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Challenges and Benefits of ERP System in Cloud Environment

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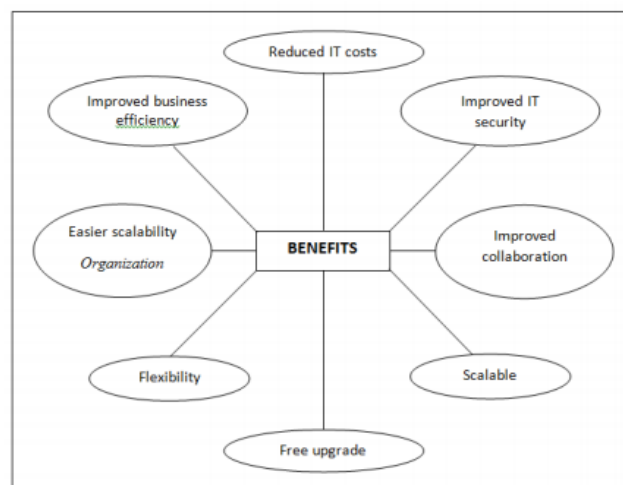
ABSTRACT: Cloud based ERP systems are becoming popular within any industry as it allows organizations to manage the businesses and integrated all processes over the internet. Cloud ERP has very low upfront cost because the computing resources are leased rather than purchased however there are certain challenges of hosting ERP system in cloud environment.

KEYWORDS: Cloud ERP , Business Intelligence , Data Security, Scalability, Customizations

I. INTRODUCTION

Cloud ERP

Cloud ERP is an adaptable and financially beneficial choice for little and medium-estimated organizations and offers far reaching profits for development and extension. ERP applications can help a corporation become more self-aware by linking information about the production, finance, distribution, and human resources together. Because it connects different technologies used by each part of a business, an ERP application can eliminate costly duplicate and incompatible technology. The process often integrates accounts payable, stock control systems, order-monitoring systems, and customer databases into one system.



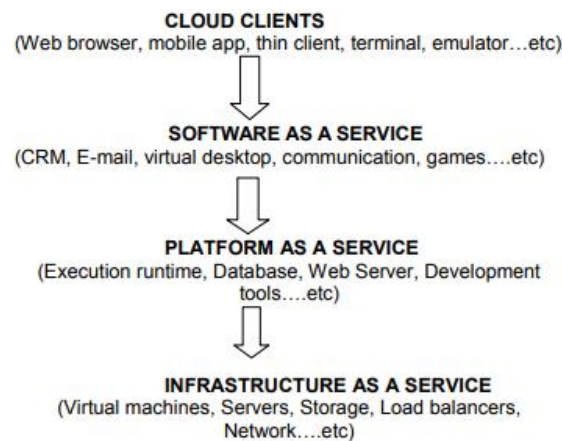
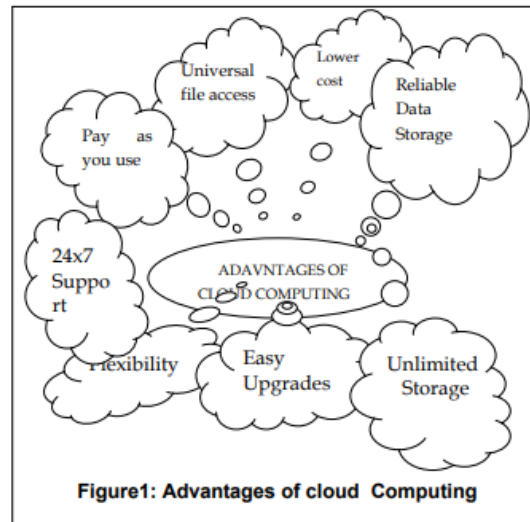
BENEFITS OF CLOUD ERP

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II. CLOUD SERVICES

Security

Some organisations are skeptical about cloud security, they think that cloud encryption isn't secure enough or that it's an easy target for hackers. In reality however, cloud ERP software provides solid security to businesses of all sizes. Organisations never have to worry about data getting backed by a third party, as the system tracks all activity and fully encrypts data stored within the ERP.

Better Decision Making

Similar to having access to real-time analytics, a clutter-free and easily understandable interface of cloud ERP software can help to make better, more informed business decisions for an organisation. With spreadsheets, charts, and graphs available with the click of a button, you can more readily make crucial decisions that will help business processes move along smoothly.

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Flexibility

As long as internet is available, all the data and information is readily available for the organisation from any location, at any time. A cloud system stores and operates everything remotely, so even if employees are spread across the country like in multi national organisation they can still input data in real-time from any connectible device (laptop, smartphone, tablet, etc.).

Low Operating Costs

To manage on premise ERP systems, a specialised team of system administrator, network engineers and software developers required who can continuously maintain system so to keep up with hardware and software updates, which can negatively impact company's budget. If compare that to cloud ERP, the company's got a way lower cost of operating. Cloud vendors provide ERP solutions as a subscription model – Software-as-a-Service (SaaS) – these costs are reasonable and generally customized to work around company's budget.

Scalability

Cloud ERP software also scales easily, as it adjusts the entire infrastructure to the necessary size for each stage in your development as a company. With onsite infrastructure, scaling can be a costly and complicated aspect of business, so the cloud just simplifies this entire process for company's.

Service Support

Since cloud ERP is a subscription-based model, service support is available 24/7 for any issues that might arise. On-premise hosting typically requires the additional purchase of a support package, but as a cloud-based ERP service subscriber, Organisation can access the support need around the clock.

Cloud ERP is fast and secure

Cloud ERP is fast because data centres are hosted and maintained by the best of the best in world-class hosting environments like Amazon Web Services (AWS) and Microsoft Azure. Their sole purpose is to make your data accessible as easily, as fast, and as secure as they can possibly make it. These data centres ensure geographic diversity and back-up and store your data in multiple places to make sure nothing gets lost.

Better Business Intelligence

Cloud technology allows organizations to access data remotely without complex technical configuration or robust IT staffing. Over the past two years, the number of organizations deploying business intelligence (BI) in the cloud has doubled. Cloud BI adoption is especially prevalent among sales and marketing departments as they rely on real-time data to understand and improve the customer journey. When it comes to data access and data storage, cloud ERP has several advantages over on-premise ERP. Cloud technology is more scalable for storing large amounts of data and can provide access to data gathered by IoT technology.

As per latest researches, the most innovative ERP vendors are heavily investing in cloud BI.

Faster Implementation

Cloud ERP systems are faster to implement than on-premise ERP systems. The technical environment for cloud technology can be configured in as little as 24 hours.

This gives organizations more time to focus on the business side of transformation.

Ability to Focus on Your Core Competencies

Many organizations lack sufficient IT staffing or cannot afford the same resources and infrastructure as cloud providers. While an organization may be decently skilled at IT, it's not necessarily its core competency.

Cloud technology allows organizations to outsource their IT function and focus on their core business. Retailers, for example, typically like to dedicate more focus to the customer experience than IT maintenance.

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End User Buy In

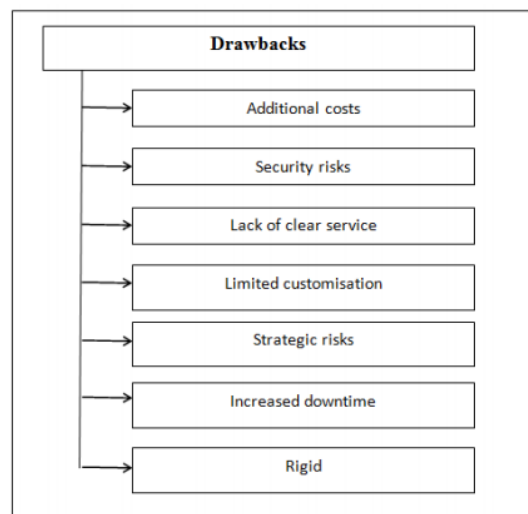
Cloud technology tends to be more modern and easier to use than on-premise software, so employees may be quicker to embrace it. This does not mean organizations won't need end-user training and a communications plan. It just means they might experience less resistance. Some organizational cultures are more accepting of cloud ERP than others.

In any technology initiative organisation should communicate with employees about the benefits of new technology, emphasizing how their jobs will become easier. By implementing robotic process automation in conjunction with cloud technology enable employees to work more efficiently.

Strong Data Security

To avoid security breaches, many organizations turn to cloud ERP as cloud vendors tend to have very secure hosting environments. Some CIOs still worry about the security of the cloud, but they don't realize how vigilant cloud ERP vendors can be when it comes to security because the stakes are so high. Cloud vendors have a lot to lose – with multiple customers, they are popular targets for security breaches. This may sound like a disadvantage, but in many cases, it forces vendors to develop sophisticated security.

Disadvantages of Cloud-Based ERP Systems



Along with the perks of a cloud-based ERP system, there are also disadvantages that make the system unfavourable and could even sway production facilities away from utilizing the system. Various disadvantages of cloud-based ERP systems include the following:

Data-Security

This is one of the biggest issues that is concerning to supply chain and the cloud. With information being strictly web-accessible, data-breaching becomes a legitimate concern for production facilities. Breaching of the ERP system can lead to system-failure and prevent or completely halt production until a solution is implemented.

Customization Limitation - As cloud-based systems are becoming configurable, older customizations are beginning to be expressed as standard. Customization can only go so far, this is why specific manufacturing operations are still utilizing on-premise ERP systems that are best suited for that specific operation. Also data migration is always a challenge.

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Price Contemplation - The cost of a cloud-based ERP system may greatly outweigh the cost of an on-premise ERP system. Since the system is technologically advanced, it is considered superior and therefore can cost more. Also, as the organisations grows and start performing more operations and storing more data , companies has to buy extra services from cloud vendor which costs more.

To select the right ERP systemfor a cloud-based system help in in efficiency, flexibility, decision making ,cost effectiveness and higher output.

RISK FACTOR	TRADITIONAL ERP	CLOUD ERP
Data Availability	LOW	HIGH
Data confidentiality	LOW	HIGH
Web security issues	LOW	HIGH
Privacy	LOW	HIGH
Privileged user access	LOW	HIGH
Data location	LOW	HIGH
Recovery	HIGH	LOW
Long term viability	HIGH	LOW
Unknown risk profile	LOW	HIGH

Risk Factors in Traditional ERP and Cloud ERP

III. RESULTS

ERP system deployed in cloud environment is cost effective solution and can help organisation improve profits and optimal utilize the resources. All the new features can be added in ERP system without upgrading any cloud environment. The implementation , configuration and data migration depends on complexity can be integrated in very short span of time. In this type of environment the scalability is better which means can add new users and allocate system to them or reduce the users in case of low business which again helpful in terms of cost reduction. At the same time business can be expanded in different geographic and with business intelligence features , the decision making would be excellent using adhoc BI reports. There would be specialist staff required to manage the hardware , servers and software part and those things can be easily manage by cloud vendors or ERP solutions providers. The cloud provider gives guarantee that the frame work is continuously running, data is secure and customization can be done. Therefore Cloud ERP is far better , cost effective and robust framework compare to on-Premises ERP.

IV. CONCLUSION

Implementation of ERP in Cloud Computing has solved many problems of many companies as ERP and Cloud Computing both contains many advantages and little disadvantage too but when there is a mix of two good things it leads to get better in time as discussed above ERP helps an organization accomplish more excellent productivity and benefit as it is a facilitated provision that an organization can use to store and supervise information from each one period of business including manufacturing, marketing and sales, inventory management, shipping and payment, product planning cost and development whereas Cloud Computing provides flexibility, better reliability, security, portability, collaboration, unlimited storage, unlimited file access and many more. Cloud ERP is nothing more than a ERP hosted on a cloud by cloud providers Cloud ERP is an adaptable and financially beneficial choice for small and medium-estimated organizations and offers far reaching profits for development and extension. If we don't see the obstacles in it then it is the best way to save money and time and really helpful for the organization to have what they needed 24x7 by paying only for that they require and can have scalability with reliable data storage.

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