Knowledge Audit Made Comprehensive thru 6 Stages

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ABSTRACT

A cliché that no one could deny today is one that sound as the following; "Knowledge is power". We need to understand the fact that managing organizational knowledge recourses is as important as managing conventional organization resources. Knowledge management is a method, which aims to help organizations to effectively use knowledge. A knowledge audit is often the initial step of a knowledge management activity. Henczel (2000) highlighted that the low regard of knowledge audit has been a contributing factor to the top-heavy high knowledge management failures over the years. Though there are knowledge audit models proposed in the past by other researches, these models still have many drawbacks. This paper aims to address these drawbacks by proposing a 6-stage Knowledge Audit Model; derived from a comparative study on knowledge audit methodologies. These 6 stages are centered on core processes and integrates the development of appropriate knowledge management strategies. The practical implementation of this knowledge audit model for knowledge auditing allows for the investigation and analysis of the current knowledge environment, the measurement of the risk and opportunities faced by the organization with respect to its "knowledge health" and finally the recommendation of appropriate knowledge management strategies to be undertaken.

Keywords: knowledge management, auditing, comprehensive knowledge audit, core processes, 6-stage knowledge audit.

I INTRODUCTION

Knowledge is generally distinguished as the most vital, strategic asset that an organization posses (Henczel, 2000) . In this 21st century, this statement is a fact as knowledge grows constantly to meet the challenging needs of various areas of expertise, interests and subjects. As such, organizations are challenged today to develop appropriate knowledge management strategies to better manage its corporate knowledge to gain competitive advantage. Zack in his article managing organizational Ignorance suggested that knowledge management guidelines are needed by organizations to help them identify and respond to the varies knowledge problems that is linked to what they don't know or don't understand (Zack, 1999). Gottschalk (2005) defines knowledge management as the process of gathering, generating and synthesizing and sharing information, reflections, insights, thoughts and experience to achieve corporate goals (Gottschalk, 2005). A knowledge audit is usually the first phase which initiates a knowledge management activity / project. The next subsections of this paper will present the extended literature review on knowledge audit.

II RELATED WORK

As suggested by Perez-Soltero at el. (2006) a knowledge audit attempts to evaluate if knowledge processes meet the organization goals. A knowledge audit would generally contain the following four major components:

Figure 1. Strategic k-gap analysis

A. Knowledge need analysis:

This component determines the organization's current (what the company knows) and future knowledge needs (what the company must know) required assisting them in their journey towards achieving organizational goals.

This analysis helps the organization to identify gaps residing in the knowledge assets, hence helps to develop its future knowledge management strategy (in which gaps identified can be corrected). The knowledge strategy link is explained in figure 1 above (Sharma & Chowdhury, 2007).

B. **Knowledge inventory analysis:**

A knowledge inventory is a stock that identifies and
locates the knowledge assets and resources contained within the organization. (Sharma, Chowdhury, 2007).

C. **Knowledge flow analysis:**

A knowledge flow analysis identifies the pattern in which the knowledge assets and resources move across the organization. It helps organization to further identify the gaps and highlights the duplication contained within the organization's knowledge assets (Sharma & Chowdhury, 2007).

D. **Knowledge mapping:**

A knowledge maps visually portrays the knowledge sources, sinks, flows and constraints. A knowledge map generally maps the Knowledge assets and resources available and Knowledge flows (Sharma & Chowdhury, 2007).

Perez-Soltero at el., 92006) highlighted that much effort has been spent by researches to develop effective knowledge audit methodologies. Though there are numerous methods to conduct a knowledge audit which has been studied for this paper, in general all methodology would contain the following major steps (Perez-Soltero at el., 2006):

1. Identifying knowledge needs via interviews, questionnaires and etc.
2. Developing a knowledge inventory based on the types of knowledge available.
3. Identifying and locating this knowledge.
4. Identifying the degree in which this
5. knowledge is maintained, and how it is stored.
6. Identifying its usage and relevancy.
7. Analyzing the knowledge flows, in terms of
8. people, processes and systems.
9. Creating a knowledge map.
10. Preparing a detailed audit report.

The first methodology studied is the 10-stages of knowledge audit based on core processes (Perez-Soltero at el., 2006). The model which focuses on core processes (Perez-Soltero at el., 2006)

1. Identifies the knowledge assets that exist

2. Identifies the level of criticality that each of these knowledge assets hold with relative to the organization's success; hence providing a basis for the knowledge management project or strategy. It can be structured to be focused on the critical knowledge assets, which would avoid managing everything regardless of its significance. Figure 2 illustrates the 10-stages ofshould be fairly even nevertheless.

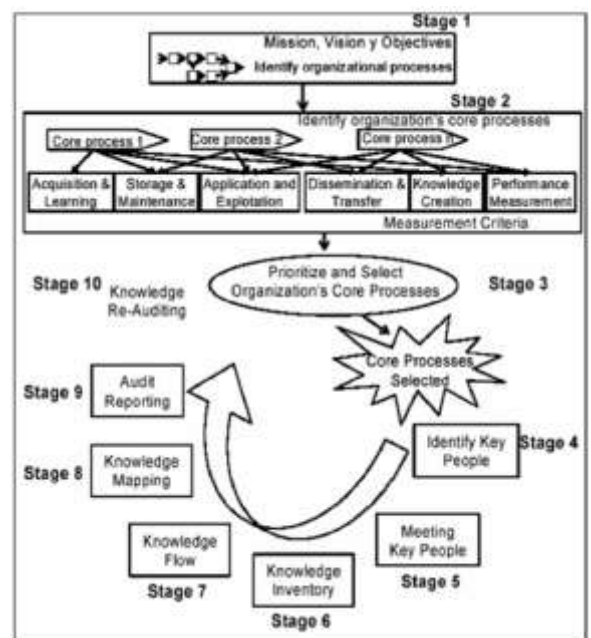Figure 2 illustrates the 10-stages of knowledge audit based on core processes (Perez-Soltero at el., 2006).

Figure 2. Knowledge audit methodology with emphasis on core Processes

The second methodology studied is the systematic approach for knowledge auditing (Cheung at el.,2007). The study contends that this systematic knowledge auditing approach, which has been trial successfully, implemented includes the following benefits (Cheung at el.,2007):
1. The identification of critical resources
2. The development of subsequent recommendations and appropriate KM Strategies to better manage knowledge in an organization.
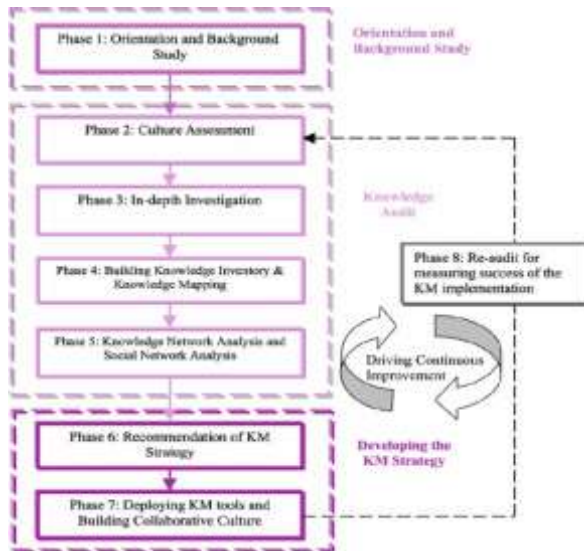
Fig 3 : A framework on the systematic approach for knowledge auditing

III PROBLEM STATEMENT

As highlighted by Henczel (2000), the low regard of knowledge audit has been a contributing factor to the top-heavy high knowledge management failures over the years is a fact. Though there are knowledge audit models proposed in the past by other researches, these models still have many drawbacks as detailed below. Most knowledge audit models:

1. Do not begin with a knowledge culture assessment to investigate the readiness of the organization to adopt on a knowledge management strategy (Cheung at el.,2007).
2. Fails to establish a clear strategy which clarifies the appropriate area in which the knowledge audit should be initiated where it attempts to audit everything without taking into consideration the degree of its significance to the organization(Perez-Soltero at el., 2006).
3. Fails to determine the measurement criteria to verify the impact related to Knowledge management processes (Perez-Soltero at el., 2006).
4. Does not include the construction of a knowledge network analysis to understand the knowledge acquiring methods. The knowledge inventory, knowledge flow or knowledge map does not provide this information.
5. Does not provide recommendations of the appropriate knowledge management strategy to be undertaken based on the knowledge audit report.

6. Are not tested to detect problems or opportunities, and further improvements are not proposed (Perez-Soltero at el., 2006).

The proposed 6-stage knowledge audit model addresses all these drawbacks.

IV RESEARCH OBJECTIVES AND SCOPE

This paper aims to propose a 6-stage knowledge audit model which addresses the drawbacks of the current knowledge audit models and incorporates comprehensive phases in the audit which allow for:

1. the investigation and analysis of the current knowledge environment,
2. the measurement of the risk and opportunities faced by an organization with respect to its "knowledge health", and
3. the recommendation of appropriate knowledge management strategies to be undertaken.

In addition, this research also aims to propose a knowledge audit plan which incorporates the proposed knowledge audit model with details of the specific objectives activities and tools involved in each stage. A qualitative evaluation shall be utilized for this research project leveraging on the review by Subject Matter Experts (SMEs) to evaluate the efficiency and effectiveness of the proposed model.

V RESEARCH METHODOLOGY AND FRAMEWORK

A qualitative evaluation shall be utilized as a part of the research methodology and this involves the following 3 phases.

A. **Phase 1 - A Comparative Study**

Based on the substantive and relevant information studied from the recent researches on the various knowledge audit models, 2 models will be chosen as study objects. Both models will be analysed to study the relevancy of all the stages involved. Such a qualitative approach is valuable here to identify the gaps between each model.

B. **Phase 2 - Development of A Hybrid Model**

Based on the drawbacks of the current knowledge audit models, together with the comparative studies performed in phase 1 a hybrid model is developed. The model is customized to incorporate the comprehensive outlook which allows for:

1. The investigation and analysis of the current knowledge environment

2. The measurement of the risk and opportunities faced by an organization with respect to its "knowledge health"
3. The recommendation of appropriate knowledge management strategies to be undertaken.

C. **Phase 3 - Review of Proposed Model with Subject Matter Experts (SMEs)**

A qualitative evaluation shall be utilized for this research project leveraging on the review by Subject Matter Experts (SMEs) to evaluate the efficiency and effectiveness of the proposed model.

VI PROPOSED 6-STAGE KNOWLEDGE AUDIT MODEL

It is important to note, that the set of stages / phases contained within both methodologies discussed in section 2 is important in performing a comprehensive knowledge audit. The table below provides a clearer picture on the drawbacks addressed in both model. The comparative study will stand as a basis to derive the new comprehensive knowledge audit methodology. Figure 4 illustrates the 6-stage knowledge audit model and figure 5 explains the 3 important elements which defined this model as a comprehensive audit model.

The objectives, tools and techniques involved in each stage of the proposed model is explained in detail below:

A. **Stage 1: Assessing organizational strategic information and culture**

The objective of this stage is to first identify all organizational strategic information to gain a clearer picture on the knowledge needs of the organization. Secondly, the organizational culture will be assessed to understand the position of the organization with regards to its KM status. Tools involved are organization visits, organizational documentation reviews, interviews, observations, and KM Quick Scan.

B. **Stage 2: Obtaining and prioritizing organizational core processes**

The objective of this stage is to identify the core process related to the organization. This would be done to identify the critical knowledge related to these processes that needs to be managed. The second objective would be to prioritize and select core processes that have a direct relationship with the organization's performance (Uses measurement criteria as defined by the organization). The third objective is to identify and meet the key people directly linked to these processes. Support tools include questionnaires, general organizational documentation, quantitative / numerical reports and documents.

C. **Stage 3: Measuring the current knowledge health**

The objective of this stage is to analyze how well knowledge is being used to achieve organizational goals. This stage attempts to identify and locate all current knowledge assets, to analyze the knowledge flow pattern in the organization, to graphically represent the organization's knowledge and to determine the knowledge sources and knowledge acquiring methods used by employees by modelling the workflow, knowledge sources, communication flow, and knowledge network map. Support tools involved are graphs, tables, diagrams and software knowledge maps.

D. **Stage 4: Knowledge audit reporting**

The objective of this stage is to report the outcome or findings of the knowledge audit. The report would stand as a basis for further decisions on the knowledge management strategy and investment to be undertaken.

E. **Stage 5: Recommendations of knowledge management strategies**

The objective of this stage is to provide recommendations derived from the outcome of the knowledge audit.

F. **Stage 6: Continuous knowledge re-auditing**

The objective of this stage is to enable the rest of the core processes to be selected and analyzed to the performance of the knowledge management implementation would be also measured and analyzed in this stage.

Table 1: A comparative Study

| Knowledge Audit Methodology with Emphasis on Core Processes (Model 1)	The Systematic Approach for Knowledge Auditing (Model 2)
Attempts to identify organizational strategic information such as objective, vision and mission with regards to its environment, culture and tradition to better understand its knowledge needs	Does not attempt to identify the organizational strategic information.
Does not include a culture assessment.	It includes a culture assessment.
It includes a core process priority table, in which it does not audit every aspect of the corporate knowledge and focuses the knowledge audit to the core processes that contributes the highest impact to the organization's performance.	Also includes the identification of core processes. However these core processes are not prioritized and are treated as if each contributes equal significance to the organization's success.
Defines a measurement criteria to verify the impact related to knowledge management processes	Does not define a measurement criteria to verify the impact related to knowledge management processes.
Does not include the construction of a knowledge network analysis.	Includes the construction of knowledge network analysis, which determines the knowledge sources and the knowledge acquiring methods used by employees
Does not provide recommendations of the appropriate knowledge management strategy.	Provides recommendations of the appropriate knowledge management strategy. Includes the development of KM tools and collaborative culture.
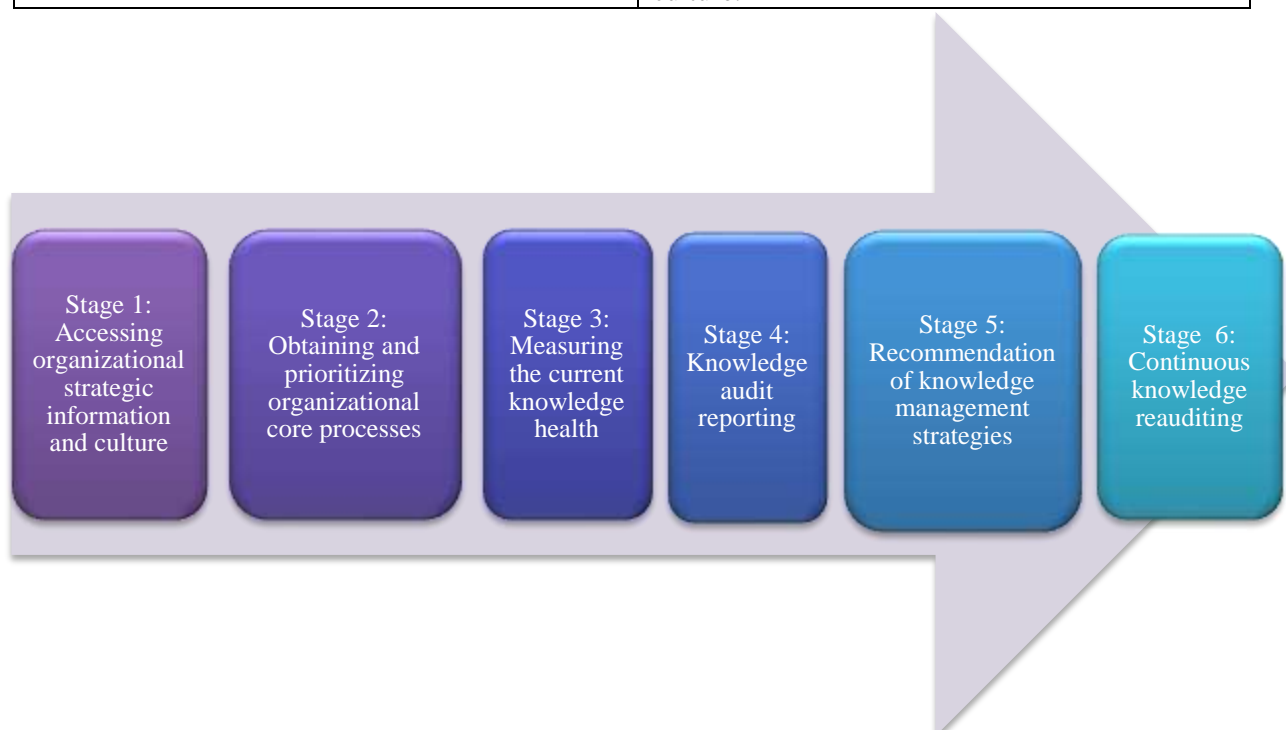
Fig. 4: 6-stages to a comprehensive knowledge audit

VII INDUSTRIAL TESTING

A qualitative evaluation shall be utilized for this research project leveraging on the review by Subject Matter Experts (SMEs) to evaluate the efficiency and effectiveness of the proposed model. This phase is still in progress.

VIII CONCLUSION AND FUTURE DIRECTION

This paper consists of the comparative study and development of the proposed hybrid knowledge audit model. The research is currently in the testing phase where A qualitative evaluation is being utilized, leveraging on the review by Subject Matter Experts (SMEs) to evaluate the efficiency and effectiveness of the proposed model. For future direction, the development of the appropriate software application which could include all the 6 stages is proposed.

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