

Aithin™ Whitepaper

Using Aithin™ Knowledge Mapping and Analytics Software to Support Knowledge Management in Your Organization

By Patrick Lambe - Principal Consultant, Straits Knowledge

Introduction

A knowledge audit is one of the most common ways of preparing for a knowledge management implementation. Knowledge audits typically contain:

- An inventory of knowledge assets including owners and locations
- An appreciation of how knowledge supports key business activities
- Maps of knowledge flows
- Identification of knowledge gaps
- Diagnostics around knowledge risks, pain points and cultural issues
- Assessment of knowledge management capabilities and maturity

Knowledge audits should provide evidence to support authoritative recommendations for improvements to the deployment and sharing of knowledge in an organization, and in support of organizational effectiveness.

Knowledge Comes in Different Forms

To get a fully rounded understanding of how knowledge contributes to the business, it is important in a knowledge audit inventory to identify the full range of knowledge assets, not just the explicit knowledge assets captured in documents and information systems. We use an adapted form of a framework first developed by David Snowden in 2000, termed the ASHEN framework ('The ASHEN model: an enabler of action' *Knowledge Management* 3 (7) 2000).

We help our clients create inventories of six types of knowledge asset, ranging from the highly explicit to the highly tacit. In mapping workshops, the knowledge assets are colour-coded to help our clients quickly interpret the knowledge management implications of each type of knowledge asset.

TYPE	DESCRIPTION	ADDRESSED THROUGH
Documents and Data	Explicit information assets usually but not always held in information systems	Information management
Methods	Implicit knowledge in routines and ways of working belonging to the team	Knowledge capture and/or transfer processes
Skills	Standard competencies that can be defined in curricula, trained and improved through practice	Incorporation into training plans
Experience	Tacit knowledge from years of practice and experience gives the ability to respond effectively to challenges	Identification of critical knowledge and plan for knowledge transfer or succession planning
Relationships	Access to the knowledge of others through trust and familiarity networks	Processes for collaboration and relationship building
Natural Talent	Unique abilities of individuals that cannot be transferred and usually require head-hunting to acquire	Awareness of available talent and management of risk associated with talent loss

Figure 1: Knowledge Asset Types

Knowledge Mapping with Aithin™

The Aithin™ knowledge mapping system is a web-based application designed to help your employees create an inventory of knowledge assets related to their functional areas, and conduct key diagnostics. The information collected about the knowledge assets also supports several other elements of the knowledge audit:

- Identification of owners and locations of knowledge assets
- Mapping of knowledge assets to key business activities and functional areas
- Mapping of existing knowledge flows and potential knowledge flows
- Identification of knowledge gaps
- Identification of knowledge risks and accessibility issues
- Capture of key diagnostics around culture, pain points and KM capabilities

For a complete knowledge audit you should complement the knowledge mapping activity with other audit activities such as a knowledge sharing culture assessment and identification of common pain points around knowledge and information use. Aithin™ allows you to capture this diagnostic data as well as mapping knowledge assets.

Knowledge mapping in Aithin™ is best conducted in facilitated workshops attended by 2-3 representatives of each functional area being mapped. Several functional areas can be mapped in parallel in the same workshop. The workshops typically have six steps:

1. Briefing on the six knowledge types and their implications
2. Participants create entries in Aithin™ for the key business activities of their functional area
3. Working together, participants create descriptions of the knowledge assets that are required for each of their critical business activities to happen (knowledge inputs)
4. Participants create descriptions for the knowledge assets produced by their key business activities (knowledge outputs)
5. Participants identify knowledge gaps, and flag any knowledge assets that represent knowledge risks or have accessibility issues.
6. Conduct diagnostic activities around culture, pain points and KM capabilities.

In Figure 2, we can see a portion of the knowledge map for a Knowledge Management Department, showing the knowledge

assets for the business activity of defining a knowledge management strategy. The knowledge assets are colour coded by type for easy identification, and the descriptions can be expanded to see the relevant details underneath.

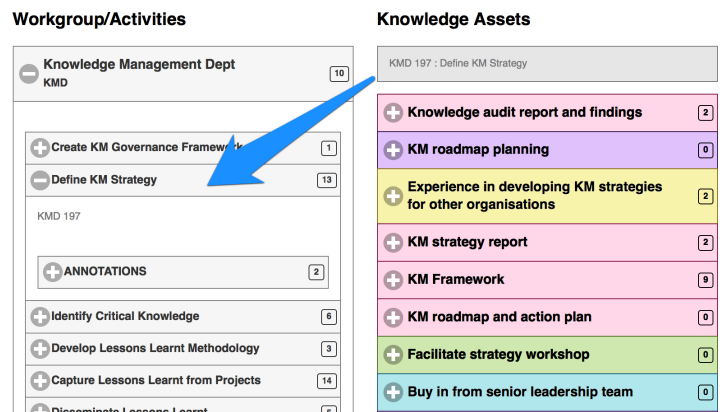


Figure 2: Knowledge Asset Mapped into Aithin™

Once the knowledge maps are created, they can be easily browsed and exploited, eg:

- By new hires to get a quick exposure to their department's key activities and the knowledge they will need to access to complete those activities
- By HR managers and training managers to identify skills and experience requirements across the business
- By department heads to identify knowledge risks, accessibility issues or knowledge gaps that need to be acted upon
- By KM teams conducting a knowledge audit and seeking to identify enterprise-wide issues and opportunities to be addressed
- In collaboration projects by analyzing the characteristics of the knowledge-carrying relationships connected to key business activities.

Figure 3 shows a browsing interface for staff or new hires who wish to get a quick view of the knowledge assets associated with their key activities. This is an interactive map that filters automatically depending on the elements selected.

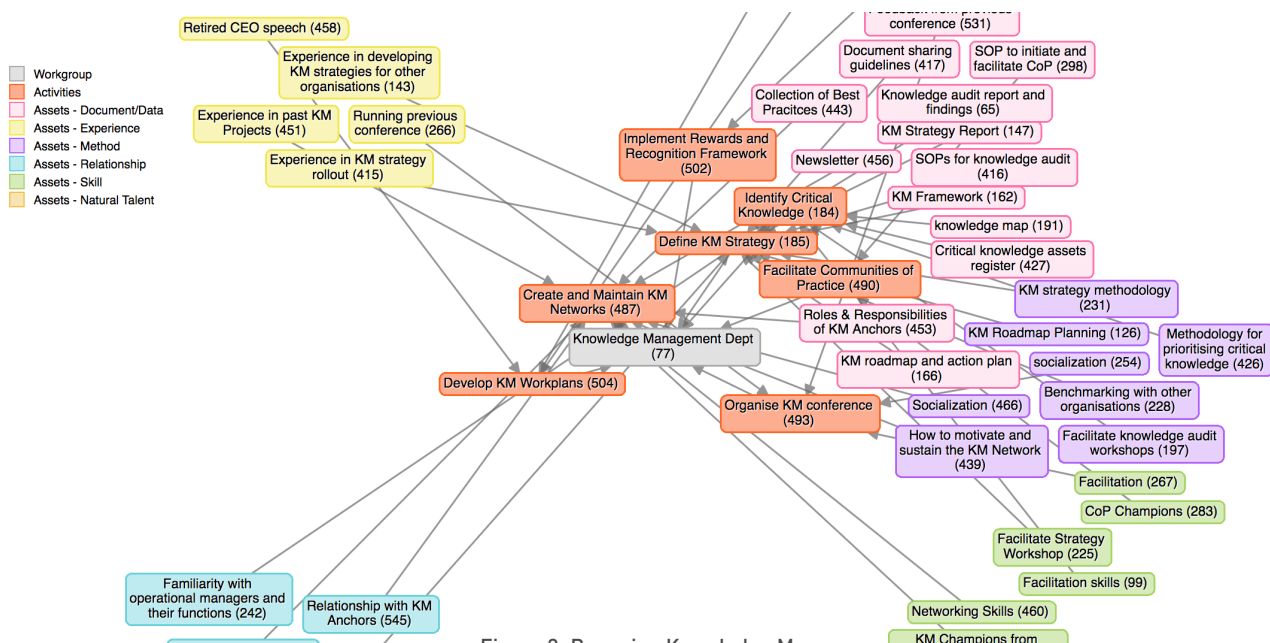


Figure 3: Browsing Knowledge Maps

Use Case 1: Moving From Folders to Shared Platform

A very large government agency was redeveloping its intranet with the aim of promoting knowledge sharing and reuse. Departments were used to managing their own information resources in shared folders and governing access at the department level. With no governance standards, folder structures and labels were very difficult to interpret if you were not familiar with the department, its people, and its work. The departments worked as functional silos, there was a common belief that “we are all different”, and that there was no need to enforce sharing on a common platform.

After we worked with the agency to create their knowledge maps, we exposed the maps to all the departments in what we call a “subscription exercise”. Representatives from each department browsed the maps of other departments, and flagged knowledge assets existing elsewhere that would be useful to their own activities, explicitly identifying which of their activities would benefit. In Aithin™ this enables us to generate a map of potential knowledge flows, as shown in Figure 4.

In the potential knowledge flow map, department nodes are sized according to the numbers of requests they make and receive. The thickness of the connecting lines shows the strength of the potential flows in terms of numbers of assets required. Each potential knowledge flow relationship can be selected to show the detail of the knowledge asset descriptions involved. With this analysis we were able to:

1. Identify the “highly sharable” knowledge assets (requested by three or more departments), and prioritize these assets for migration to the shared portal in common topic-based libraries;
2. Identify potential knowledge sharing relationships between departments to be fostered by the KM team, based on the strength of mutual knowledge requests;
3. See a change in attitude and perception towards the knowledge sharing project by department heads and staff when they saw specific instances of how knowledge sharing could support their work, simply by being made aware of which knowledge assets existed in other departments.

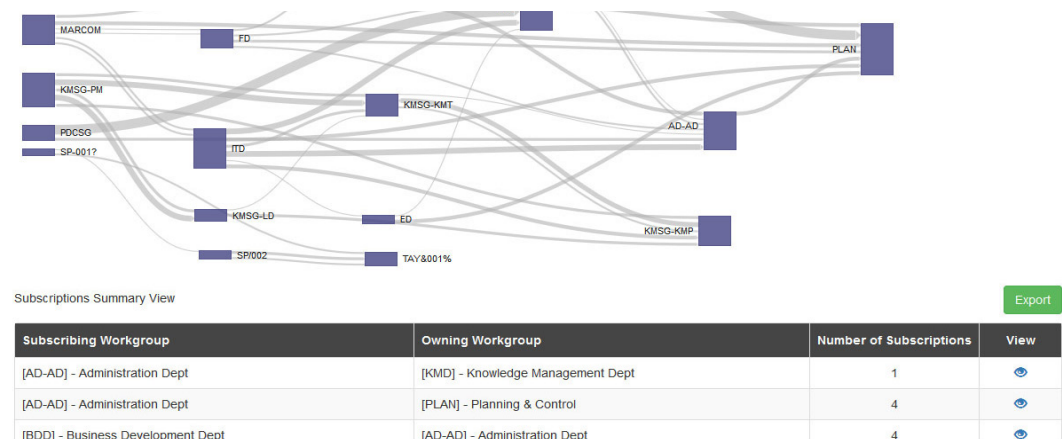


Figure 4: Potential Knowledge Flows

Use Case 2: Knowledge Retention to Manage Knowledge Risks

A major oil and gas company used Aithin™ to develop knowledge management plans for its business units. Each business unit has KM coordinators, working to a common methodology and supported by the central KM team. The KM team supports several KM activity streams, including communities of practice and knowledge retention programmes.

Using the knowledge maps, the KM team works with each business unit to apply a “RAG Analysis” to the knowledge assets in their maps. “RAG” stands for

- **Risk assessment** – identifying knowledge assets that are at some risk of loss if people leave (usually tacit, such as Experience, Relationships and Natural Talent)
- **Accessibility issues** – identifying knowledge assets that need to be made more widely available
- **Gap analysis** – identifying knowledge gaps; gaps are further broken down into minor gaps and major gaps, to help the business unit prioritize which gaps need to be acted upon in the coming year.

Once the RAG analysis is complete, the business unit is encouraged to make its own action plans based on the findings. However, in Aithin™ the KM team can also analyse the maps across business units, to identify common needs that need to be resourced centrally in the coming year. Figure 5 shows the inventory view of the maps, filtered for the knowledge risks that have been identified by business units.

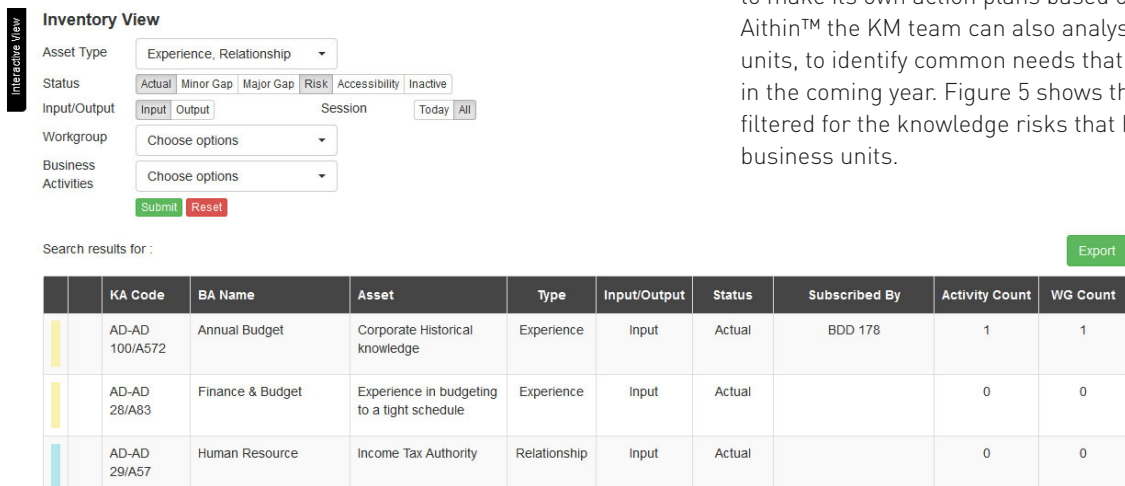


Figure 5: Analysing Knowledge Risks for Knowledge Retention

Use Case 3: Taxonomy Building Using Knowledge Maps

A China-based global technology company used Aithin™ to develop a taxonomy for a knowledge-base to support its Managed Services business. This business provides managed large scale IT infrastructure services to its clients around the world, with a special focus on mobile data services.

Currently different regions manage their key information and knowledge assets in different forms and locations. Yet this is a highly standards-based business requiring a common core of technical, engineering and customer knowledge. It also has the challenge of working across several language regions. While there is extensive business process documentation in a standardized language, this does not always relate to the vocabularies being used at a local level, or by the customers. For a common knowledge-base and search function to succeed, the vocabularies-in-use need to be captured and mapped to the technical and standards-based vocabularies.

We worked with them to conduct knowledge mapping sessions for each of their core functional areas, and covering different geographic regions and offices. The knowledge maps collect the common vocabularies-in-use for:

- Key activities (extracted from the descriptions for business activities, methods, skills, experience)
- Entities such as partners, customers, stakeholders who are connected to the work (extracted from the descriptions for relationship knowledge assets)

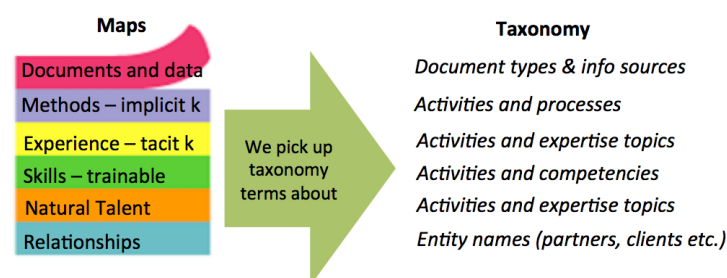


Figure 6: Using Knowledge Maps to Identify Taxonomy Candidate Terms

- Document types (extracted from the descriptions of documents and data knowledge assets)

Figure 6 illustrates how the knowledge maps can be used to extract candidate terms for the taxonomy and associated thesaurus.

To complement the knowledge maps, we conducted a content audit of information sources and collections. Some of these are shared collections that are widely known. Others are informal collections that are not widely known at the central team level. We pick up the use and location of such informal collections from the “location” field that is completed for the documents and data knowledge assets in the knowledge maps. Figure 7 shows a summary of the whole process for how the knowledge mapping process supports taxonomy and information architecture design.

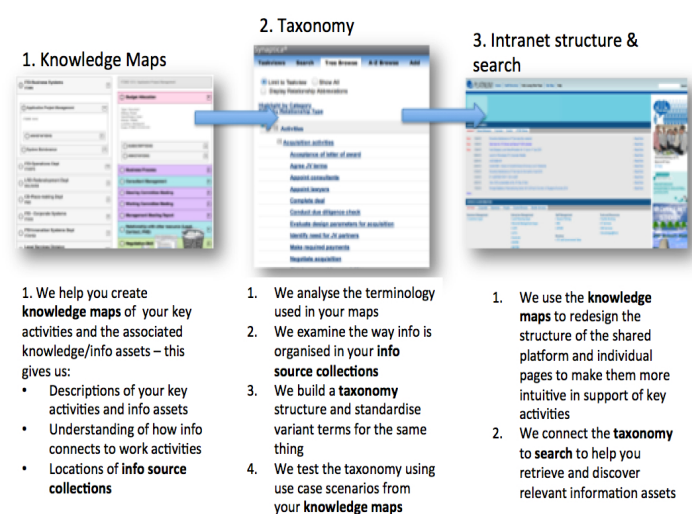


Figure 7: Using Knowledge Maps to Support Taxonomy and Knowledge-Base Design

Conclusion

In the past, knowledge audits have been seen as the sole domain of knowledge management experts. With a knowledge mapping and diagnostics tool such as Aithin™ and a simple framework for identifying different kinds of knowledge asset, we have found that we can empower managers to make their own decisions about how the knowledge assets supporting their business areas can be protected, developed and leveraged. The central knowledge management team can then focus on the larger scale opportunities for enterprise-wide interventions.

About Straits Knowledge

Straits Knowledge is a knowledge management research and consulting firm headquartered in Singapore and with clients and projects in Asia, Europe and the United States. We established our sister company Straits Knowledge Digital to embed our experience and methodology into innovative software tools in support of effective knowledge management implementation in organisations.

For more about the Aithin™ Knowledge Mapping and Analytics software please visit www.aithinsoftware.com

Asia

Straits Knowledge, 12 Aljunied Road #06-02H, KH Plaza @ Aljunied, Singapore 389801
tel/fax: +65 6221 0383 email: enquiries@straitsknowledge.com

Straits Knowledge Sdn. Bhd., Suite #332, MBE Desa Sri Hartamas, 30 Ground Floor, Jalan 25/70A, Desa Sri Hartamas, 50480 Kuala Lumpur, Malaysia
t: +60 16 306 6996 email: enquiries@straitsknowledge.com

Europe

Straits Knowledge International, c/o Yann Biancard, 23 rue Hermel, 75018 Paris, France

Straits Knowledge International, The Black Church, 23 St. Mary's Place, Dublin D07 P4AX, Republic of Ireland