



Information Technology- A magic wand in the different realm of Business Management

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ABSTRACT

In present age of Web, technology is acting as the key of success to entire business. Today most of the businesses are going global & the pre condition to be a successful global company is to have a strong Information system. It has actually become the foundation stone, oxygen for the modern day survival & has brought the revolution all around the globe. All medium to business management depend upon Information Technology for their continued survival in this competitive era. Collectively IT offers the business community a broad set of tools capable of addressing problems that are much harder or virtually impossible to solve using the more traditional techniques from statistics to operations research. Every business required IT skills with core business management knowledge which help them to stand out from the crowd. Today's best technology to manage and process data is the IT & it is laying a vital and expanding role in business. IT helps the manager to improve the effectiveness of their business processes, managerial decision making, thus helping them to strengthen the positions of their company in a rapidly changing environment.

This paper will cover the basic and advanced applications of IT in business. Its focus will be on usage of IT to create business competitive advantages. It will humbly attempt to bring upon some light; on the wonderful facets of firing innovations (newest IT application trends), in the business arena, with an apt endeavor to achieve perfection through IT. The aim is to enable the managers to know the applications of IT in various areas of Management focusing on to the production, marketing, Human Resource & Finance which become necessary ingredient for them to succeed in today's dynamic global environment.

Keywords— Information Technology, HRD, Marketing, Finance, Production

1.INTRODUCTION

Information Technology plays a vital role in the lives of people. Every field of human activity, may it be his daily life, official life, everything is now influenced under the cover of information technology. Today's best technology to manage and process data is the Information technology. The term "information" has a diversity of meanings, from everyday usage to technical interpretations. "Technology" includes the use of materials, tools, techniques and sources of power to make life easier or more pleasant and work more productive. Technology also started being used for managing information when the amount and variety of information grew to such vast proportions that the human brain could neither store nor process it efficiently.

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Information Technology is a general term that describes any technology that helps to produce, manipulate, store, communicate and/or disseminate information. "Information Technology" as defined by the Information Technology Association of America (ITAA), is "the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware." As per words of Chaffey and Wood IT is the "technology resources used for business information management" These resources include software, hardware and telecommunication networks used for managing information in business.

1.1 Indian IT Industry

The Indian Information Technology industry has played a key role in putting India on the global map. Thanks to the success of the IT industry, India is now a power to reckon with. According to the National Association of Software and Service Companies (NASSCOM), the apex body for software services in India, the revenue of the IT sector has grown from 1.2 per cent of the gross domestic product (GDP) in FY 1997-98 to an estimated 5.5 per cent in FY 2007-08. The net value added by this sector, to the economy, is estimated to be 3.3 to 3.9 per cent for FY 2007-08. In addition to the direct positive impact on national income. IT is changing rapidly and considering the increasing strategic impact on business operations, therefore its successful management is of utmost importance. IT must be perceived as an iterative business process capable of providing organizational learning throughout the lifecycle of the technology. However, even when IT is managed successfully, the question arises, as to what role IT plays in the achievement of organizational strategic goals and objectives remains.

Encompassing the computer and information systems industries, Information Technology is the capability to electronically input, process, store, output, transmit, and receive data and information, including text, graphics, sound, and video, as well as the ability to control machines of all kinds electronically in any organization. Completing tasks using Information Technology results in rapid processing and information mobility, as well as improved reliability and integrity of processed information.

1.2 Why Information system is important?

An understanding of the effective and responsible use and management of information systems is important for managers and other business knowledge workers in today's global information Society. Information systems and technologies have become a vital component of successful businesses and organizations. Information systems constitute an essential field of study in business administration and management, as they are considered a major functional area in business operations. Business professionals rely on it to transform data resources into a variety of information products for consumers and business professionals. They bring new options to the way companies interact, the way organizations are structured, & the way workplaces are designed. Use of network based IS can significantly lower the costs of communication among workers & firms & enhance coordination on collaborative projects. One more plus is that product specification in an electronic form can be modified during computerized video conferences between employees throughout the organization –after which the supplies can be secured & distribution coordinated, using automatic electronic forms as sales orders are received. Wide area networks help partnering organizations to facilitate the interaction of widely dispersed business units. Team



member who are often widely dispersed around the globe, are greatly assisted in their work by the use of corporate intranets & groupware.

II. APPLICATIONS OF INFORMATION TECHNOLOGY (IT) IN BUSINESS MANAGEMENT

Every day, people use computers in new ways. Computers and other electronic devices are becoming increasingly affordable. They continue to be more powerful as information-processing tools as well as easier to use. Humans are continually becoming dependant on IT-enabled devices for carrying out simple tasks like remembering a phone number to complex ones like flying a fighter plane. Information Technology has applications in almost all aspects of our life. IT has also given some of the wonderful facets of firing innovations (newest IT application trends), in the *business arena*, with an apt endeavor to achieve perfection through it. The aim is to enable the managers to know the applications of IT in various areas of Management focusing on to the production, marketing, Human Resource & Finance which become necessary ingredient for them to succeed in today's dynamic global environment. Some of the important applications of IT in the field of Business management are listed below:

2.1 Applications of IT in Human Resource Department (HRD)

Companies use technology as a way to gain competitive edge in the market. In case of Human Resources, technology helps in all processes from recruit to retire functions and has drastically changed the way employees and managers get access to the human resource data. HR-IT has achieved much importance now because of its use in most of the organizations to increase the productivity through maximizing the value of the organization's most significant asset, PEOPLE.

The computerization of human resources management has extended into arenas only imagined two decades ago. The decrease in the cost of company computer networks and company extranets combined with the easy accessibility of the Internet and World Wide Web (WWW) means that with just a few keystrokes, or clicks on a mouse, your company can link instantly to sources of information that used to take weeks or months to access. Today's computer networks not only allow your company access to this wealth of information, they also allow your employees accessibility to that same information, to each other, and to their customers. Today, few human resources departments are found without internal computer networks. This can be attributed, in part, to the rapid advancements in the field of Information technology. It is important to look forward for the changing trends in technology which can have an impact on the HR practices. Information is an essential tool for managers & its systems play an important role in planning and management of human resources. A human resources information system (HRIS) is the integration of software, hardware, support functions and system policies and procedures into an automated process designed to support the strategic and operational activities of the human resources department and managers throughout the organization. The wide range of impact of technology on HR can be clearly viewed on the HR functions such as:

(a)E-recruitment / Applicant Tracking: In case of Recruitment, IT has a highly positive impact. E-recruitment is the use of technology or web based tools to support the recruitment process. The major ways of



recruitment, which companies commonly use are by displaying the career opportunities on their websites, depending on the job portals for making the potential hires and using social networking sites (SNS) for getting the database. The major advantages of this e-recruitment are:

- Economical way to publish job openings
- Greater reach
- An easy tool to get connected to people with niche skills
- Speeds up the recruitment process (faster posting of jobs, quicker applicant response, and rapid hiring).
- 24*7 accesses to the online resumes.

(b) E-training: In the case of Training & development, e-learning is an intense opportunity provided by the companies for their employees, which help them to increase their knowledge level. The training materials are provided online; employees can utilize these materials and get trained. In the case of e-learning, employees have an advantage that they can learn at their own pace.

(c) E-payroll: E-payroll models automatically collect data regarding employee attendance and work record for the purpose of evaluating work performance, they calculate various deductions including tax, and generate periodic pay cheques and tax reports. By preparing paperless online pay slips, the system is able to reduce administrative costs and time for the total operations. Employees too can view their exclusive data and get personalized reports.

(d) Performance Management: Several customized HR-IT solutions are available off the shelf for performance management, CPM (Computerized performance monitoring) system used by companies helps in data collection by counting the number of work units covered by each one per time period. At a time, it helps in calculating the performance of approximately ten million people. Even though these software packages have been made to make the flow of information between different departments to be smoother.

(e) Data Management: The days of large file rooms, rows of filing cabinets and the mailing of documents is fading fast. Today, most HRD's store digital versions of documents on servers and storage devices. These documents become instantly available to everyone in the company, regardless of their geographical location. Companies are able to store and maintain a tremendous amount of historical data economically, and employees benefit from immediate access to the documents they need.

2.2 Applications of IT in Marketing

Information technology is also be used by marketing department of any organization when it comes to marketing a certain product or service. It is helping the organizations to improve their performance by bringing more sales and profit to them. The following are some of the applications of information technology i.e., how it has helped when it comes to marketing a certain product or service:

(a) Helps in Advertising: Advertisements come in many form and this include online advertisement, TV commercials, radio commercials, and even through emails. When you open your social networking account, you will see an advertisement and if in case you like it, you will definitely click it. This is how marketers use



information technology in advertising their products or services. On the internet, advertising is cheaper this is because it has a wider array of audiences from where an advertiser could direct the advertisements to. Today, with the advantages that IT brings to marketing & sales industry, advertisers are able to promote their products more effectively than ever.

(b) Customer Relationship Management: Companies are using IT to improve the way they design and manage customer relationships. Customer Relationship Management (CRM) systems capture every interaction a company has with a customer, so that a more enriching experience is possible. If a customer calls a call center with an issue, the customer support representative will be able to see what the customer has purchased, view shipping information, call up the training manual for that item and effectively respond to the issue. The entire interaction is stored in the CRM system, ready to be recalled if the customer calls again. The customer has a better, more focused experience.

(c) Communication: For many companies, email is the principal means of communication between employees, suppliers and customers. Email was one of the early drivers of the Internet, providing a simple and inexpensive means to communicate. Over the years, a number of other communications tools have also evolved, allowing staff to communicate using live chat systems, online meeting tools and video-conferencing systems. Voice over internet protocol (VOIP) telephones and smart-phones offer even more high-tech ways for employees to communicate.

(d) Online catalogs: Suppliers, especially wholesalers, use extranets to make online catalogs available to vendors. Extranets also allow suppliers to offer discounts to favored clients and to discount items that are overstocked, being phased out or proving hard to move. The extranet's ability to display up-to-date inventory data streamlines the purchasing process for both buyers and sellers.

2.3 Applications of IT in Finance

The discovery of computers has transformed the financial industry and how business deals are transacted. It is possible for accountants to keep large amounts of data, conduct intricate calculations and manage financial transactions from a computer. Information technology influence both business and personal financial management.

Computers have revolutionized the financial industry and the way finance works by automating complex calculations and providing instant communication and news. The sophisticated way we do business and economics today would have been impossible only a few decades ago, due largely to the impact of computer technology on our ability to make financial decisions.

(a) Management Information Systems: Storing data is only a benefit if that data can be used effectively. Progressive companies use that data as part of their strategic planning process as well as the tactical execution of that strategy. Management Information Systems (MIS) enable companies to track sales data, expenses and productivity levels. The information can be used to track profitability over time, maximize return on investment



and identify areas of improvement. Managers can track sales on a daily basis, allowing them to immediately react to lower-than-expected numbers by boosting employee productivity or reducing the cost of an item.

(b) Spreadsheet Software: Spreadsheet software influences the way large- and medium-sized firms, as well as individuals to run day-to-day financial tasks, such as compiling financial data, presenting the data in an organized manner through the use of charts and graphs, drawing budgets and calculations of complex transactions. This application comes with computer programs, such as Microsoft excel, that enables organizations and individuals to plan finances without wasting too much time. Excel templates automatically perform mathematical calculations and create graphs and charts, allowing financial professionals to understand meaningful data at a glance.

(c) Record-Keeping: Computerization makes data storage manageable and less bulky. Computers enable organizations to store large amounts of files in a small space, allowing us to have a large track of historical transactions, while avoiding consumption of space that would otherwise be consumed by piles of files in cabinets. Keeping financial records is critical for organizations, as well as individuals, as it allows tracking of payment records, debts owed, purchases done and bank transactions made. Having detailed financial records helps an organization to continually audit and analyze business performance.

(d) Programmed Transactions: Computerized financial software conducts programmed business and accounting transactions. Most finance departments utilize accounting applications, such as QuickBooks, Tally etc to perform financial transactions and to manage a company's income and expenditure. These programmed applications enable an organization or individuals to keep track of financial operations and also conduct complex transactions effortlessly without consuming a lot of time and labor that would otherwise be used in case of manual transactions. Organizations can purchase software depending on nature of work.

(e) Financial Information/service: Computers have enhanced access to wide financial information through Internet access. Business operators or individuals can now access information on investment prospects, and conduct a detailed research on its profitability. There is also wide financial information available on the Internet, such as world prices, tax changes, inflation rate and currency exchange rates making it easier for institutions and individuals to make informed financial decisions. The Internet provides a wide source of information and access to specific financial reports of companies in trade. Banks, brokerages and other institutions use extranets to perform a variety of transactions, covering everything from consumer banking to check-clearing services. Even the Internal Revenue Service has developed an extranet that allows tax-processing companies to submit forms over the Internet.

(f) Communication: One of the primary uses of computing power is for communicating remotely and instantly among people and computer networks. This system allows producers of goods to instantly access price



information in faraway places and make decisions about where and when to sell. Financial traders, such as stock brokers, can also keep abreast of the stock prices and trade volumes around the world, from the London to the Tokyo exchanges, and to make their own trades based on that information.

(g) Automation: Computers can perform automatic calculations, and even automatically retrieve information needed to perform those calculations. For example, Quickbooks or Peachtree accounting software can automatically obtain bank account information and transaction records from a bank, and then perform calculations to show a business owner their current cash, accounts payable, profit and loss, etc.

2.4 Applications of IT in Production / Manufacturing & operation

Computer based control systems can be combined with manufacturing technology. Computers are used in manufacturing in many, many ways. Most commonly computers are used to generate labels for products, control and/or monitor larger machines (presses, robotics, etc.), and for general reporting. They are also used in manufacturing for the shipping process, i.e. Bills of Lading printing, sending electronic communications to vendors and customers, etc.

(a) Retrieving information: . From airlines to automobiles, the manufacturing industry uses extranets to provide access to product manuals and technical specifications. IT makes it easy to share and transfer this type of information, which can run to thousands of pages in print format. Also, those with access can update information, flag problems and issue warnings — all instantly, in a self-serve format.

(b) Product designing: The combination of information technology and factory automation is often called computer-integrated manufacturing. CIM blends development in manufacturing with IT to achieve competitive advantage. When properly organized, CIM offers the opportunity to automate design, manufacturing and production planning and control. CAD software is also been used these days to design a product and, before it goes into production, to thoroughly test it for such concerns as safety, & durability. The initial design can be input to the CAD system in various ways including drawing sketches on a digitizing tablet, to build a series of equations.

(c) Automation: One of the basic functions of IT is automation. If an activity consists of processes that have to be performed on a routine basis, is made up of constantly recurring elements & can be described in precise terms, then it can be automated. This can be done by writing a program that executes the activity.

(d) Inventory Management: When it comes to managing inventory, organizations need to maintain enough stock to meet demand without investing in more than they require. Inventory management systems track the quantity of each item a company maintains, triggering an order of additional stock when the quantities fall below a pre-determined amount. These systems are best used when the inventory management system is connected to the point-of-sale (POS) system. Which ensures that each time an item is sold, one of that item is removed from the inventory count, creating a closed information loop between all departments.



III. CONCLUSION

Information technology (IT) has become a vital and integral part of every business plan. From multi-national corporations who maintain mainframe systems and databases to small businesses that own a single computer, IT plays a role. The reasons for the omnipresent use of computer technology in business can best be determined by looking at how it is being used across the business world.

In this fast growing market, if you are not aware of the latest's in IT, ensure that you don't get left back in the dust, as your competitors are already experimenting new technologies. Organizations need to be updated on the technological options that are available, select the best options that will make significant difference to their functioning and leverage them to bring efficiencies. The sector has grown to become the biggest employment generator, and has spawned the mushrooming of several ancillary industries. This, in turn, has triggered a rise in field of business management too. Hence, managers have to be keen and far sighted; don't let the opportunities pass them by, only because they were not updated on technological offerings and its impact on doing better business. Understanding these changes will help smart managers to adapt and flourish. Once they exploit these changing trends, they can very well have the advantage over other players in the global market.

REFERENCES

- [1.] COMPUTER APPLICATIONS IN HUMAN RESOURCES MANAGEMENT. (SECTION 6 APPROACHING THE YEAR 2010) CHAPTER 15[AVAILABLE ON]:[HTTP://WWW.HIGHBEAM.COM/DOC/1G1-184699728.HTML](http://www.highbeam.com/doc/1G1-184699728.html).
- [2.] How does information technology help in marketing? [Retrieved from]http://wiki.answers.com/Q/How_does_information_technology_help_in_marketing.
- [3.] HR & TECHNOLOGY [AVAILABLE ON]:[WWW.MORISONMENON.COM/HR-AND-TECHNOLOGY.PHP](http://www.morisonmenon.com/hr-and-technology.php)
- a. INFORMATION TECHNOLOGY & ITS ROLE IN THE MODERN ORGANIZATION BY CHRIS MAC KECHNIE, *DEMAND MEDIA* [AVAILABLE ON] [HTTP://SMALLBUSINESS.CHRON.COM/INFORMATION-TECHNOLOGY-ITS-ROLE-MODERN-ORGANIZATION-1800.HTML](http://smallbusiness.chron.com/information-technology-its-role-modern-organization-1800.html)
- [4.] Kelle O'Neal ,The Role of IT in Business-Led Data Governance May 19, 2011[Retrieved from] <http://www.b-eye-network.com/view/15165>
- [5.] Prof. Anatoly Sachenko, Foundations of Information Systems in Business, [Available on] <http://www.scribd.com/doc/396076/Foundations-of-Information-Systems-in-Business>
- [6.] Roles of Computer in Finance | eHow.com[Available on] http://www.ehow.com/list_5977247_roles-computer-finance.html#ixzz2LAWrbKJx
- [7.] The Role Of Information Technology In Marketing And Sales Industry[Retrieved from] <http://www.sooperarticles.com/technology-articles/role-information-technology-marketing-sales-industry-348280.html#ixzz2LALoLx5J>
- [8.] Uses of Computers in Finance | eHow.com[Retrieved from] http://www.ehow.com/info_8398199_uses-computers-finance.html#ixzz2LAW3tRVr