Information Management : An Overview

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Abstract

Information management is a process which involves converting the internal and external information of the institution into actionable knowledge with the help of technology. The three basic facts of information management are : managemen. of change, management of information systems and services, and the management process, which includes planning process, manpower planning and management, finance management. Steps in the decision making process are provided. The role of librarian and information scientists in the information management environment is highlighted.

Introduction

Information Management (IM), a discipline emerged in mid 1980s, has firmly established itself by now which is evident by the following two incidents :

- Journal of Institute of Data Processing Management was renamed as 'Information Management Journal'

- ASLIB, after 50 years of its establishment, changed its name from Association of Special Libraries and Information Bureaux to the 'Association for Information Management'.

Though these two simple examples signify the importance of IM, a critical question remains persistent, asking as to 'Is there anything new in the concept of Information Management' or is it just a luxurious label for Librarianship. The concept of information as a resource, the problems of information overload, the tremendous impact of IT on the librarianship are the key issues in IM.

The objective of this paper is to discuss a general overview of information management and what it involves. What promoted the concept to come into popular use, what are the changes and new skills that the information manager has to adopt to deal with the situation.

Definition and scope of IM

To begin with, one can take up the question as stated earlier - 'Is it just a new label for Librarianship ?' Blaise Cronin[1] opines that there is nothing to stop librarians or information scientists from retitling themselves as 'Information Managers'. But the change of label does not necessarily imply a change of activity or attitude. Further, he argues that Information Management is more than value added librarianship. In addition to the usual functions of library administration, IM involves data processing, automation activities, systems analysis, management services, the new skills and techniques needed by the information managers to deal with the IT and strategies for developing a corporate information plan. Martin White[4] cites a working definition of IT as 'the efficient and effective coordination of information from internal and external sources. As Peter Vickers[3] puts it 'Management of information is not concerned simply with documents, message and data, but with the entire apparatus of information handling. He identifies the characteristics of information management as follows :

- Information has to be treated as a resource requiring proper management, like money, manpower and materials.
- At the simplest level, information management involves planning and co-ordination (if not direct control or use) of the following :

    - information handling skills

    - information technology

    - information sources and services
- Information management requires a careful "watch on" new developments that can contribute to the better management of information resources.
- Information management requires an understanding of the patterns of information flow within the organization, and thus it demands a systematic means of mapping and monitoring such flows.

The three basic facets of information management are

    - Management of change

    - Management of Information systems and services and

    - The management process

Management of Change

Management of change is a very crucial process especially in the present day scenario. Many of us are observing the enormous change that are taking place in our professional work. These are mostly due to the following :

- Technological Changes

- Socio-political, educational and demographic changes

- Change in the Government Policies

- Change in user needs and requirements

- Change in structure and dimension of information industry.

The first in the string of changes, is marked by a movement of industrial society to an information society. Information technology is developing at rapid pace and forcing a change in the structure and dynamics of information society. The management of change is indicating a pressing need to develop new and improved strategies for coping with changes and for introducing innovation into organizations.

Introduction of technology reduces the functional boundaries which have been observed traditionally. IT thus forces us for a re-arranging the order of a working environment by creating new relationships and altering the existing ones within an organizational framework. This calls for a dynamic leadership in quality with better managerial skills and a different attitude. Further, there is a fear that the trained intermediaries may be eliminated in the years to come. The need of the hour is to respond to technological changes. Users change their requirements very frequently, for various reasons. Their culture, and demographic characteristics also changes. All these changes require a careful watch and an information manager has to tackle these related issues. Changes in the structure and dimension of information industry has direct effect on information sources and thus have impact on the information management. For instance because of the fast emerging Internet, the scope of the library automation is now being extended to

- handling of electronic journals

- online information search

- handling of CD-ROM databases

This trend raises several issues in the Information Management; they are related to :

- selection of information resources in different media
- collection development

Information resources are today available in different formats and media. For example, a bibliographic database is available in paper form, microform, CD-ROMs and on online systems and on the Internet. The important question is how far it is possible to predict future or nearfuture use of the different types of information sources that exists today. Will we prefer :

- printed materials ?
- online databases ?
- CD-ROM databases ?
- Web sources ?

It is believed that the usage of printed materials are likely to decrease in favour of electronic media. CD-ROMs are often preferred instead of printed media since the user interfaces are most likely allows end-users to search for themselves. On-line services require unlimited budget and often these services are provided for a fee. Since many electronic journals are available on the Web, libraries must have the infrastructure to access Web space. Under these circumstances, an information manager has to make decisions about the purchase of online or CD-ROM or Internet sources. It is a difficult task. One must come out with a plan to use all the three media appropriately. Such a plan must provide flexibility, ease of use and access in a cost effective way. These changes are related to the media of the information resources and have impact on information management.

Management of information systems and services

The applications of information technology in libraries and information centres tend to increase the effectiveness of information system and services. At the same time it is difficult to plan for information technology. IT management requires a systematic approach and requires to be an integral part of corporate planning process. To discuss these implications on information management, it is very important to take into consideration the availability and efficiency of computer based information services. In the computer based information services the role of information scientists as intermediaries between the users and their sources is fast disappearing. However despite the potential developments, it is unlikely that in the near future, IT will not substitute for intellectual processing. The skill of an

information scientist in adding raw information is a valuable asset and has its place in even the most mechanized environments.

Despite having good technology which is capable of delivering the information with great speed and precision, we are unable to provide to the system the necessary mechanized structure in understanding the meaning and significance of information. However, Expert systems, Intelligent knowledge based systems and primitive robots are began to make contribution at the primitive level, but at the advanced level we are long way to go.

Information scientists have an important role to play in the development of systems and software which are capable of handling the structure and semantics of natural language. This calls for understanding the computer technology and design of intelligent system by the information scientist. It is the responsibility of Information Manager to provide the specialized training programmes to the information professional. In the present day context, the end user can directly access the information and therefore it as an obligation on the part of information manager to design and develop information systems such that the end user can access them directly. This involves

- Improved communications technology
- Improved access to internal as well as external information databases
- Improved document / report processing technologies
- Introduction of / increasing use of decision support systems

The Management Process

The management processes are directly related to planning process, manpower management and financial management. These are discussed in detail elsewhere[2]. However, these are mentioned very briefly here, to give a complete overview of the IM.

Planning process

An information manager should realize that some level of systematic planning is necessary pre-requisite for the effectiveness of library operations. The important point is that planning is not an one time activitiy, rather it is an ongoing process which is cyclic in nature. It means that, keeping the intentions on par with changes in environment, one must constantly review the previous action and adjust objectives,

policies and programmes accordingly. Planning helps to carry out the priority actions in achieving specified goals of a library and information centre. This is of paramount importance especially because of the incorporation of IT, including the Internet in libraries and information centres.

The planning process should also incorporate information technology plan. In this plan one should take into consideration the impact of the new technology on users and staff. The effective use of the information technology depends upon the provision of appropriate technical and supervisory training to all the potential users and by involving them in the design, development and implementation stages.

Manpower Planning and Management

Manpower planning at the organizational level has been defined as a "strategy for the acquisition, utilization, improvement and retention of an enterprise's human resources". The need for manpower planning and management requires no emphasis as the efficiency and effectiveness of libraries and information centres would largely depend on the academic and professional competence of the staff and on facilities and environment provided for their work and development. The two categories of personnel required for libraries and information centres are professional and support staff. The different levels, the number of persons in each level, their qualifications, cost of employing them, etc., will depend on type, quality and quantity of work to be done in the different units of library and information centre. Appropriate training programmes should be conducted from time to time so as to train the existing staff to make use of IT whereever necessary. One vital aspect, especially in an IT based environment, is to change the attitude of staff since, quite a few of them are likely to go against the very idea of applications of IT in libraries and information centres for obvious reasons. The success of any library in satisfying the user needs would largely depend on their ability in harnessing their potential capabilities and thus bringing the best out of each of their professional staff.

Finance Management

Information is being recognised as a commercial commodity. Its generation and management consumes time and money. Even though most of the organisations and industries have recognized the value of information as a corporate resource, their attitude remains unchanged when it comes to requisite money for its information centre. So the

responsibility on the part of the Information Manager is to calculate the budgetary figures accurately and to prepare a budget. A proper planning and a well approved budget with a provision for further expansion are the pre-requisite for the introduction of automation activities. This can be achieved by having a good information management.

Decision Making Process

Information managers take certain decisions under certain circumstances. The different situations are :

- Decisions under strict uncertainty

- Decisions under certainty - consequence of the decisions can be predicated; usually, the alternative which has a value not less than the value of any other alternative is chosen.

- Decisions with risks – the decision maker is able to quantity the uncertainty by assigning probabilities, generally known in advance, to each alternative.

The detailed steps in decision-making process are :

1. Identify the problem (recognize a situation that requires decision / action)

2. Gather the fact which will affect the decision

3. Generate and specify alternative solutions

4. Select the best alternative

5. Gain acceptance by motivating / explaining the basis of the decision to other members of the decision-making groups

6. Communicate the decision to all those affected

7. Put the decision into action

8. Supervise the execution

9. Follow up and evaluation of the results

In this process one may have to use different tools and techniques. Among the better known are the decision trees, decision matrices, linear programming, game theory, linear reference, mathematical modelling, forecasting, PERT, CPM. Depending upon the situation, one adopts different approaches in getting the solutions. In an IT environment managers are thoroughly involved in decision making processes almost everyday.

Conclusion

The basic elements of information management include accessing, evaluating, managing, organizing, filtering and distributing information in a manner that is useful to end users. Information Management involves blending internal and external information of the institution and turning it into actionable knowledge via a technology platform. The libraries and IT experts must work together, as a team, so that they can play a valuable role in the process of IMs. Thus, IM is a logical extension of the Information Society.

The implementation of Internet is not by itself an IM. What is important is that one must make use of the Internet effectively

- to get the relevant information as and when required and
- to make it available to others what we have

This is achieved, if we are good at information management. If we remain in the traditional librarianship, i.e., "we design and they will come and use", we will fail in delivering the information in IT environment in the context of information management. We design the systems and services as per the user's requirements.

References

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