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Trends in Management Information Systems

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Abstract- **The modern business world has a complex factor for it's survival to shift their primary focus from mere profit to gain competitive advantage. Effective and efficient strategic decision making by ensuring that the right kind of information reaches the right person in the right format at the right time determines the market position of any business. Management Information System is a rapidly evolving IT based system that continuously create information from raw data collected from various sources and compiles individualized reports of various kinds which helps different levels of management in informed strategic decision making. MIS, oriented is the rapid evolving technology surrounding Artificial intelligence which aims at maximum automation of business processes. This paper discusses the recent trends in MIS which discusses the success and survival of modern business in today's era. The evolution of modern dynamic MIS from its Traditional manual version to the latest cloudbased MIS services and predictive business modeling are discussed along with the Framework and Components of MIS. The role of MIS and recent trends in business is examined in detail. The need for increased efficiency and to enhance maximum productivity make the study on MIS relevant than ever before. It plays an important role in the profit making or smooth running of the business firms.**

Keywords: Management Information System, Business, IT (Information Technology) Information Requirements, trends in MIS.

INTRODUCTION

The advent of computers has revolutionized the workplace and redefined operational practices. The use and deployment of computers, computer systems and information technology (IT) applications in every aspect of business is now commonplace. The recent application and adoption of Web-based, information and telecommunication technologies has force-multiplied the capabilities and benefits of computers. The importance of computers in business cannot be overstated. Businesses are using Internet communication technologies, networking and relevant software to enable workers and professionals to collaborate and work across locations and geographical boundaries and streamline work-flow management.

Management information systems (MIS) are complex decision support systems used by companies to enhance and improve their business operations. Historically, an MIS was a management tool to help company management make informed decisions for their business based on information gathered from all business departments. Technology has greatly improved the effectiveness of the MIS.

The management information systems (MIS) landscape is constantly changing as new technologies are introduced and existing technologies evolve, making it critical for MIS professionals to stay on top of current trends and continue to develop their technological savvy. Some of the biggest management information systems trends affecting business today are big data analytics, cloud computing, mobile computing and smart machines.

BIG DATA ANALYTICS

The digitalization of business has led to the rise of big data analytics. Big data analytics refers to the collection, organization and analysis of large sets of data. Two areas of big data analytics that MIS professionals may be involved with at a business are raw data maintenance and data mining. Raw data maintenance involves maintaining a business' raw data, usually in the form of databases. A database is like a library of information (customer data, vendor data, etc.) that is stored in an organized, easily accessible format. Database maintenance is especially important for businesses because in many cases, employees are adding, removing, moving and changing entries at will. This can lead to disorganization—and even database malfunction—if not addressed, and that's where database maintenance comes in.

MIS professionals are responsible for keeping a business' databases organized and streamlined in order to keep everything functioning smoothly. Oftentimes, database maintenance can also involve performing regular data backups. This helps protect the business from data loss due to technical problems, security breaches and other problems.A company's data is one of its most valuable assets, which makes data maintenance a top priority for many businesses.

Data mining is another aspect of big data analytics that MIS professionals may be responsible for. Businesses use data mining to turn large sets of raw data into useful information.In essence, data mining refers to using technology to automatically comb through large amounts of data in order to identify patterns and trends that provide useful insights. MIS professionals may help with a business' data mining efforts by building data mining models that use algorithms to review and analyze data in order to turn it into manageable pieces of useful information.This information can help businesses learn more about their customers, competitors, industry and more,

making data mining an important part of many MIS professionals' responsibilities.

Data Mining, a powerful tool

An important trend in MIS is the ability for companies to use data mining tools to collect information regarding consumer purchases and other economic trends. This allows management to translate this information into goals and directions for future business operations. Most MIS software also has trending or forecasting models that allow companies to project emerging consumer markets for profitable operations. Companies can use their internal figures in the MIS to measure the effectiveness of their external data mining techniques.

CLOUD COMPUTING

Cloud computing utilizes shared computing resources rather than local servers and personal computers. In other words, cloud computing refers to storing and accessing data and applications using the Internet rather than your computer's hard drive.Cloud computing has become essential to modern business. Such wide-scale adoption is no surprise, as cloud computing provides innumerable benefits to a business. For example, cloud computing facilitates collaboration, provides better access to analytics, reduces costs, increases productivity, and allows for quick development of new products and services. Cloud computing has the power to transform business, making it one MIS trend savvy professionals can't afford to ignore.

MOBILE COMPUTING

Mobile computing has forever changed the way we do business. Combined, smart phone and tablet usage in America is up 2,115 percent since 2010, with no end to the growth in sight. Mobile traffic is projected to increase at a compound annual growth rate of 45 percent over the next several years, meaning there will be an estimated 10 times more total mobile traffic by 2019.

The mobile revolution has not only changed consumer behavior—the way consumers find and purchase products, interact with brands, utilize customer reviews, and so on—but business practices as well. In addition to creating a great mobile experience for consumers (a responsive mobile website, mobile payment options, mobile apps, etc.), businesses also need to adopt mobile policies for employees that allow them to take advantage of the benefits of mobile computing without sacrificing security. As mobile computing continues to play an ever-growing role in business, it's critical for MIS professionals to stay abreast of mobile computing trends.

SMART MACHINES

It’s not too long that concepts like artificial intelligence, machine learning and self-driving cars seemed like science fiction. Today, however, smart machines are a fact of life, Smart machines will have widespread and deep business impact through 2020. Smart machines are capable of learning, making decisions and solving problems without human involvement, and many businesses are embracing their use to increase both productivity and efficiency.

As smart machines become more and more prevalent in business, it has become increasingly important for MIS professionals to stay on the cutting edge of this technology. MIS professionals need to be able to both work with smart machines (implementation, troubleshooting, integration, etc.) and also perform job duties that smart machines can't automate.

Benefits of Networking:

Modern Automatic Factory

Another trend in MIS is the ability for companies to network with other companies for business purposes. Manufacturing firms can shorten their supply chain using electronic data interchange (EDI) to transfer the necessary information for ordering more products. Networking also allows companies to transfer money through several bank accounts, creating a quicker process for paying bills and purchasing materials. An MIS ensures that management has all the pertinent information for these business operations, allowing them to review the effectiveness of their operations.

EDUCATIONAL PROGRAMS

MEDICAL TEAM DISCUSSING ON A PROJECT

As MIS software becomes more prevalent in businesses, many colleges and universities have developed educational programs to train students on these programs. Most degrees are four-year baccalaureate programs that combine general business courses with a mix of computer programming and management classes. This helps students to develop a well-rounded education in the development and implantation of MIS software. Advanced degrees are also offered.

Enterprise Resource Planning:

Enterprise resource planning (ERP) software is a form of MIS that is installed in all departments and locations of businesses to enhance the availability of company information. With the globalization of the economic marketplace, companies have sought ways to improve their ability to collect and report financial information to management for effective decision making. ERPs fill this void by allowing companies to use one computer system to effectively record all company information.

ETHICAL ISSUES IN MIS

Policies and procedures to manage end-user development include the following:

• The organization must establish sufficient support facilities for end-user computing: information centers or distributed end-user computing centers.

• Training and support should be targeted to the specific needs of those being trained.

• End-user application development should not be allowed to be undertaken randomly but should be incorporated into the organization's strategic plan.

Management should develop controls over end-user computing in the following areas:

• Cost justification of end-user information system project.
• Hardware and software standards for user-developed applications.
• Company-wide standards for microcomputers, word processing software, database management systems, graphics software, and query and reporting tools.
• Quality assurance reviews that specify whether the end-user systems must be reviewed by information systems and internal audit specialists.
• Control for end-user developed applications covering testing, documentation, accuracy, and completeness of input and update, backup, recovery and supervision.
• Critical applications that supply data to other important systems should be flagged and subjected to more rigorous standards

CAREERS IN DATABASE MANAGEMENT AND CONSULTING

Computerized MIS programs have led to a new career in database management and consulting. According to the U.S. Bureau of Labor Statistics (BLS), employment of computer and information technology occupations is projected to grow 13 percent from 2016 to 2026, faster than the average for all occupations.

CONCLUSION

The information and trends display an evolving situation that the company wants to change. Management information systems can evaluate different possibilities and let managers examine scenarios. Management information systems calculate what happens based on their collection of data on how the company operations performed in the past. Managers can see what happens if they increase promotional budgets or cut staff. MIS helps not only the organization but also its stakeholders and it helps the organization to achieve its objective in a very short period.

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