THE ROLE OF LIBRARIANS IN ACTUALIZING INFORMATION RESOURCE MANAGEMENT (IRM) FOR SUSTAINABLE DEVELOPMENT

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Abstract

This paper focused on the general concept of Information Resource Management as a philosophical and practical approach to managing information. The paper points out the techniques, benefits, goals and significance of Information Resource Management and how librarians can enhance their skills on managerial, technical and electronic media by providing flexibility and ease of access and use. It also emphasized the roles of librarians in achieving sustainable development. It concluded that the rapid advancement in global information resources and technology has made information resource management an impossible task. Information is seen as a valuable resource, which should be managed like any other corporate resources. It recommended that the hybrid librarian should integrate information systems and services using the most appropriate resources, whether print or technology based to achieve the users information needs.

Keywords: Information Management, Information Resources, Librarians, Sustainable Development.

Information is an important resource in the "knowledge society and its management is very different from the traditional library management. Mostly, it involves management of change, time and electronic sources, along with traditional

collection management aspect. Information Resource Management (IRM) is a philosophical and practical approach to managing information. Because information is a valuable resource to be managed like other resources, IRM contributes directly to accomplishing organization's goals and objectives. It provides an integral approach to managing the entire life cycle of information – from creation to dissemination so as to maximize the overall usefulness of information.

Information Resource Management (IRM) can be understood as a philosophy of management that recognizes and calls for the creation, identification, capture and management of information resources as corporate assets to enable and support the development of policy and effective decision making. IRM have its roots traced back to college of Notaries and the nascent bureaucracies of the Italian city-states and signori beginning in the mid 14th century (Trauth, 1989) in (Schlogl, 2005).

Essentially, as the administration of the state became more complex and more sophisticated over time through the late medieval and early modern periods, so also did the management of its documents and records. During this period, the number of new government departments and agencies in western democracies began to increase, especially in the aftermath of the Second World War. The creation of these new departments as well as the introduction and prolific use of new information and communication technologies (ICTs) such as the telephone, typewriter and the mimeograph in the early 20th century, increased the volume of information produced and stored (Caron & Brown, 2012).

Thus, by the early 1970s, the rapid production of information and the gradual introduction of the computer in organizations led to the emerging notion of an information age in which information processing was acknowledged as having become a fundamental component of many jobs in industrialized nations. The subsequent emergence of the digital age engaged serious studies and debates on the evolving concept of information (Floridi, 2010 and Caron, 2011). Hence, information can now be understood to comprise both what is communicated – i.e. "the information delimited and structured, and is intelligible in the form of words, sounds or images" – and how it is communicated – i.e. "information inscribed on a medium to constitute a document" (Leleu-Merviel, 2008, cited in Caron and Brown, 2012). These evolving historical contexts provided the basis for various disciplines to contribute to the development and understanding of information resource management (IRM) (Papy, 2008 and Salaun, 2009).

The concept of Information Resource Management (IRM)

The concept of Information Resource Management aims at identifying information as an asset that could be processed and manageable. It requires process and system knowledge, communication and technical expertise. The major users of information are knowledge workers (middle level and top level managers) who create and process information. The use of such information could be for broader usage including policy/action plan formulation, resource optimization (land, labour, capital, technology, material, etc). Management Information System (MIS) also known as Information Infrastructure Management (IIM) is primarily aimed at controlling and organizing information and above all taking better business decision across various department in the organization.

Management of information becomes the principal function performed by business and information professionals. Schlogl (2005) opined that one important feature of information resource management is that, it is a framework that seeks to integrate different information professionals and functions under one umbrella. However, he argued that there are different points of view on which resources are to be managed. Huang (2005) pointed out that, Information Resources Management is to ensure the effective use of information resources, which is a human management activity using advanced technical means and methods of planning for information resources and related activities, budget, organization, command, control and coordination .

Information Resource Management (IRM) suggests that information should be recognized as a valuable entity, independent of the technology that manipulates it. As such, it is recognized as a significant organizational resource in much the same way as people, machines and capital. Hence, information should receive serious management attention. Accordingly, Trauth (1989) in Schlogl (2005) identified two phenomena that are responsible for the emergence of IRM. The notion of knowledge work which was introduced in the 1960s and the concept of the post-industrial society in the early 1970's. These characterizations were popularly described in the 1970's as "the Information Age and the Information Economy". Such phrases acknowledge the fact that information processing has become a fundamental component of industrialized nation since information handling has become such an important component of the economies; it is understandable if more attention is being paid to it. Thus, Trauth (1989) in Schlogl (2005) observed that recent technological developments have served to underscore the difference between information processing technology and the information itself. She opined that, in earlier times, a single technology served a single information function. Today, that is not the case; the same information can be stored or disseminated through a

variety of technologies, such as electronic mail, the telephone or video. This means that technology can be used to support a variety of information types which can in turn be processed by a variety of technologies.

Information Resource Management (IRM) or Information Management is conceptualized as the "planning, organization, development and control of the information and data in an organization and of the people, hardware, software and systems that produces the data and information" (Caron & Brown, 2012).

Information professionals have defined Information Management (IM) as the application of management principles to the acquisition, organization, control, dissemination and use of information relevant to the effective operation of organizations of all kinds. Thus, for information professionals, Information Management (IM) deals with corporate issues related to the value, quality, ownership, use and security of information.

The field of computer science has also defined IRM as a practical approach to the management of information, while emphasizing their specific philosophical understanding of information as a valuable resource that can only be managed like other corporate resources, but should also contribute directly to accomplishing organizational goals and objectives. IRM provides an integrated view for managing the entire life-cycle of information, from generation to dissemination, to achieve and maximize the overall usefulness of information and improving service delivery and programme management (Caron & Brown, 2012).

In essence, the impact and influence of the digital age and related socioeconomic transformations within public administration, going by the contemporary roles and responsibilities now associated with IRM within the context of public administration and government, the continuous creation, capture, management and preservation of authentic and reliable documentation has become a fundamental component of 21st century administrative accountability consonant with transparent governance, effective corporate stewardship and the efficient delivery of programmes and services to citizens through public business enterprise (Caron, 2010; Caron, 2011).

Today, the production and preservation of the documents and records of the state and its public administration in open and accessible form – especially in relation to policy development, decision-making and interactive relationships between citizens and the machinery of government. The concept of IRM has been shaped by the converging understanding of the term by a diverse field of experts, the expansion of activities of the federal public administration, and by the gradual adoption and study of new forms of information processing. Core to this evolving philosophy of IRM has been the notion

that data and information should be treated separately from the technology that stores and manipulates it.

Information Resource Management (IRM) can be stated simply as a process to manage information efficiently and effectively in fulfilling the objectives of the firm. IRM concepts rest under the premise that information, information related activities, technologies and personnel are important organizational resources that deserve to be managed like any other resources in the organization (Trrauth, 1989) in (Schlogl, 2005). IRM is the management (planning, organization, operations and control) of the resources (human and physical) concerned with the systems support (development, enhancement and maintenance) and the servicing (processing, transformation, distribution, storage and retrieval) of information (data, text, voice, image) for an enterprise (Caron & Brown, 2012). Hence, IRM is the recognition by an organization that data and information are valuable resources and the application of the same principles and managing data and information are used in managing physical resources such as personnel. Thus, Kerr (1991) cited in Caron & Brown (2012) observed that information is an asset that should be managed rigorously.

The most comprehensive definition offered by Hortons (1985) in his book "Information Resources Management: harnessing information assets for productivity gains in office, factory and laboratory" states that IRM is a managerial discipline which views information as a resource equal to financial, physical, human and natural resources. IRM addresses the efficient and effective handling of information resources (raw data) and the resulting information assets (knowledge). However, there are at least three events which when combined together, triggered the inception of information resource management (IRM). There are:
1. Information explosion
2. Proliferation of paper
3. Extensive use of information handling technologies

From the beginning of its use, the term Information Resource Management (IRM) has had a wide range of meanings. This is due, in part, to its independent development in three different sectors of the information processing community; Database management, records management and data processing management. It draws on the techniques of information science (libraries) and information systems (IT related). The activities of each discipline are generally independent of one another. This partially explains the wide variation in meaning of the term Information Resource Management.
1. The database management uses the terms data administration which is the establishment and enforcement of policies and procedures for managing the

company's data as a corporate resource. It involves the collection, storage and dissemination of data as a globally administered and standardized resource. Database administration is a technical function which performs database design and development, provides education on database technology provides support to users in operational data management related activities and may provide technical support in data administration. Thus, this perspective is concerned with establishing and enforcing standards to support a global view and integrated use of enterprise data. Hence, the job of the database administrator is to define the rules that control the database and to determine the manner in which the data would be stored. The creation, design and operation of databases were the duty of the database administrator.

2. The records management approach to IRM has its origin in library science, records management, administrative management and other disciplines concerned with the effective storage, retrieval and utilization of documents in organizations. The goal of records management approach in the private sector is the need for a person or organization to eliminate redundant document processing activities and facilitate access to the information. It also reflects an awareness of the variety of media available for information storage and presentation, and proposes greater integration of people, tools and systems in order to improve the quality of the information products.

3. The data processing management approach arises from the fields of business administration and Management Information Systems (MIS). This approach is concerned with providing better support for corporate decision making. According to Trauth (1989) in Schlogl (2005), two frameworks are used to describe the history and development of data processing. However, both culminate in the concept of Information Resources Management (IRM). Information

i. Identification of information sources
ii. Types and value of information they provide
iii. Ways of classification, valuation, processing and storage of that information

IRM is suitable for use in the private sectors like corporations, factories, etc and federal agencies like intelligent agencies.

Techniques of Information Resources Management (IRM)
The techniques can be listed as follows:
1. Database design and development that is derived from computer sciences

2. Classification of data and information retrieval that is derived from librarian and information sciences
3. Document life cycle that is derived from records management
4. Information systems and technology audits that is derived from other audit system like finance, communication, energy, etc and organizational psychology
5. Cost-benefit analysis and valuation of information resources that is derived from finance and business management.

Benefits of Information Resource Management

It is necessary in today's modern organization. IRM is the engine that drives the information economy whereby information and knowledge are intensively used. Information resources are import resources. It, therefore, needs effective management. The benefits include;
1. Identifies gaps and duplication of information
2. Clarifies roles and responsibilities of owners and users of information
3. Provide costs saving in the procurement and handling of information
4. Identifies cost/benefits of different information resources.
5. Actively supports management decision processes with quality information

The goals of IRM

The goals of IRM in the paperwork reduction Act fall into seven (7) major categories according to Trauth (1989) cited in Schlogl (2005):
1. **Paperwork reduction:** Overseeing agencies information collection requests, issuing guidance on the exercise of controls and proposing changes in legislation to remove impediments. This involves facilitating and sharing in information collection, the development of a federal information locator system, and establishment of central collection agencies.
2. **Data processing and telecommunications:** Establishing policies for effective acquisition and utilization of computer and telecommunications resources. These includes promoting the use of information processing technology and enforcing standards
3. **Statistics:** Developing long-range plans for improved performance of federal statistics/activities and the development coordination of government-wide statistical policies.
4. **Records management:** Correcting the deficiencies in existing records management practices and coordinating them with other IRM functions.

5. **Information sharing and disclosure:** Managing decisions relative to the threat to privacy and confidentiality. Policy guidance on disclosure of information, confidentiality and security of information would be set.
6. **Information policy and oversight:** Establishing a strong central management function responsible for the development of uniform and consistent information policies
7. **Organization, development and administration:** Creating the steps necessary for the establishment and funding of the office of information and regulatory affairs.

Significance of Information Resource Management

Any organization that wants to survive in today's turbulent dynamic environment need IRM in order to be adaptive. Information Resource Management plays a significant role in organizations due to the following reasons:

1. Challenge to perform better, effectively and quickly sharing of information and knowledge is critical for organizations.
2. Wherever and whenever possible information should be stored in a form that maximizes it inherent usefulness.
3. Information is a valuable resource and required careful stewardship/organizations that handle information processes with people who regularly needs to access distributed information in the course of workflow, such as data workers, information workers and knowledge workers.

The Role of Librarians

In this era, one might think that a librarian is no longer necessary in the management of information resources due to the use of electronic sources of information as well as a world dominated by common internet access with new libraries and the process of gathering information may be performed automatically in modern libraries (Somvir, 2010). Nevertheless, this is not true, to search the require information a great amount of time is required due the increasing rate of the speed and the amount of information in the world and also on the internet. In order to efficiently find, select, check, manage and make information available and understand the user's needs, through a computer programme or data base it is not possible to provide some sort of condense data, an information expert such as the librarian is required to manage and access the information. The tools and resources used to manage and supply required information has changed but the librarian's role has remained unchanged. Thus, the librarian is indispensable in the era of Information Resource Management if the development is to be sustained.

The concept of sustainable development can be interpreted in many different ways, but at its core, it is an approach to development that looks to balance different and often competing needs against an awareness of the environmental, social and economic limitations we face as a society. This means meeting the diverse needs of all people in existing and future communities, promoting personal wellbeing, social cohesion and inclusion, and equal opportunity. (Brundtland report, 1987). Governments, private organizations, and multilateral institutions strive to pursue economic development that is compatible with environmental objectives. As sustainability has become increasingly politicized, it is now widely used to refer to a system approach that incorporates environment, economy, and society. The scope of sustainability has become so broad that it can include income distribution, gender equity, culture, and a host of other politicalgoals of NGO's and their donors.

Sustainable Development is the organizing principle for meeting human development goals while simultaneously sustaining the ability of natural systems to provide the natural resources and ecosystem service upon which the economy and society depends (Wikipedia, 2019). It has been also defined by the World Commission on Environment and Development (WECD) as Development that meet the needs of the people today without compromising the ability of the future generations to meet their own needs (Iris, 2014).

Conclusion

The rapid advancement in global information resources and technology has made information management an impossible task. Information is seen as a valuable resource which should be managed like any other corporate resources. Hence, information resource management provides an integrated view for managing the life-cycle of information, from generation to dissemination. One of the core ideas of sustainable development is integration, information professionals should be able to develop and integrate information resource management policies into sustainable development goals such that the goals of sustainability can be achieved.

Suggestions

Thus, to face the challenges of information resource management, it was suggested that the hybrid librarian should integrate information systems and services using the most appropriate resources, whether print or technology based to achieve the users information needs.

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