

The Meaning of Management Information Systems and its Role in Telecommunication Companies in Yemen

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Abstract Management information system one of the most important tools in any organization, which aims to provide reliable, complete, accessible, and understandable information in a timely manner to the users of the system. Management information systems assisted in automating tasks. Automation can save time, money, resources, reduce employee's staff, and enhance organizational workflow. In addition assist in increased organization productivity, effectiveness, increase customer satisfaction, and efficiency of the work. In the telecommunication companies, MIS in general enables to collect, processing and storage of the information; with overall purpose to make that information available on demand in the required format. Telecom Companies can't work without management information systems as the number of participants in these companies more than million subscribers, so it's hard to save their data using the manual method (using files). Synthesizing from the literature and interviews with some of the employees of telecommunications companies in Yemen, this paper attempts to explain the concept of MIS and clarify the role of MIS in telecommunication companies in Yemen.

Keywords: *Concept of MIS, MIS, Telecommunication Companies, Yemen*

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1. Introduction

There are a lot of organizations in Yemen that is used management information systems, such as banks and telecommunications companies, ministries and universities. The use of management information systems has become necessary for any organization to facilitate the work procedures and improve efficiency and productivity and improve performance in general.

Moreover the importance of management information systems comes from the benefits that generated by that system such providing useful information in a timely manner, improved labor productivity, cost savings, providing the information without any delays and mistakes, and improved the management of work. In case of telecommunication companies, there are different types of MIS used in telecommunication companies such as marketing IS, accounting IS, human resources IS, and customer relationship management system. The most common management information system used in telecommunication companies in Yemen are human resource IS and customers system. The human resource system contains of personal details such as salary, and attendance etc. Meanwhile, the customers management system include all the information that related to the customers. The reason for chosen of telecommunications companies is because these companies are mainly

dependent on the management information systems and cannot work without it.

2. The Meaning of Management Information Systems

The term of management information systems consists of three parts, to understand the meaning of this term must understand what the meaning of management, information, and systems. It is better to understand each part of the term.

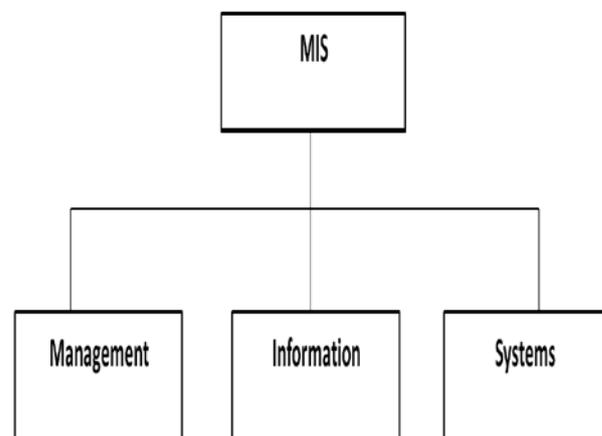


Figure 1. The Meaning of Management Information System (MIS)

2.1. Management

Management is to achieve organizational goals efficiently and effectively through planning, organizing, directing and controlling organizational resources, it's ability to achieve the goals by others [1]. According to business dictionary [2] Management is the organization and coordination of the activities of a business in order to achieve defined objectives. Management is often included as a factor of production along with machines, materials, and money.

2.2. Data and Information

Data is raw unprocessed facts and figures that have no context or purposeful meaning and information is processed data that has meaning and is presented in a context [3]. According to Hardcastle [4] Data is a raw fact and can take the form of a number or statement such as a date or a measurement. information is generated through the transformation of data. According to OBrien & Marakas [5] Information as data that have been converted into a meaningful and useful context for specific end users.

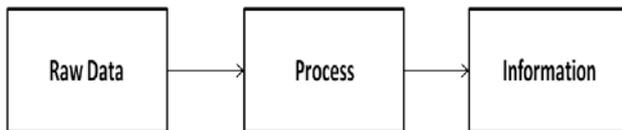


Figure 2. Transforming Data into Information

2.3. System

According to OBrien & Marakas [5] a system is a set of interrelated components, with a clearly defined boundary, working together to achieve a common set of objectives by accepting inputs and producing outputs in an organized transformation process. According to Hardcastle [4] a system can be defined as a collection of components that work together towards a common goal. The objective of a system is to receive inputs and transform these into outputs.

3. Definition of Management Information Systems

Management Information System (MIS) is basically concerned with the process of collecting, processing, storing and transmitting relevant information to support the management operations in any organizations [6]. According to Heidarkhani et al. [7] management information system is kind of organizational information computer systems, that take internal information from operating processing system and summaries them to Meaningful and useful forms as management reports to use in performing management duties. According Asemi et al. [8] management information system is one of the major computer based information systems. Its purpose is to meet the general information need of all the managers in the firm or in some organizational subunit of the firm. According to Babu & Sekhar [9] management information system is a collection of people, tools, procedures and software to perform various business tasks at various levels in the organization. According to Nowduri & Al-

Dossary [10] management information system is a computer based information system that provides for management oriented reporting based on transaction processing and business operations of the organization. According to Hasan et al [11] management information system is type of information systems that take internal data from the system and summarized it to meaningful and useful forms as management reports to use it to support management activities and managerial decision making. According to Al-Mamary et al [12] management information systems basically concerned with converting data from internal sources into information which is then communicated to managers at all the levels, in all functions to make timely and effective decisions for planning, directing and controlling the activities for which they are responsible.

4. Benefits of MIS

MIS provide reports to various managers among the middle and low level managers of the organization. Especially, for middle level managers management information system provides the organizational performance reports, which in turn help predicting the future performance of the organization [10]. According to Nath & Badgujar [13] management information system provides several benefits to the business organization: to come out with appropriate responses to a business situation; the means of effective and efficient coordination between different departments at all the levels of the organization; access to relevant data and documents; use of less labor; improvement in organizational and departmental techniques; management of day-to day activities. Management information system provides a valuable time-saving benefit to the employees. Employees do not have to collect data manually for filing and analysis. Instead, that information can be entered quickly and easily into a computer program. Access to the information needed is faster. According to Babu & Sekhar [9] the Primary purpose of management information system is to help an organization achieve its goals by providing managers with insight into the regular operations of the organization so that they can control, organize, and plan more effectively. In addition management information system provide the right information to the right person in the right format at the right time.

5. MIS in Organizations

Management information systems play a strategic role in the life of organizations, it provides the management with appropriate information and in the right place and time to help the management to do various functions of planning, organizing, directing and control and decision-making [14]. Every business organization in this era needs management information system to keep track of all business activities [10]. Managers cannot ignore management information systems because they play such a critical role in contemporary organizations. Today's systems directly affect how managers decide, plan, and manage their employees, and, increasingly, they shape what products are produced, and where, when, and how.

Therefore, responsibility for systems cannot be delegated to technical decision makers [15]. Management information systems have become as integrated into our daily business activities as accounting, finance, operations management, marketing, human resource management, or any other major business function. Management information systems and technologies are vital components of successful businesses and organizations some would say they are business imperatives. They thus constitute an essential field of study in business administration and management, which is why most business majors include a course in management information systems. Since you probably intend to be a manager, entrepreneur, or business professional, it is just as important to have a basic understanding of management information systems as it is to understand any other functional area in business. Management information systems can help all kinds of businesses improve the efficiency and effectiveness of their business processes, managerial decision making, and workgroup collaboration, which strengthens their competitive positions in rapidly changing marketplaces. Information technologies and systems are, quite simply, an essential ingredient for business success in today's dynamic global environment [5].

6. Telecommunication Companies in Yemen

The rapid development of ICT has created a wealth of opportunities for business and communities around the world. Although with the advent of current telecommunication devices networking there is still disparity in the ICT adoption between developed and developing countries [16].

Available in Yemen, more than a system of communication across the LAN for mobile services is Yemen Mobile governmental organizations, and three companies of the mobile phone system (GSM) Y, MTN, Sabafon. MTN and Sabafon started for the first time in February 2001. Y Company started for the first time in 2007. These services cover companies nowadays most areas of the country, in addition to mobile phone service via satellite. The number of subscribers to the companies (GSM) from 120 thousand in the first year to nearly 400 thousand subscribers in the next year, and currently stands at more than one million subscribers. And is expected to contribute to Yemen Mobile operating system (CDMA) to double the number of subscribers within the competition in service sectors. Owns the telecommunications sector in Yemen, the private and the mixed sectors.

6.1. The Private Sector

Sabafon mobile phone system GSM: This company is granted a license from the Yemeni Ministry of Communications, has also been allocated network code 421- 01 and numbers begin with 71 and the number of its subscribers around 600,000 subscribers. MTN (Spacotel of the former) mobile phone system GSM : This company is granted a license from the Yemeni Ministry of Communications, has also been allocated network code 421-02 and numbers begin with 73, and the number of

subscribers about joint 1,100,000. Y mobile phone GSM mobile : This company recently awarded a license from the Yemeni Ministry of Communications, has also been allocated network code 421-04 and numbers begin with 70 the number of subscribers has reached around 180,000 subscribers.

6.2. Mixed Sector

TeleYemen varicose communications and Internet services: one of the first telecommunications companies in Yemen and the Middle East is responsible for international communications and icon - based International 967 for Yemen. The ministry owns less than half of TeleYemen while owned by a British company the largest half At present ownership has become the Ministry of Communications College of Yemen but run by a French telecommunications company. Yemen Mobile, this mobile phone CDMA2000 system: The company is the only operator of Yemen's CDMA2000/1x

system Although from its beginnings studies, the establishment and the full support of the Ministry of Communications, but it has been privatized later. By Yemen Mobile numbers begin with 77 and its 421-03 networking code and the number of subscribers According to 2008 statistics, more than 1,700,000 subscribers.

7. Management Information Systems in Telecommunication Companies

According to Al-Mamary et al. [16] the telecommunications sector in Yemen is one of the most important sectors. The total revenue 2013 of telecommunications sector in Yemen amounting to almost 400 million dollars. While the budget amounted to Yemen in 2013 is nearly to 12.9 billion dollars. The allocated budget is equivalent to nearly 2.8% of the overall budget of Yemen.

In the telecommunication companies in Yemen, management information systems enable to compilation, processing and storage of the information; with overall purpose to make that information available on demand in the required format. Communications companies used modern computers and advanced servers connected to an advanced network, this network connects all network communications centers to each other. The system is connected to the main server so that the data is stored and files on a central server. So it is easy to retrieve data when needed. The telecommunication companies develop the systems and network and provide technical support by specialists and experienced in this field. In addition provide specialized training programs for their employees to help them to use the management information systems. Telecom Companies can't work without management information systems as the number of participants in these companies more than million subscribers, so it's hard to save their data using the manual method (using files).As we know that telecom companies are saving the subscriber data (name, card number, etc.) in a database where the subscriber can go to any branch in any city to inquire. Management information systems assisted in automating tasks. Automation can save time, money, resources, reduce employee's staff, and enhance organizational

workflow. In addition assist in increased organization productivity, effectiveness, increase customer satisfaction, and efficiency of the work. Management information systems play a key role in the life of organizations; it provides the appropriate information in right time as needed to support the management activities.

8. Conclusion

This study presented the literature review on management information systems. In addition clarify the role of management information systems in telecommunication companies in Yemen.

Where this study clarify the benefits of use management information systems in telecommunication companies. Management information systems makes it easier to collect, store and process the data and retrieve information easily when needed, which increases the efficiency of these companies. This study generally encourages the use of management information systems in telecommunication companies and all other companies in Yemen.

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