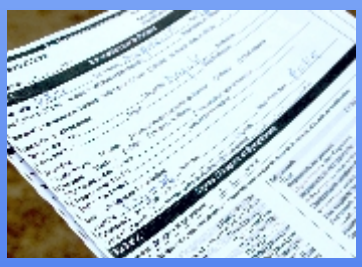
February 2017

WHO Simulation Exercise Manual



A practical guide and tool for planning, conducting and evaluating simulation exercises for outbreaks and public health emergency preparedness and response.

World Health Organization

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This document references and builds upon prior documents and other published material listed below.

The World Health Organization:

- *Emergency exercise development guide* (WHO, 2009)
- *Exercise guidelines* (WHO, 2011)
- *Exercise development guide for validating influenza pandemic preparedness plans* (WHO 2006)
- *Handbook for public health emergency exercise programmes* (WHO 2012, unpublished)
- *PHEOC handbook for training and exercises* (WHO, Interim draft 2016)
- *Handbook for International Health Regulations (2005) core capacity exercise development* (WHO, 2013)
- *A series of pre-packaged tabletop exercises for validation of core capacities at country level* (WHO, 2015).

This manual also links to guidelines for emergency simulations published by the Inter-Agency Standing Committee (I-A) sub-working group on preparedness:

- (IAES) *Inter-agency emergency simulation guide – facilitator's guide*, 2009
- (GES) *Government emergency simulation– facilitator's guide*, 2012
- (OCHA) Words into action – *Pocket guide 1: design & conduct of collective simulation exercises*, (Interim draft 2017).

And other resources including:

- Material published by the US Federal Emergency Management Agency (FEMA)
- Material published by the Emergency Management Institute (EMI) of the United States
- *Handbook on simulation exercises in EU public health settings* (ECDC, 2014)
- *Handbook on evaluation of exercises, Swedish Civil Contingencies Agency* (MSB, 2011)
- The international standard on *Societal security–guidelines for exercises* (ISO 22398, 2013).

1. Introduction

This exercise manual has been designed to meet the needs of WHO, its Member States and its partners to support and develop exercise practitioners' competency to plan, implement and evaluate simulation exercises.

Simulation exercises can help develop, assess, and test the functional capabilities of emergency systems, procedures and mechanisms to respond to outbreaks and public health emergencies.

This manual complements existing WHO exercise methodologies, helping ensure common understandings and approaches across the organization. It describes how exercise teams work, and can supplement future training courses for WHO staff, ministries of health, governments, and preparedness and response partners. It has been developed with key support from WHO regional offices and HQ technical units, and with input generated in country pilots run both by ministries of health and by WHO country offices.

An effective simulation exercise programme must be designed and driven at country level. To enhance national exercise capability, WHO and partners must provide countries with hands-on support and consistent and practical guidance and tools for designing, implementing and evaluating exercises.

1.1 Background

At WHO, exercises play an important role in the work of many teams. The organization therefore posses substantial expertise and know-how in their planning and implementation. There is, however, a wide array of exercise methodologies and terminology in use. This exercise manual has therefore been drafted, to create more consistency across existing exercise methodologies, and to support public health stakeholders.

During the 2014-2016 Ebola Virus Disease (EVD) outbreak in West Africa, WHO and others within the public health community emphasized the use of exercises to ensure that public health emergency response systems were in place to manage the importation of EVD into high-priority, non-affected countries. These exercises played an important role in identifying strengths and gaps in the development and implementation of preparedness measures.

The IHR monitoring and evaluation framework (2015)[1] aims to establish a system of mutual accountability for global public health security among Member States. It draws on a mixed approach of qualitative and quantitative data collection and analysis, as well as on desk reviews and functional assessments of capacities for preparedness, detection and response. In this regard simulation exercises have been identified as a critical functional means—along with self-assessment and joint external evaluations—of validating IHR core capacities. Transparent, accurate, timely reporting has also been identified as important in providing Member States with information on existing capacity, and helping foster dialogue, trust and mutual accountability.

WHO, its Member States and its partners continue to develop and expand their simulation exercise capacities, so they can enhance operational support to member states. WHO will continue to provide the practical tools and capacity required to support these essential preparedness activities.

[1] WHO Concept note: Development, monitoring and evaluation of functional core capacity for implementing the International Health Regulations (2005) http://www.who.int/ihr/publications/concept_note_201407.pdf?ua=1

1.2 Purpose & objectives of the exercise manual

The purpose of this manual is to support the development and management of an effective, fit-for-purpose exercise programme.

The objectives of the manual are to:

1. Support decision-making on which type of simulation exercise to use
2. Support users in key steps in planning, designing, implementing and evaluating simulation exercises
3. Provide guidance, templates, tools and checklists to support exercise implementation at all levels (national, regional, community and global)
4. Ensure consistency in conducting and designing exercises across the public health community.

1.3 Target audience

The target audience is made up of those responsible for developing and implementing national simulation exercise programmes within ministries of health, WHO, and partners.

1.4 Use of this manual

The manual adopts a project management approach and is intended for use as a ready reference toolkit, with adaptable templates for developing, implementing and evaluating exercise projects. It embraces a generic modular approach that allows users to follow standard methodology, while at the same time ensuring flexibility to adapt and implement different simulation exercises as part of an exercise programme.

Generic:	The materials in this manual are generic and must therefore be tailored to fit local contexts, hazards and needs.
Modular:	The modular structure of this package allows for the selection of one or more types of simulation exercise (to be run consecutively or simultaneously) based on the needs of the exercise programme.

Exercise chapters and tools are designed as stand-alone components for exercise management teams, and are to be used when implementing simulation exercise projects. In other words, all the guidance and tools necessary for planning, executing and validating a tabletop exercise, for example, are contained in the chapter on tabletop exercises.

1.5 Manual structure

The manual's first three chapters consist respectively of a brief introduction; a description of common concepts and terminology; and guidance on the types of exercise best suited to specific needs of the exercise programme.

Chapters 4-7 are generic modular exercise chapters, each of which covers a specific type of exercise. These are accompanied by annexes containing editable templates with which to build and implement the chosen exercise.

- Chapter 1: Introduction & objectives of the manual
- Chapter 2: Definitions and concepts
- Chapter 3: Exercise selection process
- Chapter 4: Tabletop exercise

- Chapter 5: Drill
- Chapter 6: Functional exercise
- Chapter 7: Field/full-scale exercise

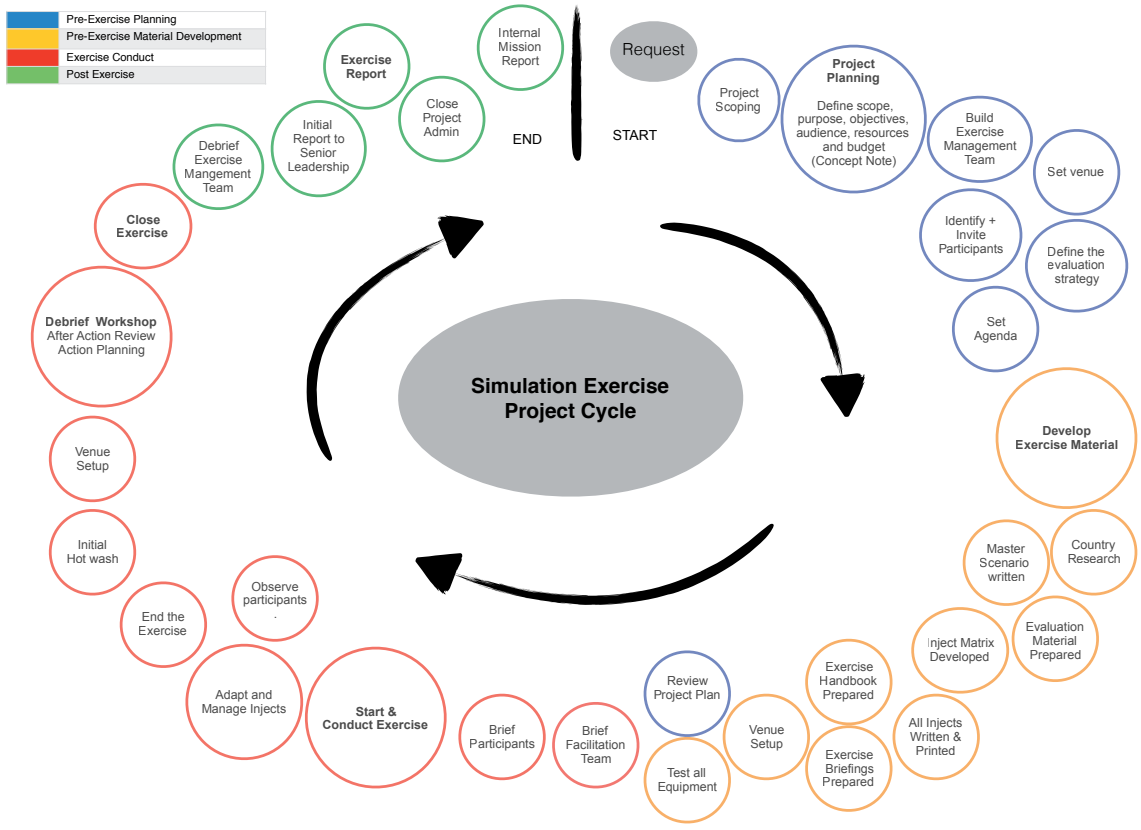
Each exercise chapter follows a standard approach for building and implementing an exercise: the exercise project cycle. This approach consists of three project phases, in which various key steps are identified. These are:

1. Pre-exercise planning, material development and set-up
2. Exercise conduct
3. Post-exercise reporting and handover.

For each project phase, key steps are identified as essential when building a simulation exercise. For more complex simulation exercises, additional requirements are identified; these are found at the end of each project phase (if applicable). See Figure 1 for an example of a functional exercise project cycle.

The manual includes key tips written in *blue italic* font at the end of each paragraph. Some tools, guidance notes & templates in the annexes contain examples of narrative content – also written in *blue italics* and placed in separate text boxes to distinguish them clearly from the guidance/instructions.

Fig. 1. **Example of an exercise project cycle for a functional exercise**



2. Concepts & definitions

2.1 Introduction

An exercise is a form of practice, training, monitoring or evaluation of capabilities, involving the description or simulation of an emergency to which a described or simulated response is made.

Exercises can:

- Reveal planning weaknesses in a controlled environment
- Reveal resource gaps
- Improve coordination
- Clarify roles and responsibilities, including the chain of command
- Develop enthusiasm, knowledge, skills and willingness to participate in emergency response
- Familiarize staff with new functions
- Gain public recognition and trust for the emergency management process
- Test equipment
- Test and evaluate plans and procedures, including operational guidelines and standard operating procedures (SOPs).

This manual presents four fundamental types of exercise, which can be split into two categories:

1. **Discussion-based exercises**; these familiarize participants with, develop, or refine current plans, policies, agreements and procedures.
2. **Operations-based exercises**; these validate plans, policies, agreements, procedures and system functionality; clarify roles and responsibilities; and identify resource gaps in operational environments.

This manual includes exercises from both categories, as summarized below.

Discussion-based exercises

- Tabletop exercises (TTX): A tabletop exercise is a facilitated discussion of an emergency situation, generally in an informal, low-stress environment. It is designed to elicit constructive discussion between participants; to identify and resolve problems; and to refine existing operational plans. This is the only type of simulation exercise that does not require an existing response plan in place.

Operations-based exercises

- Drills (DR): A drill is a coordinated, supervised exercise activity, normally used to test or train a single specific operation or function in a repeated fashion. A drill aims to practice and perfect one small part of a response plan, and should be as realistic as possible, employing any equipment or apparatus necessary for that part.
- Functional exercises (FX): A functional exercise is a fully simulated interactive exercise that tests the capability of an organization to respond to a simulated event. The exercise tests multiple functions of the organization's operational plan. It is a coordinated response to a situation in a time pressured,

realistic situation. A functional exercise focuses on the coordination, integration, and interaction of an organization's policies, procedures, roles and responsibilities before, during, or after the simulated event.

- Field exercises: See full-scale exercise. A field exercise is one form of full-scale exercise, focusing on more specific capacities or series of capacities, such as procedures for rapid response teams (RRT), laboratory analysis or sample collection and transport.
- Full-scale exercises (FSX): A full-scale exercise simulates a real event as closely as possible and is designed to evaluate the operational capability of emergency management systems in a highly stressful environment, simulating actual response conditions. This includes the mobilization and movement of emergency personnel, equipment and resources. Ideally, the full-scale exercise should test and evaluate most functions of the emergency management plan or operational plan. Differing from the FX, a full-scale exercise typically involves multiple agencies and participants physically deployed in a field location.

Note:

Although there are differences between a field exercise and a full-scale exercise (the latter is often more complex and requires more financial and human resources to be deployed), the development and implementation of both types of exercise—including the planning, exercise conduct, and post-exercise phases—are very similar. This manual therefore merges field and full-scale exercise into one chapter.

Although other types of exercises exist and may be derived from the simulation exercise types presented in this manual, this manual only includes those types listed above.

The summary table below provides an overview of key planning requirements per exercise type.

2.2 Definitions & terminology

For the purposes of this manual, the following definitions apply (in alphabetical order).

Action plan

A plan identifying corrective action/activities to be undertaken following the recommendations of an exercise report. The plan should include timelines for implementation, the identities of the officers responsible, and often the associated costs. This will ultimately contribute to continual improvement in response capabilities, and hence to preparedness.

Administrative (admin) & logistics checklist

Checklist of the administrative (admin) and logistical requirements needed for conducting the exercise.

Concept note

Project document outlining the exercise purpose, scope and objectives; the exercise methodology; the composition of the exercise management team; and the evaluation strategy and format.

Control room (also known as 'facilitation room')

The dedicated space from which the exercise management team manages and stages the exercise. The control room (in an office, room, tent or other suitable venue) is separate from the exercise participants' space.

Emergency response plan

A document describing how an agency or organization will manage its responses to emergencies of various types, by providing a description of:

- The objectives, policy and concept of operations for the response to an emergency
- The structure, authorities and responsibilities for a systematic, coordinated and effective response.

In this context, emergency response plans are agency- or jurisdiction-specific, and detail the resources, capacities and capabilities that the agency or organization will employ in its response. This is also referred to as an emergency or operations plan (WHO, 2015).[2]

Evaluation

Systematic process of observing and recording all exercise activities, comparing performance and outcomes against exercise objectives, and identifying strengths and weaknesses.

Exercise management team

Team responsible for planning, conducting and evaluating an exercise project.

Exercise objectives (outcomes)

Specific objectives for the exercise and the outcomes it is expected to achieve.

[2] Framework for a public health emergency operations centre, WHO, November 2015

Exercise project

A standard approach for building and implementing any exercise consisting of three phases:

1. Pre-exercise planning, material development and set-up
2. Exercise conduct
3. Post-exercise reporting and handover phase.

Exercise report

A report that records, describes and analyses the exercise, drawing on the evaluation, including debriefs and observations. The report should include all relevant information, including exercise description; type; scenario; outcomes; participating organizations; and recommendations to assist in the design of future exercises. Exercise reports are sometimes referred to as "after action reports," but this manual uses the term "exercise report."

Functions

Actions or operations required in emergency response or recovery. It is important not to confuse "functional exercises" with emergency "functions." All exercises, no matter what type, test and evaluate emergency functions, often contained in the Emergency Operations Plan (EOP).

Hot wash

Immediate feedback or debriefing event involving the participants and the exercise management team. Individuals share perspectives on strengths, weaknesses, and areas for improvement. These contributions are subsequently incorporated in the exercise report.

Inject

Scripted piece of information inserted into an exercise, aimed at one or more participants (players), which is designed to elicit a specific response and facilitate the flow of the exercise. Injects can be written, oral, televised or transmitted via other means (e.g. PowerPoint, fax, phone, e-mail, voice, radio, or sign) by one of the controllers/facilitators.

Inject matrix

Document detailing the sequence of events to be followed during an exercise, including the time indication of each event. It also identifies who is responsible for tasks, and provides the exercise control/facilitators with a 'script' to follow.

Needs assessment

Process of defining the reasons for conducting an exercise and identifying the functions to be exercised. Need assessments enable the design of an effective exercise constructed around specific objectives and functions.

Observer

Person who observes the exercise. Observers may submit their observations as part of the evaluation process, although they have no official role in the conduct of the exercise.

Outputs

Actual findings, recommendations and results stemming from the exercise. These should correspond with the exercise objectives and are presented in the exercise report.

Participant (or player)

A person involved in the exercise and who is performing their function and tasks as they would during a real emergency response.

Response

Provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected. (UNISDR, 2009)

Risk assessment

The process of determining risks to be prioritized for risk management, by the combination of risk identification, risk analysis, and evaluation of the level of risk against predetermined standards, targets, risks or other criteria. Risk assessments include a review of the technical characteristics of hazards; analyses of exposures and vulnerability; and evaluation of the effectiveness of prevailing coping capacities in respect of likely risk scenarios (WHO, 2015).[3]

Scenario (master scenario)

Pre-planned storyline that drives an exercise, as well as the stimuli used to achieve exercise objectives. The scenario is designed to stimulate exercise participants to respond to events.

Target team

Teams or organizations subject to the exercise. See also "participant (or player)".

Time-jump

Jumps in time are used to compress the timescale of the simulated emergency.

Training

Any activity or course that transfers or improves skills, knowledge, and attitudes through learning experiences, and which helps individuals achieve a given level of proficiency.

2.3 Common exercise principles

Regardless of the type of exercise being used, its size, or the structure being exercised, a number of common principles and terminology apply. While the underlying premise is that the exercise process is flexible, certain critical aspects need to be defined and managed.

2.3.1 Senior management commitment

Before planning an exercise, it is critical to gain the support of senior management by clearly articulating the benefits and expected outcomes of the exercise. It is critical to be granted a clear mandate and the authority to plan, implement and evaluate the exercise.

Such management support ensures that the necessary resources are made available, access is granted where required, and exercise outcomes, results or recommendations are used and followed up by those responsible. The exercise concept note can help to obtain senior management commitment.

[3] Framework for a Public Health Emergency Operations Centre, WHO, November 2015

2.3.2 Exercise needs assessment

An exercise needs assessment is essential in order to ensure an effective exercise, constructed around specific objectives. It includes four steps focussed on different areas:

1. Understanding priority risks
2. The reasons for conducting the exercise
3. The function to be exercised
4. The system, plans or training level in place.

A risk assessment is commonly conducted prior to an exercise as it helps identify the risks a country is most likely to face. This helps define the reasons for conducting the exercise, and identifies the functions to be exercised.

Assessing what needs to be exercised also entails a review of relevant emergency plans, systems, people and resources already in place. This review can also extend to previous exercise reports, "lessons learnt" and after action documents, and input from the management.

> ***TIP:*** *The needs assessment will guide the design of a relevant, realistic and appropriate exercise scenario for the specific country context and exercise objectives.*

2.3.3 Exercise purpose, scope and objectives

When preparing an exercise, focus should be on the purpose of the exercise.

The purpose is the overarching reason for undertaking the exercise, broken down into specific objectives. It helps define the scope, and relates to the size and scale of the exercise (e.g. range of different sectors involved, number of participants, etc.). The exercise objectives are the foundation of the exercise, as they describe the specific outcomes to be achieved and evaluated. In order to ensure the exercise achieves its stated purpose, it is important to define the scope clearly and set the right objectives.

There are five key elements of the scope:

1. Type of emergency
2. Location where the simulated event will occur
3. Functions that the participants will practice
4. Participants
5. Exercise type.

The exercise scope and objectives should be realistic, and should remain within the needs of the targeted audience and available resources. Since the scope and objectives are linked, a larger scope may require more objectives. However, emphasis should be on setting realistic limits. In most cases, less is better.

2.3.4 Time and resources

An exercise project often competes with other activities that need resources (time, money and people). It is therefore important to emphasize the utility and added value of an exercise, highlighting linkages to ongoing projects and the wider preparedness strategy. Simulation exercises form an integral part of an emergency risk management programme, and therefore should be integrated within the annual work plan, with sufficient time and resources allocated in advance.

> ***TIP:*** *The available resources and stakeholder buy-in will often dictate the type, scale and scope of the exercise.*

2.3.5 Selecting the exercise type

To achieve the stated exercise purpose, it is critical that the correct type of exercise is selected and that generic materials are adapted to meet the required scope and country context. This adaptation is critical in order to ensure that the exercise is in line with the stated objectives, priority risks, and the national response capability (national response plan).

Information on how to select the exercise type can be found in Chapter 3.

2.3.6 Exercise capacity & management

The exercise management team will be responsible for planning, developing, implementing and following up on the exercise and its outcomes. The composition of an exercise management team varies according to the exercise scope and type. In some cases, individuals can have more than one role.

The exercise director is responsible for planning and conducting the exercise, and is supported by the exercise management team. The exercise management team may include members from outside the organization.

The main roles in the exercise management team include:

- **Exercise director:** the person who provides strategic oversight and direction for the planning, conduct and evaluation of an exercise. The exercise director is responsible for approving the exercise's purpose, objectives and supporting documentation, including the concept note, exercise plan and exercise instructions.
- **Exercise controller/lead facilitator:** a single person who supervises the overall conduct of the exercise, ensuring that it proceeds as planned and that its objectives are reached. The exercise controller is required for drill, functional and full-scale exercises. The exercise director appoints the exercise controller.
- **Evaluator:** a person who gathers data from the exercise and analyses whether the objectives and the targets of the exercise were met. Their evaluation will include overall performance, operational effectiveness, quality control, capabilities, strengths and weaknesses, and areas for improvement.
- **Facilitator (exercise facilitator):** a person responsible for delivering injects and monitoring progress during an exercise. The facilitator is the first point of contact for any questions, clarifications or requests.
- **Role-player (or actor):** a person who simulates a specific pre-scripted role in the exercise.

TIP: *It is highly recommended always to form an exercise management team, regardless of the scope and size of the exercise.*

2.3.7 Selecting the exercise participants

Identifying exercise participants is a responsibility of the exercise management team. Mapping the response system and stakeholders is a useful method of defining the target audience (participants). Participants should be selected according to the purpose, scope and objectives of the exercise.

3. Exercise selection process

Choosing the right exercise for your needs requires a strategic approach that takes into consideration local context, current capacity and the long-term development plan.

3.1 Exercises as part of emergency risk management

One of the goals of emergency risk management is to improve operational readiness for response through emergency preparedness. Simulation exercises are used to identify and eliminate issues before an actual emergency occurs. Exercise recommendations and corrective actions are essential to improving response systems and mechanisms to manage emergencies effectively.

Exercises enable people to practice their roles and functions, and to gain experience in emergency settings. Exercises can be used as training and quality assurance tools, and provide evidence-based assessments for the monitoring, testing and strengthening of operational readiness to respond to emergencies.

As a training tool, exercises allow participants to learn and practice emergency response procedures in a safe and controlled environment. As a quality assurance tool, they test and evaluate emergency systems, policies, plans and procedures.

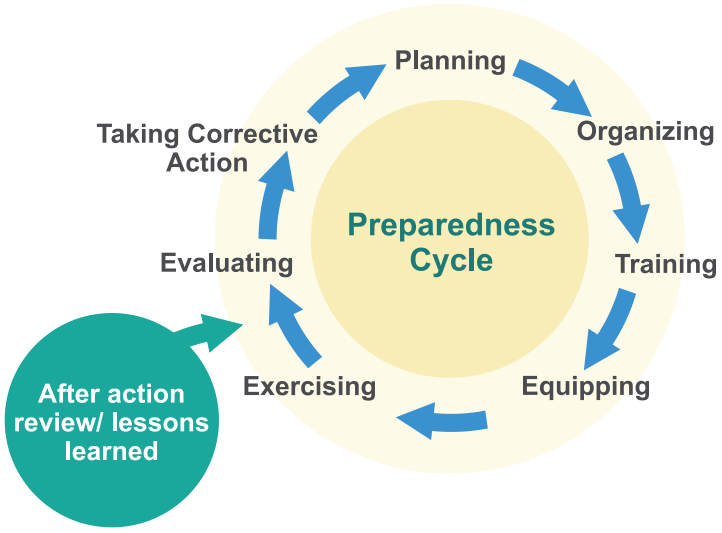
An exercise programme is an important part of emergency risk management, and should be developed in accordance with the organization's strategic priorities, using a combination of exercise types to accomplish exercise-specific aims and objectives.[4]

3.2 Exercise programme

Exercises are not one-time events, but should be undertaken as part of a carefully designed exercise programme that ensures a common strategic objective is addressed. The exercise programme forms a vital component of the emergency preparedness cycle.

The components of the preparedness cycle are: planning; organizing; training; equipping; exercising; evaluating; and taking corrective action. After action reviews/lessons learned activities from real events also feed into the cycle, as illustrated below:

Fig. 2. **Preparedness cycle**



[4] US Department of Homeland Security (2007) HSEEP Volume 1: HSEEP overview and exercise program management, p6. HSEEP = Homeland Security Exercise and Evaluation Program.

An exercise programme should be designed according to the results of risk assessments (planning) and training needs. A well-planned and well-implemented exercise programme helps ensure that risk assessments, training programmes and exercise events are consistent, progressive and focused on common goals that complement and build on one another.

The programme should blend planning, organizing, training, equipping and exercise events to ensure that participants' interest levels are maintained, and to reflect lessons from previous exercises, as well as actual emergencies.

3.2.1 Training

Training is an integral part of the preparedness cycle. Effective training ensures that individual staff achieve and maintain the level of proficiency necessary to fulfil their functions effectively.

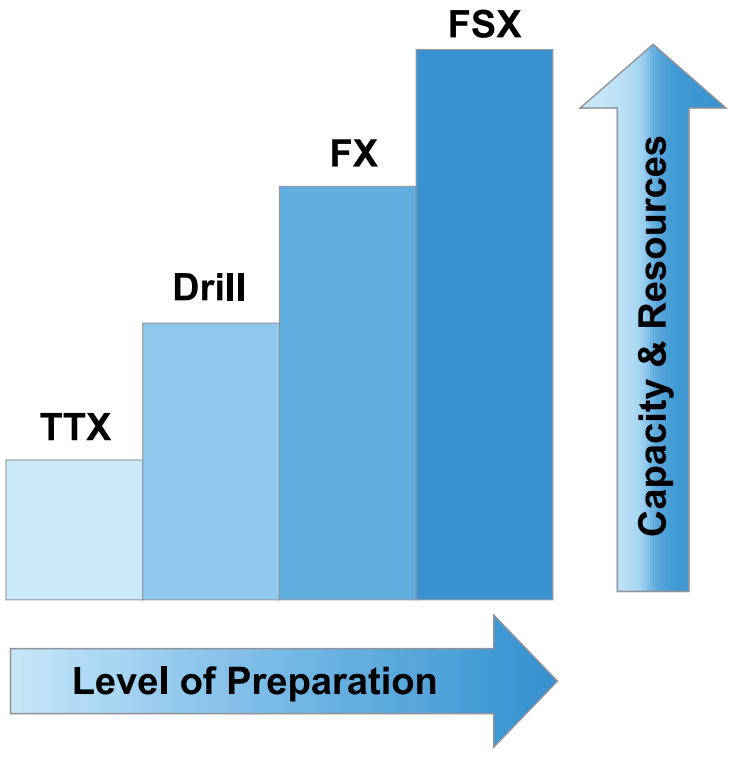
Exercises, on the other hand, should not be designed to assess an individual's performance. Their purpose should be to test and evaluate the processes and procedures used for outbreaks and public health emergency response, not the responders themselves. It is therefore essential that staff are trained on their roles, tasks or functions in emergency response before exercises are undertaken.

3.2.2 Progressive exercise activities

For exercises to be most effective, they should form part of a comprehensive programme made up of progressively complex exercises, each exercise building on the previous one until they are as close to reality as possible.[5] This 'building-block approach' should start with basic exercises that test specific aspects of preparedness and response, followed by progressively complex exercises requiring additional preparation time and resources.

The figure below provides an illustration of the levels of preparation and capacity needed for each exercise type.

Fig. 3. **Level of preparation and capacity per exercise**



[5] WHO (2009) Emergency exercise development, WPRO, p2.1

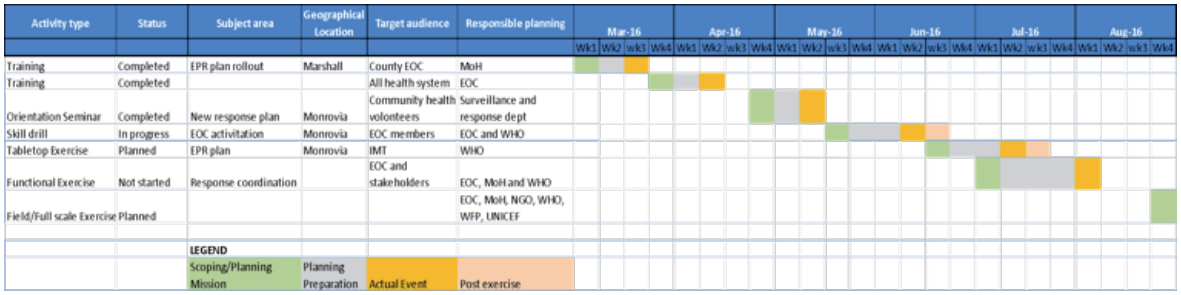
3.2.2 Exercise planning tool (EPT)

In order to support the planning of comprehensive exercise programmes, an exercise planning tool (EPT) has been developed.

The tool is divided into seven sections, including a requirement checklist, a cost estimation tool and an exercise calendar. The exercise calendar can be used to apply the `building-block approach,' so exercises are planned accordingly to their suitability within the broader exercise programme. It should be noted that this calendar may not be based on a January-to-December time period, but rather be part of a circular planning period. Figure 5 illustrates the exercise calendar, using the building-block approach.

The EPT can be found on WHO`s IHR monitoring implementation website.[6]

Fig. 4. **Exercise calendar**



3.3 Selecting the exercise type

In order to ensure that the exercise objectives are achieved, it is important to select the right type of exercise for the relevant part of the preparedness cycle.

Although not prescriptive, the table below gives an indication of which types of exercise might be best suited to each of the activities within the emergency preparedness cycle. These exercises are not necessarily mutually exclusive of one another, and different exercises can be used for different purposes.

In addition, some exercises may constitute components of other exercises. For example, a field/full-scale exercise is likely to include a series of drills, and will incorporate many elements of a functional exercise. The modular design of this package provides flexibility to select and combine different modules depending on the overall strategy.

Table 1: **Exercise types in different areas of the emergency preparedness cycle (EPC)**

Type of exercise	Corresponding EPC component
Tabletop	Planning, organizing, training and taking corrective action
Drills	Training, equipping, exercising and evaluating
Functional	Training, exercising and evaluating
Field/full-scale exercise	Training, equipping, exercising and evaluating

[6] http://www.who.int/ihr/procedures/implementation/en/

3.3.1 Defining the exercise purpose and objectives

The first step in selecting the type of exercise should be to define the exercise purpose and objectives. Once these have been articulated, exercise selection can start. Selection should consider which exercise type could best measure and evaluate the exercise purpose and objectives.

For example, when developing a new response plan, it is useful to commence with a TTX to build or stress-test the plan and familiarize stakeholders with roles, responsibilities, planning elements and objectives. Once all members of the team are familiar with the new plan, an FX can be used as a practical test of the response plan and systems.

Other factors also influence the choice of exercise. These include exercise capacity, available resources, organizational experience of exercises, and time constraints. The time and resources required to conduct an exercise will vary widely depending on the type of exercise, and its scope and scale. Although a comprehensive programme made up of progressively complex exercises is ideal, it is recommended that organizations start with basic exercises before moving to more complex ones.

In order to support the selection of the right type of exercise, a decision tree has been developed, including some key questions that can be considered in the selection process. The decision tree can be found in Figure 6.

> ***TIP:*** *Remember that the exercise purpose and objectives clearly define why you are conducting the exercise, and the specific outcomes you are aiming for.*

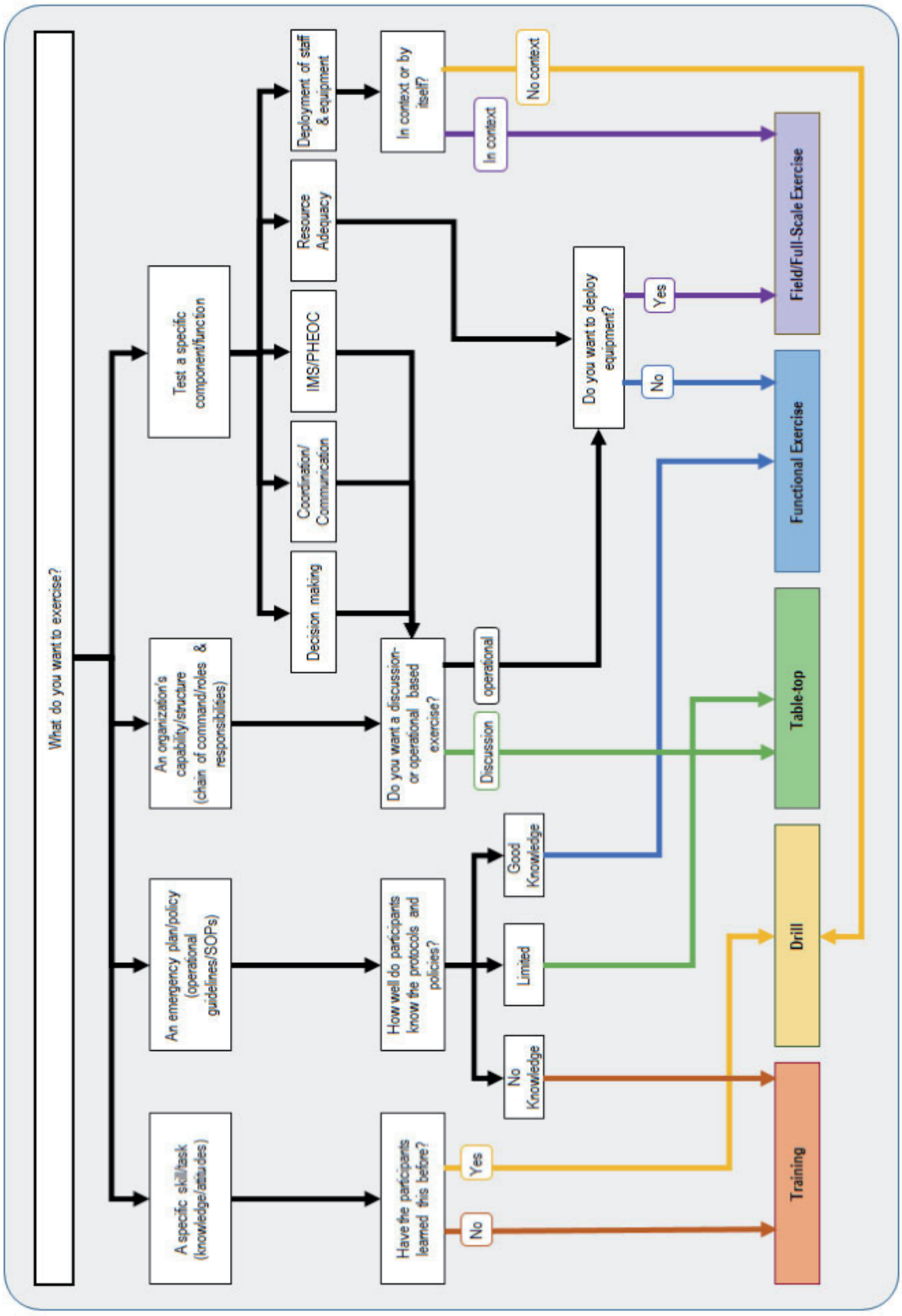


Fig. 5. **Exercise decision tree**

4. Tabletop exercises (TTX) guidance and tools

This chapter presents project management guidance, tools and templates to assist in planning, building, conducting and reporting on a tabletop exercise.

4.1 Overview

Definition	A tabletop exercise is an exercise that uses a progressive simulated scenario, together with series of scripted injects, to make participants consider the impact of a potential health emergency on existing plans, procedures and capacities. A TTX simulates an emergency situation in an informal, stress-free environment.
Purpose	The purpose of a TTX is to strengthen readiness to manage a health emergency, through facilitated group discussions. A TTX can be used to: ■ Develop or review a response plan ■ Familiarize participants with their roles and responsibilities ■ Identify and solve problems through a facilitated and open discussion.
Target audience	Strategic, operational and tactical staff of the different functional areas needed in an emergency response, representing government and humanitarian partners.
Exercise time-frame	Three to eight hours depending on the objectives. 2/3 of the time for the exercise itself, and 1/3 of the time for the debriefing.
Location/venue	The TTX can be hosted in any venue that is comfortable for the participants and suitable for the agenda and discussions planned. Normally a TTX is conducted in a comfortable meeting room or conference room.
Process overview	A TTX is a discussion guided by a facilitator (or sometimes two facilitators who share responsibilities) around an exercise scenario or narrative. Its purpose is to solve problems as a group. In many respects, a TTX is like a problem-solving or brainstorming session. Note: Unlike a functional exercise, in a TTX problems are tackled one at a time and no operational systems are used or tested.
Planning time-frame	■ 2-3 scoping meetings (4-8 weeks prior to the TTX) ■ 2-5 days to build the exercise ■ One day for the venue set up and pre-briefing ■ One day to implement the TTX (including the debriefing) ■ One week for post-exercise reporting.
Resources	At least one experienced facilitator, often supported by technical experts, and admin and logistics support as required.
Key success factors	■ Participation of relevant and appropriate participants ■ Clarity on the objectives and purpose of the TTX ■ Balanced representation of key functional areas.

See also Chapters 2 and 3 of this package to clarify which exercise is best suited to your needs, objectives and available resources.

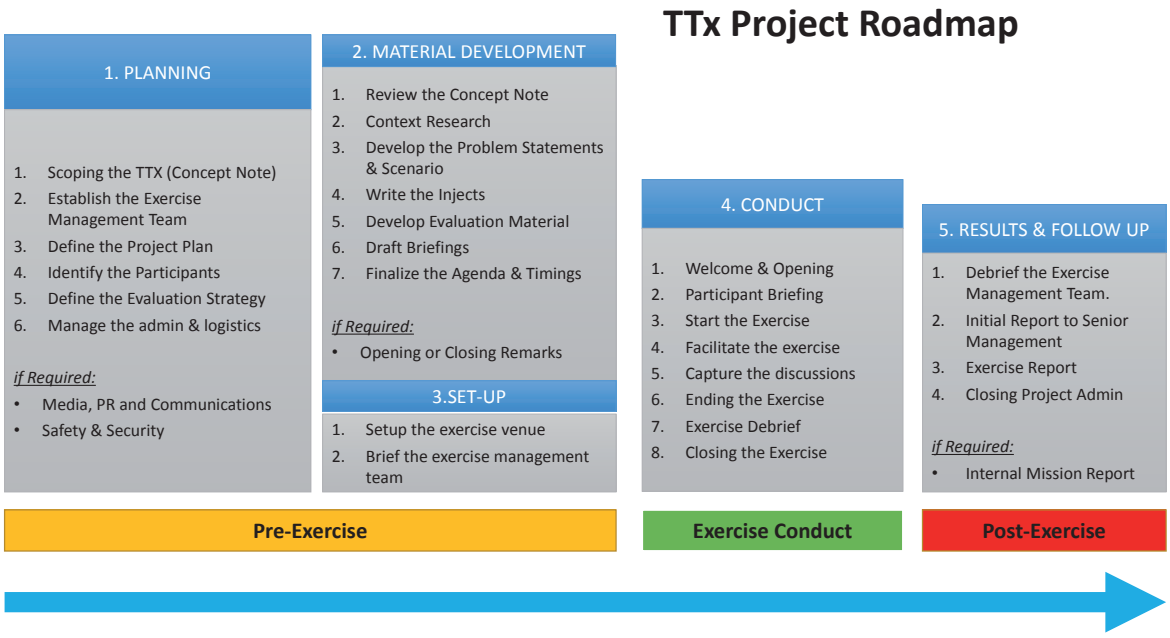
4.1.1 Project phases

TTX projects can be broken down into three main phases:

1. Pre-exercise planning, material development and set-up
2. Conducting the exercise
3. Post-exercise reporting and handover.

For each phase, this package presents the key steps, with additional elements that might be needed in more complex projects. Every step of the project is accompanied by the tools and guidance notes in the annexes.

Fig. 6. **TTX project roadmap**



4.2 Pre-exercise

4.2.1 Planning.

Step 1 – Scoping the project

Scoping the project ideally takes place one or two months before the anticipated exercise. For a TTX the scoping can be done through meetings (e.g. teleconferences) or through a scoping mission if required. The main aim of the scoping meetings is to discuss and agree on the exercise purpose, scope and objectives. Ideally they should also achieve clarity on the target audience, expected outcomes, exercise scenario, resources, project leadership (exercise director), project timeline, and budget. Agreements are captured in a concept note and signed off by all the key stakeholders involved.

> ***Tip:*** *Having a clear concept note helps manage expectations and enables the successful planning, conduct and reporting of the simulation exercise.*

Available tools:

- TTX 01 Concept note template
- TTX 02 Scoping mission TOR template (if required)
- TTX 03 Budget template

Step 2 – Exercise management team formed

Once the exercise director has been appointed, the exercise management team can be formed to plan the exercise in detail; develop the required material; conduct the exercise; and write the post-exercise report.

The exercise management team should be selected based on the skills required, and should be fully briefed on the TTX process and concept note.

The exercise management team members should not be participating in the exercise.

Available tools:

- TTX 04 Exercise management TOR

Step 3 – Define the project management plan

Once the exercise management team is formed, the exercise director should define the project plan and tasks required to develop and conduct the simulation. This plan needs to take into account all the exercise details and available resources as per the concept note (agreed budget, available time, money, people, venues and existing materials). The exercise director should review and adapt the Gantt TTX project planning tool (TTX 05) and the exercise admin & logistics checklist (TTX 06) with the team.

The exercise director should delegate the administrative, logistics and ICT support tasks to the appropriate people within the exercise management team. These tasks ensure that the exercise venue, participants, facilitators, material and equipment are ready on the day of the exercise.

TIP: To ensure that all members of the exercise management team are kept up to date and can easily share information, a shared drive is usually set up to house critical documents and information. Regular team meetings are recommended to keep the project on track.

Tools available:

- TTX 05 Project Gantt chart template
- TTX 06 Admin & logistics checklist

Step 4 – Identify participants

Depending on the purpose, scope and objectives of the exercise, the most appropriate people to participate should be identified and invited. Stakeholders, functions and target audiences should be mapped as required to define the exercise participants.

In determining the number of participants and whom to invite, it will be necessary to review the concept note, the venue setup and the available facilitators. The participants may be facilitated as a single group, or can be separated into smaller focus groups (break-out groups) if there are too many for one facilitator to manage.

TIP: *Involving the right participants and facilitators is a critical success factor in achieving the desired outcomes. To help identify the exercise participants, review the response plans, procedures and organization structure; or, working with local expert(s), take a blank page and map out the response system and the agencies, functions and people usually involved in an emergency operation at the scale you are targeting.*

Tools available:

- TTX 07 Participant list template
- TTX 08 Participant invitation template.

Step 5 – Define the evaluation strategy and methodology

In order to evaluate the exercise objectively, the evaluation process must be planned from the start of the project. This includes defining the required indicators and your strategy for reporting on or measuring achievement of each of the exercise objectives.

For a TTX, the simplest form of evaluation is to capture and report the discussion points related to the exercise purpose and objectives. This would include solutions, comments, recommendations and ideas on how to improve the level of preparedness or response. Ideally the TTX debrief should result in an action plan (designed by the participants), that clearly defines the exercise tasks, in priority order, along with who is responsible and deadlines for completion.

TIP: *In a learning-centred project team, project evaluation activities will take place during all stages of the exercise project.*

Tools available:

- TTX 09 Evaluation guidance note

Step 6 – Manage the administration & logistics

While the admin and logistics requirements are defined and tasks assigned during step 3 of the planning phase (defining the project management plan), it is important to ensure ongoing review and management of these elements by the exercise management team during the pre-exercise phase of the TTX project.

TIP: Weekly or daily review of the admin & logistics task list ensures that each activity is tracked and those assigned tasks are accountable for their completion.

ADDITIONAL ELEMENTS IF REQUIRED

Media, PR & communication strategy

Every opportunity for positive messaging and visibility for the organization, donors and partners is an opportunity to build support for preparedness activities. Therefore, all media and communication around planned simulation exercises needs clear, effective and appropriate messaging to specific audience(s) defined by the communications officer or media focal point.

TIP: *It is helpful to appoint a designated spokesperson to develop external communications material and to manage all communication with the media and the public.*

Tools available:

- TTX 10 Guidance note on media, PR and communication

Safety & security

When working in certain contexts, and depending on the venue or participant profiles, a security risk assessment may be needed to ensure a safe exercise environment. The local security advisor or appropriate security agency should provide guidance on the necessary security arrangements.

Tools available:

- TTX 11 Security guidance note

4.2.2 Material development

A successful exercise always depends on the development of detailed, realistic and comprehensive simulation exercise material. This section outlines the steps required to develop material for a TTX.

> ***TIP:*** *As each exercise is unique and built for a specific purpose and audience, changing any element in the concept note may impact the setup and material required.*

Step 1 – Review exercise purpose, objectives and expected outcomes

Before starting to develop your material, review the concept note and make sure the exercise management team is clear on the key elements of the exercise. The purpose, specific objectives and expected outcomes will lead the material development process.

Step 2 –Research context & gather reference materials

The exercise management team should allocate time to gain a good understanding of the local context and operating environment for which the exercise is planned. This research includes reviewing a number of things: the existing response system; the range of stakeholders; coordination and communication mechanisms; resources available for a response; contingency plans; and previous exercise reports and after action reviews/lessons from previous emergencies. Interviews with key stakeholders and local subject matter experts can also aid in gaining a good understanding of the local response systems, and help in the development of realistic and appropriate material for the exercise.

> ***TIP:*** *Key documents should be provided by the host agency, with additional support from local subject matter experts and experienced staff.*

Step 3 – Develop problem statements and scenario

A TTX requires both a realistic and appropriate exercise scenario (narrative) and discussion questions or problem statements posed by the facilitator. Each session should have a description of the scenario (narrative), followed by questions or problem statements that trigger discussion.

In order to ensure the exercise objectives are met, it is recommended to translate the specific exercise objectives into key discussion questions or problems to solve. The scenario narrative will describe a realistic situation that enables the participants to immerse themselves in the story of the emergency situation and discuss the planned questions that the facilitator poses to the group(s).

Both the scenario and the discussion questions are guided by the concept note and work hand-in-hand to stimulate constructive discussions and real problem solving.

TIP: *A TTX scenario is often split into several sessions, where problem statements are presented that correspond to specific exercise objectives and expected outcomes. Don't forget to consider session timings and duration when outlining each session.*

TIP: *Each session can be a distinct scenario or a continuation of the previous session. Any time jumps, story developments or assumptions need to be clear and realistic. Sessions can be designed to cover one objective per session, to or cover multiple objectives in each session.*

Tools available:

- TTX 12 Scenario & problem statement brainstorming guidance note
- TTX 13 Exercise outline template

Step 4 – Write injects

Once the problem statements and the scenario have been outlined in step 3, the injects delivered to the participants in each of the sessions must be written. Injects can be made up of any information delivered by the exercise management team to one or many participants during the simulation exercise. Injects can be written, oral, televised or transmitted via other means (e.g. PowerPoint, fax, phone, e-mail, voice, radio, or sign) by one of the facilitators.

TIP: *The injects will only be shared with the participants during the TTX and should stimulate the participants to engage with the exercise objectives in subtle or direct ways.*

Tools available:

- TTX 14 Generic TTX slide bank template (PowerPoint)

Step 5 - Develop evaluation material

For a TTX, the evaluation can be built into each session or run as a separate activity at the end of the exercise. The evaluator or note-taker should capture all the achievements, challenges, gaps, and recommendations made by the participants during the exercise session. In most cases the evaluation can be done by using the exercise outline template (TTX 13), in which expected outcomes are listed per session and can be tracked by the evaluators. However, in some cases additional evaluation preparation is required.

Example:

- If the exercise aims to evaluate the participating group's performance or knowledge of specific plans or procedures, then the evaluation team should predefine the expected outcomes and evaluation criteria.
- To improve the exercise package, inclusion of a feedback form will help the exercise management team understand how they performed in designing and implementing the exercise from the participants' perspective.

Tools available:

- TTX 09 Evaluation guidance note
- TTX 13 Exercise outline template – expected outcome column
- TTX 15 Participant feedback form template

Step 6 – Draft your briefings

To ensure that all participants and the exercise management team know how the exercise will work and what is expected from each person, clear instructions and information must be prepared. Two briefings will be conducted separately. The exercise management team will be briefed during the venue setup, and the participants will be briefed on the day of the exercise.

Tools available:

- TTX 14 Generic TTX slide bank template (Power Point) – participant briefing included
- TTX 16 Exercise management team briefing note

Step 7 – Finalise the agenda & timings

The exercise agenda and the timings for the TTX should be carefully arranged to ensure that the exercise delivers on the planned purpose and objectives. It is the responsibility of the lead facilitator to review the agenda, session outlines, expected outcomes and debrief strategy to ensure that the necessary sessions are allocated appropriately within the available time.

Tools available:

- TTX 17 Agenda template

ADDITIONAL ELEMENTS IF REQUIRED

Official opening or closing remarks

In some simulation exercises it is appropriate to hold an official opening or closing by a representative from the government, minister, agency director or representative of the host organization. To support this person, the exercise management team may be required to provide a brief on the exercise and draft the opening or closing remarks.

> ***TIP:*** *The closing session can include a certificate ceremony for participants and/or a press conference as appropriate.*

Tools available:

- TTX 18 Opening remarks guidance note

4.2.3 Setting up the exercise

Once all the material has been drafted, reviewed and finalized by the exercise director, it is time to setup the exercise venue and prepare the exercise management team to conduct the simulation exercise.

> ***TIP:*** *Admin and logistics constitute an ongoing activity that runs throughout the exercise project. At this stage most of the tasks and checklist should be completed, with all equipment and materials ready for the exercise setup.*

Step 1 – Exercise venue

The purpose and scope of the TTX will dictate the venue selected for the exercise and the setup procedure. The TTX can be hosted in any venue that is comfortable for the participants and which is conducive to the agenda and discussions planned. Normally a TTX is conducted in a comfortable meeting room or conference room.

Ensure that all necessary equipment is onsite (e.g. power supply, projector, air conditioning, laptops, tables, chairs, etc.), and that it has been set up and checked the day before the exercise.

Tools available:

- TTX 19 Venue checklist & room layout

Step 2 – Pre-exercise briefing to the exercise management team

The lead facilitator will have a team briefing prior to the TTX with the exercise management team. The nature and length of the meeting will depend on the experience and skill of the team. The aim of the briefing is to review the exercise material, run through the agenda and set up for the day. This will help ensure that each team member is clear on his or her roles and responsibilities during the simulation exercise.

Tools available:

- TTX 16 Exercise management team briefing note

4.3 Conducting the exercise

On the day of the exercise, the planning and preparations end, and the focus shifts to conducting the exercise. The section below outlines the necessary steps in conducting a TTX.

Step 1 – Welcome and opening

The exercise director or the lead facilitator will run through the planned agenda for the day, introduce the exercise management team, and ask the participants to introduce themselves. The exercise director or a senior official from the host organization may give a brief overview of the rationale for the exercise, and the wider context or strategy of which the exercise is a part.

> ***TIP:*** *For a more formal opening ceremony, a senior official of the host organization can welcome the participants and officially open the simulation exercise.*

Tools available:

- TTX 18 Opening remarks guidance note

Step 2 –Briefings

The key is to start the day with a brief overview of the purpose and objectives of the exercise. This is followed by an explanation of how the simulation works, giving the participants guidance and managing their expectations.

During this briefing it is critical that all the participants understand the process, how the exercise will be facilitated, and their respective roles during the exercise. It is important to explain how discussions, recommendations and lessons identified will be recorded, and how the debrief process and action planning will work. This session should include time for questions and clarification, to ensure all participants are clear on how to participate.

> ***TIP:*** *At this stage an overview can be provided of key concepts that will be the subjects of the exercise. These might include the response system; the preparedness plan; activation protocols; or communication and decision-making arrangements internally and with other agencies, the wider government and/or the humanitarian system.*

Step 3 – Starting the exercise

The exercise usually begins with the presentation of the narrative (effectively the first inject). This is a piece of information given to all players to set the scene, and provide background information for the simulated situation.

> ***TIP:*** *Be sure to include in this first narrative any backstory or any actions taken prior to the start of the exercise.*

Step 4 – Facilitating the exercise

Facilitating the exercise is about leading the participants through the planned sessions, adapting the sessions as required to ensure that focus is maintained on the objectives and expected outcomes.

A TTX is not tightly structured, so the exercise can be facilitated in various ways:

- The facilitator can present general problems verbally, which are then discussed one at a time by the group.
- Problems can be addressed verbally to individuals first, and then opened to the group.
- Problem statements and related discussion questions can be given to individuals to answer from the perspective of their own function and/or organization and role, and then discussed in the group. Pre-scripted messages can be presented to individual players one at a time by the facilitator. The group can then discuss the issues raised by the messages, using the national response plan or other operating plan for guidance. Occasionally, players receiving messages handle them individually, making a decision for the organization they represent.

> ***TIP:*** *In some exercises, technical experts or advisors can be available to support the participants in discussions and decision-making.*

Facilitating a TTX requires the session facilitator to take a leadership role, contributing strong communication and listening skills. They must have the confidence to control the room and lead the discussions. The session facilitator is often called on to mediate heated debates, engage quiet participants, ensure everyone plays an active role, and clarify points made by participants. He or she should also summarize the session outcomes at the end of the TTX.

TIP: *The facilitator is not there to provide answers for the exercise, but rather to enable participants to have a constructive and solutions-driven conversation among themselves.*

TIP: *The keys to running a successful TTX are flexibility and adaptability.*

Tools available:

- TTX 20 Lead facilitator guidance note

Step 5 – Capture the discussions

During the discussion sessions, one or more evaluators are assigned to capture the discussions, decisions, key comments, and recommendations.

TIP: *Summarize the session outcomes at the end of every discussion to capture all findings and to build consensus. This information will be used in the exercise debrief.*

Step 6 – Ending the exercise

The end of the exercise (ENDEX) will be declared by the lead facilitator when:

1. she or he is satisfied that the objectives have been met; or
2. the time allowed for the exercise has been exceeded; or
3. an unexpected interruption has occurred.

TIP: *Remind all participants and the exercise management team that the debriefing session is the most important part of the exercise.*

Step 7 – Exercise debriefing

Immediately following a TTX, a debriefing is conducted. The debrief is usually conducted by the lead facilitator or evaluator, and it provides an opportunity for participants to reflect on the session outcomes, and to draw out achievements, challenges and recommendations in the context of the exercise's objectives.

This debrief also aims to capture what participants have learned during the exercise, and to provide an opportunity for feedback on the exercise design and conduct. Ideally the exercise debrief includes a 'way forward' or 'action-planning' process.

TIP: *The debrief is an essential part of the exercise, and should be allocated sufficient time.*

Tools available:

- TTX 20 Lead facilitator guidance note
- TTX 15 Participant feedback form template

Step 8 – Closing the exercise

The exercise will be closed at the end of the debrief session. This can be done informally by the exercise director, or more formally as required. This session can include a certificate ceremony for the participants and/or a press conference as appropriate.

Tools available:

- TTX 21 Participation certificate template

4.4 Post-simulation

After the exercise ends it is the task of the exercise director and the lead evaluator to draft the post-exercise report and close all project admin.

Step 1 – Debriefing the management team

After debriefing the participants, the exercise management team should have a separate debriefing session to reflect on the exercise planning and implementation, as well as to confirm responsibilities and timelines for completion of the exercise report. This informal discussion is often lead by the exercise director, lead facilitator or exercise controller, in order to identify lessons and opportunities for similar future projects.

Tools available:

- TTX 22 Exercise management team debriefing guidance note

Step 2 – Initial report to senior-level officials

It is recommended to set up an initial meeting to report back to leadership or senior management. The purpose of this meeting is to share the initial findings of the exercise, including challenges, achievements and recommendations. Other goals may include gaining senior management support for proposed recommendations or an action plan.

Tools available:

- TTX 23 Leadership debriefing notes

Step 3 – The exercise report

The report will be completed by the lead facilitator and evaluator(s), and will draw on the debrief notes and reports from observers and other facilitators. Written as a record of the exercise, the report presents an overview of the exercise and—importantly—all the key achievements and challenges, along with any recommendations to the leadership.

The exercise report aims to ensure lessons identified are incorporated into the workplan and that action is taken on key recommendations.

> ***TIP:*** *Endorsement of the post-exercise report by the senior management or key stakeholders is essential to ensure the implementation of the key recommendations or action plan.*

Tools available:

- TTX 24 Exercise report template

Step 4 – Closing project admin

During the post exercise phase of the project, it is necessary to ensure that all outstanding admin and logistics for the exercise are finalized and closed.

Tools available:

- TTX 06 Admin & logistics checklist

ADDITIONAL ELEMENTS IF REQUIRED

Internal mission report

In the case that the exercise has been run with external support, the exercise management team should also write a short post-mission report for the supporting organization(s). This report should cover the lessons identified from the project and potential future opportunities (ways forward) for exercise activities.

Tools available:

- TTX 25 Mission report template

4.5 Tools and templates found in annex of this chapter

I. Pre-simulation

(A) Exercise planning

- TTX 01 Concept note template
- TTX 02 Scoping mission TOR template
- TTX 03 Exercise management TOR
- TTX 04 Budget template
- TTX 05 Project Gantt chart template
- TTX 06 Admin & logistics checklist
- TTX 07 Participant list template
- TTX 08 Participant invitation template
- TTX 09 Evaluation guidance note
- TTX 10 Guidance note on media, PR and communication
- TTX 11 Security guidance note

(B) Material development

- TTX 12 Scenario & problem statement guidance note
- TTX 13 Exercise outline template
- TTX 14 Generic TTX slide bank template (PowerPoint)
- TTX 15 Participant feedback form template
- TTX 16 Exercise management team briefing note
- TTX 17 Agenda template
- TTX 18 Opening remarks guidance note

(C) Setting up the exercise

- TTX 19 Venue checklist & room layout

II. Conducting the simulation exercise

- TTX 20 Lead facilitator guidance note
- TTX 21 Participation certificate template

III. Post-simulation exercise reporting and handover

- TTX 22 Exercise management team debriefing guidance note
- TTX 23 Leadership debriefing notes
- TTX 24 Exercise report template
- TTX 25 Mission report template

5. Drill (DR) guidance and tools

This chapter presents project management guidance and tools to assist in the planning, building, conduct and reporting of a drill (DR).

5.1 Overview

Definition	A drill is a coordinated, supervised exercise activity, normally used to test a single specific operation or function in a repeated fashion (WHO, 2009).
Purpose	The purpose of a drill is to practice specific skills, operations or functions, as an individual or in a team. The drill practices and perfects one small part of the response plan, and should be as realistic as possible, employing any equipment or apparatus necessary to carry out the function being drilled. Drills can be used to: ■ Train staff with procedures, tools or (new) equipment ■ Test a specific operation (e.g. emergency operations centre (EOC) telephone tree) ■ Exercise and maintain current skills ■ Develop new policies or procedures.
Target audience	Any member of the operations team that would normally be involved in the emergency response and is required to perform a specific and clearly defined function or task.
Exercise timeframe	30 minutes to two hours (including the exercise debrief).
Location/venue	Usually conducted in the actual location in which the drilled function or task would take place during a response, such as the health facility, in the field, or in a coordination centre (e.g. EOC). Drills can, however, also be conducted in classrooms or other designated venues as appropriate.
Process overview	An operations-based exercise, designed to test a specific function, process or procedure. Often a drill is repeated multiple times to build familiarity, knowledge and skill in the pre-defined task. The exercise should be as realistic as possible and thus requires the use of any equipment or apparatus necessary for the function being drilled. During the exercise, the simulation is led by the exercise controller, who will need evaluators. These evaluators are subject matter experts in the area being tested. If held in a public space, the realistic nature of a drill can cause panic or alarm in the community. Prior communication and awareness raising may therefore be necessary. The exercise concludes with a facilitated debrief, to capture participant feedback, identify lessons and make recommendations.
Planning timeframe	A drill is often seen as a one-month project. ● 2-4 scoping meetings (three weeks prior to the exercise) ● One-week planning mission to the country/region/district ● Two weeks building the exercise ● 2-5 days conducting the exercise ● One week for post-exercise reporting.

Resources	At least two experienced facilitators/evaluators are required to build and run this exercise, often supported by technical experts and local advisors, as well as admin and logistics support staff as required. The number of exercise staff is defined by the number of functions being tested and the technical expertise (by function) needed to evaluate and train the desired outcome.
Key success factors	■ Exercise participants have received prior training in the function/skill to be tested ■ Participants are led by an experienced exercise controller who has expertise in the area being tested ■ Well-defined and realistic exercise objectives and scenario ■ Enough planning time and resources are available.

See also Chapters 2 and 3 of this package to clarify which exercise is best suited to your needs, objectives and available resources.

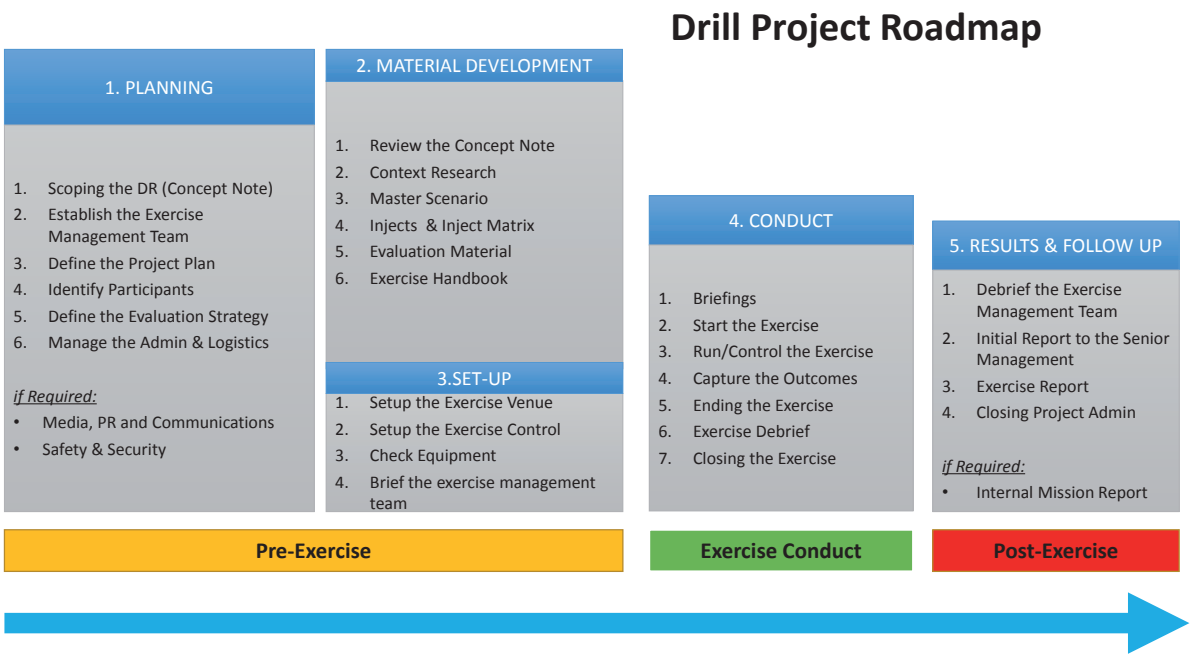
5.1.1 Project phases

A DR project can be broken down into three main phases:

1. Pre-exercise planning, material development and set-up
2. Conducting the exercise
3. Post-exercise reporting and handover.

This document presents the key steps for each phase, with additional elements that might be needed in more complex projects. Every step of the project is accompanied by the tools and guidance notes in the annexes.

Fig. 7. **DR project roadmap**



5.2 Pre-exercise

5.2.1 Planning

Step 1 – Scoping the project

Scoping the project ideally takes place one or two months before the anticipated exercise. For a DR, scoping is normally conducted through various meetings (e.g. teleconferences), or through a scoping mission if required. The main aim of the scoping phase is to discuss and agree on the exercise purpose, scope and specific objectives. Ideally it should also clarify the target audience, expected outcomes, simulation exercise scenario, resources required/available, project leadership (exercise director), project timeline, and budget. The agreements are captured in a concept note and signed off by the key stakeholders.

Available tools:

- DR 01 Concept note template
- DR 02 Scoping mission TOR template
- DR 03 Budget template

Step 2 – Exercise management team formed

Once the exercise director has been appointed, the exercise management team can be formed to plan, develop and conduct the exercise. The exercise management team should be selected based on the required skills, and should be fully briefed on the DR process and concept note. The exercise management team members should not be participating in the exercise.

Tools available:

- DR 04 Exercise management team TOR

Step 3 – Define the project management plan

Once the exercise management team is formed, the exercise director defines the project plan and the tasks required to build and implement the exercise. This plan needs to take into account all the exercise details and available resources as per the concept note (i.e. agreed budget; available time, funds, people and venues; and existing materials).

The exercise director should review and adapt the Project Gantt chart template planning tool (DR 05) and the Exercise admin & logistics checklist (DR 06) with their team. Tasks should be delegated to ensure that the required venue, participants, facilitators, materials and equipment are available and ready on the day of the exercise.

> ***TIP:*** *To ensure that all members of the exercise management team are kept up to date and can share information easily, a shared drive is usually set up to house critical documents and information. Regular team meetings are recommended to keep the project on track.*

Tools available:

- DR 05 Project Gantt chart template
- DR 06 Admin & logistics checklist

Step 4 – Identify participants

Depending on the purpose, scope and objectives of the exercise, the most appropriate participants must be identified and invited (with reference to the concept note). In determining the number of participants and whom to invite, a review should be undertaken of the concept note, the venue setup, and the available facilitators and evaluators.

> ***TIP:*** *Having the right participants involved is a critical factor in achieving the desired outcomes. To help identify exercise participants, you can review the response plans, procedures and organization structure; or, working with local expert(s), take a blank page and map out the response system, agencies, functions and people usually involved in operations at the scale you are targeting.*

Tools available:

- DR 07 Participant list template
- DR 08 Participant invitation template

Step 5 – Define the evaluation strategy and methodology

Evaluation is a key part of the pre-exercise planning phase and, depending on your needs, can broadly address two aspects:

1. Evaluating the performance of specific operations or functions being tested
2. Evaluating the organization of the drill.

To evaluate your drill(s), you will need to define the evaluation strategy and methodology to be used. This should include the monitoring and evaluation indicators, assessment criteria, participant feedback plan and reporting process.

Tools available:

- DR 09 Evaluation guidance note

Step 6 – Manage the admin & logistics

While the admin and logistics requirements are defined and tasks assigned during step 3 of the planning phase (defining the project management plan), it is important to ensure ongoing review and management of these elements by the exercise management team during the pre-exercise phase of the DR project.

> ***TIP:*** *Weekly or daily review of the admin & logistics task list ensures that each activity is tracked, and that those assigned tasks are accountable for their completion.*

ADDITIONAL ELEMENTS IF REQUIRED

Set the media, PR & communication strategy

Every opportunity for positive messaging and visibility for the organization running the exercise, its donors and its partners is an opportunity to build support for preparedness activities. PR and communication can also be used to ensure public safety during a drill, by informing the public of the event, managing any possible risks and reducing public concern or panic—for example, they might be warned of road closures and/or staged accidents, mitigating the public impact of any alarming injects). All media and communication around the upcoming drill needs clear, effective and appropriate messaging to specific target audiences.

> ***TIP:*** *It is helpful to appoint a designated spokesperson or media engagement officer to develop external communication material and manage all communication with the media and the public.*

Tools available:

- DR 10 Guidance note on media, PR and communication

Safety & security

When working in certain contexts, and depending on the venue or participant profiles, a security risk assessment may be necessary in order to ensure a safe exercise environment. The local security advisor or appropriate security agency should provide guidance on the necessary security arrangements.

Tools available:

- DR 11 Security guidance note

5.2.2 Material development

A successful exercise depends on the development of detailed, realistic and comprehensive exercise material. This includes the master scenario, inject matrix, injects, briefings and evaluation tools. This section outlines the steps required to develop the exercise material for a drill.

> ***TIP:*** *As each exercise is unique and built for a specific purpose and audience, changing any element in the concept note may impact the setup and material required.*

Step 1 – Review exercise purpose, objectives and expected outcomes

Before starting to develop your material, review the concept note and make sure the exercise management team is clear on the exercise's key elements. The purpose, specific objectives and expected outcomes will lead the development process.

Step 2 – Context research & gathering reference materials

The exercise management team should allocate enough time to gain a good understanding of the exercise's local context and operating environment. This research can include reviewing: the existing response system; stakeholders; coordination and communication mechanisms; resources available for a response; contingency plans; SOPs; and previous exercise reports and after action reviews/lessons of previous emergencies. Interviews with key stakeholders and local subject matter experts can improve understanding of the response systems in place, and help the development of realistic and appropriate material for the exercise.

> ***TIP:*** *Key documents should be provided by the host agency, and additional support should be provided by local subject matter experts and experienced staff.*

Step 3 – Write the master scenario

The master scenario includes all the planned events, expected actions and other scenario information. It is called the 'master' scenario because it outlines the full story of the drill, including all the events leading up to the start, until the end of the exercise.

In order to ensure exercise objectives are met, it is recommended to start with a brainstorming session to describe a realistic emergency situation that would trigger the expected actions and meet the exercise's specific objectives. All the key events in the story need to be identified, including the timeline that will help participants immerse themselves in the exercise and practice the planned elements of the drill.

> ***TIP:*** *The master scenario is never given to the participants in its original form, but is used to develop the injects released to the participants during the exercise.*

Tools available:

- DR 12 Master scenario template

Step 4 –Develop the injects and inject matrix

In a drill, main purpose of the injects is to evoke responses from participants and trigger decision-making or actions in line with the response plan and defined procedures.

A drill can be based on a single inject that triggers a procedure or process, or be composed of several injects, compiled chronologically in an inject matrix. Here, each inject is carefully planned, coded, timed, drafted and assigned to a facilitator/evaluator in the format required for delivery to the participants.

> ***TIP:*** *All exercise documentation and communication must be clearly labelled "EXERCISE ONLY"*

Tools available:

- DR 13 Inject matrix template

Step 5 – Develop evaluation material

Each evaluator should be given an evaluation pack containing the evaluator guidelines and the evaluation checklist/form. The role of the evaluator is to capture all the achievements, challenges, gaps, feedback and recommendations of the exercise.

In most cases the evaluation can be done using the evaluation observation template, where expected outcomes or actions are listed and can be tracked by the evaluators during the drill.

In addition, a participant feedback form is often used to help the exercise management team understand better how they performed in designing and implementing the exercise.

Tools available:

- DR 09 Evaluation guidance note
- DR 14 Evaluation observation template
- DR 15 Participant feedback form template

Step 6 – Developing the exercise handbook and/or briefings

Depending on the exercise objectives, participants may not always be notified of the drill in advance. Nevertheless, an exercise handbook or briefings should be developed to ensure that the exercise management team (and, if required, the participants) know the rules and guidance for the exercise; how the drill will work; who is participating; and what their roles are.

Tools available:

- DR 16 Exercise handbook template for participants and management team

5.2.3 Setting up the exercise

Once all the material has been drafted, reviewed and finalized for the exercise, it is time to set up the exercise venue(s) and control room, and prepare the exercise management team to conduct the exercise setup.

> ***TIP:*** *Admin and logistics is an ongoing activity that runs throughout the project. At this stage most tasks and checklist should be completed, with all equipment and materials ready for the exercise day.*

Step 1 – Exercise venue(s) setup

Drills can take place in many types of location. They can be carried out in a controlled, low-stress training environment—for example, in a classroom or a hotel conference room, with full availability of the material/equipment tested—or they can take place in an actual response location such as a health facility, remote field site, EOC or other location. Depending on the drill's objectives the level of setup will vary.

> ***TIP:*** *If the exercise will take place in a public space or facility, it is important to manage any possible risks and reduce public concern by informing people of the event in advance. If the exercise location is an institution such as a health facility or EOC, pre-arrangements should be made to minimize disruption of the facility's normal operations. Such arrangements could include a brief notification of the upcoming drill to ensure availability and accessibility of the venue to be used. When the exercise location is in the field, it is suggested that the location be clearly marked with barrier tape.*

Step 2 – Set up the exercise control room

An exercise control room can be set up as a space from which the exercise management team can manage and stage the exercise. This is particularly helpful when more than one exercise location is used. This is a space (an office, room, tent or other suitable venue) that is separate from that used by the exercise participants, and which should support and enable the team's effective management of the drill.

Tools available:

- DR 17 Control room guidance note

Step 3 – Check all equipment

Ensure all equipment is checked and that all systems are up and running the day before the exercise. Remember to test communication linkages to the participants and within the exercise management team setup, including between the exercise controller, facilitators and evaluators.

Step 4 – Pre-exercise briefing to the exercise management team

A briefing with the exercise management team, especially the evaluators, is essential to ensure that everybody is aware of his or her roles and responsibilities during the exercise. The aim of the briefing is to review the exercise material, run through the agenda and setup for the day, and ensure that everyone is clear on their roles and responsibilities during the simulation exercise. The nature and length of the meeting will depend on the experience and skill of the team.

The briefing with evaluators is key in ensuring that gaps between observed actions and expected outcomes are addressed. The facilitators and evaluators should also be clear on their location, any relevant safety aspects, and when they should intervene in the drill. Feedback is generally not given until the end of the drill, unless an action is deemed unsafe.

Tools available:

- DR 18 Exercise management team briefing note

5.3 Conducting the exercise

On the day of the exercise, all the planning and preparations are completed and the focus shifts to conducting the simulation exercise. Below are the steps involved in conducting a drill.

Step 1 – briefings

The exercise controller is responsible for all exercise briefings. The briefings should take place before the start of the exercise and should cover all the information and instructions needed for a successful exercise.

> ***TIP:*** *The participant briefing can take place on the morning of the exercise, or on the day before, as required. The exercise handbook can be provided in advance, or handed out at the briefing.*

Step 2 – Starting the exercise

A drill is usually activated with the first exercise inject. This is a piece of information given to all players that sets the scene and provides background information on the situation and any actions taken prior to the start of the exercise. The first inject should include a specific instruction that should trigger action by the participants according to their SOPs or the response plan. After the first inject, a drill would normally run by itself, as the inject activates a response or action. An inject can take a range of forms, including but not limited to the actions of a role player (actor), a radio or TV broadcast, a situation report from the field, or a telephone call or email.

> ***TIP:*** *The exercise team should make an effort to present this information in a fashion as close as possible to reality. This builds buy-in to the scenario, and encourages realistic responses from the outset of the exercise.*

Step 3 – Run/control the exercise

The first drill inject should activate the functions and/or actions being tested and evaluated. Exercise facilitators and actors play a key role in this process, as they are in direct communication with the participants and can have scripted roles to play (in the form of injects). The facilitators are also in direct contact with the exercise controller, keeping him/her informed on the progress of the exercise. If the exercise controller decides it is necessary to re-direct the exercise, the facilitators or actors deliver the necessary ad hoc injects as directed.

When a drill is composed of multiple injects, an inject matrix will be the key document used. The exercise controller and the evaluation team will use the inject matrix to guide the release of the injects and to track participant responses.

The evaluators should be in strategic positions to observe and capture feedback for the debrief session, and can also act as safety marshals if needed.

The exercise controller has the responsibility to manage the exercise and guide the exercise management team. The exercise controller will keep strategic and operational control of the exercise, checking in with the facilitators and evaluation team and discussing any major challenges with the exercise director as required.

> ***TIP:*** *In a drill, injects are generally used to stimulate the function, process or procedure being drilled. It is quite uncommon that injects are developed which intervene in or disrupt a specific process or procedure being practiced.*

> ***TIP:*** *Even if the exercise has a complex setup with multiple venues and exercise management teams, there is always only one overall "lead" exercise controller.*

Tools available:

- DR 19 Exercise controller guidance notes

Step 4 – Capturing the outcomes

During the drill, one or more evaluators is/are assigned to capture all the actions, outcomes, decisions, key comments and challenges. In most cases, evaluation is done using the evaluation observation template, where the expected outcomes or actions are listed, and which can be used as a checklist.

TIP: *Feedback is not given until the end of the exercise, in the exercise debrief.*

Tools available:

- DR 14 Evaluation observation template

Step 5 - Ending the exercise

The exercise controller will declare the end of the exercise (ENDEX)—often through an inject—when:

1. he/she is satisfied that the objectives have been met; or
2. the time allowed for the exercise has been exceeded; or
3. an unexpected interruption has occurred.

TIP: *Ensure that the exercise management team and all participants have received and are aware of the ENDEX message.*

Step 6 – Exercise debriefing "hot wash"

Each drill ends with an immediate debriefing (also known as "hot wash") that gives participants an opportunity to feed back their immediate feelings about the exercise. This debrief is usually facilitated by the lead evaluator. If required, it can be done simultaneously in multiple locations by different members of the evaluation team.

The aim and methodology of the debrief will be defined by the exercise objectives in the planning stage. Ideally the exercise debrief process includes feedback from participants and evaluators and a way forward or action-planning process.

TIP: *The debrief is an essential part of the exercise, and should be allocated sufficient time.*

Tools available:

- DR 20 Debrief guidance note
- DR 15 Participant feedback form template

Step 7 – Closing the exercise

The exercise will be closed at the end of the debrief. This can be done informally by the exercise director, or more formally as agreed with the partners. This session can include a certificate ceremony for the participants and/or a press conference as required.

Tools available:

- DR 21 Participation certificate template

5.4 Post-exercise

After the exercise ends is it the task of the exercise director, lead evaluator and exercise controller to draft the exercise report and close all project admin.

Step 1 – Debriefing the exercise management team

The aim of the exercise management team debriefing session is to reflect on exercise planning and implementation, and to confirm responsibilities and timelines for completion of the exercise report. This informal discussion is often lead by the exercise director, lead evaluator or exercise controller, and aims to identify lessons and opportunities for similar future projects.

Tools available:

- DR 22 Exercise management team debriefing guidance note

Step 2 – Initial report to senior officials

The aim of the leadership debriefing session is to report back to senior management on the outcome of the drill, sharing the initial findings of the exercise including challenges, achievements and recommendations. Goals may also include gaining senior support for the exercise's proposed recommendations or an action plan.

Tools available:

- DR 23 Leadership debriefing guidance notes

Step 3 – The exercise report

The report will be completed by the lead evaluator and exercise controller, drawing on the debrief notes and reports from facilitators and observers. Written as a record of the exercise, it presents an overview of the exercise, and—importantly—of key achievements, challenges and recommendations for the leadership.

The exercise report aims to ensure that lessons are incorporated into the workplan, and that action is taken on key recommendations.

> ***TIP:*** *It is essential that the senior management and key stakeholders endorse the exercise report, to ensure the implementation of the key recommendations or proposed action plan.*

Tools available:

- DR 24 Exercise report template

Step 4 – Closing project admin

During the post-exercise phase of the project, it is necessary to ensure that all outstanding admin and logistics for the exercise are finalized and closed.

Tools available:

- DR 06 Admin & logistics checklist

ADDITIONAL ELEMENTS IF REQUIRED

Internal mission report

In the case that the exercise has received external support, the exercise management team should also write a short post-mission report for the supporting organization(s). This report should cover the lessons of the project implementation and potential future opportunities (ways forward) for exercise activities.

Tools available:

- DR 25 Mission report template

5.5 Tools and templates found in annex of this chapter

I. Pre-simulation

(A) Exercise planning

- DR 01 Concept note template
- DR 02 Scoping mission TOR
- DR 03 Budget template
- DR 04 Exercise management team TOR
- DR 05 Project Gantt chart template
- DR 06 Admin & logistics checklist
- DR 07 Participant list
- DR 08 Participant invitation template
- DR 09 Evaluation guidance note
- DR 10 Guidance note on media, PR and communication
- DR 11 Security considerations/checklist

(A) Material development

- DR 12 Master scenario template
- DR 13 Inject matrix template
- DR 14 Evaluation observation template
- DR 15 Participant feedback form template
- DR 16 Exercise handbook template for participants and management team

(A) Setting up the exercise

- DR 17 Control room guidance note

II. Conducting the simulation exercise

- DR 18 Exercise management team briefing note
- DR 19 Exercise controller guidance notes
- DR 20 Debrief guidance note
- DR 21 Participation certificate template

III. Post-simulation exercise reporting and handover

- DR 22 Exercise management team debrief guidance note
- DR 23 Leadership debriefing guidance notes
- DR 24 Exercise report template
- DR 25 Mission report template

6. Functional exercise (FX) guidance and tools

This chapter presents the project management guidance and tools to assist in planning, building, conduct and reporting on a functional exercise (FX).

6.1 Overview

Definition	A functional exercise (FX) is a fully simulated interactive exercise that tests the capability of an organization to respond to a simulated event. The exercise tests multiple functions of the organization's operational plan. It is a coordinated response to a situation in a time-pressured, realistic simulation (WHO, 2009).
Purpose	The purpose of a FX is to test or validate the response capability of specific functions or departments in an organization. Its emphasis is on coordination, integration, and interaction of an organization's policies, procedures, roles and responsibilities before, during, or after the simulated event. A FX can be used to: Test the operational system, procedures and plans currently in place ■ Identify strengths, gaps and opportunities for strengthening ■ Enhance the capacity of the operational system to respond to the next emergency.
Target audience	All members of the coordination group, as defined in the EOC and/or emergency operations plans.
Exercise timeframe	From four to eight hours (including the exercise debrief) up to multiple days, as dictated by resources and objectives.
Location/venue	Usually conducted in the EOC or other designated emergency operations centre, or where people would gather during an emergency (this can be any venue that meets the Emergency Response Plan requirements or which can sufficiently replicate reality).
Process overview	An interactive exercise designed to challenge specific functions or to exercise several departments as part of the emergency management system. The exercise is interactive and simulates an incident in the most realistic manner possible without deploying resources on the ground. During the exercise, the simulation is led by the exercise controller, through the facilitation team. The team ensures that systems and procedures are tested as planned. The exercise concludes with a facilitated debrief workshop to capture lessons and make recommendations to enhance plans and systems.
Planning timeframe	An FX is often seen as a two-month project. ● 3-8 scoping meetings (4-8 weeks prior to the FX) ● 4-6 weeks building the exercise ● 5-10 days setting up and conducting the exercise ● One week for post-exercise reporting.
Resources	At least four experienced facilitators, including technical experts, local context advisors and admin staff, and logistics and ICT support staff as required.
Key success factors	■ The exercise is preceded by less complex lower-level exercises (e.g. DR, TTX) ■ The exercise is led by an experienced exercise controller ■ Full participation of all the response stakeholders ■ Realistic scenario and injects.

See also Chapters 2 and 3 of this package to clarify which exercise is best suited to your needs, objectives and available resources.

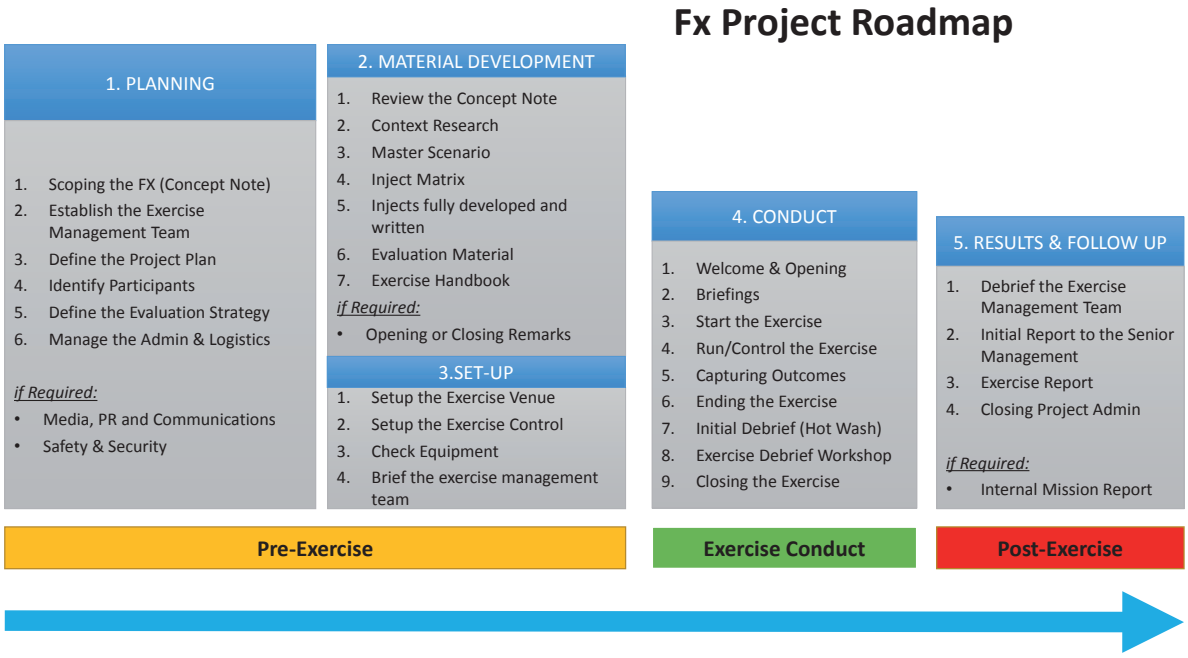
6.1.1 FX project phases

An FX project can be broken down into three main phases:

1. Pre-exercise planning and material development
2. Conducting the exercise
3. Post-exercise reporting and handover.

This document presents the key steps for each phase, along with additional elements that might be needed in more complex projects. Every step of the project is accompanied by the tools and guidance notes found in the annexes, which support implementation.

Fig. 8. **FX project roadmap**



6.2 Pre-exercise

6.2.1 Planning

Step 1 – Scoping the project

Scoping the project ideally takes place one or two months before the anticipated exercise. For an FX the scoping can be done through meetings (including teleconferences), or through a scoping mission if required.

The main aim of the scoping meetings is to discuss and agree on the exercise purpose, scope and objectives. Ideally it should also achieve clarity on the target audience, expected outcomes, simulation exercise scenario, resources, project leadership (exercise director), project timeline, and budget. The agreements are captured in in a concept note and signed off by the key stakeholders involved.

Tools available:

- FX 01 Concept note template
- FX 02 Scoping mission TOR template
- FX 03 Budget template

Step 2 – Exercise management team formed

Once the exercise director has been appointed, the exercise management team can be formed to plan, develop and conduct the exercise. The exercise management team should be selected based on the skills required, and should be fully briefed on the FX process and concept note. The exercise management team members should normally not be participating in the exercise.

> ***Tip:*** *The size of the exercise team will depend on the resources available and the complexity of the system you are simulating.*

Tools available:

- FX 04 Exercise management team TOR

Step 3 – Define the project management plan

Once the exercise management team is formed, the exercise director defines the plan of action and the tasks required to build and implement the exercise. This plan needs to take into account all the exercise details and available resources (agreed budget and available time, money and people) as defined in the concept note.

The exercise director should review and adapt the Gantt FX project planning tool (FX 05) and the exercise admin & logistics checklist (FX 06) with their team. Tasks should be delegated to ensure that the required exercise venue, participants, facilitators, materials and equipment are available and ready on the day of the exercise.

> ***TIP:*** *To ensure that all members of the exercise management team are kept up to date and that they can easily share information, a shared drive is usually set up to house critical documents and information. Regular team meetings are recommended in order to keep the project on track.*

Tools available:

- FX 05 Project Gantt chart template
- FX 06 Admin & logistics checklist

Step 4 – Identify participants

Depending on the purpose, scope and objectives of the exercise, the most appropriate people will need to be identified and invited to participate. In determining the number of participants and whom to invite, the concept note should be reviewed, along with the venue setup and the available facilitators and evaluators.

> ***TIP:*** *Having the right participants is a critical success factor in achieving the desired outcomes. To help identify the exercise participants, review the response plans, procedures and organization structure; or, working with local expert(s), take a blank page and map out the response system and the agencies, functions and people usually involved in operations at the scale you are targeting.*

Tools available:

- FX 07 Participant list template
- FX 08 Participant invitation template

Step 5 – Define the evaluation strategy and methodology

In order to capture lessons and report on the exercise, the evaluation methodology must be planned from the start of the project. This planning includes defining the required indicators and the strategy for reporting on or measuring achievement of each of the exercise objectives. Evaluation is a continuous process that begins at the very start of exercise planning and which continues long after the participants have left the site.

The evaluation of an FX focuses broadly on two aspects:

1. Evaluation of the response—i.e. the response plan or procedures tested
2. The organization of the functional exercise.

Tools available:

- FX 09 Evaluation guidance note

Step 6 – Manage the admin & logistics

The admin and logistics requirements are defined and tasks assigned during step 3 of the planning phase (defining the project management plan). It is important to ensure ongoing review and management of these elements by the exercise management team during the pre-exercise phase of the FX project.

> ***TIP:*** *Weekly or daily review of the admin & logistics task list ensures that each activity is tracked, and that those assigned tasks are accountable for their completion.*

ADDITIONAL ELEMENTS IF REQUIRED

Media, PR & communication strategy

Every opportunity for positive messaging and visibility for the organization, donors and partners is an opportunity to build the organization's reputation and support the preparedness activities it is undertaking. All media and communication around the simulation exercise therefore needs clear, effective, appropriate messaging to the specific audience(s) defined by the communications officer or media focal point.

> ***TIP:*** *It is helpful to appoint a designated spokesperson to develop external communication material and manage all communication with the media.*

Tools available:

- FX 10 Guidance note on media, PR and communication

Safety & security

When working in certain contexts, and depending on the venue or participant profiles, a security risk assessment might be needed in order to ensure a safe exercise environment. The local security advisor or appropriate security agency should provide guidance on the necessary security arrangements.

Tools available:

- FX11 Security guidance note

6.2.2 Material development

The success of the exercise always depends on the development of detailed, realistic and comprehensive exercise material. This includes the master scenario, inject matrix, injects, briefings and evaluation tools. This section outlines the steps required to develop the exercise material.

> ***TIP:*** *Each exercise is unique and built for a specific purpose and audience. Last-minute changes to any planning elements may impact the setup, resources required, material developed and the exercise implementation.*

Step 1 – Review exercise purpose, objectives and expected outcomes

Before starting to develop your material, review the concept note and make sure the exercise management team is clear on the exercise's key elements. The purpose, specific objectives and expected outcomes will lead the material development process.

Step 2 – Context research & gathering reference materials

The exercise management team should allocate time to gain a good understanding of the local context and operating environment in which the exercise will be carried out.

This process should include the study of strategic internal and external response system plans, procedures and policies, as well as after-action reviews/lessons from previous emergencies, agency-specific situation reports, and previous exercise reports. Key documents on the response system setup and arrangements should be provided by the host agency. Interviews with key stakeholders and local subject matter experts can also help in improving understanding of the local response systems, and in developing realistic and appropriate material for the exercise.

> ***TIP:*** *This knowledge will help the team write the exercise material, and enable the facilitators to play the roles of non-participating stakeholders during the exercise.*

Step 3 – Write the master scenario

The master scenario includes all the events, expected actions and other scenario information that is planned. It is called the "master" scenario because it outlines the full story of the FX, including all the events leading up to the start of the exercise, until its end.

In order to ensure that exercise objectives are met it is recommended to start with a brainstorming session to describe a realistic emergency situation that would require the expected actions as per the operational plan, and which meets the specific objectives of the exercise. The key events in the story must be identified, as must a timeline that helps participants immerse themselves in the exercise and practice its planned elements.

> ***TIP:*** *To avoid confusion and inconsistencies, the master scenario must be finalized before developing the injects. The master scenario is never given to the participants in its original form, but is used to develop the injects that they receive during the exercise.*

Tools available:

- FX 12 Master scenario template

Step 4 – Develop the injects and inject matrix

Once the master scenario is drafted and signed off by the exercise director, the exercise management team can start to plan and develop the injects. The inject matrix is the key facilitation tool during the exercise, and is used to deliver the right information to the right people at the right simulated time.

Injects are compiled chronologically in an inject matrix according to the simulated timeline for the exercise. Each inject is carefully planned, coded, timed and assigned to a facilitator for delivery to the participants.

> ***TIP:*** *All exercise documentation is clearly labelled "EXERCISE ONLY".*

Tools available:

- FX 13 Inject matrix template

Step 5 – Fully develop and write out all the planned injects

Once the injects have been planned and cross-checked with the scenario, response plans and specific objectives, they are fully developed in the format specified.

Once the injects are drafted, review the inject matrix to ensure that all injects are present; check to ensure that all material clearly states "EXERCISE ONLY"; and prepare the injects for delivery to the participants.

Tools available:

- FX 14 Inject development guidance

> ***TIP:*** *The inject matrix and all injects are printed out for the exercise management team and will be used to implement and track the exercise.*

Step 6 – Evaluation material

An evaluation pack should be developed for the exercise. It should contain the evaluator guidelines and the evaluation checklist/form, participant survey, debrief workshop agenda, and presentations.

The evaluation criteria are based on the exercise objectives and the expected outputs of the planned scenario. In an FX the evaluation is normally done using the evaluation observation template, through which the evaluators can track the expected outcomes or actions. The evaluation criteria are focused on the response system, plans or operations being tested, not the people.

In addition, a participant feedback form for the exercise itself will help the exercise management team understand how they performed in designing and implementing the exercise.

> ***TIP:*** *Each inject is linked to a specific anticipated response in the inject matrix, which enables the tracking or evaluation of the response against the SOPs and response plan.*

Tools available:

- FX 09 Evaluation guidance note
- FX 15 Evaluation observation template
- FX 16 Participant feedback form template

Step 7 – Developing the exercise handbook & briefings

An exercise handbook and briefings are developed to help ensure that all the participants and exercise facilitators know the rules and guidance for the exercise; how the simulation will work; who is participating; and the nature of their respective roles.

Tools available:

- FX 17 Exercise handbook template for participants and management team

ADDITIONAL ELEMENTS IF REQUIRED

Official opening or closing remarks

In some exercises it is appropriate to hold an official opening or closing by a representative from the government, an agency director, or a representative of the host organization. To support this person, the exercise management team may be required to provide a briefing on the exercise, and/or to draft the opening or closing remarks.

The closing session can include a certificate ceremony for the participants and/or a press conference as appropriate.

> ***TIP:*** *A ceremony in which a senior official opens proceedings is often used to ensure the participation of senior staff in the exercise.*

Tools available:

- FX 18 Opening remarks guidance note

6.2.3 Setting up the exercise

Once all the material has been drafted, reviewed and finalized for the exercise, it is time to set up the exercise venue and control room, and prepare the exercise management team to set up the exercise.

> ***TIP:*** *Admin and logistics is an ongoing activity that runs throughout the project. At this stage most of the tasks and checklist should be completed, with all equipment and materials ready for the exercise day.*

Step 1 – Exercise venue(s) setup

As most functional exercises are tests of the current coordination arrangements, the designated EOC venue should be used. If required, an alternative venue can be set up in accordance with the response plans.

> ***TIP:*** *A hotel ballroom or conference venue can be transformed into a suitable exercise location if needed. If this is done, ensure that areas are designated to replicate office locations and meetings rooms.*

Tools available:

- FX 19 Venue checklist & room layout

Step 2 - Exercise control room

Each exercise needs a dedicated space for the exercise management team to manage and stage the exercise. In order to enable the exercise management team to manage the exercise effectively, this space (office, room, tent or other suitable venue) is kept separate from the exercise participants. It should contain all the equipment, materials and resources that the exercise management team requires in order to implement the exercise.

Tools available:

- FX 20 Control room guidance note

Step 3 – Check all equipment

All equipment (phones, laptops, printers, internet, wifi, mobiles, etc.), material, systems and consumables needed for every inject should be checked the day before the exercise to ensure they are up and running. Communication linkages to the participants and within the exercise management team setup must be tested—including those between the exercise controller, facilitators and evaluators.

Step 4 – Pre-exercise briefing to the exercise management team

A pre-exercise briefing with the exercise management team is held in order to review the exercise material, run through the agenda and setup for the implementation day, and ensure that everyone is clear on their roles and responsibilities during the simulation. The nature and length of the meeting will depend on the experience and skill of the team.

The facilitators and evaluators should also be clear on their location during the exercise, any relevant safety aspects, and when they should intervene. The exercise management team may be required to wear visible identification for their role.

Tools available:

- FX 21 Exercise management team briefing note

6.3 Conducting the exercise

On the day of the exercise, all the planning and preparation ends, and the focus shifts to conducting the simulation. The section below outlines the key steps in conducting an FX.

Step 1 – Welcome and opening

The exercise director or the lead facilitator will run through the planned agenda for the day, introduce the exercise management team, and ask the participants to introduce themselves. The exercise director or a senior official from the host organization may give a brief overview of the rationale for the exercise and the wider context or strategy of which it is a part.

> ***TIP:*** *An official opening ceremony can be conducted as agreed by the partners (refer to the concept note and exercise agenda). This decision is context-specific and needs to be discussed with the local partners and exercise management team.*

Tools available:

- FX 18 Opening remarks guidance note

Step 2 – Briefings

The exercise controller must brief all the participants before the start of the exercise, ensuring that everyone has a clear understanding of the exercise purpose, objectives, structure, schedule (agenda), guidelines and procedures. The exercise handbook can be provided in advance or handed out at this briefing.

> ***TIP:*** *Use a presentation to visualize the exercise structure, and ensure enough time to run through examples of injects and the communication setup and rules. Make sure participants have all the information they need to participate in the exercise.*

Step 3 – Starting the exercise

The exercise usually begins with the presentation of the first inject (background story, current situation or start of the emergency event). This is a piece of information given to all participants to set the scene and ignite the simulation. This can take many forms—for example, slides, a radio or TV broadcast, or a situation report from the field.

> ***TIP:*** *The exercise team should try to present this information in a fashion as close as possible to reality. This builds buy-in to the scenario and encourages a realistic response from the start of the exercise.*

Step 4 – Run/control the exercise

The inject matrix will be the key document during the implementation of the exercise. Following the initial delivery of the inject, participants begin to receive additional injects, which require action based on the information they contain.

An FX often includes stress and time pressure in order to simulate reality and put systems and plans under stress. The exercise controller will release the planned injects to control the pace and pressure of the exercise.

The injects are all assigned to specific exercise facilitators, who will be directed to deliver and respond to participants as the exercise unfolds. Depending on the scale of the exercise and the complexity of the communications setup, a designated communications team can be setup to deliver, monitor and assign participant communications and requests to pre-designated facilitators for further action. An exercise switchboard can also be used to designate incoming and outgoing communication channels.

The exercise controller has the mandate to run and manage the exercise and to guide the exercise management team. The controller will keep strategic and operational control of the exercise, checking in with the facilitation team and discussing any major challenges with the exercise director and lead evaluator as required.

The evaluation team will observe and monitor participants' actions, interactions and responses to the injects, providing input for the debrief workshop.

> ***TIP:*** *To manage the flow of the exercise, exercise injects are released as per the timing in the inject matrix, or as determined by the exercise controller.*

Tools available:

- FX 22 Exercise controller guidance notes

Step 5 – Capturing the outcomes

During the exercise, one or more evaluators are assigned to capture all the actions, outcomes, decisions, key comments and challenges. In most cases the evaluation is done by checking against the evaluation observation template, which lists the expected outcomes or actions.

TIP: *Feedback is not given until the end of the exercise, in the exercise debrief.*

Tools available:

- FX 15 Evaluation observation template

Step 6 – Ending the exercise

The end of the exercise (ENDEX) will be declared by the lead controller (through an inject) when:

1. he/she is satisfied that the objectives have been met; or
2. the time allowed for the exercise has been exceeded; or
3. an unexpected interruption has occurred.

TIP: *Ensure that the exercise management team and all participants have received and are aware of the ENDEX message.*

Step 7 –Exercise debriefing "hot wash"

Each exercise ends with an immediate debrief also known as "hot wash," which is a facilitated process often conducted by the lead evaluator. The focus of this first debrief is to allow everybody to decompress and to give participants the opportunity to provide their initial feedback on the exercise. It does not include evaluation of the exercise outcomes, nor does it go into the level of detail planned for the main exercise debrief on the following day.

TIP: *At the end of the exercise, the lead evaluator will review the debrief workshop plan for the following day.*

Step 8 – Main exercise debriefing

This debrief aims to review the exercise objectives with the participants, and to capture feedback on achievements, challenges and critical gaps in plans, procedures, systems and training. The aim and methodology of the debrief will be defined by the exercise objectives in the planning stage. Ideally the exercise debrief process includes participant and evaluator feedback and a way forward or action-planning process.

TIP: *The debrief is an essential part of the exercise, and should be allocated sufficient time.*

Tools available:

- FX 16 Participant feedback form
- FX 23 Debrief guidance note

Step 9 – Closing the exercise

The exercise will be closed at the end of the debrief. This can be done informally by the exercise director, or more formally as agreed with the partners. This session can include a certificate ceremony for the participants and/or a press conference.

Tools available:

- FX 24 Participation certificate template

6.4 Post-exercise

After the exercise ends, is it the task of the exercise director, lead evaluator and exercise controller to draft the exercise report and close all project admin.

Step 1 – De-briefing of the exercise management team

The aim of the exercise management team debriefing session is to reflect on exercise planning and implementation, and to confirm responsibilities and timelines for completion of the exercise report. This informal discussion is often lead by the exercise director, lead evaluator or exercise controller, and aims to identify lessons and opportunities for similar future projects.

Tools available:

- FX 25 Exercise management team debriefing guidance notes

Step 2 – Initial report to senior officials

The aim of the leadership debriefing session is to report back to senior management on the outcome of the exercise. The purpose is to share the exercise's initial findings, including challenges, achievements and recommendations. This may include gaining senior support for proposed recommendations or an action plan.

Tools available:

- FX 26 Leadership debriefing guidance notes

Step 3 – The exercise report

The report will be completed by the lead evaluator and exercise controller, drawing on the debrief notes and reports from facilitators and observers. Written as a record of the exercise, the report presents an overview of the exercise and—importantly—lists key achievements, challenges and recommendations to the leadership.

The exercise report aims to ensure lessons identified are incorporated into the work plan, and that action is taken on key recommendations.

> ***TIP:*** *Endorsement of the exercise report by senior management and key stakeholders is essential in order to ensure the implementation of the key recommendations or action plan.*

Tools available:

- FX 27 Exercise report template

Step 4 – Closing project admin

During the post-exercise phase of the project, it is necessary to ensure that all outstanding admin and logistics for the exercise are finalized and closed.

Tools available:

- FX 06 Admin & logistics checklist

ADDITIONAL ELEMENTS IF REQUIRED

Internal mission report (if required)

In the case of that the exercise has been run with external support, the exercise management team should also write a short post-mission report for the supporting organization(s). This report covers the lessons of the project implementation and potential future opportunities (ways forward) for exercise activities.

Tools available:

- FX 28 Mission report template

6.5 Tools and templates found in annex of this chapter

I. Pre-simulation

(A) Exercise planning

- FX 01 Concept note template
- FX 02 Scoping mission TOR
- FX 03 Budget template
- FX 04 Exercise management team TOR
- FX 05 Project Gantt chart template
- FX 06 Admin & logistics checklist
- FX 07 Participant list
- FX 08 Participant invitation template
- FX 09 Evaluation guidance note
- FX 10 Guidance note on media, PR and communication
- FX 11 Security guidance note

(A) **Material development**

- FX 12 Master scenario template
- FX 13 Inject matrix template
- FX 14 Inject development guidance
- FX 15 Evaluation observation template
- FX 16 Participant feedback form template
- FX 17 Exercise handbook template for participants and management team
- FX 18 Opening remarks guidance note

(A) **Setting up the exercise**

- FX 19 Venue checklist & room layout
- FX 20 Control room guidance note

II. Conducting the simulation exercise

- FX 21 Exercise management team briefing note
- FX 22 Exercise controller guidance notes
- FX 23 Debrief guidance note
- FX 24 Participation certificate template

III. Post-simulation exercise reporting and handover

- FX 25 Exercise management team debriefing guidance note
- FX 26 Leadership debriefing guidance notes
- FX 27 Exercise report template
- FX 28 Mission report template

7. Field/full-scale exercise (FSX) guidance and tools

This chapter presents management guidance, tools and templates to assist in planning, designing, conducting and reporting a field/full-scale exercise (FSX).

7.1 Overview

	A field/full-scale exercise simulates a real event as closely as possible. It is designed to evaluate the operational capability of emergency management systems in a highly stressful environment, simulating actual response conditions. It includes the mobilization and movement of emergency personnel, equipment and resources. Ideally, an FSX tests and evaluates most functions of the emergency management plan or operational plan (WHO, 2009).[7]
Purpose	The purpose of an FSX is to test/evaluate most of the functions of an emergency plan in the most realistic manner possible. It includes coordinating the actions of multiple entities, tests numerous emergency functions, and activates the EOC/response room. AN FSX can be used to: ■ Test the emergency response operational capacity of teams and organizations ■ Test functions of the emergency management plan or operational plan ■ Exercise coordination, communication and collaboration between multiple entities and stakeholders ■ Identify strengths, gaps and opportunities for improvements ■ Enhance the capacity of the emergency management system to respond to an emergency.
Target audience	Personnel of all teams or organizations being tested. All levels take part in a full-scale exercise: senior-authority personnel, coordination personnel, operations personnel and response personnel.
Exercise timeframe	A full-scale exercise may be designed to be as short as two to four hours, but is more likely to last at least a full day and could be up to four or five days long.
Location/venue	An FSX is an operations-based exercise conducted in the actual settings in which a response would take place—health facilities, in the field and in the EOC—with actual resources and equipment being used and tested.
Process overview	The exercise begins with a description of the event, communicated to participants in the same manner as would occur in a real event. It is done under time pressure. Realism is achieved through on-scene actions and decisions; simulated victims; rapid detection, reporting and response requirements; the use of actual equipment; and the deployment of resources and personnel. The realistic nature of an FSX can cause panic or alarm in the community, so prior communication and awareness-raising is highly recommended. Full-scale exercises are the ultimate test of the functions of an emergency management plan. Because they are expensive and time-consuming, it is important that they are reserved for the highest priority hazards and functions.

[7] Although there are differences between a field exercise and a full-scale exercise in the sense that the latter often deploys more resources and is more complex, the exercise development and implementation steps are very similar—including the planning (pre-exercise) phase, the exercise conduct phase, and the post-exercise phase. This manual therefore merges field- and full-scale exercises into one chapter.

Planning timeframe	Full-scale exercises are often seen as six-month projects: • Various scoping meetings (six months prior to the exercise) • 2-4 scoping missions to the country/region/district • 4-5 months to design the exercise • 2-3 weeks to set up and conduct the exercise • 2-4 weeks for post-exercise reporting. Field-exercises are usually shorter, and are seen as eight- to twelve-week projects: • Various scoping meetings (eight weeks prior to the exercise) • 1-2 scoping missions to the country/region/district • 8-10 weeks to design the exercise • One week to conduct the exercise • 2 weeks for post-exercise reporting.
Resources	Of all the exercise types, field/full-scale exercises require the most resources, both in terms of time, financial and material resources, and in terms of the size and scale of the project team. The team includes at minimum an exercise director, an exercise controller, exercise evaluators and facilitators, and a number of actors who will role-play specific injects. In addition, the exercise team is supported by technical experts and local advisors, as well as by admin and logistics staff.
Key success factors	Before conducting a field/full exercise, the following pre-requisites must be obtained: Approval of the exercise from all relevant authorities (ministries of health, WHO representation, NGOs, private partners and/or other teams/organizations participating in the exercise). Approval must cover scope, purpose, objectives, timetable and budget. • Plans and SOPs relevant to the exercise are implemented. • Exercise-relevant training has been dispensed. • All material and equipment relevant to the exercise is in place. Due to the substantial resources needed to design and implement a full-scale exercise successfully, it is recommended that they are carried out only after having implemented at least a functional exercise and drills on specific relevant functions.

See also Chapters 2 and 3 of this package to clarify which exercise is best suited to your needs, objectives and available resources.

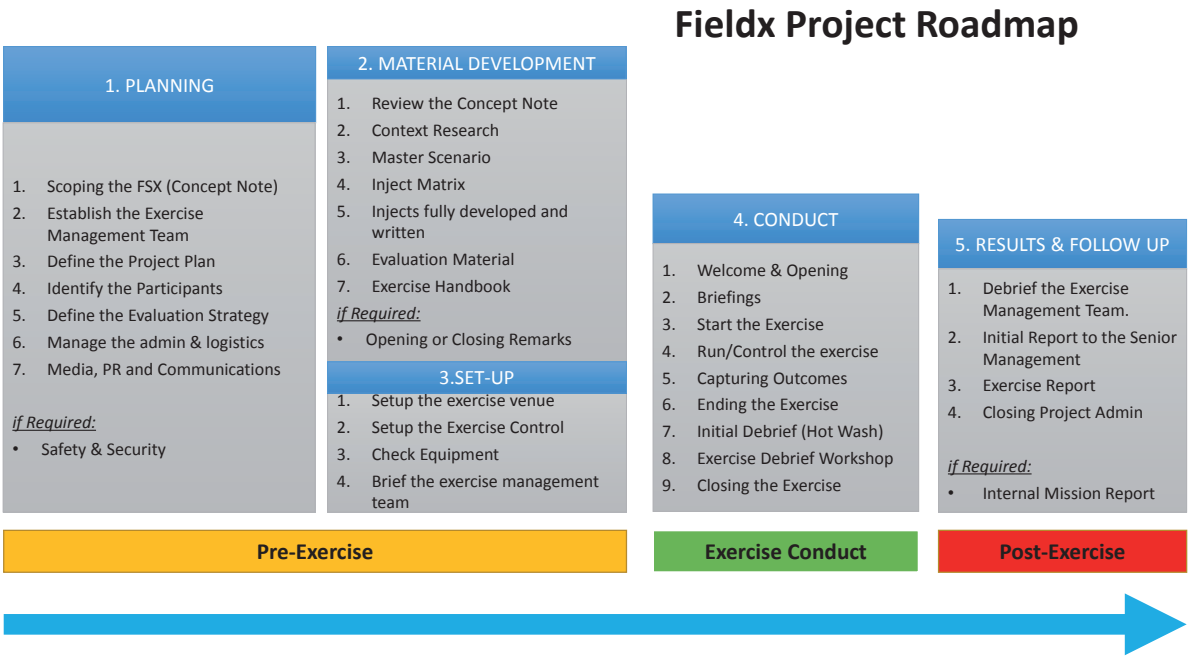
7.1.1 FSX project phases

Full-scale projects can be broken down into three main phases:

1. Pre-exercise planning and material development
2. Conducting the exercise
3. Post-exercise reporting and handover.

Each phase is broken down further into key tasks. All of these are accompanied by tools and guidance notes attached in the annex to this chapter.

Fig. 9. **FSX project roadmap**



7.2 Pre-exercise

7.2.1 Planning

Step 1 – Scoping the project

The scoping ideally starts six months before the anticipated exercise. For an FSX this would include various meetings (e.g. teleconferences) as well as one or more scoping missions. The main aim of the scoping is to discuss and agree on the exercise purpose, scope and specific objectives. Ideally the scoping should also provide clarity on the target audience, expected outcomes, simulation exercise scenario, resources, project leadership (exercise director), project timeline, and budget. The agreements are captured in a concept note and signed off by the key stakeholders involved.

Tools available:

- FSX 01 Concept note template
- FSX 02 Scoping mission TOR template
- FSX 03 Budget template

Step 2 – Exercise management team formed

Once the exercise director has been appointed, the exercise management team can be formed to plan, develop and conduct the exercise. The exercise management team should be selected based on the skills required, and should be fully briefed on the FSX process and concept note. The members of the exercise management team should not be participants in the exercise.

> ***Tip:*** *The size of the exercise team will depend on the resources available, the complexity of the system you are exercising, and the number of field locations activated.*

Tools available:

- FSX 04 Exercise management team TOR

Step 3 – Define the project management plan

Once the exercise management team is formed, the exercise director defines the plan of action and the tasks required to build and implement the exercise. This plan needs to take into account all the exercise details and available resources as defined in the concept note (agreed budget and available time, facilities, equipment, consumables, money and people). The exercise director should review and adapt the Gantt FSX project planning tool (FSX 05) and the Exercise admin & logistics checklist (FSX 06) with their team.

> ***TIP:*** *For field and full-scale exercises, it is essential to include a field visit and reconnaissance missions to the exercise sites in the planning stage. Specific tasks and responsibilities should also be assigned for the selection and coaching of the actors.*

The exercise director should delegate the management of admin, logistics and ICT support tasks to the appropriate person within the exercise management team. This role is critical for the successful implementation of a full-scale or field exercise, and the holder of the role will have to ensure that the required equipment, materials, consumables and facilities are available and operational on the day of the exercise.

> ***TIP:*** *To ensure that all members of the exercise management team are kept up to date and can easily share information, a shared drive is usually set up to house critical documents and information. Regular team meetings are recommended in order to keep the project on track.*

Tools available:

- FSX 05 Project Gantt chart template
- FSX 06 Admin & logistics checklist

Step 4 – Identify participants

Depending on the purpose, scope and objectives of the exercise, it will be necessary to identify and invite the most appropriate participants. Field/full-scale exercises may include participants from other sectors in order to achieve a realistic emergency response. The engagement of sectors outside of health should happen early in the planning process, in order to ensure buy-in and accurate assignment of roles in the exercise.

> ***TIP:*** *Having the right participants is a critical success factor in achieving the desired outcomes. To help identify exercise participants, you can review the response plans, procedures and organization structure; or, working with a local expert(s), take a blank page and map out the response system and the agencies, functions and people usually involved in an emergency operation at the scale you are targeting.*

Tools available:

- FSX 07 Participant list template
- FSX 08 Participant invitation template

Step 5 – Define the evaluation strategy and methodology

Evaluation is a key part of the pre-exercise planning phase. Its effectiveness relies on matching the evaluation strategy and expected outputs with the exercise objectives, as well as on having sufficient trained and competent evaluators.

You will need to define how the expected exercise outputs (indicators) can be measured against each of the exercise objectives. The evaluation of a full-scale exercise broadly addresses two aspects:

1. Evaluation of the overall response system or capacities being tested
2. Evaluation of the organization of the FSX in order to capture lessons for future exercises.

Tools available:

- FSX 09 Evaluation guidance note

Step 6 – Manage the admin & logistics

The admin and logistics requirements are defined, and the relevant tasks assigned, during step 3 of the planning phase (defining the project management plan). It is important to ensure ongoing review and management of these elements by the exercise management team during the pre-exercise phase of the FSX project.

> ***TIP:*** *Weekly or daily review of the admin & logistics task list ensures that each activity is tracked, and that those assigned tasks are accountable for their completion.*

Step 7 – Set the media, PR & communication strategy

A well-prepared communication strategy is essential for a field or full-scale exercise, as the FSX will usually take place in actual facilities, involving realistic reconstitutions of emergency situations. This communication strategy should include communications with the local communities and public, to avoid causing panic among the population and to mitigate the spread of false information about the exercise.

The communication strategy is also an opportunity to achieve positive messaging and visibility for the organization, donors and partners, providing a chance to help build the organization's reputation and support the preparedness activities it is undertaking. All media and communication around the upcoming exercise therefore needs clear, effective appropriate messaging to the specific audience(s) defined by the communications officer or media focal point.

Tools available:

- FSX 10 Guidance note on media, PR and communication

ADDITIONAL ELEMENTS IF REQUIRED

Safety & security

When working in certain contexts, and depending on the venue or participant profiles, a security risk assessment might be required in order to ensure a safe exercise environment. The local security advisor or appropriate security agency should provide guidance on the necessary security arrangements.

Tools available:

- FSX11 Security guidance note

7.2.2 Material development

The success of the exercise always depends on the development of detailed, realistic and comprehensive simulation exercise material. This material includes the master scenario, inject matrix, injects, briefings, and evaluation tools.

This section outlines the steps required to develop the exercise material.

> ***TIP:*** *As each exercise is unique and built for a specific purpose and audience, changing any element in the concept note may impact the setup and material required.*

Step 1 – Review exercise purpose, objectives and expected outcomes

Before starting to develop your material, review the concept note and make sure the exercise management team is clear on the key elements of the exercise. The exercise purpose, objectives and expected outcomes will lead the material development process.

Step 2 – Context research & gathering reference materials

The exercise management team should allocate time to study strategic internal and external response system plans, procedures and policies, as well as after-action reviews/lessons from previous emergencies, agency-specific situation reports (sitreps), and previous exercise reports. Key documents on the response system setup and other arrangements should be provided by the host agency.

Interviews with key stakeholders and local subject matter experts can also help in gaining a good understanding of local response systems, and in developing realistic and appropriate material for the exercise.

> ***TIP:*** *This knowledge will help the team write the exercise material and enable the facilitators to role-play non-participating stakeholders during the exercise.*

Step 3 – Write the master scenario

The master scenario includes all planned events, expected actions and other scenario information. It is called the "master" scenario because it outlines the full story of the exercise, including all the events leading up to the start of the exercise, until its end.

In order to ensure exercise objectives are met, it is recommended to start with a brainstorming session to describe a realistic emergency situation that would require the expected actions and meet the objectives of the FSX. The key events in the story must be identified, along with the timeline that helps participants immerse themselves in the exercise and practice the planned functions and processes.

> ***TIP:*** *To avoid inconsistencies, the master scenario needs to be finalized before developing the injects. The master scenario is never given to the participants in its original form, but is used to develop the injects that participants receive during the exercise.*

Tools available:

- FSX 12 Master scenario template

Step 4 – Develop the injects and inject matrix

Once the master scenario is written and approved by the exercise director, the exercise management team can start to develop the injects. The inject matrix is the key facilitation tool during the exercise, used to deliver the right information to the right people at the right times.

Injects are compiled chronologically in an inject matrix according to the simulated timeline. Each inject is carefully timed and designed to allow participants to run through the scenario and experience the planned emergency using all the available equipment, personnel, systems and plans.

Each inject is planned, coded and assigned to a facilitator to be drafted into the required format for delivery during the exercise.

> ***TIP:*** *All exercise documentation and communication must be clearly labelled "EXERCISE ONLY."*

Tools available:

- FSX 13 Inject matrix template

Step 5 – Fully develop and write out all the planned injects

Injects are developed in advance to ensure that the correct information or role-play is delivered as planned by the exercise management team.

Once all the injects are developed, review the inject matrix to ensure that all injects have been drafted, and make any final changes to the inject matrix or the injects themselves. Test any media- or technology-based injects to ensure they work.

Tools available:

- FSX 14 Inject development guidance

Step 6 – Evaluation material

An evaluation pack should be developed for the exercise. It should contain evaluator guidelines, the evaluation checklist/form, a participant survey, the debrief workshop agenda, and any relevant presentations. The evaluation criteria are based on the exercise objectives and the expected outputs of the set scenario.

In an FSX the evaluation is normally done using an evaluation observation template, in which the expected outcomes or actions are listed so they can be tracked by the evaluators. The evaluation criteria are focused on the response system, plans or operations being tested, not the people.

In addition, a participant feedback form on the exercise will help the exercise management team understand how they performed in designing and implementing the exercise.

> ***TIP:*** *Each inject is linked to a specific anticipated response in the inject matrix, which enables the tracking or evaluation of the response against the SOPs and response plan.*

Tools available:

- FSX 09 Evaluation guidance note
- FSX 15 Evaluation observation template
- FSX 16 Participant feedback form template

Step 7 – Developing the exercise handbook & briefings

To ensure that the exercise management team and all the participants know how the simulation will work, an exercise handbook and briefings are prepared and shared in advance.

Tools available:

- FSX 17 Exercise handbook template for participants and management team

ADDITIONAL ELEMENTS IF REQUIRED

Opening or closing remarks

In some exercises it is appropriate for to hold an official opening or closing by a representative from the government, an agency director, or a representative of the host organization. To support this person, the exercise management team may be required to provide a brief on the exercise and draft the opening or closing remarks.

The closing session can include a certificate ceremony for the participants and/or a press conference as appropriate.

> ***TIP:*** *A ceremony in which a senior official opens proceedings is often used to ensure that senior staff participate in the exercise.*

Tools available:

- FSX 18 Opening remarks guidance notes

7.2.3 Setting up the exercise

Once all the material has been drafted, reviewed and finalized for the exercise, it is time to set up the exercise venue(s) and control room, and prepare the exercise management team and the actors to conduct the exercise.

> ***TIP:*** *Admin and logistics is an ongoing activity that runs throughout the project. At this stage most of the tasks and checklist should be completed, with all equipment and materials ready for the exercise day.*

Step 1 – Exercise venue(s) setup

A field/full-scale exercise will be conducted in actual venues used during a real emergency, such as health facilities, hospitals or EOCs, with full availability of the material and equipment tested.

Because of the scope of an FSX, it is very likely that the exercise will use different locations at the same time, especially when testing coordination/communication between field settings and coordination centres (EOCs).

As actual venues will be used, no particular setup is required. However, as it may not be feasible to close certain venues (such as hospitals or clinics) to the general public, it is crucial to inform the relevant venue management prior to the exercise, so that realism can be maximized without compromising the effective delivery of emergency services to real patients.

TIP: *If the exercise location is an institution such as a health facility or EOC, pre-arrangements should be made to minimize disruption of normal operations. This could include a briefing and notification of the upcoming exercise to ensure availability and accessibility of the required venue(s). When the exercise location is in the field, its location should be marked clearly with barrier tape.*

Step 2 – Set up the exercise control room

An exercise control room needs to be set up as a space from which the exercise management team can manage and stage the exercise. To enable the team to manage the exercise effectively, this space (office, room, tent or other suitable venue) is kept separate from the exercise participants. It should contain all the equipment, materials and resources that the exercise management team requires to implement the exercise.

TIP: *The exercise control room runs like an EOC. It is led by the exercise controller, and to run a successful exercise it requires effective information management, communication and teamwork by the exercise management team.*

Tools available:

- FSX 19 Control room guidance note

Step 3 – Check all equipment

All the equipment, material and consumables needed for every inject should be tested, ensuring that all systems are up and running the day before the exercise. Communication linkages to the participants and within the exercise management team setup should also be tested, including those between the exercise controller, facilitators and evaluators.

Step 4 – Pre-exercise briefing to the exercise management team

A pre-exercise briefing with the exercise management team is done in order to review the exercise material, run through the agenda and set up for the implementation day, and ensure that everyone is clear on their roles and responsibilities during the simulation. The nature and length of the meeting will depend on the experience and skill of the team.

The facilitators and evaluators should also be clear on their location during the exercise, any relevant safety aspects, and when they should intervene. The exercise management team may be required to wear visible identification for their role.

Tools available:

- FSX 20 Exercise management team briefing note

7.3 Conducting the exercise

On the day(s) of the exercise, all the planning and preparations end and the focus shifts to conducting the exercise. The section below outlines the steps in conducting an FSX.

Step 1 – Welcome and opening

The exercise director or the lead facilitator will run through the planned agenda, introduce the exercise management team, and ask participants to introduce themselves. The exercise director or a senior official from the host organization may give a brief overview of the rationale for the exercise, and the wider context or strategy of which the exercise is a part.

> ***TIP:*** *An official opening ceremony can be conducted as agreed by the partners (refer to the concept note and exercise agenda). This is context-specific and needs to be discussed with the local partners and exercise management team.*

Tools available:

- FSX 18 Opening remarks guidance note

Step 2 – Briefings

The exercise controller is responsible for all exercise briefings. The briefings should take place before the start of the exercise and should cover information and instructions needed for a successful exercise.

The participant briefing can take place on the morning of the exercise or the day before, as required. The exercise handbook can be provided in advance, or handed out at this briefing.

> ***TIP:*** *For a field/full-scale exercise, local authorities and senior management in the facilities used will appreciate an advanced briefing on the exercise at which the purpose, objectives and some details of the expected outcomes can be shared (NB the master scenario or inject matrix should not be shared). This briefing fosters leadership confidence and will help senior management calibrate their messages during the opening ceremony.*

Step 3 – Starting the exercise

A field/full-scale exercise usually starts with an event triggering a response, causing exercise participants to make decisions or take actions. This event is activated through the first exercise inject, a piece of information given to all players that sets the scene and provides background information on the situation and any actions taken prior to the start of the exercise. In an FSX the exercise could begin with an actor or actors delivering the first inject in the form of a role-play at one of the field facilities. This should kick-start the exercise, triggering a chain of actions by the participants.

After the first inject, more injects are delivered in a relatively short period of time, to simulate time pressure. An inject can take many forms including the actions of role players (actors), a radio or TV broadcast, a situation report from the field, a telephone call or email, etc.

> ***TIP:*** *The exercise team should make an effort to ensure the first inject is presented in a manner as close as possible to the reality of an emergency. This builds buy-in to the scenario and encourages a realistic response from the start of the exercise.*

Step 4 – Run/control the exercise

The inject matrix is the key document during the implementation of the exercise. Following the delivery of the initial inject, participants begin to receive additional injects, which require action based on the information they present.

Stress and time pressure are often built in to the FSX in order to simulate reality and put systems and plans under stress. The exercise controller will release the planned injects to control the pace and pressure of the exercise.

The injects are all assigned to specific exercise facilitators, who are directed to deliver them and respond to participants as the exercise unfolds. Depending on the scale of the exercise and the complexity of the communications setup, a designated communication team can be established to deliver, monitor and assign (forward) participant communication and requests to pre-designated facilitators for action. An exercise switchboard can also be used, with designated incoming and outgoing communication channels.

The exercise controller has the mandate to run and manage the exercise and to guide the exercise management team. The exercise controller will keep strategic and operational control of the exercise, checking in with the facilitation team and discussing any major challenges with the exercise director and lead evaluator as required.

The evaluation team will observe and monitor the actions and interactions of participants and their responses to the injects, in order to provide input for the debrief workshop.

> ***TIP:*** *To manage the flow of the exercise, exercise injects are released as per the timing in the inject matrix, or as determined by the exercise controller.*

Tools available:

- FSX 21 Exercise controller guidance notes

Step 5 – Capturing the outcomes

During the exercise, one or more evaluators are assigned to capture all actions, outcomes, decisions, key comments and challenges. In most cases evaluation is done by checking against the evaluation observation template, which lists expected outcomes or actions.

> ***TIP:*** *Feedback is not given until the end of the exercise, in the exercise debrief.*

Tools available:

- FSX 15 Evaluation observation template

Step 6 – Ending the exercise

The end of the exercise (ENDEX) will be declared by the Exercise Controller (often through an inject) when:

1. he/she is satisfied that the objectives have been met; or
2. the time allowed for the exercise has been exceeded; or
3. an unexpected interruption has occurred.

> ***TIP:*** *Ensure that the exercise management team and all participants have received and are aware of the ENDEX message.*

Step 7 –Exercise debriefing "hot wash"

Each exercise ends with an immediate debrief also known as "hot wash," which is a facilitated process often conducted by the lead evaluator. The focus of this first debrief is to allow everybody to decompress and to give participants the opportunity to provide their initial feedback on the exercise. It does not include evaluation of exercise outcomes, nor does it go into the level of detail planned for the main exercise debrief on the following day.

> ***TIP:*** *As the exercise may have taken place at different locations, it is important to plan a "hot wash" at each location directly after the final involvement of that location in the exercise. After the end of the exercise, the lead evaluator will review the debrief workshop plan for the following day.*

Step 8 – Main exercise debriefing

This debrief aims to review the exercise objectives with the participants, and capture feedback on achievements, challenges and critical gaps in plans, procedures, systems and training. The objectives and the methodology for the main debriefing would have been set in the planning phase, and the sessions included in the exercise agenda.

The debrief captures what was learned by the participants and observed by the evaluators, and what can be brought forward as a recommendation to improve response capacity. Depending on the time available this debrief can include an action-planning session or a report back session to the senior management.

It is important to plan and budget for the transport of all key participants from the different locations to the main debriefing session. Some of the participants may have never met each other, and the opportunity to discuss the challenges and lessons of the exercise face to face will be invaluable for them, and for the strengthening of the response system.

> ***TIP:*** *The debrief is an essential part of the exercise, and should be allocated sufficient time.*

Tools available:

- FSX 22 Debrief workshop guidance note
- FSX 16 Participant feedback form

Step 9 – Closing the exercise

The exercise will be closed at the end of the debrief. This can be done informally by the exercise director or more formally as agreed with the partners. This session can include a certificate ceremony for the participants and/or a press conference.

Tools available:

- FSX 23 Participation certificate template

7.4 Post-exercise

After the exercise ends is it the task of the exercise director, lead evaluator and exercise controller to draft the exercise report and close all project admin.

Step 1 – Debriefing the exercise management team

The aim of the exercise management team debriefing session is to reflect on exercise planning and implementation, and to confirm responsibilities and timelines for completion of the exercise report. This informal discussion is often lead by the exercise director, lead evaluator or exercise controller, with the aim of identifying lessons and opportunities for similar future projects.

Tools available:

- FSX 24 Exercise management team debriefing guidance note

Step 2 – Initial report to senior officials

The aim of the leadership debriefing session is to report back to senior management on the outcome of the exercise. The purpose is to share the exercise's initial findings, including challenges, achievements and recommendations. The aims of the session may also include gaining senior support for proposed recommendations or an action plan.

Tools available:

- FSX 25 Leadership debriefing guidance notes

Step 3 – The exercise report

The report will be completed by the lead evaluator and exercise controller, drawing on the debrief notes and reports from facilitators and observers. Written as a record of the exercise, the report presents an overview of the exercise and—importantly—key achievements, challenges and recommendations to the leadership.

The exercise report aims to ensure that identified lessons are incorporated into the workplan, and that action is taken on key recommendations.

> ***TIP:*** *Endorsement of the exercise report by senior management and key stakeholders is essential to ensure the implementation of the key recommendations or action plan.*

Tools available:

- FSX 26 Exercise report template

Step 4 – Closing project admin

During the post-exercise phase of the project, it is necessary to ensure that all outstanding admin and logistics for the exercise are finalized and closed.

Tools available:

- FSX 06 Admin & logistics checklist

ADDITIONAL ELEMENTS IF REQUIRED

Internal mission report

In the case that the exercise has been run with external support, the exercise management team should also write a short post-mission report for the supporting organizations. This report covers the lessons identified in the project implementation, and potential future opportunities (ways forward) for exercise activities.

Tools available:

- FSX 27 Mission report template

7.5 Tools and templates found in annex of this chapter

I. Pre-simulation

(A) Exercise planning

- FSX 01 Concept note template
- FSX 02 Scoping mission TOR
- FSX 03 Budget template
- FSX 04 Exercise management team TOR
- FSX 05 Project Gantt chart template
- FSX 06 Admin & logistics checklist
- FSX 07 Participant list
- FSX 08 Participant invitation template
- FSX 09 Evaluation guidance note
- FSX 10 Guidance note on media, PR and communication
- FSX 11 Security guidance note

(B) Material development

- FSX 12 Master scenario template
- FSX 13 Inject matrix template
- FSX 14 Injects development guidance
- FSX 15 Evaluation observation template
- FSX 16 Participant feedback form template
- FSX 17 Exercise handbook template for participants and management team
- FSX 18 Opening remarks guidance note

(C) Setting up the exercise

- FSX 19 Control room guidance note
- FSX 20 Exercise management team briefing note

II. Conducting the simulation exercise

- FSX 21 Exercise controller guidance notes
- FSX 22 Debrief workshop guidance note
- FSX 23 Participation certificate template

III. Post-simulation exercise reporting and handover

- FSX 24 Exercise management team debriefing guidance note
- FSX 25 Leadership debriefing guidance notes
- FSX 26 Exercise report template
- FSX 27 Mission report template

World Health Organization