

AUDIT AND ASSURANCE

AUDITING AND KNOWLEDGE MANAGEMENT

How to Address Common Problems Through
Knowledge Management: A Case Study

ISACA[®]



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ABSTRACT

Auditors must collect necessary and sufficient information to produce a rational and comprehensive analysis; many auditors need to document appropriate evidence to explain and defend potentially adverse findings. All auditors require expert knowledge of governmental regulations, business norms and practices, and often generate new knowledge about the regulations, norms and practices that they examine during their engagements.

Because audit plans depend so heavily on the expertise of auditors, the quality and comprehensiveness of the information they collect, and the findings that they produce, a systematic approach to knowledge management becomes critical to ensure the accuracy, efficiency and quality of audit engagements across all business disciplines.

This case study traces one audit team's efforts to identify and map its knowledge, and then use that information to develop a knowledge strategy and knowledge management system (KMS). Discover how your team can also optimize the quality and management of its knowledge, leading to improved services for all clients.

Auditing and Knowledge Management: An Overview

As a professional discipline, auditing involves many standard repeatable procedures for researching and assembling information, documenting conclusions and presenting findings and recommendations. Many enterprises establish annual audit plans that require participation from diverse internal business disciplines, departments, employees and, often, external contractors. Some audits focus on information technology security, privacy and regulatory compliance, while others look at financial accounting, governance and business-planning processes and activities. Auditors working across these disciplines must collect necessary and sufficient information to produce a rational and comprehensive analysis; many auditors need to document appropriate evidence to explain and defend potentially adverse findings. All auditors require expert knowledge of governmental regulations, business norms and practices, and often generate new knowledge about the regulations, norms and practices that they examine during their engagements.

Because audit plans depend so heavily on the expertise of auditors, the quality and comprehensiveness of the information they collect, and the findings that they produce, a systematic approach to knowledge

management becomes critical to ensure the accuracy, efficiency and quality of audit engagements across all business disciplines. When the architecture, framework and systems associated with auditing are insufficient, outdated or inadequately scaled, programs become inefficient, unnecessarily costly, slow or outright inaccurate and undependable. Managing individual and collective knowledge is crucial to efficient and effective delivery of audits, and, by extension, client retention and continuity of engagements from year to year. Auditing is not a one-person job. It requires collaboration and sharing of knowledge both within the audit team and between team members and clients to maximize value for all.

This white paper describes the challenges of an enterprise that provides audit services for a range of governmental clients in Australia. The white paper illustrates how common issues arise from inadequate or haphazard knowledge management, and proposes a model for identifying, mapping and managing the knowledge of the auditor team to:

- Improve its procedures and documentation
- Expand and build its expertise
- Optimize the quality and timeliness of its services to all clients

The Case Study: Subject, Business Context and Challenges

Enterprise ABC (whose actual name is redacted for this case study) is a publicly traded enterprise with over 250 staff working in five capital cities across Australia. The enterprise is primarily an information and

communications technology (ICT) development and service delivery operation that has expanded to include financial, audit, security and risk management services.

The audit team in one regional office is the subject of this case study. The team consists of approximately 25 consultants of varying levels of experience, backgrounds and qualifications, who have built strong relationships with a diverse range of government customers. Many of the auditors interact daily with clients at all organizational levels. The objective of Enterprise ABC's audit business is to ensure it delivers high quality audits and assurance advice to its customers, while maintaining a healthy workplace for its employees that builds trust, innovation and success.

The team recruited numerous candidates as potential auditors, but many did not meet expectations, and some became unhappy with their jobs and left the enterprise. Auditors require special skills, attributes, experience, training and knowledge; however, not all people have these or know where to find the requisite skills, and not all enterprises provide optimal training in the nuances of auditing for their own industry, business or existing clients. New staff often joined the enterprise with good knowledge of standard auditing, but little or no knowledge of existing internal processes established for repeat clients. Experienced and highly effective staff sometimes left the enterprise, taking their expertise and accumulated knowledge with them.

During engagements, auditors discovered, created, collected, stored, shared and disposed of a range of knowledge and knowledge artifacts as they performed their tasks. Knowledge and artifacts were managed by individuals at Enterprise ABC in diverse ways, with little consistency or discipline around access, reuse and duplication of effort. Information was stored in individual

email folders or saved to shared network drives, with no uniform policy or controls around access, backup and recovery. Auditors gathered knowledge internally, from individual and shared drives, and hard-copy files; publicly, from the Internet; and from clients who did not always store knowledge in a way that supported appropriate access. Enterprise ABC had a range of systems, tools and processes for sharing and storing information, which were often acquired and deployed at different times, under various historical circumstances, and grew more discontinuous over time. It became imperative to improve the management of auditor knowledge, training, documentation, artifacts, sources of information and conclusions to ensure consistency and efficiency of audit engagements, increase staff retention and reduce costs.

The auditing team undertook a careful and deliberate review, mapping and inventory of its knowledge architecture. By understanding the depth and breadth of knowledge assets—who holds them, who uses them, how they are used and which activities require them—Enterprise ABC designed a comprehensive knowledge management strategy to:

- Improve audit engagements
- Leverage common artifacts
- Disseminate targeted training
- Improve efficiency and timeliness
- Lower expenses
- Maximize quality

The following sections provide details about the knowledge model, audits and mapping used by the Enterprise ABC audit team, and the resulting knowledge management strategy and system.

Knowledge Models, Audits and Mapping

During its review, the Enterprise ABC audit team conducted a knowledge audit of existing knowledge artifacts, tools and resources and identified assets and resources they need to complete their work. The team discovered gaps in existing processes and technology which could not be closed fully within the existing infrastructure. The audit identified newer, more aspirational, cutting-edge technologies and intelligence that could improve the current state. Ultimately, the team determined that a more holistic, systematic approach was necessary to acquire new technologies and integrate older technologies with newer applications and processes.

To guide the auditing and mapping of knowledge assets, the team sought out a model for knowledge management, and chose Patrick Lambe's Wheel of Knowledge (WoK).¹

Other models can be used for the same purpose. Examples include the DIKW (Data, Information, Knowledge, Wisdom) pyramid,² COBIT® 5 information model³ or any other model that systematically organizes information, data and knowledge. Because the WoK model can accommodate a wide diversity of knowledge sources, the Enterprise ABC audit team used it to help them analyze gaps. The WoK is powerful, "because when you have used it to map your existing or desired knowledge assets, each type of knowledge suggests different kinds of knowledge management strategies."⁴

The WoK accommodates the following knowledge aspects:

- **Documents**—artifacts (print and electronic), books and videos
- **Methods**—standards, work routines and instructions
- **Skills**—abilities and competencies acquired through prior education or

training on the job

- **Relationships**—soft knowledge acquired through networks and distributed across social groups
- **Experience**—proficiency and judgment accrued over time, often informing the ability to take shortcuts
- **Natural talent**—inherent good judgment, cognitive aptitude and intuition

Figure 1 shows the WoK adapted for this case study.

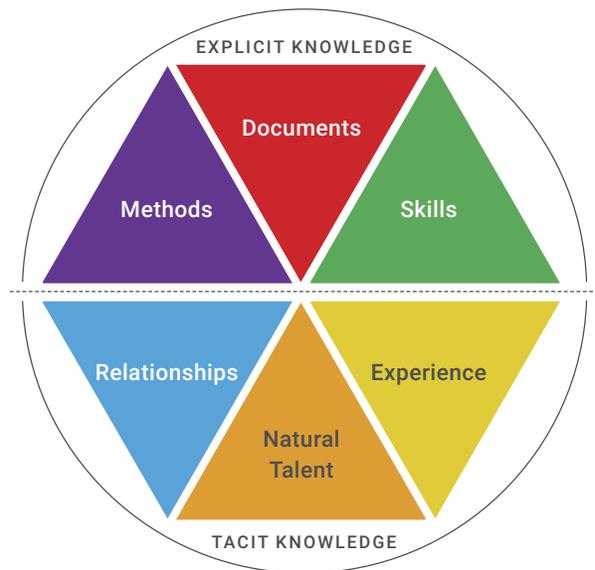


FIGURE 1: Wheel of Knowledge

Source: Adapted from Lambe, Patrick; Edgar Tan; *Knowledge Audit and KM Diagnostics—Workbook*, Straits Knowledge, USA, 2013. Used with permission.

Explicit knowledge includes procedures, instructions, explanations, user documentation, standard operating procedures, etc. Explicit knowledge often explains a concept or process and adds some dimension from experience. Tacit knowledge is held in one person's mind or is inherent in relationships among people. It is generally combined with personal experiences, memories, values,

¹ Lambe, Patrick; Edgar Tan; *Knowledge Audit and KM Diagnostics—Workbook*, Straits Knowledge, USA, 2013, www.straitsknowledge.com

² Rowley, Jennifer; "The wisdom hierarchy: representations of the DIKW hierarchy," *Journal of Information Science*, 2007, 33 (2): 163–180, <http://journals.sagepub.com/doi/abs/10.1177/0165551506070706>

³ ISACA, COBIT® 5: *Enabling Information*, USA, 2012, <http://www.isaca.org/COBIT/Pages/COBIT-5-Enabling-Information-product-page.aspx>

⁴ Op cit Lambe

etc., and includes natural ability, talent or intuitive perceptions on the part of the person with the knowledge.

The audit team held a series of workshops attended by all team members. During the knowledge audit workshop, participants considered each of Lambe's knowledge aspects and listed the knowledge sources appropriate to each aspect, within their local context. The team identified

and distinguished discrete knowledge sources by type of knowledge aspect, and marked each source with a colored sticky note corresponding to one of the WoK's six colors.

The team organized the results of the knowledge audit exercise by Lambe's six knowledge aspects, as shown in **Figure 2**.

DOCUMENTS	<ul style="list-style-type: none"> • Audit templates (audit plans, audit reports, audit control models and interview notes) • Auditing books and journals (including <i>Internal Auditor</i>, the journal of the Institute of Internal Auditors, and <i>ISACA® Journal</i>)
METHODS	<ul style="list-style-type: none"> • <i>International Standards for the Professional Practice of Internal Auditing (Standards)*</i> • Instructions for completing Microsoft® OneNote® audit working papers • Explanations and observations gathered from coworkers and clients <p><small>* Institute of Internal Auditors (IIA), revised Standards, effective January 1, 2017, https://na.theiia.org/standards-guidance/mandatory-guidance/Pages/Standards.aspx</small></p>
SKILLS	<ul style="list-style-type: none"> • Acquired through training and educational courses: <ul style="list-style-type: none"> • Certified Information Systems Auditor® (CISA®), An ISACA® Certification • Certified Internal Auditor® (CIA®)* • Graduate diploma in internal auditing • Report-writing course • IT-auditing course • On-the-job skills <p><small>*Institute of Internal Auditors (IIA), Certified Internal Auditor® (CIA®), https://global.theiia.org/certification/CIA-Certification/Pages/CIA-Certification.aspx</small></p>
EXPERIENCE	<ul style="list-style-type: none"> • Several staff on the Enterprise ABC audit team have many years of experience in the profession (e.g., 15–25+ years) • Some staff have experience in particular specialized areas and are often called on by other auditors to share their expertise
RELATIONSHIPS	<ul style="list-style-type: none"> • Pairing less experienced staff with an experienced auditor • Attending externally organized professional development sessions where internal auditors from a range of organizations gather to discuss a specific area of interest or topic • Attending regular internal meetings of audit staff to share recent experiences, challenges and knowledge • Participating in internal discussion forums online • Visiting (and contributing to) internal online team sites for specific clients or topics • Connecting with others in the field through social media sites, such as LinkedIn® and Facebook®* <p><small>* Note that other categories not included in this case study are possible and should be evaluated based on the enterprise. For example, relationships between subject matter experts, technical resources required to support the audit process (e.g., with regard to collecting evidence) and other artifacts may be considered. These relationships are not included here because they did not form part of this case study.</small></p>
NATURAL TALENT	<ul style="list-style-type: none"> • Auditors need to hold numerous attributes to be successful as an auditor. Some of these attributes are: <ul style="list-style-type: none"> • Ability to communicate • Ability to listen • Ability to think strategically • Research skills • Professionalism • Ability to meet deadlines • Enterprises may develop and store assessments, reviews or other artifacts that document natural talent among auditors. Over time, staff recruitment and retention strategies may be informed by the knowledge gained from such sources.

FIGURE 2: Results of Knowledge Audit Exercise Organized by Knowledge Aspect

Distinguishing among various types of knowledge audit is important when assessing knowledge gaps in an enterprise. Note that Lambe identifies several different types of knowledge audit (see **figure 3**).⁵

⁵ Description compiled from personal email communication with Patrick Lambe, July 2013

KNOWLEDGE AUDIT TYPE	DESCRIPTION
Knowledge management audit	Identifies knowledge management processes, practices and systems
Knowledge asset audit	Determines the what, where and who of knowledge assets—as well as associated gaps—across enterprise activities
Knowledge flow audit	Analyzes social networks and the flows of knowledge assets
Intellectual capital audit	Identifies the human, structural, tangible and intangible knowledge assets of the enterprise
Intellectual property audit	Identifies the trademarks, recipes, patents, trade secrets and copyrights of the enterprise

FIGURE 3: Lambe's Knowledge Audit Types

The team leveraged an existing chart of core activities that was developed to train new recruits; during the workshop, team members reevaluated the activities in the context of Lambe's knowledge aspects. They categorized

activities in terms of different knowledge audits, identifying intangible and tangible assets, workflows, social networks and cultural practices across their audit engagements (see **figure 4**).

KNOWLEDGE INPUTS		CORE ACTIVITY	KNOWLEDGE OUTPUTS
<ul style="list-style-type: none"> • Template – audit proposal • Experience 	<ul style="list-style-type: none"> • On the job learning • Internal online discussion forum 	Submit a proposal	<ul style="list-style-type: none"> • Audit proposal • Discussion forum contributions
<ul style="list-style-type: none"> • Template – audit plan • Audit control models – internal • Audit control models – external • Audit methodology • Auditing standards 	<ul style="list-style-type: none"> • Observation • Audit working paper instructions • Training courses • On the job learning • Internal staff meetings • Internal online discussion forum 	Plan audits	<ul style="list-style-type: none"> • Audit plan • Control model • Updated audit working papers
<ul style="list-style-type: none"> • Template – Interview notes • Interview note-taking style • Auditing books and journals • Auditing standards • Observation 	<ul style="list-style-type: none"> • Audit working paper instructions • Personal attributes • Training courses • On the job learning • Client databases 	Conduct fieldwork	<ul style="list-style-type: none"> • Completed audit control model • Finalized interview notes
<ul style="list-style-type: none"> • Topic expertise • Audit experience • Client experience • Interview notes • Client documentation • Auditing standards 	<ul style="list-style-type: none"> • Observation • Audit working-paper instructions • Training courses • On the job learning • Personal attributes 	Analyze fieldwork	<ul style="list-style-type: none"> • Audit findings • Audit recommendations
<ul style="list-style-type: none"> • Template – audit report • Auditing standards • Observation • Audit working-paper instructions 	<ul style="list-style-type: none"> • Training courses • Audit experience • On the job learning • Internal staff meetings • Personal attributes 	Report audit	<ul style="list-style-type: none"> • Audit report
<ul style="list-style-type: none"> • QA checklist • Auditing standards • Audit working-paper instructions 	<ul style="list-style-type: none"> • Training courses • Audit experience • On the job learning 	Ensure quality	<ul style="list-style-type: none"> • Quality Assurance
<ul style="list-style-type: none"> • Template – timesheet • Observation • Template – Invoice proposal 	<ul style="list-style-type: none"> • On the job learning • Internal staff meetings 	Perform administrative tasks	<ul style="list-style-type: none"> • Completed timesheets • Invoices
<ul style="list-style-type: none"> • Auditing standards • Training courses 	<ul style="list-style-type: none"> • Internal staff meetings • External professional development forums 	Manage professional development	<ul style="list-style-type: none"> • Certifications • Training completed • Enhanced skills
<ul style="list-style-type: none"> • Observation • Client experience • On the job learning • Internal staff meetings 	<ul style="list-style-type: none"> • Staff recruitment and retention strategy 	Develop business / manage clients	<ul style="list-style-type: none"> • Client management plan • Discussion forum contributions

FIGURE 4: Enterprise ABC Audit Team Core Activities

The audit team produced a detailed map of knowledge inputs and outputs, each correlated to the audit team's core activities (see figure 5). The map codifies the results of knowledge identification in a visual way and traces knowledge inputs to knowledge outputs in the team's audit process. The map also helps to identify gaps in

knowledge. The audit team used the insights gained from the knowledge audits and resulting maps to create a new knowledge management strategy and a set of written requirements for a comprehensive knowledge management system.

LEVEL 1 & 2 AUDITORS								LEVEL 3 & 4 AUDITORS
ACTIVITY A Submit a proposal	ACTIVITY B Plan audits	ACTIVITY C Conduct fieldwork	ACTIVITY D Analyze fieldwork	ACTIVITY E Report audit	ACTIVITY F Ensure quality	ACTIVITY G Perform administrative tasks	ACTIVITY H Manage professional development	ACTIVITY I Develop business/ manage clients
<p>Task A1 Review procurement documentation.</p> <p>Task A2 Liaise with client contact.</p> <p>Task A3 Establish tender response team.</p> <p>Task A4 Determine necessary and available skills.</p> <p>Task A6 Finalize proposal / quote and submit to client.</p>	<p>Task B1 Develop strategic audit plan.</p> <p>Task B2 Identify tasks.</p> <p>Task B3 Identify audit skills for job.</p> <p>Task B4 Identify availability of skills.</p> <p>Task B5 Prepare project budget.</p> <p>Task B6 Conduct team meeting.</p> <p>Task B7 Set up WPs and project activation.</p> <p>Task B8 Conduct entry interview.</p> <p>Task B9 Gather information on audit topic.</p> <p>Task B10 Prepare detailed audit plan including test program.</p>	<p>Task C1 Document system and process.</p> <p>Task C2 Interview relevant client staff.</p> <p>Task C3 Identify risks / threats.</p> <p>Task C4 Complete field audit plan / control model / test program.</p> <p>Task C5 Undertake testing.</p>	<p>Task D1 Analyze test results with team members.</p> <p>Task D2 Identify and assess findings.</p> <p>Task D3 Discuss findings / recommendations with team members and auditee.</p> <p>Task D4 Reassess / update risk model.</p>	<p>Task E1 Plan report / layout.</p> <p>Task E2 Draft report or issues paper for comment.</p> <p>Task E3 Conduct exit interview and seek management comments.</p> <p>Task E4 Prepare final audit report.</p> <p>Task E5 Distribute report, including management comments / response.</p> <p>Task E6 File reports on WPs and permanent file.</p>	<p>Task F1 Monitor progress of audit.</p> <p>Task F2 Monitor staff productivity.</p> <p>Task F3 Monitor self productivity.</p> <p>Task F4 Manage audit team.</p> <p>Task F5 Assess achievement of audit work program.</p> <p>Task F6 Regularly review working papers.</p>	<p>Task G1 Complete timesheets.</p> <p>Task G2 Manage WIPs and invoicing.</p> <p>Task G3 Conduct staff performance reviews.</p> <p>Task G4 Manage multiple people.</p> <p>Task G5 Assist in business planning.</p> <p>Task G6 Manage multiple client sites.</p> <p>Task G7 Liaise with other service lines.</p> <p>Task G8 Present and chair a variety of internal and client meetings.</p>	<p>Task H1 Plan self-development.</p> <p>Task H2 Identify training needs of audit staff.</p> <p>Task H3 Keep abreast of technological changes.</p> <p>Task H4 Be a member of or contribute to professional body.</p> <p>Task H5 Achieve appropriate qualifications.</p> <p>Task H6 Begin to gain or gain an advanced knowledge of own area of specialty.</p> <p>Task H7 Contribute to professional journals.</p>	<p>Task I1 Provide advice to clients.</p> <p>Task I2 Attend marketing events.</p> <p>Task I3 Identify new opportunities.</p> <p>Task I4 Visit all clients regularly.</p> <p>Task I5 Provide value-add on assignments.</p> <p>Task I6 Identify new service or improvements to existing ones.</p> <p>Task I7 Participate in the running of an external organization.</p>

FIGURE 5: Enterprise ABC Audit Team Knowledge Map

Knowledge Management Strategy and System

Developing a robust knowledge management strategy is critical to guide the design of a new, detailed and comprehensive knowledge management system (KMS).

The Enterprise ABC audit team had several legacy applications and practices loosely functioning alongside each other as a KMS (e.g., Microsoft OneNote

collaboration tool, various discussion forums and team meetings). An underlying infrastructure already existed to support the audit team; it included appropriate facilities (office accommodation, storage containers, desks, etc.), laptops, Internet, collaboration software and networking equipment. Cumulatively, these components left significant room for improvement. The Enterprise ABC audit team hoped to achieve a more integrated system connecting people, assets, technology and core activities

in support of discovery, storage, integration, sharing and delivery of knowledge.

Enterprise ABC’s audit team forged a knowledge management strategy from some of the key elements and their components in David Williams’s “Components of a Knowledge Management System.”⁶ The audit team defined their key KMS concepts (**figure 6**) based on two of Williams’s key KMS elements—strategy and actors.

Strategy	Includes recognition of the problem, risk and culture around knowledge management in the internal audit team
Actors	Includes knowledge owners and users
Knowledge actors	Includes key contributors and receivers who create, store and share knowledge

FIGURE 6: Knowledge Management System Concepts Critical for Enterprise ABC

For Enterprise ABC’s audit team, knowledge actors include:

- Auditors working in the Enterprise ABC office (both junior and more experienced)
- Clients (who create the documents that are being audited)
- External authors (of standards, journals, books, etc.)
- Audit colleagues in other organizations

The information that these actors collect, create, use and store is kept by the actors themselves, stored in a shared work area (physical and/or electronic), or available in the public domain. The actors interact with one another on a regular basis through internal staff meetings, one-on-one discussions, small internal team meetings and client meetings. In addition, professional meetings involving both internal staff and external audit colleagues (e.g., professional development training sessions) take place monthly.

The Enterprise ABC audit team knowledge management strategy includes the following items:

- All knowledge assets should be identified in terms of actors, including the knowledge owner/custodian, source or authority; they should be

marked according to the actors’ dates of access and modification, and rated for reliability.

- The knowledge assets should be continually assessed, reviewed, updated and disposed of if no longer current. For example, templates should include a date and document name based on a naming convention, so the most recent templates are always used.
- The KMS should ensure that access to different knowledge assets are controlled appropriately, especially regarding update transactions.
- Although the audit staff should have access to the majority of the knowledge, sometimes client confidentiality dictates that only those with a need to know have access to certain information.
- The KMS should integrate with existing infrastructure, including the Microsoft OneNote and SharePoint® products already used extensively throughout the enterprise.
- The KMS should be accessible to staff at any time, from any place, within the enterprise or remotely via handheld devices, such as iPads®, Android® tablets, iPhones®, Android phones, laptops, notebooks and desktop computers.
- Knowledge should be sourced from one place and updated in real time.
- The implementation of the KMS should be executed as a project with appropriate management, timeframes, oversight, testing and training.
- Testing should involve a small subset of the auditors to work through a real-life audit using the KMS. In this way, user acceptance testing (UAT)

⁶ Williams, David; “Components of a Knowledge Management System,” University of Canberra, June 2013

would encompass audit planning, research, information gathering, risk assessment, etc., through field work and reporting.

Williams describes the ideal KMS: “[T]here are seven fundamental elements that must be in place for a system to be considered a ‘KMS’. Within those seven elements, a

range of components may...contribute to the functioning” of the whole system.⁷ The Enterprise ABC audit team developed the elements of their KMS (see **figure 7**) from a combination of some of Williams’ key KMS elements and their components.

⁷ *Ibid.*

KMS ELEMENT	DEFINITION
Purpose	The KMS at Enterprise ABC will connect people, knowledge assets, technology and core activities to facilitate the discovery, capture, integration, sharing and delivery of knowledge.
Problem	There is increasing evidence in the Enterprise ABC audit team of the absence of skills transfer, high staff turnover, duplication of effort, inconsistent work practices and increasing costs associated with these. The KMS will address these issues.
Risk	Poor KMS design can result in misuse or even avoidance of the KMS. Ineffective KMS design may lead to loss of corporate knowledge, high rate of staff turnover and high cost for staff training. The KMS will seek to mitigate this risk.
Benefits	Enterprise ABC hopes to increase capability, streamline activities, reduce costs, increase level of staff retention, and improve existing knowledge assets, processes and efficiencies in operation.
Policy	The KMS encourages innovation in the use and reuse of knowledge assets, technology and sociotechnical solutions for knowledge management.
Key Performance Indicators	Success of the KMS will be indicated through increased profits over similar reporting periods, reduced staff turnover, improved client feedback and reduction in cycle time for all core activities.
Actors	<p>Internal audit team. The auditors working in the enterprise include both junior and more experienced staff.</p> <p>Audit clients. Clients often author documents that are the subject of internal audit activities.</p> <p>External authors. Knowledge is frequently gleaned from external authors of books and journals.</p> <p>Audit colleagues. The broader internal audit community shares knowledge with the internal audit team in the enterprise.</p> <p>Management team. Management provides a level of quality assurance over the knowledge outputs.</p>
Functions/ Functionality	Core activities need to be carried out using specific business rules, procedures and templates. The inputs and outputs from the knowledge mapping exercise will be used to ensure knowledge develops through a process of transformation. The existing core activities model is to be used as the basis for the KMS.
Infrastructure	The KMS will require technical and physical infrastructure, including network servers, cabling, portable media, desks, cabinets, software, Internet technologies, laptops, mobile phones, etc.
Continuous Improvement	The KMS will be subject to an annual assessment, ongoing feedback, KPI monitoring and reporting.

FIGURE 7: Elements Identified and Defined for Enterprise ABC's Knowledge Management System (KMS)

The audit team synthesized results of its knowledge audit with guidance regarding knowledge management strategy and design. They produced a blueprint for a new knowledge management system that integrates, relates

and aligns their knowledge artifacts and core activities with KMS best practices. **Figure 8** shows the resulting blueprint.

KNOWLEDGE MANAGEMENT STRATEGY	Purpose: provide interconnectivity between people, knowledge assets, technology and core activities to facilitate the discovery, capture, integration, sharing or delivery of the knowledge.	Problem: absence of skills transfer, low staff retention, duplication of effort, inconsistent work practices and increasing costs associated with these.	Risks: poor KMS design could result in misuse, non-use. Ineffective KMS design may lead to loss of corporate knowledge, high rate of staff turnover and high cost for staff training.	KM Policy: to be innovative in the use and re-use of knowledge assets, technology and socio-technical solutions for knowledge management.	Benefits: increased capability, streamlined activities, reduced costs, increased staff retention rate, improved use of existing knowledge assets, improved processes & efficiencies in operation.	KPIs: increased profits over similar periods, reduced staff turnover, increased positive client feedback, reduction in time taken in all core activities.
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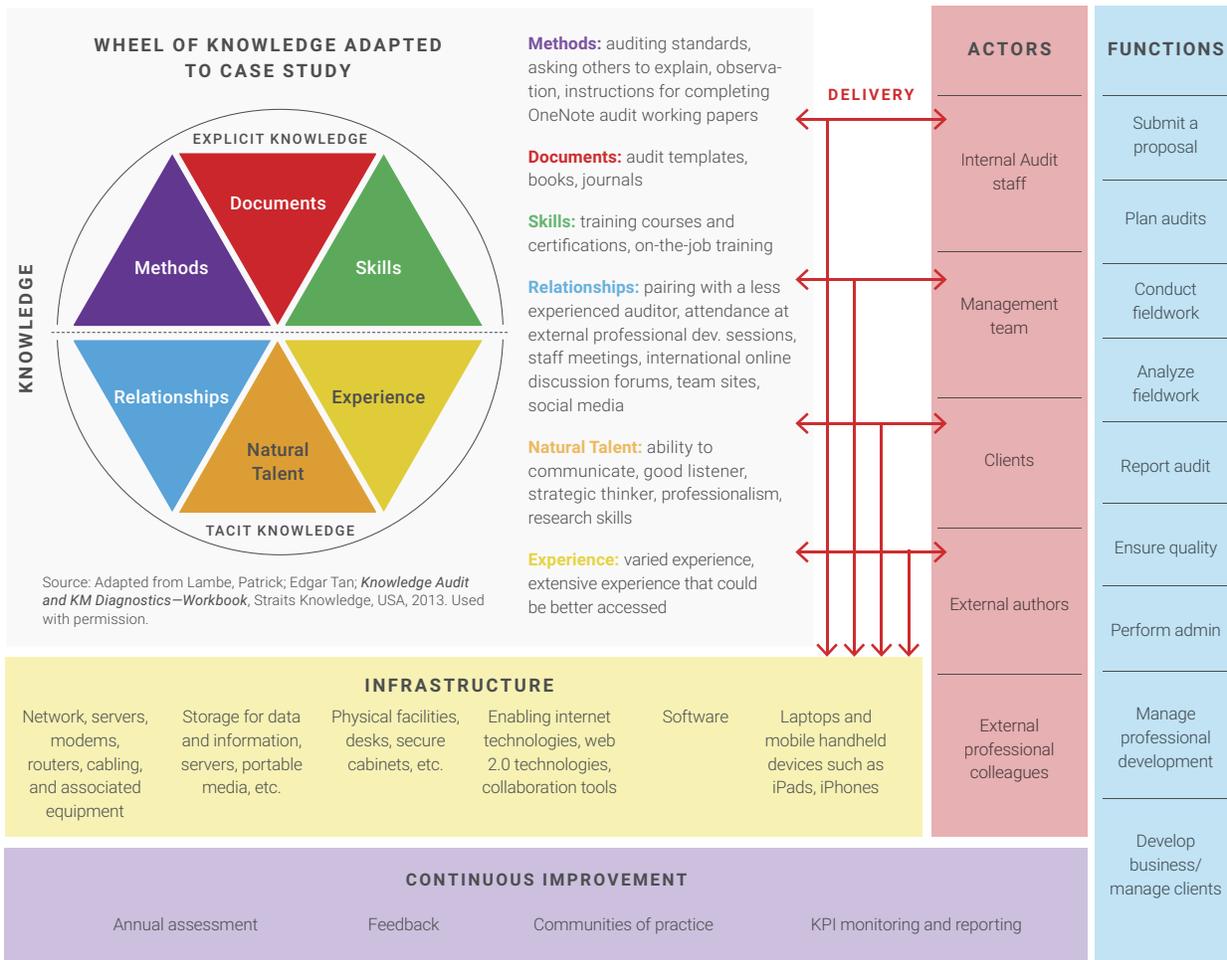


FIGURE 8: Blueprint for Knowledge Management System (Enterprise ABC)

Audit Team's Knowledge Management System Outcomes

The KMS for internal audit brought the following benefits to the Enterprise ABC audit team (specific key performance indicators are outlined in detail in **figure 8**):

- **Increased capability**—Audits can be conducted with expanded scope; audits that were previously unable to be conducted can now be performed.
- **Streamlined activities**—Audits can be conducted more efficiently, faster or with reduced overhead.
- **Reduced costs**—Cost savings can be realized relative to the audit function.
- **Better personnel management**—Staff is retained at a higher rate due to employee engagement and commitment to knowledge.
- **Knowledge efficiency/efficacy**—Existing knowledge assets are more accessible, useful and valuable.
- **Improved processes**—Business processes and audit processes are mutually enhanced and optimized.

- **Efficiencies in operation**—Operational efficiencies are realized.
- **Opportunity for continuous improvement**—Strategies for continuous improvement can be implemented on an ongoing basis.

There are a range of ways to ensure the KMS undergoes continual improvement. They should include:

- **Annual assessment.** A scheduled (annual) assessment will be conducted to evaluate the KMS against expected benefits and costs.
- **Key Performance Indicator (KPI) monitoring and reporting.** Regular reporting of progress against KPIs will occur. KPI progress reports will be prepared each quarter and provided to the management team.
- **Feedback.** The establishment of a community of practice within the enterprise will help ensure continuous improvement of the KMS. The community will gather interested staff on a regular basis to discuss ideas, review use of the KMS and discuss innovative ways of improving it, especially as new technologies come online.

Conclusion

The use of knowledge management specifically to support the audit function helped Enterprise ABC realize a number of tangible business benefits, including cost savings, gains in efficiency, and client satisfaction and retention. Other more intangible benefits included

resiliency and resistance of processes to disruption via attrition. By following a process such as the one described in this paper, enterprises may be able to realize similar gains for their organizations as well.

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Katsumi Honda

CISA, CRISC, CGEIT
Tokyo, Japan

Shruti Shrikant Kulkarni

CISA, CRISC, CCSK, CISSP, ITILv3 Expert
Intelligent Environments, UK

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CISA, CRISC, CISM, CISSP
Oracle Corporation, USA

Tracey Dedrick

Former Chief Risk Officer with Hudson
City Bancorp, USA

Leonard Ong

CISA, CRISC, CISM, CGEIT, COBIT 5
Implementer and Assessor, CFE, CIPM,
CIPT, CISSP, CITBCM, CPP, CSSLP, GCFA,
GCIA, GCIH, GSNA, ISSMP-ISSAP, PMP
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R.V. Raghu

CISA, CRISC
Versatilist Consulting India Pvt. Ltd., India

Gabriela Reynaga

CISA, CGEIT, CRISC
Holistics GRC, Mexico

Gregory Touhill

CISM, CISSP
Cyxtera Federal Group, USA

Ted Wolff

CISA
Vanguard, Inc., USA

Tichaona Zororo

CISA, CRISC, CISM, CGEIT, COBIT 5
Certified Assessor, CIA, CRMA
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Ltd, South Africa

Theresa Grafenstine

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ISACA Board Chair, 2015-2017
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INTRALOT, Greece

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Matt Loeb

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ISACA®

1700 E. Golf Road, Suite 400
Schaumburg, IL 60173, USA

Phone: +1.847.660.5505

Fax: +1.847.253.1755

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