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Security and resilience — Security management systems — Requirements

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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 (see 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 (see 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 of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 292, *Security and resilience.*

This second edition cancels and replaces the first edition (ISO 28000:2007), which has been technically revised, but maintains existing requirements to provide continuity for organizations using the previous edition. The main changes are as follows:

— recommendations on principles have been added in Clause 4 to give better coordination with ISO 31000;

— recommendations have been added in Clause 8 for better consistency with ISO 22301, facilitating integration including:

  — security strategies, procedures, processes and treatments;

  — security plans.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Most organizations are experiencing an increasing uncertainty and volatility in the security environment. As a consequence, they face security issues that impact on their objectives, which they want to address systematically within their management system. A formal approach to security management can contribute directly to the business capability and credibility of the organization.

This document specifies requirements for a security management system, including those aspects critical to the security assurance of the supply chain. It requires the organization to:

— assess the security environment in which it operates including its supply chain (including dependencies and interdependencies);

— determine if adequate security measures are in place to effectively manage security-related risks;

— manage compliance with statutory, regulatory and voluntary obligations to which the organization subscribes;

— align security processes and controls, including the relevant upstream and downstream processes and controls of the supply chain to meet the organization's objectives.

Security management is linked to many aspects of business management. They include all activities controlled or influenced by organizations, including but not limited to those that impact on the supply chain. All activities, functions and operations should be considered that have an impact on the security management of the organization including (but not limited to) its supply chain.

With regard to the supply chain, it has to be considered that supply chains are dynamic in nature. Therefore, some organizations managing multiple supply chains may look to their providers to meet related security standards as a condition of being included in that supply chain in order to meet requirements for security management.

This document applies the Plan-Do-Check-Act (PDCA) model to planning, establishing, implementing, operating, monitoring, reviewing, maintaining and continually improving the effectiveness of an organization's security management system, see Table 1 and Figure 1.

Table 1 — Explanation of the PDCA model

Plan (Establish)	Establish security policy, objectives, targets, controls, processes and procedures relevant to improving security in order to deliver results that align with the organization's overall policies and objectives.
Do (Implement and operate)	Implement and operate the security policy, controls, processes and procedures.
Check (Monitor and review)	Monitor and review performance against security policy and objectives, report the results to management for review, and determine and authorize actions for remediation and improvement.
Act (Maintain and improve)	Maintain and improve the security management system by taking corrective action, based on the results of management review and reappraising the scope of the security management system and security policy and objectives.

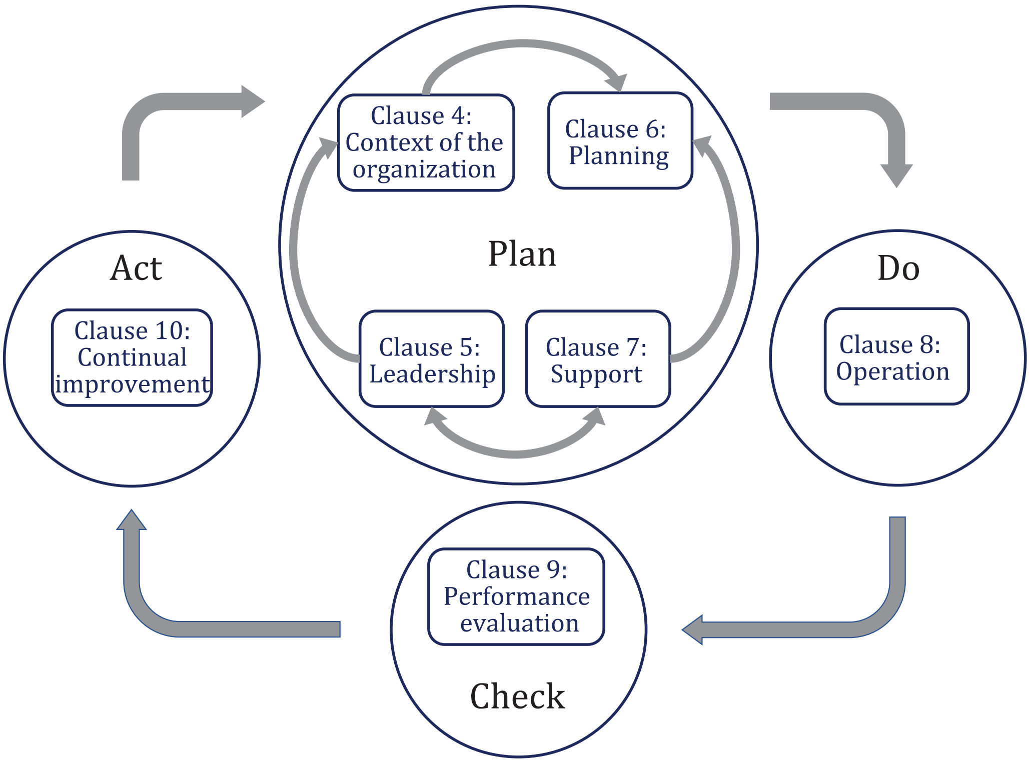

Figure 1 — PDCA model applied to the security management system

This ensures a degree of consistency with other management system standards, such as ISO 9001, ISO 14001, ISO 22301, ISO/IEC 27001, ISO 45001, etc., thereby supporting consistent and integrated implementation and operation with related management systems.

For organizations that so wish, conformity of the security management system to this document may be verified by an external or internal auditing process.

Security and resilience — Security management systems — Requirements

1 Scope

This document specifies requirements for a security management system, including aspects relevant to the supply chain.

This document is applicable to all types and sizes of organizations (e.g. commercial enterprises, government or other public agencies and non-profit organizations) which intend to establish, implement, maintain and improve a security management system. It provides a holistic and common approach and is not industry or sector specific.

This document can be used throughout the life of the organization and can be applied to any activity, internal or external, at all levels.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 22300, *Security and resilience — Vocabulary*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
organization
person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its *objectives* (3.7)

Note 1 to entry: The concept of organization includes, but is not limited to, sole-trader, company, corporation, firm, enterprise, authority, partnership, charity or institution, or part or combination thereof, whether incorporated or not, public or private.

Note 2 to entry: If the organization is part of a larger entity, the term "organization" refers only to the part of the larger entity that is within the scope of the *security management system* (3.5).

3.2
interested party (preferred term)
stakeholder (admitted term)
person or *organization* (3.1) that can affect, be affected by, or perceive itself to be affected by a decision or activity

3.3
top management
person or group of people who directs and controls an *organization* (3.1) at the highest level

Note 1 to entry: Top management has the power to delegate authority and provide resources within the organization.

Note 2 to entry: If the scope of the *management system* (3.4) covers only part of an organization, then top management refers to those who direct and control that part of the organization.

3.4
management system
set of interrelated or interacting elements of an *organization* (3.1) to establish *policies* (3.6) and *objectives* (3.7), as well as *processes* (3.9) to achieve those objectives

Note 1 to entry: A management system can address a single discipline or several disciplines.

Note 2 to entry: The management system elements include the organization's structure, roles and responsibilities, planning and operation.

3.5
security management system
system of coordinated *policies* (3.6), *processes* (3.9) and practices through which an organization manages its security *objectives* (3.7)

3.6
policy
intentions and direction of an *organization* (3.1) as formally expressed by its *top management* (3.3)

3.7
objective
result to be achieved

Note 1 to entry: An objective can be strategic, tactical, or operational.

Note 2 to entry: Objectives can relate to different disciplines (such as finance, health and safety, and environment). They can be, for example, organization-wide or specific to a project, product and *process* (3.9).

Note 3 to entry: An objective can be expressed in other ways, e.g. as an intended result, as a purpose, as an operational criterion, as a security objective, or by the use of other words with similar meaning (e.g. aim, goal, or target).

Note 4 to entry: In the context of *security management systems* (3.5), security objectives are set by the *organization* (3.1), consistent with the security *policy* (3.6), to achieve specific results.

3.8
risk
effect of uncertainty on *objectives* (3.7)

Note 1 to entry: An effect is a deviation from the expected. It can be positive, negative or both, and can address, create or result in opportunities and threats.

Note 2 to entry: Objectives can have different aspects and categories, and can be applied at different levels.

Note 3 to entry: Risk is usually expressed in terms of risk sources, potential events, their consequences and their likelihood.

3.9
process
set of interrelated or interacting activities that uses or transforms inputs to deliver a result

Note 1 to entry: Whether the result of a process is called an output, a product or a service depends on the context of the reference.

3.10
competence
ability to apply knowledge and skills to achieve intended results

3.11
documented information
information required to be controlled and maintained by an *organization* (3.1) and the medium on which it is contained

Note 1 to entry: Documented information can be in any format and media, and from any source.

Note 2 to entry: Documented information can refer to:

— the *management system* (3.4), including related *processes* (3.9);

— information created in order for the organization to operate (documentation);

— evidence of results achieved (records).

3.12
performance
measurable result

Note 1 to entry: Performance can relate either to quantitative or qualitative findings.

Note 2 to entry: Performance can relate to managing activities, *processes* (3.9), products, services, systems or *organizations* (3.1).

3.13
continual improvement
recurring activity to enhance *performance* (3.12)

3.14
effectiveness
extent to which planned activities are realized and planned results are achieved

3.15
requirement
need or expectation that is stated, generally implied or obligatory

Note 1 to entry: "Generally implied" means that it is custom or common practice for the *organization* (3.1) and *interested parties* (3.2) that the need or expectation under consideration is implied.

Note 2 to entry: A specified requirement is one that is stated, e.g. in *documented information* (3.11).

3.16
conformity
fulfilment of a *requirement* (3.15)

3.17
nonconformity
non-fulfilment of a *requirement* (3.15)

3.18
corrective action
action to eliminate the cause(s) of a *nonconformity* (3.17) and to prevent recurrence

3.19
audit
systematic and independent *process* (3.9) for obtaining evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled

Note 1 to entry: An audit can be an internal audit (first party) or an external audit (second party or third party), and it can be a combined audit (combining two or more disciplines).

Note 2 to entry: An internal audit is conducted by the *organization* (3.1) itself, or by an external party on its behalf.

Note 3 to entry: "Audit evidence" and "audit criteria" are defined in ISO 19011.

3.20
measurement
process (3.9) to determine a value

3.21
monitoring
determining the status of a system, a *process* (3.9) or an activity

Note 1 to entry: To determine the status, there can be a need to check, supervise or critically observe.

4 Context of the organization

4.1 Understanding the organization and its context

The organization shall determine external and internal issues that are relevant to its purpose and that affect its ability to achieve the intended result(s) of its security management system including the requirements of its supply chain.

4.2 Understanding the needs and expectations of interested parties

4.2.1 General

The organization shall determine:

— the interested parties that are relevant to the security management system;

— the relevant requirements of these interested parties;

— which of these requirements will be addressed through the security management system.

4.2.2 Legal, regulatory and other requirements

The organization shall:

a) implement and maintain a process to identify, have access to and assess the applicable legal, regulatory and other requirements related to its security;

b) ensure that these applicable legal, regulatory and other requirements are taken into account in implementing and maintaining its security management system;

c) document this information and keep it up to date;

d) communicate this information to relevant interested parties as appropriate.