

BS ISO 22398:2013



BSI Standards Publication

# Societal security — Guidelines for exercises

**bsi.**

...making excellence a habit.™

**National foreword**

This British Standard is the UK implementation of ISO 22398:2013.

The UK participation in its preparation was entrusted to Technical Committee SSM/1, Societal security management.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2013. Published by BSI Standards Limited 2013

ISBN 978 0 580 74562 1

ICS 03.100.01

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 October 2013.

**Amendments issued since publication**

Date	Text affected
------	---------------

---

INTERNATIONAL  
STANDARD

**ISO**  
**22398**

First edition  
2013-09-15

---

---

**Societal security — Guidelines for  
exercises**

*Sécurité sociétale — Lignes directrices pour exercice*



Reference number  
ISO 22398:2013(E)

© ISO 2013



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2013

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Planning, conducting and improving an exercise programme</b> .....	<b>4</b>
4.1 General.....	4
4.2 Planning.....	4
4.3 Conducting.....	6
4.4 Reviewing and improving the exercise programme.....	7
<b>5 Planning, conducting and improving exercise projects</b> .....	<b>7</b>
5.1 General.....	7
5.2 Planning.....	8
5.3 Conducting.....	19
5.4 Improving.....	21
<b>6 Continual improvement</b> .....	<b>21</b>
6.1 General.....	21
6.2 Evaluation.....	21
6.3 Management review and corrective action.....	23
<b>Annex A (informative) Exercises within a management system description</b> .....	<b>24</b>
<b>Annex B (informative) Needs analysis</b> .....	<b>27</b>
<b>Annex C (informative) National strategic exercises</b> .....	<b>29</b>
<b>Annex D (informative) Exercise enhancement</b> .....	<b>32</b>
<b>Annex E (informative) Creating scenarios through experience</b> .....	<b>33</b>
<b>Bibliography</b> .....	<b>35</b>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. [www.iso.org/directives](http://www.iso.org/directives)

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received. [www.iso.org/patents](http://www.iso.org/patents)

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 223, *Societal security*.

## Introduction

This International Standard describes the elements of a generic approach to planning, conducting and improving exercise programmes and projects. The purpose of this International Standard is to:

- provide a basis for understanding, developing and implementing an effective exercise programme within an organization;
- provide guidelines for planning and conducting an exercise project;
- enhance the organization's ability to conduct exercises with internal and external involved parties;
- assist the organization with developing and assessing its exercising capability in a consistent and risk-assessed manner that reflects good practice; and,
- enable continual improvement in exercise programmes and projects within an organization.

It is applicable to all organizations, regardless of type, size and nature, whether private or public. The guidance can be adapted to the needs, objectives, resources, and constraints of the organization.

Exercises are an important management tool intended to identify gaps and areas for improvement as well as to determine the effectiveness of response and recovery strategies. In addition to measuring the competence of the organization and its personnel, exercises are excellent tools to assess revised plans and changed programmes for completeness, relevancy and accuracy.

Exercises can be used for validating policies, plans, procedures, training, equipment, and inter-organizational agreements; testing information and communication technology (ICT) disaster recovery systems; clarifying and training personnel in roles and responsibilities; improving inter-organizational coordination and communications; identifying gaps in resources; improving individual performance; identifying opportunities for improvement; and, providing a controlled opportunity to practice improvisation.

Exercise projects usually have performance objectives such as:

- *orientation/demonstration*: simulating experience of an expected situation to increase awareness of vulnerabilities and the importance of effective action in response to the simulated conditions;
- *learning*: enhancing knowledge, skills, or abilities by individuals or groups with the goal of mastering specific competencies;
- *cooperation*: providing an opportunity for people to work together to achieve a common end result;
- *experimenting*: trying new methods and/or procedures with the intent of refinement; and,
- *testing*: evaluating a method and/or procedure to assess which components are sufficiently developed.

See [Figure 1](#).

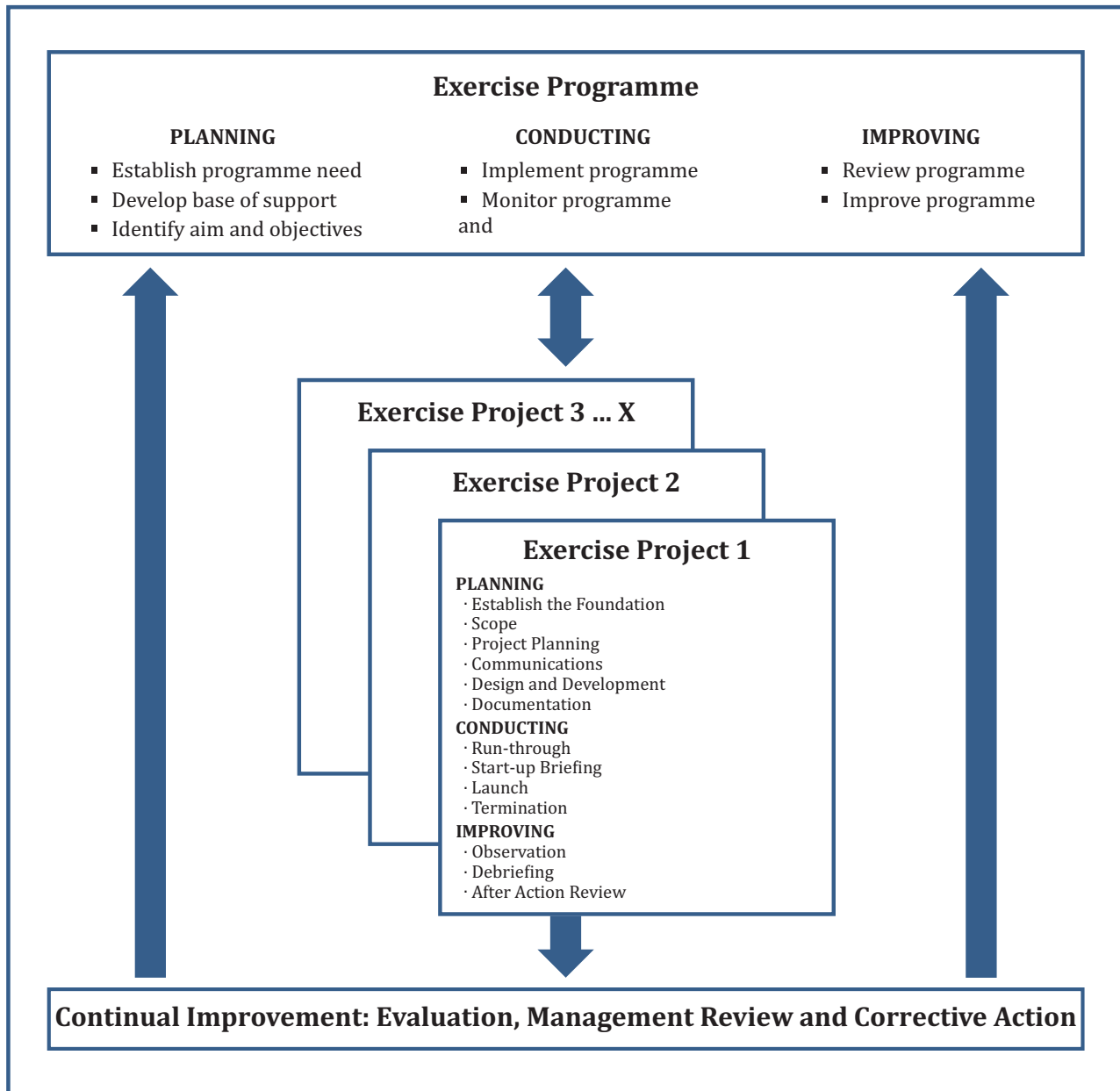


Figure 1 — Relation between exercise programme, exercise projects and continual improvement



# Societal security — Guidelines for exercises

## 1 Scope

This International Standard recommends good practice and guidelines for an organization to plan, conduct, and improve its exercise projects which may be organized within an exercise programme.

It is applicable to all organizations regardless of type, size or nature, whether private or public. The guidance can be adapted to the needs, objectives, resources, and constraints of the organization.

It is intended for use by anyone with responsibility for ensuring the competence of the organization's personnel, particularly the leadership of the organization, and those responsible for managing exercise programmes and exercise projects.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 22300, *Societal security — Terminology*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 22300 and the following apply.

### 3.1

#### **after-action report**

document which records, describes and analyses the exercise, drawing on debriefs and reports from observers, and derives lessons from it

Note 1 to entry: The after-action report documents the results from the after-action review.

Note 2 to entry: An after-action report is also called a final exercise report.

### 3.2

#### **competence**

demonstrated ability to apply knowledge and skills to achieve intended results

### 3.3

#### **drill**

activity which practices a particular skill and often involves repeating the same thing several times

EXAMPLE A fire drill to practice safely evacuating a building on fire.

### 3.4

#### **evaluation**

systematic process that compares the result of measurement to recognised criteria to determine the discrepancies between intended and actual performance

Note 1 to entry: The gaps are inputs into the continual improvement process.

### **3.5 exercise**

process to train for, assess, practice, and improve performance in an organization

Note 1 to entry: Exercises can be used for validating policies, plans, procedures, training, equipment, and inter-organizational agreements; clarifying and training personnel in roles and responsibilities; improving inter-organizational coordination and communications; identifying gaps in resources; improving individual performance and identifying opportunities for improvement; and a controlled opportunity to practice improvisation.

Note 2 to entry: A test is a unique and particular type of exercise, which incorporates an expectation of a pass or fail element within the goal or objectives of the exercise being planned.

### **3.6 exercise coordinator**

person responsible for planning, conducting, and evaluating exercise activities

Note 1 to entry: In larger exercises, this function may include several persons/staff and may be called “exercise control”.

Note 2 to entry: Some countries use a term such as “exercise director” instead of “exercise coordinator” (or similar text).

Note 3 to entry: The exercise coordinator role is also responsible for the cooperation among internal and external entities.

### **3.7 exercise programme**

series of exercise activities designed to meet an overall objective or goal

### **3.8 exercise programme manager**

person responsible for planning and improving the exercise programme

### **3.9 exercise project team**

persons planning, conducting and evaluating an exercise project

### **3.10 exercise safety officer**

person tasked with ensuring that any actions during the exercise are performed safely

Note 1 to entry: In larger exercises, involving multiple functions, more than one safety officer may be assigned.

### **3.11 hazard**

source of potential harm

Note 1 to entry: A hazard can be a source of risk.

### **3.12 interested party**

person or organization that can affect, be affected by, or perceive themselves to be affected by a decision or activity

Note 1 to entry: A decision maker can be an interested party.

### **3.13 inject**

scripted piece of information inserted into an exercise designed to elicit a response and facilitate the flow of the exercise

Note 1 to entry: Injects can be written, oral, televised, and/or transmitted via any means (e.g. fax, phone, e-mail, voice, radio, or sign).

**3.14**  
**management**  
coordinated activities to direct and control an organization

**3.15**  
**observer**  
exercise participant who witnesses the exercise while remaining separate from exercise activities

Note 1 to entry: Observers may be part of the evaluation process.

**3.16**  
**participant**  
person or organization who performs a function related to an exercise

**3.17**  
**risk**  
effect of uncertainty on objectives

Note 1 to entry: An effect is a deviation from the expected - positive and/or negative.

Note 2 to entry: Objectives can have different aspects (such as financial, health and safety, and environmental goals) and can apply at different levels (such as strategic, organization-wide, project, product, and process).

Note 3 to entry: Risk is often characterized by reference to potential events, consequences, or a combination of these and how they can affect the achievement of objectives.

Note 4 to entry: Risk is often expressed in terms of a combination of the consequences of an event or a change in circumstances, and the associated likelihood of occurrence.

Note 5 to entry: Uncertainty is the state, even partial, of deficiency of information related to, understanding or knowledge of an event, its consequence, or likelihood.

**3.18**  
**scenario**  
pre-planned storyline that drives an exercise, as well as the stimuli used to achieve exercise project performance objectives

**3.19**  
**scope of exercise**  
magnitude, resources, and extent which reflects the needs and objectives

**3.20**  
**script**  
story of the exercise as it develops which allows directing staff to understand how events should develop during exercise play as the various elements of the master events list are introduced

Note 1 to entry: The script is often written as a narrative of simulated events.

**3.21**  
**target group**  
individuals and/or organizations subject to exercise

**3.22**  
**test**  
exercise with an aim to obtain an expected measureable pass/fail outcome

Note 1 to entry: A test is a unique and particular type of exercise, which incorporates an expectation of a pass or fail element within the aim or objectives of the exercise being planned.

Note 2 to entry: The terms “test” and “testing” are not the same as “exercise” and “exercising”.

### **3.23 training**

activities designed to facilitate the learning and development of knowledge, skills, and abilities, and to improve the performance of specific tasks or roles

## **4 Planning, conducting and improving an exercise programme**

### **4.1 General**

An organization conducting exercises should establish an exercise programme. Establishing an exercise programme allows for a coordinated approach to building and maturing the organization's capabilities by allowing the exercising of the individual plans, people, capabilities and/or resources that contribute to the organization's strategic objectives.

Top management should ensure that the exercise programme objectives are established and assign a competent person to manage the exercise programme. The scope of an exercise programme should be based on the size and nature of the organization undertaking exercising, as well as on the scope, functionality, complexity and the level of maturity of the plans and capabilities being exercised.

The exercise programme should include the information and resources necessary to organize and conduct its exercises effectively and efficiently within the specified time frames. It should also include the following:

- needs analysis;
- base of support;
- exercise programme aim and objectives;
- extent/number/types/duration/locations/schedule of the exercise projects;
- selection of exercise project teams;
- necessary resources and budget; and,
- processes for handling confidentiality, information security, health and safety, and other similar matters.

The organization should monitor and measure the implementation of the exercise programme to ensure the established objectives have been achieved. The exercise programme should be reviewed in order to identify possible improvements.

### **4.2 Planning**

#### **4.2.1 Establishing the need for an exercise programme**

The organization should perform a needs analysis to identify or establish the following:

- the organization's strategic objectives;
- the risks to the organization;
- legislative and regulatory requirements;
- the organization's maturity to respond and/or recover compared to desired objectives, noting gaps in capability and plans;
- the plans, procedures, capabilities or resources that require exercising;
- the period in which a defined level of response and/or recovery capability (programme scope) should be met; and,

- the base of support and guide the content of the exercise programme.

#### **4.2.2 Establishing the base of support for an exercise programme**

The organization should secure a base of support and commitment from top management to ensure the appropriate organizational involvement and commitment of resources. Securing a base of support ensures that the exercise aim and objectives correspond to the organization's strategic objectives and strategy.

Top management should give the organization a clear mandate and full authority to carry out the exercise programme. The benefits and advantages of the exercise programme, as determined by the needs analysis, should be clearly explained and presented to top management, and to those who have responsibility for the exercise programme.

#### **4.2.3 Establishing the exercise programme aim and objectives**

Top management should ensure that the aim and objectives of the exercise programme are established to direct the exercise planning, conducting and improving and should ensure the exercise programme is implemented effectively.

Based on the exercise programme aim, the objectives can be based on the following:

- the findings of the needs analysis;
- management priorities;
- management system requirements, as applicable;
- legal, regulatory and contractual requirements and other requirements to which the organization is committed;
- needs and expectations of interested parties;
- risks to the organization or interested parties;
- reports and results of previous exercises or actual incidents; and,
- the level of organization maturity and its resources being exercised.

NOTE [Annex A](#) provides additional information about exercises within a management system.

#### **4.2.4 Roles and responsibilities of the exercise programme manager**

The organization should establish the roles and responsibilities of the exercise programme manager who will be nominated by top management. These roles and responsibilities usually include:

- establishing the scope, aim and performance objectives of the exercise programme, and the scope, criteria and timeframe of the individual exercise projects based on the objectives;
- identifying, documenting and evaluating the exercise programme risks;
- determining the potential impacts of the exercise project upon the organization's operations, reputation and resources;
- estimating the impact of an actual incident occurring during the exercise project;
- establishing the exercise types and methods required to achieve the programme objectives;
- determining necessary resources, including the resources to plan and conduct the exercise;
- selecting the exercise project team;
- developing a procedure to complete documents, and managing and maintaining documentation;

- ensuring the implementation of the exercise programme; and,
- monitoring, reviewing and improving the exercise programme.

The exercise programme manager should inform top management of the activities and risks associated with the exercise programme and obtain approval to proceed with exercising.

The exercise programme manager should have the competence necessary to effectively and efficiently manage the exercise programme and the associated risks. The exercise programme manager is accountable to top management for the programme and top management should be responsible for the exercise programme. The exercise programme manager may form and select one or more teams to support the delivery of the programme, ensuring that team members are competent to meet their responsibilities effectively and efficiently.

### **4.3 Conducting**

#### **4.3.1 Implementing the exercise programme**

The exercise programme manager should implement the exercise programme by:

- communicating the pertinent parts of the exercise programme to interested parties, and informing them periodically of its progress;
- coordinating and scheduling exercise projects and other activities relevant to the exercise programme;
- ensuring the selection of exercise project teams whose members have the necessary competence;
- providing necessary resources to the exercise project teams;
- conducting exercises in accordance with the exercise programme and within the agreed upon time frame;
- recording exercise activities and managing and maintaining documents; and,
- completing after-action reviews and following up on lessons learned and recommendations for improvement.

#### **4.3.2 Monitoring exercise performance**

The exercise programme manager should ensure the effective and efficient evaluation of individual exercise projects. Consideration should be given to the method used for comparison over the duration of the programme in order to implement an effective and efficient exercise programme.

Performance evaluation processes identify changing maturity, allow for comparison between teams, locations or capabilities and identify areas for development in future programmes. A consistent method of measuring the performance of participants, procedures and capabilities provides for effective evaluation of the performance of the exercise programme and should be included in the organization's evaluation process.

The exercise programme manager should ensure that the evaluation process and criteria assess the entire programme, inclusive of the individual exercise projects, based on programme aim and objectives. The exercise performance objectives should have predefined evaluation criteria and consistent measurement methods that compare exercise project results over time. A number of consistent objectives should be applied to individual exercise projects, and aligned to the exercise programme objectives. Examples of activities that could provide performance trends are the:

- time taken to respond to the information inserted into an exercise (specific injects);
- time taken to conduct a call cascade; and,
- number of resources mobilized in a given time or space.

### 4.3.3 Monitoring the exercise programme

**4.3.3.1** The organization should ensure the exercise programme manager continuously monitors the exercise programme implementation, and considers the need to:

- evaluate the performance of the exercise project team members;
- evaluate the ability of the exercise project team to implement the exercise programme; and,
- evaluate feedback from top management, interested parties, exercise participants and exercise project team members.

**4.3.3.2** The following factors may determine the need to modify the exercise programme:

- after-action reports or actual incident findings;
- demonstrated level of management system effectiveness, where appropriate;
- changes to, or the implementation of, a new management system, if established;
- changes to, or a new, plan, resource or capability;
- changes to standards, regulatory, legal and contractual requirements and other requirements to which the organization subscribes; and,
- major organizational or personnel changes.

### 4.4 Reviewing and improving the exercise programme

Through the process of monitoring, the exercise programme should ensure improvements are identified from the lessons learned and implemented to ensure the programme achieves established objectives. The exercise programme manager should conduct regular reviews, considering:

- new exercise methods;
- results and trends from exercise programme monitoring; and,
- evolving needs of interested parties.

The exercise programme manager should report results of the review to top management.

## 5 Planning, conducting and improving exercise projects

### 5.1 General

As each individual exercise requires planning, the organization should manage each exercise as a project. This section provides guidance on planning and conducting an exercise project.

The level of planning will likely vary based on the requirements for the exercise and the constraints that affect the programme.

The organization should follow three steps to deliver an exercise that meets the exercise programme objectives:

- a) plan the exercise;
- b) conduct the exercise; and,
- c) evaluate the exercise and its results.



## 5.2 Planning

### 5.2.1 General

The organization should design and develop the exercise based on the needs analysis and the scope of the exercise project. Project planning includes developing the aim and performance objectives for the exercise, designing the scenario, creating the documentation, managing logistics, planning the exercises to be conducted and planning for continual improvement.

### 5.2.2 Establish the foundation of the exercise project

#### 5.2.2.1 Needs analysis

The organization should perform a needs analysis with the following expected outcomes:

- a statement of the need for exercises;
- a firm base of support for the exercise project;
- recognition of the role of exercises in managing the risks to the organization; and,
- acceptance of the need to manage the risks of conducting exercises.

In order to meet exercise objectives, the organization should develop specific exercise activities that take into account issues related to risk, the constraints on developing and conducting these activities, geographic boundaries, and interested parties.

[Annex B](#) provides a series of questions to assist in conducting the needs analysis.

#### 5.2.2.2 Scope of the exercise project

The organization should develop an exercise project scope based on the needs analysis. The scope summarizes and describes the magnitude, resources, and extent of the exercise and how it will achieve the aim and exercise programme performance objectives.

#### 5.2.2.3 Base of support

The organization should secure a base of support and commitment from top management, participants and interested parties for every exercise project, regardless of its inclusion as part of a programme.

The organization should identify the benefits of the exercise as determined by the needs analysis and communicate the benefits to those who have responsibility for an exercise.

Support for an exercise and its exercise project team is also important to ensure that the exercise aims and performance objectives correspond to and run parallel to the organization's strategic objective.

Top management should give the exercise coordinator and exercise project team a clear mandate and full authority to plan, conduct, and evaluate the exercise project. The benefits and advantages of the exercise project should be clearly explained and presented to the appropriate personnel, such as the exercise coordinator, controllers, evaluators, and the exercise safety officer.

### 5.2.3 Developing aim and performance objectives

#### 5.2.3.1 General

The organization should define the aim for the exercise project and clarify how conducting the exercise supports the exercise programme aim and objectives. The organization should establish exercise performance objectives for every exercise project to provide a framework for scenario development, and to determine the criteria upon which the exercise will be evaluated.



An exercise can be designed to:

- train the participants and provide an opportunity to gain knowledge, understanding and skills;
- evaluate the capabilities of individuals, organizations and systems:
- develop activities, abilities and ideas; and,
- measure knowledge, ability, endurance (time), or capacity.

The exercise performance objectives should reflect specific capabilities that the organization has set as priorities, and identify the tasks associated with those capabilities. The exercise performance objectives should be simple, measurable, achievable, realistic and task-oriented.

The ability to evaluate performance against objectives will depend on what data or evidence is required to make an assessment. Before exercise performance objectives are adopted, it is important to consider how the objective can be assessed.

Exercise performance objectives usually contain four parts.

- a) **Participant:** Identifies the participants in the exercise. In larger exercises, the participants could be teams or functional units.
- b) **Performance:** An exact statement of the exercise performance objective.
- c) **Condition:** The specific circumstance under which the expected, desired performance should occur.
- d) **Criterion:** The criterion to be used to compare the observed performance with measurable standards for the specific performance. If the organization does not have established standards for performance, the standards should be developed, approved, and communicated by the organization.

### **5.2.3.2 Non measurable performance**

Knowing and thinking are difficult to measure directly. The organization should use indicator performance objectives if the assessment of cognitive functions is needed during exercises.

Examples of performance indicators may include decisions made, choices selected, and information recalled.

### **5.2.3.3 Review of exercise performance objectives**

The exercise performance objectives may need some alteration after the exercise project is launched. The changes should be based on established controls and implemented as part of the improvement process to achieve the aim of the exercise.

## **5.2.4 Team management**

### **5.2.4.1 General**

The organization should form one or more exercise project teams to plan, conduct, and evaluate the exercise. Representatives from key areas within the organization being exercised should be included on the team. The exercise project team can be expanded as needed. For example, logistics and communications may be added to meet the aim and exercise performance objectives.

The organization should identify the scope of the exercise and the identify the roles to plan, conduct, and evaluate the exercise, and assign the responsibilities to competent individuals.

Exercise project team roles may include:

- an exercise coordinator;
- a documentation coordinator;

- a logistics coordinator;
- a communications coordinator;
- an exercise safety officer;
- controllers and facilitators; and,
- evaluators.

The organization may appoint one person for several of the roles, or several persons for each of these roles, depending on the complexity or scope of the exercise.

#### **5.2.4.2 Team development and responsibilities**

The organization should appoint one person to be in charge of the exercise project team regardless of how many persons are involved. The person with responsibility for planning and conducting the exercise should chair the planning committee and be accountable to the organization.

For multi-organizational exercises, all participating organizations should have at least one member on the exercise project team.

The exercise coordinator should identify the need for training for the exercise project team before conducting an exercise. The exercise project team should develop pre-exercise briefing materials, including the exercise safety briefing and other important information necessary to conduct and evaluate the exercise.

The organization should ensure that the exercise project team and participants have the knowledge, skills and abilities, and the competence necessary to perform assigned roles and responsibilities. The organization should also identify the competencies of the evaluators. In a multi-organizational exercise, identification of the required competencies should be done during exercise planning prior to identifying and training evaluators.

### **5.2.5 Risk management**

#### **5.2.5.1 General**

Risks should be managed when planning, conducting and evaluating exercises to ensure the exercise performance objectives are achieved. Risk management addresses concerns such as safety, environmental effects, waste of resources, loss of sensitive information, trauma, damage to the organization's reputation and relations with other organizations and governmental entities (intergovernmental arrangements).

Safety is of critical importance if the exercising involves participant exposure to potentially dangerous situations or hazardous materials or risks to the community and the environment. The responsibility for identifying risk controls should be assigned to a safety officer with appropriate responsibilities and powers.

Risk management is an integral part of the planning process as the performance objectives are being developed. Continuous monitoring and reassessment is also a very important part of risk management. The process involves communication, documentation, and coordination. ISO 31000 provides a suitable framework for undertaking risk management to ensure systematic risk identification, analysis and evaluation processes are in use and evaluates risk when compared to the exercise performance objectives. The exercise project team should use a risk management process compatible with ISO 31000.

#### **5.2.5.2 Context**

Internal and external factors such as changes in legislation and regulations, media interest and relationship with government or other organizations which may affect the exercise performance objectives should be considered. It is also important to consider the risks of conducting the exercise to the organization itself.

### **5.2.5.3 Risk identification**

Risk identification involves the identification of risk sources, potential unwanted events and situations, their causes and their potential consequences that will have a negative effect on exercise performance objectives.

### **5.2.5.4 Risk evaluation**

Risks should be prioritized using the rating assigned during the risk analysis, so that the most important risks can be addressed first. Risk treatments may include eliminating or avoiding risk by not undertaking an exercise activity, reducing the likelihood of occurrence, mitigating the consequence, sharing the risk, or accepting the level of risk and continuing with the exercise project without change.

### **5.2.5.5 Risk management plan**

A risk management plan should ensure that risks are managed. Risk management should be embedded in all aspects of the organization's exercise practices and processes including the policies, planning, and budget required for effective exercise project risk management.

### **5.2.5.6 Monitor and review risk**

Monitoring and review are integral to the risk management process and involve regular checking or surveillance. Responsibilities for monitoring and reviewing should be clearly defined in the risk management plan. Monitoring and reviewing processes should encompass all aspects of risk management including:

- ensuring that controls are effective and efficient in both design and operation;
- analysing and learning lessons from events (including near-misses), changes, trends, successes and failures, which may require revision of risk treatments;
- detecting changes in the external and internal context; and,
- identifying emerging risks.

## **5.2.6 Environmental considerations**

The organization should consider environmental risks and impacts, and the effect on the community and the operating environment. The environmental impact of the exercise activities should be assessed and analysed and the results documented and considered during exercise planning, conducting and evaluation.

## **5.2.7 Gender and diversity considerations**

The exercise coordinator is responsible for gender and diversity considerations associated with exercise projects. These considerations should be addressed in exercise planning, conducting and evaluation, the results documented and the "lessons identified" reported.

## **5.2.8 Logistical considerations**

The exercise coordinator should ensure that logistical details are managed by the exercise project team.

Management of logistical details can make the difference between an effective exercise and an exercise that is confusing, ineffective, and inefficient.

Exercise logistical requirements will vary based on type and method of the exercise. The specific materials, equipment and facilities needed to carry out the exercise should be determined by the exercise planners as they develop the scenario, including the location(s) where the exercise will take place. Those responsible for logistics address the supplies, materials, equipment, services and facilities required for the exercise.

Exercise logistical considerations include transportation, infrastructure (facilities, parking and equipment), staffing, services (catering, medical support, and site security) and appropriate meeting and briefing arrangements.

## **5.2.9 Exercise communication**

### **5.2.9.1 General**

Three types of communications activities should be considered as part of an exercise project:

- exercising of communications methods planned for use during the exercise;
- managing communications for the purpose of exercise planning and interested party engagement; and,
- managing communications among the project team during the exercise.

### **5.2.9.2 Exercising communication methods as a performance objective**

The exercise project will include exercise performance objectives against which the communication method used to deliver the plan or capability being exercised can be assessed. This may include the exercising of:

- the communication flow between groups of people; and,
- the communications equipment being used.

To ensure that performance objectives are met, the indicators should be identified when planning the exercise project. Communications equipment should be tested prior to the exercise and issues identified and addressed.

The following considerations are examples of indicators that can be used to support evaluation of the communication performance objectives:

- the time taken for communication to be relayed;
- the accuracy of information relayed;
- the appropriateness of the communication method used; and,
- the appropriate people or systems received the information.

### **5.2.9.3 Communications strategy**

#### **5.2.9.3.1 General**

The exercise coordinator should develop a strategy which should include communication exercise performance objectives, identification of interested parties, indication of when and what it plans to communicate, and a management commitment to allocate adequate resources.

One person should be assigned the responsibility for delivering the strategy. The following issues may be considered:

- aim and scope of the communication strategy;
- risk issues and impacts;
- main activities to be considered as part of the exercise, messages to be conveyed, and communication techniques, approaches, tools and channels to be used;
- timeframe; and,

- roles and responsibilities.

Once the communication strategy is defined, top management should approve it and use it to control the organization's exercise communication activities.

During the exercise, media interest may be simulated. The person responsible for the communication strategy may identify media simulation resources to be included in the planning and delivery phase.

The communications resources role may involve:

- providing subject matter expertise on crisis communication in the application of the scenario;
- developing the crisis communication injects to make the exercise's conditions appear realistic; and,
- providing input into the scenario and inject development.

#### **5.2.9.3.2 Establishing communication exercise performance objectives**

During the development of the exercise performance objectives for communication activities, the organization should consider its priorities and desired results. The organization should be sensitive to the perception of risk by interested parties, and how the exercise may change their perception of risk and of the organization.

Considerations for setting communications-related performance objectives may include:

- meeting the information expectations of interested parties;
- minimizing internal and/or external conflicts;
- improving the organization's credibility and reputation;
- improving public knowledge and the image of the organization's products and services;
- complying with applicable legal and regulatory requirements and the other requirements to which the organization subscribes; and,
- providing information about the exercise activities and encouraging understanding by interested parties, of the aspects, impacts and performance of the organization.

#### **5.2.9.3.3 Identifying interested parties**

In developing the exercise communication strategy and the associated exercise performance objectives, the organization should identify internal and external interested parties who are impacted by, or have expressed an interest in, the organization's products, services and activities.

Some examples of interested parties to be considered by an organization include:

- first responders and emergency management personnel, and non-governmental organizations,
- employees and their representatives, customers, suppliers and the communities associated with the supply chain, contractors, distributors and competitors;
- public authorities, legislators and regulators, politicians and opinion leaders;
- community, schools, academics and researchers; and
- media organizations.

Conflicting interests may be identified among different interested parties. The communication activities should address demands, particularly of those who are most influential and who may negatively impact the outcomes of an exercise.

#### 5.2.9.3.4 Management of communications for the project team during an exercise project

A communications strategy should be defined to allow the exercise project team to communicate effectively throughout the exercise and to support the delivery of an effective exercise project. The purpose is to avoid conflict of communications methods and protocols, reducing the likelihood of confusion to participants, so that the exercise project team can:

- start and terminate the exercise, allowing for escalation and termination in emergency situations; and
- monitor, discuss and alter the progression of the exercise.

#### 5.2.9.3.5 Communications methods during the exercise

A communications strategy should be created that considers the methodology to communicate during the exercise including which communications types will be used and by whom, with consideration given to accessibility to each communications type where multiple organization types are represented as well as varying training requirements. Where the communications technologies, such as radios or email, are used to manage the exercise and within the exercise scenario, there should be separate channels for participation in, and management of, the exercise.

The exercise project team should nominate separate individuals to monitor the exercise and exercise management communications and develop a contingency plan for the loss of exercise management communications and the ability to communicate with participants. The communications strategy should be tested along with other testing protocols prior to the exercise. Protocols should be defined to allow participants to notify the exercise project team if it is necessary to terminate the exercise, with a clear escalation process to the nominated lead decision maker and back to the participants.

#### 5.2.9.4 Review

Feedback should be generated as the communications strategy is implemented by the exercise project team. The organization seeking input from interested parties should explain why it is seeking information and how the information obtained will be used during the exercise. The feedback may also be used to review the communications strategy to ensure the communications-related exercise performance objectives are achieved.

#### 5.2.10 Resources

The organization should ensure resources such as financial, time, human, equipment, and facility-related resources are used effectively during the project. Exercise cost estimates and budgets should be considered prior to initiating the exercise planning process. The amount budgeted for an exercise should be based on analysis of the appropriate exercise type and method required to achieve the anticipated exercise aim and performance objectives. This analysis should consider which staff, systems, tools, participating interested parties and other costs that are involved in the exercise. The exercise project team is responsible for monitoring expenditures and routinely updating their budgets to ensure that the amount allocated to an exercise is sufficient to achieve the exercise aims and performance objectives.

The exercise timetable and the time required from the exercise project team and exercise participants are to be considered early in the planning process. All exercises require sufficient time to be allocated to exercise planning, conducting and evaluating, ultimately determined by the exercise aim and performance objectives.

The exercise project timetable may include:

- date and time of the exercise;
- duration of the exercise;
- deadlines; and,
- estimate of person-days required for the exercise.

The resources required are usually determined by the scope of the specific exercise. Exercise participants and resources should be scheduled as early as possible because an exercise requires considerable time and resources. Where a plan or capability is exercised, those involved should receive the training identified for the role being exercised. The exercise participants should receive training prior to the exercise.

#### **5.2.11 Design and development**

The organization should design and develop the exercise based on the exercise scope as well as the exercise aim and performance objectives used to design the exercise, develop the exercise project document, manage the logistics, and plan to conduct and evaluate the exercise. The organization should select the type and method of exercise to meet the performance objectives and recognize the constraints under which the exercises will be developed and conducted. The type of exercise defines what should be exercised, consistent with the exercise scope. The exercise method describes how the exercise is to be performed to be consistent with aim and performance objectives.

An exercise might be a combination of multiple types and methods.

#### **5.2.12 Exercise types**

The organization should determine the exercise type according to the aim and performance objectives as well as the size and the magnitude of the exercise. [Table 1](#) provides sample descriptions for the exercise types and the function or activity which should be exercised and evaluated while conducting the exercise.



**Table 1 — Sample descriptions for the exercise types**

Exercise type	Description
Alert exercise	Used to test the organization by alerting the involved participants and eliciting a response, as well as to test an alert mechanism. While primarily applied to the staff within the organization, it may also be applicable to other contexts.
Start exercise	A means to test and develop the ability to invoke an appropriate response. It usually builds on the alert exercise by testing how fast the organization can be activated and begin carrying out appropriate, assigned tasks.
Staff exercise	Designed to increase the ability to work within and among internal processes, staff and information routines to create a common situational awareness and suggest decisions.
Decision exercise	Used to exercise decision making processes within an organization, which may include the ability to make clear and timely decisions and to initiate coordination between those responsible as well as with other interested parties, taking into account time constraints.
Management exercise	A combination of alert, start, staff and decision exercise with a focus on the roles, organization and standard operating procedures.
Cooperation exercise	<p>Used by different organizations or different parts of the same organization work or act together in order to achieve a common objective. It can be carried out both in large and small scales and may consist of:</p> <ul style="list-style-type: none"> <li>— “vertical” coordination (between national, regional and local levels);</li> <li>— “horizontal” coordination;</li> <li>— participation in a sector by public and private interested parties; and,</li> <li>— co-operation among several sectors in the society.</li> </ul>
Crisis management exercise	Simulates crisis conditions providing an opportunity for people to practice and gain proficiency in their roles described in the crisis management plan.
National strategic exercise	<p>Comprehensive exercise activities taking place at a strategic level (e.g. inter-ministerial crisis staff, political-administrative staff, cross-sector and cross-departmental management staff, or corporate crisis management). The general objectives of a national strategic exercise include:</p> <ul style="list-style-type: none"> <li>— improving the integrated response capability in exceptional threat and danger situations (crisis situations); and,</li> <li>— developing a comprehensive coordination and decision culture in organizations within the public or private sectors.</li> </ul> <p><a href="#">Annex C</a> provides additional information on national strategic exercises which may support public sector organizational exercise planning.</p>
Exercise campaign	A series of recurrent exercises with a common generic organizational structure.

### 5.2.13 Exercise methods

Exercise methods can be grouped into two categories.

- Discussion-based exercises familiarize participants with current plans, policies, agreements, and procedures. They are also called “dilemma exercises” and may be used to develop new plans, policies, agreements, and procedures.
- Operations-based exercises are used to validate plans, policies, agreements, and procedures and to clarify roles and responsibilities. They are carried out through simulations with the exercise



activities carried out in real-life environments and are useful in identifying resource gaps in an operational environment. They are commonly employed using an approach in which one type of exercise builds upon another.

[Table 2](#) provides sample descriptions for common exercise methods.

**Table 2 — Sample descriptions for the exercise methods**

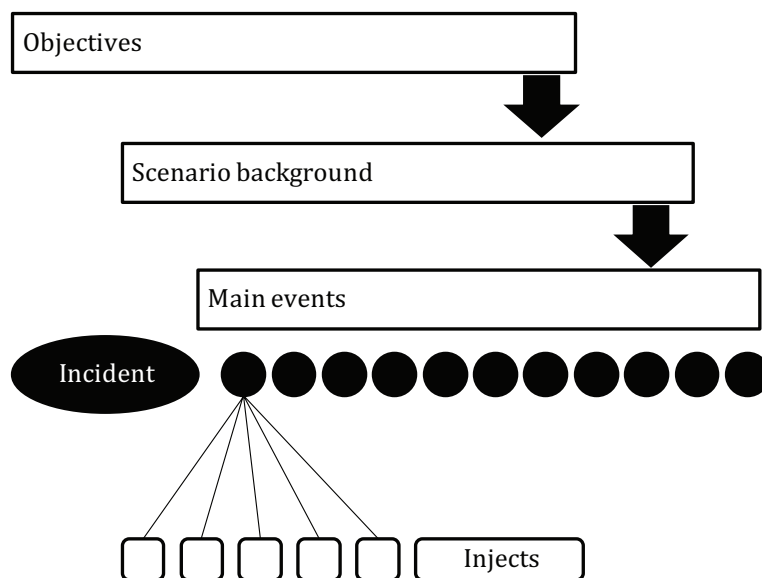
Category (basis)	Method	Description
Discussion	Seminar	An informal discussion method, assisted by an experienced facilitator, designed to orient participants to new or updated plans, policies, or procedures unconstrained by real-time simulation of events. May be used by organizations as an initial organizing point when plans and programs are being revised or developed, for example to review and revise a procedure that proved difficult to implement during a recent actual disruptive event).
	Workshop	Similar to seminars but differ as participant interaction is increased, and the focus is on achieving or building a product, such as new standard operating procedures, emergency operations plans, multi-year plans, or improvement plans. Workshops are often employed during exercise development to write exercise performance objectives and scenarios.
	Tabletop exercise	Includes key personnel who discuss simulated scenarios in an informal setting and used as a tool to build competence and support for a revised plan or procedure, or review plans, policies, and procedures and to assess the processes and systems needed to respond to undesired situations. Issues that result from the simulated events are discussed by the participants who develop decisions through paced problem solving. They can be timed to require rapid decision making or untimed allowing for in depth discussion and development of solutions. Untimed tabletop exercises are commonly used first and timed exercises second.
	Discussion-based game	A simulation of operations often involving two or more teams in a competitive environment, using rules, data, and procedures designed to depict an actual or assumed real-life situation. Gaming and simulation are often discussion-based. Games are also called “virtual exercises” and use technology to engage participants and create stress through the simulation of behavioural conditions.

## 5.2.14 Preparing scenarios

### 5.2.14.1 Structure

The organization should structure the scenario in a logical, readily accessible way. A systematic structure is often achieved by constructing the scenario using three levels: events, incidents and injects.

When the scenario is developed, the exercise should not become too complex and overburdened by details. On the other hand, the target group should be challenged with content to enable decision making and action. [Figure 2](#) shows an example of a generic breakdown of an exercise.



**Figure 2 — Generic breakdown of an exercise**

Scenario enhancements can range from the inclusion of details of research on a specific hazard to providing accessories such as explosion debris, mannequins, smoke, or simulated victims. These enhanced exercises provide more realistic scenarios or field environments, and increase the learning potential for participants.

[Annex D](#) provides further information on exercise enhancement, and [Annex E](#) provides further information on scenario enhancement.

#### 5.2.14.2 Events, incidents and injects

Events describe the general content of the exercised scenario. The number of events depends on the exercise aim and performance objectives. Several independent events may be required to achieve the exercise project aim and performance objectives. However, the realism of the scenario can be decreased by too many independent events.

Each event includes a number of consequences also known as incidents. The number of incidents should keep exercise participants occupied but not overwhelm them. Should particular incidents or injects become irrelevant or unsuitable during the exercise, the exercise planning team should have extra incidents and injects that can be used or be prepared to improvise and produce new material. Each incident should enable the evaluation of one or several of the exercise performance objectives. If the relationship between performance objectives and an incident is unclear, then the incident should be changed or removed altogether.

Injects are used by the exercise project team to communicate the exercise events and incidents to the exercise target group, providing them with information and giving them problems to solve. Injects serve to limit their behaviour and prompt them to act and make decisions. The means by which incidents are injected to the exercise target group should be realistic.

The scenario should stimulate the exercise target group to respond so that their actions can be evaluated against a backdrop of the evaluation criteria and points of measurement. Therefore there has to be a clear relationship and link between events, incidents and injects and exercise performance objectives and points of measurement.

### 5.2.14.3 Documentation

The organization should document the scope, aim, performance objectives, risk management, exercise instructions, exercise specifications, evaluations and safety plan for the exercise project.

The exercise project teams should prepare, implement, and maintain an exercise evaluation and an exercise safety plan. The effectiveness of each exercise is evaluated by the target group so that appropriate conclusions can be drawn and improvements can be made to future exercises.

To ensure the safety of the participants, employees, the general public and environment, the exercise safety officer should develop an exercise safety plan and submit it to the exercise project team for review to the exercise coordinator for approval. All modifications should be discussed with the exercise safety officer.

The exercise safety plan describes risk management aspects and procedures. Incident simulations should be as realistic as possible, balanced with safety considerations. The risks are identified in the safety plan, and the appropriate risk treatments described. The exercise safety plan should identify the site specific hazards of each exercise and identify the controls to treat each of these specific hazards. The treatments are based on the exercise risk identification and evaluation, and may include proactive, preventive, and preparative treatments. Other details, exercise stop action procedure, and accident reports may be included in the exercise safety plan.

### 5.2.14.4 Records

All documentation should be controlled in accordance with the organization's quality and record retention policies. If the exercise involves more than one organization, the control of records should be discussed and agreement reached during initial planning meetings.

## 5.3 Conducting

### 5.3.1 Exercise run-through

All exercise team members should participate in an exercise run-through. This brief review should contain only vital information to ensure that the participants act as planned throughout the course of the exercise. The lead evaluator should participate in this process. A similar review should be done with the exercise controllers to synchronize injects and exercise scenario changes, and to facilitate the implementation of the exercise coordinator's guidance as the exercise proceeds (at least daily in a multi-day exercise).

### 5.3.2 Start-up briefing

The exercise coordinator should ensure that a start-up briefing is performed as an integral, necessary part of the exercise risk management process. The organization should also clearly communicate to all participants the reasons for an exercise suspension or termination, both crisis and non-crisis.

The points to be covered in a start-up briefing may include:

- the target group;
- the aim and performance objectives of the exercise;
- the value and the purpose of participation in the exercise;
- the function of the management team and its relation to the exercise participants;
- the rules of role-play;
- the use of phones, exercise phone catalogues, etc. for communication during the exercise;
- the expectations for the exercise;
- the written information that will be provided;

- the scenario; and
- the termination process.

The start-up briefing should be used to avoid confusion between simulated and actual events.

### 5.3.3 Launch of exercise

The organization should test the communications to be used to launch, temporarily stop, and terminate the exercise prior to the scheduled launch. The methods for communicating exercise launch, stop, and termination should be explained during the start-up briefing. The exercise coordinator should announce the beginning or start of the exercise.

Techniques to launch the exercise include a verbal briefing, a fictional media inject; and mass messages.

### 5.3.4 Exercise facilitation

While the scope and scale of the exercise may vary, exercise facilitation tasks may include:

- maintaining the flow;
- reacting to the decisions of participants;
- flexibly adjusting the injects;
- collecting regular feedback from observers and evaluators;
- managing visitors;
- recording evidence and outcomes;
- enabling post exercise debriefs;
- facilitating opportunities to attempt tasks or issues for a second time; and
- dealing with the unexpected.

### 5.3.5 Termination of exercise

#### 5.3.5.1 General

The exercise coordinator should terminate the exercise using the same communications for launching and temporarily stopping the exercise. The exercise may be terminated, for example, through an inject or announcement stating that the exercise is complete.

#### 5.3.5.2 Unplanned termination

The exercise coordinator should call for a quick termination of the exercise and transition to routine operations when a situation such as a crisis arises. An exercise may also be stopped to clarify a procedure, and provide training to correct observed problems and another non-crisis situation. The exercise may then be re-started or terminated.

An urgent need to stop an exercise may require all activities to cease immediately. So that all participants know when to immediately cease all exercise-related activities, an exercise stop-action mechanism such as a word or phrase should be defined. If an “exercise stop-action mechanism” is planned, all participants should be briefed, describing the immediate action to be taken when the mechanism is activated. When the issue leading to the stop-action clears, an agreed-upon signal should be used to indicate that the exercise activity can resume.

The organization should adopt one exercise stop-action word and continue to use this word during all exercises. Terms such as “No play” and “End ex” may be used. The organization should make sure that

all participants know the word and the immediate actions required when the word is used. The exercise stop word should be covered as part of the pre-exercise safety briefing.

## **5.4 Improving**

### **5.4.1 Post exercise debriefing**

The exercise coordinator should organize a post-exercise debrief. Review of the exercise should provide valuable information on the validity of the plans, what resources were available and how they were used, and the transfer of behaviour learned from training. The process used to review actual incidents and near misses within the organization should be used to conduct post-exercise briefings.

During the post exercise debriefing, attention should be given to the functioning of the exercise organization and the exercise planning process.

### **5.4.2 Observation**

Exercise evaluators should have knowledge of the expected performance and criteria for evaluation. They should have prepared observation forms containing the exercise performance objectives and allow for notes to be taken during the exercise.

NOTE The evaluators should remain independent from participation and not be assigned other duties.

### **5.4.3 After-action review**

The organization should conduct an exercise after-action review, considering the validity of the plans, the resources that were available, how the resources were used; and the transfer of behaviour learned in training. The same format for the critique of exercises should be used for an actual incident to allow for comparison between simulated to actual events.

## **6 Continual improvement**

### **6.1 General**

After-action reviews of the exercise project result in feedback to enable an evaluation of individual exercise projects, the exercise programme as a whole and the aspect being exercised.

### **6.2 Evaluation**

#### **6.2.1 General**

The organization should evaluate the exercise programme and exercise projects based on performance objectives by monitoring or measuring performance during exercise projects then comparing the results to the criteria established and described as part of the performance objectives.

The disparity between exercise performance objectives and the observed or measured performance becomes the input into the corrective action process.

#### **6.2.2 Evaluation process**

##### **6.2.2.1 Initiating**

An evaluator should be involved in the exercise project from beginning. During the initiation of the exercise project, one or more people should be appointed to manage the evaluation, depending on the scope of the exercise. Evaluators should participate in planning the exercise and in the evaluation.

#### **6.2.2.2 Planning and organization**

The exercise project team should plan the evaluation and the exercise at the same time. The evaluation should be designed to assess the extent to which the exercise aim and performance objectives were achieved. During larger exercises there should be different external evaluators who evaluate the exercise project management and the exercise.

#### **6.2.2.3 Formulating questions and the basis for analysis**

Exercise performance objectives can be developed from accepted standards for competence. The evaluator(s) should ensure that the evaluation questions relate to the aim and exercise performance objectives. The criteria against which the collected material should be assessed should be clearly presented. Assessment criteria should result from collaboration between those in charge of the evaluation and exercise as well as other participants.

#### **6.2.2.4 Training**

The head evaluator appointed for the exercise project should ensure the evaluation group is informed about the organization and participants. The evaluator(s) who collect material should be trained for the tasks they are assigned.

#### **6.2.2.5 Observing and directing feedback**

Different types of material can be used to evaluate an exercise. Primary materials include participant observations, logs and notes, e-mail, telephone reports, and audio and video recordings. Secondary materials are orientation documents, exercise objectives, scenario information and other exercise documents, evaluation forms, observer notes and direct feedback from after-action debriefings.

Directly following the completion of the exercise, participants should be given the opportunity to discuss and present their experiences, address initial findings, provide first impressions about what went well and what could be improved.

#### **6.2.2.6 Analysing data and developing the after-action report**

The organization should analyse the data and identify corrective actions. For consistency, the same standards that were used to develop exercise performance objectives should be used during the analysis of the data.

#### **6.2.2.7 Presenting the after-action report**

An after-action report should provide an overview of the exercise, report on the outcomes compared to performance objectives and note the actions to be taken and by whom.

The after-action report may contain:

- the scope, aim and performance objectives;
- a summary of participants, resources, exercise location, set-up and staging, and the activities relating to the preparation and execution of the exercise;
- the selection of type and method of the exercise, including scenario, incidents and injects;
- identification of any exercise process constraints;
- evaluation of the exercise performance, including the response by participating organization(s);
- input from observers and feedback from debriefing;
- operational performances, competencies and learning experience of participants;
- recommendations for improvements, with responsibility assigned and completion dates;

- recommendations for a next exercise;
- any limitations on findings or guidance on how findings should be interpreted; and,
- conclusions regarding the validity of the exercise.

The after-action report should be circulated to the participating organization(s) for input. The report should be provided to management and interested parties when it is finalized. It should also be presented to top management of the participating organizations for their endorsement.

Where the report is shared across organizations and public, several versions of the report may be needed to preserve confidentiality

### **6.3 Management review and corrective action**

Top management should review the after-action report by comparing the exercise results with the exercise performance objectives.

The organization should document all recommendations contained in the after-action review and the result of specific corrective actions. The organization should identify all corrective actions and assign appropriate and competent individuals for resolution within agreed timelines. A system for establishing priorities may be required if there is a limitation on resources to correct the discrepancies identified during exercise projects. The organization should monitor and report progress as appropriate. The exercise project team should continue to seek ways to improve effectiveness and efficiency.

Top management should ensure that approved corrective actions are implemented and followed up to ensure that the commitments for corrective action are satisfied. A system for tracking the completion of corrective action is recommended.

The organization should incorporate corrective actions into the standard operating procedures. The lessons identified are usually used for performance enhancement, planning and preparing for future exercises, and improving the exercise programme.



## **Annex A** **(informative)**

### **Exercises within a management system description**

#### **A.1 General**

A management system should harmonize a number of elements within the organization so that it is effective and efficient. The organization's management should define processes and controls to be implemented and contribute to meeting its aim and objectives. The management system should be flexible and scalable, adaptable to changes in the organization's policy, aims and objectives, and perform as a tool to implement the changes.

In order to achieve a high level of competence, the organization should employ exercises as an integral part of its management system. The exercises should be planned, conducted and evaluated either by a sub-unit within the organization or by an external organization. This annex relates to the elements of a management system as defined in Appendix 2 of Annex SL of the ISO/IEC Directives, Part 1 fourth edition 2013.

#### **A.2 Identifying the benefits of using exercises**

The organization, through its management system, can be expected to benefit from an exercise programme and exercise projects. The organization's needs should be clearly defined so a suitable programme can be developed and exercise types and methods selected.

#### **A.3 Defining the organization's need**

##### **A.3.1 Identifying the inputs**

###### **A.3.1.1 General**

In order to plan, conduct and evaluate effective exercises for an organization, the organization's needs should be defined and communicated to the exercise programme manager and exercise coordinator.

###### **A.3.1.2 Policy**

All organizational activities should be designed to support the organization's strategy and policy and the policy should influence the exercise programme. This is a sequential process with management plans based on the organization's aim and objectives which are in turn based on the organization's policy.

###### **A.3.1.3 Operational planning and control**

The plans and the resources allocated to implementation of these plans are the basic elements of the organization's need for exercises. The competence of the participants involved in these plans should be evaluated and verified through effective exercises. If gaps are identified they serve as an input to develop corrective action.

###### **A.3.1.4 Understanding the needs and expectations of interested parties**

Interest party requirements and expectations have an impact on what has to be done by the exercise participants (as well as constraints, exercise type, method, timing and frequency).



### **A.3.1.5 Organization roles, responsibilities and authorities**

Exercise projects evaluate and develop personnel competencies so the organization is able to meet its aim and performance objectives. Understanding roles, competencies and expectations is most important to the planning and conducting of exercise projects.

### **A.3.1.6 Resources**

The organization's management should allocate financial, and human resources and equipment so participants who are assigned a specific task can perform it, and to build and preserve competencies. Exercises should be developed and conducted within established resource constraints.

### **A.3.1.7 Competence and awareness**

The organization must determine the necessary competence of those doing work under its control, and ensure that competencies are achieved and preserved. This includes the competencies affecting management system performance. Those doing work under its control must be aware of the management system policy, how they are expected to contribute to the effectiveness of the management system, and the consequences of not conforming to management system requirements.

## **A.3.2 Elements influenced by feedback from exercise projects**

### **A.3.2.1 Documented information**

The "competence enhancing" activities performed by the participants in the organization must be recorded and used by the organization to evaluate personnel in the context of aim and performance objectives and to develop future plans.

### **A.3.2.2 Competence and awareness**

The information from the exercise projects is a direct indication of the level of interested party awareness and competence and a direct input for evaluating gaps that have to be addressed.

### **A.3.2.3 Monitoring, measurement, analysis and evaluation**

When using the "Plan Do Check Act" model, planning and conducting exercises is part of "Do" (as noted in ISO 22301, for example), the outcomes are used in "Check" and "Act" to evaluate improvement opportunities and drive continual improvement.

### **A.3.2.4 Nonconformity and corrective action**

Addressing corrective actions contributes to the continual improvement of the management system and exercises offer a source of corrective actions.

### **A.3.2.5 Internal audit**

Assessing whether the organization performs exercises and if the exercises compare actual performance to desired results should be part of the internal audit.

### **A.3.2.6 Management review**

Exercise results are a critical management review input because of the importance of having top management understand the outcomes to prioritize and drive continual improvement.

#### **A.4 Continual improvement**

The management system requires the organization to continually improve the suitability, adequacy and effectiveness of the management system. Exercise is one of the tools used to identify and rectify performance, competence and awareness gaps.

## **Annex B** **(informative)**

### **Needs analysis**

#### **B.1 Organizational considerations**

The organization should perform a needs analysis for the purpose of determining the need for an exercise programme and/or exercise project(s). The following questions should be asked:

- What are the strategic issues and priorities for the organization and what will satisfy these needs?
- What are the requirements for the exercise programme and/or project?
- Who are the interested parties?
- What risks require treatment?
- What are the legal, regulatory and compliance obligations to which the organization subscribes?

#### **B.2 Situational analysis**

The development or improvement of an exercise programme or project begins with an acceptance by an organization of the need to manage its risks based on risk assessment results obtained through the use of a number of methods. In the situational analysis, the organization should seek information to help plan, conduct and improve its exercise programme and/or projects by considering these issues:

- existing risk management activities and commitments;
- concerns of interested parties;
- exercise activities that have proven to be the most effective in similar situations;
- the influence of opinion leaders on issues related to management of risk;
- hazard and risk mapping;
- periodic data analysis;
- social and political implications;
- public image of the organization on a specific issue;
- latest developments and trends on risk management issues related to the organization's specific activities;
- products and services;
- economic, financial and regulatory implications; and
- knowledge of the values and cultures of interested parties.

It is also important to consider the potential costs and consequences when evaluating the context for an exercise activity. The analysis may have already been completed in a community or agency hazard, risk and vulnerability analysis or in a comparable process or document.

### **B.3 Identifying information relevant for exercise programme and project management**

The organization should anticipate issues of concern to interested parties as this helps to focus the collection of risk and impact information on the performance of its products, services, processes and activities, and on the protection of assets. Appropriate quantitative and qualitative data and information can be selected or generated based on the targets set for an exercise project. The information should be aligned to current standards and guidelines on performance and performance indicators.

There are many sources and types of information available within most organizations, including information on an organization's strategies, policies, and the risks involved.

Sources may include:

- lists of risks and impacts specific to products, services, processes, activities, assets and finances;
- lists of risk indicators;
- asset valuation and assessment of critical shortfalls;
- routinely and occasionally collected information, such as reports from facilities located in a specific area, reports from subsidiaries (for a holding company), research reports, monitoring, control and measurement data registers and analysis reports;
- regulatory reports;
- compliance records and contracts, as well as other requirements to which the organization subscribes;
- response and recovery strategies and plans;
- manuals and records of employee training;
- relevant financial and accounting data; and,
- information from community outreach activities specific to response and recovery.

When choosing the time to hold exercises, the following should be considered:

- minimum negative effect on the organization's routine and operations;
- holiday schedules;
- weather and other seasonal considerations;
- the period of time required to improve competencies and skills; and,
- regulatory cycles and requirements.

## Annex C (informative)

### National strategic exercises

#### C.1 General

This annex gives additional information for the exercise type “national strategic exercise” as described in [Table 1](#).

#### C.2 Objective of the exercise

A national strategic exercise refers to comprehensive exercise activities taking place at a strategic level (e.g. inter-ministerial crisis staff, political-administrative staff, cross-sector and cross-departmental management staff, or corporate crisis management).

The general objectives of a national strategic exercise include:

- a) improving the integrated response capability in exceptional threat and danger situations (crisis situations); and,
- b) developing a comprehensive coordination and decision culture in organizations within the public, or private sectors.
- c) identification of weak points:
  - 1) within organizational structures in the event of crisis situations,
  - 2) in the context of management and deployment concepts,
  - 3) in the context of the cooperation of different organizations and of the deployed resources assisting with response and recovery;
- d) evaluation and improvement of:
  - 1) tools for the comprehensive and prognostic assessment of the situation,
  - 2) cooperation across departments, public authorities and institutions,
  - 3) efficiency of existing organization, management and communication structures which should even work in the event of a shortage of personnel or technical equipment,
- e) availability and quick deployment of personnel and special material resources consistent with the objectives associated with the cross-social protection strategies, as well as risk and crisis management plans,
- f) allocation of capable professional expertise to cope with the situation,
- g) management procedures and internal crisis communication between managers and among managers and staff,
- h) timely and precise press releases and public relations information,
- i) inclusion of psychosocial aspects of crisis management,
- j) appropriate deployment and management of resources, in particular when faced with resource constraints.

### C.3 Scope of exercise

The scope of a national strategic exercise is to practice top management inter-organizational cooperation which may involve exercises across and between any mix of levels of public, private and non-governmental organizations. These exercises can simulate extreme national large-scale damage and threat situations, in order to guarantee an even more effective protection of the population.

The major challenge is the interdisciplinary connection of all areas of civil security provisions to create an efficient security system for the population and its basic needs.

National strategic exercises therefore include the following aspects:

- exercises executed by the crisis and administration staff ranked higher than the tactical or operative levels;
- to bring together the organization's responsibilities and central possibilities and potentials;
- creation of networks, among other things, by bringing together public and non-public sectors (critical infrastructures);
- cross-departmental and cross-divisional coordination of media and public relations work;
- creation of optimal basic conditions for successful operative-tactical deployment;
- ensuring sustainability and ability to persevere; and,
- cross-social approaches.

### C.4 Exercise purpose

The purpose of a national strategic exercise is the examination and evolution of cross-social emergency preparedness systems and strategies designed to protect the population. This type of exercise includes the coordination of measures and the cooperation of responsible authorities and private operators of critical infrastructures in situations of extreme risk and damage. The focus of national strategic exercises should be on cross-departmental and interdisciplinary crisis management, including information, media and resource management. The exercise should address the needs of the entire population.

### C.5 Participants

Participants in the national strategic exercise scenario include response and recovery professionals (crisis management staff/administrative staff) from authorities, private operators and interested parties. The exercise is led by exercise coordinators, with planning, conducting and improving activities performed by the exercise project team, as well as central and local operating staff. For exercise planning, conducting and improving, central and local project groups are deployed and supported by experts, depending on the complexity associated with the exercise scenario (see C.7).

### C.6 Planning of the exercise project

Preparatory measures as well as general and thematically appropriate workshops are organized in the course of the exercise. In general, the conduct of a national strategic exercise is based on an iterative process.

For strategic crisis management exercises, a minimum of 12 months preparation time is required. In the preparation phase, the starting point (scenario), a script with the appropriate additional documents (incidents and injects), the communication plan and further exercise papers are prepared. Additionally, the exercise participants are introduced to their functions. Right from the start of the actual exercise, it is important to remove, whenever possible, any identified crisis management deficits in order to start the execution phase with optimised structures. Therefore, it is of utmost importance to remedy, as much as possible, the defects of crisis management, which had been identified during the preparation phase, in order to enter the execution phase against the background of optimised structures.

The aim is to deploy personnel, equipment, and resources to a specific location for the real-time, real-life simulation of a scenario. Incorporate as many functions as possible to exercise and/or test the entire plan. The number of exercise performance objectives depends upon the number of functions involved. There should be no less than three objectives per function.

## **C.7 Organizational aspects**

Strategic exercises on the national level require a complex exercise management team.

A high-ranking steering committee makes decisions regarding the main exercise aim and objectives and the exercise framework.

During the conduct of the exercise, a central exercise project team and local management staff as well as framework management groups conduct (initiate, monitor, coordinate and, if necessary, adjust) the development of the exercise. These teams and groups report to the management staff. They are closely involved in the general planning and conduct of the exercise. Framework management groups have management knowledge. At the same time they are also participants in the exercise. Because of their double function, they represent the exercise environment. Toward the exercising staff, the framework management groups behave like exercising staff and pass on management knowledge only depending on situation and time.

## **C.8 Media work**

Psychosocial aspects of crisis management are increasingly important. For exercises at a strategic level, possible reactions of the population, individual groups or helpers are important parameters which have to be taken into account during exercise planning, conducted and evaluated. In particular, media and public relations work (risk and crisis communication) is a strategic instrument of crisis coping measures in real or simulated media work.

## **C.9 Evaluation**

After the completion of the exercise, based on the findings, a joint evaluation report is prepared which is distributed to all those who participated in the exercise. It is also a starting point for the further optimization of crisis management structures and the development and further development of up to date strategies for the handling of crises. To be able to understand and evaluate these optimization measures during the evaluation phase, attention should be paid to the complete documentation. Further information is given in [6.2](#).

## **Annex D** **(informative)**

### **Exercise enhancement**

#### **D.1 General**

Enhanced exercises provide a realistic scenario or field environment and add an increased level of learning potential for participants. Enhancements can range from using scenarios based on detailed research on a specific hazard to providing props such as explosion debris, mannequins, smoke, or simulated victims. The following paragraphs detail some operations-based exercise enhancements.

#### **D.2 Potential enhancement**

##### **D.2.1 Props**

Props are non-functional replicas of objects, the presence or discovery of which prompt certain actions by exercise participants. Examples include simulated bombs, bomb blast debris (i.e. shrapnel), mannequins or body parts, and foam bricks and beams. Simulations that mimic the effects of chemical hazards or that cause a positive reading of an actual detection device are also considered props. Providing written materials is a suitable method of delivering detailed, scripted information. For example, providing a copy of a local newspaper that includes a scripted article related to the exercise scenario is an effective way to enhance what might otherwise be a bland message.

##### **D.2.2 Equipment**

When feasible, using real equipment is more desirable than using simulated props. Using real equipment has the added effect of familiarising personnel with the tools of the trade. For example, emergency medical technician (EMT) staff should benefit more from completing medical triage tags than from stating what they would do if they had triage tags.

##### **D.2.3 Personnel**

Using actual team members and victim actors is essential for exercise realism. Teams that consistently train and practice together tend to respond more effectively and cohesively. Every effort should be made to incorporate existing teams into the exercise as players. For example, include hazardous materials (HazMat) teams and bomb squads; disaster medical assistance teams; and evidence response, special reaction, and hostage negotiation teams. Using actors as victims enhances realism for all response staff that interacts directly with them. Soliciting volunteers from the local jurisdiction (e.g. city, county) helps develop a sense of community and ensures community members that their first responders are well-trained.

##### **D.2.4 Special effects**

A special effect is a technical enhancement that typically requires trained and licensed personnel, special permission for use, and additional safety and/or security precautions. Examples include the employment of pyrotechnics or explosives, or the use of makeup specialists.

##### **D.2.5 Red teams**

Composed of experienced role-players, Red Teams are a physical representation of the adversary whom the players are seeking to prevent or deter from perpetrating an attack during a prevention-focused, operations-based exercise. Numerous personnel, logistics, and safety considerations are associated with employment of Red Teams.



## **Annex E** (informative)

### **Creating scenarios through experience**

#### **E.1 General**

Exercise scenarios can be enriched by the inclusion of learning from human experience associated with significant events. Ethnography, a qualitative research tool, is a useful methodology to collect this experience, providing insight and understanding of the human impact.

This activity can vary from a discussion with a person who has experienced the relevant scenario, to a research project that includes many interested parties. For some scenarios, ethnographic studies may have already been completed, and can provide useful information on experience.

This technique can assist in ensuring the exercise challenges the response, as exercise participants will rarely have exposure to the scenario they intend to use.

#### **E.2 Benefits**

The main benefits of using ethnography in exercises are:

- to understand the experiences and tacit knowledge of people who were directly affected by a disruptive event;
- to understand the wider impacts and potential issues that may arise during an incident that is not easily predicted; and,
- to validate assumptions made on human or animal experience, and perceptions.

The outcome of this activity is an enriched scenario that reflects previous incidents and has an increased likelihood of reflecting possible outcomes were the scenario to occur. This activity also provides context and increases learning opportunities for exercise participants.

#### **E.3 Methodology**

##### **E.3.1 General**

Ethnography is a method that records verbal experiences. For the purposes of scenario development, verbal reports should be provided by people who have experienced an incident closely aligned to the scenario being developed.

The verbal reports are systematically analysed to provide more comprehensive understanding what could occur in future incidents.

##### **E.3.2 Method**

###### **E.3.2.1 General**

Primary Research: Verbal reports are recorded through an unstructured interview.

Secondary Research: Previous research conducted may provide the desired information. A literature search for reports, books or academic journal papers may provide ethnographic research on a specific case study. The text should be relevant to the scenario or impacts being exercised.

#### **E.3.2.2 Interviewees**

The choice of interviewees is determined by:

- the scenario;
- the role of interviewees in the incident; these people may be survivors, response personnel, friends and family of survivors, witnesses or others who have a link to the incident; and,
- geographical location; the incident may have no physical location therefore consideration should be given to the practicalities of undertaking the interview.

#### **E.3.2.3 Interviewers**

When choosing interviewers, consideration should be given to:

- cultural understanding of the interviewees;
- sensitivity to psychological status; and,
- understanding of the incident including the damage in the area.

#### **E.3.2.4 Conducting interviews**

Record the interview by taking notes and using devices including voice and video recorders. After holding an interview, an interviewer should:

- write a verbatim transcript based, but not limited to, on the notes and voice records;
- edit the transcript, if necessary, without changing its original meaning, to make it more easily readable and understandable; and,
- confirm with the interviewee the edited transcript if it correctly describes his/her experience to finalise the record.

The official record should be analysed to extract tacit knowledge from which lessons may be drawn. Methods to analyse records may not necessarily be highly quantitative and technical. The framework to be applied to the analysis of the records should be drawn from a combination of the exercise participants' desire and need for inquiry and their interpretation of the information from secondary data sources.

## Bibliography

- [1] ASIS SPC.1 – 2009, *Organisational Resilience: Security, Preparedness and Continuity Management - Requirements and Guidance for Use*
- [2] ASIS GDL BC 01 2005, *Business continuity guideline: A Practical Approach for Emergency Preparedness, Crisis Management, and Disaster Recovery*
- [3] Australia P2 *Public Safety Competencies*
- [4] BS PD 25666, *Exercising and Testing for continuity and contingency programmes*
- [5] German Federal Office of Civil Protection and Disaster Assistance - LUKEX - *Guidelines for Strategic Crisis Management Exercises*
- [6] *Guidelines for planning, conduct and assessment of international EAPC exercises*
- [7] ISO/IEC 27031, *Information technology — Security techniques — Guidelines for information and communication technology readiness for business continuity*
- [8] ISO 10015, *Quality management — Guidelines for training*
- [9] ISO 19011, *Guidelines for auditing management systems*
- [10] ISO 22300, *Societal security — Terminology*
- [11] ISO 22301, *Societal security — Business continuity management systems — Requirements*
- [12] ISO 22320, *Societal security — Emergency management — Requirements for incident response*
- [13] ISO 31000, *Risk management — Principles and guidelines*
- [14] ISO Guide 73, *Risk management — Vocabulary*
- [15] NFPA 1600, *Standard for Disaster/Emergency Management Programs 2010 Edition*
- [16] SS 540:2008, *Singapore Standard for Business Continuity*
- [17] U.S. Department of Homeland Security HSEEP (Homeland Security Exercise Evaluation Program): Volume I: *HSEEP Overview and Exercise Programme Management*; Volume II: *Exercise Planning and Conduct*; Volume III: *Exercise Evaluation and Improvement Planning*; Volume IV *Library: Sample Exercise Materials*





# British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

## About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards-based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

## Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at [bsigroup.com/standards](http://bsigroup.com/standards) or contacting our Customer Services team or Knowledge Centre.

## Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at [bsigroup.com/shop](http://bsigroup.com/shop), where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

## Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to [bsigroup.com/subscriptions](http://bsigroup.com/subscriptions).

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

**PLUS** is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit [bsigroup.com/shop](http://bsigroup.com/shop).

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email [bsmusales@bsigroup.com](mailto:bsmusales@bsigroup.com).

## BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

## Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

## Copyright

All the data, software and documentation set out in all British Standards and other BSI publications are the property of and copyrighted by BSI, or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI. Details and advice can be obtained from the Copyright & Licensing Department.

## Useful Contacts:

### Customer Services

**Tel:** +44 845 086 9001

**Email (orders):** [orders@bsigroup.com](mailto:orders@bsigroup.com)

**Email (enquiries):** [cservices@bsigroup.com](mailto:cservices@bsigroup.com)

### Subscriptions

**Tel:** +44 845 086 9001

**Email:** [subscriptions@bsigroup.com](mailto:subscriptions@bsigroup.com)

### Knowledge Centre

**Tel:** +44 20 8996 7004

**Email:** [knowledgecentre@bsigroup.com](mailto:knowledgecentre@bsigroup.com)

### Copyright & Licensing

**Tel:** +44 20 8996 7070

**Email:** [copyright@bsigroup.com](mailto:copyright@bsigroup.com)



...making excellence a habit.™