Knowledge Principles
for Government

July 2016

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Foreword

The Civil Service is a knowledge business. It uses its collective knowledge to support the government of the day in implementing its commitments, delivering high quality public services and keeping the country safe.

Making sure we maximise the knowledge of the Civil Service is something we are all responsible for. If we get this right we minimise the need to undertake expensive training or re-training as people move roles because the required knowledge is transferred in advance of their departure. We avoid wasting time 're-inventing wheels' and the drag it causes on Civil Service productivity because the expertise needed can be easily found.   The creative spark generated by good knowledge sharing also helps departments to innovate to tackle the challenges they face.

Civil servants are experienced in managing information, but knowledge does not have the same characteristics and ensuring that it is shared effectively requires a different approach. Departments also differ in size, organisation and culture – all factors which shape and constrain knowledge sharing - and what works for one is not guaranteed to work for another.

This set of Knowledge Principles has therefore been designed by Knowledge and Information Management practitioners in government to assist their colleagues in developing strategies and plans to improve how knowledge is shared in their departments. The principles don't prescribe solutions, but instead provide a framework for considering the knowledge sharing issues that need to be addressed if the Civil Service is to be a world-leading knowledge organisation.

As a result of the work I have been leading in government to address our information and knowledge management challenges I believe we have the potential to become such an organisation. These principles are a step on that journey and I commend them to you.

Philip Rycroft
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Head of UK Governance Group, Cabinet Office
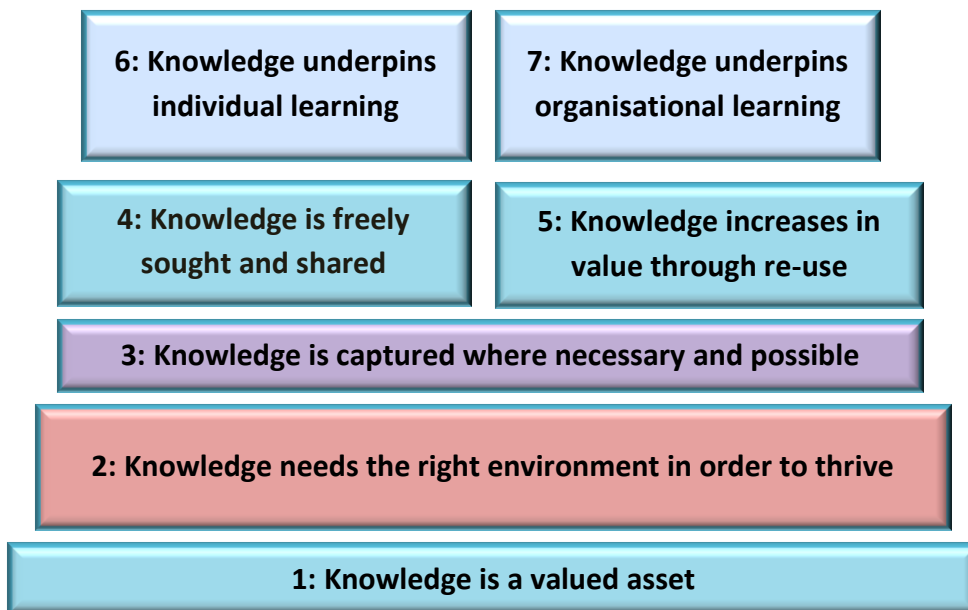
Executive Summary

The key part knowledge plays in efficiently and effectively running departments is broadly well understood. How to achieve this in more consistent, predictable and controlled ways is less understood and subject to a variety of approaches and strategies.

The nature of government and the operation of individual departments of state make a single pan-government knowledge management (KM) strategy impractical. The GKIM Knowledge Management Working Group (KMWG) has therefore produced a set of Principles intended to inform a common overall approach to individual departmental strategies, while retaining the ability to flex the detail. This is consistent with the approach taken to Information Management, and the two documents – the Information Principles and this set of Knowledge Principles – form a companion set.

Knowledge is not Information, although Information Management principles may be applied to captured knowledge. Knowledge capture, however, must not be seen as synonymous with, or a substitute for, a holistic knowledge management programme.   Knowledge is the sum of experience, training, insight and education and is tacit, whereas information is tangible, captured, manipulated in information systems and subject to further interpretation. Knowledge is fluid and dynamic, in a constant state of creation and renewal. Exploiting it to best effect for the individual and organisation is a challenge, but one where success can deliver benefits integral to adapting, improving and innovating.

The need for robust and active KM is amplified as Crown Servants become more mobile and move posts more often, reducing the constancy of knowledge and experience. The opportunity to share their knowledge and exploit it to the betterment of organisations can help reduce rework, repetition of mistakes and improve delivery time and performance of projects.

As shown here, the Principles build into a hierarchy, with the core Principle at the bottom.

6: Knowledge underpins individual learning	7: Knowledge underpins organisational learning
4: Knowledge is freely sought and shared	5: Knowledge increases in value through re-use

3: Knowledge is captured where necessary and possible

2: Knowledge needs the right environment in order to thrive

1: Knowledge is a valued asset

If knowledge is not valued, KM will not attract the level of resource required for success.

Principle 2 recognises that whereas Information Management has tangible items to manage, KM relates to the intangible substance of a person or organisation's awareness. Managing knowledge, therefore, is about working with people to create an environment where their knowledge is given freely and where they are supported and encouraged to share with and learn from others.

Principles 3-5 draw on this. Large and geographically dispersed organisations are unlikely to consistently share knowledge face to face. In order for knowledge to be fully exploited and contribute to the benefit of the organisation, it must be nurtured and readily accessible. This requires techniques to socialise learning (eg through the concept of Communities of Practice); the application of social business software; mentoring programmes; and structured knowledge-elicitation techniques such as exit interviews.

The advantage of making knowledge widely available is that organisations can exploit it to:

- avoid re-work,
- avoid repetition of bad practice / mistakes
- improve processes / ways of working

In this sense, knowledge increases its value by delivering benefit through sharing and re-use.

Principles 6 and 7 build on the preceding ones as the foundation for individual and organisational learning, exploiting knowledge at both the individual and organisational level to become more effective and efficient, increase capability and achieve greater impact.

It is intended that these Principles will be used by departments to inform discussions on Knowledge and form the central tenet of their Knowledge Strategies.

Why This Document Matters

The Information Principles[1] clearly identify that Information is needed to inform policy development and make evidence based decisions, and can be used to drive efficiency and service improvement – enhancing public services, whilst at the same time reducing waste and improving value for money; the same is true of knowledge.

Information and knowledge are inextricably connected in underpinning effective decision-making in government. Building on the Information Principles:

- Information is hard fact – but the ability to use that information to deliver tangible effect comes from the way it is used by human beings; more specifically, how it is converted into knowledge.
- Learning lessons, preventing duplication of errors and effort in the workplace, cannot be done from information alone. To be done successfully, lessons-learnt exercises must incorporate people's experience, insight, skills and how they bring them all together and subsequently share them.

Much of an organisation's capital and organisational advantage resides in the minds of its employees. The little tricks, workarounds, understanding, experience, background and skills in an organisation are rarely captured, yet these, as much as hard information, contribute significantly to organisational competence. People leaving the organisation and taking this know-how with them can have a significant impact on its efficiency and effectiveness.

The public sector has historically benefitted from a stable workforce with on the job training, creating an environment where knowledge has been passed on informally. However, the current workforce is much smaller, more mobile and tends to move jobs more regularly, often taking hard earned knowledge and experience with them. This is exacerbated by a demographic of people above their 40s and current staffing reductions which often result in older, more experienced people leaving.

Given the importance of knowledge to the public sector, there is clearly a need for greater access to the latent knowledge of individuals, taking a strategic view on what knowledge is vital and using state of the art methods and, where appropriate, technologies to ensure that knowledge is effectively shared, captured and re-used. This document therefore presents, for the first time, an overarching set of Knowledge Principles for the UK public sector.

These Knowledge Principles are intended to express timeless truths to which all public sector organisations can subscribe - but also to provide, as a corollary, concrete implications for organisations to consider when implementing KM programmes. The Principles are intended be bold and challenging and to set direction. They are not however intended to be directives. It is for each organisation to consider the Principles and to set the extent of their own ambition – interpreting the implications in the light of their own unique organisational context.

The Principles provide high-level foundations and therefore their scope is intentionally broad. They apply to all knowledge that is created and re-used by a UK public sector organisation. They apply to both tacit and articulable knowledge, and to knowledge at all stages of its lifecycle[2].

The intention is that organisations across the public sector will become increasingly aligned in their use and management of knowledge, drawing their own local strategy and practices from a common set of Principles and best-practices.

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[1] http://www.nationalarchives.gov.uk/information-management/manage-information/planning/information-Principles/
[2] See diagram, p.7

How To Use This Document

This document is intended to be of interest and relevance to a wide readership. However it is specifically aimed at those responsible for creating Knowledge Management Strategies for UK Public Sector organisations. The purpose of the Principles is to provide a common and consistent set of themes and best practices resulting in a coherent approach to realising, and capitalising on, the value of knowledge for the UK Public Sector as a whole.

Value of Knowledge to Citizens and Government
The Principles are fundamentally based on realising the value of knowledge for the UK Public Sector. The principal drivers are therefore efficiency, service improvement, value for money, and innovation.

Principles Structure
Each Principle consists of the following parts:

- *Name* - a brief, memorable title

- *Statement* - a more descriptive explanation of what the Principle is about

- *Rationale* - explaining why the Principle is important

- *Implications* - highlighting concrete implications for organisations which arise from subscribing to the Principle.

The implications are particularly important as they provide a checklist of topic areas which a Knowledge Strategy aligned with the Principles would be expected to cover. Each implication is supported by further text (in italics) which gives examples of what this might include.
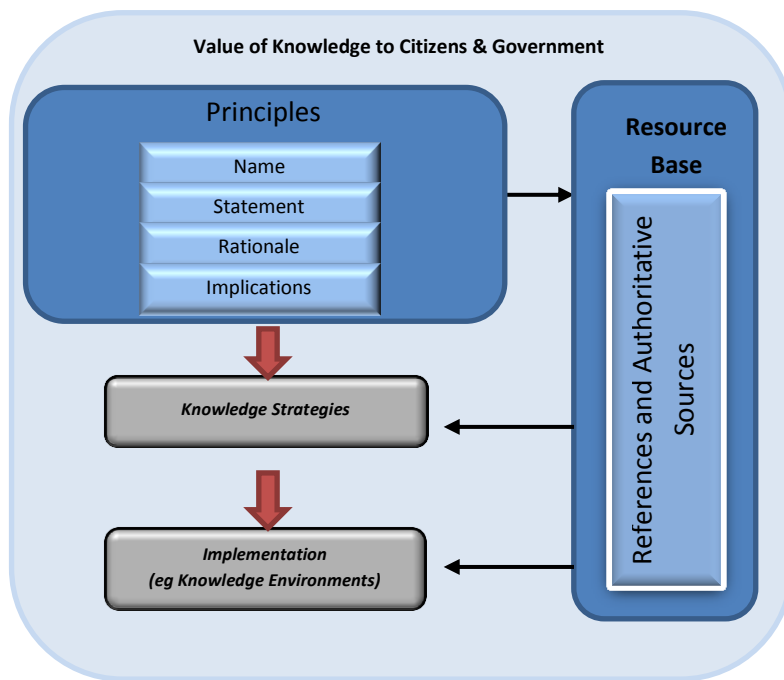
Resource Base
The Principles are supported by a companion Resource Base. This lists extensive references and authoritative sources relating to each Principle. The Resource Base thus provides important further assistance for implementation of the Principles.

The remainder of this document describes the Principles themselves.

- The next chapter gives a brief overview of the Principles as a set, explaining how they form a logical hierarchy.
- Then there is a chapter per Principle, explaining each Principle in detail.
- Finally, an appendix provides a quick-reference checklist of each Principle and its implications.

The following diagrams show how all this works:

1.

Value of Knowledge to Citizens & Government

Principles
- Name
- Statement
- Rationale
- Implications

Resource Base

References and Authoritative Sources

Knowledge Strategies

Implementation (eg Knowledge Environments)

2.

Acquire /Create

Re-use

Assess

The Knowledge Lifecycle

Learn (Individual /Collective)

Apply

Share

What is Knowledge?

There are many definitions of knowledge derived from dictionaries or academic text books. As the specific context for this document is Knowledge Management, the definition put forward by Davenport & Prusak[3] best fits the bill:

> ***"Knowledge is a fluid mix of framed experience, value, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information."***

Background

It is generally accepted that knowledge cannot be managed in any conventional sense as it is the product of an individual's mental processes; and that what is actually meant by KM is the management of environment, cultures and behaviours to proactively stimulate knowledge creation and sharing.

Thus, the definition of knowledge has to encompass three key elements:
- The "mix"
- The evaluation of new experiences and information
- The incorporation of new experiences and information.

The Mix

Every individual has a unique mix of framed experience, value, contextual information and expert insight that informs their outlook. These are "deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world"[4].

The Evaluation

Each individual's view of the world is slightly different and thus how they perceive, process and act upon information is based on and rooted in their individual experiences.

The Incorporation

*"It [knowledge] originates **and is applied** in the mind of knowers"* [5].
The act of evaluating new experiences and information tests our existing views by supporting or challenging them. We weigh this up, evaluate it, and as a result incorporate all, some or none of it into our existing knowledge, thereby creating new knowledge.

Organisational View

In the same way as an individual has a unique view of the world, so an organisation has a unique shared view which it projects to the world. There may be different sub-cultures within the organisation, but in general terms these will ultimately coalesce into a single, coherent corporate view.

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[3] Davenport, Thomas H and Prusak, Laurence: Working knowledge: how organisations manage what they know, Harvard Business School Press; 2nd Rev Ed edition, 2000
[4] Senge, Peter M: The fifth discipline: the art and practice of the learning organisation. Random House Business; 2nd Revised edition , 2006
[5&5] Davenport & Prusak, op cit.

The same factors apply: this time the mix is an aggregation of the individual views plus corporate history and experiences and is embodied not "only in documents or repositories but also in organisational routines, processes, practices and norms."[6]

Evaluation and subsequent incorporation of knowledge within the organisation can be from lessons learned, organisational methods / practices such as Communities of Practice (COPs), online forums and/or face-to-face briefings, eg Sharing New and Acquired Knowledge (SNAK) sessions. The individuals in an organisation should test and evaluate outputs from these, either formally or informally. The wider the distribution, the greater the exposure and testing.
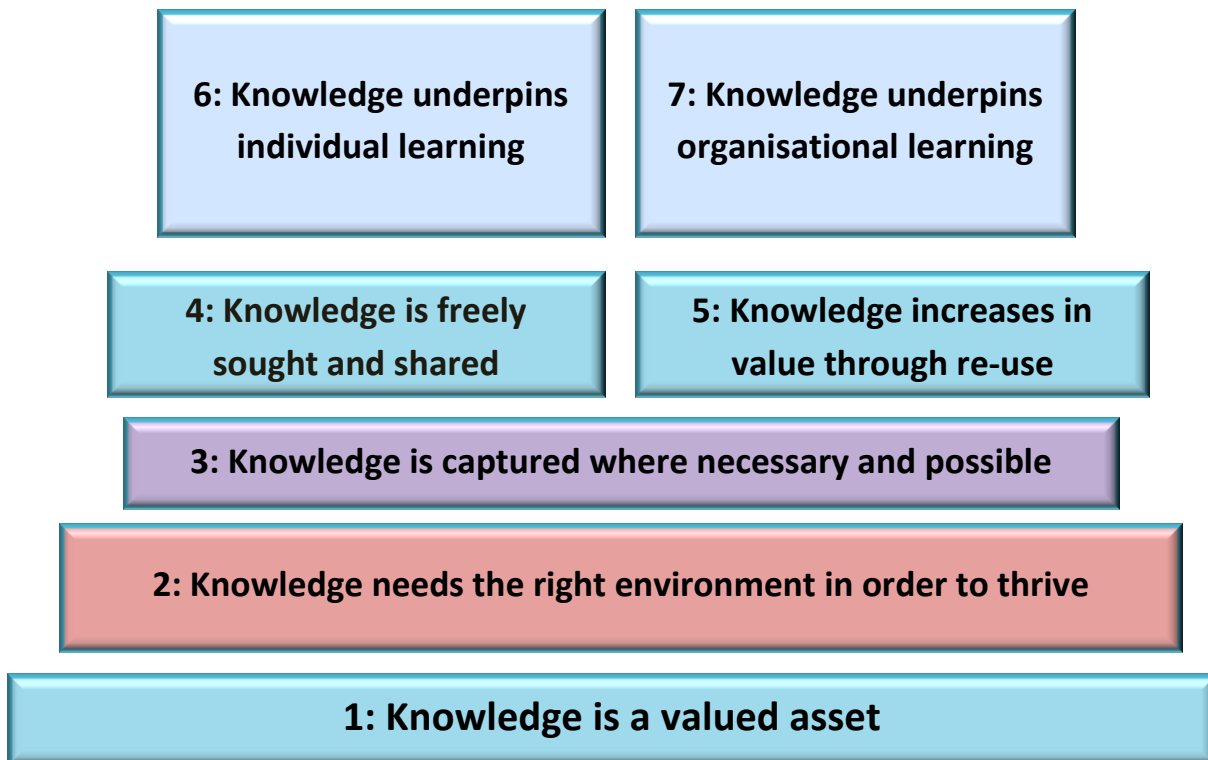
NOTE: One thing to bear in mind is that a limited number of personnel can disproportionately affect the shared view. This can be overt, where influential individuals seek to own/set the direction and cultures of an organisation. Alternatively, it can be an unintended consequence: for example the influence of films or television productions which alter historical fact to enhance dramatic effect, leaving an indelible – and erroneous – print on an entire culture. These are things that every organisation must be aware of.

Knowledge is supported by, but is not Information

Information is a tangible asset which can be managed by defined processes and ways of working: essentially, "hard" system activity. Knowledge however is not, it is an intangible asset, held in the minds of individuals. To share knowledge effectively requires "soft" skills which set the environment and influence the behaviours and cultures of both individuals and organisations.

While effective information management is a key component of a comprehensive knowledge creation and sharing policy, organisations must recognise that knowledge cannot be handled simply by using ICT, IS and associated tools.

Principles Overview

6: Knowledge underpins individual learning	**7: Knowledge underpins organisational learning**
4: Knowledge is freely sought and shared	**5: Knowledge increases in value through re-use**

3: Knowledge is captured where necessary and possible

2: Knowledge needs the right environment in order to thrive

1: Knowledge is a valued asset

Seven Principles have been identified. They build naturally into a hierarchy, as depicted in the diagram above.

> **The hierarchy is important as each Principle builds on that which has gone before. For example, it is unlikely that knowledge can be re-used unless it is also valued, freely shared and, where possible, captured.**

Principles 1 and 2 provide the foundation on which all others depend. It is crucial that knowledge is valued as an asset and managed, protected, and exploited throughout its lifecycle. Governance should be light-touch with a consistent approach to risk assessment. Organisations should define roles and responsibilities and develop skills and capabilities.

Principles 3 and 4 help to unlock the value inherent in knowledge. Captured knowledge needs to be fit for purpose in terms of its content, and transmission format. It increases in value when presented in standardised/open formats which can be linked to other information and/or authoritative sources; good information practice supports this.

These two Principles allow knowledge to become truly pan-organisational, enabling all knowledge to be available regardless of geographic location, or proximity in organisational networks

NOTE: There are differing views on whether captured knowledge should be categorised as knowledge or as information; notwithstanding these views, without the ability to share knowledge other than verbally, its value is inevitably restricted.

Facilitating knowledge sharing by providing tools such as collaborative workspaces and encouraging formal and informal networking also helps to spread knowledge. This makes it available for wider organisational benefit.

With these pre-requisites in place organisations can begin to achieve the next Principle: re-use. Re-use both avoids wasteful duplication, and provides the means to extract value in new and innovative ways.

The top layer builds on all of the layers below, emphasising the relationship between knowledge management and learning. These become the two final Principles: knowledge seeking underpinning individual learning; and knowledge sharing underpinning organisational learning.

Principle 1 - Knowledge is a valued asset

Statement

Knowledge is an asset which is fundamental to the efficient and effective delivery of public services. This Principle emphasises the importance of an organisation recognising that the seeking and sharing of knowledge leads to better outcomes, including:

- Increased collaboration
- Improved quality of evidence-based decisions and continuous improvement
- Enhanced speed of decision making and provision of advice
- Reduced duplication of effort
- Increased business resilience

Organisations need to understand their need for knowledge and value that knowledge in business terms. They should appreciate that it is through knowledge that they deliver value and impact. In parallel with other assets (eg buildings, machinery, people, money), knowledge needs to be fully and appropriately exploited for maximum business benefit.

Rationale

Valuing knowledge as an asset is the basis on which all other knowledge Principles depend. It is essential to establish a culture where knowledge is valued if people are to share and capture knowledge freely and if the leadership of organisations are to promote knowledge management and support staff in such activity.

Implications for Knowledge Management Strategy

- **There is a declaration from the organisation clearly acknowledging and establishing the importance of knowledge to the business.**

- **The importance of knowledge is reflected in organisational policies and practices.**

- **Tacit and explicit knowledge assets need to be considered, and given equal weight.**

Principle 2 - Knowledge needs the right environment in order to thrive

Statement

In order for knowledge to thrive, it requires appropriate behaviours and cultures, fostered and adopted by leaders and individuals alike, which encourage the free sharing of knowledge to the advantage of individuals, the organisation and citizens.

Leaders must allocate time, acknowledge contributions and ensure a no-blame, no ridicule ethos prevails. Individuals must respond positively, using the opportunity to seek out and share knowledge.

In order to develop the environment, there are many tools and techniques available. Good tools, such as an organisation-wide collaborative environment, can facilitate knowledge sharing, provided their use is explained, promoted and encouraged, not coerced. Likewise, making the physical environment conducive to collaboration and the "chance encounter", via breakout areas, soft seating, coffee points etc is helpful, but leaders need to encourage use of these spaces and ensure everyone knows informal meetings, conversations and discussions are sanctioned. Organisations must avoid the temptation to view these tools as a solution in themselves.

Rationale

Establishing culture, policies and practices that encourage diverse knowledge sharing ensures that knowledge has the potential to be utilised as fully as possible across an organisation. It also enables the capture and re-use of knowledge.

Implications for Knowledge Management Strategy

- **The management of knowledge is a combination of soft skills and effective resource management.**

- **Knowledge sharing should be recognised and rewarded.**

- **Expectations of a need to share knowledge are set at all levels.**

- **Knowledge sharing across the organisation is monitored and reviewed.**

- **Tools to support knowledge sharing are provided and promoted.**

Principle 3 - Knowledge is captured where necessary and possible

Statement

Capturing of knowledge turns that which is held tacitly in the heads of members of staff into explicit, recorded knowledge. It is important to note that not all knowledge needs to be (or indeed can be) captured in this way. That said, some knowledge – particularly that which has widespread application and/or long-term value, and/or is likely to be transient in its availability – should be captured if possible.

Knowledge can be captured in a range of different ways. Capture should:
- be as efficient as possible
- match techniques to situations
- maximise potential for re-use (easy to find, easy to access).

Captured knowledge needs to be refreshed: identifying ownership and associated responsibilities, as with information assets, is a key part of this.

Rationale

Capturing knowledge increases its potential for re-use. It is a more efficient way to enable such re-use where the knowledge has wider application, and particularly in circumstances where it is at risk of being lost to the organisation, for example through the loss of experienced staff.

Implications for Knowledge Management Strategy

- **The organisation needs to understand which vital and potentially transient knowledge it needs for its business and ensure efforts are made to capture it**

- **A range of capture techniques should be evaluated and promulgated**

- **Captured knowledge needs to be owned and refreshed**

- **Tools for knowledge capture should be provided and promoted.**

NOTE:
- **Knowledge capture is not synonymous with knowledge management, and organisations should be wary of over-reliance on knowledge capture programmes. Only a small proportion of collective corporate and/or individual knowledge relative to the whole can ever be captured effectively. Good KM programmes must acknowledge and address knowledge sharing and organisational learning to be properly effective.**
- **Knowledge is not static. Databases of captured knowledge can become (a) unwieldy and (b) outdated unless they are regularly reviewed and refreshed. Organisations should consider ways of feeding captured knowledge back into the business to improve processes and practices.**

Principle 4 - Knowledge is freely sought and shared

Statement

Knowledge is an asset that develops from the intellectual activity of individuals – which can be brought together to form Organisational Knowledge. Knowledge cannot be *demanded* from an individual in any sense that would ensure a full and total disclosure. Instead organisations must create a culture, supported by leadership and individual behaviours, which encourages the free seeking and sharing of knowledge for the benefit of all.

To realise its full benefit knowledge needs to be shared freely, otherwise it is of limited value, benefiting only its keeper. This Principle highlights the importance of developing ways to share knowledge, to move from a perspective that 'knowledge is power' to one where 'knowledge sharing' is power.

Knowledge sharing should not be codified or constrained, unless there are over-riding security considerations. Knowledge can be relevant in unlikely or disparate ways and sharing should be maximised where possible, to uncover these hidden linkages.

Rationale

The value of knowledge is in the amalgamation of an individual's experience, thought processes, education and training, together with the information to which they are exposed. Only the individual knows the full extent of that knowledge and the reasoning behind any conclusions they draw from it, and therefore non-freely-given knowledge can never generate the confidence or assurance that it is either accurate or complete.

Implications for Knowledge Management Strategy

- **Knowledge management is a combination of soft skills and effective resource management.**

- **Leaders do not try to pressurise individuals into disclosing knowledge.**

- **Leaders should foster a culture where knowledge sharing is viewed as empowering.**

NOTE:
- **Shared knowledge needs to be credible. Encouraging rather than demanding knowledge-sharing is likely to elicit more credible, reliable output.**
- **Knowledge differs from person to person. Sharing knowledge widely allows for quality checking and for understanding to be tested and, where necessary, clarified.**

Principle 5 - Knowledge increases in value through re-use

Statement

The value of knowledge can be multiplied by re-use. This requires thinking outside traditional silos and proactively looking for opportunities to re-use. Promoting a culture of knowledge-sharing facilitates this approach.

Aspects of re-use include:

> *Internal re-use* - making sure that full value is gained from using knowledge within the organisation in areas of both obvious and less immediately obvious applicability.

> *External re-use* – sharing knowledge with others across organisational boundaries, particularly within the public sector or more generally with private businesses and citizens. Re-use involves considering what knowledge an organisation can make available to others, but it also involves looking at what others have on offer, and how an organisation might itself re-use this external knowledge.

Whilst this Principle strongly encourages re-use, it is important to appreciate that, as with information, re-use does require a careful risk-based judgement to be made with regard to exploiting vs protecting sensitive knowledge, as well as consideration of the costs and benefits involved, and any rights or other commercial considerations.

The ability to govern the dissemination, capture, storage and retrieval of information is key to the ability to share explicit knowledge across an organisation regardless of geographical or functional dispersion.

Rationale

This Principle again builds on what has gone before. No significant re-use of knowledge will be achieved unless it is effectively sought, shared and, where necessary and possible, captured.

Knowledge re-use presents opportunities for cost and time savings and efficiencies. The practice of re-using knowledge helps embed a culture of learning[7] within an organisation, promoting a continuous improvement approach and enhancing the quality of decision-making.
Good knowledge management requires time and resource, and is therefore not a zero-cost activity. Tangible return on investment comes from maximising the value of organisational knowledge through appropriate and innovative re-use.

Implications for Knowledge Management Strategy

- **Opportunities to proactively offer knowledge re-use are identified**

- **An approach is established for discovering re-useable knowledge.**

- **An approach is established for promoting re-useable knowledge.**

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[7] "Learning" encompasses, but is not limited to, the following types of activity: courses, classroom training, reflective practice, after-action reviewing, job shadowing, peer-to-peer expertise transfer, one-to-one training, mentoring, community of practice participation.

Principle 6 – Knowledge underpins individual learning

Statement

Knowledge is the cornerstone of learning, both classroom and workplace based. The understanding of learning needs, the content of the learning and the assimilation of the learning either come from an individual / team's knowledge or add to an individual / team's knowledge.

Real value lies in on the job learning – the opportunity to supplement training / education with up to date knowledge from someone doing the job. This is what makes apprenticeships so effective – the blend of classroom and on the job learning.

Exposure to "new" knowledge, experience and skills is assimilated by the individual to form fresh knowledge – the very definition of learning.

Rationale

We cannot learn as individuals if we cannot either experience new things or be exposed to knowledge gleaned through benefiting from others' experiences and skills. We need this to add to or challenge our own understanding of the world, our own knowledge. Without sharing and access to others' knowledge the opportunities to learn are significantly diminished.

Implications for Knowledge Management Strategy

- **Exposure to others' knowledge is essential for an individual to learn.**

- **Learning is a key benefit of sharing knowledge.**

- **Knowledge is a key enabler in developing educational and learning courses.**

Principle 7 - Knowledge underpins organisational learning

Statement

Organisational Learning in this context is the ability of the organisation to benefit from the collective knowledge of its individuals, and apply it through training, changes in procedures / policies / ways of working / technology to improve effectiveness and efficiency.

Thus there is a direct correlation between sharing and re-use of knowledge and improvements in the organisation.

Rationale

Establishing culture, policies and practices that encourage diverse knowledge sharing ensures that knowledge has the potential to be utilised as fully as possible across an organisation. It also enables the capture and re-use of knowledge.

Implications for Knowledge Management Strategy

- **Knowledge management is explicitly recognised as a core component of organisational learning,**

- **Knowledge management is a combination of soft skills and effective resourcing.**

- **Knowledge sharing and seeking should be recognised and rewarded.**

- **The expectation that knowledge will be shared and re-used is embedded at all levels.**

- **Knowledge sharing across the organisation is monitored and reviewed.**

- **Tools to support knowledge sharing are provided.**