eNOTICE
European Network Of CBRN TraIning Centres

D3.15 - Links to other CBRN networks and platforms, integration and interface functions on the eNOTICE information and communication platform Report 1

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4	*Association pour la recherche et le développement des méthodes et processus industriels (ARMINES)*	*X*
6	*Fire Department Dortmund (FDDO)*	
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Executive Summary

This document is the Deliverable 3.15 – Links to other CBRN networks and platforms, integration and interface functions on the eNOTICE information and communication platform.

It describes the work carried out so far in Task 3.4: Integration of platforms and interfaces. The aim is to enlarge the community for communication and information dissemination and to make eNOTICE visible to participants of other projects and platforms.

The objectives of guiding users in the CBRN area, the exchange with other platforms, network building, and the promotion of eNOTICE Joint Activities are the objectives of this task. They are achieved by different means: based on the identification of other relevant networks in D2.4 a thorough search for other projects and platforms already offering interfaces is conducted. This is complemented by a research for common interfaces that might be relevant for eNOTICE. The realization of links to other platforms is conducted by a technical and a content-related approach.

All eNOTICE consortium partners have been invited to contribute to this task by taking ownership of one or more relations with other projects, in order to follow them in a proactive way. All interesting information on their activities is regularly shared with the eNOTICE partners. By doing so, input is ensured to develop the web-based links but also, structural relations and dynamic interactions are built with these other networks, projects and platforms.

All identified interfaces will subsequently be listed and discussed.

Task 3.4 is lasting from M13 to M60. There will be this deliverable and three subsequent deliverables building upon the results from this document. Therefore, this deliverable also defines the future work, carried out in the remaining time of this task.

The platform itself is available at www.h2020-enotice.eu and is described thoroughly in Deliverable 3.7.

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Abbreviations

API	Application Programming Interface
CBRN	Chemical Biological Radioactive and Nuclear
CBRNE	Chemical Biological Radioactive Nuclear and Explosive
EC	European Commission
ECC	eNOTICE Community Centre
FP7	Seventh Framework Programme
H2020	Horizon 2020
KPI	Key Performance Indicator
eNOTICE	European Network of CBRN Training Centres
Sec21	SEC-21-GM-2016-2017 call on Pan European Networks of practitioners and other actors in the field of security
CoU	Community of Users for Secure, Safe and Resilient Societies
CoE	Center of Excellence
TC	Training Centre

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1 Introduction

The eNOTICE web-based information and communication platform, which is called "eNOTICE Community Center" (ECC), is an essential tool for the eNOTICE community. It enables the community to increase the visibility of individual training professionals, practitioners involved in CBRN training, and Training Centers (TCs) with their facilities and capabilities, and allows users to communicate and share information, using only a web browser.

This deliverable aims at identifying "Links to other CBRN networks and platforms" and at proposing means for the "integration and interface functions on the eNOTICE information and communication platform". In other words, it is about linking of the eNOTICE project with similar or complementary networks to make both eNOTICE and the other projects more visible and accessible to the users.

The main goal of this task is the identification and implementation of interfaces. This deliverable, as the first deliverable in Task 3.4, also sets the time plan for the next project phases which consists of three more deliverables, all with the same scope.

The remainder of this chapter will present a short motivation for this deliverable, the concrete objective it wants to achieve and the approach on how these objectives will be achieved.

1.1 Motivation

As a networking project eNOTICE wants to bring together similar and complementary CBRN-related projects, events and platforms in order to support the visitors and users in guiding them through the multiple CBRN aspects covered either by eNOTICE or by another entity. To become a recognised player in the CBRN Defence community, eNOTICE wants to provide open interfaces and motivate other projects and networks to adopt the platform. By implementing and providing interfaces, eNOTICE would like to offer other interested entities the possibility to make use of the data available on the platform and likewise making use of data available on other platforms by accessing their pubic interfaces and embed the information, among other, on the eNOTICE web-based platform.

By linking the eNOTICE site with others, synergy effects like increased awareness, specialisation of each entity on its strengths, better exchange among practitioners, and identification of possible duplications of efforts are aimed at.

Promoting the eNOTICE Joint Activities (JA) at other platforms or events and providing means to integrate the events into other calendars should rise their visibility.

Interfacing with other platforms makes eNOTICE visible to other projects and their related users and it enlarges the CBRN community. This can lead to a wider information dissemination and an improved cooperation between projects. Being visible to potential users also supports the acquisition of new users for each network or community. The implementation of

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interfaces between platforms or sites also fosters the direct exchange between the organizing teams in the background.

1.2   Objectives

This task has several main objectives which are achieved by different means. The objectives are grouped in a project-, task-, and deliverable-wide scope. Task- and deliverable-wide objectives aim at supporting the overall project objectives.

1.2.1   Project objectives

Guide users in the CBRN area

Because there are many different CBRN-related projects, events and platforms, eNOTICE aims at becoming a networking and exchanging platform which helps users to find the most suitable resource for their current needs, e.g. finding a training center, event or other platform. To achieve this, links will be built up with relevant organisations to know what their focus is and when their events take place to display this information to the users, the CBRN community.

Exchange with other platforms and network building

The collaboration between the networks and platforms should help to build a network of CBRN projects and entities. Each of them has its specific focus area and other networks could benefit from each other's expertise. eNOTICE wants to contact related networks and platforms and collaboratively develop and implement interfaces between the ECC and the other entities. The network should be constructed to last longer than the funded project phase to build a sustainable network.

Promote eNOTICE Joint Activities

By promoting the eNOTICE Joint Activities, stakeholders will be better informed about what eNOTICE is, what it does and what its benefits are. Therefore, spreading the information about eNOTICE JAs into other networks is aimed at.

1.2.2   Task objectives

Strategy development

The gained knowledge of interfaces will serve to develop a strategy, on which interfaces and implementations provide the most value to the ECC users. Some interfaces are easier to implement than others because they make use of standardized exchange formats.

1.2.3   Deliverable objectives

Overview of relevant platforms

Overview of related projects, events and platforms is presented in this deliverable: they are relevant either because of their thematic focus (i.e. C, B, R, or N) or because they provide interfaces which could be used for the ECC platform as well, e.g. the project TEAMWORK which uses the same software base for the platform. This overview should help to identify possible interfaces that could be included into the eNOTICE platform.

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Time plan for Task 3.4

The time plan for the rest of the funded project phase which guides the task itself and upcoming deliverables within this task will also be developed in this Deliverable. Nevertheless, the time plan will be subject to change as the process is dynamic and depends on external entities.

1.3   Methodological approach

The methodology for this Task consists of three distinct but complementary approaches: 1) the technical approach describes the technically available interfaces and how they could be used; 2) the content-related approach deals with the substance which eNOTICE could provide to or include from other networks, platforms and entities; 3) time plan with consecutive steps to achieve the overall goals of this task.

1.3.1   Technical Approach

To achieve the objectives elaborated in Chapter 1.2, a transparent approach aims to be a guidance for the reader throughout the document. As a first step, a systematic research is conducted of safety- and security-related projects funded in research programs FP7 and H2020 with the question in mind whether these projects have technical interfaces already available. The results from Deliverable 2.4 on the "Report on Key Performance Indicators for a successful CBRN network" serves as a starting point. Furthermore, all task partners gathered ideas of possible, already existing or demanded technical interfaces, also from entities beyond the scope of EU-funded research projects.

The results will be condensed and transferred into single features which will be the input for the conception of the technical interfaces of the eNOTICE platform. This outcome will influence the development of the platform – while the already developed parts of the platform also influence this deliverable. The outcome of the overview of other networks and platforms is contrasted with the interfaces which the ECC could provide to see which interfaces can be adopted.

To technically implement the interfaces to other networks or platforms, contacts with other entities will be established.

1.3.2   Content-related Approach

The content available in the ECC depends both, on the collected information and on the available data of other platforms.

The collected information about the capabilities of CBRN Training Centers, the Joint Activity calendar, the lists of other relevant networks, and eNOTICE publications could be used by other networks or projects. For this valuable data, means can be provided to access them on the web-page.

On the other side, different kinds of available information on other sites will be used to be embedded in the ECC. This depends on the technical feasibility and on agreements with the providing platforms.

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1.3.3   Temporal approach

As a last step, this initial deliverable of Task 3.4 should elaborate a roadmap for the remaining three years of the task during the project phase. Furthermore, the established links to other platforms could be one factor of the sustainability of the eNOTICE platform. Therefore, the results of this Task 3.4 could have influence on the time after the funded project phase has ended and is intended to ensure sustainability.

1.4   Links to other tasks

This deliverable builds upon the results from former tasks and deliverables which serve as an input. Likewise, the findings of this deliverable will serve as input for other ongoing/upcoming tasks and deliverables.

1.4.1   Input

Deliverable 2.4 "Report on Key Performance Indicators for a successful CBRN network" is one of the major inputs for this deliverable. The Key Performance Indicators (KPI) elaborated in this deliverable show that there is a lot of opportunities for collaboration and partnership within the security research. The avoidance of duplication by establishing collaborations and partnerships with other networks and platforms is named as one KPI. (D2.4)

The Deliverable 2.4 took advantage of DM-TRAINET KPIs (AETS, DG ECHO) which were complemented by another KPI, namely 'Supporting Instruments' which covers the website and its features to work together and to work with other projects or platforms. The goal is to support this KPIs by providing interfaces on the web-based information platform which can be adopted by others to retrieve information about eNOTICE.

Deliverable 2.4 provided also a list of relevant networks which were examined in this task whether they provide any kind of interface or Application Programming Interface (API). This list was used to elaborate the results of Chapter 3.

Deliverable 2.5 "Framework and Sustainability plan for the European CBRN Training Centres network" provided complementarities to existing networks to avoid duplication and covered the development of tools to assess the long-term sustainability of the network and the activities and initiatives that characterize it.

One part of Task 5.1 "Consortium management" is to organize contacts between eNOTICE and other CBRN networks, communities, platforms and on-going projects. These other entities provide a pool of information which can be useful for the implementation of (technical) interfaces.

1.4.2   Output

This task has already influenced development of the web-based platform in Task 3.2. During the development, one focus for the implementation was, whether the interoperability could be increased by providing interfaces for other user or platforms.

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This task will influence further development of the web-based platform in Task 3.3, as it proposes to implement interfaces and APIs to the platform in order to build up links. Whether they will be used or not has to be elaborated during the task.

Another output could influence the contacts between eNOTICE and other entities, which are in the scope of Task 5.1 "Consortium Management".

As the sustainability plan will mature during the project lifetime, it is likely that the links and interfaces to other platforms will also have an influence on it. Up to now it is difficult to foresee the development and outcome. Nevertheless, Task 5.2.1 about the quality management and continuous improvement could benefit from links to other platforms as well.

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2   Methodology

The methodology used during the research of similar platforms and networks is described in the following part.

2.1   Action Research and Design Science

Action Research and Design Science are two methodologies providing the means for doing research that is relevant. Both offer ways of resolving the problem between rigor and relevance of research. The action in action research has the purpose to solve an immediate and real-world problem and it intends to directly and immediately benefit. Design science also focuses on solving problems in the real world. To explain the connection of action research and design science, the two methodologies are described in the following part. (Kock 2007)

2.1.1   Action Research

Action Research is a cyclical process with five stages called *diagnosing*, *action planning*, *action taking*, *evaluating* and *specifying learning*. The aim is to get reproducible experiments that are part of the body of knowledge. This progress can be made by testing and destruction of hypotheses. By being replicable, the experiments turn its findings into public knowledge. In society there are some special conditions that need to be respected. A social situation is a collaborative process between researchers and people in the situation that is a deliberate process of reflective learning. It focuses on social practice and is a process of critical inquiry.

Figure 2.1 shows the five stages of the Action Research cycle. The cycle begins with the diagnosis. Here, an action researcher interacts with a practitioner to find a diagnosis of the problem in the practitioner's setting by observing the situation as well as questioning and conversing with the practitioner. The action planning proposes actions for the practitioner to take. After this stage, the practitioner implements the action that he and the action researcher planned, and he shares his own evaluation of how successful the action was. For the action researcher, this dialogue helps to evaluate how well the actions performed. On this basis, the action researcher can specify the lessons learned and improve the actions for the next research cycle. (Kock 2007)

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Figure 2.1: Action Research (Kock 2007)

2.1.2   Design Science

Design Science is a special strand of design research and aims to create models, methods and systems. These artefacts are supposed to support people in developing, using and maintaining IT solutions. An artefact can be defined as an objective made by humans. It has the intention that it be used to address a practical problem. (Johannesson and Perjons 2014)

Design and Design Science both aim at novelty, but there are some important differences. Design is a process for finding and developing a solution to an existing problem. It is only relevant to a single actor or a local practice. (Johannesson and Perjons 2014) In contrast, design science is supposed to produce and disseminate knowledge that concerns the general interest and global practice. General interest means communities of local practices or a research community. (Peffers et al. 2007) Design science is a central element for architecture, engineering, computer science, software engineering, media, art design, and information systems. (Hevner and Chatterjee 2010)

There are three requirements on design science research:

- Design science projects are required to create new knowledge of general interest and to make use of rigorous research methods;

- To ensure the well founded and original results, the new knowledge has to be related to an existing knowledge base;

- New results need to be communicated and disseminated to practitioners and researchers.

(Johannesson und Perjons 2014)

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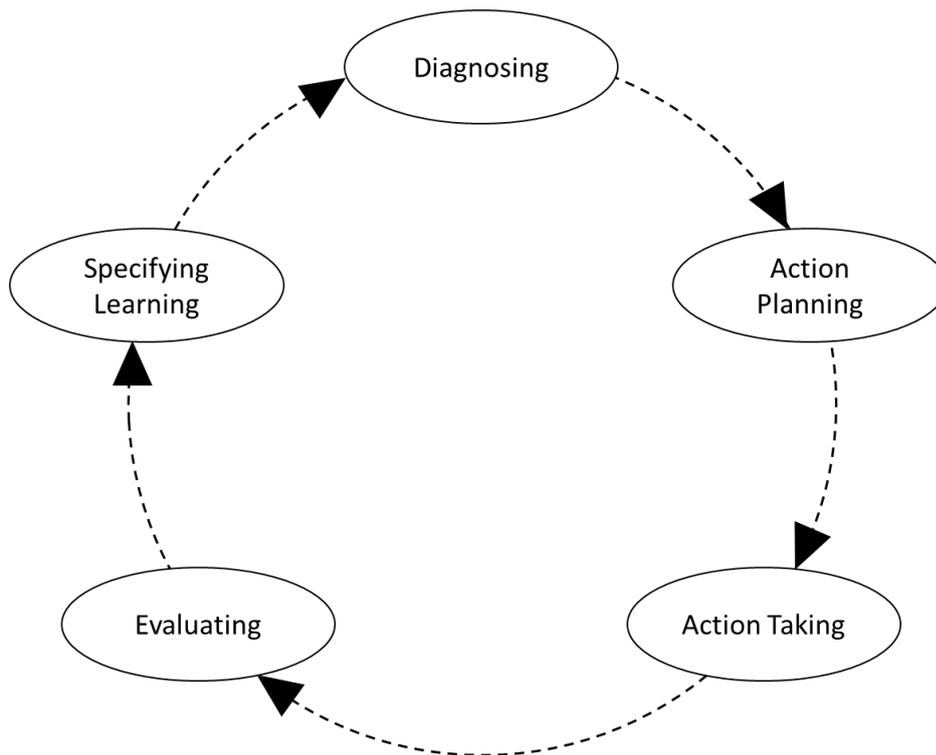on the eNOTICE information and communication platform Report 1**

Figure 2.2 shows the connection of a design science project and local practice. The design science project may have the possibility to use empirical data from a local practice. Furthermore, the results of this project can provide local practice contribution. It is important to build the project on a scientific body of knowledge and contribute to it. In addition, the body of knowledge is also important to a global practice. (Johannesson and Perjons 2014) This knowledge context includes mathematics, social science, natural science, design science, design specifications, useful facts, practical knowledge and common sense. (Wieringa 2014)
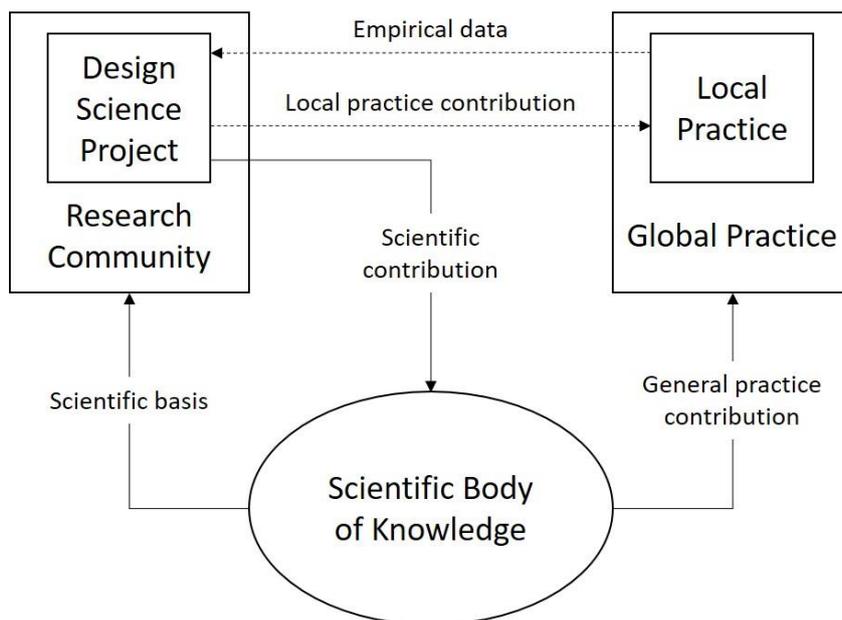

Figure 2.2: Local and global practices in design science research (Johannesson and Perjons 2014)

The goals of design science projects can be differentiated by the researcher´s goals and the goals of external stakeholders. The goals of the researcher include curiosity, fun, the desire to improve society and to promote the well-being of people. The external stakeholder which sponsors the research project wants to achieve goals and receive useful designs that serve these goals. They also want to achieve useful knowledge about those designs. In summary, sponsors are driven by utility and constrained by budgets. The general design science research goals include the instrument *design goals*, *knowledge goals*, *prediction goals* and *artefact design goals* or *technical research goals*. This leads to the social context goals which includes the improvement of a problem context and the external stakeholder goals. (Wieringa 2014)

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3   Similar platforms to eNOTICE and their interfaces

This part focuses on the projects relevant for eNOTICE. It also points at the interfaces and common interests. The list of the related projects is based on the outcome of Deliverable 2.4 for projects up to May 2018 and further research of more recently started projects on CORDIS[8]. As indicated in D2.4, many other projects use web-based platforms and social media as supporting instruments. This could be possible interfaces which could enable automated information exchange.

3.1   EU Initiatives

Multiple EU bodies fund several CBRN- and networking-related projects and initiatives. They will be presented in the following paragraphs in a structured manner to focus on the important aspects.

3.1.1   DG Home initiatives

Function ⟍ Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
CoU	**Title:** CoU – Community of Users for Secure, Safe and Resilient Societies, a DG HOME initiative **Abstract:** The CoU aims at reducing the current fragmentation in security research and at facilitating the information exchange among policy-makers, research, industry, practitioners and the general public. Its key objectives: Ensure that research programming takes account of practitioners needs and to promote research results that are relevant to them; Identify the most promising tools and methods that have the potential to be taken up by practitioners; Support the competitiveness of EU industry by enhancing the market for research results. Ensure that practitioner´s expertise is available to policy makers; Facilitate the implementation of policy. (CoU) **Links to eNOTICE:** eNOTICE coordinators are present at CBRN-related meetings						
	www.securityresearch-cou.eu/	www.securityresearch-cou.eu/events#events		www.securityresearch-cou.eu/documents		www.securityresearch-cou.eu/news	
MELODY	**Title:** A harmonised CBRN training curriculum for first responders and medical staff **Abstract:** Design, develop, test, improve and quality assure a harmonised CBRN training curriculum for (CBRN) first responders and medical staff, taking into consideration: what training programmes, curricula and materials already exist, what is being used and valued by training institutes in Europe, practitioner's needs and possible cultural differences. (MELODY) **Links to eNOTICE:** Campus Vesta and UNITOV are partners in both projects						
	melody.sckcen.be/en	Calendar melody.sckcen.be/en/Events	Consortium melody.sckcen.be/en/Participants		ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/org-details/999986	melody.sckcen.be/en/News	

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[8] https://cordis.europa.eu (last accessed 2019-06-28)

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Function Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
					775/project/814803/program/31077817/details		
BULLSEYE	**Title:** Harmonised procedures and awareness of all agencies involved in the response of a chemical or a biological terrorist attack: education- training and train the trainer **Abstract:** The general objective of Bullseye is to further improve the knowledge and skills of police and forensic officers as well as fire, medical and civil protection services in all EU member states on how to prevent terrorist attacks using CBRN agents and explosives by improving detection capabilities as well as on how to properly mitigate and respond in case of an emerging CBRN attack. The knowledge and experience of the military services will be used to enforce the 'civil' procedures. **Links to eNOTICE:** Procedures for 7 types of first responders in C and B attacks, expansion of training facilities for explosive dogs. Expectation from eNOTICE - for training centres representatives to assist with the workshops, sharing their educational skills with the experts, in order for them to lead a group of first responders in developing the draft procedures; possible cooperation on scenarios for the exercise (May 2021, Vught).						
	http://www.bullseyeproject.eu/ not yet functioning						

3.1.2   DG DEVCO initiatives

Function Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
EU CBRN CoE	**Title:** EU CBRN CoE, a DG DEVCO initiative **Abstract:** The EU CBRN CoE Initiative aims to avoid CBRN risks by strengthen the institutional capacity of countries outside the European Union. It includes human-made risks and natural risks. To strengthen the regional security the CoE supports local ownership and local expertise. The CoE wants to ensure long-term sustainability and to strengthen regional security. (CoE) **Links to eNOTICE:** eNOTICE collaborates with DG DEVCO's CBRN CoE for the identification of CBRN Training Centres in and outside the EU.						
	www.cbrn-coe.eu/					www.cbrn-coe.eu/News.aspx	

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3.1.3   DG ECHO initiatives

Function / Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
DM-TRAINET	**Title:** Disaster Management Training Network, a DG ECHO initiative **Abstract:** The initial scope of DM-TRAINET was to create a network for the National Contact Points for Civil Protection, specifically dedicated to Disaster Management Training. This initiative is currently on hold, new orientations are under discussion. **Links to eNOTICE:** There is currently no formal relation with DM-TRAINET, informal contacts (VESTA) with DG ECHO officials will ensure to follow up the new orientations and the relevance for eNOTICE.						
	Currently no website						

3.2   Horizon 2020 – SEC21 Networks

Sec21: "Pan European Networks of practitioners and other actors in the field of security" is the topic of several projects funded by the European Union within the Horizon 2020 programme. The specific challenge is to build networks with practitioners to support the interaction with academics or with industry to dedicate time and resources to monitor innovation and research. There are four different categories of networks of practitioners within the call. The first one includes practitioners in the same discipline and from across Europe (FIRE-IN, ILEAnet, I-LEAD, NO-FEAR, PEN-CP), the second merges practitioners from different disciplines in a particular geographical area (DAREnet, MEDEA, ARCSAR). The next network merges European entities to manage the demonstration and testing sites and training facilities (eNOTICE, EXETER, INCLUDING). The last network type, which follows up on the work of SEREN3 is omitted in this work because it does not match the CBRN purpose. (SEC21)

3.2.1   Mono-disciplinary networks

Function / Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
FIRE-IN *2017.05-2022.04*	**Title:** Fire and Rescue Innovation Network **Abstract:** Aim is to guarantee fast and cheap access to Fire and Rescue technology for Europe. It consists of five thematic working groups which are Search and Rescue (SAR) and Emergency Medical Response (EMR), Structure fires, Vegetation fires, Natural disasters and CBRNE. The project cooperates with the industry and research. The platform of FIRE-IN will provide working groups, request for ideas, monitoring results publication, events organisation and a forum. (FIRE-IN) **Links to eNOTICE:** CNBOP-PIB is a common project partner						
	fire-in.eu	Events www.fire-in.eu/index.php/events/ iCal link www.fire-in.eu/index.php/events/ical/	Partners fire-in.eu/index.php/partners		Related Projects fire-in.eu/index.php/related-projects-initiatives		Facebook www.facebook.com/fireinproject Twitter twitter.com/FIREINProject YouTube www.youtube.com/chan

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Function / Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
							nel/UCrNnm-S3zY541rGSwvSDclg
ILEAnet *2017.06-2022.05*	**Title:** Innovation by Law Enforcement Agencies networking **Abstract:** This project aims to build a sustainable organisational law enforcement by the exchange and collaboration in the area of research and innovation addressing Agency practitioner's network. Furthermore, it stimulates Law Enforcement Agencies capabilities to influence, develop and take up research. (ILEAnet) **Links to eNOTICE:** VESTA will establish relations, in the context of the H2020 SHOTPROS and the ISF QROC projects						
	www.ileanet.eu		Consortium www.ileanet.eu/ileanetconsortium	Project documents www.ileanet.eu/projectdocuments	Community www.ileanet.eu/join-theileanet-community	www.ileanet.eu/news	
I-LEAD *2017.09-2022.08*	**Title:** Innovation-Law Enforcement Agencies Dialogue **Abstract:** The project focuses on the incapability of groups of operational Law Enforcement Agencies (LEA) practitioners defining their needs for innovation. This project aims to build the capacity to monitor the security research and technology market. This leads to a better matching and uptake of innovations by law enforcement agencies. (ILEAD) **Links to eNOTICE:** VESTA will establish relations, in the context of the H2020 SHOTPROS and the ISF QROC projects						
	www.i-lead.eu		Partners i-lead.eu/partners Practitioners Groups i-lead.eu/practitioners-groups	Resources i-lead.eu/resource	Media i-lead.eu/media	i-lead.eu/news	Twitter twitter.com/i_LEAD_Project YouTube www.youtube.com/channel/UCykl38KGXRR2wsawFT-xDJA
NO FEAR *2018.06-2023.05*	**Title:** Network of practitioners For Emergency medical systems and critical care **Abstract:** The objectives of this project are to create a community of practitioners to advise relevant Research and Innovation projects and to increase the EU innovation potential. It deals with the preparation to respond to new threats and assist casualties after security incidents. (NO-FEAR) **Links to eNOTICE:** Community of practitioners could be an interesting target group for eNOTICE; medical aspect of CBRN incident response						
	www.no-fearproject.eu			Results and Resources www.no-fearproject.eu/results-and-resource	News-letter www.no-fearproject.eu/results-and-resource	News & Events www.no-fearproject.eu/news-and-events	LinkedIn www.linkedin.com/in/no-fear-project-b51849164/ Facebook www.facebook.com/No-Fear-Project-710864312579221 Twitter twitter.com/NOFEAR_EU

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Function / Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
PEN-CP *2018.09-2023.08*	**Title:** Pan-European Network of Customs Practitioners **Abstract:** The aim is to create an ecosystem for interoperability, knowledge sharing and innovation between customs administrations. This improves European security though more efficient control of the illicit trade flows. (PEN-CP) **Links to eNOTICE:** Network building could be interesting to observe, also the planned platform which is not accessible yet						
	www.pen-cp.net				Magazine www.pen-cp.net/download-pen-cp-magazine	Events www.pen-cp.net/events	

3.2.2 Geographical networks

Function / Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
DAREnet 2017.09-2022.08	**Title:** Danube river region Resilience Exchange Network **Abstract:** A regional network for flood resilience in the Danube river region. It supports flood management practitioners across the EU Danube River region. DAREnet builds a community of practitioners, operating in a network of civil protection organizations. The main objective is to establish a regularly updated RDI Roadmap highlighting promising innovation opportunities to cope with the main environmental and societal challenges of the region. (DAREnet) **Links to eNOTICE:** Network-building similar to eNOTICE and hence interesting to observe and learn from it.						
	darenetproject.eu		Partner http://darenetproject.eu/#partner	Downloads http://darenetproject.eu/#download		http://darenetproject.eu/#news-events	Twitter twitter.com/DAREnet_EU
MEDEA *2018.06-2023.05*	**Title:** Mediterranean practitioners' network capacity building for effective response to emerging security challenges **Abstract:** This project aims to create a network of security practitioners. The focus is on Border Protection and other Security- and Disaster-Related tasks. They deal with the volatile and dynamically changing security environment in the Mediterranean and Black Sea region that pose severe threats and challenges on the society and prosperity. (MEDEA) **Links to eNOTICE:** Network-building similar to eNOTICE and hence interesting to observe and learn from it.						
	www.medea-project.eu				Project Overview www.medea-project.eu/wp-content/uploads/2019/03/MEDEA-EAIDCM-2018.pdf		

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Function / Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
ARCSAR *2018.09-2023.08*	**Title:** Arctic and North Atlantic Security and Emergency Preparedness Network **Abstract:** The ARCSAR project will establish international best practice and propose innovation platforms for the professional security and emergency response institutions in the Arctic and the North-Atlantic. The focus is on increased interaction in targeted networks between the professional institutions, academia and the innovators in the preparedness service and equipment industry. (ARCSAR) **Links to eNOTICE:** Network-building similar to eNOTICE and hence interesting to observe and learn from it.						
	arcsar.eu	Events arcsar.eu/event	Partner arcsar.eu/project-consortium			arcsar.eu/#news	www.instagram.com/arcsarnetwork

3.2.3 Networking projects for demonstration and testing sites, and training facilities

Function / Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
eNOTICE *2017.09-2022.08*	**Title:** European Network Of CBRN TraIning CEnters **Abstract:** This project will strengthen cross-border cooperation, training, preparedness and resilience against all hazards caused by natural or human-made chemical, biological, radioactive and nuclear disasters. Its goal is the establishment of a European network of civil and military CBRN training, testing and demonstration centres and the optimisation of investments by pooling and sharing resources. The network is technically enabled by the eNOTICE Community Centre (ECC). (eNOTICE) **Links to other projects:** Joint Activities, APIs, CBRN CoE						
	www.h2020-enotice.eu	www.h2020-enotice.eu/calendar/view.php?view=month not public yet Joint Activities www.h2020-enotice.eu/static/ja-catalogue.html	CBRN TC www.h2020-enotice.eu/static/catalogue.html Consortium www.h2020-enotice.eu/static/partner.html	Cloud storage https://cloud.h2020-enotice.eu/	Related projects www.h2020-enotice.eu/static/related-projects.html Publications www.h2020-enotice.eu/static/publications.html	www.h2020-enotice.eu	Facebook www.facebook.com/H2020eNOTICE Twitter twitter.com/H2020_eNOTICE
EXERTER *2018.06-2023.05*	**Title:** Security of Explosive pan-European Specialists Network **Abstract:** The objective is to connect the security practitioners to the industry. The captured and utilized research results by the practitioners are connected to the industry's innovation efforts to address the most pressing needs in the fight against serious crime and terrorism. (EXERTER) **Links to eNOTICE:** Build an End user and Expert Community (EEC), which is interesting to observe and learn from it						
	www.exerter-h2020.eu	Events www.exerter-h2020.eu/netw	Consortium	Dissemination			

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Function / Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
		orking---events.html	www.exerter-h2020.eu/project-partners.html	www.exerter-h2020.eu/dissemination.html			

INCLUDING	**Title:** Innovative Cluster on raDIological and Nuclear emerGencies **Abstract:** INCLUDING connects partners to share infrastructure, equipment and expertise from Practitioners, Governmental Research Institutes, Academia and Industries operating in the field of radiological and nuclear emergencies. INCLUDING pursues to develop a Federation in which individual Members will cooperate together to provide a common framework to standardize access to their respective facilities, enhance interoperability and to allow a more intensive use of expensive equipment. The operative tool to manage the Federation will be a web-based platform. The Joint Actions will be the focal points of the project. They are multidisciplinary field exercises, tabletop exercises, training, serious gaming and simulation organized at their premises by the project partners **Links to eNOTICE:** Web-based platforms and Joint Actions will be interesting to follow

3.3   Other related projects

The following part describes further programs related to eNOTICE, funded by different entities than EU's H2020 SEC-21 program.

Function / Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
DRIVER+ *2014.05-2020.04*	**Title:** DRiving InnoVation in crisis management for European Resilience **Abstract:** The aim is to cope with current and future challenges due to increasingly severe consequences of natural disasters and terrorist threats, by the development and uptake of innovative solutions that are addressing the operational needs of practitioners dealing with Crisis Management. (DRIVER+) **Links to eNOTICE:** ARMINES is a mutual partner							
	www.driver-project.eu		Consortium www.driver-project.eu/driver-project/who-are-we		Events www.driver-project.eu/events/trials	www.driver-project.eu/news	Twitter twitter.com/DRIVER_PROJECT LinkedIn www.linkedin.com/groups/8161096
EDUCEN *2015.05-2017.04*	**Title:** European Disasters in Urban centres **Abstract:** A Culture Expert Network for better understanding the links between culture, risk perception and disaster management. (EDUCEN) **Links to eNOTICE:** Outcome could be used to improve the procedure of the eNOTICE Joint Activities and to adjust the JAs to each environmental situation.							

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Function / Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
	www.educenproject.eu	Calendar www.educenproject.eu/calendar	Consortium www.educenproject.eu/consortium	Results www.educenproject.eu/results		www.educenproject.eu/news	YouTube www.youtube.com/channel/UCfleLaHN6RwnC7ZTDAqVUyg Twitter twitter.com/educen_eu LinkedIn www.linkedin.com/groups/8434169
TARGET *2015.05-2018.10*	**Title:** Training Augmented Reality Generalised Environment Toolkit **Abstract:** Aim of the project is to deliver a serious gaming platform with new tools, techniques and content for training. Users will learn how to cope with scenarios such as tactical firearms events, mass demonstrations, cyber-attacks and CBRN incidents. The platform of TARGET is for sharing training material and to maximise the efficiency in delivering complex exercises. (TARGET) **Links to eNOTICE:** eNOTICE project partner METU researches in this thematic area.						
	www.target-h2020.eu		Consortium www.target-h2020.eu/who-we-are	Public Resources www.target-h2020.eu/deliverables-reports/	Related Projects www.target-h2020.eu/related-projects/	www.target-h2020.eu/newsroom/ Newsletter www.target-h2020.eu/target-newsletter	Instagram www.instagram.com/target_eu/ Twitter twitter.com/TARGET_EU YouTube www.youtube.com/channel/UCSzwRY3Dcop8wsIyagaCUTA LinkedIn www.linkedin.com/groups/8308107
TEAMWORK *2016.02-2019.01*	**Title:** "Krisensimulation für die Zusammenarbeit von Einsatzkräften und Bevölkerung" **Abstract:** The main goal is to increase the resilience of the general population and to enable them to prepare for crisis events together with the help of serious gaming. (TEAMWORK) **Links to eNOTICE:** The community portal of the TEAMWORK project is realised with the open source tool Moodle, which is also the basis for the ECC. Therefore, an exchange between these two platforms and communities is easy to facilitate. UPB and FDDO are mutual partners.						
	www.teamworkprojekt.de	Calendar https://www.teamworkprojekt.de/tcc/calendar/view.php?time=1557921012	Consortium www.teamworkprojekt.de/tcc/local/staticpage/view.php?page=partner			Events	Instagram instagram.com/TEAMWORKprojekt Twitter twitter.com/TEAMWORKprojekt Facebook facebook.com/TEAMWORKprojekt
ROCSAFE *2016.07-2019.06*	**Title:** Remotely Operated CBRNe Scene Assessment & Forensic Examination **Abstract:** The project aims to change and improve the way of dealing with CBRNe events. The highest priority is safety for the crime scene investigators. This can be achieved by reducing the need to enter these scenes. With the help of RAVs and cameras as well as sensors to define chemical and biological threats the scene will be checked first. (ROCSAFE)						

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Function \ Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
	Links to eNOTICE: Training participants and familiarizing them with the handling of drones. In particular for those who are dealing with dangerous substances could be of interest for the users.						
	www.rocsafe.eu		Partners www.rocsafe.eu/			www.rocsafe.eu/	Twitter twitter.com/ROCSAFE_H2020 YouTube www.youtube.com/user/thinkingaboutnuig LinkedIn www.linkedin.com/school/nui-galway/
ENCIRCLE *2017.03-2021.03*	**Title:** EuropeaN Cbrn Innovation for the maRket CLustEr **Abstract:** Aims to support small to medium size enterprises (SME) to take their innovative technologies for CBRN safety, security and defence to markets. With the help of bringing together the Industrial and Technological, and Practitioners and Customers communities through the dynamic catalogue of CBRN technologies, the project will strengthen the European CBRN industry. To advance the innovation and business development the aim is to build a CBRN cluster, a roadmap, a platform and to support CBRN safety, security and defence. (ENCIRCLE) **Links to eNOTICE:** Web portal with databases, networks, market places, and the dissemination of information about CBRN related projects. (D3.1) ENCIRCLE can be connected to eNOTICE with a roster with information about these products. Université catholique de Louvain coordinates both ENCIRCLE and eNOTICE projects.						
	encircle-cbrn.eu	Events encircle-cbrn.eu/events Manually maintained list of entries / no calendar	CBRN TC encircle-cbrn.eu/communities/cbrn-training-centres/	Resources encircle-cbrn.eu/resources/encircle-deliverables	Catalogue encircle-cbrn.eu/catalogue Network encircle-cbrn.eu/communities/cbrne-coe-networks	encircle-cbrn.eu/news	
TERRIFFIC *2018.05-2021.04*	**Title:** Tools for early and Effective Reconnaissance in cbRne Incidents providing First responders Faster Information and enabling better management of the Control zone **Abstract:** deliver a step change in the effectiveness of first responders during the first hours of a Radiological, Nuclear, explosive (RNe) incident. It will lead to reduced response time, less health and safety risks for the response team, and less human intervention in the operation due to higher number of automated processes and extended mobile detection capabilities. **Links to eNOTICE:** TERRIFFIC tested the technology under development at their first trial during eNOTICE large-scale field exercise in Gurcy in May 2019. More trials with eNOTICE training centres are expected upon agreement with the hosting training centres.						
	www.terriffic.eu		Consortium www.terriffic.eu/partners		Links www.terriffic.eu/links	www.terriffic.eu/newsroom	

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Function / Project	Website	Calendar	CBRN TC Profile	Common file storage	Other	News	Social Media
			www.terriffic.eu/objectives				
PROACTIVE *2019.05-2022.04*	**Title:** PReparedness against CBRNE threats through cOmmon Approaches between security praCTItioners and the VulnerablE civil society **Abstract:** PROACTIVE aims to increase practitioner effectiveness in managing large and diverse groups of people in a CBRNe environment. The main goal is to enhance preparedness against and response to a CBRNe incident through a better harmonisation of procedures between various categories of practitioners, and a better understanding of the needs of vulnerable citizen groups. (PROACTIVE) **Links to eNOTICE:** WMP is a mutual partner. PROACTIVE takes part in eNOTICE Joint Activities in Rieti in October 2020, in Dortmund in April 2021 and in the JA organized by WSU+CNBOP-PIB in February 2022.						
	proactive-h2020.eu		Consortium proactive-h2020.eu/#consortium				Twitter twitter.com/PROACTIVE_EU

3.4 Summary of similar platforms

There exist several other platforms and websites in the CBRN-area which provide interesting information for the users of the eNOTICE ECC. Many of them provide information on e.g. events, the project consortia or provide collections of files. But only a few provide this information in a machine-readable format which could be adopted by a technical interface.

To observe how these other networks plan to build their networks is also an interesting aspect which can be useful to be monitored.

Nearly all projects and networks have one or more social-media profiles. They use them for dissemination and publicity. Some are quite active in the social-media, while others are posting more sparsely.

There are numerous content-related interfaces to other CBRN-related projects and initiatives. Not only from the SEC-21 call but also from other DGs at EU level and national entities as well. But to find and access all the resources is time-consuming since there is no consistent way how information is being provided.

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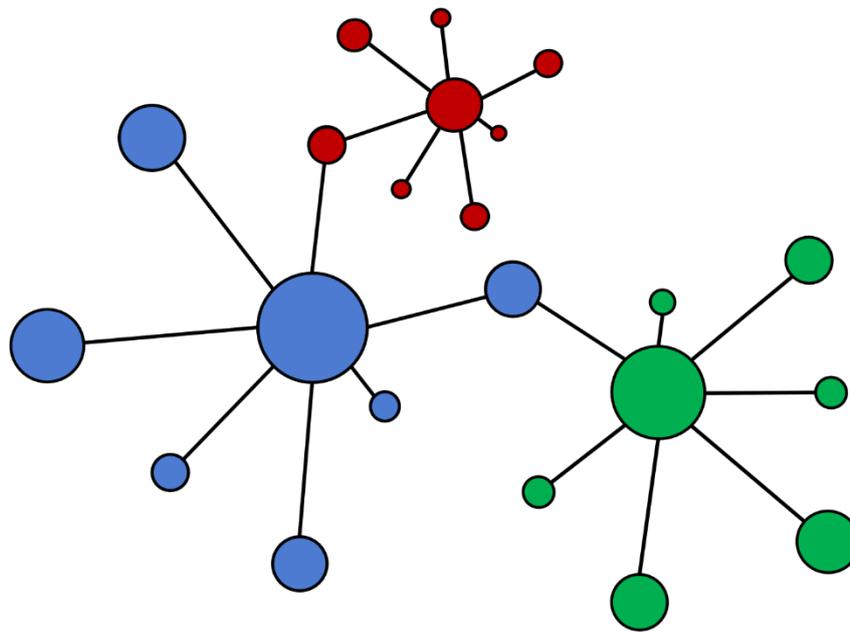on the eNOTICE information and communication platform Report 1**

4   Interface Implementation

The first section of this chapter makes use of the interfaces derived from the previously described projects and shows ways of how to integrate them into the ECC. Some interfaces are already mature enough to be actually implemented and used.

The chapter continues with describing possible obstacles for the implementation of interfaces to other platforms.

The last section briefly describes, how other relevant projects and their results will be monitored.

4.1   Definition of Interfaces

A *technical* interface describes a point of an encounter or a coupling between two or more systems. Furthermore, it can also clarify borders between those systems. Function of an interface is to take over the task of translation, communication and exchange between linked systems. Basically, all of the interfaces are import or export interfaces. They can be divided into hardware interfaces, software interfaces, hardware-software interfaces and human-computer interfaces. In the human-computer interface, also called user interface, all components for serving the machine are included. The design of the user interface defines both the possibilities of usage and the interaction between human beings and the machine. In addition, it assigns the range of functions and the way of use. (Halbach 1994)

The following figure illustrates the connection of different systems or as in this case, projects. The interfaces are reflected by the common topics, while the main project can be connected to other projects on the same topic, but also on different topics. In Figure 4.1, the blue system provides an interface to the green system and it accesses an interface of the red system.

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Figure 4.1: Interfaces (Source: author)

4.2   Realization

The following paragraphs provide information about the creation of technical interfaces. As already mentioned in D2.4, the 2013 DM-TRAINET analysis recommends a scalable approach: "*wiser to start small, consolidate the results, widen the scope, consolidate new results, etc.*" (D2.4) The main technical interfaces which the ECC already provides are the calendar, the CBRN TC Catalogue, the Joint Activity Catalogue, and the common file storage that are explained below. Additionally, the concept of ActivityPub is introduced which could be used in the future. Furthermore, this chapter describes the links to other projects by linking via social media and referencing other CBRN projects on the platform.

4.2.1   Calendar

Nearly all the examined related projects provide a list of events, mostly a calendar; and training centres also organize conferences, events or exercises. Getting an overview of all the different events from various hosts is tedious work for the end-user. Therefore, the ECC wants to provide a central calendar which can automatically import events listed on other sites. This automatism can be realised with the standard calendar exchange format iCal.

There is one *global calendar* (or platform-wide), which content is visible for every logged-in user of the platform. Each user group (open and closed) can also have a *Group Calendar* which is visible to the group members only. Lastly, users have a *personal calendar* which is only visible to them.

The global calendar, c.f. Figure 4.2, is part of the ECC and displays general information and public events. It can list public project meetings (eNOTICE or other projects), dissemination events or scientific conferences. Interested users can use the information to take part in activities or to share information about lessons learned. The subscriptions in this calendar are maintained by the site administrators.

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Each group can have a calendar. This can be used for planning of activities, dates for exercises, meetings or deadlines relevant for the members of that group. The content of the calendar is visible only for the group members. If the group calendar subscribed another calendar e.g. related to the groups interests, every group member sees the imported events.

Each user also has a private calendar which can be filled with personally relevant events. Also users can subscribe to other calendars.

As shown in Figure 4.3, the current user has subscribed to events from the FIRE-IN project and the site has a subscription of events from the JCBRN COE training centre.

It is possible to export the events from the ECC calendars in order to make them available and e.g. import them into the calendar programme on someone's phone or PC.

Figure 4.2: Export and subscription management of a calendar

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Figure 4.3 Global and user-specific imported calenders

4.2.2   CBRN TC Catalogue

The CBRN TC Catalogue[9] (based on eNOTICE Deliverable 2.1) provides an overview of the eNOTICE database of training centers who expressed their interest in becoming a member of the eNOTICE network and lists their contact details, a link to the public website or a telephone number, and their capabilities, thematic areas and facilities. The list presents important features in a comprehensive overview, allowing the user and participants to quickly gather needed information.

To display the information on the web-based platform, eNOTICE developed a scheme for storing and exchanging information about CBRN training centres. With this scheme, the information which is available on TCs can be presented on the web-based platform in a list- or map-view, cf. Figure 4.4.

The information about CBRN TCs are not only relevant for eNOTICE but also for other ongoing or upcoming projects. By collaborating with other projects and sharing the information about CBRN TCs, eNOTICE can elaborate closer links to other projects and benefit from their outcomes in return.

The content of the TC profile will be maintained via the EU Survey website. Training Centres received a token which allows them to submit and update or change information about their Training Centre. This information will be semi-automatically transferred to the eNOTICE platform. For more information on this process, see eNOTICE D2.1.

Bringing together information from various Training Centres enables the users to choose the best-matching TC for their needs (through the use of a dedicated search function), improves the visibility of every Training Centre, and could foster links to other projects.

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[9] https://www.h2020-enotice.eu/static/catalogue.html

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Catalogue of Training Centers

Search by name...

| Countries | Expertise | Accessibility | Training area | Accommodations |

Only show training centers in the following countries:

Select all | Deselect all

- ☑ Belgium
- ☑ Czech Republic
- ☑ Estonia
- ☑ Finland
- ☑ France
- ☑ Germany

- ☑ Hungary
- ☑ Italy
- ☑ Poland
- ☑ Romania
- ☑ Serbia
- ☑ Slovenia

- ☑ Spain
- ☑ Ukraine
- ☑ United Kingdom
- ☑ Uzbekistan

☰ List view   📍 Map view

Figure 4.4 CBRN Training Centre map

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4.2.3   Joint Activity Catalogue

The Joint Activity catalogue is also publicly available[10] on the web-based platform and provides an overview of upcoming and past joint activities. For the time being, it is limited to eNOTICE Joint Activities. Joint Activities are practical training activities, such as field and table top exercises, opened up for external participation for observation, testing or demonstrations (See eNOTICE Deliverable 4.1). Users can easily select Joint Activities which match their interest and field of expertise and retrieve more information about them. This overview can also be used by members of other projects to see what the eNOTICE project is doing. An excerpt of the JA catalogue can be seen in Figure 4.5. Grey events have already taken place.

It is possible to provide the information about eNOTICE events as an iCal[11] file, which is a common exchange format for calendars. Users could subscribe to this online accessible file and will see the events in their private calendar.

Figure 4.5 Catalogue of Joint Activities

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[10] www.h2020-enotice.eu/static/ja-catalogue.html
[11] en.wikipedia.org/wiki/ICalendar (last accessed 2019-06-28)

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4.2.4   Common file storage

eNOTICE will use an open-source tool called Nextcloud[12] to provide cloud functionalities for
the users. With a common file storage, the ECC enables multiple users to work on documents
in the cloud – it is even possible that they work on the same document and see other's changes
immediately. They can use the cloud system to collect and share documents with others and
invite external people to have read and or write access to the shared files.

4.2.5   Social Media

Social media enables more and better possibilities to publish information online and to edit
and share the information with other people.

In terms of the eNOTICE project it means that the visibility of projects through social networks
can be significantly increased. Similar projects can be linked together, and current information
can be published easily. Therefore, eNOTICE is present on Facebook and Twitter.

4.2.6   ActivityPub

Social networks like Facebook or Twitter are mostly run by global companies which also have
the centralized control of all data in the network like personal information and messages.
ActivityPub, as a self-hosted alternative, is a decentralized social networking protocol and an
official W3C recommended standard published by the W3C Social Web Working Group. Every
user has an inbox to get messages and an outbox to send messages to others. There you have
different options. First, you can post to someone's inbox to send them a private message, then
you can read your latest messages from your inbox, third, you can post to your outbox to
publish messages to the world and at last you can get from someone's outbox to see what
messages they have posted publicly. The protocol is technically divided into two layers and
the first one is a server to server federation protocol that enables information sharing of
decentralized websites. The other layer is a client to server protocol, so users can
communicate with a server using their ActivityPub accounts from a phone or other web
applications. (W3C)

The idea of this protocol is to implement an open and decentralized networking solution. The
ECC could adopt this protocol and join the loosely connected network. This has advantages in
terms of data privacy and controllability.

4.3   Obstacles

Regarding the implementation of links to other platforms there are several obstacles. The first
one is that every project uses their own platform. In addition, it is often developed by
themselves which leads to different structures, functions and designs of the platform. As can
be seen in Chapter 3, the offered functions vary from platform to platform.

For example, the common exchange formats for calendars are provided by only a few other
platforms which renders an automatic import unfeasible.

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[12]https://nextcloud.com/ (last accessed 2019-06-28)

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As mentioned in D 2.4, the same efforts are taken multiple times within different projects but the transfer between older and newer projects could be improved. (D2.4)

Another obstacle is the duration of the projects as well as the different starting and ending dates. The development of the platforms differs and that leads to different available functions. After the end of a project, oftentimes the projects and websites are disabled or not maintained anymore. This also inhibits a cooperation with other projects.

The collaboration with other platforms and the contact details of Training Centres often include personal data which has to be protected according to the GDPR. This could impede the exchange of Training Centre information with other projects.

4.4   Monitoring of other projects

To overcome some of these this obstacles, other relevant ongoing projects during the JA in May 2019 in Gurcy (FR) were discussed. Each project was assigned to an eNOTICE partner who is either a partner to the other project or has an interest in the topics covered by the project. The task of this "project owner" or "observer" is to monitor the other project and inform the eNOTICE consortium regularly about relevant outcomes or events. For the moment, the projects are listed in a spreadsheet where all partners enter their collected information for a reporting period from one JA to the next one. The interesting and useful results will then be presented systematically at every project meeting. The methodology will be refined at the upcoming JAs, and also the set of relevant projects will change during the project.

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5   Summary and future work

This chapter will give a short summary of the deliverable and present an outlook on future work to be carried out in this task.

5.1   Summary

In this Task, the foundations for the linking with other platforms were laid.

The methodology and the approach are described and an overview of other projects – yet not providing satisfying interfaces is presented. This overview will be updated within the ongoing Task as new projects come up and others end.

The possible interfaces provided by the ECC and the already implemented interfaces were also introduced and their usage explained.

A monitoring strategy of other networks should help to keep track with their development. How efficient and useful it is will be examined.

5.2   Timeplan

The following time plan gives an overview of the upcoming actions which should be taken in this task 3.4.

- Until M24:
  Implementation of the first interfaces like: Calendar, CBRN TC Catalogue, Joint Activity Catalogue and Common File Storage into the ECC

- From M24 on:
  Linking with other projects by Social Media and ActivityPub will be discussed from M24 onwards, whether it is useful for the project's goals to implement these interfaces into the platform. Also the discussions how to monitor other related projects should be more mature by then.
  The technical and content-related integration of other platforms or projects with the ECC will also be subject of the phase from M24 onwards.

- From M46 on:
  During the last quarter of the project, the actions taken so far will be monitored and controlled, whether they are useful for the project's advancement. Also, possible improvements will be examined. The time plan for this period is still tentative, as it extends far into the future.

5.3   Future work

The Task 3.4 will last until the end of the project phase (M60). In the remaining time, the focus will remain on researching more information about other network's interest in exchanging information with eNOTICE and also implementing mutual interfaces. The calendar exchange

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seems very promising, but also the ActivityPub format could provide an added value to the
CBRN community.

The following list enumerates the upcoming tasks:

- Identifying more possible interfaces with other platforms

- Integration of interfaces and projects on the eNOTICE platform

- Elaborate monitoring methodology for relevant other projects

- Set foundation for technical collaboration with other networks

- Exchange of information and lessons learned

- Evaluate monitoring of other projects

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