

eNOTICE

European Network Of CBRN Training Centres

D4.1 eNOTICE methodology for the preparation, organisation, evaluation and follow up of CBRN exercises combined with tests, validations or demonstrations

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Executive Summary

This document describes the elaboration process of a methodology and proposes a detailed template for the preparation and organisation, evaluation and follow up of CBRN exercises, combined with tests, validations or demonstrations.

The CBRN Exercises Methodology and Templates are one of the key instruments developed for the eNOTICE project, a European Horizon 2020 EC funded project, under the Grant Agreement n° 740521. eNOTICE aims at building a dynamic, functional and sustainable European network of CBRN Training Centres, testing and demonstration sites (CBRN TC), which is expected to enhance capacity building in training and user-driven innovation and research, based on well-identified needs.

One of the eNOTICE key activities is the organisation of Joint Activities (WP4), in which CBRN TCs will open up their core activities such as multidisciplinary field exercises, table top exercises, trainings, serious gaming and simulations to external partners, such as EU R&D projects, industry, research, policy makers and other practitioners. The idea behind these Joint Activities is that such a practical approach will lead to the establishment of a viable and sustainable network that allows for various stakeholders to meet and to bridge the gap between research, technology suppliers and practitioners.

The main objectives of WP4 are to establish a transactional network, based on the sharing of expertise and effective practices and collaboration between the eNOTICE partners and external partners through these Joint Activities.

In Task 4.1, a methodology and templates are developed that will serve as the basis for the preparation of these Joint Activities, organised in Task 4.2. As these activities are organised by partners with different profiles and expectations, the methodology needs to be a generic instrument that is applicable for any kind of CBRN exercise or training event.

Deliverable 4.1 describes the objectives of this task, the methodological approach for the elaboration of the methodology and the templates, and includes a first draft of both. They will be continuously updated as part of Task 5.2.3 (Evaluation of the methodology and templates for the preparation/organisation, evaluation and follow up of exercises combined with tests, validations or demonstrations).

This first draft of the eNOTICE Methodology and Templates consists of an overview of steps, a brief guidance for every steps and templates and checklists where relevant.

The Methodology and Templates will be used for all future eNOTICE Joint Activities, as part of Task 4.2: for the preparation and organisation, debriefing and evaluation. The same format will be used for reporting on these activities. The reports will be included in the Deliverables of Task 4.2.

Furthermore, all the information collected, using the debriefing and evaluation templates, will serve as input for various other eNOTICE tasks, such as strengthening opportunities for policies and recommendations for R&D (Task 4.3); comparison and lessons learnt on optimal allocation of resources and optimisation of investments (Task 4.4).

This Deliverable concludes with lessons learnt, general findings and a description of the way forward.

Tables and figures

During the project, all eNOTICE consortium partners will organise such activities in which they open up their core activities such as multidisciplinary field exercises, table top exercises, trainings, serious gaming and simulations to external partners, such as EU R&D projects, industry, policy makers and other practitioners. These realistic settings of real-life situations will provide unique opportunities for the identification and development of user-driven technological solutions, e.g. through the identification of genuine user's needs, technical testing, validations, demonstrations, focus groups, etc.

Table 1 Joint Activity

Table 2 Types of exercises

Table 3 Exercise Roles and Responsibilities

Table 4 Scenario Roles and Responsibilities

Table 5 Roles in Incident Management

Table 6 Step-by-Step Approach to developing and using scenarios

Table 7 Overview of the sources

Figure 1 Three lines of actions

Figure 2 Structure of the methodology and templates

Figure 3 HSEEP/FEMA Exercise cycle

Definitions

CBRN Training Centre - eNOTICE uses the following instrumental definition of CBRN Training Centres:

CBRN Training Centres

A CBRN Training Centre is a civil or military organisation that provides education and training in the field of public safety and security. The Training Centre can be monodisciplinary, such as fire fighting, medical, police or military academy and/or multidisciplinary, including incident/emergency/disaster management. Education and training covers the thematic areas Chemical, Biological, Radiological and Nuclear.

eNOTICE focus

The eNOTICE project focuses on those Training Centres with a CBRN thematic capacity and corresponding infrastructure to organise exercises for first responders or civil protection practitioners such as demonstrations, tests, table tops, field exercises, simulations and serious gaming.

eNOTICE ambition

One of the ambitions of the eNOTICE project is to promote these Training Centres as a facilitator for Innovation, Research and Development through their exercises which can be joined for the purpose of observation to obtain a better understanding of end user needs and requirements, for technical testing, technical and scientific validation and demonstration to a broad audience.

eNOTICE rationale

The combination of the Training Centres' network of practitioners, their available infrastructure and their annual program of practical training and exercises provides for unique opportunities for R&D solution providers to observe and participate in real case scenarios, to engage structural collaboration with practitioners and end users and to strengthen mutual understanding.

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1 Introduction

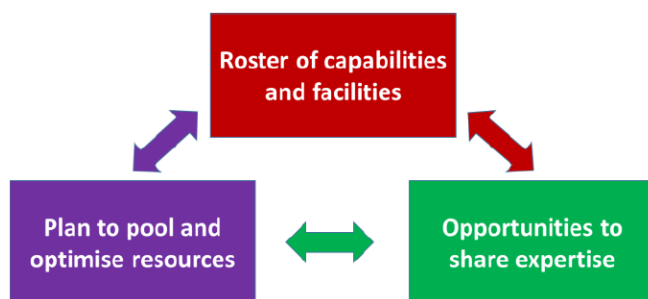
1.1 Overall objectives of eNOTICE and scope of WP4

The objective of the eNOTICE project – European Network of CBRN Training Centres is to build a dynamic, functional and sustainable pan European network of CBRN Training Centres, testing and demonstration sites (CBRN TC), aiming at enhanced capacity building in training and users-driven innovation and research, based on well-identified needs.

eNOTICE seeks to improve European preparedness, resilience and incident response to CBRN attacks and emerging threats through close multi- (stakeholders) and single-discipline (practitioners) interactions. 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.

To set up such a network that is both efficient and responsive of the needs of different security actors, several lines of action will be followed within the five-year timeframe of eNOTICE in order to develop a network that will be viable, attractive as well as sustainable. The work programme (SEC-21-GM-2016-2017 – Pan European Networks of practitioners and other actors in the field of security¹) proposes three lines of actions: 1) establish and maintain a roster of capabilities and facilities, 2) organise the best way to share expertise, and 3) plan to pool and share resources with a view to optimise investments. These lines will serve as a baseline for the project (Figure 1) and will be achieved through a mix of activities.

Figure 1 Three lines of actions



¹ European Commission Decision C(2017) 2468 of 24 April 2017, Horizon 2020 Work Programme 2016-2017, 14. Secure Societies - Protecting freedom and security of Europe and its citizens, webpublication at: http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-security_en.pdf

One of the key activities within eNOTICE is the organisation of Joint Activities, which is the main scope of WP4.

The objectives of WP4 are defined in the DoA as followed:

WP4 aims at transforming the WP3 information and communication network into a transactional network, based on sharing of expertise and effective practices and collaboration through the organisation of joint activities between the eNOTICE consortium partners and external partners. WP4 will also identify and encourage opportunities to optimise investments through pooling of resources, and liaise with other networks and policy makers to avoid duplications and to create synergies to align policies and optimise efforts.

Joint Activities can be defined as exercises for first responders or civil protection practitioners organised by a CBRN TC that are opened up to external stakeholders, which allow for the activity to be combined with tests, validations or demonstrations.

The eNOTICE Joint Activities can be seen as show cases to demonstrate the role, contribution and added value of the TC *beyond* their traditional activities, in terms of user driven R&D, enhanced preparedness, improved training capacity and building a community.

During the project, all eNOTICE consortium partners will organise such activities in which they open up their core activities such as multidisciplinary field exercises, table top exercises, trainings, serious gaming and simulations to external partners, such as EU R&D projects, industry, policy makers and other practitioners. These realistic settings of real-life situations will provide unique opportunities for the identification and development of user-driven technological solutions, e.g. through the identification of genuine user’s needs, technical testing, validations, demonstrations, focus groups, etc.

Table 1 Joint Activity

Activity	Joint
Regular training activity of the TC: <ul style="list-style-type: none"> • Field Exercise (LIVEX) • Table Top Exercise (CPX/CAX) • Training • Simulation • Serious Game • Other 	Opened up to R&D partners for: <ul style="list-style-type: none"> • Observation for the identification of end user needs • Testing of tools, technologies, methods etc. under development • Validation of research results • Consolidation of Standard/National Procedures • Demonstration of final research results

Lessons learnt from these Joint Activities will result in recommendations to improve their organisation and output, for optimised resource allocation and for enhanced collaboration both at operational and strategic (policy) level.

1.2 Objectives and scope of Task 4.1

Task 4.1 – “*Elaboration of a methodology and templates for the preparation/organisation, evaluation and follow up of CBRN exercises combined with tests, validations or demonstrations*” is the first building block of WP4 and lays the foundation for the practical organisation of these Joint Activities.

The current Deliverable D4.1 consists of the following structure:

- 1) clarification on the context and objectives (section 1.2);
- 2) clarification on the methodological approach (section 1.3);
- 3) the first draft of the templates (section 2);
- 4) the approach for the future use and continuous improvement of this first draft (section 3).

The objectives of Task 4.1 are defined in the DoA as followed:

Task 4.1 will strengthen the CBRN training capacity throughout Europe, based on the elaboration of a common methodology for the preparation/organization, evaluation and follow up of training exercises. Good practices will provide input and inspiration of the methodology and template, which includes guidelines for writing a scenario and an exercise/test plan and guidance for their implementation (e.g. how to choose the most appropriate activity, table top or full scale exercise, simulation, serious gaming, etc.) A threefold template covers:

- 1) Preparation/organisation: criteria for clear objectives, KPI's for efficient exercises combined with testing, validation and demonstration; guidance for a scenario and a test script;
- 2) A detailed evaluation: evaluating objectives, processes (organisation) and results; identification of lessons learnt and elements for improvement;
- 3) Follow up form: a specific form to list concrete follow up actions to ensure the take up of elements for improvement into needs for further research and development, policy recommendations etc.

Using the templates will oblige organizers and participants to make all the relevant information related to the preparation/ organisation, evaluation and follow up of an activity explicit, in a form that facilitates sharing of information and lessons learnt (incl. comparisons) and planning of follow up actions.

In Task 4.1 a methodology and templates for the preparation, organisation, evaluation and follow up of CBRN exercises will be developed.

The goal is to provide a generic approach, which can be used for any type of CBRN or multidisciplinary exercise, ranging from a standalone activity for CBRN training to exercises combined with testing, validation or demonstration of new methods, procedures, tools,

technology etc. (Joint Activities). Both standalone exercises and Joint Activities are defined in the methodology (see Guidance, p. 28).

These Joint Activities (Task 4.2) are one of the key instruments, chosen to build the network. They are considered as show cases, to demonstrate all possible benefits of a multi-profile participation in CBRN or multidisciplinary exercises: by inviting public safety and security stakeholders to these training exercises, normally exclusively attended by practitioners, a broad range of learning opportunities and possible synergies is expected (see D4.2 for a more detailed description).

Task 4.1 relates to eNOTICE Sub-objective 3.1:

To identify good practices in preparing and organising stand-alone exercises and exercises combined with tests, validations or demonstrations. A standardised effective practice will be implemented based on a threefold template that will be used as a checklist for recording and monitoring the organisation, evaluation and follow up of such activities.

The Methodology and Templates will provide a structured approach to achieve this sub-objective and thus serve multiple purposes. First of all, they will be used for the preparation and organisation, debriefing, evaluation, follow up and reporting of the Joint Activities, organised in Task 4.2. Secondly, they will be designed to collect relevant information for different eNOTICE related tasks: ideas to build the network (Task 2.3), to strengthen the community (Task 2.4), identification of effective practices that can be shared with all other stakeholders (Task 3.1), identification of possibilities to optimise the allocation of resources (Task 4.4).

Using a standardised approach for the organisation of these activities and events is expected to improve the efficiency of the preparation and organisation, as it ensures that all relevant information is made explicit. This way, the information flow of all valuable input into other Tasks is guaranteed (see 1.2.2 Link between Task 4.1 and other eNOTICE tasks).

Moreover, a structured reporting and documenting will allow for lessons learnt to be clearly identified, which increases the visibility of follow up actions. Best practices can more easily be extracted and shared.

Having a harmonised approach will also allow for comparison of results over time, and ensure continuous improvement.

1.2.1 *Structure of the methodology and templates*

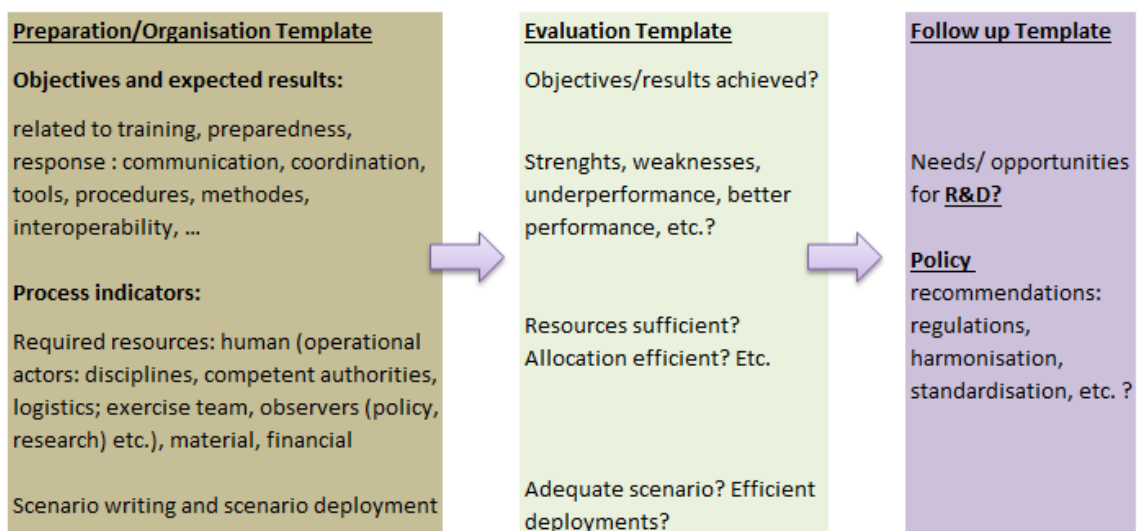
The Methodology and Templates consist of three main components: 1) preparation and organisation; 2) evaluation; 3) follow up (see Figure 2).

The first part consists of clear guidelines on the practical organisation of the exercise, whereby the main components and their respective actions are described. Within the preparation and organisation phase, each exercise starts with the definition of objectives and expected results. Process indicators are defined accordingly, referring to the required resources (human, material and financial). Furthermore, the development and the deployment of the scenario is a crucial part, as it forms the basis on which exercise practices and objectives are built upon and tested.

The evaluation phase mainly consists of the assessment to what extent the objectives or expected results are achieved. Strengths and weaknesses of the exercise can be identified and the performance level of the practitioners is being considered. The resources deployed need to be critically looked upon: were they sufficient? Was the allocation efficient? etc. Furthermore, the applicability and adequacy of the scenario can be evaluated as well.

Lastly, a follow up approach will identify actions to ensure that the needs and opportunities identified during the exercise are taken care of. Is there any need for additional research and development? Are there any recommendations for actions at policy level (e.g. any needs for regulations, harmonisation, standardisation)? etc.

Figure 2 Structure of the methodology and templates



1.2.2 *Link between Task 4.1 and other eNOTICE tasks*

The results of Task 4.1 will serve as input for other Tasks:

- First of all, the Methodology and Templates will be used for the preparation and organisation, evaluation and follow up of the Joint Activities organised within Task 4.2. It will provide the exercise team with guidance and support to organise and document the main steps of the process.
- The Templates will provide a structured approach to identify opportunities to strengthen policies and recommendations for R&D, which is the scope of Task 4.3.
- A structured approach to collect information on the resources and costs related to the exercise will be a part of the design of the templates and should allow for identification, comparison and lessons learnt on optimal allocation of resources and optimisation of investments (cost-benefit analysis) for Task 4.4 – Plan to pool resources and optimise investments for increased CBRN Training Capacity.
- Once the Templates will have gained enough maturity to be considered generic, they will be shared on the web based platform, free to be used by other Training Centres that lack a structured approach. This dissemination of effective practices falls within the scope of Task 3.1 – Dissemination activities to promote and enhance the web based platform and project results.
- The Templates are considered as a ‘live document’ and will be continuously updated in Task 5.2.3 – Evaluation of the methodology and templates. After each Joint Activity, the Methodology and Templates will be revised and updated in line with the identified lessons learnt and points of improvement, agreed upon by the consortium partners.

1.3 Methodological approach

1.3.1 *Identification and collection of relevant documents*

At the start of the task, a discussion among the partners led to agreement on a predefined set of preliminary objectives and principles, to be challenged and evaluated regularly during the Task.

As in first instance, the initial approach was to take advantage of the expertise of all partners and to have all contributors collect and summarise existing good practices, to be merged into an integrated methodology. The profile of the task members, representing different stakeholder profiles – Training Centres, academics, civil and military organisations – was considered as an asset to collect a broad variety of relevant information to be used to elaborate a generic methodology. This was decided as a primary focus: a generic methodology, applicable to different types and different thematic exercises, to be completed with guidelines for specific aspects.

As a first step, all contributors engaged themselves in the collection of relevant documents, examples and existing good practices for each item to be covered by the template: 1) Preparation and organisation; 2) Evaluation (and debriefing); 3) Follow up actions.

The goal was to have a mix of different sources in order to have a sound, balanced and representative basis for both the Methodology and the Templates. The basic principles agreed on were to look for:

- A representative geographical coverage, in an attempt to gather sufficient different national sources to bias possible culture differences and to ensure a generic character;
- The use of international documents, where a generic approach is already included;
- Documents related to civil as well as military practices;
- Applicable for all thematic areas: C, B, R and N;
- Applicable for all types of exercises: table top exercises, field exercises, serious gaming, simulations etc. as well as for mono and multidisciplinary exercises;
- Mix of resources: manual used by the exercise teams of Training Centres, national guidelines (voluntary or mandatory) from competent authorities, scientific literature.

Each contributor mainly focused on those type of sources they are most familiar with, taking into account their own field of expertise, e.g. C, B, R, N, or a specific type of exercise such as table top or field exercise or serious gaming.

eNOTICE partners who did not participate in this specific Task, were also asked to share their methodology or references.

1.3.2 *Integration of the sources / elaboration of a generic methodology and templates*

As in first instance, it was decided that all contributors would provide a summary on their own methodology, combined with a minimum of two additional sources (guidelines from competent authorities and scientific or professional literature). This way, different types of

documents could be compared and merged into one integrated document that would form a generic approach and a tool to be used for the eNOTICE Joint Activities to test the methodology and to continuously learn from each Joint Activity.

During the execution of the Task, it was soon observed that this initial approach of merging all relevant resources at once in one generic methodology would be highly complicated and probably too complex, at the expense of added value and user-friendliness. The difficulties encountered can be summarised as follows:

- Diversity of the type of sources: mandatory versus optional documents, elaborated in detail versus compilation of checklists with little information, referring to national legal requirements in case of Seveso and nuclear exercises, specific requirements imposed by competent authorities, because of their administrative environment, etc.
- It was questioned whether this kind of generic methodology could be used by all the eNOTICE consortium partners, since it became clear that military organisations are bound to the methodology of NATO (BI-SC Collective Training and Exercise Directive (CT&ED) 075-003) and that they would not be able to or allowed to implement any other methodology. Other partners, such as the UK partner WMP face the same problem as they have national guidelines – the Joint Emergency Services Interoperability Programme (JESIP) methodology – which is mandatory.

In search for a solution that would ensure the elaboration of a Methodology and Templates that could provide added value for the organisation of both the Joint Activities and standalone exercises, the aforementioned challenges were taken into consideration and discussed at the Project Meeting that took place in December 2017 in Gurcy.

After a discussion on these stumbling blocks, it was decided to adjust the approach: instead of striving for an integration of all sources into one generic and specific template at once, a more gradual approach was agreed to be more effective.

Step 1:

A generic methodology “*Guidance for the preparation, organisation, evaluation and follow up of Exercises & Joint Activities for disaster management and CBRN preparedness*” was provided as a basic document that will be completed and refined by each of the eNOTICE partners who organises one of the Joint Activities. This first draft is a synthesis of a limited number of documents: 1) FP7 CascEff Deliverable 1.4: Report on scenarios to be elaborated of testing the incident evolution methodology; 2) Practical and methodological guide for the organisation of a disaster exercise, for the attention of local authorities from the Province of Antwerp (BE); 3) Organisation of nuclear emergency plan exercises: practical guide by the

national Crisis Centre of the Ministry of the Interior (BE). The initial draft was completed with information from the French manual for chemical biological and exercises of the Ministry of the Interior². The update was done while using the Guidance and Templates for the report on the Joint Activity organised in Gurcy, 12 December 2017, by the SDIS77.

Step 2:

For the first two Joint Activities (Gurcy (France), December 2017 and Nîmes (France), January 2018), the draft Methodology and Templates will be used only as a basis for reporting by hosting partners of these activities, resp. SDIS77, ARMINES and METU, given the fact that the first draft is under elaboration during the preparation phase of these activities.

Step 3:

From the third eNOTICE Joint Activity on June 19 (organised by UCL in Brussels, Belgium) the draft Templates will be used and updated, refined and completed in accordance with the methodology and insights of the organising team of the respective Joint Activity. From then on, the methodology and templates will be used both as a basis for the organisation and preparation, evaluation and follow up *and* as a tool for documenting and reporting the process.

It was decided not to merge the civil and military approaches into one single, generic document, but to keep them separated and to learn from each other, rather than through observation. The military organisations, JCBRND CoE, WSU, the Italian CBRN School in Rieti, will organise their Joint Activities, based on their own methodology, but will analogously use the eNOTICE methodology as a generic tool to document the process for reporting purposes so that comparison and identification of best practices of each of the Joint Activities will be possible. The first Joint Activity that is organised by one of the military eNOTICE consortium partners will take place in October 2018, in Rieti (Italy).

1.3.3 *Plan of action for the use and continuous improvement of the templates*

Within Task 4.1, thought had to be given to how the Methodology and Templates were going to be applied within the organisation of the Joint Activities during the eNOTICE project and how it will be further refined and updated within Task 5.2.3 – Evaluation of the methodology and templates. This implies that the conditions and boundaries are to be defined on how

² Ministère de l'Intérieur, Direction Générale de la Sécurité Civile et de la Gestion des Crises - DGSCGC, Guide national de référence relatif aux risques chimiques et biologiques

continuous evaluation on the (use of) the templates will be possible. The main challenges can be summarised as follows:

- How to follow up the use of the methodology and templates?
- What will be the predefined criteria to evaluate the use?
- How to identify opportunities for continuous improvement?

For each Joint Activity, organised by a member of the eNOTICE consortium, the most recent version of the Methodology and Templates will be provided. The organiser of every next Joint Activity is asked to: 1) use these guidelines to support the organisation of their JA; 2) sufficiently document the process of organising the JA; 3) revise, update, complement, improve and refine the initial document.

After each Joint Activity, a discussion on various aspects of the (use of the) Templates will take place during the debriefing session with the eNOTICE partners and invited experts. This way various aspects, such as the applicability, relevance, efficiency, etc. of the methodology are monitored and evaluated. The following set of questions is an example of how the discussion will be framed:

- **Usability:** Was it practical to use? Were there any difficulties in interpreting or implementing the template? Was it user-friendly?
- **Completeness:** Are any additions needed? Were the steps sufficient as guiding principles? Are there any steps or aspects that need to be added, elaborated or removed?
- **Applicability:** Was it applicable for the type of exercise that was organised? Can the same methodology be used for organising different types of activities? Is it necessary to differentiate certain aspects according to the type of JA?

It is however expected that the discussion on the methodology and templates will raise awareness of other aspects as well.

These questions will be included in the debriefing and the evaluation forms (see below, TEMPLATES on Evaluation and Debriefing Forms).

The collected feedback will be evaluated in Task 5.3.1.

2 First draft of the Methodology and Templates

In the following pages, the first draft of the Exercise Methodology and Templates is included.

This draft is a synthesis of the following sources:

- 1) FP7 CascEff Deliverable 1.4 (2016): Report on scenarios to be elaborated of testing the incident evolution methodology;
- 2) Practical and methodological guide for the organisation of a disaster exercise, guidance to support local authorities from the Province of Antwerp (BE);
- 3) Organisation of nuclear emergency plan exercises - practical guide by the national Crisis Centre of the Ministry of the Interior (BE). This document is a summarised version of a IAEA manual³ for the organisation of nuclear exercises.
- 4) Guide national de référence relatif aux risques chimiques et biologiques, Ministère de l'Intérieur, Direction Générale de la Sécurité Civile et de la Gestion des Crises - DGSCGC

³ IAEA EPR-EXERCISE (2005), Preparation, Conduct and Evaluation of Exercises to Test Preparedness for a Nuclear or Radiological Emergency.

Guidance, incl. Templates & Checklists for the preparation, organisation, evaluation and follow up of Exercises & Joint Activities for disaster management and CBRN preparedness

- Chronological steps
- Guidance
- Checklists & Templates

I. Overview of chronological steps per phase

Chronological steps for the preparation and organisation of Exercises & Joint Activities for disaster management and CBRN preparedness

Main steps PREPARATION General	Scenario	Logistics	Communication	Documentation
1. Describe context	Define relevant aspects to take into account for the scenario	Define logistic requirements related to the scope, objectives, number and profile of the participants, ...	Announce the X (open for other?, impact for the neighbourhood, ...)	Make the context and objectives explicit in a Master Exercise Document
2. Define objectives , expected results and evaluation criteria				Prepare evaluation templates for different categories of participants and observers + Follow up templates
3. Define the type of exercise and corresponding needs	The type of exercise will shape the scenario	Define logistic requirements related to the type of the exercise		List of logistic requirements
4. Identify roles	Incl. scenario roles			
5. Plan the preparation and define a timeline Incl. the strategic period	Incl. for the elaboration of the scenario	Set the date (summer/ winter) according to the availability of resources (material and financial) only in particular periods of the year		To do list: actions + owner + timing
6. Define a cost calculation method	Costs related to the scenario elaboration? Budget will determine the scenario			Cost calculation sheet
7. Select the scenario	Write the scenario:	Define logistic		Exercise scripts, including Major

	<p>evolution of the incident, roles, etc.</p> <p>Define safety requirements and measures adapted to the setting and scenario</p>	<p>requirements related to the scenario</p>		<p>Event List</p> <p>Instructions for (key and supporting) actors</p> <p>Safety instructions (target group?)</p>
8. Define logistic requirements		<p>Logistic requirements for the venue, such as catering etc.</p>		
9. Elaborate a communication strategy, incl. conferences			<p>Communication to the public</p>	<p>Communication Plan (internal + external)</p>
<p>A template on the Example of an Informed Consent can be found as well, to meet the legal and ethical requirements for such a project. This documents is handed to all external participants as a confirmation that they are informed about the objectives and presumptions of participation in the exercise. Special attention goes to the voluntary participation of the participants and their</p>				

<p>(legal) rights, confidentiality of the information collected during the activity and the processing of personal information. All external participants are asked to sign this informed consent before the start of the exercise.</p> <p>Document every step</p>				
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Main steps ORGANISATION General	Scenario	Logistics	Communication	Documentation
1. Set up of the location		= preparing logistics for the exercise		
2. Set up of a reception		= preparation for welcoming all participants		
3. Start-up briefings : - Safety - Exercise			Briefing press	- Safety instructions - Exercise instructions (practitioners, actors) - Instructions for observers
4. Start exercise	Roll out of the script/scenario			- Evaluation forms for observers
5. Suspension rules and termination				
6. Post-exercise debriefing (hot wash debriefing)		Possible lack identified (feedback form)	Possible lack identified (feedback form)	- Evaluation forms for observers - Evaluation forms for practitioners

Chronological steps for the evaluation (debriefing) of Exercises & Joint Activities for disaster management and CBRN preparedness

Main steps EVALUATION (debriefing) General	Exercise	Scenario	Logistics	Communication	Documentation
1. Define the type of debriefing and evaluation (hot, post in depth, consultation stakeholders)	Exercise objectives/scope: - Procedures? - Coordination? - Communication?	To be evaluated? Criteria: Efficient ? Goal-oriented?	To be evaluated? Criteria: Appropriate? Cost-efficient?	To be evaluated? Criteria: Successful?	To be evaluated? Criteria to be determined, such as: <ul style="list-style-type: none"> - Complete? - User friendly? - Available - Appropriate format?
2. Identify evaluators and distinguish different categories/roles if relevant	Overview of types of observers, based on their profile (function, organization, reason for attending the X): practitioners, external experts, stakeholders, citizens....				
3. Prepare evaluation forms	Use the pre-identified evaluation criteria (see objectives and expected results) for evaluation forms, to be distributed among the observers Create different Teams (if needed) assigning to each of them, a specific thematic area in order to cover the full spectrum aspects of the evaluation criteria				

Chronological steps for follow up of Exercises & Joint Activities for disaster management and CBRN preparedness

Main steps FOLLOW UP General	Exercise	Scenario	Logistics	Communication	Documentation
Identify actions for improvement during the debriefing and evaluation	Identify concrete actions for each aspect (if relevant)				
Identify owners	Identify owners for each concrete action				
Make a time plan	Define deadlines for each concrete action: for follow up evaluation, for realisation				
Identify required resources	Identify the necessary means for each concrete action				

II. GUIDANCE/GUIDELINES

Introduction

These guidelines provide a manual for the preparation and organisation, debriefing and follow up of a CBRN and disaster management exercise. For each chronological step, clarification and practical tips are provided, based on best practices. This enables the organisers of the exercise to follow a structured approach so that lessons learnt are more thoroughly extracted and output is being gathered and actively followed up within the organisation of future exercises.

Input for the steps, guidance and templates is based on a balanced mix of relevant documents. This initial draft is a synthesis of the following sources:

- 1) FP7 CasEff Deliverable 1.4 (2016), Report on scenarios to be elaborated of testing the incident evolution methodology;
- 2) Practical and methodological guide for the organisation of a disaster exercise (guidelines for local authorities from the Province of Antwerp (BE));
- 3) Organisation of nuclear emergency plan exercises - practical guide by the national Crisis Centre of the Ministry of the Interior (BE). This document is a summarised version of a IAEA manual⁴ for the organisation of nuclear exercises.
- 4) Guide national de référence relatif aux risques chimiques et biologiques, Ministère de l'Intérieur, Direction Générale de la Sécurité Civile et de la Gestion des Crisis - DGSCGC

The format of chronological steps and guidance is inspired on the HSEEP/FEMA Exercise cycle.

⁴ IAEA EPR-EXERCISE (2005), Preparation, Conduct and Evaluation of Exercises to Test Preparedness for a Nuclear or Radiological Emergency.
740521 - eNOTICE: D4.1 –Templates for CBRN exercises



Figure 3 HSEEP/FEMA Exercise cycle
 (Homeland Security Exercise and Evaluation Program, 2013, p. 1-2)

This cycle is based on continuous improvement, an ongoing effort to improve services, or processes. The chronologic phases of preparation, organisation, evaluation and debriefing, and follow up, correspond to the HSEEP/FEMA phases as follows:

- Design and Development ⇨ Preparation
- Conduct ⇨ Organisation
- Evaluation ⇨ Evaluation and debriefing
- Improvement planning ⇨ Follow up

Guidance for the X PREPARATION

1. Describe the context

The context refers to the reason why this exercise is organised, such as:

- A **standalone exercise** organised by the Training Centre for training purposes as part of their own programme of activities, such as:
 - Mandatory training as part of the curriculum for rescue services
 - Examination of students
 - ...

The Exercise Team of the Training Centre is in charge of every aspect (commissioning body as well as executor)
- A **standalone exercise** organised by the Training Centre, ordered by an external party - competent authority, industry, research organisation, etc. - with its own specific objectives, such as:
 - A competent authority ordering a Seveso or nuclear exercise (based on their legal responsibility)
 - A private company, research organisation or research project ordering an exercise for testing, validation, demonstration of new technologies, equipment, devices etc. (as part of the development process)
 - ...

The Exercise Team of the Training Centre is mainly executor, the commissioning body defines the context
- A **Joint activity**: an exercise organised by the Training Centre and joined by an external party, each having their own, specific objectives, such as:
 - Mandatory training for practitioners as part of the regular program of the Centre, opened up to an industrial or research partner who wants to test, validate, demonstrate new Technologies
 - ...

Both the Exercise Team and the organisation who join have their own objectives. The external partner joins an existing exercise.

2. Define the objectives, expected results and evaluation criteria

A shared vision is needed by all the actors involved in order to make sure that everyone is on the same line. In order to ensure efficiency, a result oriented preparation and organisation and a focussed debriefing/evaluation and follow up, objectives, expected results and corresponding evaluation criteria need to be clear and explicit from the start.

Objectives

To determine the general objectives, it is necessary to make explicit what is the general goal of the exercise, such as:

- What needs to be validated?
- What needs to be tested (in correspondence to the means)?

Objectives are preferably SMART-ly defined. **SMART** is the acronym for:

- Specific: target a specific area of improvement;
- Measurable: suggest (quantifiable) indicators of progress;
- Achievable: define objectives that are practically manageable, based on the current operation and knowledge;
- Relevant: make sure the objectives in correspondence to the overall vision and strategy of the organisation;
- Time-bound: indicate a timeframe in which the objectives need to be achieved.

Some **points of attention** when setting up the objectives are:

- Lessons learnt from previous exercises should be taken into account;
- If relevant, specific objectives can be defined for distinct groups of participants, such as monodisciplinary objectives.

Expected results

Expected results concretize the objectives. Each objective can have multiple expected results.

Evaluation criteria

Identifying evaluation criteria from the start can serve as a coherence check if objectives are clear and correctly understood by all participants. In alignment with the SMART-criteria, the expected results should also be achievable and realistic.

See the [TEMPLATES Objectives, Expected Results and Evaluation Criteria](#).

3. Define the type of exercise/activity and corresponding needs

When the context and the objectives are clear, the type of exercise should be determined. Some types of exercises are better adjusted to achieve certain objectives than others. The type of exercise should thus be justified by making sure all objectives that are aimed for are practically manageable to be executed within this kind of exercise, and that it is the most efficient way to do this. A brief overview of the various kinds of exercises is given below:

Table 2 Types of exercises

Type of exercise	
Discussion based (or functional) exercises	Single or multi-agency activities designed to evaluate capabilities and multiple functions using a simulated response (simulated deployment of resources and staff).
<i>Command post Exercise (CPX)</i>	Simulation with focus on command and coordination structures, information flow and means of transmission etc.
<i>Table Top Exercise (TTX)</i>	Simulation with focus on procedures and structures related to collaboration and mutual communication between the services involved.
Operation-based / full scale / field exercises	Single agency or multi-agency/multi-jurisdictional activities involving actual deployment of resources in a coordinated response, as if the real incident had occurred (mobilization of units, personnel and equipment in a realistic environment).
Serious game	A simulation of an actual or assumed real-life scenario that is designed to test the participant's insight in the situation, its decision process and use of procedures.
Simulation	A virtual medium which allows for replicating real detectors that can be used to detect simulated sources that mimic live situations.

Thematic types:	
<i>Monodisciplinary</i>	A single discipline practices one or more parts of the tasks assigned to it.
<i>Multidisciplinary</i>	Several disciplines practice one or more parts of the tasks assigned to them. The emphasis is on collaboration between them.
<i>CBRN</i>	To practice the preparedness and response of situations in which chemical, biological, radiological or nuclear hazards may be present, accidentally or intentionally (warfare, including terrorism).
<i>Seveso</i>	Mandatory exercises subject to Seveso regulations.

4. Identify roles

Three main categories of roles can be distinguished, corresponding to: 1) responsibilities related to the organisation of the exercise, 2) the scenario and 3) to incident management functions. A clear division of roles makes sure that everyone knows what to expect from each other and who is accountable for what task.

Table 3 Exercise Roles and Responsibilities

Role	Responsibility
Exercise director or manager	Has the overall responsibility for all aspects related to the organisation of the exercise. Has a clear mandate to do so. Manages and supervises the exercise team and the whole process.
Exercise (project) team	Depending on the complexity of the exercise, recurrent functions in the exercise team are: the exercise coordinator, operators, facilitators, evaluators, observers, (safety) controllers, etc.
Exercise coordinator	The person responsible for the concrete planning, conducting and evaluating exercise activities and for the cooperation between internal and external entities.
Evaluator(s)	Persons who observe and evaluate the exercise without taking an active part in it. They are chosen for their specific expertise related to the theme and the goals of the exercise. They use evaluation documents or templates to document their observations and feedback.
Observer(s)	Their task is to observe and share their observations, without interpretation or evaluation.
(Lead evaluator)	(If there are many evaluators, assigned for specific aspects of the exercise, a lead evaluator can be appointed. (S)he is in charge of collecting all the feedback and their integration into a global evaluation.)
Exercise Operators	Operators are in charge of operational aspects of the organisation of the exercise. They play an important role in the logistic preparation of the exercise.
Safety controller	The person in charge of occupational safety and health matters in the preparation and execution phase of the exercise.

A template for the [Division of Exercise Roles](#) can be used to retain an overview of the participants and their responsibilities related to the organisation of the exercise.

Scenario roles

Scenario roles are different from the exercise roles in that they do not actively participate in the organisation of the exercise. These are the main roles that can be distinguished in the practical execution of the scenario steps.

Table 4 Scenario Roles and Responsibilities

Role	Responsibilities
Participants	Persons who participate actively in the exercise as players in the scenario. They can be key actor or supporting actors.
Key actors	Persons playing an active role in the assessment, prevention, planning, preparedness, response or recovery actions presented in the scenario. They initiate actions and by doing so determine the actual course of actions on the day of the exercise. They participate in Discussion-based as well Operation-based exercises.
Supporting actors	Mostly volunteers, simulating a specific role in Operation-based exercises and contributing to a realistic scenario (victims, neighbours, people passing by, etc.).

A template for the [Division of Scenario Roles](#) can be used to retain an overview on the contact details of participants, key actors and supporting actors that take on a role in the exercise scenario.

Roles in incident management

General roles that come forward in incident management are also recognisable within CBRN or disaster management exercises. These roles relate to all aspects concerning risks and incidents.

Table 5 Roles in Incident Management

Role	Description
Risk Owner	The party that creates the risk, e.g. industry, festival organizer, building owner. In case there is no private risk owner the Competent Authority is the risk owner: e.g. municipality or province for natural reserves, county for rivers, etc.
Licensing Authority	Government body in charge of providing the Risk owner a license (environmental permit, building permit, license to operate, etc.).
Competent Authority	Authority liable from a legal perspective.
Incident Response Team (Rescue)	All public agencies involved in incident response: - fire rescue services; - police;

Services)	<ul style="list-style-type: none"> - medical services; - logistic services; - civil security services; - military/defence forces; - specialised services, etc.
Emergency Planning Services	Organisation(s) in charge of developing external emergency plans for the authorities and Rescue Services
Specific roles	<p><i>Specific functions can be the object of observation of evaluation during the exercise, such as:</i></p> <ul style="list-style-type: none"> • <i>An information officer</i> • <i>Anticipation officer (FR)</i> • <i>Safety advisor</i> • <i>Person responsible for a crisis management tool (strategic) or an incident evolution tool (operational)</i> • <i>...</i>

A template for [Roles in Incident Management](#) can be used to describe the organisations and contact persons that fulfill each respective incident management role.

5. Plan the preparation and organisation and define a timeline

The preparation and organisation of an exercise involves various steps that need to be taken by different actors. To ensure everything is been taken care of, sufficient attention needs to be paid to **listing the steps** and identifying who takes care of which tasks.

Preparation

To create an overview of what needs to be done in the preparation phase, a template [Timeline Todo's](#) for the preparation of the exercise can be used to sum up the actions that need to be taken, together with the corresponding time frame, the owner of the action, a brief description of the action and the participants/contributors that are involved.

Organisation

On the day of the exercise itself, the actions that need to be taken are summarised as [Todo's](#). This gives an overview of the entire course of the day and its different facets (reception, briefing, start, debriefing etc.). In analogy with the preparation of the exercise, it mentions the timing, owner of the action, a brief description of the action and the participants/contributors that are involved.

6. Select the scenario

Scenario definition

The scenario is a core element of the exercise, as it describes the events that will happen – which corresponds to the (type of) actions that need to be taken by the practitioners. The scenario should make sure that it allows for the objectives to be tested and validated. A general definition can be phrased as follows:

“A story of possible future events, with some degree of uncertainty. The scenario can be based on real events, complemented with fictional story lines based on assumptions that are not necessarily predictive and thus differ from forecast and prognoses” (CasEff, 2016).

Criteria for qualitative scenarios

As the scenario serves as the foundation for the further course of the exercise, it is recommended to pay sufficient attention to its establishment. Therefore, a few criteria can be distinguished that need to be met in order to ensure the scenario is qualitatively established and capable for the testing and validation of the exercise objectives (CasEff, 2016):

- **Consistency:** the script is not self-contradictory;
- **Plausibility:** the scenario is likely to occur, i.e. it might happen (without necessarily being predictable);
- **Credibility:** circumstances, consecutive steps and any changes in them should be logical, and it is important to understand why they occur;
- **Relevance:** the scenario relates to the objectives of the exercise.

These four elements should continuously be kept in mind when creating the scenario.

Scenario writing

Firstly, the theme and place of the scenario should be defined, as they provide a general framework for the establishment of the scenario. These two elements should be aligned:

- **Theme:** should relate to the objectives of the exercise; be dependent on the inventory of risks; be based on the perceived need of a crisis;
- **Place:** should relate to the objectives of the exercise; take into account the danger zones in mapping the risks; keep in mind the availability of the place (for the duration of the exercise and impact on the daily operation of the organisation).

After the consensus about the theme and place of the exercise is achieved, the further elaboration of the script can be done by the exercise project team. The main axes of scenario writing related to content, according to CasEff (2016) can be summarised as:

- Selection of **events** corresponding to the theme **in a Major Event List**;
- Selection of **incidents**;
- Selection of **actions**;

- Identification of the **roles and functions** of the participants.

Complementary to creating a shared vision about the main axes of the scenario, the actual scenario writing is to be executed by the exercise project team. The main steps in scenario writing can be summarised as followed in analogy with Wessberg (VTT User Manual):

- **Scoping the scenario field:** definition of the purpose, identification of problems to be addressed, focus of the scenario, theme, etc.;
- **Identification of key factors**, such as key decision factors, drives and barriers;
- **Analysing key factors and their dependencies:** ranking the driving forces on the basis of their significance and degree of uncertainty and identifying logics to deal with uncertainty;
- **Scenario script generation:** writing the story line as a coherent and realistic scenario;
- **Scenario transfer to paths:** linking the scenario to the initial purpose and communicate to the parties involved.

Besides these chronological steps, the following areas of attention for scenario writing can be identified from literature (CascEff, 2016).:

- Create scenarios that are **trustworthy and plausible** (E. Borglund and L-M Öberg, 2015);
- **Participatory process:** involve both the actors and players and the exercise organisation team in the writing process of the scenario (E. Borglund and L-M Öberg, 2015);
- **Goal-orientation:** the goal of the activity where the scenario is used for, should be constantly kept in mind (E. Borglund and L-M Öberg, 2015), e.g. to determine the level of complexity (do not make it more complex than necessary to obtain the goal);
- **National differences:** if several countries are involved, national differences related to incident management should be taken into account in the scenario script (E. Borglund and L-M Öberg, 2015).

A practical framework for a step-by-step approach in developing and using a scenario is provided by Wilson & Ralston (2006). This involves seventeen steps (see Table 6 **Fout! Verwijzingsbron niet gevonden**.below). Each step in this process is a critical point of adding value and exposing mental models and assumptions during the scenario project (CascEff, 2016).

Table 6 Step-by-Step Approach to developing and using scenarios
(Wilson & Ralston, 2006)

Step 1	Develop the case for scenarios	Step 10	Assess the importance and uncertainty of forces and drivers
Step 2	Gain executive understanding, support and participation	Step 11	Identify key “axes of uncertainty”
Step 3	Define the decision focus	Step 12	Select scenario logics to cover the “envelope of uncertainty”
Step 4	Design the process	Step 13	Write the story lines for the scenarios
Step 5	Select the facilitator	Step 14	Rehearse the future with scenarios
Step 6	Form the scenario team	Step 15	Get to the decision recommendations

Step 7	Gather available data, views and projections	Step 16	Identify signposts to monitor
Step 8	Identify the critical forces and drivers	Step 17	Communicate the results
Step 9	Conduct focused research on key issues, forces and drivers		

Lastly, thought needs to be given to any **practical concerns** that need be taken into account when establishing a scenario. The type of practicalities depends on the type of exercise and the scenario. A few examples are:

- For the practical implementation of the scenario, concerns should be taken into account that are related to feasibility, safety, the well-being of figurants (in particular with extreme weather conditions), certain technical aspects;
- If necessary to deploy personnel or material on beforehand, it should be spread in time and planned within a regular intervention timeframe;
- The number of personnel and means, as well as the corresponding costs, should be taken into account;
- The organisers of the exercise have to dispose of their own communication tools (radio posts, headphones, group chat,...) that are separate from the operational communication within the exercise.

Confidential part of the scenario

Parts of the scenario might need to stay confidential, such as some first response procedures in the case of a standalone exercise or procedures or product information in case of testing or validation in a Joint Activity. Both practitioners and research and industrial partners might express that request. This is especially the case for CBRN training. This needs to be discussed as part of the preparation of the scenario and clear arrangements need to be made in order to ensure confidentiality as requested.

7. Define a cost calculation method

The costs that are involved in the organisation of an exercise have to be estimated as soon as possible. It is therefore important to have a cost calculation method from the start, that takes into account both the direct costs (e.g. person months spent for the preparation and organisation of the exercise, equipment that needs to be bought specifically for the exercise, catering, etc.), as well as the indirect costs (infrastructure and material used for the exercise).

To keep track of all costs that are made or estimated, it is recommended to work with a cost calculation method – and to gather all costs that are (to be) made within each task in a [Cost Calculation](#) sheet.

8. Define logistic requirements

Defining the logistic requirements implies the search (and application) of all the necessary material for proper execution of the exercise and making sure any technical and operational malfunctions are resolved.

The main categories for which logistical support is needed and some practical examples, can be divided as follows:

Setting up the decor

In the beginning of the day, and if needed already the day(s) before the exercise, the decor of the scenario should be established. This should ensure the practical execution of the scenario is possible, and that anything related to safety is taken care of.

Decor for scenario: Car wrecks; Smoke pot; ...

Securing the area: demarcation ribbons; a canvas to block the sight; ...

To welcome the participants, a **reception** is needed: parking spaces; tent(s) for reception; provisioning (refreshments, food,...); ...

What is needed to further deliver to the participants, is highly depended on the type of the exercise. Some examples are:

- Face paint for the figurants;
- Badges and pinafores;
- ,...

Requirements related to **accommodation:**

- On-site: key to dormitory, WiFi access, instructions about house rules,...
- Off-site: shuttle service between hotel, information about dinner,...

For the execution of the exercise/ roll out of the scenario

Before the start of the exercise, any **technicalities** need to be tested in order to avoid any technical problem that might hinder the exercise:

- Radio check;
- ,...

It is recommended to prepare a checklist with all logistic requirements that are identified during the preparation phase of the exercise.

A template on [Logistic requirements](#) can be used to define all material and equipment is needed, and to define who is responsible for delivering this, within which timeframe and what the costs are.

9. Define a communication strategy

The exercise planning and execution implies a lot of alignment to ensure all actors and stakeholders are and stay on the same page. Both an internal communication strategy (communication flows between participants of the exercise), as well as an external communication strategy, is needed.

Internal communication

During the preparation phase, internal communication often belongs to the responsibility of the Exercise Director.

During the exercise, the exercise project team has a twofold task, which includes monitoring the evolution of the exercise and an evaluation task. To fulfil this task, an organisation structure is needed which covers:

- The communication between different members of the exercise project team;
- The frequency of consultation between members;
- The means of communication.

The exercise project team has to dispose of their own communication tools (radio posts, headphones, group chat) that are separate from the operational communication within the exercise.

External communication

For external communication, a distribution of tasks and modalities need to be defined.

- Who is responsible for communication? (e.g. government, company, intervention service)
- Who is the target group? (e.g. media, local residents, employees)
- How is the communication ensured? (e.g. press release, press conference, door-to-door paper, information session, website,...)
- When should be communicated? (e.g. before the exercise, the day itself, right after the exercise)

The principles (and content) of the communication (before, during and after the exercise) to the outside world should be prepared in correspondence with the overall goals of the exercise and the organising body. The exercise project team takes the initiatives for providing appropriate information towards the local residents and passing citizens.

Strategy for the local residents/passing citizens

The information for local residents/passing citizens serves to enable them to:

- Understand the turmoil that arises through the exercise;

- Being ensured that one doesn't run any risk, despite any irregularities that can be observed;
- Know whether or not they are involved with the scenario of the exercise;
- Be informed about the preparations so that they can organise themselves to experience as little nuisance as possible;
- Dispose of a phone number for additional information.

Strategy for the media

In case of a larger scale exercise, it is recommended to invite the media. When they are being overlooked, there is a risk that they will disturb or interrupt the exercise by appearing unexpectedly. The compilation of a press file or, if necessary, the organisation of a press release serves to:

- Present the exercise;
- Explain the perimeters and indicate available areas for them during the exercise;
- Ask for their contribution in informing the residents/citizens;
- Provide all additional details in relation to the exercise.

The communication strategy is defined in advance by the exercise project team. Necessary steps related to the communication strategy include the composition of relevant documents, the compilation of the press release (timetable, outline, details of participating services, useful information for better understanding) to inform journalists. It is however recommended to act cautiously in sharing information, to make sure that the surprise element of the exercise is not being influenced.

Communication to stakeholders

The exercise might be open for participation or observation to external experts and organisations.

Information on the objectives, the type of exercise, the scenario etc. are relevant for them to consider attending the exercise.

In order to ensure uniform communication to all external stakeholders, a template in the form of a [Example of a **General Information Sheet**](#) and a [Practical Information Sheet](#) can be used.

For the organisation of Joint Activities, a variety of partners are involved. To manage the registration, the use of a template for registration is recommended, such as the [Example of a Registration **Form for eNOTICE partners**](#) and [Example of a Registration **Form for external participants**](#).

A template on the [Example of an **Informed Consent**](#) can be found as well, to meet the legal and ethical requirements for such a project. This documents is handed to all external participants as a confirmation that they are informed about the objectives and presumptions of participation in the exercise. Special attention goes to the voluntary participation of the participants and their (legal) rights, confidentiality of the information collected

during the activity and the processing of personal information. All external participants are asked to sign this informed consent before the start of the exercise.

10. Document every step

List of required documents

To evaluate and follow up the exercise and to be able to extract lessons learnt of the entire process or setting up an exercise, it is important to sufficiently document during the preparation, organisation and execution.

Relevant documents are listed here (to have an overview of all required documents to prepare in advance) – clarification is given below for the corresponding aspects; as well as examples of templates.

Preparation of the exercise

Document	Content
Master Exercise Document	<p>The Master Exercise Document is a summarising and structured document, in the form of a table of contents, that is provided before the start of the exercise and aims to determine a common framework. It should consist of the following information:</p> <ul style="list-style-type: none">• Name of the exercise;• General (and specific) objectives;• Period and/or day of the exercise, if possible with mention of the duration;• The meaning of the badges, coloured demarcation ribbons, recognition of evaluators and their roles,...;• Code words (if applicable);• Modalities of the start, interruption, restarting and end of the exercise (By whom? How?);• Expected reaction in case of a factual incident (Who to inform? To suspend or terminate the exercise?);• Behaviour of the press and essential elements of the communication strategy;• Rules for phasing out the process, take down the decor;• Rules for debriefing (Who takes part? Who leads? Where? When?);• Measurements taken for insurance of the participants.
List of logistic requirements	A listing, that can take the form of a checklist (see Template on Logistic requirements), of all materiel and equipment that is needed for the execution of an exercise.
To do list (actions + owner + timing)	While elaborating the scenario, an inventory of all tasks that need to be executed is elaborated. It should be specified by whom and in which time frame the task needs to be elaborated.
Cost calculation sheet	See above
Exercise scripts:	

Major Event List (MEL)	<p>This table gives an overview of each event in the scenario, which person or service is involved and which actions are expected by each coordination structure and discipline.</p> <p>The multidisciplinary composition of the steering committee is of importance in the elaboration of the MEL, as each representative per discipline will explain in what way needs to be acted if one is confronted with this event. Multidisciplinary aspects are provided by the steering committee; monodisciplinary aspects are provided by the discipline involved.</p> <p>The realisation of the general MEL is based on the technical MEL as a basis, supplemented with the reaction pattern of the participants. The necessary inserts are elaborated and put into the technical MEL.</p>
Technical Master Event List (TMEL)	A document that allows for testing different exercise objectives, as some objectives might not be compatible with each other. The document gives a schematic, step-by-step overview of the main twists within the technical scenario. It is a tool for the exercise project team to follow up the exercise and make adjustments if needed.
Instructions for (key and supporting) actors	
Safety instructions	
Communication plan	

Evaluation/debriefing of the exercise

Document	Content
Safety instructions	<i>To be added</i>
Exercise instructions (practitioners, actors)	<i>To be added</i>
Instructions for observers	<i>To be added</i>
Evaluation forms for observers	e.g.: See the template on Evaluation and Debriefing , as an example of the evaluation on observations made as regards to input for eNOTICE related Tasks.
Evaluation form for practitioners	e.g.: See the template on Evaluation of the Exercise , which is an example for a Seveso Exercise.

Follow up of the exercise

Document	Content
Follow up form	e.g. See the template as an Example of a Follow up Form , used for the follow up within a research project.

Guidance for the X ORGANISATION

1. Set up of the location

On the morning of the exercise, or if needed the day(s) before the exercise, all equipment and material need to be put in place. The practical organisation involves both the transport of the equipment to the exercise location, as well as setting up the decor and making sure all equipment is operational.

Material of the exercise

In alignment with the *Todo's*, all preparations are made (on the day of the exercise, or if necessary the day before) to transport the necessary material and equipment of the participants.

- The timing/**precise moment** on which the material is transported is based on: the starting time of the exercise, the nature of the material used, the possible protection for theft, vandalism, etc.
- **Testing of the equipment** is recommended to avoid any interruption the scenario or organisation of the exercise due to defects.

Setting up the decor

The site of the exercise is equipped according to the script of the scenario and to the ground maps of the forms of evaluators and figurants.

Outside:

- **Demarcation of the terrain:** if necessary (for safety, continuation of activities), the practice zone is clearly demarcated. If there is any fear for curiosity of road users, a canvas to block the sight of road users can be considered, so that any accidents can be avoided.
- **Signage:** the outside parking zones should have signs. If necessary, the traffic in the environment should be redirected to avoid any hinder.

Inside:

- To create a simulation, the **material** (car wrecks, exercise tank) is positioned;
- **Tents or classrooms** are decorated as waiting- or assembly rooms;
- If the weather circumstances are worse than expected, **additional protective equipment** (coats, blankets) are foreseen.

2. Set up of a reception

Welcome point

A **welcome point**, for registration, should be established close to the exercise terrain.

- This should be clearly indicated by **signs** and an **access road** should foresee that one can smoothly enter;
- If necessary, the organisation can arrange **shuttle services** between the parking zone and this mandatory access point;
- The planned supply will be transported and stored to the agreed **assembly point(s)**;
- An **emergency post** is set up on the terrain.

Reception

Everyone who signs up at the welcoming point, will be guided to the corresponding places, according to their type of participation.

- A **dressing room** is available for use;
- The secretary of the welcome point keeps a **list of attendees**;
- Depending on their function during the exercise, a **badge** and **pinafore/vest** is handed;
- The **figurants** receive the **information** necessary to play its role: its fictive identity, its placement, what he/she needs to do/say, the attitude to be taken, the type of injuries and possible development of them;
- The figurants that have to be **(face) painted**, are guided to the workplace of the make-up artist. In this room, showers and material are available so that figurants can wash up when their participation to the exercise is no longer needed.

Visual recognition

It is recommended to have a **visual distinction** between those who participate in the exercise as participant/actor, and those who are members of the exercise project team, observers, evaluators, simulants, media etc.

3. Start-up Safety and Exercise briefings

The briefing of the actors is a responsibility to be defined, e.g. as the task of those responsible for the services/disciplines the actors belong to. It is based on the Master Exercise Document and provides all information the participants need to know about the course of the day.

The exercise project team provides a **logbook** that consists of at least the following documents:

- The Master Exercise Document;
- The Major Event List (MEL);
- A specific evaluation form for each participant;
- A map of the area, together with a couple of pictures

The briefing consists of at least the following aspects:

- The **circumstances** (theme, timing, place) and the **Master Exercise Document**;
- The task and specific role (what to expect) of the **exercise Director**;
- The task and specific role (what to expect) of the **exercise team members**;
- An explanation on the **principles of modesty**, the interpersonal attitude of the participants, during the exercise (no comment, no intervention, no initiative in relation to other actors) and discretion;

Some practical rules for briefing are:

- **Evaluators:** the briefing is given by the Lead Evaluator, if necessary a second briefing just before the start of the exercise is done to go through any last details and adaptations made;
- **Actors:** the briefing is given by the responsible of each service, based on the Master Exercise Document. To ensure discretion, it is recommended to not hand this task to the responsible of the service that forms the steering committee.

4. Start of the exercise/Roll out of the scenario

When all practicalities before the exercise are taken care of, the actual roll out of the scenario can take place. This phase should involve a last check on the readiness on everyone and everything involved and the sign to mark the beginning of the exercise.

Last check

A last check of the readiness of the team, the technology and other arrangements are done:

- a **radio check is to be performed**;
- As soon as it is determined that all devices are ready for use, the **Exercise Director** should be **notified**;
- After ensuring that everything is ready (organisation, arrangements of the material, a last briefing if necessary), the Exercise Director gives his **go-ahead** for the exercise.

Beginning of the exercise

- The Exercise Director gives his **go-ahead** to the operator or coordinator who inserts the **first event/message**;
- A **succession table** is filled in with the sequence of actions that are executed; the main actions to be consulted in the Major Event List. This enables to follow up the process of the exercise.

General oversight/check

- The Exercise Director is responsible for the general oversight of the exercise. He has to make sure the **evolution of the incident** is adapted to the reactions;
- The **succession table** is the essential basic instrument to keep oversight on the exercise. It has to be made sure that the Master Exercise Document is being complied with and that the predetermined objectives are being reached;
- Ideally, the Exercise Director and all controllers dispose of radios and headphones (to remain discrete towards the actors) and they communicate within their own (chat) group;
- In case the exercise takes an **unexpected turn**, the Exercise Director has to take a decision: continuation, adjustment or suspension.

5. Suspension rules and termination

In some cases, it might be necessary to temporarily or definitively stop the exercise. All practitioners should then stop their actions. This can take the form of suspension or termination.

Suspension

Before deciding on prematurely ending an exercise, the Exercise Director can decide to suspend it due to one of the following reasons:

- An incident occurs during the exercise;
- A real intervention is needed;
- Need for adjustment due to a lack of effort or too vivid imagination of the actors;
- Extreme weather circumstances (protection of the health of the figurants);
- Necessity to skip a step of the scenario so that everyone can start at the same level;
- Planned suspension (in case of a sequential exercise).

The suspension has to be clearly communicated to all – a code word or signal that was determined in the Master Exercise Document can be used.

Termination

The Exercise Director commands to end the exercise in the following circumstances:

- End of the scenario / objectives reached;
- Time has expired;
- Failure of the exercise;

- Other real interventions are needed.

The end of the exercise has to be clearly communicated to all – a code word or signal that was determined in the Master Exercise Document can be used.

After making sure that all actors and figurants have returned, a word of thanks can be expressed. The received material (badges, pinafores/vests) are returned to the reception.

6. Post exercise debriefing

Different types of debriefings exist, varying according to the objectives (quick, in depth, ...) and the profile of participants invited to attend – see below.

Immediately after the exercise, a hotwash briefing is recommended.

Hotwash debriefing

Depending on the type of the exercise, the hotwash debriefing can take different forms:

- In case of a **table-top** or **command exercise**, all participants are involved in this debriefing;
- In case of a **field exercise**, every participating body, discipline or service holds its own debriefing at their level;

Immediately after the exercise, preferably close to the exercise terrain (to avoid any displacement and loss of time), a meeting with all participants is organised.

- A discussion is held based on **tangible facts**, that are still fresh in the memory of the participants;
- Every actor (regardless of their hierarchical position) gets the opportunity to share personal **impressions** and **experiences** concerning the exercise and the application of existing procedures;
- This meeting is not intended for formulating specific remarks concerning the achieved objectives or the domains to be improved;
- The meeting is **coordinated** by (according to the type of the exercise) either by the Director of the operational command post; the director (or representative) of a discipline or his representative, ...for each participating service/discipline;
- Someone is appointed to be responsible for taking **notes**, to be delivered to the Exercise Director within the fixed time frame. The observers can in their turn share their comments to the Exercise Director;

- A **second hotwash debriefing** (immediate debriefing) can be held optionally. Ideally a checklist with the objectives of the exercise serves as a basis for the discussion.

Guidance for X EVALUATION AND DEBRIEFING

1. Define the type of debriefing and evaluation

Evaluation and debriefing are important parts of the exercise, as this is the time to immediately share the observations and impressions about the course of the exercise, so that lessons learnt can be extracted. Some principles to bear in mind:

- Evaluation of the organisation of the exercise as such is always the responsibility of the Training Centre: evaluation of the performance/efficiency of the costs;
- Evaluation of the exercise objectives is the sole responsibility of the Training Centre in case of a standalone X Training Centre; the sole responsibility of the commissioning body, if a standalone X is ordered;
- Evaluation of the exercise objectives is the combined responsibility of the Training Centre for its own objectives + the responsibility of organisation who joined the X for its own objectives, evaluation of joint objectives can be done if relevant;
- The evaluation always applies to the objectives pursued within the exercise and *not* on specific individuals.

The **evaluation targets** can be summarised as follows:

- The functioning of the participating entities and services;
- The interaction between these entities and services;
- The predetermined exercise objectives;
- The methodology for the organisation of the exercises themselves.

In-depth debriefing

Each discipline/group of participants makes the final assessment of its activities:

The relevant parts of the logbooks of the services of the disciplines and the coordination structures can be made available to facilitate the later in-depth debriefing;

The disciplines deliver their detailed report (together with the relevant parts of the logbooks) ASAP to the Exercise Director.

Consultation of stakeholders

In certain cases, it might be useful to involve other stakeholders for the completion of the exercise: either as a public consultation or limited to a specific target group, such as other practitioners, competent authorities, local residents, etc. For public consultation, a **press release**: can be made to inform about the lessons learnt that came out of the (two) hot wash debriefing(s).

Global evaluation

In general, a few weeks after the exercise the Exercise Director, in cooperation with the exercise project team, establishes a global evaluation based on:

- The evaluation report of the Lead Evaluator;
- The comments of the steering committee;
- The notes taken during the hot wash debriefings;
- The reports on the debriefings of the structures and disciplines;
- The analyses of the logbooks and press articles.

All objectives of the exercise are thoroughly analysed.

The Exercise Director compiles a report that consists of three parts:

- 1) The general framework of the exercise: theme, context, objectives, procedures, intended personnel,...;
- 2) A global evaluation on the actions and recommendations concerning the possible actions (e.g. education, material, persons, procedures);
- 3) An improvement sheet per action to be taken.

2. Identify evaluators and distinguish different categories/roles if relevant

The persons that are assigned the task to evaluate the exercise need to be appointed in advance. Various elements need to be made explicit, so that everyone has a clear view on the role of these evaluators:

- **Responsibility:** the Lead Evaluator is responsible for the evaluation and for ensuring that the scenario is adapted to the defined objectives
- **Establishment of an evaluation committee:** a specific evaluation team can be established that will act both before and after **the exercise by preparing the evaluation** forms and roles and by preparing an evaluation report summarising the feedback based on the forms
- **Profile of the evaluator: usually, neutral specialists** representing various disciplines are assigned the role of evaluator. Lay **evaluators that have little to no foreknowledge** of the organisation systems within the exercise can be consulted; they will however **need a more thorough briefing**.
- **Number of evaluators:** the exact number of evaluators is difficult to determine, although it should be noted that there should not be more evaluators than actors on the scene, as it could possibly hinder their actions.
- **Mobility of evaluators:** in alignment with the complexity of the scene, a sufficient number of evaluators should be statically (e.g. within the operational as well as the strategic body) following the process of the exercise to retain a general view; and a mobile team can be deployed to follow a specific function or person

- **Objectivity of evaluators:** to ensure objectivity of evaluation, it is recommended to assign multiple evaluators who focus on the same actions. However, this will be dependent on the possibilities and availabilities.
- **Role:** each type of observer fulfills its own role, based on their profile (function, organisation, reason for attending the JA). The main types of observers can be subdivided into: practitioners, external experts, stakeholders and citizens.

When compiling the list of participants, attention should be paid to the profile and interests of each observer, therefore an overview of all participants is to be made (see Template below).

3. Prepare evaluation forms

Aspects to be included in the evaluation forms are:

- The specific objectives of the exercise ;
- The exercise as such (preparation and organisation).

Evaluation forms should entail the specific aspects or actions that need to be evaluated by the observers and evaluators. Ideally they list specific questions in order to ensure focussed observations and allow for additional comments to be made.

An example template for [Evaluation of the Exercise](#).

In case of the Joint Activities, considered as eNOTICE show cases, information is needed to further achieve the project's objectives. As it is recommended that each observer has a clear focus within the exercise, a list of relevant question is made (see below) with the specific purpose of:

- Providing guidance for all observers, in order to ensure an active participation during the exercise;
- Gathering information, relevant for the different ongoing tasks or tasks starting in a near future;
- Providing for input and guidance for the discussions during the debriefing sessions.

These questions should be distributed and assigned to three categories of participants (A = eNOTICE partners; B = Participating EU projects/experts; C = invited experts), to ensure they are answered by different profiles. Different focuses because of different profiles are expected to enrich the discussion on lessons learnt.

A template on the Evaluation and Debriefing Form (see below) can be used to hand each observer a document that can be used during or after the exercise to respond to the questions and to write down any other comments. After the exercise, the forms are to be collected and processed, as it is exercise feedback that should be used as source of information for follow up actions.

Guidance for X FOLLOW UP

1. Identify actions for improvement during the debriefing and evaluation

Analysis of the forms

All evaluation and debriefing forms need to be gathered by the exercise team, to be prepared for the processing of all relevant information. The main steps that need to be executed will be:

- The exercise project team considers the **recommendations** that result out of the exercise;
- For each form, the exercise project team considers the proposed points of improvement of the Exercise Director by **approving/disapproving** them;
- Each form is translated into a real **action plan** (with actions to be taken + owners + timeframe).

2. Identify owners

For each action point or task that is defined, one or multiple owners need to be assigned. They will be assigned the responsibility for taking the necessary steps to make sure it is being followed up, and they have the ability to close a task once it has been completed.

3. Make a time plan

For the tasks that need follow up, an indication of timing is needed to ensure the follow up will happen within a realistic time frame and so that steps can be taken when a task is not being given any attention.

4. Identify required resources

The observations, the points of improvement in particular, need to be documented in order to ensure its follow-up. A [Follow-up](#) template can be used as a guidance tool for documenting the next steps that are to be taken.

III. CHECKLISTS and TEMPLATES

TEMPLATES Objectives, Expected Results and Evaluation Criteria

TEMPLATE Standalone X Training Centre Objectives, Expected Results and Evaluation Criteria:

Possible objectives	Possible Expected results	Evaluation criteria
Practical training, part of the regular program	Knowledge of new procedures Reaction skills of the participants Familiarity with new procedures Compatibility of new and existing procedures	Such as X% correct answers when testing knowledge X% correct reactions
Practical examination / Evaluation of students	Knowledge Skills	

TEMPLATE Standalone Exercise ordered by an external party Objectives, Expected Results and Evaluation Criteria:

Possible objectives	Possible Expected results	Evaluation criteria
Mandatory exercises imposed by regulations (such as Seveso and nuclear exercises)	Compliance with a legal obligation Evaluation of preparedness/efficiency/... of the participating organisations Evaluation of specific aspects such as coordination, communication, interoperability, etc.	
(Voluntary) exercises to test emergency planning		
(Voluntary) exercises to test private/public collaboration		
(Voluntary) exercises to test new procedures		

Exercises with testing, validation and demonstration purposes, as part of a (H2020 or any other) research project		

TEMPLATE Joint Activity Training Centre Objectives, Expected Results and Evaluation Criteria:

Multiple objectives because of multiple partners: each partner has its own specific objectives

Training Centre			External partner 1			External partner 2, 3, ...		
Possible objectives	Expected results	Evaluation criteria	Possible objectives	Expected results	Evaluation Criteria	Possible objectives	Expected results	Evaluation Criteria
See list above, possible objectives for a standalone exercise organised by the Training Centre	See list above		See list above, possible objectives for a standalone exercise ordered by and external partner	See list above		See list above, possible objectives for a standalone exercise ordered by and external partner	See list above	
Additional or common objectives (as a result of 'Joint'), identified from the start?								
			Additional or common objectives (as a result of 'Joint'), identified from the start?					
Additional or common objectives (as a result of 'Joint'), identified from the start?								

TEMPLATE Logistic requirements

TEMPLATE Logistic requirements

Category		What	Who	Timing	Cost
General organisation	<input type="checkbox"/>	Shuttle-bus			
	<input type="checkbox"/>	Tents			
	<input type="checkbox"/>	Drinks			
	<input type="checkbox"/>	...			
Subtotal cost					
Decor	<input type="checkbox"/>	Car wreck			
	<input type="checkbox"/>	Exercise doll			
	<input type="checkbox"/>	Smoke pot			
	<input type="checkbox"/>	...			
Subtotal cost					
Safety	<input type="checkbox"/>	Traffic signs			
	<input type="checkbox"/>	Demarcation ribbon			
	<input type="checkbox"/>	Whistle			
	<input type="checkbox"/>	...			
Subtotal cost					
Figurants	<input type="checkbox"/>	Badges			
	<input type="checkbox"/>	Blankets			
	<input type="checkbox"/>	Toilets			
	<input type="checkbox"/>	...			
Subtotal cost					
Evaluators	<input type="checkbox"/>	Camera			
	<input type="checkbox"/>	Audio recorder			
	<input type="checkbox"/>	Pinafores			
	<input type="checkbox"/>	...			
Subtotal cost					

Controllers	<input type="checkbox"/>	Headphones			
	<input type="checkbox"/>	Radio station			
	<input type="checkbox"/>	...			
TOTAL COST					

TEMPLATE Exercise Roles and Responsibilities

TEMPLATE Division of Exercise Roles

Role	Contact details
Exercise director or manager	Name:
	Tel.:
	E-mail:
Exercise (project) team	Name:
	Tel.:
	E-mail:
Exercise coordinator	Name:
	Tel.:
	E-mail:
Evaluator(s)	Name:
	Tel.:
	E-mail:
Observer(s)	Name:
	Tel.:
	E-mail:
(Lead evaluator)	Name:
	Tel.:
	E-mail:
Exercise operators	Name:
	Tel.:
	E-mail:
Safety controller	Name:
	Tel.:
	E-mail:

TEMPLATE Division of Scenario Roles

Role	Contact details
Participants	Name:
	Tel.:
	E-mail:
Key actors	Name:
	Tel.:
	E-mail:
Supporting actors	Name:
	Tel.:
	E-mail:

TEMPLATE Roles in Incident Management

Role	Contact details
Risk owner	Organisation:
	Contact person:
	Tel.:
	E-mail:
Licensing Authority	Governmental body:
	Contact person:
	Tel.:
	E-mail:
Competent Authority	Organisation:
	Contact person:
	Tel.:
	E-mail:
Incident Response Team (Rescue)	Organisation:
	Contact person:
	Tel.:

Services)	Tel.:
	E-mail:
Emergency Planning Services	Organisation:
	Contact person:
	Tel.:
	E-mail:
Specific roles	<i>e.g. Information officer</i>
	Name:
	Tel.:
	E-mail:
	<i>e.g. Anticipation officer (FR)</i>
	Name:
	Tel.:
	E-mail:
	<i>e.g. Safety advisor</i>
	Name:
	Tel.:
	E-mail:
	<i>e.g. Responsible for (crisis management/incident evolution) tool</i>
	Name:
	Tel.:
	E-mail:

TEMPLATE Preparation and organisation

EXAMPLE TEMPLATE Timeline Todo's PREPARATION

Example Timeline Todo's PREPARATION				
Timing	Action nr. + short description	Owner(s)	Description of the action	Participants
X-4M ⁵	1	Initiator/commissioning body	Definition of objectives and expected results+ type of the exercise + scale + available budget	Exercise Director
X-4M	2	Initiator/commissioning body	Contractual arrangement if applicable	Exercise Director (Direction Training Centre)
X-4M	3	Exercise Director	Definition of exercise roles Scenario proposal + corresponding requirements (actors, logistics, safety...) Elaboration of a to-do list	Initiator/commissioning body Participating practitioners
	4			
	5			
X-3M	6	Exercise Director	Scenario elaboration: <ul style="list-style-type: none"> • Major Event List (MEL) • ... 	Exercise Team Leading practitioners
X-2M		Initiator/commissioning body	Elaboration of an external communication strategy	Exercise Director
X-4W ⁶		Exercise Team	Elaboration of evaluation and debriefing forms (based on objectives, expected results and evaluation criteria defined by the initiator)	Initiator/commissioning body
X-10 ⁷		Initiator/commissioning	Communication to media, local population, ...	

⁵ 4 months before the exercise

⁶ 4 weeks before the exercise

n	Setting up of all material	
missioning	Testing equipment available – if relevant	Exercise Team

EXERCISE

	Description of the action	Participants
missioning	Reception of observers	
n	Reception of practitioners Reception of actors	
n	Preparation time for practitioners and actors	
n member 1	Safety briefing and scenario instructions for practitioners	
n member 2	Safety briefing and scenario instructions for actors	
n member 3	Safety briefing and instructions for observers	
ctor	Start of the exercise	
ctor	End of the exercise	
ctor	Hotwash debriefing	
ctor		

TEMPLATES Information & Communication about the exercise

TEMPLATE Example of a General Information Sheet eNOTICE for a Joint Activity

Part A: Summary description of the objectives and topic of the CBRN Exercise

Main activity

This part 1-4 on the main activity is important information for: 1) Research projects interested in joining, so that they can assess whether the X offers an opportunity for their project to complete, test or validate their knowledge and developments. Both the type (field, table top, simulation, ...) and the scenario of the exercise (C or B or R or N) as well as the profile of the participants (type of intervening services) are relevant for them; 2) eNOTICE partners who all received a budget for inviting people from their network to the joint activities. This budget can be spent for their own activities as well as for activities organised by the partners. This information will be used to identify interested nationals.⁸

Invited activity

This part 1-4 on the invited activity is important information for: 1) The organising partner, as a basis to assess whether a joint activity is feasible, if yes: as a basis to start from to make arrangements to make the observation/demonstration/... possible; 2) eNOTICE partners to identify interested nationals.

1 Type of activity and contact details of the hosting exercise	Type of activity and contact details of the invited activity
<p>Organising partner:</p>	<p>Research project:</p>

⁸ This needs to be an exercise that is included in the regular annual program of the organising partner or covered (incl. financially) by another research or training program. This exercise is **not specifically organised for** (nor funded by) the eNOTICE project.

2 Objectives and evaluation criteria of the hosting exercise	Objectives and evaluation criteria of the invited activity
Objectives: Evaluation criteria:	Objectives: Evaluation criteria:

3 Main scenario: short description	Description of the invited activity

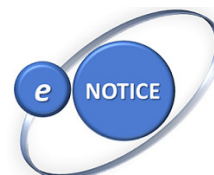
4 Facilities used for the activity	If relevant, extra facilities needed for the activity
Chemical: Biological: Radiological: Nuclear:	

5 Profile of the participants of the hosting exercise	Profile of the participants of the invited activity

Part B: Practical organisation

Agenda

Day 1: Project meetings	Day 2: Exercise	Day 3: Project meeting
12:00 17:00	8:00 12:00 17:00	8:00 12:00

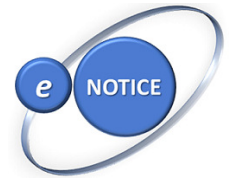


TEMPLATE Practical Information Sheet eNOTICE Joint Activity

To be communicated to all organisations/persons who registered for participation

Practical information	
Dates: _____	
Location:	
Meetings and exercise:	_____
Hotel/accommodation:	_____
Contact person: (course manager/ exercise director)	Name: _____
	Mobile: _____
	E-mail: _____
Deadline for registration for the activity: _____	
Transfer information	
Train:	_____
Highway:	_____
Airport:	_____
Exercise details	
Participants:	
Participants to the exercise: _____	
eNOTICE partners + invitees: _____	
Invitees from the project: _____	
Invitees from the invited research project: _____	

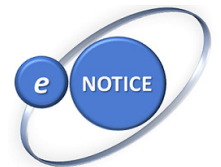
Other	
Dietary restrictions/requirements:	To be given by e-mail 2 weeks before travel
IMPORTANT:	



Joint Activity Registration Form eNOTICE partners

To confirm your attendance to the eNOTICE Joint Activity organised in [location], by [organisation], on [date], please send the complete form to [e-mail address contact person of the hosting organisation] before [deadline for registration].

Joint Activity		To be completed by the organiser of the exercise.
Type of exercise:		
Location:	Address:	
	City:	Zip code:
	Country:	
Timing:	Begin:	
	End:	
Attendant(s)		To be completed by the attendant(s).
Organisation:		
Representative (1):	Name:	
	E-mail:	
	Phone number:	
Function within the organisation:		
Role during the exercise:		
Arrival:		
Departure:		
Dietary restrictions/requirements:		
Representative (2):	Name:	
	E-mail:	
	Phone number:	
Function within the organisation:		
Role during the exercise:		
Arrival:		
Departure:		
Dietary restrictions/requirements:		
Comments:		



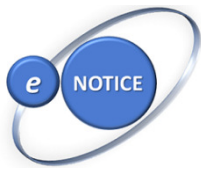
TEMPLATE Example of a Registration Form for external participants

eNOTICE Joint Activity Registration Form External participants

To confirm your attendance to the eNOTICE Joint Activity organised in *[location]*, by *[organisation]*, on *[date]*, please send the complete form to *[e-mail address contact person of the hosting organisation]* before *[deadline for registration]*.

Joint Activity		To be completed by the organiser of the exercise.	
Type of exercise:			
Location:	Address:		
	City:	Zip code:	
	Country:		
Timing:	Begin:		
	End:		
Attendant		To be completed by the attendant(s).	
Contact details:	Name:		
	E-mail:		
	Phone number:		
Organisation:	Name:		
	Address:		
	City:	Zip code:	
	Website:		
Function within organisation:			
Field of expertise			
Current involvement in EU or national R&D projects			
Specific interests and motivation to attend the eNOTICE Joint Activity			
Arrival:			
Departure:			
Dietary restrictions/requirements:			
Comments:			

TEMPLATE Example of an Informed Consent Form



**European Network of CBRN Training Centres
Under the EC Grant Agreement n° 740521**

INFORMED CONSENT FORM

I, the undersigned, agree to take part in the eNOTICE Joint Activity, organised at *[location]*, by *[organisation]*.

I confirm that the purpose and the scope of the Joint Activity have been explained to my satisfaction. I am well aware of the above notes and the content of the Information Sheet and understand what the Joint Activity involves. I have had the opportunity to consider the Information Sheet, the verbal explanations given and to ask questions and I have had all my questions answered to my full satisfaction.

My participation in the Joint Activity is voluntary and I understand that I am free to withdraw at any time during the period of data collection and engagement with the researcher without giving a reason and without my right to medical care or my legal rights being affected in any way.

I understand that any information collected during the Joint Activity will be held in confidence and will only be shared within the eNOTICE project consortium. I understand that conclusions reached from the Joint Activity may be published in emergency planning and academic journals, as well as in project reports. I understand, however, that individuals participating in the Joint Activity will not be identified in any of such publications.

I consent to the processing of my personal information (name, affiliation, email, address, phone number) for this project. I understand that such information will be treated in a strict confidence and handled in accordance with the provisions of the *[to be completed with relevant regulations]*. I understand that the project research team may use my data for future research and understand that identifiable data will be reviewed by the project ethics monitoring experts before such use to ensure it would not be included in any report.

I consent to my participation in the Joint Activity and in focus groups being video-recorded and transcribed *[if and when needed]*.

[City/training facility, place] Date

.....

[Name typed] & [signature]

TEMPLATES on Cost Calculation Sheet

EXAMPLE 1 TEMPLATE Cost Calculation

ID	Task	Hours	Duration (days)	Resources	Cost of resources	Estimated Budget
1	e.g. Registration of participants			Tent	€XX	[sum]
				X pinafores	€XX	
				X badges	€XX	
				...	€XX	
2	e.g. Catering			X bottles of water	€XX	[sum]
				X breads	€XX	
				X hot dogs	€XX	
				...		
3						
4						
5						
6						

This example of a template for cost calculation for project management is based on Techno-PM (2015-2016).

EXAMPLE 1 TEMPLATE Cost Calculation

Personnel cost – time spent mentioned as man-months

Role	
Exercise director or manager	
Exercise (project) team	
Exercise coordinator	
Evaluator(s)	
Observer(s)	
(Lead evaluator)	
Exercise operators	
Safety controller	

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Other direct costs

Logistics	Subtotal 1
	Subtotal 2
	Total cost
Subcontracting	

Indirect costs – overhead costs (for different categories if relevant)

Personnel	
Infrastructure	
Equipment	

TEMPLATES on Evaluation and Debriefing Forms

TEMPLATE Evaluation of the Exercise (Example for a Seveso Exercise)

Exercise	[Name]	Fiche nr.	
Date		Evaluator	

Ref MEL	Actions	Yes/No*	Timing	Comments
[Hour +]				

**Yes/No: Certain actions are required only to indicate whether they have been executed or not. For the actions that require more information, this box will be marked in grey – so that the evaluation can be done within the column “Comments”.*

TEMPLATE Evaluation and Debriefing

Example Todo's Debriefing and evaluation				
Timing	Action nr. + short description	Owner(s)	Description of the action	Participants
14:00		Initiator/commissioning body	In depth debriefing with leading practitioners and observers	leading practitioners and observers exercise team
X+7		Initiator/commissioning body Or Exercise Director	Consultation of stakeholders	
X+3W		Exercise Director	Evaluation report based on the evaluation forms	Exercise team
X+4W		Initiator/commissioning body	Evaluation meeting and discussion of the evaluation results (exercise participants + stakeholders)	leading practitioners and exercise team

EXAMPLE TEMPLATES on Follow-up

EXAMPLE TEMPLATE Todo's Follow up debriefing exercise

Example Todo's Follow up				
Timing	Action nr. + short description	Owner(s)	Description of the action	Participants
X+5W		Initiator/commissioning body	Follow up report based on the evaluation reports and the decisions taken at the evaluation meeting: action list incl. timing	
X+3M		Initiator/commissioning body	Follow up meeting	
X+6M		Initiator/commissioning body	Follow up meeting	

EXAMPLE TEMPLATE Example of a Follow up Form for an R&D project

	Topic	Link/task	Required action	Who?	Timing	Expected result
1	Integration of feedback	All tasks	Evaluation forms to be uploaded on SharePoint	All eNOTICE partners	X+7	Input for all Tasks
2	Integration of feedback	Task 4.1 Task 5.2.3	Evaluation to be send to <i>[Name]</i>	EU Projects + invited experts	X+7	Input for 4.1/5.2.3
3	Integration of feedback	All tasks	All task leaders make sure to use the feedback of the exercise as input to their task	All task leaders	Cf. Timing of the task	Exercise feedback used as a source of information
4	Integration of feedback	All tasks	Writing minutes of debriefing		X	Exercise feedback used as source of information
5	Integration of feedback	All tasks	Minutes are being send to all partners		X+3	Exercise feedback used as source of information
6						
7						
8						
9						
10						

TEMPLATE Specific actions/areas of attention for JOINT activities

Areas of attention for Joint Activities	YES	NO
Do the objectives of the organisation who joins the X impact the scenario?		
a. Extra actors/response management roles needed?		
b. Extra events or actions needed/adaptation of the MEL needed?		
c. ...		
Does the 'joint' aspect impact logistic requirements ?		
a. Material for the X?		
b. Catering?		
c. ...		
Does the 'joint' aspect impact the communication strategy ?		
Does the 'joint' aspect impact safety aspects ?		
a. On site (e.g. in case of use of specific substances)?		
b. For the exercise only (in case of dangerous actions)?		

EXAMPLE TEMPLATE Overview of questions for JA observers – input to be collected for ongoing tasks in a Research project

Task	Lead		A	B	C	Observer	Organisation/project
2.1.1 Roster	VESTA	What infrastructure did you see that provokes interest for use within the project(s) you are involved in?		X			
2.1.2 Quality label	SDIS77	What do you consider to be 'unique selling points' of training centres, that might influence your choice to work with them?	X	X	X		
2.2 Mapping	UCL	Would you consider working with practitioners through the participation of a training centre? What would be your requirements to take such a training centre on board as full partner in your next EU or national research project?		X	X		
2.3 KPI	VESTA	After observing the joint activity, do you feel like you have a better image of the		X	X		

			needs of practitioners?					
2.4	Frame work	UNITO V	Does the development of a CBRNe TC's network, implementing standardized procedures, with a common programme/catalogue of exercises (covering all the fields of CBRNe specializations), help to increase the practitioner access to an optimized training process? Why (not)?		X	X		
4.1	Methodology and templates	VESTA	Could the use of a common methodology for the organisation of exercises be useful? Have added value?	X	X	X		
4.2	Joint activities	VESTA	Do you consider this type of exercise as an interesting setting for testing, as part of the technical development process in an EU project? What is most interesting: interaction with practitioners, the infrastructure, other?		X	X		
4.3	Policy recommendations	UCL	After participating in the joint activity, do you feel like there is a need for harmonisation/standardisation of exercise practices? Why (not)? What specific aspect?	X	X	X		
4.4	Plan to pool resources	UMU	Would you be interested in observing/participating in the exercise if you had to pay a fee for attendance?		X	X		

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A = eNOTICE partners; B = Participating EU projects/experts; C = Invited experts

EVALUATION & DEBRIEFING FORM

Name: XXX

Organisation/representing project: XXX

Question 1 – e.g. *What do you consider to be ‘unique selling points’ of training centres, that might influence your choice to work with them?*

Question 2 – e.g. *Does the development of a CBRNe TC’s network, implementing standardized procedures, with a common programme/catalogue of exercises (covering all the fields of CBRNe specializations), help to increase the practitioner access to an optimized training process? Why (not)?*

Question 3 – e.g. *After participating in the joint activity, do you feel like there is a need for harmonisation/standardisation of exercise practices? Why (not)? What specific aspect?*

Other feedback or suggestions you would like to share with us?

3. Conclusions and Way Forward

The Methodology and Templates for CBRN exercises developed in Task 4.1 serve multiple purposes. Firstly, they are the instruments used for the preparation and organisation, evaluation and follow up of the Joint Activities, organised in Task 4.2. They will also serve as a format for reporting in Task 4.2. Secondly, they are used to extract input for different eNOTICE tasks: ideas to build the network, to strengthen the community, identification of effective practices that can be share with all other stakeholders, identification of possibilities to optimise the allocation of resources etc.

3.1 General findings and conclusions

As this Task demonstrated the difficulty of integrating various good practices into one generic document (see section 1.3.2), it was observed that a gradual approach for the development of the Methodology and Templates was preferable. This initial draft, which is a synthesis of a limited number of documents, will serve as a first reference document that will be continuously improved during the eNOTICE project.

The first draft Methodology and Templates elaborated in Task 4.1 consists of a threefold structure, composed of: 1) an overview of chronological steps per phase; 2) guidance; 3) checklists and templates.

- 1) The overview of the chronological steps provides a structure of the main steps that all CBRN exercises consist of. For each step within the preparation, organisation, evaluation and follow up phase, the corresponding tasks related to the scenario, logistics, communication and documentation are visually shown in the overview table.
- 2) For each step, the methodology provides for guidance in the execution of these steps. This guidance consists of a clarification and points of attention to be taken into account. It is a synthesis of current practices.
- 3) Checklists and Templates complete the methodology where relevant. They are provided as examples. Some of them are rather generic and will be applicable for all kinds of exercises, others are more specific and include additional or emphasize specific aspects e.g. to take into account the joint aspect of the eNOTICE activities.

3.2 Way forward

The Methodology and Template elaborated in Task 4.1 provide a basic document that will be continuously updated and improved when used for the preparation of the Joint Activities in Task 4.2. The lessons learnt and opportunities for improvement, identified as part of the evaluation of the Joint Activities, will be used to ensure updates in Task 5.2.3. The aim is to gradually build a generic method that is applicable for any type of CBRN exercise, taking into account both standalone exercises as well as joint activities.

For each following Joint Activity organised in Task 4.2, these guidelines will be used for the preparation and documentation of the exercise. Specific attention will be paid to criteria such as usability, completeness and applicability. By using this instrument in a practical environment followed by discussions on its practicability, lessons learnt and points of improvement will enable revision, update and refinement of the tool.

Once the Methodology and Template have reached sufficient maturity as a generic instrument, they will be made public on the eNOTICE web based platform. The chronological steps, its guidance and the corresponding checklists and templates can then be transformed into an online tool. This will provide more opportunities for practical visualisation of the steps and is expected to increase the user-friendliness of the tool. Several options to maximise the user-friendliness will be considered and discussed, such as a graphical overview of the whole process, one or several ‘cheat sheets’ or reference cards, for a quick overview and understanding of all the steps.

If relevant, a modular approach can also be integrated, which subdivides the process so that the user can easily navigate through the steps that are relevant for their own type of exercise.

REFERENCES

CascEff (2016). Deliverable 1.4 Report on scenarios to be elaborated for testing the incident evolution methodology, webpublication at:

<http://casceff.eu/new-report-report-on-scenarios-to-be-elaborated-for-testing-the-incident-evolution-methodology/>

Cerise, A., Delcourt, C., and Sorgeloos, D. (2009), Praktische en methodologische gids voor de organisatie van een rampen oefening ter attentie van lokale overheden, Provincie Antwerpen.

Direction de la Sécurité Civile (2009), Exercices de Sécurité Civile. Guide Thématique Sur Les Exercices *PPI*.

Federale Overheidsdienst Binnenlandse Zaken (2011). Organisatie nucleaire noodplanoefeningen: praktische gids.

JESIP (2015), Joint Emergency Services Interoperability Principles (2015), JESIP Exercise Assurance Framework v1.0., webpublication at:

<http://www.jesip.org.uk/uploads/resources/JESIP-Exercise-Assurance-Framework-v1.0.pdf>

US Department of Homeland Security (2013), Homeland Security Exercise and Evaluation Program, Exercise Evaluation Guides (EEGs)

Annex

Annex 1 - Manuals and guidelines – overview of relevant sources

This table gives an overview of all manuals and guidelines identified by eNOTICE partners, as possible relevant sources to use for the elaboration of a generic exercise Methodology and Templates.

Table 7 Overview of the sources

			Country	Civil/ Military	Focus on				Type of exercise	Type of source
					C	B	R	N		
1	WSU & JCBRND CoE	North Atlantic Treaty Organisation (2013). BI-SC Collective Training and Exercise Directive (CT&ED) 075-003.	International	Military					Command Post, Live Exercise Exercise Study	Guidelines competent authority
3	VESTA	Business Continuity Institute (2015). The BCI guide to... Exercising your business continuity plan.		Civil					Discussion based, table top, command post, live, test	Business guidelines
5	VESTA	Cerise, A., Delcourt, C., & Sorgeloos, D., (2009). Praktische en methodologische gids voor de organisatie van een rampenoefening ter attentie van lokale overheden. Provincie Antwerpen. <i>[Practical and methodological guide for the organisation of a disaster practice, for the attention of local authorities. Province of Antwerp].</i>	Belgium	Civil	C				Table top, command post, field exercise	Guidelines competent authority
6	VESTA	De Neef, H. (2011). Organisatie nucleaire noodplanoefeningen: praktische gids. Federale Overheidsdienst Binnenlandse Zaken. <i>[Organisation of nuclear emergency plan exercises: practical guide. Federal Department of Interior].</i>	Belgium	Civil			R	N	Field exercise	Guidelines competent authority
7	UNITOV	The Exercise Planners Guide, Home Office Publication, UK,		Civil					All types	Guidelines

		(1998).						competent authority
8	UNITOV	Evaluation of Exercises, Swedish Civil Contingencies Agency. ISBN 978-91-7383-127-7, (2011).	Sweden	Civil			Focus on evaluation	Guidelines competent authority
9	UNITOV	Homeland Security Exercise and Evaluation Program (HSEEP) Exercise Evaluation Guides (EEGs). U.S. Department of Homeland Security, April 1, 2013. https://hseep.dhs.gov/pages/1002_EEGLi.aspx		Civil			All types	Guidelines
10	UNITOV	International Atomic Energy Agency (2005). Preparation, Conduct and Evaluation of Exercises to Test Preparedness for a Nuclear or Radiological Emergency. <i>Emergency Preparedness and Response. EPR-EXERCISE.</i>	International	Civil		R N	Field exercises	Guidelines Competent authority
11	VESTA	IS-120.A An Introduction to Exercises	International	Civil			All types	International standard
12	VESTA	ISO 22398 (2013). Societal security – Guidelines for exercises.	International	Civil			All types	International standard
13	(VESTA) WMP	Joint Emergency Services Interoperability Principles (2015). JESIP Exercise Assurance Framework v1.0.	United Kingdom	Civil			Field exercise, table top	National standard
14	WMP	Joint Emergency Services Interoperability Principles (2015). JESIP Fact Sheet 3.	United Kingdom	Civil				
18	SDIS77	Direction de la Sécurité Civile (2009). Exercices de Sécurité Civile. Guide Thématique Sur Les Exercices PPI.	France					Guidelines
19	SDIS77	Direction de la Sécurité Civile (2008). Exercices de Sécurité Civile. Comment les préparer? Les réaliser? Les évaluer? Mémento en 10 points.	France					Guidelines competent authority

Literature

			Country	Civil/ Military	Focus on	Type of exercise	Type of source
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1	METU	Garro, A., Longo, F., & Nicoletti, L. (2013). Disasters management: a serious game architecture centered on a modelling and simulation infrastructure. <i>SCS M&S Magazine</i> , 4(1). http://scs.org/wp-content/uploads/2016/12/2013-07-Issue12-3.pdf	Italy	Civil			Serious gaming	Academic
2	METU	Clavaud, E. (2012). The next step after Japan? (Virtual reality, training and crisis management). <i>Transatlantic Security Paper No. 2</i> , June 2012. https://www.frstrategie.org/en/publications/notes/the-next-step-after-japan-virtual-reality-training-and-crisis-management-05-2011	United States				Serious gaming	Academic
3	METU	Medhurst, J., Stanton, I. M., Bird, H., & Berry, A. (2009). The value of information to decision makers: an experimental approach using card-based decision gaming. <i>Journal of the Operational Research Society</i> , 60(6), 747-757. https://link.springer.com/article/10.1057%2Fpalgrave.jors.2602616		Military	B		Serious gaming	Academic
4	METU	Silva, J. F., Almeida, J. E., Rossetti, R. J., & Coelho, A. L. (2013, May). A serious game for EVAcuation training. In <i>Serious Games and Applications for Health (SeGAH)</i> , 2013 IEEE 2nd International Conference on (pp. 1-6). IEEE. http://ieeexplore.ieee.org/document/6665302/?reload=true	Portugal	Civil			Serious gaming	Academic
5	METU	Gunal, M. M. (2012). A guide for building hospital simulation models. <i>Health Systems</i> , 1(1), 17-25. https://link.springer.com/article/10.1057/hs.2012.8		Civil			Simulation	Academic
6	METU	Hongqiao, Y., Xihua, L., Fei, W., & Weizi, L. (2009, October). Multi-agent based modelling and simulation of complex system in hospital. In <i>Industrial Engineering and Engineering Management, 2009. IE&EM'09. 16th International Conference on</i> (pp. 1759-1763). IEEE. http://ieeexplore.ieee.org/document/5344312/	China	Civil			Simulation	Academic
7	METU	Gupta, M., Bertrand, J. W., Babu, S. V., Polgreen, P., & Segre, A. M. (2012, January). An evolving multi-agent scenario generation framework for simulations in preventive medicine education. In <i>Proceedings of the 2nd ACM SIGHIT International Health Informatics Symposium</i> (pp. 237-246). ACM. https://dl.acm.org/citation.cfm?id=2110392	United States	Civil			Simulation	Academic
8	METU	Silva, J. F., Almeida, J. E., Rossetti, R. J., & Coelho, A. L. (2013,	Portugal	Civil			Serious	Academic

		June). Gamifying evacuation drills. In Information Systems and Technologies (CISTI), 2013 8th Iberian Conference on (pp. 1-6). IEEE. http://ieeexplore.ieee.org/document/6615881/					gaming	
9	METU	Silva, J. F. M., Almeida, J. E., Pereira, A., Rossetti, R. J., & Coelho, A. L. (2013). Preliminary experiments with eva-serious games virtual fire drill simulator. arXiv preprint arXiv:1304.0726. https://arxiv.org/abs/1304.0726	Norway	Civil			Serious gaming	Academic
10	METU	Ribeiro, C., Pereira, J., & Borbinha, J. (2013, September). Creating awareness of emergency departments healthcare values using a serious game. In European Conference on Technology Enhanced Learning (pp. 502-507). Springer, Berlin, Heidelberg. https://link.springer.com/chapter/10.1007/978-3-642-40814-4_46		Civil			Serious gaming / simulation	Academic
11	METU	Bartoli, G., Del Bimbo, A., Faconti, M., Ferracani, A., Marini, V., Pezzatini, D., ... & Zilleruelo, F. (2012, November). Emergency medicine training with gesture driven interactive 3D simulations. In Proceedings of the 2012 ACM workshop on User experience in e-learning and augmented technologies in education (pp. 25-30). ACM. https://dl.acm.org/citation.cfm?id=2390903	Japan	Civil			Simulation	Academic
12	UCL	Vybornova, O., Gala, J.L., Banus, S., Woelfel, R., Korthagen, E., Fykse, E.M., Bucht, G., Roberts, M. and Maujean, H. (2015). CBRN Mobile Laboratories. FP7-SECURITY MIRACLE project (2013-2015) Mobile Laboratory capacity for the rapid assessment of CBRN threats located within and outside the EU	International			B	Mobile capacity	Academic
13	UCL	Vybornova O. and Gala J.L. (2016). Decision Support in a Fieldable Laboratory Management during an Epidemic Outbreak of Disease, Journal of Humanitarian Logistics and Supply Chain Management, special issue on Technology Innovation and Big Data in Humanitarian Operations, Volume 6, Issue 3, pp. 264 – 295, DOI: 10.1108/JHLSCM-06-2016-0025	International			B	Mobile Capacity	Academic
14	VESTA	Borglund, E. A., & Öberg, L. M. (2014, May). Creation of an exercise scenario: A collaborative design effort. In <i>ISCRAM</i> .		Civil			General Focus on scenario	Academic

15	UNITO V	Cacciotti et al. (2015), G.A.T.E': Gap Analysis for TTX evaluation. International Conference of Numerical Analysis and applied Mathematics 2015 (ICNAAM 2015) AIP Conf. Proc. 1738, 270019-1–270019-5; doi: 10.1063/1.4952058.	International				Table top	Academic
16	UNITO V	Saaty, T. L. (2008). The Analytic Hierarchy and Analytic Network Measurement Processes: Applications to Decisions under Risk. European Journal of Pure and Applied Mathematics, 1(1), 122–196. Retrieved from http://ejpam.com/index.php/ejcam/article/view/6		Civil				Academic
17	UNITO V	Saaty, T. L. (2013). The analytic network process. Decision Making with the Analytic Network Process, 195, 1–40. doi:10.1007/978-1-4614-7279-7_1		Civil				Academic
18	VESTA	Van Heuverswyn, K., et al. (2016). Report on scenarios to be elaborated for testing the incident evolution methodology. CascEff.		Civil			Table top Focus on scenario	H2020 Research report

CBRN Education and Training

			Country	Civil/ Military	Focus on	Type of exercise	Type of source
1	WMP	Counter Terrorism Policing (2017). Initial Operational Response and the transition to Specialist Operational Response (OR-SOR).	United Kingdom	Civil			PowerPoint presentation
2	WMP	Joint Emergency Services Interoperability Principles (2015). JESIP Fact Sheet 3.	United Kingdom	Civil			
3	WMP	Counter Terrorism Policing (2017). The Multi Agency Management of a CBRN Event. <i>Command and Control Doctrine</i> .	United Kingdom	Civil			PowerPoint presentation
4	WMP	Police National CBRN Centre (2017). Intelligent preparation for CBRN terrorism. Exercise Support Request/Decision Log & Progress Report.	United Kingdom	Civil			
5	WMP	Police National CBRN Centre (2017). Intelligent preparation for CBRN terrorism. Testing & Exercise Update Report.	United Kingdom	Civil			

6	FDDO	FwDV 500 (2012). Feuerwehr-Dienstvorschrift FwDV 500. Einheiten im ABC – Einsatz.	Germany	Civil				
7	FDDO	FwDV 2 (2012). Feuerwehr-Dienstvorschrift 2 – FwDV 2. Ausbildung der Freiwilligen Feurewehren.	Germany	Civil				

Leaflets

			Country	Civil/ Military	Focus on	Type of exercise	Type of source
1	UCL	Humanitarian Aid and Civil Protection (2015; 2016). ECHO Factsheet European Emergency Response Capacity.	European	Civil			
2	UCL	Humanitarian Aid and Civil Protection (2016). ECHO Factsheet European Medical Corps.	European	Civil			
3	UCL	EU Modex (2016). Modex Exercises. Retrieved at 6 th December, 2017, at http://eu-modex.eu/w/RedCMS/exercises/	European	Civil			

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Overview on the type of sources

Countries	
International	9
Belgium	2
China	1
France	2
Germany	2
Italy	1
Japan	1
Norway	1
Portugal	2
United Kingdom	7
United States	2

Type of exercise	
Field exercise	5
Table top	4
Simulation	4
Serious gaming	7
Discussion based	2
Testing	
Mobile Capacity	3

Civil	35
Military	2

Focus on	
C	1
B	3
R	2
N	2

Type of source	
Academic	17
Guidelines competent authority	8
Guidelines other	4
National Standard	1
International Standard	2