PAS 99:2012

Specification of common management system requirements as a framework for integration

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Contents

Foreword

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- Co-opted

Wider comments from other interested parties were invited by BSI. The expert contributions made by the organizations and individuals consulted in the development of this PAS are gratefully acknowledged.

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Organizations should use this PAS in conjunction with the specific requirements of management system standards e.g. BS EN ISO 9001, BS EN ISO 14001, BS ISO/IEC 27001, BS EN ISO 22000, BS ISO/IEC 20000, BS ISO 22301 and BS OHSAS 18001 or specifications to which the organization subscribes. This PAS is not intended for certification purposes as a stand alone document.

Adherence to this PAS does not ensure conformity with any management system standard.

Presentational conventions

The provisions of this PAS are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This PAS is not to be regarded as a British Standard. It will be withdrawn upon publication of its content in, or as, a British Standard.

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Introduction

Many organizations have adopted or are adopting formal management system standards (MSSs), such as BS EN ISO 9001, BS EN ISO 14001, BS ISO/IEC 27001, BS EN ISO 22000, BS ISO/IEC 20000, BS ISO 22301 and BS OHSAS 18001.

Frequently these are operated as independent systems. In all management systems, however, there are certain common elements which can be managed in an integrated way; the essential unity of all these systems within the overall management system of the organization can then be recognized and used to best advantage. Therefore organizations are questioning the approach of having separate systems.

PAS 99:2006 was produced to enable organizations to integrate common management system (MS) requirements into one framework. Since the initial publication of PAS 99:2006 there have been many developments in international standards and PAS 99:2012 has been revised to take account of these changes and, in particular, of the introduction of a new ISO guidance, recently published and now contained in the Consolidated ISO Supplement to the ISO Directives, Part 1 (Procedures specific to ISO), *Annex SL (normative) Proposals for Management System Standards, SL.8 Guidance on the development process and structure of an MSS* plus Appendices 2-4 (hereafter referred to as "Annex SL").

***NOTE** During its drafting this Annex SL guidance was known as ISO draft Guide 83,* High level structure, identical core text and common terms and core definitions for use in Management Systems Standards.

PAS 99:2012 is primarily meant to be used by those organizations who are implementing the requirements of two or more Management Systems Standards (MSSs). The adoption of this PAS is intended to simplify the implementation of multiple system standards and any associated conformity assessment together with introducing some of the newer principles of management systems outlined in ISO Annex SL which will need to be satisfied in the longer term.

Organizations using this PAS should include as input, the specific requirements of the MSSs to which they subscribe, e.g. BS EN ISO 9001, BS EN ISO 14001, BS ISO/IEC 27001, BS EN ISO 22000, BS ISO/IEC 20000 and BS OHSAS 18001. This may well necessitate specialist input on the technical aspects of the individual disciplines.

Compliance with this PAS does not in itself ensure conformity with any other MSSs. The particular requirements of each MSS will still need to be addressed and satisfied. This is particularly the case where certification is sought.

This PAS has been produced to help organizations to achieve benefits from consolidating the common requirements in all MSSs and from managing these requirements effectively. The benefits may include:

a) improved business focus;
b) a more holistic approach to managing business risks;
c) less conflict between individual management systems;
d) reduced duplication and bureaucracy;
e) more effective and efficient audits both internally and externally;
f) easier facilitation of the requirements of any new MSS that the organization wishes to adopt.

Although Annex SL is intended for those writing international standards, it provides a template which further develops the framework and text that was used in the original PAS 99:2006.

There have also been changes made to some MSSs referenced in PAS 99:2006 since it was published and where these changes provide improvements to the integration process, they have been accommodated within the new version.

This revised PAS 99 is therefore based upon the structure provided in Annex SL and incorporates its text where appropriate to provide a future proof approach for accommodating new MSSs as they are produced. Users of BS EN ISO 9001 and BS EN ISO 14001, which are unlikely to appear in the new format in the near future, may find particular benefit in using PAS 99:2012 to enable them to develop their current integrated approaches. The subsequent revisions of BS EN ISO 9001 and BS EN ISO 14001 should then have minimal impact on existing internal management system operations when these revised standards appear. Many current standards under review or being drafted are likely to appear in this format from 2012 onwards and this PAS should help organizations accommodate common requirements in a format that is likely to be the future pattern for MSSs.

Many of the elements and clauses used in the PAS structure will be recognized by users of MSSs. The framework however, has been extended to formally include elements which have not necessarily been a feature of MSSs in the past, although they are important to the success of the organization. The new structure is shown below and, for those familiar with the Plan Do Check Act approach, the correlation between the management system process in Annex SL and PDCA is indicated:

a)	Context of the organization	Plan
b)	Leadership	
c)	Planning	
d)	Support	
e)	Operation	Do
f)	Performance evaluation	Check
g)	Improvement	Act

This revision of PAS 99 has incorporated:

1) Annex SL definitions plus a definition of integrated management system as applied in this PAS;
2) Annex SL core text, incorporating minor modifications to reflect this PAS shown in italics. These core requirements are given in a text box at the beginning of each clause from Clause **4** onwards;
3) requirements that were present in PAS 99:2006 and not included in Annex SL and which continue to add value;
4) requirements that are seen as being common to more than one standard which will help with integration;
5) explanatory information on the intent of a clause – where this is not evident in MSSs in current use – e.g. context and leadership.

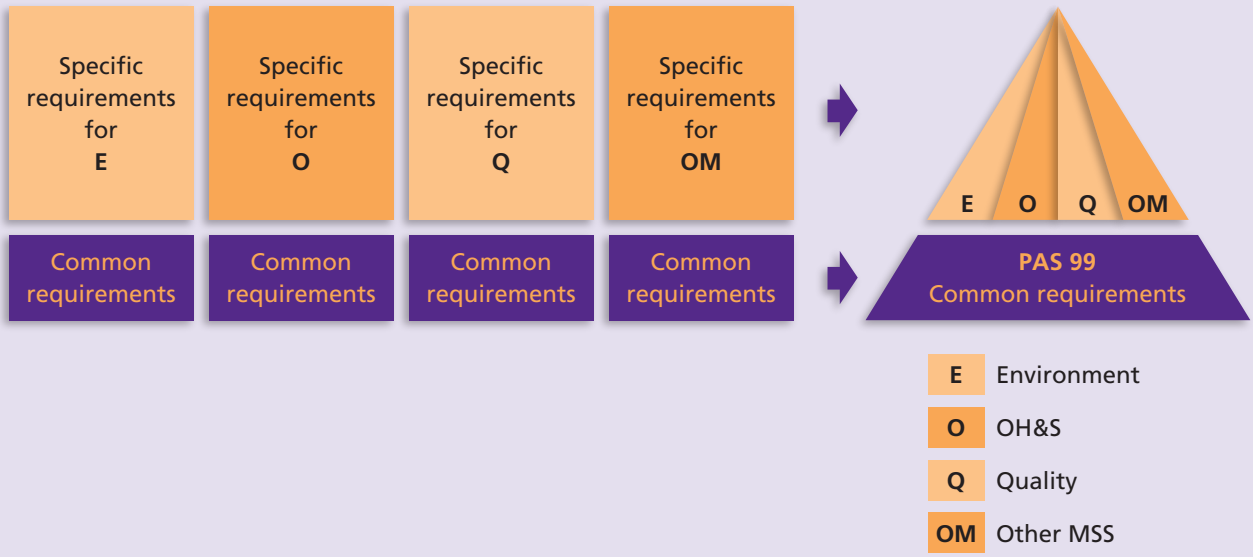
Extra guidance has been provided on the "new" elements such as context and leadership to help organizations implement these requirements.

This PAS uses the same categorization as Annex SL framework for the common management system requirements and each subject will be considered in more detail in the course of this PAS where it is felt additional requirements or guidance are required. In addition, Annex A provides further guidance information on implementing the PAS, particularly for those standards not yet published in the new format.

Many of the requirements in standards are common and these can be practically accommodated under one generic management system as shown in Figure 1. It follows that the reduction in duplication by combining two or more systems in this way has the potential to significantly reduce the overall size of the management system and improve system efficiency and effectiveness.

Figure 1 shows that as the various management system requirements can be aligned in a single structure it is possible to integrate the common requirements. This should be done in a manner that is most appropriate to the organization.

Figure 1 – Illustration of how the common requirements of multiple management system standards can be integrated into one common system



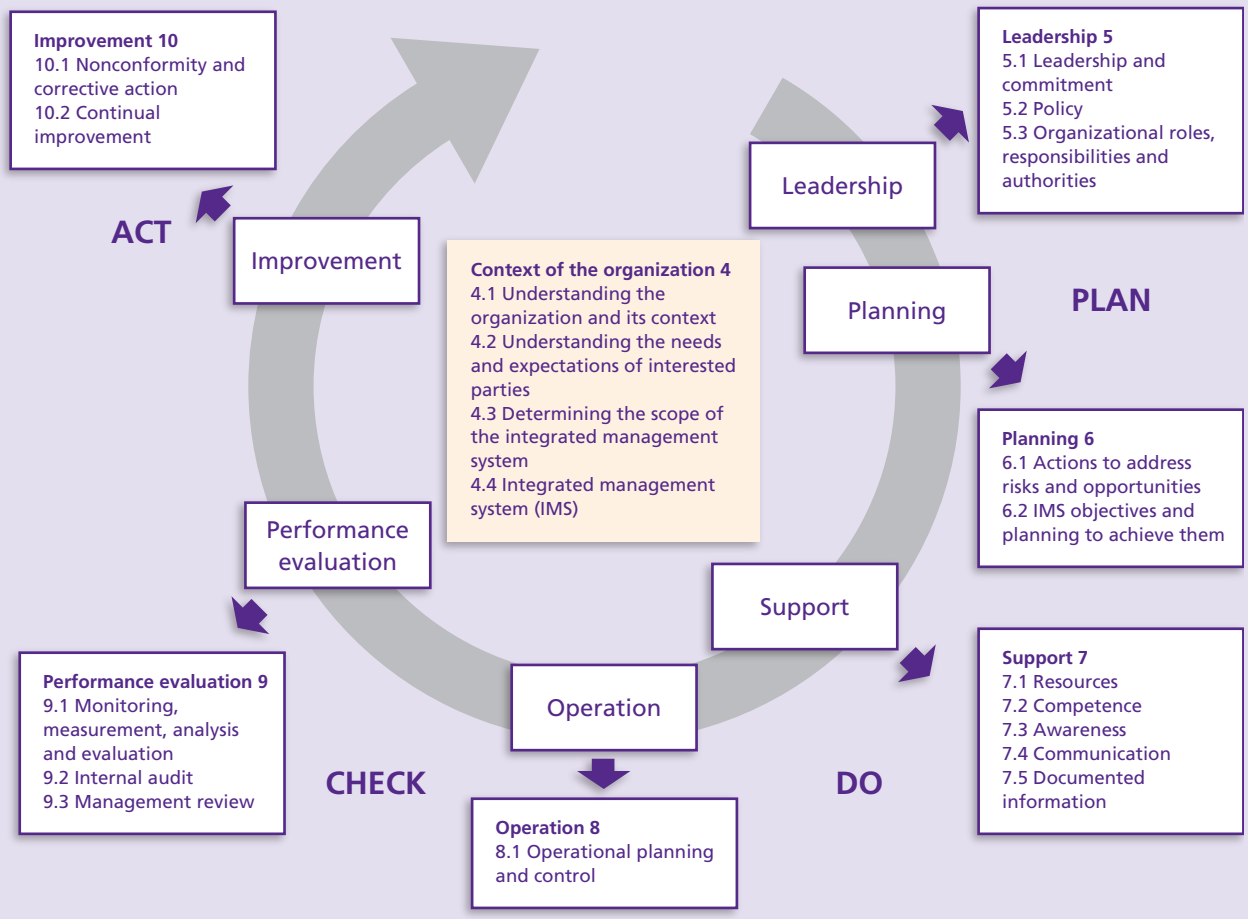
In large or complex organizations, it may be appropriate to allocate all the management systems between two or more integrated systems that align well with organizational functions rather than force them into a single scheme. Nonetheless, by aligning the structures of MSSs, as described in this PAS, an organization should be able to ensure a commonality of approach.

Integration should be planned and implemented in a structured way. Many businesses have adopted MSSs as a result of outside pressures such as customers demanding the implementation of a quality standard or an external requirement to install an occupational health and safety system. This does not apply to integration, which will be done purely for the benefit of the business. The first step should therefore be to identify the business needs. If a business does not see benefits from integration, then it should not do it, although it is difficult to imagine an organization that would not experience benefits from integration.

To meet the requirements of a specific MSS it will be necessary to carry out an analysis of each of the requirements in detail and compare them with those that have already been incorporated in the integrated system. Even elements which are considered common can have subtle differences within the context of the individual standard.

Annex SL does not specify use of either the process approach or of the Plan Do Check Act (PDCA) and either can be accommodated within the high level structure provided. For simplicity, a diagram is provided in Figure 2 to show the cyclical process and the interaction of the clauses. Figure A.1 shows how the Annex SL approach fits into the process approach model.

Figure 2 – Framework of management system requirements



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1 Scope

This Publicly Available Specification (PAS) specifies common management system (MS) requirements and is intended to be used as a framework for implementing two or more management system standards (MSSs) in an integrated way. It draws together the common requirements in MSSs based on the new guidance provided by ISO to standards writers (Annex SL). Annex SL and its appendices provide a high level structure and common text which will be utilized in new MSSs and in revisions to existing standards.

Although PAS 99 is primarily intended to be used in combination with MSSs such as BS EN ISO 9001, BS EN ISO 14001, BS ISO/IEC 27001, BS EN ISO 22000, BS ISO/IEC 20000, BS ISO 22301 and BS OHSAS 18001 it can also be used with other national and international MSSs.

It applies to all sizes and types of organization.

It is not intended for organizations that have based their MS upon a single standard except as preparation for the adoption of additional systems or standards.

Compliance with this PAS does not ensure compliance with any other MSSs.

2 Normative references

Only the standards that the organization subscribes to and that it wants to use in combination with this PAS should be used as normative references. Those listed below are examples of some of the major standards in use in organizations.

For dated documents, only the edition cited applies. For undated documents, the most recent edition of the document (including any amendments) applies.

BS EN ISO 9001:2008, *Quality management systems – Requirements*

BS EN ISO 14001:2004, *Environmental management systems – Requirements with guidance for use*

BS EN ISO 22000:2005, *Food safety management systems – Requirements for any organization in the food chain*

BS ISO 22301:2012, *Societal security – Business continuity management systems – Requirements*

BS ISO/IEC 20000-1:2011, *Information technology – Service management – Part 1: Service management system requirements*

BS ISO/IEC 27001:2005, *Information technology – Security techniques – Information security management systems – Requirements*

BS OHSAS 18001:2007, *Occupational health and safety management systems – Specifications*

3 Terms and definitions

For the purposes of this PAS, the following terms and definitions apply.

***NOTE** All terms and definitions have been taken from Annex SL Appendix 3, except integrated management system (**3.1**) and additions to the definition of risk (**3.10**).*

3.1 integrated management system (IMS)

management system that integrates multiple aspects of an organization's systems and processes to one complete framework, enabling an organization to meet the requirements of more than one management system standard

3.2 organization

person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives

***NOTE** 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.*

3.3 interested party (preferred term) [stakeholder (admitted term)]

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

3.4 requirement

need or expectation that is stated, generally implied or obligatory

***NOTE 1** "Generally implied" means that it is custom or common practice for the organization and interested parties that the need or expectation under consideration is implied.*

***NOTE 2** A specified requirement is one that is stated, for example, in documented information.*

3.5 management system

set of interrelated or interacting elements of an organization to establish policies and objectives and processes to achieve those objectives

***NOTE 1** A management system can address a single discipline or several disciplines.*

***NOTE 2** The system elements include the organization's structure, roles and responsibilities, planning, operation, etc.*

***NOTE 3** The scope of a management system may include the whole of the organization, specific and identified functions of the organization, specific and identified sections of the organization, or one or more functions across a group of organizations.*

3.6 top management

person or group of people who directs and controls an organization at the highest level

***NOTE 1** Top management has the power to delegate authority and provide resources within the organization.*

***NOTE 2** If the scope of the management system covers only part of an organization then top management refers to those who direct and control that part of the organization.*

3.7 effectiveness

extent to which planned activities are realized and planned results achieved

3.8 policy

intentions and direction of an organization as formally expressed by its top management

3.9 objective

result to be achieved

***NOTE 1** An objective can be strategic, tactical, or operational.*

***NOTE 2** Objectives can relate to different disciplines (such as financial, health and safety, and environmental goals) and can apply at different levels [such as strategic, organization-wide, project, product and process (**3.13**)].*

***NOTE 3** An objective can be expressed in other ways, e.g. as an intended outcome, a purpose, an operational criterion, as an IMS objective or by the use of other words with similar meaning (e.g. aim, goal, or target).*

***NOTE 4** In the context of an IMS, IMS objectives are set by the organization, consistent with the IMS policy, to achieve specific results.*

3.10 risk

effect of uncertainty on objectives

[BS ISO 31000:2009, **2.1**]

NOTE 1 *An effect is a deviation from the expected – positive or negative.*

NOTE 2 *Uncertainty is the state, even partial, of deficiency of information related to, understanding or knowledge of, an event, its consequence, or likelihood.*

NOTE 3 *Risk is often characterized by reference to potential events (ISO/IEC Guide 73:2009, **3.5.1.3**) and consequences (ISO/IEC Guide 73:2009, **3.6.1.3**), or a combination of these.*

NOTE 4 *Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood (ISO/IEC Guide 73:2009, **3.6.1.1**) of occurrence.*

NOTE 5 *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.*

3.11 competence

ability to apply knowledge and skills to achieve intended results

3.12 documented information

information required to be controlled and maintained by an organization and the medium on which it is contained

NOTE 1 *Documented information can be in any format and media and from any source.*

NOTE 2 *Documented information can refer to:*

- *the management system, including related processes;*
- *information created in order for the organization to operate (documentation);*
- *evidence of results achieved (records).*

3.13 process

set of interrelated or interacting activities which transforms inputs into outputs

3.14 performance

measurable result

NOTE 1 *Performance can relate either to quantitative or qualitative findings.*

NOTE 2 *Performance can relate to the management of activities, processes, products (including services), systems or organizations.*

3.15 outsource (verb)

make an arrangement where an external organization performs part of an organization's function or process

NOTE *An external organization is outside the scope of the management system, although the outsourced function or process is within the scope.*

3.16 monitoring

determining the status of a system, a process or an activity

NOTE *To determine the status there may be a need to check, supervise or critically observe.*

3.17 measurement

process to determine a value

3.18 audit

systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled

NOTE 1 *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 *"Audit evidence" and "audit criteria" are defined in BS EN ISO 19011.*

3.19 conformity

fulfilment of a requirement

3.20 nonconformity

non-fulfilment of a requirement

3.21 correction

action to eliminate a detected nonconformity

3.22 corrective action

action to eliminate the cause of a nonconformity and to prevent recurrence

3.23 continual improvement

recurring activity to enhance performance

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 outcome(s) of its integrated management system (IMS).

The organization should identify the factors which need to be taken into account when implementing its IMS that are pertinent to the "environment" in which it operates both internally and externally.

Evaluating the organization's external context may include:

a) the social and cultural, political, legal, regulatory, financial, technological, economic, natural and competitive environment, whether international, national, regional or local;
b) key drivers and trends having impact on the objectives of the organization;
c) relationships with, and perceptions and values of, external stakeholders.

NOTE 1 *Clause* ***4.1*** *a) to c) has been taken from BS ISO 31000.*

Evaluating the organization's internal context may include:

1) governance, organizational structure, roles and accountabilities;
2) policies, objectives, and the strategies that are in place to achieve them;
3) capabilities, understood in terms of resources and knowledge and competence (e.g. capital, time, people, processes, systems and technologies);
4) information systems, information flows and decision making processes (both formal and informal);
5) relationships with, and perceptions and values of, internal stakeholders;
6) the organization's culture;
7) standards, guidelines and models adopted by the organization;
8) the form and extent of contractual relationships;

NOTE 2 *Clause* ***4.1*** *1) to 8) has been taken from BS ISO 31000.*

9) identifying key interfaces between systems, potential conflicts that may arise and a process for resolving them.

Those who have quality systems should find the requirements of **4.1** in BS EN ISO 9001:2008 will augment this requirement as the identification of processes will illuminate some of the context issues.

4.2 Understanding the needs and expectations of interested parties

The organization shall determine:

a) the interested parties that are relevant to the integrated management system;
b) the requirements of these interested parties.

The organization should determine what interested parties are impacted on by the activities and what reasonable requirements need to be controlled to meet those expectations. These requirements should be accommodated within the integrated approach and the scope of the IMS requirements. The emphasis should be on the customer satisfaction and customer focus for quality, the worker for occupational health and safety, society for environment, etc.

The organization should establish, implement and maintain a process to determine any legal requirements relating to its activities, products and services that are relevant to the scope of the management system. These requirements should be taken into account (and any compliance necessary) when establishing, implementing and maintaining its MSS. The organization should communicate relevant information on legal and other requirements to persons working under the control of the organization and other relevant interested parties (see Figure B.1).

4.3 Determining the scope of the integrated management system

The organization shall determine the boundaries and applicability of the IMS to establish its scope.

When determining this scope, the organization shall consider:

a) the external and internal issues referred to in **4.1**;

b) the requirements referred to in **4.2**.

The scope shall be available as documented information.

The organization should determine what the IMS is going to cover with respect to the specific disciplines and their requirements and to the boundaries of operation.

It is recommended that the scope for the IMS reflects the scope of the MS that has the widest requirements for simplicity at the operational level. For example, BS EN ISO 9001 can limit the scope whereas such limitations are not normally applicable to BS EN ISO 14001:2004 and BS OHSAS 18001:2007 users (see **4.4.1** in both standards) which cover all activities.

Those using the process approach may find the information generated on processes and interactions required by **4.1** of BS EN ISO 9001:2008 useful in helping to define the scope.

4.4 Integrated management system (IMS)

The organization shall establish, implement, maintain and continually improve the management system, including the processes needed and their interactions, in accordance with the requirements of this PAS and the management system standards to which it subscribes as defined in the scope of the IMS (**4.3**).

The intent of this subclause is to emphasize that an IMS is a living system and that it should be maintained with a view to improving both the system and performance.

In order to deliver the requirements, the organization should:

a) identify the processes needed for the implementation, operation and maintenance of the management system, and their application throughout the organization;

b) determine the sequence and interaction of these processes and the applicability for integration of these processes;

c) determine criteria and methods needed to ensure that both the operation and control of these processes are effective;

d) ensure the availability of resources and information necessary to support the operation and monitoring of these processes;

e) monitor, measure and analyze these processes, and implement actions necessary to achieve planned results and continual improvement of the organization's overall performance.

5 Leadership

5.1 Leadership and commitment

Top management shall demonstrate leadership and commitment with respect to the IMS by:

a) ensuring that policies and objectives are established for the IMS and are compatible with the strategic direction of the organization;
b) ensuring the integration of the IMS requirements into the organization's business processes;
c) ensuring that the resources needed for the IMS are available;
d) communicating the importance of effective management and of conforming to the IMS requirements;
e) ensuring that the IMS achieves its intended outcome(s);
f) directing and supporting persons to contribute to the effectiveness of the IMS;
g) promoting continual improvement;
h) supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

NOTE *Reference to business in this PAS should be interpreted broadly to mean those activities that are core to the purpose of the organization's existence.*

Clause **5.1**b) reflects the aim of this PAS which is to integrate the requirements into the organization's overall business processes. Clause **5.1**a) and c) to d) emphasize the role top management play and what they should do to ensure the IMS achieves the intended outcomes.

5.2 Policy

Top management shall establish an IMS policy that:

a) is appropriate to the purpose of the organization;
b) provides a framework for setting IMS objectives;
c) includes a commitment to satisfy applicable requirements;
d) includes a commitment to continual improvement of the IMS.

The IMS policy shall:

1) be available as documented information;
2) be communicated within the organization;
3) be available to interested parties, as appropriate.

It should be noted that **5.2**c) includes the legal and other requirements to which the organization subscribes and that **5.2**2) includes all those persons who work under the control of the organization.

The policy and objectives should be reviewed for their continuing suitability, particularly when changes occur and also after any management review if it is found deficient in any way.

Organizations may have a specific policy covering each MSS to which it subscribes or it may combine all of the policy requirements into one policy.

5.3 Organizational roles, responsibilities and authorities

Top management shall ensure that the responsibilities and authorities for relevant roles are assigned and communicated within the organization.

Top management shall assign the responsibility and authority for:

a) ensuring that the IMS conforms to the requirements of this PAS;
b) reporting on the performance of the IMS to top management.

If the management of the disciplines is to be recognized as being of importance to the organization and its success, then it is essential that a member of top management is assigned overall responsibility. This person(s) should, irrespective of other responsibilities, have defined roles, responsibilities and authority for:

a) ensuring that the management system is established, implemented and maintained in accordance with the requirements of this PAS and the MSSs to which the organization subscribes;
b) reporting to top management on the performance of the management systems for review, including recommendations for improvement.

The organization should identify, document and communicate the roles, responsibilities and authorities of those involved in the management system and their interrelationships within the organization.

Everyone from top management down should know their individual and collective responsibilities.

6 Planning

6.1 Actions to address risks and opportunities

When planning for the IMS, the organization shall consider the issues referred to in **4.1** and the requirements referred to in **4.2** and determine the risks and opportunities that need to be addressed to:

a) assure the IMS can achieve its intended outcome(s);

b) prevent, or reduce, undesired effects;

c) achieve continual improvement.

The organization shall plan:

1) actions to address these risks and opportunities;

2) how to:

- integrate and implement the actions into its IMS processes;
- evaluate the effectiveness of these actions.

The intent of this Clause is to ensure that the organization addresses those issues identified in **4.1** and **4.2** when determining the arrangements for managing its risks and opportunities. The specific disciplines and management system requirements that are included in the scope of the IMS will determine what risks and opportunities should be considered.

Those wishing to include environmental management (BS EN ISO 14001) need to identify the environmental aspects of its activities, products and services within the defined scope of the environmental management system that it can control and those that it can influence. In doing so, they should take into account planned or new developments, or new or modified activities, products and services (see BS EN ISO 14001:2004, **4.3.1**).

Those who are incorporating OHS should identify hazards and prioritize risks in line with the hierarchy prescribed in BS OHSAS 18001:2007, **4.3.1**.

It is also important that the organization establishes, documents and maintains a process(es) for identifying and responding to any unplanned event, potential emergency or disaster. This procedure(s) should seek to prevent or mitigate the consequences of any such occurrence and consider the continuity of the business operations. The organization should periodically review and, where necessary, revise the contingency preparedness and response procedure(s).

Specific requirements on identification of business impact analysis and risk assessment is given in BS ISO 22301:2012, **8.2.2** and **8.2.3**.

Many existing MSS have a requirement for "preventive action" which is synonymous with addressing organizations' risk, and those preventive requirements should be addressed under this clause.

6.2 IMS objectives and planning to achieve them

The organization shall establish IMS objectives at relevant functions and levels.

The IMS objectives shall:

a) be consistent with the IMS policy;

b) be measurable (if practicable);

c) take into account applicable requirements;

d) be monitored;

e) be communicated;

f) be updated as appropriate.

The organization shall retain documented information on the IMS objectives.

When planning how to achieve its IMS objectives, the organization shall determine:

1) what will be done;

2) what resources will be required;

3) who will be responsible;

4) when it will be completed;

5) how the results will be evaluated.

The organization should establish IMS objectives, taking into account its significant risks and opportunities, legal obligations, other applicable requirements and its commitment to continual improvement. To achieve its objectives, the organization should implement and maintain (a) programme(s) for achieving them.

Meaningful objectives based on what has been determined in **4.1**, **4.2**, **5.2**, **5.3** and **6.1** should be set to demonstrate that the policy is being delivered. It can be useful to adopt the SMART (Specific, Measurable, Achievable, Realistic and Time-based) approach for setting objectives. The organization should ensure that the objectives are documented, communicated and reviewed and updated as necessary.

7 Support

7.1 Resources

The organization shall determine and provide the resources needed for the establishment, implementation, maintenance and continual improvement of the IMS.

In the first instance, the organization should identify resources to manage effectively each component management system. Use of this PAS should then enable it to determine commonalities that enable integration and resulting efficiencies.

7.2 Competence

The organization shall:

a) determine the necessary competence of person(s) doing work under its control that affects its IMS performance;

b) ensure that these persons are competent on the basis of appropriate education, training or experience;

c) where applicable, take actions to acquire the necessary competence and evaluate the effectiveness of the actions taken;

d) retain appropriate documented information as evidence of competence.

NOTE *Applicable actions may include, for example, the provision of training to, the mentoring of, or the re-assignment of currently employed persons or the hiring or contracting of competent persons.*

It is possible that training in itself may not deliver the necessary competency needed for the tasks. The competency needs for any particular activity should be determined. Personnel should be evaluated against these needs prior to assignment and on an ongoing basis.

7.3 Awareness

Persons doing work under the organizations control shall be aware of:

a) the IMS policy;

b) their contribution to the effectiveness of the IMS including the benefits of improved IMS performance;

c) the implications of not conforming with the IMS requirements.

Involving the workforce in identifying the risks and developing effective processes can help promote a better workplace culture and encourage workforce involvement in improvement actions. The workforce should understand the relevance and importance of their activities in achieving organizational objectives.

7.4 Communication

The organization shall determine the need for internal and external communications relevant to the IMS including:

a) on what it will communicate;

b) when to communicate;

c) with whom to communicate.

Effective arrangements should be established and implemented for:

a) internal communication amongst the various levels and functions of the organization;

b) receiving, recording and responding to relevant communications from interested parties.

The organization should establish, implement and maintain (a) process(es) for:

1) the participation of workers by their involvement in consultation processes;

2) consultation with contractors, including ensuring they clearly understand their responsibilities within the IMS.

The organization should ensure that, when appropriate, relevant external interested parties are consulted about IMS matters.

7.5 Documented information

7.5.1 General

The organization's IMS shall include:

a) documented information required by this PAS;

b) documented information determined by the organization as being necessary for the effectiveness of the IMS.

NOTE *The extent of documented information for an IMS can differ from one organization to another due to:*

- *the size of organization and its type of activities, processes, products and services;*
- *the complexity of processes and their interactions;*
- *the competence of persons.*

The organization's IMS documented information should include:

a) a description of the scope of the management system, including the MSSs subscribed to;

b) statements of the organization's policies and objectives;

c) a system manual (electronic or paper based), describing the main elements of the management systems and their interaction, including common policies, processes and procedures and references to related documents;

d) the documented procedures and records that are required by the MSSs to which the organization subscribes (various disciplines may have specific requirements for keeping records that are necessary for regulatory reasons, insurance etc.);

e) documents determined as necessary by the organization to ensure the effective planning, operation and control of its processes.

The extent of documented information for a management system can differ from one organization to another due to:

1) the size of the organization and its type of activities, process, products and services;

2) the complexity of processes and their interactions.

7.5.2 Creating and updating

When creating and updating documented information, the organization shall ensure appropriate:

a) identification and description (e.g. a title, date, author, or reference number);

b) format (e.g. language, software version, graphics) and media (e.g. paper, electronic);

c) review and approval for suitability and adequacy.

7.5.3 Control of documented information

Documented information required by the IMS and by this PAS shall be controlled to ensure:

a) it is available and suitable for use, where and when it is needed;

b) it is adequately protected (e.g. from loss of confidentiality, improper use, or loss of integrity).

For the control of documented information, the organization shall address the following activities, as applicable:

1) distribution, access, retrieval and use;

2) storage and preservation, including preservation of legibility;

3) control of changes (e.g. version control);

4) retention and disposition.

Documented information of external origin determined by the organization to be necessary for the planning and operation of the IMS shall be identified as appropriate, and controlled.

NOTE *Access implies a decision regarding the permission to view the documented information only, or the permission and authority to view and change the documented information, etc.*

Guidance on implementation for both creating and updating (**7.5.2**) and for control of documented information (**7.5.3**) is as follows.

The organization should define the controls needed to:

a) approve documents for suitability and adequacy prior to issue;

b) review and update and re-approve documents as necessary;

c) ensure that changes and current revision status of documents are identified;

d) ensure that relevant versions of applicable documents are available at points of use;

e) ensure that documents remain legible and readily identifiable;

f) ensure that documents of external origin are identified and their distribution controlled;

g) prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose;

h) ensure the document are identified and described (e.g. title, date, author, or reference number);

i) ensure they are in the appropriate format (e.g. language, software, version, graphics) and media (e.g. paper, electronic).

8 Operation

8.1 Operational planning and control

The organization shall plan, implement and control those processes needed to meet requirements, and to implement the actions determined in **6.1**, by:

a) establishing criteria for those processes;

b) implementing the control of these processes in accordance with the criteria;

c) keeping documented information to the extent necessary to have confidence that the processes have been carried out as planned.

The organization shall control planned changes and review the consequences of unintended changes, taking action to mitigate any adverse effects as necessary.

The organization shall ensure that outsourced processes are controlled.

It is intended that processes are established for addressing the risks and opportunities determined in **6.1** (derived from **4.1** and **4.2**), as well as the organization's policies, objectives and the identified legal and other applicable requirements.

The organization should ensure that it manages changes in the organization or its operation to ensure that any new risks introduced are controlled.

It is good practice to implement documented controls to cover situations where their absence could lead to deviations from the management system policy and the objectives.

9 Performance evaluation

9.1 Monitoring, measurement, analysis and evaluation

The organization shall determine:

a) what needs to be monitored and measured;

b) the methods for monitoring, measurement, analysis and evaluation, as applicable, to ensure valid results;

c) when the monitoring and measuring shall be performed;

d) when the results from monitoring and measurement shall be analyzed and evaluated.

The organization shall retain appropriate documented information as evidence of the results.

The organization shall evaluate the performance and the effectiveness of the IMS.

The organization should monitor and measure to ensure that it is delivering its policy and objectives. Inspection, observations, recording deviations, calibrations, etc. are all components of an effective monitoring and measurement regime.

The organization should:

1) take both qualitative and quantitative measures, appropriate to the needs of the organization;

2) take proactive measures of performance that monitor conformance;

3) take reactive measures of performance which enables trends to be monitored;

4) monitor the effectiveness of controls for the management systems;

5) retain relevant information as evidence of the results.

If equipment is required to monitor or measure performance, the organization should establish and maintain processes for the calibration and maintenance of such equipment, as appropriate. Records of calibration and maintenance activities and results should be retained.

Consistent with its stated commitment to compliance (see **4.2**), the organization should establish, implement and maintain processes for periodically evaluating compliance with legal and other applicable requirements to which the organization subscribes (i.e. that are relevant to the scope of the management system) and record the results.

9.2 Internal audit

The organization shall conduct internal audits at planned intervals to provide information on whether the IMS:

a) conforms to:
   - the organization's own requirements for its IMS;
   - the requirements of this PAS;

b) is effectively implemented and maintained.

The organization shall:

1) plan, establish, implement and maintain an audit programme(s), including the frequency, methods, responsibilities, planning requirements and reporting. The audit programme(s) shall take into consideration the importance of the processes concerned and the results of previous audits;
2) define the audit criteria and scope for each audit;
3) select auditors and conduct audits to ensure objectivity and the impartiality of the audit process;
4) ensure that the results of the audits are reported to relevant management;
5) retain documented information as evidence of the implementation of the audit programme and the audit results.

When establishing an audit programme and planning and undertaking audits, the risks (see **6.1**), and the processes to address these risks (see Clause **8**), should be taken into account. The approach adopted for auditing different disciplines in a management system that is integrated can be undertaken by auditors of one discipline for all common areas of the management system (as covered in this PAS). There may be a need for specialists in those areas that are discipline specific depending on the nature and complexity of the processes.

Guidance is available on auditing from BS EN ISO 19011.

9.3 Management review

Top management shall review the organization's IMS at planned intervals to ensure its continuing suitability, adequacy and effectiveness.

The management review shall include consideration of:

a) the status of actions from previous management reviews;
b) changes in external and internal issues that are relevant to the IMS;
c) information on the IMS performance, including trends in:
   - nonconformities and corrective actions;
   - monitoring and measurement results;
   - audit results;
d) opportunities for continual improvement.

The outputs of the management review shall include decisions related to continual improvement opportunities and any need for changes to the IMS.

The organization shall retain documented information as evidence of the results of management reviews.

The input to a management review should include, as a minimum, information on:

a) results of audits;
b) interested party feedback;
c) status of preventive (where these are a requirement in the specific management system) and corrective actions;
d) follow-up actions from previous management reviews;
e) changes in external and internal issues, including developments in legal and other requirements, related to the organization's aspects and associated risks;
f) recommendations for improvement;
g) data and information on the organization's performance;
h) results of the evaluation of compliance with legal and other requirements.

Reviews should include assessing opportunities for improvement and the need for changes to the management system, including the policy and objectives.

The output from the management review should include any decisions and actions related to:

1) improvement of the effectiveness of the IMS;
2) improvement related to interested party requirements and/or expectations;
3) resource needs to enable improvement to the IMS and its processes.

10 Improvement

10.1 Nonconformity and corrective action

When a nonconformity occurs, the organization shall:

a) react to the nonconformity, and as applicable;
   - take action to control and correct it;
   - deal with the consequences.

b) evaluate the need for action to eliminate the causes of the nonconformity, in order that it does not recur or occur elsewhere, by:
   - reviewing the nonconformity;
   - determining the causes of the nonconformity;
   - determining if similar nonconformities exist, or could potentially occur;

c) implement any action needed;

d) review the effectiveness of any corrective action taken;

e) make changes to the IMS, if necessary.

Corrective actions shall be appropriate to the effects of the nonconformities encountered.

The organization shall retain documented information as evidence of:

1) the nature of the nonconformities and any subsequent actions taken;

2) the results of any corrective action.

***NOTE** Standards published prior to the adoption of Annex SL and this PAS (i.e. BS EN ISO 9001, BS EN ISO 14001, BS OHSAS 18001, etc.) also include the term "preventive action".*

The structure of this PAS is such that all risk of nonconformity should have been identified by the processes used to implement **6.1** and measures taken to prevent their occurrence. This process is similar to what was previously specified in most MSSs as "preventive action". When nonconformities nevertheless occur, corrective actions need to be taken as specified in this Clause.

The process implemented for dealing with the nonconformity should also deal with mitigating the impact as well as dealing with the direct consequences.

10.2 Continual improvement

The organization shall continually improve the suitability, adequacy and effectiveness of the IMS.

Continual improvement is key and should be taken into account as follows:

a) for the whole IMS;

b) for any operational delivery objective (**6.2**);

c) for some general operational purposes.

The continual improvement cycle times may vary between organizations depending on their size, nature and complexity and should be driven by the IMS policy, objectives, audit results, analysis of monitored events, corrective actions and management review.

Changes arising from corrective actions should be reflected in IMS documentation.

The organization should define and allocate the responsibility and authority for improvement of the IMS.

Annex A (informative)
Guidance on the background and use of this PAS

A.1 General

This Annex is provided to assist in the understanding of why the approach specified in this PAS has been selected and to give guidance in those areas where it is thought additional explanation is necessary. Where clauses are deemed to be self explanatory no additional guidance is provided. It is not intended to be a comprehensive guide to implementing the requirements of multiple management systems; there are many sources of advice on how to implement individual management systems and integrated systems available from a number of sources.

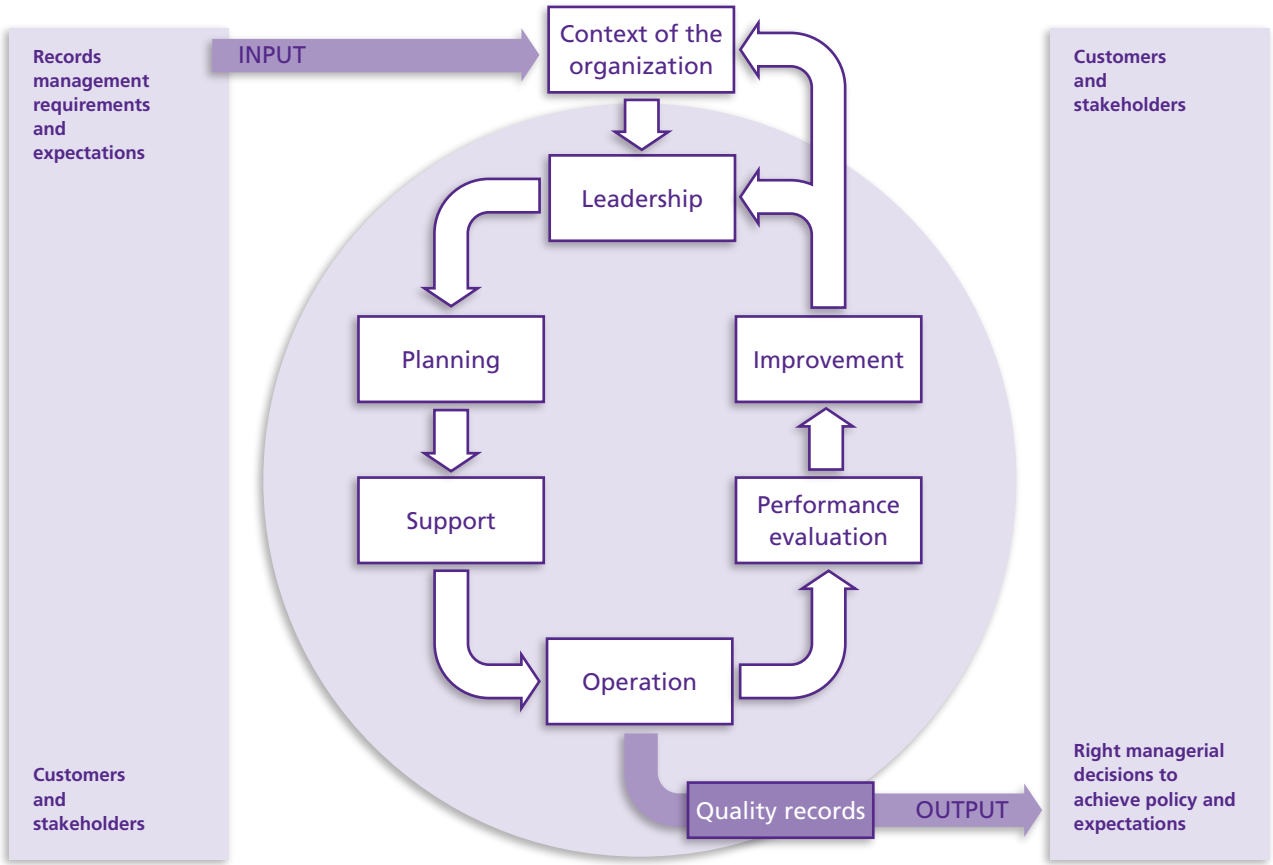
MSSs contain many common requirements which have been identified and formalized in ISO Annex SL. ISO Annex SL and Annex SL Appendices provide core text, common terms and core definitions as well as a high level structure. The PAS draws on the high level structure and common requirements provided in ISO Annex SL (and Appendices 2-4) as a framework to implement two or more MSSs in an integrated way. In applying this high level framework for embracing the common requirements of MSSs and other management systems, it is important to recognize that there are specific requirements in individual specifications that are not included in the generic framework. Those requirements that are not common should be addressed in addition to those in PAS 99, in order to meet the specific standards and specifications to which the organization subscribes.

It was considered that this was the most appropriate framework for this PAS, as emerging MSSs are based on this approach. It enables the existing standards listed in the scope of this PAS to be accommodated, and for effective and efficient management of the common management system requirements.

A.2 Process approach

BS EN ISO 9001 uses the process approach for identifying those areas that need to be controlled in order to deliver an efficient and effective product or service. It forms an integral part of the ISO Annex SL approach (for example, see **4.4** of this PAS). Figure A.1 shows the Annex SL high level structure applied using the process approach.

Figure A.1 – Structure of management system standards



There is no requirement for the process approach to be used in MSS standards and indeed many MSS are risk-based. However, the process approach can be usefully employed to identify all the issues an organization needs to manage and also those aspects that need to be controlled, because in the absence of effective control there would be a risk to some interested party.

Often the word "procedure" is used in MSSs and there can be confusion as to what a procedure is and how it relates to a process. In simple terms:

- a process is an activity;
- a procedure is the formalization of the process (i.e. stating how the process should be performed, which may be documented).

A.3 Risks

At the heart of modern management standards is the "risk based approach".

This can be recognized from the definition of management system in combination with the definition of risk.

A management system assists an organization in establishing policies and achieving objectives.

Risks could have a positive or negative impact upon objectives.

"Positive risks" are opportunities that may need to be seized to ensure an organization thrives whereas "negative risks" pose a threat. Thus, it is logical that management systems exist to manage risks in order to achieve objectives. In some disciplines, the risk based approach is closely related to legal requirements (safety for example) which obviously have to be satisfied.

BS EN ISO 9001 is, at first sight, less explicit in its risk based approach because there is no general requirement to identify and assess critical characteristics related to quality. However, customer and regulatory requirements need to be identified and form the basis for the assessment, with control and monitoring of the organization's processes to ensure these requirements are met. Many organizations apply such techniques as failure modes and effects analysis (FMEA) within their quality system to embrace the risk approach. The requirement to assess risks is the principal driver for occupational health and safety, information security and food safety management systems and is likely to feature in all future MSSs.

Annex B (informative)
Specific additional guidance on the clauses of PAS 99

***NOTE** Annex B, in particular **B.4** to **B.10**, gives guidance where it is thought the text of the specification might need some further amplification. Where the text is thought to be explicit enough and is adequately covered in the various standards that may be adopted or implemented by the users of this PAS, no further guidance is given.*

B.1 Scope

No additional guidance needed

B.2 Normative references

No additional guidance needed

B.3 Terms and definitions

No additional guidance needed

B.4 Context of the organization

B.4.1 Understanding the organization and its context (see 4.1)

In essence, no organization or single individual can exist in a vacuum and there will be many interactions with other parties during day-to-day operations.

The nature of these interactions can vary depending upon the size of the organization but all may be part of a network of suppliers or customers at some stage. BS ISO 31000 identifies that these interactions can take place both with groups that are external to the organization as well as groups within the organization and develops the terms:

a) external context, *the external environment in which the organization seeks to achieve its objectives* (BS ISO 31000:2009, **2.10**);

b) internal context, *the internal environment in which the organization seeks to achieve its objectives* (BS ISO 31000:2009, **2.11**).

When identifying the internal and external factors to be considered, it is important to think of opportunities and not just threats. There is often an association of the term risk with negative impacts and it is important that an understanding of the positive aspects of risk is appreciated in the organization. This is perhaps best illustrated in the ISO Annex SL definition of risk as, "effect of uncertainty".

B.4.2 Understanding the needs and expectations of interested parties (see 4.2)

To some extent, the interested parties should have been identified when determining the context and this will also have identified their expectations.

Figure B.1 may assist in determining those interested parties that impact on the organization and help in the development of understanding their needs and requirements.

The needs of the customer have to be addressed in all management systems whether it is the quality specification for a product/service, an aspect of environmental management for society or health and safety for a worker.

In many areas there are be legal requirements and some specific customer requirements that should be identified and considered, for example:

a) contract;

b) service level agreement;

c) insurance condition;

d) local government requirement;

e) limits on emissions requirements for OH&S and environment;

f) legal requirements;

g) codes adopted by the organization;

h) industry codes of practice applicable to activities undertaken by the organization.

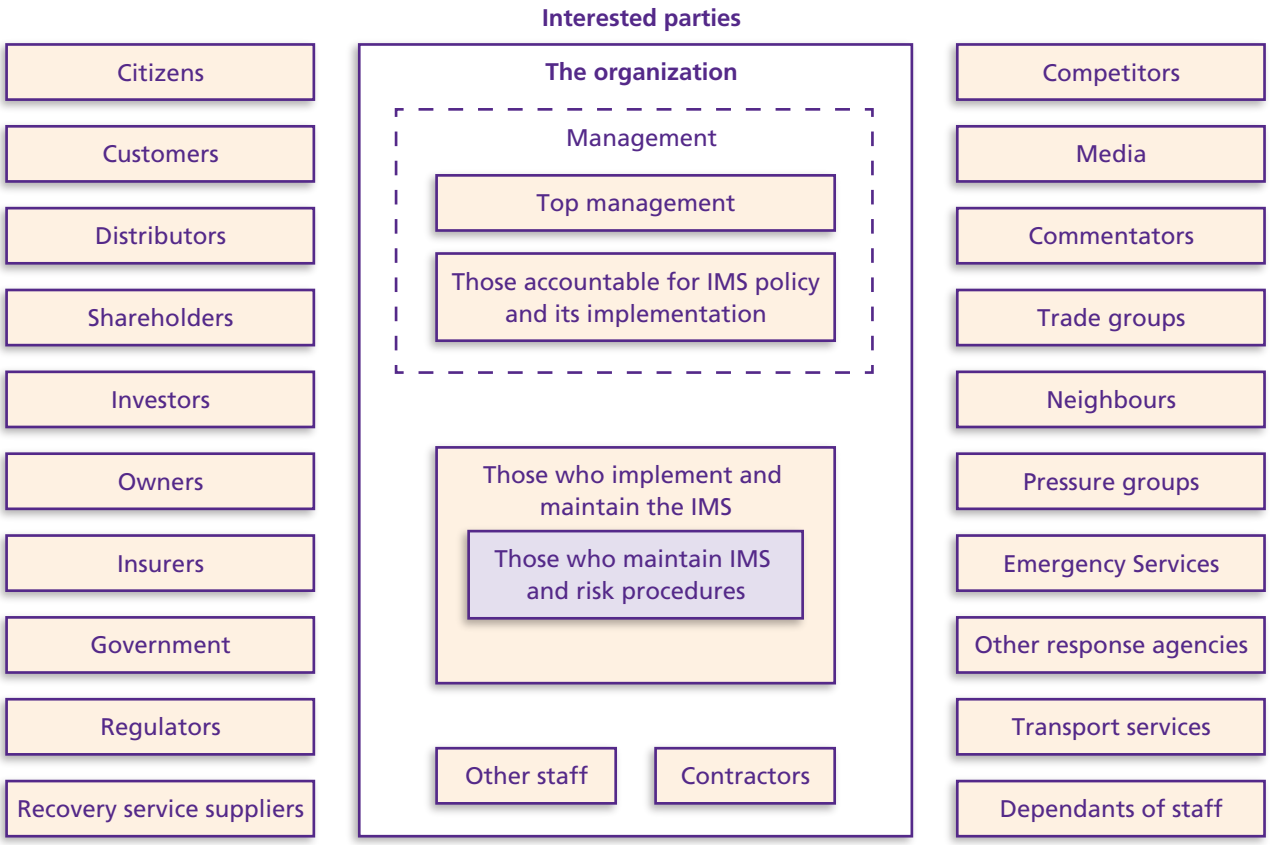
B.4.3 Determining the scope of the integrated management system (see 4.3)

No additional guidance is necessary.

B.4.4 Integrated management system

No additional guidance is necessary apart from that provided in the introductory sections of **A.1** to **A.3**.

Figure B.1 – Examples of interested parties to be considered and private sectors



B.5 Leadership (see Clause 5)

B.5.1 Leadership and commitment (see 5.1)

Employees are substantially influenced by their perceptions of their supervisors' commitment. Top management are the ultimate supervisors in an organization and their leadership should be manifested by genuine and sustained interest in the organization's operations; their attitudes and behaviours should cascade down the organization.

B.5.2 Policy (see 5.2)

It is sensible to define what one intends to do before starting to do it, and that is the basis of a policy statement. Each MSS specifies unique requirements that should be addressed in its policy statement.

The wording is based on ISO Annex SL, but is of general application; it may be used to cover other specific elements, such as industry codes of practice.

Issues to be covered include a policy to demonstrate the organization's commitment to meeting the requirements related to the management system, and to establish an overall sense of direction and principles for action. It should, in addition, provide a framework for setting objectives.

A corresponding requirement can easily be identified in any MSS. For example, BS EN ISO 9001 requires "*documented statements of a quality policy…*" and BS EN ISO 14001 requires that "*Top management shall define the organization's environmental policy…*" and that this includes a commitment to prevent pollution. The organization may decide to have separate policies for each discipline, or an integrated policy. This is acceptable provided that this covers the requirements of each individual standard, for example:

a) Those wishing to include BS EN ISO 14001 should review requirements of **4.2** of BS EN ISO 14001:2004 and bullet b) Commit to continual improvement and prevention of pollution.

b) Those wishing to include the additional requirements for BS OHSAS 18001should refer to **4.2** of BS OHSAS 18001:2007, etc.

B.5.3 Organizational roles, responsibilities and authorities (see 5.3)

The successful implementation of the IMS will depend on the commitment of top management. There also needs to be someone appointed by top management who is responsible for the implementation and operation of the IMS.

The increasing awareness of the importance of risk management should help as the management system will be the cornerstone of the risk control measures of the organization. It is vital that every manager and every employee understands their role in the implementation of the system. The competences required for each task need to be identified, and training provided where necessary. There needs to be a progress reporting system, and each manager should have a specific programme of phases in achievement.

In some cases, such as occupational health and safety (OHS), it is a legal requirement that someone within top management is appointed as the person responsible for the specific discipline (see BS OHSAS 18001:2007, **4.4.1**).

B.6 Planning (see Clause 6)

B.6.1 Actions to address risks and opportunities (see 6.1)

There are many ways of assessing risk, but a simple system is often the best. Elaborate systems usually add very little in practice. Even organizations that operate in high risk sectors have found that an approach based on what is proposed in **B.6.1** can be useful as a first step. They then use more sophisticated methods such as hazard analysis and operability studies (HAZOPS), hazard analysis and critical control points (HACCP), FMEA with those risks that are identified as posing the greatest risk to the organization and its interested parties.

NOTE 1 *An overview and guidance on the use of common risk assessment methods is given in ISO/IEC 31010.*

All of the significant risks should be subject to some form of control within the management system. In addition, the most significant risks should also be the subject of improvement programmes to help the organization to reduce its overall risk profile.

There is a need to identify what the management system is intended to support, what is to be done, by whom, how and when, and what resources might be needed.

There needs to be a commitment by management at all levels to the development of the system. Training is needed for people to be able to operate the system and also to enable key employees to take part in its development in determining risks and opportunities. The programme of implementation can in itself be a valuable aid to making all employees aware of the principles of risk and risk management as well as the specifics of environmental management, quality, etc.

Having defined the policy stating what is intended, the next logical step is to plan how it is to be put into practice. The framework lists the following subjects which should be covered:

a) Understanding the organization and its context (see **4.1**);
b) Understanding the needs and expectations of interested parties (see **4.2**);
c) Actions to address risks and opportunities (see **6.1**);
d) Objectives and planning to achieve them (see **6.2**);
e) Organizational roles, responsibilities and authorities (see **5.3**).

Bullet point c) includes considerations with respect to contingency planning (see **B.6.2**) and should be extended to cover specifically disaster recovery and business continuity.

NOTE 2 *A generic process for assessing risk, determining appropriate risk treatment processes and monitoring the effectiveness of applied risk controls is described in BS ISO 31000:2009, Clause **6**.*

In any sizeable organization the process of implementing a management system can be significant, involving many people and considerable time; benefits might be gained from using a formal project management approach to implementation.

Many organizations should already have some formal control of their processes and the management system might already be process based. Those who are embarking on the route to integration might well find the approach suggested in PAS 99 a convenient way to work (recognizing that it is not the only way).

If the process approach is to be adopted, the initial step should be to identify the processes and sub-processes involved in the organization. If the organization has adopted BS EN ISO 9001, this should have been done already, at least for those processes which affect the quality of the output. If the processes are mapped and the map is published throughout an organization, it can be invaluable in demonstrating to employees how they contribute to the objectives.

For each process the following tasks should be carried out:

a) identification of the inputs and outputs;
b) identification of the risks associated with the process (which should involve those engaged in the process);
c) identification of those risks that could have a significant effect, and prioritizing them;
d) deciding on control measures and implementing them.

For each process, it is necessary to identify those aspects which could have an impact on the management areas that are to be brought within the overall management system. For example:

a) In the input stage, is there anything that might significantly affect:
   - the quality of the output?
   - the environment?
   - the occupational health and safety of the employees or those affected by the organization's activities?
b) In the output stage, is there anything that might significantly affect:
   - the quality of the output?
   - the environment?
   - occupational health and safety?

This approach demonstrates one of the advantages of an integrated system. In a traditional system these questions would be considered separately, at different times and quite possibly by different groups of people. In an integrated system, all these aspects (and others, such as customer satisfaction or information security) can be considered at the same time, by the people who are actually involved in the process. There is, however, no requirement to have an integrated approach to identifying and prioritizing aspects.

The simple approach described in Table B.1 is offered only as an example. However, by approaching risk assessments in this manner for all disciplines, the chance of conflict from addressing one issue in one discipline without considering the impact on other issues can be reduced.

For each process the questions are:

a) What could go wrong?
b) What would the effect and impact be if it did go wrong?
c) How likely is it to happen?

The answers in combination give a measure of risk, as illustrated by the matrix in Table B.1.

If an event is quite likely and the effect would be serious, then the risk is high and something needs to be done about it immediately; possibly the process should be stopped or the factory evacuated. If the risk is moderate, something still needs to be done but not with the same degree of urgency. If the event is improbable and the impact insignificant, then the risk is one that the organization may feel that it can live with.

Table B.1 – Risk matrix

	Very improbable	Not probable	Rarely occurring	From time to time	Fairly regularly
No effect					
Negligible effect					
Slight effect					
Considerable effect					
Great effect					
Very great effect					

Key
- Acceptable risk
- High risk, risk controls needed
- Very high risk, risk-reducing actions are necessary

This approach can be used to identify the stage in the process that could have the greatest impact on the quality of the product or customer satisfaction. It is the the item which would have the most significant impact that should be addressed in the first instance. Those risks that are thought to be acceptable may have little impact on the organization, and in the hierarchy of managing risks they may not need to be dealt with at all unless the organization recognizes some benefit.

Areas that are often not well managed include:

a) contractors; and
b) changes in the organization or methods of working.

There should be controls in place for selecting and managing those parties that work on behalf of the organization. Contractors need to be aware of the risks that the organization is controlling and of where and how their activities could impact on these risks. In this way, they can ensure that they do not put the organization at risk.

Before any changes are introduced to the way the organization functions, whether in its management structure, operational procedures, new equipment etc, there should be an assessment of the risks and opportunities that arise. These should be addressed before implementation of any change. Identified risks and opportunities should also be part of the planning phase process as described in **6.1**.

As part of its risk management programme, the organization needs to consider its response to any emergency that might arise. This should include disaster management.

For instance, BS EN ISO 9001:2008, **8.3** deals with product recall as this can be an issue for which any well managed manufacturing organization would have established arrangements. Similarly, any fire or emergency that would cause business interruption should have been addressed.

There is a whole spectrum of possible events which might arise which would affect the ability of the organization to continue operating. This will range from the failure of a major customer (or supplier) to a fire or flood or even an earthquake.

B.6.2 IMS objectives and planning to achieve them (see 6.2)

It is up to the management of the organization to decide how the objectives are to be selected and ranked. The objectives chosen should be relevant and realistically achievable taking into account the resources available. If employees have been involved in identifying the key aspects, it is likely that they will also be able to contribute to defining key objectives. The objectives should be positive and meaningful. An objective such as "to reduce waste" is too general to be constructive. "To reduce waste by x % over a period of y months" is better so long as the present level of waste is known and there are effective means of measuring it. Often, identifying a key objective may reveal a number of subsidiary objectives which have to be attained first, and conflicts might arise over the use of limited resources. Accordingly, the selection of objectives needs to be undertaken with care.

In BS EN ISO 14001, there is the term "target" as well as "objectives". A target is seen as being a lower level objective in BS EN ISO 14001 terms (it might be, for instance, the timescale in which it hopes to achieve an objective). A target is a statement of what an organization hopes should be achieved but is not critical to its future. If the organization fails to meet its targets it should review its objectives.

B.7 Support

B.7.1 Resources (see 7.1)

No additional guidance is necessary.

B.7.2 Competence (see 7.2)

No additional guidance is necessary.

B.7.3 Awareness

No additional guidance is necessary.

B.7.4 Communication (see 7.4)

Communication from management to employees should be sufficient and effective so that they can carry out the desired tasks in terms of the relevant systems, and understand the reasons why. There needs to be a corresponding and efficient system of communication in the opposite direction from the employee to management at all levels. Remember that the workforce is always an interested party that may act through external bodies such as trade unions, and furthermore, is the best source of information on aspects and risks in the workplace.

It should be recognized that the method of communication and language used should be appropriate to the needs of the workforce and be in such a form that they can easily understand the information being provided to them.

The arrangements with suppliers and contractors may need to be more formalized than previously to meet this requirement.

B.7.5 Documented information (see 7.5)

No additional guidance is necessary.

B.8 Operation (see Clause 8)

This term "operation" does not appear in BS EN ISO 9001, but there are clauses in BS EN ISO 9001 that relate to this requirement in PAS 99. In particular, requirements to ensure that the product is controlled are apparent in BS EN ISO 9001:2008, **6.4** (Work environment), **7.1** b) and c) (Planning of product realization), **7.5.1** (Control of production and service provision) and **7.5.2** (Validation of processes for production and service provision).

In both BS EN ISO 14001 and BS OHSAS 18001, there is a more direct comparison to Clause **8** of this PAS, as in both these standards there is a clause (**4.4.6** Operational control) which has parallels to Clause **8**.

An approach for risk control is proposed in BS ISO 31000 which could be used to determine action. The options can include the following:

a) avoiding the risk by deciding not to start or continue with the activity that gives rise to the risk;
b) taking or increasing the risk in order to pursue an opportunity;
c) removing the risk source;
d) changing the likelihood;
e) changing the consequences;
f) sharing the risk with another party or parties (including contracts and risk financing);
g) retaining the risk by informed decision.

Risk treatment options are not necessarily mutually exclusive and, it should be noted, they may not be appropriate in all circumstances.

Risk treatment involves a cyclical process of:

1) assessing a risk treatment;
2) deciding whether residual risk levels are tolerable;
3) if not tolerable, generating a new risk treatment;
4) assessing the effectiveness of that treatment.

B.9 Performance evaluation (see Clause 9)

NOTE *Having installed the IMS and got it working, the next requirement is to see how it is performing. This will entail:*

*a) monitoring, measurement, analysis and evaluation (see **9.1**);*
*b) internal audits (see **9.2**);*
*c) management review (see **9.3**).*

B.9.1 Monitoring, measurement, analysis and evaluation (see 9.1)

Monitoring and measurement are essential in order to make sure that the IMS is operating as intended. They will also help in demonstrating continual improvement.

The IMS should be implemented so that performance can be readily evaluated. Monitoring should be both proactive (in achieving the plans and objectives) and reactive (responding to and reporting on nonconformities or major incidents).

Apart from identifying the needs of interested parties and regulatory requirements (**4.2**) and establishing arrangements for delivering requirements, there should be ongoing processes for evaluating continuous compliance.

B.9.2 Internal audit (see 9.2)

Audits are essential to ascertain whether the system is being followed in all respects, and if not, to help determine why. They are a requirement of every MSS. Deficiencies might be identified in staff or in the system itself. Audits are often regarded as a necessary chore but they should be recognized as providing opportunities for improving the IMS.

In the case of PAS 99, it should be recognized that an integrated audit can bring many benefits. Those areas which are common need only be assessed once, instead of two or three times, depending on how many standard management system requirements have been adopted. The specific requirements may need to be addressed and, for that, specialist skills might be needed. It may be beneficial, for instance, depending on the complexity of the organization and its risks, that a multi-disciplined audit team is used. There should be personnel with expertise in auditing the core management system, and specialists for evaluating the control of those aspects that fall within the requirements of the specifications to which the organization subscribes. A food hygienist may be needed for BS EN ISO 22000, for example.

BS EN ISO 19011 provides guidance on auditing and the needs for auditors working in specific disciplines.

When establishing the audit programme and the scheduling of individual audits, both risks and any processes to address risks, should be taken into account.

There are several organizations that provide further information on auditing, including the International Accreditation Forum (IAF) and the European cooperation for Accreditation (EA): EA issued guidance on the application of ISO/IEC 17021:2006 for combined audits, about expectations for when certification bodies carry out combined audits.

NOTE *ISO/IEC 17021 was revised in 2011 and is about to undergo further revision.*

B.9.3 Management review (see 9.3)

No additional guidance is necessary.

B.10 Improvement (see Clause 10)

B.10.1 Nonconformity and corrective action (see 10.1)

Arrangements should be established, implemented and maintained for investigating, analyzing, learning and implementing lessons from incidents, actual and potential nonconformity(ies), and for taking corrective action and preventive action.

Those with quality (BS EN ISO 9001) requirements embedded in their IMS should for instance consider failure to meet a specification or customer requirement.

Those with embedded environmental management system (BS EN ISO 14001) requirements should consider incidents, failure to meet discharge limits, waste targets, reduction in energy usage, etc.

Those with OHS systems (BS OHSAS 18001) should consider, for example, incidents, failure to reduce exposure levels, inadequate control of contractors and failures during change of structure and processes.

B.10.2 Continual improvement (see 10.2)

Continual improvement requires a process that properly identifies problems and non-conformances and corrects them. This process should address the nature of the problem and the environment within which the problem exists. It should also allow for changing the environment to ensure that the problem does not recur. Each step should build and improve on the previous step so that improvement covers more aspects than just the original problem identified, and has a wider, more noticeable, effect on the organization.

The implementation of corrective actions should be validated as effective. Each action should have an estimated date of completion. After that date, the organization should ensure that the prescribed action was accomplished and effective. If the review reveals the action did not succeed as planned, a new date for action should be set.

The continual improvement process should follow the same basic process as used for corrective actions and should:

a) identify what to address and the present condition (non-conformance);

b) identify the present process and controls (root cause);

c) determine what changes to implement (corrective action).

Corrective actions address deficiencies in the IMS and ensure that it functions as intended, whilst continual improvement takes the IMS to a higher level of efficiency and effectiveness.

Annex C (informative)
Correlation with other management system standards

Table C.1 provides the correlation between this PAS and the other MSSs on a clause by clause basis.

Table C.1 – Correlation on a clause by clause basis

Clause	PAS 99:2012	BS EN ISO 9001:2008	BS EN ISO 14001:2004	BS OHSAS 18001:2007	BS ISO 22301:2012	BS ISO/IEC 20000-1 :2011	BS ISO/IEC 27001:2005	BS EN ISO 22000:2005
4	**Context of the organization**				4			
4.1	Understanding the organization and its context	4.1*	4.3.1*	4.3.1*	4.1		4.2.1*	4.1*
4.2	Understanding the needs and expectations of interested parties	5.2	4.3.2	4.3.2	4.2		4.2.1*	7.2.3
4.3	Determining the scope of the integrated management system	4.2.2a)	4.1	4.1	4.3	4.5.1	4.2.1a)	4.1
4.4	Integrated management system (IMS)	4.1	4.1	4.1	4.4	4.5	4.1	4.1
5	**Leadership**				5			
5.1	Leadership and commitment	5.1	4.4.1	4.4.1	5.1, 5.2	4.1.1	5.1	5.1
5.2	Policy	5.3	4.2	4.2	5.3	4.1.2	4.2.1b)	5.2
5.3	Organizational roles, responsibilities and authorities	5.5	4.4.1	4.4.1	5.4	4.1, 4.1.3, 4.1.4	4.2.2b)	5.4, 5.5
6	**Planning**	5.4, 7	4.3	4.3	6			7
6.1	Actions to address risks and opportunities	4.1, 5.4.2, 7.1, 6.4	4.3.1	4.3.1	6.1, 8.2, 8.3	6.2, 4.2	4.2.2	7.1, 7.3, 7.4
6.2	IMS objectives and planning to achieve them	5.4.1, 5.4.2, 7.2, 7.3, 7.4, 7.5	4.3.3	4.3.3	6.2, 8.4	4.5.2	4.2.2	7.2, 7.5, 7.6, 7.7, 7.9

Table C.1 – Correlation on a clause by clause basis (*continued*)

Clause	PAS 99:2012	BS EN ISO 9001:2008	BS EN ISO 14001:2004	BS OHSAS 18001:2007	BS ISO 22301:2012	BS ISO/IEC 20000-1 :2011	BS ISO/IEC 27001:2005	BS EN ISO 22000:2005
7	**Support**	6			7	4.4		6, 6.1
7.1	Resources	6.1, 6.2, 6.3	4.4.1	4.4.1	7.1	4.4.1	5.2	6.3, 6.4
7.2	Competence	6.2	4.4.2	4.4.2	7.2	4.4.2	5.2.2	6.2.1
7.3	Awareness	6.2	4.4.2	4.4.2	7.3	4.4.2	5.2.2	6.2.2
7.4	Communication	5.5.1, 5.5.3, 7.2.3	4.4.3	4.4.3	7.4 7.4.1, 7.4.2	4.1.3		5.6.1, 5.6.2
7.5	Documented information	4.2	4.4.4	4.4.4	7.5	4.3	4.3	4.2
7.5.1	General	4.2.1			7.5.1	4.3.1	4.3.1	4.2.1
7.5.2	Creating and updating	4.2.2	4.4.5	4.4.5	7.5.2	4.3.2	4.3.2	4.2.2
7.5.3	Control of documented information	4.2.3, 4.2.4	4.5.3	4.5.3	7.5.3	4.3.3	4.3.2 4.3.3	4.2.3
8	**Operation**	7			8	4.5.3		
8.1	Operational planning and control	7.1	4.4.6, 4.4.7	4.4.6, 4.4.7	8.1 – 8.5		4.2.2	7.5, 7.6, 7.7 – 7.9
9	**Performance evaluation**	8			9			8
9.1	Monitoring, measurement, analysis and evaluation	8.2, 8.2.1, 8.3, 8.4	4.5.1	4.5.1, 4.5.2	9.1	4.5.4	4.2.3	8.1, 8.2, 8.3
9.2	Internal audit	8.2.2	4.5.5	4.5.5	9.2	4.5.4.2	6	8.4.1
9.3	Management review	5.6	4.6	4.6	9.3	4.5.4.3	7	5.8, 8.5.2
10	**Improvement**	8.5			10		8	
10.1	Nonconformity and corrective action	8.5.2, 8.5.3	4.5.3	4.5.3	10.1	8.1, 8.2	4.2.4, 8.2, 8.3	7.10, 8.4.2, 8.4.3
10.2	Continual improvement	8.5.1			10.2	4.5.5	8.1	8.5.1, 8.5.2

* There is no direct correlation in PAS 99:2006 but some clauses contribute to this requirement.

Annex D (informative)
Correlation table for PAS 99:2012 versus PAS 99:2006

Table D.1 provides the links between PAS 99:2012 and the previous edition PAS 99:2006 on a clause by clause basis.

Table D.1 – Correlation table for PAS 99:2012 versus PAS 99:2006

Clause	PAS 99:2012	PAS 99:2006
4	**Context of the organization**	
4.1	Understanding the organization and its context	4.3.1a)*
4.2	Understanding the needs and expectations of interested parties	4.3.2, 4.4.4*
4.3	Determining the scope of the integrated management system	4.1.1
4.4	Integrated management system (IMS)	4.1.2, 4.1.3
5	**Leadership**	
5.1	Leadership and commitment	
5.2	Policy	4.2
5.3	Organizational roles, responsibilities and authorities	4.3.5
6	**Planning**	
6.1	Actions to address risks and opportunities	4.3.1, 4.3.3
6.2	IMS objectives and planning to achieve them	4.3.4
7	**Support**	
7.1	Resources	4.4.2.3
7.2	Competence	4.4.2.1, 4.4.2a)
7.3	Awareness	4.4.2b)
7.4	Communication	4.4.4.
7.5	Documented information	4.4.3
7.5.1	General	4.4.3.1
7.5.2	Creating and updating	4.4.3.3, 4.4.3.4
7.5.3	Control of documented information	4.4.3.2, 4.4.3.5
8	**Operation**	4.4
8.1	Operational planning and control	4.4.1
9	**Performance evaluation**	4.5
9.1	Monitoring, measurement, analysis and evaluation	4.5.1, 4.5.2
9.2	Internal audit	4.5.3
9.3	Management review	4.7.1, 4.7.2, 4.7.3
10	**Improvement**	4.6
10.1	Nonconformity and corrective action	4.5.4, 4.6.2
10.2	Continual improvement	4.6.1

* There is no direct correlation in PAS 99:2006 but some clauses contribute to this requirement.

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[1)] In preparation.

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