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Knowledge Sharing through Intranet

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ABSTRACT

The article describes the Intranet, knowledge and knowledge sharing (KS) with the key considerations of Intranet. The different types of KS like professional knowledge, coordinating knowledge, object-based knowledge and know-how are discussed. A modular approach for Intranet has been explained with the perspectives of managing Intranet through cyclical activity. The contents, which may be shared on Intranet, are exhaustively outlined, while emphasing on the relevancy of information content on it. In addition, the different categories of information to be included for KS like news, directories, reports, agreements, training material, etc., are mentioned. Some of the examples are given where, KS has been implemented. The benefits of Intranet for KS are given in detail with the problems of KS also. It is concluded that KS is an emerging area and all organisations/departments must share their resources in a fast way.

Keywords: knowledge sharing, Intranet, knowledge management, professional knowledge

1. INTRODUCTION

The concept of knowledge management (KM), the aspects of information communication technology (ICT), intellectual capital and people management have received wide attention from academics and practitioners in the past 10 years. Human behaviour is the key to success or failure of KM strategies. KM involves an emphasis on organisations; culture, teamwork, the promotion of learning and sharing of skills, experience and knowledge. The explicit knowledge can be articulated in written and oral forms, and easily acquired, transferred and shared, while tacit knowledge is troublesome and difficult to articulate, describe and communicate. KM is focused on operational issues, while some others emphasise on conceptual issues. However, organisations are sharing their knowledge across people and management. Knowledge sharing (KS) is of vital importance, enabling to develop skills and competencies, increase value and sustain their competitive advantage. It is a prerequisite for developing new techniques and products. Also, the ability to share knowledge between units contributes significantly to the performance of the organisations. Intranets are often cited as one of the pragmatic routes to promoting KS, as an essential part of KM strategy. This article focus on the opportunities and the Intranet management practices to increase their usability and KS capability.

2. INTRANET

Intranets have emerged as one of today's most effective ways of sharing information and knowledge in organisations. They act as the nervous and circulatory systems for a company, supporting business processes as well as the flow of information. An Intranet has been defined by Parks as "a private computer network based on the data communication standards and technologies of the public Internet". Curry and Stancich defined an Intranet as a private computing network, internal to an organisation, allowing access only to authorised users. Blackmore described an Intranet as simply a means of exploiting Internet technologies

within an organisation-based computer environment to aid the progression towards the seamless navigation of both Internet-based and inhouse-generated learning materials.

From the above definitions, an Intranet can be defined as a network that uses Internet concepts and technologies within an organisation in order to be accessed by employees to share knowledge. In addition, such knowledge is stored electronically and access is usually controlled by password.

3. KEY CONSIDERATIONS

An Intranet can be regarded both as an information and strategic management tool in the context of KM. First, Intranet is a network based on the Intranet protocol TCP/IP and runs common Internet applications. Secondly, it is private network, granting access on a selective basis and finally they do not address any specific well-defined need. The term Intranet also covers a variety of mobile and remote work environments[1]. The key considerations for the Intranet are:

- Web management on/of the Intranet site.
- Ease the webmaster/publishing bottleneck by devolving management of content to library groups.
- Acts as an information structure and submission system to ensure regular updating and user confidence in the content.
- Managers and staff must be able to contribute, update and manage content on the site without specialist skills such as HTML skills.
- Support easy workflow to be able to submit, approve, publish, review, retract and finally remove content.
- Schedule when content goes live and when it is to be removed.
- A role-based security model to control who can change what.
- Ability to build pages automatically with consistent headers and footers.
- Tag the content with metadata to facilitate finding information.
- Storage and searching both content and metadata[2].

Intranets also offer new ways to manage and communicate data, information and knowledge.

4. KNOWLEDGE AND KS

Knowledge has been suggested as the prime mechanism for economic value creation, thereby sparking a keen interest in managing and controlling it. In general knowledge-focused activities are:

- Generating new knowledge.
- Accessing valuable knowledge from outside sources.
- Using accessible knowledge in decision making.
- Facilitating knowledge growth through culture and incentives.
- Monitoring the value of knowledge assets and/ or impact of knowledge management, etc[3].

From the literature[4,5], KM can be operationally defined as a process of collecting and identifying useful information (i.e., knowledge acquisition), enabling employees to retrieve organisational knowledge including orphaned knowledge (i.e. organising knowledge), exploiting and usefully applying knowledge (i.e. knowledge leverage), disseminating it through the whole organisation (i.e. KS) and storing the knowledge in a repository (i.e. organisational memory). KS is, hence, not solely linked to work that has been done, and that has been benchmarked, but also to work that is being done. It becomes a process bridging situations of organisational interdependencies in ongoing activities.

Bartol and Srivastava[6] defined KS as the action in which employees diffuse relevant information to others across the organisation. According to Bock and Kim, KS has been considered the most important part of KM. The ultimate goal of sharing employees' knowledge is its transfer to organisational assets and resources. As Inkpen puts it, ''unless individual knowledge is shared throughout an organisation, the knowledge will have a limited impact on organisational effect. The goal of KS can either to create new knowledge by differently combining existing knowledge or to become better at exploiting existing knowledge[7]. KS is defined as the process intended at exploiting existing knowledge, and hence defined as being about identifying existing and accessible knowledge, in order to transfer and apply this knowledge to solve specific tasks better, faster and cheaper than they would otherwise have been solved.

Knowledge sharing is also to be understood as a process of bridging organisational interdependencies inherent in ongoing organisational activities. Viewing KS as a process of bridging organisational interdependencies expands our understanding of what

types of knowledge are at stake in KS, and what channels are best suited for sharing knowledge. KS is the process by which individuals collectively and iteratively refine a thought, an idea or a suggestion in the light of experiences. The original idea may be progressively modified or gradually rejected until a shared perspective emerges. Knowledge can be shared through face-to-face interactions, synchronous and asynchronous communication using an electronic knowledge repository. The degree of explicitness of knowledge shared is influenced by the media richness of the communication channels used.

First, the empirical setting is introduced, then the four types of knowledge, viz., professional knowledge (PK), coordinating knowledge, object-based knowledge and know-who is identified. Then the type of knowledge is related to situations of interdependencies for KS. The PK basically describes knowledge that enables the operation supporter to perform the job. PK is limited to the practice of being an operation supporter, and has also been referred to as know-how. It originates from a person's formal education in combination with the experience in performing job. It is a prerequisite for being able as a specialist to contribute to organisational activities, but in itself it does not produce any organisational outcome[8].

Coordinating knowledge is embedded in rules, standards and routines for how jobs are supposed to be performed. It guides the application, for instance PK, in order to secure the efficient transformation of input to organisational output. In other words, coordinating knowledge shapes who is going to perform what and when not necessarily how (which is rather guided by the PK).

Object-based knowledge is knowledge related to a certain object passing through the production line of the company. In situations of interdependencies the central organisational task is clustering the contribution from various specialists (and their specialised knowledge). Often, the combination of specialised knowledge and coordinating knowledge is applied to a certain object such as a patient, a machine or a customer. Know-who is knowledge about where knowledge exists. It enables the identification of who might be able to help solve specific problems. These four types of knowledge are all a prerequisite for organisational activities, since they all emphasise that knowledge is being shared as a means for efficiently transforming an input to an organisational output.

5. BUILDING THE INTRANET

A collaborative, open environment is essential to encourage and foster networking and information sharing. The Intranet should be viewed as a strategic tool that helps the organisation to achieve its objectives. Wherever in the organisation, the responsibility for the coordination of this system ultimately resides, it needs to be managed like any other business activity involving a cyclical process[9] as shown in Fig. 1.

A modular approach to the design of the Intranet on an experimental basis has to be done and then it may be extended gradually to meet the needs of all the library groups. The site framework consists of an Intranet homepage of common areas of interest to all library staff, and links to several library group areas. This requires a portal, which has to be set up for each area, and each of the library group portals will be customised in terms of colour and content requirements. Existing content has to be prioritised and then to be migrated to the new site over a period of time[10].

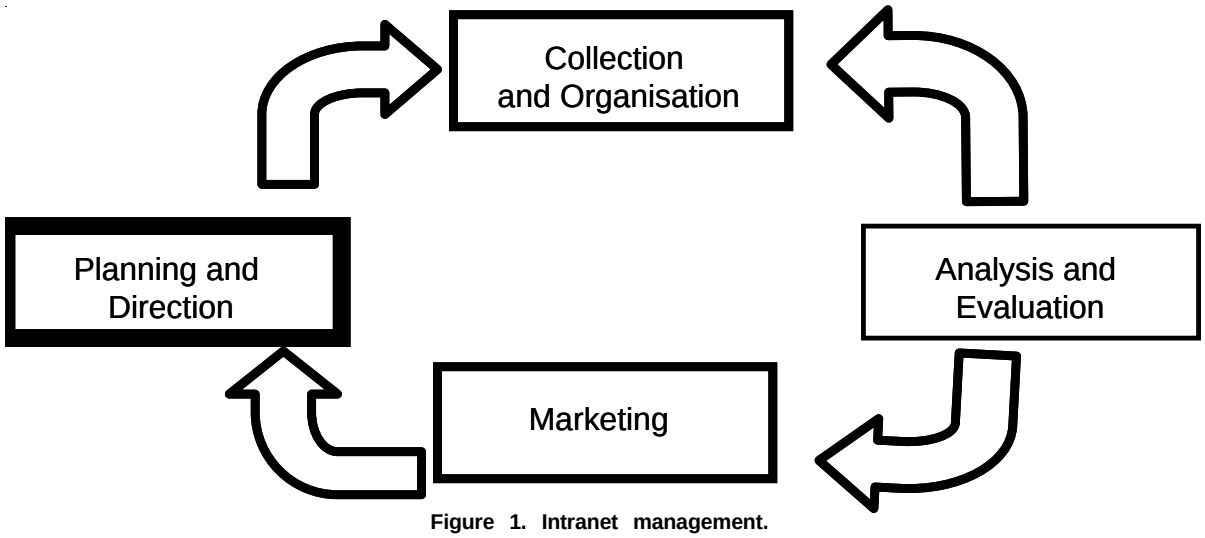

Figure 1. Intranet management.

6. CONTENTS FOR KS

The library Intranet aims to deliver content, which is important to all our users. All the staff is invited, to contribute content, ideas and to assist with this process so as to help, identify working needs such as sharing of minutes from a meeting, finding an important document, adding a photograph to a document, evaluation information on a training event, and open management. The content needs to be managed carefully so that it is always fresh and up to date; and concentrates on sharing best practices, and the "how was it done factor".

The library groups may have the following objectives for the Intranet:

- Providing a repository for documents.
- Offering a searchable and browseable collection of documents and web pages.
- Obtaining policies, procedures, forms.
- Disseminating reports to staff, and eventually to the rest of the members.
- Finding out about current projects, conferences, and training opportunities.
- Supporting discussion particularly planning events, scenario planning.
- Identifying knowledge gaps.
- Fitting in with working needs.
- E-mail alerting feature whereby someone has registered that they are interested in a particular area, and wants to know when new information or resources are available.
- De-skilling the publishing process to enable staff to focus on content and keep to the library style.
- Personalising the service.
- Collecting feedback.
- Logging usage.
- Finding performance indicators.
- Publishing news, e.g., connections (library's monthly newsletter), news from the library groups.
- Monitoring new developments, e.g., technology and web watch.
- Searching on library related topics, e.g., metadata, digitisation, KM, etc.
- Accessing database information, white pages (staff directory).
- Workflow-check new content before it is published, control versions.
- Events calendar, shared group diaries.
- Linking to related library information, e.g., *LISA*, (Library & Information Science Abstracts), library and technology news feeds, etc.

Apart from the technical elements, primarily two issues are coincident with activity levels. First, relevant information has to be put on the Intranet at regular intervals. The users of Intranet tries to put on data and demand others to do so. It demands for high activity and expectations. Second, the Intranet's contribution to maintaining a work culture among the people is more important. The Intranet generates a kind of consensual knowledge. Different users can, wherever they are spatially, go into familiar, a mutual trust and get a feeling of belonging, i.e., bringing people together, to get a feeling of coming closer to each other.

7. CATEGORIES OF INFORMATION

The types of information, which can be made available on Intranet, can be grouped as:

- News: all matters concerning staff.
- Directories: a list of contact details of personnel.
- Annual budget: annual budget of the enterprise provided by the mother organisation.
- Reports: feedback on activities, meetings, business and seminars.
- Agreements: for example, between the institution and vendors or partners.
- Archives: repository of information stored and organised for easy retrieval.
- Policies: principles of action adopted or proposed by the organisation.
- Templates of letters: kept centrally and can be completed. Data can be sent through or a print out generated.
- Management information: messages from top management can be made available on the Intranet

- Training materials: training materials and policies can be linked using the actual electronic documents.
- Electronic magazines: refers to magazines, which are available online or stored in electronic format.
- Forms: includes application forms for employment, experiential training, leave, and conference attendance.
- Discussion forums: tools which facilitate interactive communication via the Intranet, allowing all users to contribute their knowledge.
- Bulletin boards: an information source where notices, announcement, brief news, and advertisement are placed.
- Points of interest: includes suggestions, comments, recommendations as well as any matter of interest which employees need to raise.

The above-mentioned categories of information assist in sharing knowledge. Valuable records can be stored in the archives and retrieved when needed. Availability of such information can save time. It improves productivity because, for example, employees need not leave their offices to look for leave forms; they can easily download the forms from their computers in their offices.

8. ORGANISATIONAL CULTURE

Culture is defined as the shared values, benefits and practices of the people in the organisations. It is reflected in the visible aspects of the organisation, like its mission and espoused values. It is rooted in the organisation's core values and assumptions. Following this definition, in an organisation with a knowledge sharing culture, people would share ideas and insights because they see it natural rather than something they are forced to do. They would expect it of each other and assume that sharing ideas is the right thing to do. To those who know the core values of the organisation, they speak volumes, reinforcing the organisation's values[11]. Three of our following findings relate to this visible dimension of culture:

(i) There is a visible link between sharing knowledge and solving practical business problems.

(ii) The approach, tools and structures to support knowledge sharing match the overall style of the organisation.

(iii) Reward and recognition systems support sharing knowledge.

It is concluded that aligning KS with the organisation culture require:

(i) To create a KS culture, make a visible connection between sharing knowledge and practical business goals, problems or results.

(ii) It is far more important to match the overall style of the organisation than to directly copy the practices developed by other organisations. To make sharing knowledge a natural step, think through how effective change happens in the organisation. Make the visible artifacts knowledge sharing the events, language, websites match the style of the organisation, even if you intend to lead into new behaviour and approach.

(iii) Link sharing knowledge to widely held core values.

(iv) Human networks are one of the key vehicles for sharing knowledge. To build a sharing culture, enhance the networks that already exist. Enable them with tools, resources, and legitimisation.

(v) Recruit the support of people in the organisation who already share ideas and insights. Ask influential people and managers to encourage and even pressure people to share their knowledge. Build sharing knowledge into routine performance appraisal. Find the knowledge sharing networks that already exist and build on the energy they already have[12].

9. SOME EXAMPLES

KS can be viewed as an organisational innovation, owning to its fundamental role in generating new ideas and developing new business opportunities through the socialisation and learning process of knowledge workers. An important approach often found to significantly influence organisational innovation is the socio-technical perspective, which treats both social and technical issues as equally important in facilitating innovation. Although little research has been conducted into the use of networked computers to support knowledge-building among school students, work by Hakkarainen[13] and Hill, *et al*. provides evidence of the merit of this approach, by finding positive aspects to the use of networked computers for this purpose. The effective study of a community engaged in online knowledge-building is dependent upon a suitable theory being used to frame it. Little research has been done on the utilisation of an Intranet as a KM tool in academic libraries, especially in South Africa. Ford openly talks about the importance of KS, conducts internal advertising and organises KS events. Lotus works through informal teams to share knowledge based on their business needs[14].

Questions sharing and interactive assignments (QSIA) offers a unified infrastructure for developing, collecting, managing and sharing of knowledge items. QSIA enhances collaboration in authoring via online recommendations and generates communities of teachers and learners. At the same time, QSIA fosters individual learning and might promote high-order thinking skills among its users. The system is based on open standards, flexibility, privacy, open source, ease of use and multi-community. It enables users to create and edit different knowledge items such as questions or learning tasks. Also, it acts as a web-tool and permits easy accessibility to a variety of knowledge databases that include written text, as well as interactive multimedia such as music, video films, special simulations and virtual tours to museums. It is a multi-lingual system and has been used in English, Hebrew, Arabic, and Turkish[15].

10. BENEFITS OF INTRANET

Intranet provides an opportunity to bring new value, new rewards, manage information in new ways. The benefits and savings of the Intranet are:

- The same document/information is shared by staff.
- Can be updated easily by any member of staff who has the permission(s) to do so, with checks such as version control in place.
- Online discussions may prevent the need to physically meet or can help before a meeting and planning.
- Sharing generic information on the Intranet can lessen the amount of e-mail messages.
- People should work smarter as they will find information quicker and more easily.
- Acts as an up-to-date information sharing area and, therefore, the information is timely available.
- Supports the project culture-keeps people up-to-date, interaction, project content, templates are available for project initiation, progress and closure, best practice, exemplar projects, etc.
- Documents can be mapped so that any related documents can be linked or if staff read a particular document then it may be possible to push them towards other related documents or documents which may be of interest to them.
- Easy for staff to use as it uses familiar web technology.
- Information can be richer as it can incorporate text, tables, graphics, sound, animation, and multimedia with ease.
- Relieve the need for numerous paper-based forms as they can be delivered, and submitted electronically.
- Searches can be performed to find documents/ information including metadata (e.g. author, date, keywords, etc.) searches.
- One access point to the organisation's databases which allows a remote worker to access the knowledge available.
- Alerts can be set up to notify users of new content.
- Topic lists, which identify virtual working groups such as metadata, digitisation, personalisation, will provide additional pathfinders to the right people and content.
- Information and data will remain accurate and remain the same for all users accessing it.
- The more Intranet progresses, the less paper will be used.
- Using an Intranet requires the organisation to review and evaluate its working practices, and this is a valuable exercise in itself.

Thus, it is found that the Intranet as a KS tool facilitates for speedy and effective communication within an organisation.

11. PROBLEMS OF KS

Researchers seem to agree that the problems of KS most often stem from social dilemmas, knowledge dilemmas and a combination of the two, causing behaviour of knowledge that is counterproductive-or irrational-to the common good of the organisation. Social dilemmas are also referred to as ''dilemmas of the common good'' and ''public good dilemmas'', while knowledge dilemmas refer to cognitive barriers and epistemologically differences of knowledge, i.e., that knowledge can be either tacit or explicit, and exist at either an organisational or individual level. Some ways of overcoming the social and knowledge dilemmas are believed to be increased financial incentives, increased organisational efficacy, and a KS culture. Broadly speaking, the social dilemmas and knowledge dilemmas give rise to the following five problems inherent in organisational KS:

(i) The stickiness of knowledge: all sharing of knowledge is to some extent sticky-but to the epistemologically different faces of knowledge.

(ii) No common identity.

(iii) No relation between the receiver and sender of knowledge.

(iv) Unwillingness to share knowledge.

(v) No knowledge of knowledge.

12. CONCLUSION

Intranet plays a central role in many organisations, expanding the knowledge in the organisation. Running an Intranet includes the ambition to manage it or, at least, to make a decision not to. Managing the activity level and letting relevant information circulate are primary managerial concerns. To make an Intranet a success, the users must discipline themselves. They should also communicate problems of fulfilling expectations of the Intranet's potential. Therefore, organisations tend to support KS as if they were in situations of pooled interdependency, but in the words of Thompson this will eventually favour the least costs to the increased instrumentality. Alternatively, in other words, KS will most likely fail[15].

If companies are to practice KS, they must accept that getting started on sharing knowledge requires thorough identification and analysis of the problems that KS are supposed to be solved. This analysis has to start with identifying organisational interdependencies, and the flaws in bridging these interdependencies. Different forms of interdependencies involve different types of knowledge, and the sharing of these types of knowledge is to be facilitated differently. For global organisations, the implementation of Intranets may be difficult to achieve, since in some developing countries, Internet access is still not reliable and bandwidth problems may hinder their effective use. However, the evolution towards a KS tool implies more than state-of-the-art technology. People have to be motivated to share information and knowledge. Most importantly, management needs to examine their objectives for the use of Intranets and develop a strategy for their development, which is consistent with organisational goals.

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