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TECHNOLOGY: CHANGING THE FACE OF BUSINESS IN COMPETITIVE ENVIRONMENT

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ABSTRACT
Businesses are constantly under pressure to keep up with ever-changing technology advancements. Technology can slingshot a business to success or destroy it. Ironically, the problem and solution are the same thing: technology. Technology has revolutionized the way companies conduct business by enabling small businesses to level the playing field with giant organizations in their field. People in nearly every career are required to have some knowledge of computers and software. Information technology (IT) is used by organizations for a variety of reasons. Several major technological changes have had significant impacts on the present and future for businesses viz internet, Email, Website, Social Media, smart phone, video and audio Conferencing, VoIP etc. some emerging technologies have major impact on today's business like Data Science, Big Data, Machine Learning, Artificial Intelligence (IT), Cloud Computing, Internet of Things (IOT), Blockchain etc. and some analytical tools that put some value (major impact) on business.

KEYWORDS: Information Technology, Big data, IOT, Cloud computing, Data Science.

INTRODUCTION

Technology is a double edge weapon, at one end of the spectrum there is fear of losing job due to bot revolution. On the opposite end people are excited about what can be achieved with the increase of machine. Every major place where we have multiple dynamics happening can really be improved by the use of technology. A combination of information technology innovations and a changing domestic and worldwide business environment makes the role of IT in business even more important for managers than just a few years ago. The Internet revolution is not something that happened and then exploded, but rather has become a constant, powerful source of new technologies with important business implications of this century.

Today and over the next ten years, there are five factors to consider when assessing the increasing impact of IT in business firms.

- Internet growth and technology convergence
- Transformation of the business enterprise
- Growth of a globally connected economy
- Growth of knowledge and information-based economies
- Emergence of the digital firm

The Internet Growth and Technology Convergence

The Internet, the development of Internet-based technologies, and the convergence of technologies that break traditional boundaries and trade relations, even as new ones. Telephone networks are merging into the Internet, and cellular phones are becoming Internet access devices. Traditional markets and distribution channels are weakening and new markets are being created. Firms' relationships with customers, employees, and supplier, active and logistic partners are becoming digital relationships

Electronic business, or e-business, designates the use of Internet and digital technology to execute all of the activities in the enterprise. E-commerce is the part of e-business that deals with the buying and selling of goods and services electronically using private and public network and other digital technologies. It also encompasses activities supporting those market transactions, such as advertising, marketing, customer support, delivery, and payment. Governments on all levels are using Internet technology to deliver information and services to citizens, employees, and businesses with which they work.

Transformation of The Business Enterprise

Rapid changes in markets and competitive advantage are changes in firms themselves. The Internet and new markets are changing the cost and revenue structure of traditional firms and accelerating the demise of traditional business models. Firms are no longer limited to traditional organizational boundaries or physical locations in how they design, develop, and produce goods and services. It is possible to maintain close relationships with suppliers and other channel partners over large distances and with outsource work, which firms themselves previously used for other companies. The new style of business firm is a flattened, decentralized, flexible arrangement of generalists who rely on nearly instant information to deliver mass-customized products and services uniquely suited to specific markets or customers.

Growth of a globally connected economy

The success of firms today and in the future depends on their ability to operate globally. Companies are also distributing core business functions such as product design, manufacturing, finance, and customer support to

locations in other countries where the work can be performed more cost effectively.

Today, information systems provide the communication and analytic power that firms need to conduct trade and manage businesses on a global scale. Globalization and information technology also bring new threats to domestic business firms: To become competitive participants in international markets, firms need powerful information and communication systems.

Growth of knowledge and information-based economies

Knowledge and information are key ingredients in creating wealth in knowledge based economy, Today, most people not preferring to work on farms or in factories but instead are found in sales, education, health care, banks, insurance firms, and law firms. These jobs primarily involve working with, distributing, or creating new knowledge and information.

In knowledge-and information-based economy, the market value of many firms is based largely on intangible assets, such as proprietary knowledge, information, unique business methods, brands, and other "intellectual capital." Knowledge and information provide the foundation for valuable new products and services,

Emergence of the digital firm

A digital firm is one in which nearly all of the organization's significant business relationships with customers, suppliers, and employees are digitally enabled, mediated. Core business processes are accomplished through digital networks. Key corporate assets—intellectual property, core competencies, and financial and human assets—are managed through digital means. Digital firms offer extraordinary opportunities by digitally enabling and streamlining their work.

IMPACT OF TECHNOLOGY AND BUSINESS ENVIRONMENT

Thanks to advances in computer, information and communication technology. Companies now use a variety of mobile devices, software and various applications that employees can use for marketing and networking, as well as research and development, for their goods and services.

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

There are some ways by which employee, Business Personals and customer communicate each other.

- **Websites**

Websites not only serve as a resource for contact and other information about a business, but are actually a means to advertise to anyone who visits upon the site. Consumers searching online for a certain service or product may be directed to a business's website that they may not have ever visited otherwise. The increasing popularity of business websites has driven down the costs to get one

- **Email**

Email has changed the way business communication is done by offering another way to reach colleagues, customers and vendors. More importantly, though, is the ability of email to reach customers through the use of email marketing, which now has its own industry and service providers. Email marketing firms provide their clients with metrics reports that include click-through rates, as well as forward and open percentages, thereby demonstrating increases in the spread of their sales messages to their clients

- **Smart Phones**

The overwhelming popularity of smart phones continues to integrate into office environments. Smart phone provide on-the-go access to email, Internet, scheduling and calendars, and can even provide access to presentations and invoices through the use of downloadable applications.

- **Videoconferencing**

Teleconference capabilities have allowed businesses to communicate with clients from all parts of the world, but now video calling from a computer provides the face-to-face contact that's important in business. Internet-based voice and video calling services and applications require users to download an application program. System requirements include a webcam, microphone and Internet connectivity.

- **Social Media**

Social media is changing the way business market themselves. With numerous social media sites, including Facebook, Twitter, MySpace and YouTube, businesses can control their marketing message in a non-traditional environment. More and more companies are embracing social media as a new way to reach consumers directly and quickly, and with almost zero costs.

- **VoIP**

VoIP stands for voice over internet protocol, a common type of telecommunication that combines phone services with internet services in one affordable package. VoIP services are simple to offer for businesses already invested in online communications and represent a viable new business opportunity for companies interested in using such services

- **Web Integration**

Businesses are not using only voice to connect with partners and customers, but also they are beginning to use online video and other multimedia aspects of their networks to spread messages. Telecommunication businesses can enter new markets by offering services that integrate different types of media more easily.

ARTIFICIAL INTELLIGENCE (AI) AND BUSINESS ENVIRONMENT

Artificial Intelligence has the potential to change our society and business environment effectively. Next coming years this technology likely to do many works which currently done by humans. Artificial Intelligence will do many of the functions of existing organizations and many jobs will be created which do not exist now.

The Basics of Artificial Intelligence

AI, the technology must first learn from known inputs, and then derive additional layers of abstraction to reach predictions that refines itself as the machine learns." There

are a few key areas of artificial intelligence worth understanding that fall under that broader category. The two types of AI technology most applicable to the today's business include:

- **Machine Learning:** A type of AI that provides computers with the ability to learn without being explicitly programmed. It works by examining large volumes of data and uses patterns in that data to improve a program's understanding and resulting predictions.
- **Natural Language Processing:** Technology that reads understands and responds to conversational language. An example is a chat bot. It's valuable because it can extract data from ambiguous, unstructured data sets like conversations. Elements such as context and tone can also be interpreted by the computer. Common applications of this software today include translation and speech recognition.

Artificial Intelligence changes our business as

1. **Drive innovations**
   Artificial Intelligence helps to provide insight into your customer's needs by advancing R&D activities.
2. **Do effective and efficient work**
   Artificial Intelligence Boost employees to do effective and efficient work by providing the right information at the right time. to help to do repetitive hard work in an easy way.
3. **Changes organizational culture**
   Most of the small and medium-size business organization having a pure human to human networks, and collaborate and organize some activities to reach their goal. When this collaboration shifts from human networks to human-to-machine, and advanced machine to machine interactions, will takes the company to another level.
4. **Communicate with customer and employees**
   Artificial Intelligence can communicate with the customer through automated target advertising messages and answer employees' questions. But in future Artificial Intelligence will directly communicate with customers without automated target advertising messages.
5. **Have control over the financial activities**
   AI will make Management team doing a difficult task to get a complete overview of the financial activities of the company and reduce their headaches by doing paperless activities.
6. **Removes the language barrier**
   Artificial Intelligence transaction becomes more accurate, makes the instant and perfect transaction between one language to another. It helps for an organization working across borders by eliminating language barriers at workplace.
7. **Improve the security in the digital way**
   AI will support the organizations to take forward steps from a responsive behavior to a predictive behavior, protecting from cyber-attacks by stopping it before it can occur, prevention is better than cure.
8. Personalize t**he marketing activities**
   E-mail marketing is one of the effective marketing strategies. If it became more effective and efficient, sending messages at the right moment to the right person will drive sales and increase the leads. Artificial Intelligence will create hyper-personalized messages that save your time and improve the results of these messages. Artificial Intelligence can also improve your business by optimizing your company's investment activities, increase productivity, improve the customer experience across channels and expand your marketing activities.

Some other technological fields where AI has a greater impact on businesses

- Self-service customer solution
- Robots and sales assistants
- Industrial robots
- Sensory intelligence

ARTIFICIAL INTELLIGENCE AND THEIR IMPACT ON FUNCTIONAL BUSINESS

Some functional business area where AI used most are

MARKETING

Customer Relationship Management (CRM) and their loyalty have always been the leading challenges for those involved in marketing, company sales, and those who work in B2B. AI marketing-specific solutions are based on:

- voice recognition solutions
- analysis of natural language
- support of contextual marketing projects
- Chat bots
- voice assistants and

Virtual assistants have also been very successful in after-sales services such as help desks, customer support and customer service;

SUPPLY CHAIN

The optimization of the chain that goes from product or service distribution is another of the areas where AI is having particular success because it is able to connect and monitor the whole process through various analytical systems. Some examples of usage may include

- Order Management, through real-time analysis of consumption or commodity markets
- Preventive Distribution Management by analyzing correlative data that may also relate to weather forecasts.

Artificial intelligence systems for supply chains are also often integrated into other solutions such as marketing.

HEALTHCARE

Voice assistants in support of sick or disabled people are now quite commonly used and their effectiveness will mature even more when these systems start using biometric sensors and the analysis of unstructured data. Artificial intelligence is also already in use in operating rooms with systems that perform as real assistants to surgeons and doctors. Use of machine and deep learning systems for the prevention of rare diseases and cancers since AI

solutions can analyze data, even unstructured, such as documents, texts, and scientific publications, with a greater speed not even comparable to that of man

RISK MANAGEMENT

The prevention of fraud is one of those areas where artificial intelligence has managed to best develop by becoming the technological engine of a number of solutions. Some of these solutions can predict, and reduce, the risk of fraud or loss of data or money by making real-time correlations of large amounts of data, including those related to consumer behavior.

Other common uses for AI in business include

- Transferring and cross-referencing data; updating files
- Consumer behavior forecasting and product recommendations
- Fraud detection
- Personalized advertising and marketing messaging
- Customer service via telephone or chatbots

INTERNET OF THINGS (IOT) AND BUSINESS ENVIRONMENT

Almost every aspect of our lives now generates data. Smart devices track each step we take and sense each beat of our heart. The smart phones in our pockets know our location at any moment, our hobbies, where we're going, and what we're buying. Some of these insights benefit the customer, and some the product maker. IoT devices record and transfer data to monitor important processes, give us new insights, boost efficiency, and allow companies to make more informed decisions.

The Internet of Things (IoT) is a network of interconnected objects via the Internet. These objects are able to collect and share data incoming from embedded services. The IoT devices are any stand-alone devices connected to the Internet that can be managed remotely. A lot of Businesses and industries including manufacturing, production, transport, healthcare, agriculture, and many others benefits from using IoT-devices. Some IoT achievements can that affect our business is given below

Inventory Management

Today, supply chains are mainly managed with the help of barcode or RFID tracking. Once a company starts using IoT technologies, all its devices and products will be connected to the same network that makes tracking and management of your inventory in the real time,

Get access to more data.

The Internet of Things opens access to the huge amounts of useful data from connected device. Business personal will be able to learn detailed metrics and examine how their customers' behavior can affect sales and boost revenue.

Business processes will be in gather pace.

When it comes to goods delivery, IoT devices including the information about public transport and traffic lights facilitate faster delivery.

Reasonable prices for production and energy.

Energy is possible to become cheaper with smart energy management. You will be able to find more effective ways to operate your machines so that all production processes are easier and cut costs for inventory coordination.

Opportunity to telecommute with employees

Work from remote location is becoming more feasible due to the possibility to use different cloud software and portable devices. The Internet of Things has brought additional opportunities to remote employees.

Need to manage your devices regularly.

IoT devices must be updated regularly for proper functioning. It will take some time to keep those updated and care about the latest software but it is worth doing that.

Effectiveness will be higher.

Using IoT devices you are able to run your business more effectively. IoT technology helps companies reduce cost of running business and expanses for salaries, energy, and machines.

Some industry sectors will change greatly or disappear at all.

IoT revolution allows shifting from human labor to completely automated work done by robots or other machines. Some industries like logistics can become absolutely automated.

CLOUD COMPUTING AND BUSINESS ENVIRONMENT

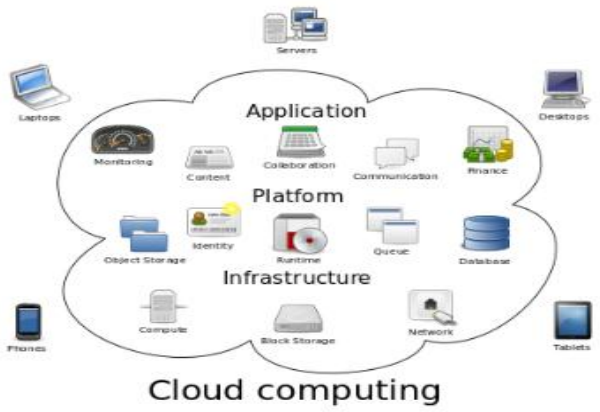
Cloud computing is a delivery model for computing resources in which various resources like servers, applications, data, and other resources are integrated and provided as a service over the Internet.

Cloud computing still relies upon the same physical server hardware that forms the backbone of any computer network. The difference is that cloud architecture provides the processing power, memory and storage capacity of that hardware available over the internet.

In this technology-oriented marketplace, a business organization can only be as agile as its IT environment. Business must improve IT agility to amplify overall business agility. Cloud computing promises a more agile and efficient IT environment. It replaces costly and inefficient computing devices with elastic, self-managed, dynamic IT infrastructure. Business organization wants to achieve the advantages of cloud computing with a scalable, secure and manageable solution that addresses their unique business challenges.

Cloud computing, an on-demand service platform, appeals to small businesses because it offers time and money-saving benefits. In cloud computing, hardware infrastructure and software services (such as servers, storage, CRM, networks, memory, accounting, and so on) are passed through the Internet to an organization's computers and devices.

Cloud computing promotes a new conversation between business organization and IT decision makers. It allows decision makers to first define business service requirements first and then decide how to balance the use of shared, internal virtualized IT resources and external public services, so that cost, performance, security, and business flexibility can be maintained up to necessary levels



Cloud computing solution cannot possible without the use of virtualization. Virtualization is technique use to provide virtual platform of server, operating system and storage devices that helps the user by providing multiple machines at the same time. It also allows sharing a single physical instance of resource or an application to multiple users. Cloud Virtualizations also manage the workload by transforming traditional computing and make it more scalable, economical and efficient. There are several kind of virtualization technique are

- Operating System Virtualization
- Hardware Virtualization
- Server Virtualization
- Storage Virtualization

CLOUD DEPLOYMENT MODELS

Cloud deployment describes how to implement a cloud platform, how it is hosted, and who has access to it. Virtualization is the principle on which all cloud computing deployments operates.

Public Cloud

Public clouds usually have massive amounts of available space, which translates into easy scalability. Most cloud providers package their computing resources as part of a service. The great advantage of a public cloud is its versatility and "pay as you go" structure that allows customers to provision more capacity on demand. The essential infrastructure and operating system of the public cloud remain under full control of the cloud provider. Customers may continue to use the platform under the terms and conditions laid out by the provider.

Private Cloud

Private clouds typically utilized by a single organization and are reside behind a firewall. A completely on-premises cloud may be the preferred solution for businesses. Authorized users can access, utilize, and store data in the private cloud from anywhere, just like they could with a public cloud. No one else can access or utilize those computing resources.

Private cloud solutions offer both security and control, but these benefits come at a cost. The company that owns the cloud is responsible for both software and infrastructure, making this a less economical model than the public cloud. Private clouds lack the versatility of public clouds. They can only be expanded by adding more physical compute and storage capacity, making it difficult to scale operations quickly when the business need arise.

Community clouds

Community clouds are distributed systems created by integrating the services of different clouds to address the specific needs of an industry, a community, or a business sector. The infrastructure is shared by several organizations and supports a specific community that has shared concerns (e.g., mission, security requirements, policy, and compliance considerations). It may be managed by the organizations or a third party and may exist on premise or off premise. Community clouds are also different from private clouds, where the services are generally delivered within the institution that owns the cloud. Different organizations such as government bodies, private enterprises, research organizations, and even public virtual infrastructure providers contribute with their resources to build the cloud infrastructure. Candidate sectors for community clouds are as Media industry. Healthcare, Energy and other core industries. Public sector and scientific research.

A community cloud is formed by harnessing the underutilized resources of user machines and providing an infrastructure in which each can be at the same time a consumer, a producer, or a coordinator of the services offered by the cloud. The benefits of these community clouds are the following:

- Openness.
- Community.
- Graceful failures.
- Convenience and control.
- Environmental sustainability.

Hybrid Cloud

Hybrid clouds combine public clouds with private clouds. They are designed to allow the two platforms to interact effortlessly, with data and applications moving effortlessly from one to the other.

The primary advantage of a hybrid cloud model is its ability to provide the scalable computing power of a public cloud with the security and control of a private cloud. Data can be stored safely behind the firewalls and encryption protocols of the private cloud, and then moved securely into a public cloud environment when needed.

This is especially helpful in the age of big data analytics, when industries like healthcare must adhere to strict data privacy regulations while also using sophisticated algorithms powered by artificial intelligence

(AI) to derive actionable insights from huge masses of unstructured data.

There are two commonly used types of hybrid cloud architecture.

1. Cloudbursting uses a private cloud as its primary cloud, storing data and housing proprietary applications in a secure environment. When 100 percent of the resource capacity in a private cloud is used, then overflow traffic is directed to the public cloud. A cloud bursting model uses the public cloud's computing resources to supplement the private cloud, allowing the company to handle increased traffic without having to purchase new servers or other infrastructure.
2. The second type of hybrid cloud model also runs most applications and houses data in a private cloud environment, but outsources non-critical applications to a public cloud provider. This arrangement is common for organizations that need to access
   - Specialized development tools like Adobe Creative Cloud
   - Basic productivity software like Microsoft Office 365 or
   - CRM platforms like Salesforce

To meet there kind of requirement multi-cloud architecture is often deployed.

Multi-Cloud Model

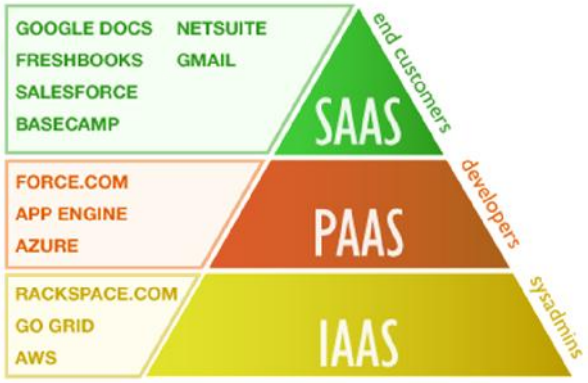
When single public cloud is not enough to meet an organization's computing needs. They move to multi-clouds, a more complex hybrid cloud that combines a private cloud with multiple public cloud services. While a hybrid cloud always consists of a public and private cloud, in this arrangement, an organization's IT infrastructure consists of multiple public clouds from multiple providers, and access those clouds through a single software-defined network. A private cloud could certainly be part of a multi-cloud architecture, but it is usually more isolated from its public cloud counterparts.

Hybrid Cloud vs Multi-Cloud

The key difference is that multi-cloud models involve using separate cloud environments to perform separate tasks. If an organization needs its IT infrastructure to be able to accommodate the conflicting demands of different departments, then it probably needs to pursue a multi-cloud deployment. The sales team may need the CRM features offered by a specific cloud provider, while software programmers may favor different types of cloud computing environments that offer superior storage and processing capacity. On the other hand, hybrid cloud models offer a lot of advantages. Since they only involve the interconnections between two environments, they are easier to set up and scale. By using the private cloud to locate sensitive data and running front-end applications in the public cloud, organizations can reduce their exposure to potential security threats and keep a closer watch over activity within their cloud ecosystem.

CLOUD COMPUTING SERVICES

All public cloud computing services are built upon the same conceptual framework of remote infrastructure powered by servers housed in a data center. cloud computing think of as a pyramid comprised of three layers. Each layer is more specialized than the one below it, but it's built upon the same basic structure. The lower layers are much broader, representing their versatility, customizability, and wide range of applications, while the upper layers are narrower because they're purpose-built for a specific task.



INFRASTRUCTURE AS A SERVICE (IaaS)

IaaS is the most comprehensive and flexible type of cloud service available. It provides a completely virtualized computing infrastructure that is provisioned and managed over the internet. An IaaS provider manages the physical end of the infrastructure (servers, data storage space, etc) in a data center, but allows customers to fully customize those virtualized resources to suit their specific needs. With IaaS, the customer can purchase, install, configure, and manage any software they need to use, including things like operating systems, middleware, applications, business analytics, and development tools. Highly scalable, companies only pay for the infrastructure they use, allowing them to scale their computing needs as needed without having to build out additional capacity.

Eg. of IaaS: Microsoft Azure, Amazon Web Services (AWS), Cisco Metacloud, Google Compute Engine (GCE)

PLATFORM AS A SERVICE (PaaS)

PaaS is situated a bit higher up the cloud computing pyramid. PaaS is a bit more specialized rather than pure infrastructure, PaaS provides the framework needed to build, test, deploy, manage, and update software products. It utilizes the same basic infrastructure as IaaS, but it also includes the operating systems, middleware, development tools, and database management systems needed to create software applications.

PaaS is extremely helpful for any company that develops software and web-based applications. Many of the tools needed to develop for multiple platforms (computers, mobile devices, browsers, etc) can be quite expensive. By using PaaS, customers can access the development tools they need, when they need them, without having to purchase them outright.

Eg. of PaaS: AWS Elastic Beanstalk, Apache Stratos, Google App Engine, Microsoft Azure

SOFTWARE AS A SERVICE (SaaS)

SaaS is the most familiar form of cloud computing situated at the top of the pyramid, SaaS is a fully-developed software solution ready for purchase and use over the internet on a subscription basis. The SaaS provider manages the infrastructure, operating systems, middleware, and data necessary to deliver the program, ensuring that the software is available whenever and wherever customers need it. Many SaaS applications run directly through web browsers, eliminating the need for downloads or installations.

Eg. of SaaS: Microsoft Office 365, Salesforce, Cisco WebEx, Google Apps

COLOCATION & THE CLOUD

There are a variety of technical and business reasons why companies are transitioning away from owning their own data centers, and many of these reasons have become associated with the cloud. A colocation optimizing hybrid cloud deployment, equipping IT teams with the interconnection and connectivity to spin up cloud environments quickly and affordably while maintaining local infrastructure. There are a number of important advantages to a colocation-cloud hybrid model:

- Flexible Scalability
- Greater Scale and Support
- Reduced Risk
- Improved Resource Allocation
- Interconnectivity Options
- Better Uptime Reliability
- Enhanced Security and Compliance

IMPACT OF CLOUD COMPUTING ON FUNCTIONAL BUSINESS

Deciding to move your business to the cloud is not the end of the journey rather it is the beginning. The Cloud Computing impact has ripple effects on internal business operations and processes. Business processes and procedures will need to be modified for almost every department as a change of this scale is likely to affect Service Delivery, Finance, Support, Development & Testing, Storage & Backup, Networks, Sales, Risk, Operations and even Human Resources.

CLOUD COMPUTING IMPACT ON MARKETING

Cloud computing and marketing become increasingly integrated in last decade. Marketing and IT departments have had to work closely together to deploy the technologies needed to help identify and build a company's brand. It is important that marketing and IT departments work together to better integrate insights from data, technology, and strategy across all business units. After existence of cloud computing, the digital marketing industry has swung into full gear. Cloud computing is a big step forward for the digital marketing industry and the benefits far outweigh the costs. Workflows are being resolved with light speed efficiency, data can be accessed from anywhere and from any device.

CLOUD COMPUTING IMPACT ON HUMAN RESOURCES

The Human Resource has completely transformed with the help of cloud computing. It bridges the gap between HR management team and the rest of the organization by eliminating the communication gap. Information flow has become instant, and this has made data analysis much easier. HR personnel can now make better decisions concerning recruitment.

One of the most valued advantages of cloud computing in HR is the centralization of personals information with fast and efficient storage and retrieval. Human Resource registry becomes flawlessly organized, and the storage and retrieval of administration-heavy documents become smooth. There are some way, how HR personal uses cloud computing.

- Streamline the recruitment process
- Boosting employee well-being
- Access to innovation
- Reduction of workload
- Cloud computing and Internet of Things (IoT)
- Keeping information safe
- Facilitates Training, Learning, and Development
- Adds More Agility and Flexibility to the HR Process

CLOUD COMPUTING IMPACT ON FINANCE

Cloud computing is rapidly evolving and finance executives, more than ever, are finding they must navigate an unprecedented period of disruption and innovation. Cloud computing in finance began with non-core business processes, such as human resources and admin systems.

Today, Businesses are seeing core processes such as credit risk management, payment transactions, and customer due diligence moving to the cloud. There is definitely potential for cost savings. Business who truly understand cloud technology, as well as the associated challenges and risks, are better placed to manage the impact of cloud computing on the finance function and potentially gain a competitive advantage over less informed competitors.

The financial services community is already adopting a mix of cloud service and deployment models for their business and IT needs, with many business functions within financial services being moved predominantly to the cloud.

The opportunities and emerging trends in financial services driving adoption of the cloud include:

- Shortened time-to-market for new services
- Achieving greater operational efficiency, at lower costs
- Conducting analytics in the cloud, for enhanced business intelligence, strategic planning, targeted marketing, and more.
- Customer-facing web apps and portals that streamline self-service, provide efficient channels for promoting new products and services, and enhance customer satisfaction and engagement.

Eg. Cloud computing in banking

Financial sector's journey in the cloud is not without its challenges. In cloud computing, finance sector is subject to very strict data security requirements, which can include restrictions on geographic locations where their data resides as well as the need for full visibility at all times into where and how primary and secondary data sets are being stored and backed up. Finance companies are held to very high standards of data protection, data privacy, business continuity, and disaster recovery.

CONCLUSION

Technology has revolutionized the way companies conduct business. Technology allows Business owner's to create operations using the most effective technology available to him/her. Technology enables business to reduces their operational cost, secure sensitive information, improve communication process, Increased Employee Productivity, Collaboration and Outsourcing of non-core business process and much more using technology IoTs, AI, Cloud Computing, Big data, Analytics etc. which is affordable to gain the competitive advantage in this competitive business environment.

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