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Introduction

Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international and European standards, comments will be reviewed by the relevant UK national committee before submitting the consensus UK vote and comments. If the draft standard is approved, it is usual for the resulting published standard to be adopted as a British Standard.

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Knowledge management – Application of BS ISO 30401 – Guide

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on **XX Month 201X**. It was prepared by Technical Committee KMS/1, *Knowledge management systems*. A list of organizations represented on this committee can be obtained on request to its secretary.

Information about this document

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Presentational conventions

The provisions of this standard 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.

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. “organization” rather than “organisation”).

Contractual and legal considerations

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

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

0 Introduction

0.1 Purpose and usage

BS ISO 30401:2018 is a management system standard (MSS) that sets out the essential elements of a knowledge management system (KMS) in the form of requirements, each of which is expressed in a “shall” statement.

This British Standard:

- a) explains the features of an MSS and the rationale behind this approach;
- b) expands on the fundamentals of knowledge management (KM) in BS ISO 30401:2018;
- c) explains some of the terminology used in BS ISO 30401:2018;
- d) clarifies the requirements specified in BS ISO 30401:2018; and
- e) provides examples and guidance to support implementation of these requirements applicable to organizations of any size and in any sector.

Clauses 1 to 10 of this British Standard are numbered to match the clauses in BS ISO 30401:2018. Each clause in this guidance explains the relevant terms, concepts and where applicable, the intent of each requirement in BS ISO 30401:2018. Short examples are used throughout this guidance to clarify and illustrate the content of BS ISO 30401:2018. Annex A contains examples of KMSs in different organizational contexts.

0.2 Management systems standards

0.2.1 General

Management systems are the way in which an organization manages the interrelated parts of its business to meet its objectives. Each management system focuses on a single topic, such as knowledge, quality, finance, or environmental performance. An organization may therefore apply, e.g. a risk management system, a quality management system, an asset management system, according to the circumstances of the organization. A management system is not a technology system. Rather it is a system of objectives, policies, processes, roles and behaviours, which might or might not be supported by technology.

An MSS is a type of standard focused on one management system. An MSS is designed to help organizations improve performance of that management system, by specifying required components, many of which are common across different management topics. MSSs have a common structure, known as the High-Level Structure (HLS) and contain common definitions and text, known as “identical core text”. The HLS and identical core text are designed to make it easy for organizations to implement multiple management systems in a consistent (consistently managed) way and to allow those systems to interact and support each other. Those in an organization with an existing quality management system based on, e.g. BS EN ISO 9001, might recognise the similarity of the structure of BS ISO 30401:2018 and its requirements for planning, implementing, evaluating and improving a KMS.

MSSs are not detailed recipes that tell organizations what to do. They set out high-level minimum standards for planning, implementing, evaluating and improving management systems, but without being prescriptive about how those standards can be met. For example, BS ISO 30401:2018 requires a conforming organization to identify KM objectives, but does not define what these objectives should be.

BS ISO 30401:2018 is a requirements-based MSS, which means it contains “shall” statements that an organization needs to conform to in order to claim conformity of its KMS. This type of MSS makes it possible to conduct an internal or external audit of an

organization's conformity to BS ISO 30401:2018. If an accredited external certification body conducts an audit of an organization against the requirements, the organization can become certified against BS ISO 30401:2018. Certification is not mandatory and is not the only reason for using BS ISO 30401:2018. An organization can implement an MSS and conduct an internal audit to check progress and conformity or use an MSS as a checklist or guide to the essential elements of the management system.

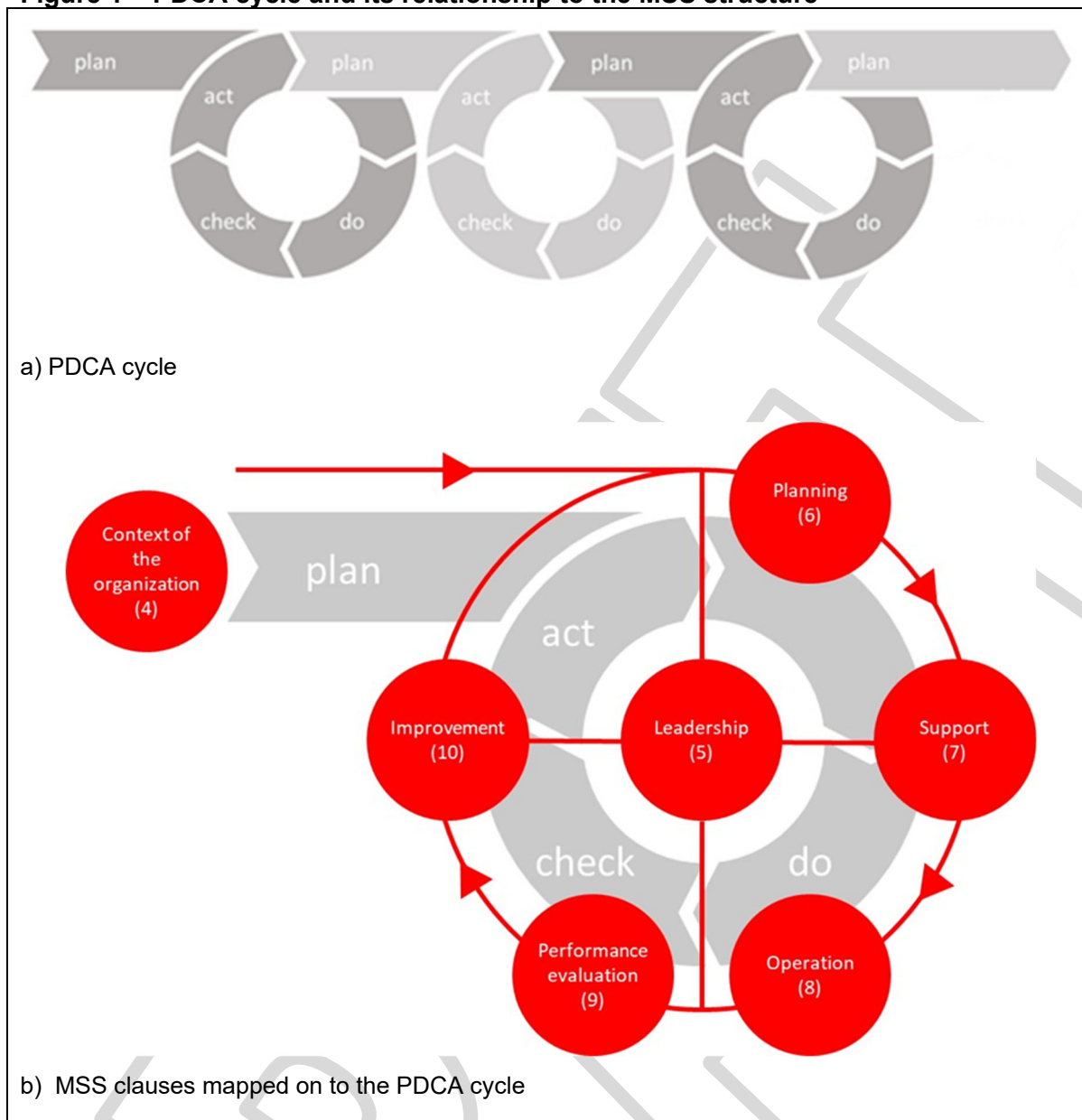
0.2.2 High level structure and PDCA cycle

All MSSs have 10 main clauses (see Table 1). An MSS can also include an introduction and annexes that provide topic-specific information to support the main clauses. The introduction and annexes do not contain requirements. Embedded in this structure is the PDCA (plan, do, check, act) cycle, also known as the "Deming wheel" or the "Shewhart cycle". PDCA is an iterative cycle for the development and continuous improvement of products, processes and services (see Figure 1).

Table 1 – Main clauses of a management system standard

Clause	Content
1. Scope	What the document does.
2. Normative references	References cited in the document in a way that makes them required reading.
3. Terms and definitions	Terms used in the document and their definitions.
4. Context of the organization	Factors and issues that affect the organization; needs and expectations of stakeholders; scope of the management system; elements of the management system.
5. Leadership	What 'top management' (those who direct and control the organization at the highest level) needs to do. Includes policy setting and establishment of roles and responsibilities.
6. Planning	Planning actions to address risks and opportunities; establishing objectives and deciding how these objectives will be met.
7. Support	Making sure the right people and resources are available to operate and support the entire management system. Includes requirements for maintaining documented information about the management system.
8. Operation	Implementing and controlling the processes and actions determined in clauses 5, 6 and 7.
9. Performance evaluation	Monitoring, measuring and evaluating the effectiveness of the management system. Includes requirements for internal audits and management reviews.
10. Improvement	Requirements to deal with non-conformities and to continually improve the management system.

Figure 1 – PDCA cycle and its relationship to the MSS structure



0.2.3 Identical core text

As well as a common structure, many of the clauses of an MSS contain one or more components of core text, which is found in all other MSSs. Inclusion of the core text is mandatory for those who develop an MSS. Additional topic-specific text can be added, but the core text cannot be changed. This gives all MSSs common clauses that make it easier for users to implement and integrate multiple management systems.

Table 2 summarizes the use of identical core text in BS ISO 30401:2018.

Table 2 –BS ISO 30401:2018

Clause	Identical core text
0. Introduction	No identical core text. The Introduction explains some of the fundamentals of KM.
1. Scope	No identical core text.

2. Normative references	No identical core text.
3. Terms and definitions	Includes core MSS terms and their definitions, e.g. definitions of <i>organization</i> and <i>management system</i> .
4. Context of the organization	Core text provides a framework for this clause. 4.4 , <i>Knowledge management system</i> and 4.5 , <i>Knowledge management culture</i> describe the dimensions of a KMS and are specific to KM.
5. Leadership	Most of the text in these clauses is the MSS identical core text.
6. Planning	
7. Support	
8. Operation	
9. Performance evaluation	
10. Improvement	
Annex A	No identical core text. Annex A describes the different types and forms of knowledge covered by KM, and the activities associated with these.
Annex B	No identical core text. Annex B describes the relationship between KM and other disciplines, including information management and organizational learning.
Annex C	No identical core text. Annex C lists the characteristics of a KM culture and the factors that influence this culture.
Bibliography	No identical core text.

0.2.4 Benefits and limitations of MSSs

The main benefit of MSSs is an organizational culture of continuous self-evaluation, correction, learning and improvement; achieved through employee engagement and management leadership and commitment. Although it is possible to create this culture without an MSS, conforming to requirements adds impetus to what might otherwise be good intentions that are not actioned.

A further benefit is the ability for organizations to integrate multiple MSSs into their management systems. The common high-level structure and identical core text make it possible for a single audit to be conducted on two or more management systems.

BS ISO 30401:2018 brings additional benefits, specific to KM. For the first time, BS ISO 30401:2018 sets out globally agreed KM principles and the essential elements of KM. The combined effect of the principles and essential elements is to clarify what KM is, what KM isn't and what it involves. The existence of a KM standard also legitimizes the practice of KM: if there is an international standard, then KM is "real".

The main limitation of MSSs is the language used in the high-level structure and identical core text. Although the intention of MSSs is to create learning and continuous improvement, some of the language used indicates an underlying mechanistic view of organizations: a view in which people are compliant, reliable and predictable "cogs" in the organization machine – a machine that is "controlled" and "directed" by "top management" (whose work consists of ensuring policies and objectives are established and followed). Whether this is

intentional or not, in some countries – including the UK – the use of such terms implies hierarchy and outdated leadership thinking.

The mechanistic view might work in organizations performing simple, repetitive work in a stable environment; but it can create difficulties in innovating, adapting to change, and coping with complexity. The mechanistic view of organizations is also at odds with the way people and organizations learn, which makes it uncomfortable for many KM professionals.

NOTE For further discussion of different views of organizations, see Images of Organization [1].

An associated limitation of MSSs is lack of clarity over the role of individuals and teams. Although “roles and responsibilities” are elements of a management system, people are hardly mentioned in the MSS template. The MSS emphasis is on generating negative feedback, or signs of “non-conformity” that require “correction”. This limitation is particularly prominent in BS ISO 30401:2018, Clause **10**, which covers continuous improvement. Most KM professionals appreciate that “improvement” involves individual and group learning; therefore the way people learn is central to continuous improvement.

The result is that although MSSs are intended to create a culture of continuous improvement, in practice they can create a culture of box-ticking and excessive documentation. They can also create a focus on detailed processes, monitoring and feedback; which can lead to losing sight of the desired outcomes and their relevance to changes in the organization’s environment.

Limitations such as these need not stand in the way of realising the benefits of using MSSs. It is better to think of an MSS as a supporting framework for organizational improvement rather than a set of requirements that creates layers of undesirable bureaucracy. MSSs are written for organizations of all sizes, types and purposes – therefore, organizations should interpret MSSs flexibly, in their own context. The way an MSS is used makes a big difference to its impact.

A final limitation is that many users are not aware that MSSs are a specific type of standard, written to a common template. This lack of awareness can be overcome by effective communication and engagement with users. This lack of awareness can be overcome by effective communication and engagement with users.

0.3 Knowledge management fundamentals

0.3.1 Knowledge management principles

0.3.1.1 General

The Introduction to BS ISO 30401:2018 contains eight guiding principles with the following labels:

- a) nature of knowledge;
- b) value;
- c) focus;
- d) adaptive;
- e) shared understanding;
- f) environment;
- g) culture; and
- h) iterative.

The principles are intended to capture the essence of KM, to support understanding of KM and to be used as a guide to implementing a KMS. The principles are interrelated and should be used together as a whole, not individually.

In **0.3.1.2** to **0.3.1.9**, each KM principle is stated as it appears in BS ISO 30401:2018, its intention is explained and illustrated with examples of its application.

0.3.1.2 Nature of knowledge

“Knowledge is intangible and complex; it is created by people.”

Understanding the nature of knowledge supports KM and helps distinguish KM from information management.

Knowledge exists in many forms but is always created by people and always intangible when it is created. Although some knowledge can be made tangible by codification, e.g. in documents, codification never captures knowledge completely; an intangible, dynamic version of what has been codified is still held by the people that wrote the document, with associated knowledge such as experience and insights that are personal and difficult to articulate. Some knowledge is even more explicitly embodied in a human being, in the form of muscle-memory or similar know-how, e.g. an expert potter knows not only the intellectual aspects of their craft, but through experience and practice they know exactly where to apply pressure to the clay they are shaping. Or an expert engineer might understand not just where a specific component should be placed, but also exactly how to twist it to force it to slot into place. Knowing *how* to do something is often at least as valuable as knowing *what* needs to be done. No-one can write down everything they know and sometimes people are not even aware of what they know. This makes knowledge complex.

Appreciating the intangible, complex nature of knowledge and its connection to people leads to KM that includes all forms of knowledge and a KMS that reflects this. Poor appreciation of the nature of knowledge can lead to a KMS that addresses only limited forms of knowledge, e.g. thinking of knowledge only as a “thing” that can be captured and shared, can lead to KM focused on codified knowledge, which excludes knowledge in the form of experience and insights.

0.3.1.3 Value

“Knowledge is a key source of value for organizations to meet their objectives. The determinable value of knowledge is in its impact on organizational purpose, vision, objectives, policies, processes and performance. KM is a means of unlocking the potential value of knowledge”.

Knowledge is valuable to an organization only when it is used to meet an organization’s needs by contributing to something that matters to the organization. KM ensures that knowledge contributes to the things that matter: it is a means rather than an end. The definition of knowledge (see BS ISO 30401:2018, **3.25**) states that the primary application of knowledge is in making decisions and taking action. Organizations should be clear what they want their KMS to do and which decisions and actions it should support. KM should be driven by the needs of stakeholders and by KM objectives, which can be established for different functions and at different levels in an organization. The glue that holds an organization’s KM objectives and practices together is a knowledge management policy (see **5.2**).

KM can add value at different levels and in different ways. At a strategic level, KM can help clarify (or even transform) an organization’s purpose and vision and can help support strategic actions and decisions. At a tactical level, KM processes can ensure that different parts of an organization learn from each other and that this shared and combined knowledge improves practices, products and processes (see **0.3.2**).

KM can also add value at different points in the knowledge lifecycle (see **4.2.2**) by:

- a) acquiring new knowledge, e.g. by creating knowledge through research or by analysing feedback from customers;

- b) applying existing knowledge, e.g. by embedding knowledge in standard operating procedures; and
- c) ensuring that the organization uses up-to-date knowledge, e.g. through continuous professional development and training.

0.3.1.4 Focus

“Knowledge management serves the organizational objectives, strategies and needs”.

The high-level purpose of KM is to support organizational objectives, strategies and needs.

In practice, KM focuses on the way people create, share and use knowledge rather than on managing knowledge itself. This practical focus is missing from the “Focus” principle in BS ISO 30401:2018.

The practical focus of KM is on encouraging, enabling, supporting and motivating people to create, share and use knowledge. This is because knowledge exists in people whose participation in KM activities is voluntary. People only contribute ideas, share what they know and learn from others if they are motivated and feel safe to do so.

0.3.1.5 Adaptive

“There is no one knowledge management KM that fits all organizations within all contexts. Organizations may develop their own approach to the scope of knowledge and knowledge management and how to implement these efforts, based on the needs and context.”

KM is highly dependent on context: the needs of stakeholders, organizational objectives, the nature of the knowledge work in an organization and the people who are involved in KM activities. This means that KM can take many different forms. KM in a law firm, for example, might focus on maintaining and providing access to documents about case law and legal precedents. KM in a project environment might focus on good project management practices, with communities of practice to encourage cross-project knowledge sharing. KM in a government laboratory might focus on maintaining capability and retaining specialist knowledge in specific areas of research.

The wide range of KM means that organizations need to articulate and communicate the importance and application of knowledge and KM in their own context. It also means that copying KM policies and practices from one organization to another is unlikely to be effective unless the organizations have common contexts (See Annex A for examples of common KM contexts).

0.3.1.6 Shared understanding

“People create their own knowledge by their own understanding of the input they receive. For shared understanding, knowledge management should include interactions between people, using content, processes and technologies where appropriate.”

Shared understanding is fundamental to KM and is another principle that sets KM apart from related disciplines, such as information management.

Whenever people work together, they share knowledge. A team developing options for a project, for example, share ideas about how to deliver the project. An advisor in a call centre relies on codified knowledge to answer customer queries. Whatever medium is used to share knowledge, recipients interpret what they hear, see and feel to make sense of and learn from it. When recipients interpret and learn, they create their own knowledge. There is no guarantee that a recipients’ interpretation matches the meaning intended by the originator of the knowledge. Two people can read the same document, for example, and interpret it in different ways. Participants can each have a different understanding of what was agreed in a meeting.

To reach shared understanding, people need to interact with each other so they can compare, check and develop their interpretations collectively. The team developing options

for a project might interact in a workshop where they question each other to explore their ideas. The call centre advisor might attend a training session to develop understanding of the codified knowledge used to answer customer queries. People might also need to interact so they can check that the knowledge being shared is relevant to the context in which it is to be used. When the advisor is talking to a customer, for example, they might ask the customer whether the advice offered answers the customer's query or solves the customer's problem.

The medium used to share knowledge is just one factor in reaching shared understanding. The way the medium is used is equally important, e.g. a face-to-face meeting in which only one person speaks is no more interactive than sending an email to all the participants. Other factors that affect shared understanding include the complexity of the knowledge to be shared, the existing knowledge of the recipients and the relationships between the people involved. All these factors need to be assessed when designing and using KM practices.

0.3.1.7 Environment

"Knowledge is not managed directly; knowledge management focuses on managing the working environment, thus nurturing the knowledge lifecycle."

Knowledge cannot be managed directly because it is intangible. The practical focus of KM is on encouraging, enabling, supporting and motivating people to create, share and use knowledge (see **0.3.1.4**). The intention of this principle is to emphasize the way in which the practical focus of KM is applied, namely through the working environment.

Working environment refers to the characteristics of the workplace that affect peoples' motivation and ability to engage in KM activities. These characteristics are referred to as "knowledge management enablers", see **4.4.4**. The enablers are human capital, processes, technology and infrastructure, governance and KM culture.

"Knowledge lifecycle" in this principle means the stages of knowledge development (see **4.4.2**). The stages are acquiring new knowledge, applying current knowledge, retaining current knowledge and handling outdated or invalid knowledge. The knowledge lifecycle therefore covers the whole KMS.

Leadership values and behaviours, organizational policies and roles and responsibilities (see Clause **5**) also affect the working environment as they influence and overlap with the KM enablers of governance and human capital.

Different views exist on precisely what constitutes a KM enabler, what constitutes a working environment and whether a KM enabler is the same as a characteristic of the working environment. If an enabler is defined as the lever to pull to influence the working environment, for example, it can be argued that KM culture is determined by governance and is therefore not an enabler in its own right. Whatever the definitions of KM enablers and the working environment, the key message is the same: the effectiveness of KM is determined not only by what an organization does, but also by the way the organization does it and the environment in which it is carried out.

0.3.1.8 Culture

"Culture is critical to the effectiveness of KM."

This principle is intended to emphasize the importance of organizational culture to the effectiveness of KM.

Organizational culture is an important concept in many management disciplines, but it is not normally a core concept in an MSS. BS ISO 30400 (the human resource management vocabulary) defines organizational culture as "values, beliefs and practices that influence the conduct and behaviour of people and organizations". BS ISO 30401:2018 is a member of the "human resource" management standards family and has adopted the same definition.

The concept of a KM culture has been widely used in KM since the mid-1990s with various definitions and descriptions. BS ISO 30401:2018 defines KM culture as “elements of the organizational culture, supportive of the values, behaviours and activities associated with the KMS”.

As well as being covered by this principle, in BS ISO 30401:2018 KM culture is:

- a) defined in Clause 3;
- b) listed as a KM enabler in 4.4.4;
- c) included as a part of the organizational context in 4.5; and
- d) the subject of Annex C.

BS ISO 30401:2018, Annex C provides the most comprehensive explanation of KM culture. It describes the characteristics of a KM culture, the factors that affect (and can therefore be used to influence) the KM culture and how a KM culture can be promoted.

There are many different perspectives on the nature of organizational and KM culture and on the interplay between organizational culture and KM. BS ISO 30401:2018 presents KM culture as behaviours and values that can be influenced by making changes to factors, such as leadership behaviour, diversity, policies, incentives and organizational structure.

0.3.1.9 Iterative

“Knowledge management should be phased, incorporating learning and feedback cycles.”

A KMS can be difficult to get right at the first attempt. BS ISO 30401:2018 describes an approach to KM in which top management establishes an overall policy, assigns KM roles and responsibilities and supports and oversees iterations of the PDCA cycle. Top management is also responsible for cultivating the organizational culture. Although BS ISO 30401:2018 describes the role and involvement of top management, this does not mean that implementing a KMS needs to be top-down .

Within the overall PDCA iterations of the MSS standard, many organizations find it helpful to introduce a KMS in phases, so that learning and feedback can be used to improve the next phase. For example, a KMS can be piloted in one part of an organization to find out what works and what doesn't, then learning and feedback from the pilot can be used to plan the next phase. At each phase, BS ISO 30401:2018 can be used to check whether the necessary elements of KM are in place in the pilot area, to allow later scale-up in the organization.

Even in an organization with no formal KMS, people already create, share and use knowledge. Building on existing good practice is often a good place to start, e.g. a part of the organization that already has good knowledge sharing practices could be chosen as a pilot for an organization-wide KMS. Building on existing good practice has the additional benefits of generating buy-in and recognising people who are already committed to KM.

Even when KM is fully embedded across an entire organization, there is still room for iterative improvement. BS ISO 30401:2018 requires that this be in place, as described in Clause 10.

0.3.2 Layers of knowledge management

0.3.2.1 General

BS ISO 30401:2018 presents KM as a management system: a way of managing work to meet objectives by focusing on knowledge. KM is also a management discipline with associated practices and at the same time, an academic discipline with connections to philosophy and strategic management. This creates widely differing views about the nature of knowledge and about what KM actually is.

Although philosophy is not typically associated with management systems, it has a profound effect on an organization's understanding of the nature of knowledge and therefore on the way it approaches KM. As such, the boundaries between philosophy and KM are often unclear..

0.3.2.2 Knowledge and philosophy

Two distinct views of knowledge – the *possession* view and the *process and practice* view are common in organizations.

NOTE See Annex C for an explanation of these two views and how they can affect a KMS.

In practice, the two views of knowledge are both supported by and often can be best used together within a KMS. BS ISO 30401:2018 covers KM based on both views.

In an organization, KM can also operate both at a strategic level and at a tactical level. Supporting KM with a management system makes it possible to include both and, importantly, to align the two.

0.3.2.3 Strategic KM

At a strategic level, KM thinking is used to understand the purpose of organizations, to formulate objectives and strategy, and to make high-level decisions, e.g.:

- a) where knowledge is recognised as a strategic resource, it is also recognised that part of the purpose of the organization might be to create, integrate and transform knowledge into products and services;
- b) KM thinking can be used in organization design to develop strategies for ensuring an organization is good at both creating new knowledge and using existing knowledge, such as having separate R&D and manufacturing functions;
- c) in project-based organizations, KM can be used to understand and choose between linear, iterative and hybrid project delivery methods;
- d) where specialist knowledge is critical, maintaining capability and retaining knowledge can be one of the organization's main strategic objectives; and
- e) KM thinking can be used to support decisions about whether to collaborate or compete, whether to make or buy, and whether to share or protect organizational knowledge.

BS ISO 30401:2018 can be used to plan and implement strategic KM by including “strategy” in the KMS scope (see 4.3) and consulting top management and strategists to identify their needs and expectations (see 4.1 and 4.2). If the opportunity to include strategic KM in the KMS is missed, KM objectives can lose their connection to organizational strategy and top management might see the KMS as something other people have to do, or as an expensive luxury rather than a critical business tool.

0.3.2.4 Tactical KM

Tactical KM is concerned with the practical actions taken to meet KM objectives: the processes, other enablers and support necessary for effective operation of the KMS.

It is not uncommon for organizations to focus on KM processes, tools and techniques without fully understanding KM objectives. This quickly leads to a proliferation of isolated KM activities that fail to support organizational needs – even more so if the KM objectives themselves are not well connected to organizational strategy.

The KM enablers of roles and accountabilities, technology and infrastructure, governance, and KM culture are at least as important as the KM processes, tools and techniques. Without a supporting KM culture, it doesn't matter how good the KM processes are – they won't be effective.

1 Scope

This British Standard provides guidance on how to design, implement, operate, evaluate and improve a knowledge management system (KMS) in accordance with the requirements of BS ISO 30401:2018. It is intended to be used in conjunction with BS ISO 30401:2018.

This British Standard is intended for use by people involved in any aspect of the design, implementation, operation, evaluation and improvement of a KMS.

2 Normative references

There are no normative references in this British Standard.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in BS ISO 30401:2018 apply.

NOTE 1 See Annex B for BS ISO 30401:2018 terms to be amended for BS ISO 30401:2018+A1:2022.

NOTE 2 The terms used in BS ISO 30401:2018 are written so they can be translated into languages other than English. This has led to a few terms that would not be the natural choice of native English speakers. Knowledge conveyance, for example, is used in place of the more natural (to English speakers) term 'knowledge flow' (see 4.4.3).

4 Context of the organization

COMMENTARY ON CLAUSE 4

ISO believes that a management system, if it is to be effective, needs to:

- a) address issues and opportunities for the organization,*
- b) meet the needs and expectations of stakeholders,*
- c) have a clearly defined scope, and*
- d) be a complete system, with no missing elements.*

In other words, it needs to define why the management system (in our case, a management system focused on knowledge) is needed, and for whom. Its boundaries need to be clear and its internal components well defined.

BS ISO 30401:2018, Clause 4 therefore sets not just the context for the system, but the rationale, and the objectives by which it is to be measured.

4.1 Understanding the organization and its context

COMMENTARY ON 4.1

This subclause covers the strategic and tactical issues which knowledge management need to address. It also touches on the topic of "outcomes".

The organization should create a list of issues (both positive and negative) which provide the context for KM. These might include issues such as the following:

- a) the organization is moving to a hybrid working model, allowing a much greater level of home working, requiring that all relevant knowledge (both documented and undocumented) is available to homeworkers, as well as in the office;
- b) the organization is moving to a new desktop platform, which provides an opportunity to address the difficulties with locating up-to-date codified knowledge within the current IT environment; and
- c) a large proportion of the workforce in the organization is approaching retirement age, with a risk that critical knowledge will be lost to the organization.

NOTE Many other issues are possible and the list could be extensive. An organizational strategy is a very informative source of issues.

BS ISO 30401:2018, Clause **6** requires an organization to document objectives for its management system.

An organization should list the issues that affect the outcomes defined in BS ISO 30401:2018, **6.2**.

BS ISO 30401:2018, **6.2** specifies that an organization develops objectives which are informed by the needs of the stakeholders in accordance with BS ISO 30401:2018, **4.2**. Outcomes are not necessarily the same as objectives, and BS ISO 30401:2018 does not specifically require that an organization documents the outcomes. However, documenting the outcomes is a sensible and prudent thing to do, as this defines the rationale behind the entire KMS.

BS ISO 30401:2018 states that the outcomes of the knowledge management system are a means to achieve organizational outcomes and not an end in itself. Each of the three example issues or opportunities in a) to c) could be converted to outcomes for the KM system as a whole, for example, to ensure;

- 1) no loss of performance or innovative capacity as home working becomes more more frequent;
- 2) a greater level of knowledge findability under the new desktop platform and thus a greater level of efficiency, and
- 3) no loss of performance or service as experienced staff retire.

Both the issues and the accompanying outcomes can be usefully documented within a KM strategy, or even with the organizational strategy or strategic plan.

A good example of this is the Oxfam strategic plan for 2013 to 2019, which defines six outcome goals for the organization, and six operational goals to improve the way the organization operates [2]. Three of these operational goals are supported by KM elements, such as “using innovation, learning and knowledge management to increase the quality and impact of our program work and that of our partners”. This is an excellent example of situating the KM management system within the organizational context.

A second example is the *IFAD 2019 Knowledge Management strategy* [3] which uses a “Theory of Change” model to link organizational and societal impact and outcomes to planned KM activities.

4.2 Understanding the needs and expectations of interested parties (stakeholders)

BS ISO 30401:2018 defines KM as a discipline focused on knowledge and therefore on supporting decisions and actions.

BS ISO 30401:2018, **4.2** requires the organization to take account of the decision makers and action takers and their needs and expectations from the KMS. These parties can be considered the primary users, “customers” or beneficiaries of the system, and understanding their needs and expectations makes it possible to evaluate the performance of the system.

NOTE See BS ISO 30401:2018, Clause 9.

There may be secondary stakeholders, interested in the benefits KM brings rather than the details of the knowledge itself, such as regulators, the press, or investors. In some cases, the interested parties will all be internal to the organization. They could include the knowledge people (the decision makers and action takers who rely on ready access to accurate knowledge), as well as their managers, e.g. a member of a sales team might want ready access to up-to-date product knowledge, including knowledge of how to sell the benefits of these products more effectively to buyers. The sales manager might want, as a result of this, to increase sales of new products.

In other cases, some of the stakeholders might be external to the organization, e.g. an aid and development organization might want to create knowledge products for use in

developing countries, in which case the relevant country ministries would be stakeholders. Or a government department might want to use knowledge to provide quicker and more accurate advice to their relevant minister. The minister is therefore a stakeholder, needing and expecting timely and accurate advice.

BS ISO 30401:2018, **4.2** therefore requires an organization to:

- a) identify and document the stakeholders and interested parties;
- b) define and document what each stakeholder needs and expects from the KMS. In some cases, the organization might need to engage with stakeholders to establish what their individual needs are, where these are not already known. These needs and expectations should be defined in business terms and as business outcomes, which should be linked to the organizational outcomes defined in BS ISO 30401:2018, **4.1**. The organization should take care to thoroughly analyze stakeholder needs in order to fully understand the underlying KM needs, e.g. a stakeholder might express a need to more efficiently access project documents, however their underlying KM need is actually to understand lessons from past projects in order to make better decisions and avoid repeating past mistakes in current projects; and
- c) prioritise the resultant list of stakeholder requirements. Where the organization is unable to meet all of the needs expressed by stakeholders within its KMS, it should define and document which of its stakeholders and which requirements are most important to the success of the KMS, with these requirements prioritized within the design of the KMS.

4.3 Determining the scope of the KMS

The organization should determine the scope of its KM system as:

- a) firstly, an organizational scope; and
- b) secondly, a scope based on knowledge domains.

The organizational scope defines whether the KM system, for example, covers:

- 1) only staff in support centres;
- 2) all front-line staff;
- 3) all employees;
- 4) contractors;
- 5) partners; and/or
- 6) resellers and agents.

In some cases, e.g. the scope of a KMS might only cover support or service centres, and (by extension) its customers. However, in other cases KM might have a much wider scope. An organization's KM scope can increase over time, but at any one time there needs to be a clear definition of which parts of the organization are within KM scope, and which are outside.

The KM scope can also be determined in terms of knowledge domains; a knowledge domain being a class of knowledge topics, e.g. in many legal firms, the scope of the KMS is confined to the various legal knowledge domains (tax, property, corporate law) and does not cover non-legal knowledge domains, such as business development or stakeholder management. A large and complex organization might have multiple KMS for diverse knowledge domains, such as research and development, sales and manufacturing, or might choose to cover all these domains within the same KMS. For this reason, BS ISO 30401:2018 requires an organization to create a list of the knowledge domains which are in scope and to prioritize this list to identify the knowledge domains which have the greatest value. These tend to be:

- a) the knowledge which has greatest impact on the organizational strategy outcomes;

- b) new knowledge, which needs to be urgently acquired, and/or
- c) knowledge at greatest need of management (i.e. knowledge which is currently not managed, or is being mismanaged).

For example, an organization with a growth strategy might place higher priority on knowledge of developing new products than on knowledge of older products, or might prioritize the knowledge domains needed by agents, partners or resellers, or (if this is part of their strategy) knowledge of how to acquire other organizations. The strategic work done in response to BS ISO 30401:2018, **4.1**, combined with the stakeholder analysis performed in response to BS ISO 30401:2018, **4.2**, helps identify and prioritize these knowledge domains.

4.4 Knowledge management system (KMS)

4.4.1 General

BS ISO 30401:2018 requires an organization to have in place (and to be continuously improving) a management system for KM. The subclauses under BS ISO 30401:2018, Clause **4** provide some of the parameters of this management system. BS ISO 30401:2018, Clause **4** makes specific mention of “the processes needed and their interactions”, but there is more to the management system than processes alone. However, the mention of “interactions” is important; all parts of the system should be interconnected, rather than a set of standalone elements, in order that knowledge should be able to flow around the organization.

If an organization is in the early stages of KM, BS ISO 30401:2018 requires an organization to implement such a system. If an organization has such a system in place, BS ISO 30401:2018 requires the organization to monitor, manage, maintain and continuously improve it.

This might be an area where the use of trusted consultants can be helpful as they might have more experience than the organization in the development of KM management systems and might be able to highlight risks and proven practices. Consultants might also be helpful during the planning stage (see BS ISO 30401:2018, Clause **6**).

4.4.2 Knowledge development

The first sub-clause deals with what we could refer to in English as the knowledge lifecycle (the term lifecycle was rejected by the ISO drafting team as being difficult to translate).

Knowledge does not live forever; it has a half-life. The common knowledge of the present becomes the outdated fallacy of the future. Therefore, the KMS should manage knowledge throughout all of its lifecycle stages:

- a) acquiring new knowledge;
- b) applying current knowledge;
- c) retaining current knowledge when it is at risk of loss; and
- d) handling outdated or invalid knowledge.

An organization could analyse whether the component processes, roles, technologies and governance (see BS ISO 30401:2018, **4.4.4**) applied within its system cover the four stages of the knowledge lifecycle. This analysis should be documented, e.g. by mapping these components against the stages, as shown below in Figure 2. Each organization should complete this table with its own set of components, to fit its own organizational chart, master process set, technology suite and overall governance approach.

Figure 2 – Knowledge development stages versus primary enablers

	Acquiring	Applying	Retaining	Handing outdated K.
Human Capital (roles and accountabilities)	Project Knowledge Managers	Project K Managers, Knowledge owners	Knowledge interviewers	Knowledge owners
Processes	Lesson capture	Knowledge gap analysis Wiki update	Retention interviews	Wiki update
Technology and infrastructure	Lesson management	Search	Wiki	Wiki
Governance	Project guidelines	Project guidelines	KRT guidelines KRT plans	Domain guidelines

NOTE The contents of the table are example contents only.

BS ISO 30401:2018 also requires an organization to link back to previous clauses, to make sure that the responses to the requirements of BS ISO 30401:2018 form a consistent narrative. Therefore, an organization's analysis should focus primarily on the objectives of the KM system and on the high priority knowledge. This analysis could usefully be documented within a knowledge management strategy.

An engineering organization, for example, might have an issue with retiring staff, where knowledge retention is a key requirement. However, determining how to retain this high-priority knowledge within the engineering domain is not an organization's only concern; the KMS might need to ensure the retained knowledge is shared, found and applied by remaining or new workers, and is archived, updated or overwritten once it becomes superseded. The retention processes therefore do not stand alone; they should be interconnected with other processes within the system in order to cover the complete knowledge lifecycle.

4.4.3 Knowledge conveyance and transformation

COMMENTARY ON 4.4.3

For English speakers, this sub-clause could equally well be termed "Knowledge flow", and is concerned with the flow of knowledge around the organization, from person to person, within and between its two main states: codified and uncoded.

A division between "codified" and "uncodified" is simplistic; any knowledge topic is only ever partially codified, if at all. As discussed in **0.3.2.2**, there are two common views of KM, both of which are valid and both of which should be taken into account, namely that knowledge is a:

- a) "cognitive thing"; and
- b) "process of knowing".

The first view leads to an emphasis on codified knowledge, the second to an emphasis on uncoded knowledge.

The distinction between the two forms of knowledge is important, as the ways in which the knowledge in each form can be shared are radically different. Uncoded knowledge can only be shared with the direct real-time involvement of the knower, whereas codified knowledge has become detached from the knower and can be shared widely throughout and beyond the organization. These two forms of knowledge therefore should be consciously addressed within the management system, to the extent needed to satisfy the requirements of the stakeholders, address the prioritized knowledge domains and achieve the objectives of the KM system.

BS ISO 30401:2018 requires that both forms are taken into account, including the:

- a) flow of knowledge within the organization, in uncoded and/or codified form; and

- b) transition from one form to another; codification of uncodified knowledge, and internalization of codified knowledge into the human repertoire.

Knowledge can flow between people through human interaction in its uncodified form, and often this is the fastest, most direct and most effective form of knowledge flow. This form of flow is multi-way rather than one-way, and such human interaction is often a forum for knowledge co-creation. Where knowledge is esoteric, complex, related to skills, rapidly changing, constantly rehearsed, or required by very few people, human interaction could be the most appropriate means of transfer. For example, transferring knowledge of how to play tennis, or the piano, at the highest level will require human interaction in the form of personal coaching.

Knowledge can flow between people in its codified form. This implies that the knowledge from the supplier can be, and is, represented in text, image or other form, combined with other knowledge and then accessed and internalized by the receiver. This knowledge flow is slower, indirect and subject to loss of knowledge at each stage, but is very efficient for dissemination of knowledge within a large organization, as knowledge can be codified once and then re-used hundreds or thousands of times. This approach is most appropriate when the knowledge is procedural, relatively slowly changing, and required by many users, e.g. a body of basic work-place knowledge for newly hired staff.

The four knowledge flows and transitions are cross-referenced in Figure 3 with four enablers (see 4.4.4), and this figure is populated with example elements. . An organization should analyse whether the component processes, roles, technologies and governance applied within its system cover all these four flows/transitions, e.g. by mapping these components as shown in Figure 3. This analysis could usefully be documented within a knowledge management strategy.

Figure 3 – Knowledge flows and enablers

	Human interaction	Representation	Combination	Internalization
Human Capital (roles and accountabilities)	Community of practice roles	Project Knowledge Managers	Knowledge domain owners	Project Knowledge Managers
Processes	Peer Assist, After Action reviews, Interviews, mentoring	Documentation of lessons	Creation and curation of guidance documents	Before Action reviews, briefings
Technology and infrastructure	Discussion forums	Lesson management system	Wiki	Search
Governance	CoP charters	Project guidelines	Domain guidelines	Project guidelines

The example components shown in Figure 3 would be typical for a project-based organization, potentially within the engineering, construction or oil sector. The organization has to decide which components to include, based on its organizational context and issues.

The specific working environment of the organization should be taken into account when addressing this clause in BS ISO 30401:2018, e.g. the human interactions available within a workforce co-located within an office building might not be possible in an organization with many remote workers. Instead of relying on informal conversations, an organization might need to schedule knowledge-focused conversations, or provide always-on chat facilities that allow people to ask for knowledge and advice when required.

4.4.4 Knowledge management enablers

BS ISO 30401:2018, 4.4.4 is titled “knowledge management enablers” and addresses four elements an organization can introduce or control to enable its KMS, and one thing (culture) you can influence but cannot control (see discussion below).

The four elements the organization can introduce are: