IT Infrastructure & Enterprise Applications - Organizations Strategy and Planning

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Abstract: The key to success in today's international market is to make advances in data management, analytics, and robust integration among enterprise applications. The competent IT strategy is to invest in cloud computing has the most significant potential to fuel economic transformation, as it underpins mobile productivity and provides interactive dashboards that help the executives to make strategic decisions. The recommended change will help to create an infrastructure that provides anywhere, anytime, work capabilities, which is essential for the company competing in the international market. Let us try to understand the IT infrastructure and enterprise application layout of an organization running on the traditional environment and find out the recommended changes that can help the company to grow.

Keywords: Network Engineering, IT Infrastructure Strategy, Business Continuity, Information Technology

1. Introduction

Effective IT strategies can strike a delicate balance between stability and agility, as well as between accessibility and security. According to Hoeing (2017), an effective Strategic Plan should achieve a balance by striving for operations and scalable systems that are both highly responsive and resilient, and recognizing that an organization is critical information. It must be easily accessible to the right group of people and secured from those who may compromise the ability to promote confidence and preserve in the financial system of the company. As we plan our IT Strategy, we should be committed to improving the company's ability to respond to both new threats and IT opportunities, developing proactively innovative measures to mitigate those threats; and anticipating the needs of financial institutions, consumers, and staff. These goals can only be accomplished through collaboration and shared responsibility for IT service delivery across the organization.

State of Organizations relying on Traditional Technologies and Recommendations

1.1 Data Storage Activities

For the company to be ready for the future infrastructure needs and support international expansion, it needs to update its hardware and perform an architectural review. The current support operations may be costly and equipment intensive.

If an organization decides to continue operations without any upgrade, it is not beneficial for the company from not only the cost perspective but it will even act as a roadblock for the company's plan to upgrade other applications like upgrading CRM (Customer Relationship Management) or POS (Point of Sale) applications. Data Center hardware or the network components are the backbones for IT infrastructure, which is required by all the front-end tools to function appropriately. In many cases, an organization may miss on a critical component of infrastructure management, and that is called (NOC) Network Operation Center or Command Center. This team is essential, as they monitor alerts and follow the incident management process. If an organization has a dedicated NOC, that means they are committed to work on incidents actively and inform management or its clients on emergency and scheduled maintenance. As NOC team members can take care of all the Level 1 responsibilities, it helps the core technical teams to focus on other critical projects and service improvement initiatives. An enterprise may be using point-to-point connections for their locations to provide network connectivity, which is not only costly but also prohibits use to the latest network technologies like SDWAN (Software-Defined Wide Area Network). Point to Point connections also introduces a lot of network latency, which can affect response times for different applications, and it significantly affects customer service and business operations for a company who has its presence globally.

1.2 Recommended Changes to Data Storage Activities

If, the company has an existing data center facility near its corporate office where a lot of infrastructure is already in place, then there is no need to search for a new data center facility. If the organization has upgrade, plans for other applications like CRM that it makes sense for the company

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to retire old single running instances and outdated infrastructure and migrate to the new platform on the cloud.

The organization should invest in upgrading the existing facility to the latest standard and it is not advisable to move to a new data center facility unless you have relevant reason. The company should also plan to move its enterprise applications like CRM, HCM (Human Capital Management) applications to the cloud. It will not only help the company to better manage the application and business operations in the international market but will also increase the reliability, as existing infrastructure is old. The organization should plan to update its data center facility to host its corporate applications, which cannot be migrated to the cloud. It should also prepare for refreshing its network and server infrastructure so that it can provide necessary network speed and computing power, which is essential for the new age applications to run. The organization should also plan to build a Network Operations Center (NOC) that will be managed 24 hours a day and seven days a week. This team is essential, as they monitor alerts and follow the incident management process. If an organization has a dedicated NOC, that means they are committed to work on incidents actively and inform management or its clients on emergency and scheduled maintenance. It will help the company to minimize the downtime experienced by any outages, and they diligently follow the problem management process. It will help to reduce the reoccurrence of interruptions, which, on the other hand, will help to keep the revenue stable.

1.3 Unified Communications

Traditionally sales operations and customer data management have been done manually by each salesperson. The Sales leaders usually gather the data from each salesperson and forward the numbers, sometimes with errors, to the sales VP. Then, it is manually consolidated, sales forecasting and quota assignments are manually generated from the results. It is beneficial to use the latest available technology to communicate internally and with customers and suppliers. There is a lot of enterprise collaboration and messaging applications available in the market today, which significantly reduces the time taken to interact and get the required response. If an organization is still relying on traditional communication methods, they are reducing the team’s productivity. Traditional communication methods usually take a lot of effort to convey the same information and reduces cross-functional collaboration. If the company has its presence globally and team member operating in different countries, they need a communication mechanism, which is real-time and easily accessible. If the company does not invest in adapting the latest communication technologies like Google Mail, hangouts they are not allowing their teams to interact on a common platform, which significantly affects organization growth, especially when the company is competing against global competitors.

1.4 Recommended Changes to Unified Communications Activities

If the organization’s Local Area Network (LAN) is slower than needed and the organization is planning to have unified communication systems for collaboration on chat, emails, and video conferencing. To accomplish this goal company should plan to upgrade its LAN network and select a cloud-based solution like Google, which provides Gmail for messaging. Google hangouts for audio, and video conferencing along with the chat function.

This initiative of a cloud-based collaboration platform also goes hand in hand with its strategy for enterprise applications like CRM, as Google functions can be easily integrated with other cloud applications. If the organization is already serving its customers in different countries and is planning to grow in the international, market, to achieve these objectives, its team members need to collaborate on a global platform that is not only reliable but also easy to implement and use.

Google suite comes with some inbuilt features like Google translation and has supporting applications like Google docs for creating new documents or Google Drive to store the documents on the cloud. These features will help the team members to collaborate in real-time on any task, which in turn will help the company to achieve its results faster in the international market. The financial analyst will look at various factors to judge a company's performance, which includes its financial results, its growth strategy, and how well a company is performing on the promised targets from the last quarter. If an organization is committed to providing its employees a platform on which all of the teams can interact in real-time, it will help them to achieve their targets quickly and achieve their goals on time. Implementation of Google suite will help the company to meet all the main objectives as it has a client-based email architecture and can integrate with third-party email client applications, including Outlook. The company employee can easily access his email on his phone or an iPad using inbuilt functions on the device. Team members can collaborate in real-time on audio or a video conference using Google Hangout.

1.5 Enterprise Resource Programming (ERP) System

The organization may be using an old version of an ERP system. The old version may only provide basic functionality like general ledger (GL), accounts receivable (AR), and accounts payable (AP), and along with budgeting and reconciliation. The features of the latest Enterprise Resource Programming application can vary depending on the type of application and an organization's use case. Still, it enables an organization to share and edit data among different teams located across the globe in real-time, and it improves security and access. A new age ERP application can help to unify many of the systems that may currently be fragmented in the organization, as an example product development, accounts receivable, accounts payable or supply chain can use the same application with different modules for each department, and corresponding data can be shared across different teams. The correct choice of the latest ERP software can make it faster and easier for all the team to create various reports based on trends and metrics. The continuous use of an old version of the ERP system significantly reduces the productivity of business operations. It will affect the growth of the company on a global platform as it does not allow complete integration with all the functions and lacks many features that can be of use to
various departments. The company needs to upgrade to an ERP platform that can be integrated with one or multiple point-of-sale (POS) systems and capable of integration with internal tools like the Human Resource Management System (HRMS) and Materials Resource Management System (MRP).

1.6 Recommended Changes to ERP System Activities

If the company is currently using an old version of ERP, which is not integrated with its point of sale systems, the organization should upgrade its Enterprise Resource Planning (ERP) system. A new ERP will help the company to handle the growing business and its international expansion. The system must be capable of integration with one or multiple point-of-sale (POS) systems, and it should involve a human resource management system (HRMS) and a materials resource management (MRP) system. The existing BPCS ERP is not able to provide all the functions.

If the current software is lacking many features, then the company should not further invest its efforts to upgrade the same. The company should form a Project Team consisting of key players from business and information technology to evaluate an ERP program. Once the selection has been made, they should also review whether the application should be hosted on the cloud or premises.

One of the first steps before starting the selection of the software is to perform a business analysis of all the existing functions to figure out what all modules are necessary and what are optional. To ensure the correct choice of an ERP has been made, the project team should provide strict selection criteria keeping all the objectives in mind like the functionality of the ERP system should include HRMS, MRP, etc. A modern ERP platform will give the company an ability to analyze its business conditions globally. It will help the team to develop better business plans, monitor, and measure its progress in all the departments. It will provide visibility into daily operations. A correct choice of a new age ERP system will also help the company to make better strategic decisions and take appropriate actions. As the company is making all the right necessary decisions on time, it will help to maintain steady growth and perform well in the international market.

1.7 Integrated Point-Of-Sale (POS) System

The organizations may have the old Point-Of-Sale (POS) infrastructure, with quite a few single instances running that need to be consolidated or replaced to support the growth of the company, especially in the international marketplace. The current manual point of sale system in most of the cases can no longer scale or sustain the company's ongoing growth.

Point of sale systems handles the sales transactions between the company and the customer as well as between the company and the supplier, to improve business performance systems need to be streamlined, and process needs to be developed to provide not only speed but also the quality of service. According to Zafar (2017), this includes the hardware as well as the software that is used. The idea is that instead of having diverse systems for cash registers, the online side of the business, touchscreen displays, and all other connects to the system come together to be controlled by one system.

The company needs to upgrade its point of sale system if the company is going to continue to stay profitable and grow gradually. If an organization is using different instances of the POS system, then most often, they are not able to consolidate their data, perform analytics, and produce reports. If the company is competing against its competitors in the international market. It is essential to view data related to daily, weekly, and monthly sales and compare the same with the market trends to measure where they stand today and what actions they should take for improvement. In the absence of the POS system, which is not integrated with other tools like CRM and lacks various features, organizations cannot gauge its financial growth. They will not have adequate control of their sales operations and finance management. The use of multiple types of POS systems for a company that has its stores in different countries brings many complexities in the payment methods. It significantly slows the process of data integration across various regions.

1.8 Recommended Changes to POS System Activities

In an organization, there may be various single and manual systems in use that needs to be consolidated or replaced to support the growth of the company, especially in the marketplace. The organization should plan for below objectives, to begin with

1) Consolidate the systems and make a selection of a point-of-sale system that can function anywhere in the world.
2) Perform research in the market, select, and implement a new customer response/relationship system and Salesforce automation system.

If the organization wants to achieve these objectives, they should plan to select a new POS system that can be implemented in all regions and should replace all old POS systems and integrate with other enterprise applications like CRM. If the organization wants to measure its worldwide sales on a daily /weekly basis and create some intelligent metrics out of the data, it should plan to implement a new POS system that can replace all old system running in silos. It takes a lot of time to implement new software and provide training to all the team members on how to use it. The organization must make the right choice of implementing a new POS system instead of working on the installation of an old method, for example, based on an old version of MS Access Database and then training users on how to use it.

A modern POS system can streamline the business, and data can be easily compiled as all transactions are based in one order. This can also include maintaining stock levels of various products, sales receipts, and accounts. If the organization has everything in one central system that is integrated with the CRM and other enterprise tools like sales audit, it means that everything becomes much easier to handle, and errors are reduced to a minimum.

An integrated POS system will help the company to keep reasonable control of the incoming and outgoing stocks. If the company does not upgrade its POS system, that means...
they are holding back their success. POS system, which is integrated with CRM and sales audit tools, can help the company to keep a daily check on its performance and take necessary actions to ensure they are on target to achieve their quarterly results.

1.9 Customer Resource Management (CRM) System

In many instances, an organization may not have a formal CRM system. The company may be using an older version of the ticketing system to manage their orders and take customer service calls from their sales desk located in the house. Various marketing and salespeople may have a local copy of the contact information to maintain their customer lists. However, there are no centrally located corporate data repositories to track customers. They may have an influential senior leadership member who continues to support the individual instances of contact information, indicating that it gives independent sales agents better control over their customers. Sales directors must be involved in gathering the data from each salesperson and forward the numbers, sometimes with errors, to the sales VP. Then, it is manually consolidated, sales forecasting and quota assignments are manually generated from the results.

In the above-listed scenario, it appears that in the organization, there are various single instance systems are running that must be consolidated or replaced to support the growth of the company, especially for the organization operating in international marketplace. According to BPM (n.d.), a unified CRM tool is essential for the growth of the company; an integrated CRM implementation means that company is making progress in integrating its strategies, tools, technologies, and techniques that are in use by the enterprise for retaining, developing, and acquiring new customers. This application ensures that every step of the interaction with consumers goes efficiently and smoothly to increase the overall profits for the organization. The software gathers customer data from different channels. CRM stores detailed information on personal info, whole purchase history, and even purchasing behavior patterns.

CRM software is a unique system designed to work only with one primary purpose – to improve the relationships with clients by providing the organization with efficient tools to develop a remarkable strategy. It is worth noting that the implementation of this useful tool can make a huge difference when it comes to standing side by side with some of your biggest competitors.

The best part is that all of these data will be safely stored in a unified CRM database. Therefore, users can manage and quickly access relevant data via one data source, this will help to grow the company globally, and it can have a common platform to manage its customers.

1.10 Recommended Changes to CRM System Activities

The organization can plan for below objectives to improve its customer engagement process
1) Research, select and implement a new customer response/relationship system.
2) Consolidate all instances of Salesforce CRM within the company, including non-SFDC CRMs and customer ticketing systems. Consolidate Salesforce customer relationship management (SFDC CRM) into a single corporate entity.

To achieve these objectives, the organization should invest in moving to the latest Salesforce platform and consolidate or migrate the data from other instances to a shared repository. The company should remove the plan of rolling over current customer data into a consolidated SQL database if they have any. It should not plan for developing an offline data source, as this will create multiple instances of the same data, which can further complicate the whole database architecture. It should plan to invest in the implementation of a new Salesforce platform and its integration with other enterprise applications like point-of-sale and sales audit. The organization should wisely make the selection at this critical stage of its expansion for CRM application to make sure it meets their business objectives. The on-premise CRM implementation may have its benefits like no network latency, but they cannot disregard many advantages of a cloud CRM deployment.

If the company decides to go with the on-premise CRM, then it needs to purchase the licenses beforehand. Considering that, the software is located on the company's servers, on-premise CRM is the right choice for organizations with a strict security policy. Still, in such a case, the implementation process takes more time and IT resources. It will be the company's responsibility to ensure the constant maintenance of an on-premise CRM system. The software vendor has no responsibility for its operation and data security after the implementation stage. The vendor will only provide technical support to deal with any software bugs or technical issues with the actual application.

On the other hand, the software-as-a-service (SaaS), cloud, or on-demand CRM, stores data on the servers located in the cloud infrastructure. In this case, the organization will have full access to the CRM database all the time wherever they are located, and, most importantly, the software vendor takes all the responsibility for the operation of the system and provides all the critical system updates and support. It is also essential to consider that cloud-based CRM software is highly scalable, which means that the company can quickly expand its functionality when there is a plan of any kind of expansion. The only requirement for cloud system accessibility is a reliable high bandwidth internet connection, accompanied by an affordable monthly or annual fee. In today's world, cloud-based CRM application is available across the globe; the users from around the world can access the same application modules seamlessly using the local internet connection. A modern CRM system plays a significant role in the growth of the company. It keeps its performance on track by providing updated information, real-time collaboration using different tools, and best in class customer service.
2. Justification of Above Changes and Alignment with Company Goals

2.1 Global Technology Trends

The internal processes like supply chain, customer records management are getting so sophisticated these days that it needs a complex array of tools to function appropriately. It is not only essential to make the correct choice of enterprise tools, but it also necessary to consider how well they are integrated. The elaborate process flow of data, which is handled by these new-age enterprise applications will help the organization in solving enterprise problems and perform day-to-day operations efficiently.

The Global Technology Trend in enterprise applications is to move towards cloud computing, where the organizations are making decisions to move some or its entire infrastructure to the cloud. In case applications are hosted on the cloud, services are delivered to the user utilizing the local internet connection. It does not require a significant investment in the on-premise IT infrastructure as all the necessary computing, and the services provider handles the network requirements. A cloud-based service is easily scalable and does not require a lot of effort in implementation.

In many scenarios, a hybrid approach is also very successful as it sometimes not possible to migrate all the business applications to the cloud because of some legacy processes or complex integrations with the different in-house business processes. In that respect, it makes sense to upgrade the existing data center facility and the necessary hardware. It not only provides the required computing power to the in-house applications but also offers an excellent network backbone to access cloud-based applications on the internet. The choice of a Unified Communication System like Google suite helps the team to collaborate using different mediums like email, chat, audio, and video conferencing. In today's world, where inputs are required from its team members located in different countries, a real-time collaboration platform is necessary to have.

A modern age ERP system is the backbone of any organization's business operations. This software helps the management to update its core business process continually. The plan of selecting a modern ERP system that includes various modules like HRMS, MRPI will help the company to enhance the quality and efficiency of any business set-up especially for the organization’s which have its presence in the international marketplace. It is becoming a global trend that all medium and large-scale enterprises are utilizing ERP applications to get the required information, which can help in their strategic decision-making process. A well-matured ERP system with many features can help in forming a company that is updated with the ongoing industry trends.

The plan to implement and consolidate the POS system is essential for the growth of the company and is in line with the global technology trend. In today's large market lot of companies are operating in the worldwide market, and it is essential to analyze its performance as a whole by looking at the metrics compiled from the data received from all the regions, not in pieces. If we make our decisions just based on limited performance, it may be beneficial for that region in the short term. Still, it may hurt other areas and can affect the company's performance. The modern POS system holds vital importance for a company operating in internal markets. It provides critical information to be consumed by other reporting tools in the form of graphs, charts, and tables, which helps the executives to run daily operations and make critical strategic decisions.

According to Ramachandran (n.d.), in the late '80s, many organizations started using front office applications like contact management software to store and organize customer's contact information. In the '90s, technology started developing the automated business process that laid a strong foundation for the creation of new-age CRM software. The CRM system has become an intelligent tool that is integrated with other enterprise applications, manages all business relationships, and analyzes customer interactions and data throughout the customer life cycle. As many organizations are already operating in the international, market and wants to expand in all the regions the choice of implementing a unified new age CRM is the right move and goes in line with the current technology trend.

2.2 Maintaining Technology Standards and Best Practices

All the organizations around the world are experiencing increased pressure to implement enterprise data management. There is an urgent demand to make data accessible, useful, and secure. The business needs to be able to put its data collected out of various transactions to work fueling decisions, shaping company direction, and efficiencies. The current technology standard and best practice is that data must be standardized, stored where it is secure but still accessible to users, and converted to useful forms, and. A large number of retail organizations are managing a massive volume of data daily and are growing at a brisk pace. According to Globalscape (n.d.), data streams contain everything from inventory figures and financial information to images and videos, and other unstructured data coming in from different sources.

The current technology trend is to have a centralized database that is providing relevant data to the different tools; this not only helps to avoid any duplicate copies but also simplifies the data management process. Many organizations are adapting to new age enterprise applications hosted on the cloud. The cloud-based applications are not only scalable but are highly reliable. These modern applications provide in-depth data governance policies that are used to ensure the integrity, quality, and security of data. Current ERP and CRM systems can be integrated with other tools like POS or sales audit, which means moving and consolidating a business's varied data into one accessible place. It is an essential component to make all the diverse date forms accessible and usable for the company.

New age CRM, ERP, and POS systems provide excellent data security. In this age of applications, being centrally located on a remote cloud location security is an integral part of any data-related strategy. This protection not only refers to anti-leaking and anti-theft measures but also relates to...
maintaining data integrity and prevent corruption or destruction.

Fast and reliable network infrastructure is not only required for all the on-premises applications to function, but it is a basic need for cloud applications to operate on the client systems and desktops. The company executives can share a vision and provide a direction for the team members, but it is the employees that will make things happen through a team effort. The current trend is to form different teams based on the product or a common goal to achieve a specific target using various project management methodologies like agile or scrum. A unified communication platform is required not for all the implantation of any projects but also to run daily operations efficiently.

2.3 How Recommended Changes Address International Market Opportunities and Global Economic Challenges

In the future, if an organization decides to start a new partnership with any regional company, the new-age enterprise application architecture hosted in the cloud will make that merger easy. One of the global economic challenges is data security and privacy, especially for all the retail organizations. According to Etchegoyen (2018), over time, data privacy and security have become some of the biggest roadblocks for migration to the cloud, especially in the space of business-critical applications such as customer relationship management (CRM), ERP, or any other supply chain management (SCM), due to the critical nature of the processes and data that these applications store and support. The organizations now have more security-focused tools that they use to maintain, build, and trust with cloud and application providers. It is due to this, migrations to the hosted environments and the cloud are happening more often. Another challenge is the companies operating in the international market are running extremely complex and customized business processes, which in many instances cannot be mapped to a cloud ERP software as service (SaaS) model. It means a lot of time migration to the cloud starts with running their former on premise systems in hosted environments. Another challenge in implementing the IT Globalization plan is in laying out the migration process from the current state to the future state. Many organizations are already operating in the international market. They are running extremely complex and customized business processes in silos, which in many instances, cannot be mapped to a cloud ERP software as service (SaaS) model. It means a lot of time migration to the cloud starts with running their former on premise systems in hosted environments.

One of the key challenges that come during the implementation of the IT globalization plan and it is even more critical for maintaining the new application is how to train the employees to use new tools and how to manage them promptly.

3. Discussion

This article explains how an organization should make their IT infrastructure and Enterprise application strategy if they are operating in a global market.

4. Methods

Business Continuity using Cloud Migration

5. Results/Conclusion

The implementation of this IT globalization plan creates many opportunities for the company to grow and expand in the international market. If the company wants to get its hand in any new business areas or is seeking to create new business allies, this modern age enterprise application architecture simplifies the complex task of the business process integration. Globalization has melted national borders, free trade has enhanced economic integration, and the information and the communications revolution have made geography and time irrelevant. Economic growth and development in the new global economy have been preceded by a complex structural realignment of investment streams, the clustering of business enterprises, the transformation of the production process, and the adoption of a niche marketing approach. It has necessitated the effective integration of state-of-the-art technologies in the domain of information and communications to enhance competitive advantage in the form of international trade. The new economy is built on a culture of innovation, and IT globalization plan will help the company to get ready for the future.
References


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