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**The Role of the
Knowledge Audit
in Corporate Intranet Design**

Dr Ann Hylton

Knowledge Management Consultant & Knowledge Auditor

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ann@annHylton.com

www.annHylton.com

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Dr Ann Hylton
CEO, KeKma Ltd
ann.hylton@kekma.com
ann@annhylton.com
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The Role of the Knowledge Audit in Corporate Intranet Design

Most medium and large companies have in place or are building Corporate-Intranets. This paper describes the pivotal role of an information and knowledge audit in the planning and design of the corporate Intranet. Without such an audit, an Intranet cannot properly serve its function as a prime information and knowledge conduit, since it would lack evidence-based information and knowledge of the most appropriate content, format, and interface for targeted end-users¹

There has been an explosive growth of Corporate Intranets since the mid-nineties. It is bordering on impossible to find a large company or organisation that does not have in place a Corporate-Intranet, however rudimentary. At the same time, medium-sized companies are catching up, and smaller companies are waking up. The phenomenal uptake and growth in the Intranet market is reflected in the financial investment made in Intranets. Industry analysts reported that the global spend on Corporate-Intranets, in year 2001 was in the region of \$64 billion. Leading forecasters Gartner, Forrester and others predict that \$200 billion per year will be spent on Intranets by 2010, primarily on hardware, software and related support services. On a geo-national level, in year 2001 the Intranets & Extranets adoption rate was 60% in the UK, USA, Canada, Sweden, and Germany, while for France, Italy, and Japan the rate was about 40%.² Undoubtedly, soon to be released 2002 figures will show further significant growth.

The Purpose and Importance of the Corporate-Intranet

A Corporate Intranet is a Local Area Network and/or Wide Area Network constructed as internal website and is secured behind company firewalls. Its purpose is to make corporate information and processes available to targeted users, (primarily employees) from a single point of access. The Corporate-Intranet will generally also be linked to websites of other interested parties, including, partners, suppliers, and information agencies, thus being extended into an Extranet. An Intranet is an important information and knowledge management enabling tool, allowing employees, across the board, to efficiently and effectively gather, transfer and share information and knowledge and to streamline business processes, in a secure, collaborative environment. Its purpose is to deliver pertinent information and knowledge to the end user, speedily and securely, at the precise time that it is needed.

In an economy where knowledge is the most important asset that any company or organisation owns, the Corporate-Intranet's purpose and importance in delivering the right up-to-date, just-in-time information to those employees who need it, cannot be questioned. The high growth in the Intranet industry over just a few years is in keeping with the focus of global knowledge based economies, where employees need greater empowerment and enablement in order to manage 'their' corporate information and knowledge more efficiently and effectively. The Intranet should therefore rank high in importance among information and knowledge management enabling systems of the modern knowledge based business.

¹ The terms: Corporate-Intranet, Intranet and Portal will be used inter-changeably in this paper

² Source: DTI International Benchmarking Studies, 2001

Are Intranets Serving the Purpose for Which They Were Designed

For an organisation to show measurable benefits from its corporate Intranet investment there should be demonstrable evidence of improved internal communication, better and more effective sharing of information, knowledge and best practices and reduction in information overload. In short, there should be quantifiable evidence of a significant improvement in the company's information and knowledge management, such that the right people are getting the right information and knowledge just when they need it, in the way they need it, securely.

Sadly however, very few Intranet initiatives or projects can boast anything beyond marginal achievement of the standards that would qualify them as successful ventures. Intranets have failed their organizations and the employees that are meant to benefit from using them. The figure most banded around industry and technology analysts and experts as the success rate is about 10%. This means that approximately 90% of Corporate-Intranets fail to have any truly discernable or significant impact on an organization's ability to maximize its information and knowledge potentials. Intranets by and large have failed to improve the efficiency and effectiveness in which employees are able to search for, access and share information and knowledge; yet that is their core purpose.

Corporate Intranets are Expensive Failures

Intranets are by no means cheap. The initial or setup cost of even the most basic Intranet is likely to run into six figures, with further high annual maintenance costs. Experts calculated that the average setup cost to be in the region of US\$600,000 with an annual maintenance cost of \$100,000. For many large Intranet projects this is only a drop in the bucket of the real costs. For instance, Bay Networks (now Nortel) spent \$3 million building a state-of-the-art Intranet³.

Despite the huge financial investments behind them, Intranets have all too often become 'white elephants', financially burdensome possession. Leonard M. Fuld, president, Fuld & Company, stated that "Companies are likely wasting billions of dollars a year on their intranets, specifically as they apply to improving the critical use of intelligence by management."⁴. At the same time, in his paper *Intranets are Failing to Properly Serve the End User (2001)*, Jakob Nielsen estimated that "the world economy will lose roughly \$100 billion because of bad intranet usability. In his calculation of 'The Costs of Running an Intranet' Neilson further estimates that "if the number of people in the world using intranets is multiplied by the number of minutes they're wasting on them each day, it's approximately a \$1 trillion problem". In *'Why Do Intranets Flop' (2001)* Daintry Duffy, Senior Editor, Darwin Magazine, sums it up as follows: "Unfortunately, many companies invest in the seemingly simple project of building a corporate intranet only to have their efforts met with lukewarm success or abject failure."⁵ The writing is on the wall, or more specifically, the message is clear. Large financial investment Corporate-Intranets have for the most part been a case of 'throwing good money after bad', or simply burning money.

Why Corporate Intranets Fail - Why They Have Been Rebuffed

All too often, finding information (documents) and knowledge experts in one's organisation is a daunting, time-consuming, time-wasting and frustrating task. Corporate Intranets were designed to alleviate this daily suffering and the resulting inefficiencies. But not so, since numerous studies have reported that employees waste a great deal of time searching, (all too often in vain) for information on their Corporate Intranets. For instance, Sun's usability experts calculated that 21,000 employees were wasting an average of six minutes per day due to inconsistent intranet user interface designs and navigational structures. The cost of inconsistency at the page level was costing Sun roughly \$1 million per year and at the site-wide navigation level \$10 million per year.⁶

³ CIO Web Business Magazine, April 1, 1999

⁴ Source: www.fuld.com 2001

⁵ Source: www.darwingmag.com, November 2001.

⁶ Source: "Calculating the Cost of a Large-Scale Web Site," webreview.com (8 August 1997)

Time wasted is not only money being burnt, but also contributes to high end-users frustration and stress levels, and goes to the core of low confidence in Intranet's and their eventual failure to deliver.

Main Issues Concerning Intranet Failures

As with all failings the guilty are ever ready with their reasons, which are more likely to be weak excuses, while the experts and analyst go to great pains to unearth the underlying reasons or causes. According to Melcrum's Publishing Survey 2001 covering the UK, North America and Europe, the main issues that needed to be addressed with respect to Intranet failures and therefore their ultimate success were: content management, lack of resources, content overload, security, insufficient control, navigation, and internal politics.⁷ This falls in line with the plethora of reasons given by experts for Corporate Intranet failures, such as: poor strategic planning and organization; inadequate executive sponsorship; poor in content management; inadequate financial support; user uncertainty; focus on technology rather than the end users; insufficient attention given to the needs, wants and capabilities of targeted end-user

The last two points, technology focus and lack of attention to end users, are especially relevant to this paper.

Focus on Technology is the Likely Root Cause of Failure

Historically, Corporate-Intranets have been technology driven, or technology centered, as opposed to being what they should be, people focused. The unequivocal and unjustified focus on technology has, to my mind, been the single most cause for the poor success rates of Corporate-Intranet. It cannot be disputed that cutting-edge technology is the back-bone of the Intranet Architecture, and indeed, essential to the design, building and continued development of any good Intranet. However, the technology-centered approach to its planning and design serves to disguise, and to a very large extent ignore, the fact that the role of an Intranet and especially the technology behind it is that of enablement. The enablement is people determined, as it is people who manage information, and more so knowledge. Therefore people must be given priority consideration in the planning, design and development of, what is after all, their Intranet. As intimated above, the core reason that employees have been forced to rebuff their corporate smart tool is that they have generally not been consulted before the fact or act, even though they are the key players in Intranet use and its ultimate success.

Intranet Designers Need to Know What the Company Knows

It is well established that in most organizations at least 80% of corporate knowledge is hidden. Central to the problem is that companies do not really know what they know, or know what information and knowledge resides within and, therefore, unable to fully tap into the vast wealth of knowledge that resides within their walls. Companies are deficient in such knowledge as: how people get the information and knowledge they need; with whom people collaborate and share information and knowledge; how well knowledge is documented for reuse and sharing, and the extent of duplication of effort. Further, even those who claim to be reasonably knowledgeable about their information and knowledge resources, are unlikely to be able to declare with confidence that they know exactly where such knowledge reside and who owns and guards it. More importantly, confidence levels fall drastically when pressed to demonstrate knowledge of how different types of corporate knowledge is used, distributed and shared.

The question then is: how can a company or organisation plan, design and build its Corporate-Intranet when it does not know what it needs to know about its information and knowledge resources and sources, and very importantly, the flow of its (corporate) information and knowledge? This multi-faceted question and others like it strongly places the responsibility on

⁷ Sourced December 2002: www.econtentmag.com/Magazine/Columns/02/firewall6_02.html

Intranet planners, designers and high ranking decision makers to ensure that a proper examination, assessment and review of the company's information and knowledge resources has been carried out before they begin the actual design of this major, highly expensive information and knowledge management system.

Recipe for Failure: Recipe for Success

An Intranet is doomed to failure without a profound understanding of corporate information and knowledge structure, flow and expertise, including the type, quantities and quality or value. Intrinsic within this is an understanding of end-user needs, and indeed wants, and when. In other words, an Intranet cannot be successfully designed and implemented without thorough planning, analysis, and understanding of core corporate values, and the way information and knowledge is used, as well as the objectives and the expectations of the end-users.

The best way, and arguably the only way, to determine end-users needs and preferences is to go right to the source, the employees themselves. An example of a good approach in this respect is that of Bay Networks (Nortel), who spent two years studying the different ways people think about the same thing, with CIO Jorge Taborga announcing that "We didn't want an application to dictate how people work". The result of their well thought out and well executed approach is a \$10 million annual savings.⁸ Bay Network's approach is indeed laudable, but there is another more systematic and standardised method and approach, namely via the Knowledge Audit. This is the most logical, scientific and natural route by which essential information and knowledge needed to properly plan and execute a corporate Intranet can be objectively acquired.

Introducing the Knowledge Audit

A knowledge audit is a systematic investigation, examination, verification, measurement and evaluation of *explicit* and *tacit* knowledge resources and assets, in order to determine how efficiently and effectively they are used and leveraged by the organisation. The output is a Diagnostic and Prognostic Report highlighting knowledge related risks and opportunities.

The Information Audit versus the Knowledge Audit

Intranets are generally deemed to be concerned with information and documents (content) as opposed to tacit knowledge. It is therefore prudent at this time to distinguish between the 'information audit' and the 'knowledge audit'.

An *Information Audit* is concerned with corporate information housed in documents (also known as 'content'). A *Knowledge Audit* is also concerned with documented knowledge (information), but more importantly its focus is on non-documented (tacit) knowledge that people carry around with them. Unlike information, such knowledge cannot be found in the corporate information systems, and is almost totally people dependent. Thus the key difference is that the information audit is limited to knowledge documents whereas a knowledge audit has a wider scope to include both knowledge documents and people based knowledge.

For the purposes of this paper, the term 'knowledge audit' will also refer to the information audit where appropriate. However, the focus is on 'tacit' knowledge.

Planning & Designing the People Focused Intranet

Corporate-Intranets have historically been planned, designed and built by small teams of individuals, most often from the I.T and/or information services departments, obviously on certain assumptions. One of these assumptions must surely have been that they as planners and designers '*know*' targeted user's information needs and preferences, as well as their technical end-user skills and capabilities. The problem is that premises such as these were generally never

⁸ Source: CIO Web Business Magazine, April 1, 1999

scientifically tested or validated, and hence there was not strong foundation for the assumptions on which hundreds of thousands of corporate currency was invested, and eventually wasted. One cannot help but feel overly generous in awarding Intranet designers anything more than the barest credit for having given any real consideration to end-users. Historical evidence strongly points to a general misguided approach of *'build it and they will use it'* or *'build first and consult after'*. The consideration given to end-users thus being no more than, *'we are building this toy for you, so do show your appreciation and gratitude and come and use it like good children... please'*.

Their phenomenal failure rates points squarely to the fact that Intranet planners and designers have never properly appreciated that the core purpose of a Corporate Intranet is to meet the needs of end users, most specifically employees. Time and time again knowledge workers, who are the owners, custodians, distributors, communicators and users of core or critical information and knowledge are largely omitted from the Intranet plan and design equation. It is little wonder that Corporate-Intranets have failed and will continue to fail to deliver.

In order for Intranets to get off to the right start, and indeed finish, a knowledge audit must be a major factor from the early planning stages.

The Role of the Knowledge Audit in Intranet Design

The generic role or purpose of the knowledge audit is to facilitate the efficient and effective creation, capture, storage, access, retrieval, processing, use and sharing of explicit and tacit knowledge. With respect to Corporate-Intranets, the purpose of the knowledge audit is to ensure that the designers and builders obtain a better understanding of the corporate information and knowledge landscape and culture.

The Intranet focused knowledge audit should be largely concerned with the auditing of the knowledge of employees who are, after all, the targeted end-users. Of less concern to the Intranet focused knowledge auditor is the actual information or content that will to be placed on the Intranet. However, a comprehensive, detailed audit would also be concerned with identifying, labelling, categorising and describing of information and knowledge.

The people focused knowledge audit is often sufficient to ensure that employees and other targeted users contribute valuable knowledge and expertise to help designers build the appropriate end-user centered Intranet.

Conducting a Knowledge Audit

A comprehensive knowledge audit involves investigating, examining, measuring, quantifying, evaluating and reporting on virtually every aspect of corporate knowledge (both documented and non-documented). The audit will identify the origin, nature, ownership, characteristics, quality, value and significance of the various types of explicit and tacit corporate knowledge. The audit also examines the work culture and attitudes of the people within the organisation, and how well the company's processes support knowledge sharing and collaboration. In addition it will give valuable insight into the knowledge capabilities and potential of the employees.

The Components of the Knowledge Audit

There are 5 major components of a comprehensive knowledge audit⁹:

1. Background Research & Roundtable discussions (pre Audit preparation)
2. Questionnaire Survey (gaining information via the direct voice of the employees)
3. Face-to-Face Interviews (more in-depth information and analysis via the people)
4. Knowledge Inventory (objective stock-taking of the corporate knowledge wealth)

⁹ Note: these components are based on the authors own knowledge audit methodology/system, the ©KeKmaAudit

5. Knowledge Mapping (graphically building a corporate knowledge road map, including knowledge process flow and gap analysis that highlights strengths and weaknesses)

A knowledge audit that is conducted on the basis of designing a Corporate-Intranet will need to be organisational wide. This means that virtually all employees should have the opportunity to participate in the questionnaire survey. At the next level, which involves face-to-face interviews, representative samples of different user-groups will be involved. The findings of the questionnaire survey and interviews will certainly provide sufficient evidence based information and knowledge to begin planning and designing the Intranet. However, designers of very large Intranets might be advised to await the outputs of the more detailed and complex levels of the audit, the *knowledge inventory* and *knowledge mapping* processes, before they can finalise their designs.

Summary of Benefits that the Knowledge Audit Brings to Intranet Design

The purpose or aim of the Corporate-Intranet is to ensure that the right information reaches the right person at the right time, securely. The direct and indirect benefits to be gained by undertaking a knowledge audit before commencing the formal design of the Corporate-Intranet are numerous. Overall it helps the organisation to learn what it knows and does not know about its information and knowledge management efficiency and effectiveness, including management of external knowledge: customers, partners, suppliers, competitors. A few key benefits are outlined below:

- **It identifies Knowledge Experts and Measure s Knowledge Resources**
Designers are better able to properly profile knowledge experts and facilitate user access to the right experts. They are also better able to ensure that the most valued information is included on the Intranet, based on valuation given to them resulting from the audit.
- **It Identifies Knowledge Needs, Use, Information Types, Formats, and Tools In Use**
Designers are better able to understand users' requirements and select the most appropriate technology, specifically information and content management tools. They can make more qualified decisions re the inclusion or exclusion of certain types of documents and keep content updated based on user defined needs and likely frequency of use.
- **It Builds an Inventory & Knowledge Map**
Designers will be more knowledgeable about what knowledge exists, where it is and who owns it. They will have greater understanding of information and knowledge flow and the business processes aligned to them.
- **It Reveals Knowledge Strengths & Weaknesses and External Interactions**
Designers will be alerted to problem areas and opportunities relating to current information practices and policies. They will gain an understanding of the interaction between employees and external bodies, and be made aware of opportunities for using information for strategic competitive advantage

From a technical standpoint, the knowledge audit will offer the evidence needed to at least:

- Determine the best composition of the Intranet design and development team
- Know how to engage end-users in the process of designing and building the Intranet
- Make appropriate selection of enabling technology
- Identify quick wins or immediate potential benefits
- Ensure that the Intranet is truly aligned to corporate values and objectives
- Provide better information indexing, categorising and filtering
- Identify and profile knowledge experts
- Design within the established internal and external communication channels
- Provide higher levels of information authentication, validation and security
- Understand the technical requirements of the end-users and their training needs

While the focus of this paper has been on the planning and design of a new Intranet, the knowledge audit also makes an important contribution to the re-design or updating of an existing Intranet. Examples of some of the things that may be revealed about existing Intranets are:

strengths and weakness; perceived benefits; desired changes or improvements; measurable value; who really uses it and how they use it; why some people don't use it or don't like to use it.

Major Considerations Before Undertaking a Knowledge Audit

There is no question that a knowledge audit is essential to the good design and development of a Corporate-Intranet. However, all key stakeholders, especially senior decision makers and sponsors, must take cognisance of the fact that a knowledge audit is a rigid scientific business process that must be properly thought out and executed, however small or limited the audit may be. A few key considerations are the fact that the audit can take many months; it is likely to be an expensive venture; it involves time and commitment from company experts; employees must be engaged in the audit; it must have executive sponsorship.

After the Information & Knowledge Audit

Once the audit has been completed, the *Knowledge Audit Report* is closely examined by senior managers and the Intranet technical advisors. From the *Report*, they will be able to make evidence-based decisions concerning the scope of the Intranet project and appropriate designs. This will also include decisions re the Intranet roll-out, whether incrementally, say department by department, or in one big bash. The key persons to be involved in the final Intranet design and build can then be confidentially selected, based on the evidence of the potential usage and the needs and wants of the targeted users. The Intranet can now be designed and built according to corporate format and standards while allowing for individual and group level personalisation.

Summary of Pivotal Role of the Knowledge Audit in Corporate Intranet Design

The benefits of a Corporate-Intranet are huge and includes: self sufficiency and time saving especially time wasted searching for information; reduction in duplication of effort; improved sharing of information and knowledge; better document management, and more cost effective document storage and dissemination; improved information and knowledge security. However, these and many other benefits will not be forthcoming unless the Intranet is well thought out, and carefully designed based on evidence coming from the knowledge audit research and analysis process.

The knowledge audit provides a base-line for developing a Corporate-Intranet that is aligned to the organisations goals and strategies. It establishes a basis for monitoring and evaluating what the organisation is doing with its information and knowledge. Most importantly, employees will feel engaged in the process of the designing and building of the Intranet, and as a natural consequence will understand the benefits to them in helping them to work smarter. A Corporate-Intranet cannot be a success, unless it is people-centred and people focused. Intranets by their very nature must be inclusive from the very start, i.e. the design stage. It stands to reason that the core design and construction of the Corporate-Intranet **must** by necessity be centered on the end-user. But, incredibly, this has not been the norm. Corporate-Intranets have not been successful in helping people to work smarter, because insufficient thought and planning was given to the appropriateness the information/content, and the use and management of that content, by the people, both at individual and group levels.

It is prudent for companies to invest in a knowledge audit at the first major step in the inclusive, people-centred approach to Intranet design, construction and maintenance. While it is not always practical for an organisation to undertake a full knowledge audit, most certainly some kind of knowledge audit, should, indeed must, be carried out in order to guarantee a more useful and cost effective corporate Intranet that will appeal to the targeted end users.

The new generation of Corporate-Intranet designers must develop and exhibit a culture of engagement, whereby all targeted end-users are viewed and treated as customers. With this comes the need to ensure that they have a solid understanding of their customer's information

wants and needs, and the way they want information and knowledge delivered to them via the Corporate-Intranet.

It belies belief that senior management, most especially chief executives have approved or sanctioned significant investment in Intranet technology without the necessary due diligence.

But the future promises to be better, as the heavy price that companies who have veered towards technology focused Intranets have paid for failing to give sufficient weight to the end-users (people) perspective, has undoubtedly not gone unnoticed by those who must keep a watchful eye on corporate spending. Since it is no secret that these 'white elephant' pseudo-Intranets have been underutilised or even totally ignored by those for whom they were supposedly developed, serious questions are being asked, budgets are being held back, and new approaches are being demanded.

The days of Intranets being built by persons divorced or distant from the end users are now coming to an end

Your comments will be welcomed

Dr Hylton can be reached at: ann.hylton@kekma.com or ann@annhylton.com

Her company's websites can be accessed at: www.KEKMA.com and www.AnnHylton.com

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