Lecture 6
Knowledge Audit

Dr. Henry Linger

The KMS Road Map

The first phase: evaluation of the infrastructure and aligning KM and business strategy.

The second phase: KM system analysis, design, and development.
- Knowledge audit and analysis
- Designing the KM team
- Creating the KM system blueprint
- Selecting KM technology
- Developing the KM system

The third phase: KMS deployment.

The final phase: measuring ROI and performance evaluation.

Amrit Tiwana, 2002
The Knowledge Audit

- A structured method for analyzing knowledge resources and needs.
- The method relies on answering the questions such as:
  - What internal information/knowledge does the organization have?
  - Where is it kept and in what form?
  - What are the external sources of information/knowledge?
  - Who creates and “owns” the knowledge
  - How is knowledge organized?
  - What information and knowledge is needed but not available

Role of Knowledge Audit

At the organizational level:
- assists making decision in systems and process design
- assists in resource planning for information and knowledge services
- identifies gaps and duplication in information processes
- provides insights into organisational culture and user behaviour

At the pragmatic level:
- identifies gaps in the current knowledge processes
- provides direction for changes in management structures and methods
- maps knowledge management against organizational culture and needs
- is a part of quality control to confirm that key information and knowledge is being captured
- identifies where knowledge can be applied to benefit the organization
- provides a snap shot of the organization's status at a point in time
Stages in the Audit Process

- Define the goals of the audit (core competencies)
- Identify constraints (time, cost, etc.)
- Identify an end or “ideal” state (performance measures)
- Select audit method (includes planning and organising a team to perform it)
- Perform audit (identify knowledge types and sources)
- Document knowledge assets
- Determine the strategic position within the existing infrastructure (value proposition & type of KM strategy)

Strategy Development

Sussman, et al., 2003
The Aim of Knowledge Audit

Ideal State
based on org. strategy

Gaps to be filled

Current Reality

Recommendations:
Plans
Actions
Changes

Knowledge Gaps

- One of the major results of knowledge audit is identifying knowledge gaps;
- Two types of gaps:
  - information deficiency (internal process problem);
  - Skills deficit (need external intervention/source);
- Three approaches to bridge the knowledge gaps:
  - Develop internally;
  - Acquire from outside;
  - Anchor within organisation.
Sources of Knowledge

- Types of knowledge
  - Individual/Collective/Organisational
  - Codified/Uncodified
  - Structured/Unstructured
  - Tacit/Explicit
- Sources
  - Reports, contracts, manuals, other structured documents
  - Protocols, procedures
  - Best (better) practices, lessons learnt
  - Customer information
  - Competitor information
  - Skills/expertise indexes

Knowledge Acquisition Techniques

- interviews
- presentations by the expert
- verbal protocols
- observation
- simulated consultations
- teachback techniques
- psychological techniques (e.g. repertory grids)
- induction from examples (machine learning/data mining)
Knowledge Maps

- A diffuse concept that is generally considered as a scheme of 'knowledge domains' within a specific organisation or unit of that organisation
- Charts where the core knowledge areas are and how that knowledge flows
- It is a way of grouping knowledge and then analyzing for gaps
- In problem solving situations it can be used for coming up with new unique (creative, innovative) solutions.

Producing a Knowledge Map

- Purpose
  - depends on what and who's knowledge is being mapped and the type of results that are required
- Process
  - identify knowledge-intensive processes
  - locate relevant knowledge assets and knowledge holders
  - index the assets and holders (?)
  - integrate indexed assets into a navigation system which is linked to the process
  - enable decentralised update mechanism
How to draw a Knowledge Map

- Start writing down the names of the areas of expertise within the group concerned.
- Make connections/relationships between them.
- Expand by naming the 'knowledge' (information) that belongs or should belong to each domain (people, documents, URL's, etc).
- Link them together with the relationships they have when exchanging knowledge (information);
- Put labels on the links indicating in what format knowledge flows occur

Tools for Knowledge Mapping

- theBrain (theBrain.com) allows to chart out (in a taxonomy form) all of the various nodes of knowledge in an organization.
- MindManager – helps visualising conceptual relationships and convert conceptual maps into documents of various formats [http://mindjet.com](http://mindjet.com)
Problems with Knowledge Maps

- Can distort internal relationships by focusing on knowledge
- Must be dynamic
- Must respect privacy
- Transparency and visibility of knowledge comes with a “cost”
- Visibility at any cost can be counter-productive as it can lead to people losing jobs
- Common language has to be established
- They are only effective if the organisation values knowledge (supports “internal knowledge markets”)

Knowledge Audit: Pros and Cons

Pros
- it is a powerful and necessary tool to assess the level of current knowledge requirements;
- it helps to define future state of knowledge management for the organisation and the means to get there

Cons
- will fail if
  - it aims to identify, elicit and record all knowledge in an organisation, or even one of its units
  - it does not have firm commitment from the top and access to organisational resources including people;
- results can have (unexpected) political implications
- there is just too much knowledge to elicit in a short time when dealing with experts with 30+ years of experience.
- the structure of the knowledge reveals what the experts know not the details of the knowledge
What is a Knowledge Audit?

Can be understood in two ways:

- "A thorough survey of an organisation's knowledge assets (e.g. IP) along a number of parameters like location, medium, availability, value, currency, relationship to other knowledge assets, custodian, source, etc.
- An audit of a particular value chain including the knowledge requirements/inputs into that value chain. It is essentially a process mapping exercise with knowledge included as an attribute to be assessed. An example might be "how to make an aeroplane"

Why is it difficult:

- A knowledge audit that aims to identify, elicit and record all knowledge that all staff possess is doomed to failure

Mark W. McElroy, 2003 act-km discussion list

Issues in Knowledge Audits

- Ironically, the result of knowledge audit is 'virtually obsolete the instant it is completed'. Because the subject is a moving target. To imply that an understanding of knowledge gaps should serve as the basis of KM strategy is optimistic in the extreme.
- KM practitioners should be aiming for ‘knowledge processing audits’ … of how well organizational processes are handling the CONTINUING needs for knowledge production and integration, not just assessments of how well today’s profile of organizational knowledge happens to meet current demands, as if the profile and the needs are static.
- It’s not just the gaps we’re interested in; it’s how they got there in the first place and [how] to prevent them from doing so again.
- Unless our audits focus on what accounts for the gaps, …the gaps will almost certainly appear again, no matter how well we close the current ones.

Mark W. McElroy, 2003 act-km discussion list
Consider the knowledge acquired by an expert, approaching retirement, with 30+ years of experience. There is just too much to elicit in a short time and certainly too much to put in an expert system. If several such experts are involved, the problem is compounded.

Eliciting the structure of the knowledge means that we find out what it is the experts know or what a working section needs to know, but not the detail of the knowledge.

We just want a label and possibly a brief description. We also find out what the dependent relationships of this knowledge are and look for several parameters that will help in any subsequent decision making process.

http://www.nwaiag.com/what/struct.htm

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**Process Types**

Q28 - Which aspect of day-to-day operations would be best served if it were automated vs Q1A

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<th>(B)</th>
<th>(C)</th>
<th>(D)</th>
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Sussman, et al., 2003
Q21 What would you expect from an information system to help you do your job vs Q1J

Responses

(A) Access to information
(B) Management of information
(C) Ability to create information
(D) Management of business

Selection Universe

Sussman, et al., 2003

Q49 Which of the following is the primary team-based repository for best practices vs Q1B

Responses

(A) Paper documents
(B) Electronic mail
(C) Database
(D) Brains of employees

Selection Universe

Sussman, et al., 2003
Sources of Knowledge - Experts

An expert is an individual who is widely recognised as being able to solve a particular type of problem that most other people cannot solve nearly as efficiently or effectively.

Harmon and King (1985)

- Eliciting knowledge
  - knowledge is usually elicited verbally from the expert
  - interpret the information to infer the expert's underlying knowledge and reasoning processes
  - use the interpretation to guide the construction of a model (prototype)
  - use the model to guide further interpretation of data

Kidd (1987)

- Elicitation process
  - begin with structured or unstructured interviews
  - then employ other methods appropriate to acquire the required knowledge
  - work from general knowledge to the more specific by relating the knowledge to difficult and rare problems

Hart (1989)

Knowledge Sharing

I am often asked for my ideas about how we could do things better at work

Sussman, et al., 2003

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Selection

Universe
References