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Mobile ERP: Implementation and Sustainment Strategies

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Abstract *- Real-time communication and mobility are two factors that are driving technological change in every organization. The portability factor changes the way businesses make decisions, and organizations are not shy in leveraging these opportunities to their full potential. A mobile ERP (enterprise resource planning) implementation is one way you can be at the technological forefront.*

Keywords *- Mobile ERP implementation, Mobile ERP Strategies, Mobile ERP Sustainment*

I. INTRODUCTION

A mobile ERP implementation seeps through every operation that is carried out in an organization. But with every strategy used to bring software to life – a complete restructuring is required to ensure employees adapt to rapid change. Effective mobile ERP strategies guarantee long term satisfaction. But with that being said, many things can go wrong when traditional brick-and-mortar operations are optimized with technology.

There is no way of making sure that your employees will positively react to the change, for starters. For some employees, mobile ERP implementation can mean a fall in morale. Everything they know about their job has changed. While supervisors may see a mobile ERP implementation to increase profits by making employees efficient – some employees see it just as another training module they have to sit through.

A successful mobile ERP strategy revolves around several different elements that work in synergy to deliver high profits. Even though mobile ERP strategies have mostly been used to keep track of supply chain operations, modern applications have seen them mature and incorporate various corporate procedures. Nowadays, ERP software can provide you with an integrated view of operational data. This summarized view often puts organizational leaders in a better position to make strategic decisions, and cross-functional flow of information can also improve.

A. Goals and Objectives

Increased Efficiency

For several companies that manufacture products for different market segments, a mobile ERP implementation can help make internal operations more efficient. Since information flows in real-time, the process of data collection is simplified greatly. Planning for market demand and inventory restocking is also done with software, which reduces the number of people needed to perform a single task.

Since various processes get streamlined because of mobile ERP strategies, getting a delay in production also reduces. With the help of ERP, managers can make decisions in real-time. For example, suppose managers notice that a reduction in production is on the cards because of a supplier's problem. In that case, they can start making backup plans for the expected shortcoming. Managers can decide to order goods from a different supplier and inform customers that a delay can be expected due to an internal fault.

Decreased Costs

Every business uses cost and revenue to determine whether a corporate decision is worth their attention or not. Since mobile ERP implementation promises reduced long-term costs – it is an easy decision to make. An efficient and streamlined value chain ultimately means reduced costs. Since there are fewer human resources required, a smaller cost is incurred.

Also, with the help of an ERP system, businesses can predict the number of supplies they will need to complete a production batch. Traditionally, this tough decision has relied on human expertise, which can falter more often than technology. Not only can an ERP software plan for the resources required that will be required, but it can also give customers realistic ETAs of deliveries. So, in a way, not only is it helping you reduce costs – it is also increasing customer satisfaction.

Improved Quality

Better quality is one of the most *vital* goals of mobile ERP strategies. A mobile ERP implementation also allows

organizations to measure their performance against different industry companies with a clearly defined benchmark. While this can entice ruthless competition amongst the more *developed* companies – it also gives startups and new companies a standard to follow. It's also a lot easier to spot mistakes and correct the defects *before* production is complete.

B. Defining the Scope of the Project

Who is Will Be Using the Software?

When an organization finally decides to get a mobile ERP implementation, several decisions need to be made. First and foremost, companies need to decide who will be using the software and *how much* of the software they will use. Managers often have extra rights that allow them to view cost analysis reports. At the same time, employees can only see details relevant to them like the items in stock and ETAs for production batches.

Online vs. Offline

Two types of ERP software can be used. Offline ERP software does not need internet connectivity. An organization can save costs in this aspect. However, the implementation process of an offline ERP software can be a bit more complex since it has to be individually installed in every device that has to use the software.

Since the software *is not* connected to the internet, the flow of information isn't real-time, and if employees have to share data, they use traditional tools like email. This slows down the flow of information, but processes can still be efficient since employees use the ERP software for all operations.

On the other hand, online software can offer greater flexibility. Since you can use data through cloud software and are not bound to your computer's hard drive, decisions can be made a lot quicker. Employees can work on operations simultaneously, and being restricted to a single location isn't a problem either.

C. Project Timeline

To ensure mobile ERP sustainment, a defined timeline is essential. Mostly, businesses have clear ideas of the goals they are trying to achieve with a mobile ERP implementation, but ensuring every need translates into a usable feature is a challenge. Every manager starts the process of ERP mobile app development with an idea. The initial thought explains how a mobile app would make things convenient and how an application can reduce production cycles.

After initial ideation is complete, planning occurs during which you interview the employees you have and understand the problems they face with current operations. Agile is the way to go. As soon as a prototype is present in front of your employees, app development can start. In the first few stages, core features that the business relies on are created. When these functions are perfected after rigorous testing, low priority operations are performed.

Businesses start with low priority requests to make sure the worst-case scenario can be handled. If the app *helps meet* deadlines quicker and streamlines core processes – secondary operations are tested similarly.

D. Gathering and Validating Business Requirements

Shifting your operations to a mobile ERP app can be exciting for a company. But with that being said, several problems can arise if the transition is not smooth. Even though companies might aim to increase profits with a mobile ERP application, if you make any mistakes during the process, ERP software can end up becoming a high cost.

To make sure the application requirements are spot on – make sure you tie your business goals with them. Usually, businesses focus on:

- Automating their current operations with a mobile app
- Improving how employees can respond to potential customers
- Ensuring dataflow is in real-time

Once you have selected the requirements you want to focus on with a mobile app – try to get everyone on the same page. When you start asking your employees for their input and suggestions in the first few stages, it will be hard to gauge responses. But once people start feeling they are being listened to, opinions and problems will start pouring in rapidly.

At this point, every solution will seem relevant and crucial, but the goal is to focus on a problem that is faced by the highest number of people. If you are focusing on reducing inventory costs, you will need a mobile application that allows you to take care of warehousing responsibilities. Once you have finalized a list of requirements for your application, run it by your employees for one last time to prepare themselves for the changes that are about to come.

E. The volume of Data and Performance

The developer and the company must know how much data they plan to move to the app. Since *data is the new oil*, modern businesses have a lot of data stored. Some of this data is in informational silos, while some details can be shared with every person. However, one more important aspect is *how much* of the data should be transferred to the system.

If you focus on transferring large volumes of data in the first few phases, you should make sure the system can process it. The method you use to transfer data matters too. While manual entry can be used to cleanse data while being fed, it can take extra time to do the process yourself. On the other hand, an electronic way of transferring data can speed up the process greatly. But even something as tedious as data transfer will not be your responsibility due to electronic transfer. It is a process *only* your IT team can perform.

You will not have the ability to ask each employee to fill in their data on to the system themselves, which can be a lot

more feasible for the IT team.

F. Operating System and Hardware

Another crucial factor in ensuring successful mobile ERP sustainment is understanding the software and hardware requirements. No matter how biased your audience is towards a single operating software – it is always good to create a mobile application for *both* iOS and Android. Generally, mobile phones can process data slower than most laptops, so it's essential to keep a cap on the application's data limitations.

After the app has been created, some bugs and improvements will make themselves apparent after employees use them rigorously. Try to release updates frequently and make sure every employee is always using the latest version of the app all the time.

G. Connectivity

As you might have noticed, there are several reasons an organization might choose to for mobile ERP strategies. They streamline your operations, reduce your costs, increase your revenues, and improve customer satisfaction. But even though ERP software can bring several advantages to a company, many employees cannot see these advantages because they still prefer conventional software.

Now do not get us wrong – an online ERP implementation is always better than an offline ERP implementation. But for the few employees who avoid using the app because they cannot understand it, traditional solutions work better. If any employee is a valuable asset to your business, and they can't seem to wrap their head around your mobile ERP implementation – let them stay disconnected.

H. Mobile App User Friendliness

Building upon the last point, a user's willingness to shift to an app also depends on how friendly your mobile application is in general. Every mobile application should focus on creating an experience for the user that makes the app fun *and* useful. This *may* or may not be true for life outside the workplace – but when an employee is at the office – they do not pick up their phones for a long time.

The same can be said when people are using a mobile application in general. An app or its notifications can give you a general idea of what is happening in your social media circles. An app that delivers information in a clear, concise, and quick way works well with the user, and that is what you should aim for.

For the managers and vendors who use your app to stay updated with every product in the value chain – an app acts as a supplementary feature. Something that keeps them in the loop is even when they are not around their desktop computer or laptop. Focus on keeping the layout simple and reduce loading times as much as you can. Remember: a web page that loads faster is always more friendly than a web page that looks beautiful.

I. Security

With time, security concerns have become increasingly common in the mobile app development world. When you create a mobile app that can update your employees about the resource planning structure, you're hoping to make business processes more convenient for everyone. This convenience factor brings several problems in the limelight since viewing confidential information has become so *easy*.

Authenticating whether your employee uses the app can be convenient when an employee is inside the company's network. However, this authentication process can be tough when your employee is accessing your server remotely.

Unauthorized APIs can be hacked very easily. Decide on the technology you will implement to authenticate your employee when they log in outside the company's network. For example, they could log in from a hotel using their Wi-Fi connection. This step is crucial because many employees are travelling to different work sites and have to use Wi-Fi networks to use the company app when company networks are not available. There is a big risk associated with an app that can access your database from an external network. Mobile apps can be easily hacked if you are not using a secure network, and hackers can easily steal the company's secure data.

J. Proof of Concept

The proof of concept for ERP application ensures long term mobile ERP sustainment. Quite simply, the proof of concept stage offers company management and employees insight on what the app will look like once it has been completed. Consider the proof of concept, a *demo* that shows employees how every process will phase out when they have a requirement. It is the same as the mobile application you will receive at the end of the whole process but on a smaller scale.

But even though the proof of concept phase is intended to rid common concerns that can arise, problems still arise in later phases – and that is okay! On most occasions, the final version of the application is a lot heavier and has slower load times, which creates further time-management delays.

K. Testing Environment and User Acceptance Testing

For some people, the testing environment of an ERP application is also considered a "sandbox." The testing environment is one of the several ways a developer can optimize their application for the better. The closer the test environment is to reality, the more accurate the test results can be.

The same can be said for the process when different users use the app for real-life scenarios. Even though your ERP consultant might tell you that they have tested the app according to their experience, make sure you have another test with your employees. Your employees might even test the app for some common problems they face with the current system, and if they do not face the same problems, they might start liking the app before it goes live.

The user acceptance testing phase can make or break your transition to a mobile app for a manager. By this point, all you can do is wait and watch how things turn out.

L. Training

Training your users for a mobile app might not be as necessary as training them for a desktop ERP module. If your app is well designed and the interface is simple to understand, people will poke around the app and find how stuff works independently. But to be sure, provide a training module within the app or a tutorial that teaches your employees how to use it.

And of course, after the app goes live and your employees start using it, there might be several problems that your employees encounter – and that is normal. No app is perfect in its first version. Frequent updates will eventually bring you to the sweet spot that enables you to run things smoothly.

M. Employee Motivation and Documentation

When people receive motivation and appreciation every time they learn a new skill, they feel more engaged to be a part of that activity. Because of this reason, several business owners use gamification to motivate their employees when an ERP Mobile system is being implemented. The more enjoyable and ERP Mobile implementation experience is, the faster the employees will become comfortable around the app.

On average, a video gamer typically spends an hour or two playing video games. Many of these involve co-operation and teamwork. In the same way, social games are good for corporations since recognition and competition can motivate employees to do better. Likewise, change agents play a huge role in motivating employees to use the mobile app, too. Change agents are people within the organization who act as catalysts for change management activities.

They are the bridge between the technical team and the end-users. They make sure that everyone on the team is training needs. These organizations understand the importance of this procedure and the significance of each step. They would also know the best methodology that can be used to train your employees, depending on their skill level and the app's complexity.

Documentation is also key for any project implementation. Documenting technical and functional requirements and training and testing scripts are best practice for any project. Documentations are very useful when we encounter some issues after going live and if we have to validate the mobile app's requirements and functionalities.

N. Troubleshooting and Go-Live Support

The most important step to consider while implementing any project is defining the troubleshooting process and the live support model. Mobil ERP app implementation is different than a traditional project implementation where only a desktop computer or laptop versions are part of the project.

The biggest challenge with a mobile device is that it is not easy to share the screen when a user notices some issues—defining the process like sending the log by email to the IT support team for any errors after go-live is very useful to resolve the issues.

After go-live, a support model should be well defined and communicated to the business users. To be successful, a well-defined support model is crucial because end-users feel comfortable adopting new technology and the changes that come with it.

O. Sustainment

Sustaining a mobile app is also a very important and difficult task. Define a sustainment strategy to ensure a business will not be impacted due to any app updates. During the sustainment phase, you might have to upgrade the app and implement the new version to add new features. Define the sustainment strategy to ensure a business will not be impacted due to any app updates or fix bugs. However, a more prominent challenge is to make sure all of the end-users are using the latest version of the application to take advantage of all the new features added to the new version. Better communication and follow-ups with end-users are important to ensure that all the users have downloaded the correct version.

During the warranty period, you must make sure that all support services are available to the end-users. If there are any common issues, make sure your staff members are trained.

The long-term sustainment of the app is very important for ROI. Every organization expects ROI for money and time they spend to implement new technology.

II. CONCLUSION

Creating a mobile application for your ERP software can make things convenient organization-wide. It can streamline processes and increase customer satisfaction to a great deal. But most importantly, it can help drive innovation and become an essential component of your organization. For successful mobile ERP sustainment, understanding what functions you want from the app and deciding who can use it is just as important as its developmental phase.

After the process has been completed and using the system becomes smooth sailing, you start to see your employees develop creative solutions to different problems just because of the ERP system. The organization gets more efficient as a whole, but your employees start enjoying the processes associated with every task. However, this level of comfort can take some time since implementation, and operational sustainability takes time. To make sure your company gets comfortable with the app as soon as possible, try to take a lot of time to understand your true requirements from the software.

Do not rush to create an app unless you are completely sure of the requirements!

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