

AUDITING THE INTANGIBLE

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1. What is an information audit?

Information exists in all agencies in many forms: as paper records, in computer databases, in libraries, in personal journals and business records. All agencies depend heavily on the collection and use of information. Some agencies, for example the Registry of Births, Deaths and Marriages, or the State Archives Authority, have the management of information as their core business. Yet there has historically been no formal recognition of information as a business asset which is valuable like physical and human resources, and finance. Different components of information may be formally and carefully controlled (for example, file naming conventions, data definitions, security passwords, document archiving), but in many agencies there is little appreciation, knowledge or control of:

- the degree of *relevance* or *utility* of the information being collected;
- the *cost* of the total information collection, storage, access, use and disposal activities in the agency;
- the *value* of the total information resource, in terms of, for example, what it would mean for the agency if all its information were lost, or how much the market would pay for the information. (OIT, 1997)

In most firms, when I ask the first questions about what they believe are their "information resources", I get a vague wave of the hand towards the law library, somebody mumbles shyly, "the Internet", and the really brilliant administration officer (very few of those here) would point at the filing cabinet containing all kinds of forms and pamphlets. When I was constructing an IS system for my last client, the Managing Principal has a business background, as opposed to a legal one. His reply to my question about his information resources was straight forward: "My client database and my computers. Just network me." I still have to come across a firm where the people see THEMSELVES as information resources. Although they often use the term "knowledgeable", they do not seem to see the correlation between that and the fact that managing the firm's knowledge will involve managing their tacit knowledge.

Information professionals are very familiar with Information Audits or Information Needs Assessment studies conducted to get a comprehensive picture of what information resources are needed to support business objectives, what information resources are available within the organization, and which resources are actually being used by various groups and departments. These findings are used to understand where there is a match between information needs and available resources, where there are redundancies, and where information gaps – unmet information needs, exist. The Information Audit also provides the basis for evaluating strengths and weaknesses in how the organization currently acquires, handles, stores, uses, reuses, and disseminates information critical to business applications (InfoPro, 2002).

Information Audit is not a new term. The topic has been discussed in the literature for at least thirty years. Attempts at formal definitions of Information Audit in the literature, however, are incomplete or conflicting. One definition describes it as a process which provides a 'snapshot' of an organisation's use of information and help to provide a diagnosis of the efficiency of information within the organisation (Morton, 1998). Another definition states that it is a systematic process through which an organisation can understand its information needs, what it knows, the information flows and gaps. The resulting 'information map' can be the foundation of a corporate information strategy or a knowledge management strategy (Oxbrow, 1998).

The information audit is a process that will effectively determine the current information environment by identifying what information is required to meet the needs of the organization. It establishes what information is currently supplied, and allows a matching of the two to identify gaps, inconsistencies and duplications. The process will also facilitate the mapping of information flows throughout the organization and between the organization and its external environment to enable the identification of bottlenecks and inefficiencies. Where information resources are being maintained but can be shown to be redundant to either

current or future requirement, and to be generating unnecessary overheads for the business, the information audit will act as a catalyst for corrective action (Swash, 1997). Buchanan and Gibb (1998) have most befittingly defined it as “the process of discovering, monitoring and evaluating an organisation’s information flows and resources in order to implement, maintain or improve an organisations’ management of information”. It is a management tool that can be used to identify, evaluate and manage information resources for optimal exploitation of its strategic potential.

The term Information Audit suggests an analogy with the activities performed by financial auditors in an agency, though in practice most of the activities performed have little similarity. Information Audit is frequently described in terms of an ‘inventory’ or ‘stock-take’ of the information collected and maintained by an agency. In practice, an agency would only perform this inventory process once. After it has been performed for the first time, subsequent efforts would only be an update of the original inventory. Nevertheless, the size of this inventory task seems to have dominated thinking on Information Audit. Booth (1994) defined it as a “systematic examination of information use, resources and flows (...) in order to establish the extent to which they are contributing to (...) objectives.”

An information audit will review what information is created and needed across the organisation. Everyone within an organisation has a role in creating and using information - even if they do not realise it! One of the positive side effects of a well-run audit is that it raises the awareness across the organisation of the value of information and the value of sharing knowledge.

2. The characteristics of information audits:

2.a. What is being audited:

The Information Audit may examine some or all of information form, content, processes, classifications, costs and values at any stage of the information lifecycle and assess them against criteria under the identified purpose of the Audit (OIT, 1997).

The basis for the Information Audit is the Information Inventory. This may be composed of the Conceptual, Physical and Knowledge Inventories, as described in the Inventory Guideline. The audit is focussed on those items identified by the inventory, and the policies, procedures and problems associated with the information lifecycle activities. However, the audit should also examine new information collected by the agency subsequent to the inventory, and update the inventory.

An audit, consequently, might assess such matters as:

- The existence and adequacy of the **Conceptual Inventory**, as measured against the agency’s goals and objectives;
- The existence and adequacy of the **Physical Inventory** (eg storehouses identified, storehouses of record, custodians, information users, information directory attributes), as assessed against the Conceptual Inventory, and in other ways (refer to the Audit Checklist Appendix I);
- The existence and adequacy of the **Knowledge Inventory**;
- The existence and adequacy of information **classification schemes**;
- The existence of an **Information Management Strategy** and whether adhered to;
- Whether agency Information Management policies, standards and procedures have been developed and are adhered to;
- Whether state and national **legislative requirements** and standards for records management and archiving are adhered to;
- The **cost** of collecting and storing information;
- The **value** of the information holdings;
- The **accessibility** of the information;
- The **use** made of the information.

A knowledge audit has two main objectives, with the first being to identify the 'people' issues that impact on knowledge creation, transfer and sharing. These include the communication issues that enable or prevent knowledge transfer, and the cultural and political issues that impact on the success of knowledge

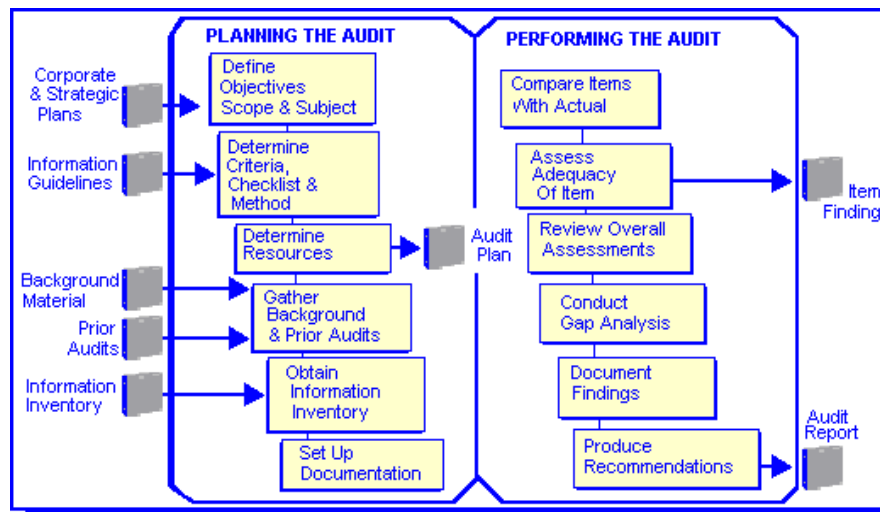
management strategies. The second objective of a knowledge audit is to identify which knowledge can be captured, where it is needed and can be reused, and to determine the most efficient and effective methods to store, facilitate access to and transfer of the knowledge. By building on the outcomes of the information audit with a knowledge audit you are able to incorporate your information and knowledge management strategies to ensure that strategically significant knowledge is identified and managed appropriately, and that the most appropriate resources are provided for its ongoing creation (Henczel, 2001).

2.b. Who performs the audit:

The term "information auditor" is used in this document, but in practice, and especially for large agencies, this will be a team. To be effective, the **information audit team** should have, or have access to, a mix of audit, information technology, data administration, record-keeping and library skills.

In larger corporations, the CIO is encouraged to establish an **annual cycle** of information audits aimed at addressing high priority concerns for performance improvement in information management.

A successful information audit must reflect the organisation and how it works. It must review the different business processes within the organisation, exploring what information is needed in the process and what information is generated by the process. It requires a top-down as well as a bottom up approach looking at all the information flows, barriers, and inefficiencies. Whereas Oxbrow (1998) prefers an independent information audit team is often preferable, bringing confidentiality and a fresh perspective to the way information is managed and used; Dubois (1995) and Swash (1997) both state that the best team is one which has a mix of external consultants and internal information workers, since an external team will not have the necessary in-depth knowledge of the audited organization. Dobson and Ernst (1999) state that even if external consultants are invited into the team, the respondents to the audit interview must be chosen by someone from within the organization.



Unless the information management team has well-developed skills in mind-reading, it is just not possible to build an effective intranet without carrying out an information audit. This involves defining business processes (from managing a project to completing a holiday form), documenting the information required to complete the task, identifying the source of the information either within or outside the company, and establishing what happens to the information at the completion of the process.

An information audit is usually carried out through a combination of interviews with senior staff, surveys (by email or paper) of the rest of the staff, and focus groups to work on particular processes (such as project management). In effect, it is an internal market research project. A senior staff member should sponsor the audit, and a team assigned to carry it out. There is no point in going around with a clipboard asking people what information they use. The more specific the question, the more valuable the answer will be. One useful

approach is to ask staff members about the last three telephone calls they received and made. These calls should have been to obtain information. Using these calls as a basis for discussion will provide insight into the information gaps in the current system. Additionally, asking about the last three emails containing attached files that were sent or received can also be a very good indication of information that cannot easily be accessed from a central repository. The interviews are best carried out at the desk. Get an impression of the way the interviewee organizes their physical desktop, the types of reference works and reports on the bookshelf, and the range of messages in the email in-box. The audit can identify external information resources that are used, and also highlight staff with particular expertise that tend to be called upon to assist when all else fails. Jargon and acronyms also surface, to be added to a keyword list in due course (White, 2001).

Ron Peters, principal of Ronald F. Peters and Associates, Calgary, BC, says the information audit is the first step to ensure a maximum return on investment in knowledge workers and information resources. He characterizes his work as that of a "coach," helping clients avoid mis-steps in doing a needs and expectations analysis. His goal is to help create a one-stop shop for information. His final report offers a resource plan to transform how decisions are made, suggests the right mix of products and services, identifies the right people to be served, and pinpoints the practices needed to sustain success. "The value of the information audit is the ability to make ideas work, to pull the library out of where it is," (DiMattia & Blumenstein, 2000).

According to Swash (1997) the prime benefit of an information audit is the recommendations for rationalisation and improvement that arise of the analysis of its results.

3. The relevance/necessity of information auditing:

An Information Audit can be undertaken for a number of purposes, both **operational** and **educational**. Both purposes are listed below. In planning for an Information Audit, not all the purposes will necessarily be selected. Some of them overlap slightly, having different emphases. No particular priority is intended or implied by the sequence in which these purposes are set out.

The operational purposes include the following:

- to identify the information needs of the organisation itself, the various business units and divisions and the specific needs of individuals and to assess how well the information held by an agency meets the **agency's needs**, in terms of compliance with policies and strategies, and support for the agency's goals and objectives;
- to identify the information created and assess its value to the organisation and to assess the relevance, usefulness and effectiveness of the **activities** performed during the agency's information lifecycle;
- to identify expertise and knowledge assets and enable the start of an intellectual asset register
- to identify the information gaps
- to identify quick wins that could be implemented to produce immediate benefits
- to review the use of external information and how it may be used more effectively
- to review the use of internal information resources, how valuable they are, and how they may be improved
- to map the information flows and current bottlenecks within those flows
- to develop an information and know-ledge map of the organisation
- to assess how well the information held by an agency meets its **clients' needs** (the auditor would expect to find clients' needs reflected in the agency's goals and objectives);
- to identify and remove **duplicated holdings**;
- to assess the management of the **characteristics** of information
- to assess the compliance of Information Management with **regulatory** and **legal requirements**;
- to identify **changing information needs**, for example from new business or legislative demands, or changed agency objectives, and assess their impact on information management within the agency;
- to identify the **costs** of information management in the agency;
- to identify the **value** of the information asset in an agency, in terms of revenue earned, and cost to replace;
- to identify the **operational value** of the information asset in an agency, in terms of its importance to the agency's purpose; and

- to recognise **changing technology** and assess its impact on information management within the agency.

The educational purposes include the following:

- to clarify for the agency the **scope** of its information management and to determine its information management **activities**;
- to achieve *recognition by staff* of the **benefits** of information as a corporate asset which should be managed at least as well as other assets;
- to achieve recognition of the full range of the **types** of information in the agency (for example, from journal subscriptions to IT, from paper records to video, from file cards maintained in somebody's drawer to computer databases);
- to achieve, where appropriate, a change in the perception of information management from that of a cost centre to a **profit centre**; and
- to achieve, where appropriate, a **consistent philosophy** in government agencies of Information Management.

4. Guidelines for a standardized information audit methodology:

As to date there are no internationally recognized standards for information audits (Dubois, 1995 and Swash, 1997). A few recommendations for a methodology have been published, the latest being Henczel's (2001) kit. The Special Libraries Association (1995) has also produced an information kit. Most of the writers have followed SLA in stating that the following should be the steps towards a successful information audit.

A. Plan the audit:

- ✚ Objectives and constraints should be defined, and backing secured from senior management.
- ✚ Organisational charts should be obtained for mapping communication flows and identifying potential survey respondents. Job responsibilities need to be accurately defined (Reuter, 2000).
- ✚ A methodology should be established and a sample of respondents identified.
- ✚ The audit team should be established, its size and nature depending on the size of the body to be audited.
- ✚ All survey respondents should be contacted before the start of the survey, to explain the procedure and provide "thinking" time.

B. Perform the survey:

- ✚ The survey consists of a questionnaire, followed by face-to-face interviews.
- ✚ The questionnaire seeks to elicit general information about the respondent's work.
- ✚ The questionnaire should then identify information sources used, before attempting to elicit responses about information needs.
- ✚ The duration and scope of each interview will vary according to the importance of the respondent to the overall functionality of the organization.
- ✚ The information obtained through the interviews must be carefully recorded and analysed.
- ✚ The information obtained from the questionnaire should be transferred to a suitable database, and analysed.
- ✚ The information obtained through the survey should focus primarily on business activity, identifying what information is central to business needs, what sources are actively used, and how often.

C. Map the Information:

- ✚ The results of the survey are used to create an information map.
- ✚ The map can take a form of charts, listings and/or descriptive analysis.
- ✚ The map should fully identify how information flows, or fails to flow, around the audited body, and confirm information ownership, and responsibility for information resources management.
- ✚ The map also pinpoints resources and their location, identifying overlap and duplication, underutilization and technology problems.

D. Prepare an audit report:

- ✚ The results of the information map should be incorporated into a written report with recommendations for action. These recommendations should be the most important value of the whole process.
- ✚ The report should recommend the setting up of a monitoring mechanism, so that further audits (which should take place periodically) do not have to start from scratch.

Knowlton and Wolowitz (1998) start with the team, and then let the team do the planning. There is more an IT audit, though, and they involve in it the identification of work sites and arising security measures. It doesn't seem to me that it was their intention to do an information audit, as what they describe is a routine "information security audit". Hence the need to have a trustworthy team before embarking on it.

The above methodology is more interested in quantifying information than having a qualitative description of it. A different approach is shown by Jurek (1997). He terms his process "intelligence audit". Part of it is the standard auditing of resources, locations and needs. But he then goes on to add that resources should be profiled by "interest" - this includes human resources (experts and gatekeepers) as well as material resources and how much they "interest" the users. According to him "such methods of information distribution allow the analyst broader corporate exposure as well as involvement in the front-end of management's brainstorming and strategic planning by creating forums for such broad discussion and content delivery."

6. Conclusion:

An information audit is a means by which an organization can better understand how the tasks and activities that it supports contribute to its success. Conducting an information audit will increase the understanding of how an organization works with regard to information and consequently with regard to knowledge. It enables the determination of how well tasks and activities are aligned with organizational objectives and the strategic significance of not only the tasks and activities, but also the information resources. This flows on to other processes and enables the elimination or minimisation of non-strategic tasks and their associated support services (Dubois, 1995). The information audit can form a solid basis for the development of a knowledge management strategy by providing the foundation dataset for a knowledge audit that enables the identification of how and where knowledge is being created and used, and where it is needed to improve outputs.

The consequences of not conducting an information audit prior to conducting a knowledge audit or developing a knowledge management strategy can cause significant direct and indirect costs for an organization. When an organization is unaware of the strategic significance of its knowledge assets it manages everything rather than what it is necessary to manage. The direct costs increase as the program requires more people and technical resources and the indirect costs increase as the program is unable to identify strategically significant knowledge assets and prioritize their management. Other direct costs are incurred when the knowledge that is managed is sub standard knowledge, that is knowledge produced using sub-standard resources and processes. There is also the risk of excluding significant knowledge assets because you don't know they exist.

Clearly, there is still much to learn about the role of the information audit in an enterprise. It is neither carried out in a void nor is it an end in itself. Its main objective is to develop an effective information strategy and prepare the ground for corporate information management - i.e. "the effective and efficient creation, storage, retrieval, processing, and disposal of information for the purpose of achieving business benefits" (Ramjaun, 2000). Hence, future-oriented organisations cannot afford to ignore the pivotal role that an information audit can play in their enterprises.

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