Information Technology

Recent Developments in the Field of Information Technology

Computers and the internet are already a part of practically every aspect of business. Information technology has played an important role as a change agent in agriculture, mining, manufacturing and the service industries. This trend will continue and a greater number of activities will be impacted by IT in the coming days. Further developments in areas that are already computerized will evolve as technology finds faster and simpler ways for work to be done.

Some of the important new areas in the field of information technology are:

1. Digital Analytics:

Practically all companies capture a large amount of data about their customers through their web properties and mobile apps. But putting this data to use and deriving information that is of help in serving customers better or getting new ones, is a complicated task.

Digital analytics is the analysis of this information to achieve greater customer satisfaction, increase client acquisition rates and improve the online experience of the people who visit the company's website.

2. Internet of Things:

This is the biggest booming technology in the recent days. It is commonly known as loT. It is the network connecting devices with electronics or software to connect and exchange.

3. Artificial Intelligence:

In computer science AI research is defined as the study of "intelligent agents". It is when a machine mimics "cognitive" functions that humans associate with other human minds, such as "learning" and "problem- solving".

4. Mobile Applications:

An increasing number of people access the internet and company websites through smartphones and tablets instead of desktop computers or laptops. This trend is expected to accelerate and businesses need to develop mobile-friendly websites and applications if they want to retain existing customers and attract new ones.

The question before businesses is no longer whether to invest heavily in information technology or not. It is not even whether employees across the organisation need to be extremely tech-savvy and capable of using the information technology available to them. The current challenge before business leaders of organisations of all sizes is how they will use their digital advantage to keep ahead of the competition.

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6. Virtual Personal Assistants:

These are features available on smartphones, where the user can interact with the device. They help us find what we are in need of. Examples are Siri for Ios, Google Assistant for Android platform and Cortana for Windows Mobile.

7. Video Games:

With recent technology, everybody is addicted to playing games. Video games can be either online or saved in devices and played later. The complexity and effectiveness of that AI have increased exponentially over the past several decades, resulting in video game character that learn your behaviors, respond to stimuli, and react in unpredictable ways.

Impact of IT on Organization

Information technology systems are used by organizations to perform various tasks. Some use IT to provide for the basic processing of transactions, while others enable customers, distributors and suppliers to interact with the organization through various communication technology systems such as the internet.

The term ''information technology systems in an organization '' is composed of four distinct parts which include: an organization, information in an organization, and information technology and information technology systems in an organization.

1. Automation of Business Processes

The movement towards increased automation of business processes has gained traction over the years. It improves efficiency and increases workflow considerably.

Information technology helps in developing automated processes for businesses. This not only helps in reducing the cost of operation but also saves time. The time saved can be utilized to focus on other tasks, thus speeding up business processes significantly.

Processes like billing, tracking metrics, collecting customer data, monitoring certain processes etc. can be automated easily. There are numerous automation software that can be utilized for this purpose.

2. Protecting Information

Every organization has a mammoth database comprising various information related to business transactions, client details and so on. Such information is extremely valuable to a business and can cause a host of legal issues if it is lost. This is where information technology becomes relevant. It provides the right resources to store the information in a way that ensures maximum protection.

Virtual storage systems can keep information safe by allowing a limited number of users to access these. Increased protection also ensures that these systems are not hacked and the information is not wiped out owing to some problems. Therefore, information technology helps in upholding business integrity.

3. Flow of Information:

Information is a key resource for all organizations. What information describes might be internal, external, objective or subjective.

- **External** information describes the environment surrounding the organization.

- **Objective** information describes something that is known.

- **Subjective** information describes something that is currently unknown.

With information technology the flow of all these three types of information is made simple buy use of centralized data centers where all this data can be retrieved. Information in an organization can flow in four direction and these include upward flow of information, downward flow of information, outward flow of information and horizontal flow of information.

4. Decision Support:

A decision support system (**DSS**) is a highly flexible and interactive IT system that is designed to support decision making when the problem is not structured. A DSS works together with an artificial intelligence system to help the worker create information through (**OLAP**) online analytical process to facilitate decision making tasks that require significant effort and analysis.

5. Workgroup Support:

Since information technology facilitates in the creating an information sharing environment, workers can easily consult each other across different department without any interruption. They can use emails, text chatting services to inquire something related to a given task at work. With work group support systems, group decision making becomes easier.

6. Providing Customer Satisfaction:

Customer experience and satisfaction are crucial aspects of all businesses. The key to customer satisfaction is a strong customer support team and its availability to cater to the requirements of the customers.

Information technology provides the best tools for communicating with customers and solving their problems in real time. It has unlocked the facilities like Email, social media and other messaging platforms for this purpose.

A happy customer-base is important for the growth of a business. Various cloud-based communication channels have made customer experience more improved.

7. Open Source Software:

Information technology has paved the way for various open source software that allow free usage of certain tools for various organizations. The primary benefit of open source software is its flexible license. This allows modifications to the source code. This means that you have the facility to customize its functions according to your requirements.

Almost every software that businesses use has open source variants that are widely available on the Internet. Utilizing these could mean multiple benefits at reduced expenses.

Such benefits of the increased implementation of information technology have provided businesses with competitive advantages. What matters most is, how businesses are utilizing this technology to maximize their profits and ensure long-term success. Done right, this can help your business scale new heights.

8. Executive Support:

An executive information system (EIS) is an interactive management information system (MIS) combined with decision support systems and artificial intelligence for helping managers identify and address problems and opportunities. An **EIS** allows **managers** to view information from different angles. Yet it also provides managers with the flexibility to easily create more views to better understand the problem or opportunity at hand.

9. Communication:

Information technology accounts in the development of communication technology. Services like electronic mail make communication within and outside the organization easy and first. Now days email communication is a default communication technology used by every organization.

Communication is a great tool in business develops, with advanced communication tools, employees and managers can easily make beneficial decisions in the organization.

10. Transaction Processing:

Information technology simplifies the transaction process of an organization. A transaction process system (**TPS**) is a system that processes transactions that occur within an organization. At the heart of every organization are IT systems whose main role is to capture transaction information, create new information based on the transaction information. **TPS** will update any transaction process and store that information in a database, so any concerned party in the organization can access that information via a centralized information storage network of internet.

11. Management of Resources:

A business has a variety of resources. These may include financial resources, human resources and so on. For large organizations, managing resources becomes quite difficult. Information technology plays a vital role in managing these resources effortlessly by introducing a wide range of feasible solutions.

For example, the integration of Enterprise Resource Planning (ERP) has improved the efficiency of various business processes. ERP is business management software that enables an organization to use a series of integrated applications that can manage and automate various business operations.

Information technology is at the core of such software. The implementation of ERP is progressing at a rapid rate with more and more businesses implementing this efficient technology to make certain business processes hassle-free.