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Defining Your Mobile Strategy

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Executive Summary

In today's rapidly changing mobile landscape, setting a mobile strategy for your enterprise can seem overwhelming and confusing. There is an enormous amount of activity in this sector, as mobile application uptake by enterprises grows at an ever increasing rate. To help sift through the noise, Sky Technologies has developed this whitepaper to assist executives in the development of their mobile strategy.

In producing this paper, Sky Technologies has drawn on more than 10 years of experience in Mobilizing SAP. Through this time Sky has witnessed the evolution of enterprise mobility, from the "nice to have", to the "must have" productivity improvement initiative that we see today.

This Whitepaper aims to outline key points that must be considered when developing a mobile strategy for SAP, thereby assisting those executives that are considering **extending their SAP systems** to the perimeter of their organization using mobile devices.

What is a Mobile Strategy?

Put quite simply, your enterprise mobile strategy is a roadmap that will govern your mobile application deployments over the coming years. It will encompass a variety of aspects including hardware, networks, security, office productivity (such as email) and enterprise applications. For users of SAP software this becomes a very strategic decision given the role that SAP plays in "integrating" the enterprise. Clients of SAP have invested time and money to implement a back office suite that is fully integrated and provides them with a platform to run and grow their business. Mobilizing this functionality enables field based workers to harness the power of back office solutions without having to return to the office.

Summary - Key elements in developing a mobile strategy

If you are developing a mobile strategy then you must consider the following:

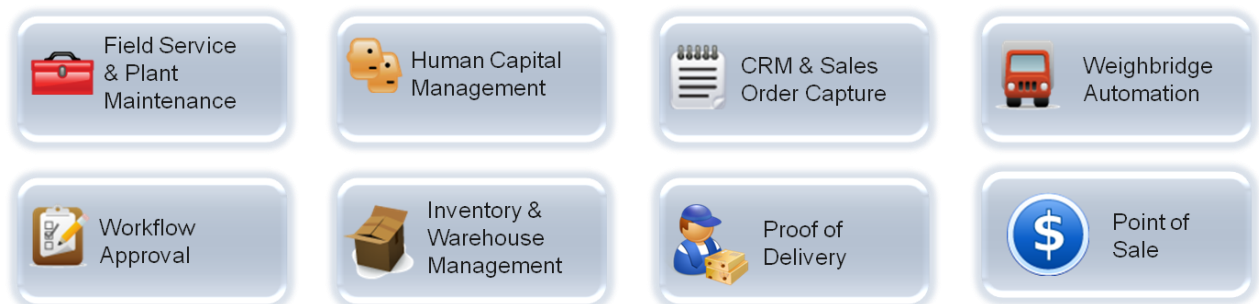
- Utilize a single mobile infrastructure that supports multiple types of devices and applications.
 - Different areas of your business will require different device types.
 - Avoid multiple point solutions that will require different infrastructure.
 - Ensure all mobile applications, data and devices are managed in a single consistent manner.
- Fully utilize your existing SAP infrastructure, skill sets and processes.
 - Utilize the same SAP business processes, data, IT skills, DRP, change management and security in which you have already invested.
 - Avoid additional hardware, complex middleware and management platforms that will deviate from your existing SAP strategy.
- Properly manage all business transactions, from the point of inception through to final posting.
 - Understand that 70% of the effort in all SAP mobile deployments is the integration with your SAP system. Ensure the integration piece of your strategy is detailed and understood.

- Ensure you have the proper interface management “inside SAP” to guarantee transaction and data integrity and avoid performance bottlenecks.
- Pay attention to SAP data and business process integrity, ensuring:
 - SAP levels of security are not compromised.
 - SAP remains the master system. Don’t replicate SAP functionality into 3rd party middleware systems. Extend SAP functionality to the field, don’t replace it.

Be sure that you consider these keys points when developing your mobile strategy and you will have taken the first steps towards a successful deployment of mobile technology.

Mobilizing Business Functions

One of the key inputs to your mobile strategy will be to understand the areas of your business that will need to be mobilized, both now and in the future. Typical functions that are being mobilized in today's landscape include:



As such, when addressing today's requirements, be sure to also consider your future mobility needs. Gartner reports indicate that mobilizing more than 1 business function is "highly likely" and that your mobile strategy must assume this to be true. Many early adopters of mobility suffered heavily by not considering future needs. They deployed a point solution that addressed a particular need at that point in time, but subsequently the solution could not be utilized for mobilizing other business processes. This process continued until they had multiple solutions that simply could not be maintained. Gartner reports indicate that on average, clients have deployed seven (7) different mobile solutions in their enterprise, which as you would expect, causes significant management issues. As such, be sure to consider both current and future application requirements when formulating your mobile strategy.

Hardware Deployment

In today's environment, the fastest moving area of mobility is hardware. There is an incredible amount of competition between major hardware vendors to win your business. As a result of this, it is highly likely that you will have a number of different devices including smartphone's, tablets and laptops throughout your organization. As such, you need to ensure that your applications can be deployed on a variety of devices. At the time of writing, there are a number of key device platforms that you should assume will need to be supported now or at some point in the future. They are detailed below:



BlackBerry

BlackBerry smartphones are manufactured by Research in Motion (RIM) and have the strongest market penetration in the smartphone market, particularly due to its dominance in North America. RIM is well known as the “email machine” but is building a reputation as extendable to other enterprise applications, giving greater return on investment from the RIM infrastructure.



iPhone

The iPhone is now well known given its “game changing” appearance in the consumer market. iPhone is now appearing in corporate boardrooms and is rapidly making its way into the enterprise. Deployment of enterprise applications should be assumed as a requirement either now or in the not too distant future.



Windows Mobile

Windows Mobile is a very common platform in the enterprise market, particularly in Europe and Asia. While the Microsoft platform may be considered a little “behind” its competitors, it is still widely used in smartphone devices from major manufacturers such as HTC, as well as ruggedized devices from Motorola (Symbol) and Intermec.



Windows (Laptop and Tablet)

Deployment of mobile applications to tablet &/or laptop is still very much common place. While the introduction of “smarter” applications will reduce this requirement, it is still expected to be a mode of deployment in certain circumstances. Particularly when dealing with application needs that have large data volumes, multi-media and attachments that are difficult to read/navigate on a smartphone or in situations where the hardware is already deployed.



Android

Android is the newest operating system and is the result of the “Open Handset Alliance”. (www.openhandsetalliance.com) With so many key industry players contributing to this open source (and royalty free) operating system, you should expect deployment on this device to be a requirement in the not too distant future.



Symbian (Predominantly Nokia)

Nokia is still the most widely used mobile phone in the world. While its position in the smartphone market is not as strong as its competitors, you can be assured that Nokia's next generation phones will be more powerful and capable of deploying enterprise applications.

With such a vast array of devices and operating systems you must ensure that your mobile strategy allows for your applications to be deployed across multiple device platforms. Furthermore, your platform must be able to seamlessly interact with the "native" features of the device platform. For example, can your enterprise application interact with the phones calendar, telephone, internet browser, address book, mapping features etc. While each of these functions will be different on each mobile device, a robust mobile platform will support this native integration across device platforms.

The Risks with Middleware

Your mobile strategy needs to consider the impact of introducing middleware into your corporate landscape, as opposed to deploying mobile solutions from inside SAP. The benefits of deploying without middleware include:

- Interfaces are managed from within SAP.
- SAP is your master system. Many mistakes are made by replicating SAP functionality into 3rd party middleware. In no time at all, there is confusion as to which system is the "master". Where do you run reports and which system is your financial system...it should be SAP, ensuring your enterprise remains fully integrated.
- The ability to utilize existing SAP skills to mobilize. 3rd party middleware will require unique skills that are difficult to acquire and keep.
- The ability to utilize existing infrastructure. SAP provides you with a development, test, training and production environment. How will you replicate this with middleware based solutions? What extra hardware will be required and how will it fit into your existing network and DRP?

Online vs. Offline

Your mobile strategy needs to consider the implications of running applications that are "online" (i.e. require a permanent connection to the host system) or "offline" (i.e. can run without a network connection). When you consider the number of applications that will be deployed in your enterprise, you should assume that you will need to support **both** types of deployment.

Online applications should be able to communicate directly with your SAP system (not a middleware based database) ensuring that any inquiries are displaying data in “real time”. Dynamic data such as inventory, credit position, order status and pricing should be accurate when presented to the mobile user and not reliant on synchronization to a 3rd party middleware system.

Offline applications should be able to seamlessly synchronize data with the SAP environment, without user intervention. The database that is resident on the mobile device must be capable of scaling to support the data that will be required to run your application. It should also incorporate features such as being network aware and upgradeable “over the air” (i.e. not having to return the device to base for an upgrade).

With this requirement in mind, ensure that your mobile strategy caters for both styles of application within a single mobile framework.

Selecting a Mobile Framework

When attempting to mobilize your first business application, your mobile strategy should dictate the choice of a mobile framework rather than a single “point solution”. Gartner refer’s to the mobile platform as a “Multi-Channel Access Gateway” in their *Enterprise Mobility Research* paper. The risks of **NOT** selecting a single integrated platform are:

- A single application solution will not support future mobility requirements. i.e. your field service application will not be capable of providing workflow approvals or the entry of leave requests.
- A single application is unlikely to support deployment across multiple device platforms. For example, a CRM application developed for BlackBerry smartphone will not assist with a field service application on a ruggedized Motorola device.

When choosing a framework that can support your current and future mobile requirements, you should consider the following key questions.

Can the framework support multiple device types and operating systems?

How easily can I support multiple device types? How easily can I switch if/when my current device is end of life?

Can the framework meet my current and future mobile application requirements?

The mobile framework must be able to meet current and future business needs. Do I need to custom build everything or can I start with a pre-defined and customizable template?

What skills will I need in my enterprise to develop and support applications?

Can I develop applications myself or am I “stuck” with a particular vendor every time I want to enhance or modify my application(s)?

What hardware is required to support my infrastructure?

Are there unique (and additional) hardware requirements that I am not aware of. What are the capital implications and cost of ownership issues (for example additional backup/DRP, redundancy, failover etc.). Also, are there environments for development, test, training and production just as I have within my SAP landscape?

How will the application interface to my SAP system(s)?

What protocols will be used to interface to SAP?

- How will these interfaces be managed?
- How will failures be “trapped”?
- How will I be notified when there is a problem?
- What skills will my staff need to manage and diagnose problems?
- Can errors be safely “reprocessed” with minimal intervention?
- What load will this place on my SAP system? Will it be overrun with transaction “storms” at the start and end of each day?

Is SAP still my master system?

Many mobile deployments make the mistake of replicating key SAP processes to non-SAP systems, removing the integrated business that you started with. For example, don't be fooled into replicating your Field Service or CRM functions into a middleware based “Mobile” application. This will only create “two versions of the truth” and eliminate the benefits that come with implementing SAP, such as a fully integrated view of your business.

Ongoing support

Can I maintain the system myself? How do I deploy changes? Can this be done remotely “over the air” or do devices need to be returned to base to be “uploaded”. How do I provide support to remote workers?

A mobile strategy that includes the selection of a mobile platform that is able to address these questions will give you comfort that your mobile strategy will meet current and future mobility requirements.

The Value of SkyMobile

With more than 10 years of experience in Mobilizing SAP, Sky Technologies has developed a mobile framework that is specifically designed to extend your SAP infrastructure to the point of business. SkyMobile is provided as a SAP certified “add-on” enabling middleware free mobile solutions that will support your current and future mobile requirements. Supporting multiple applications and multiple device types without the addition of cumbersome middleware, SkyMobile should be a consideration for any SAP customer undertaking a mobile project.



The diagram above articulates how SkyMobile is delivered within SAP, enabling a middleware free Mobile framework with all of the technology requirements for your business. When you then add to the framework some predefined template applications, or indeed your own custom built application you have a mobile solution that will align to your mobile strategy.

Conclusion

In today’s rapidly changing mobile landscape, there are many pitfalls for businesses that embark on a mobile project without first considering the development of an enterprise wide mobile strategy. The basic principles of deploying multiple applications across multiple devices will be faced by all enterprises, if not today then definitely tomorrow. This view is supported by research analysts such as Gartner and IDC and should be a critical factor in developing a “Mobile Strategy” for your enterprise. When assessing Mobile Platform’s for your organization, we ask that you consider evaluating SkyMobile as the mobility platform for your business, just as our international client base spanning more than 23 countries and 5 continents has already done.

About Sky Technologies

Sky Technologies is an enterprise mobility solution provider, specializing in SAP. With our headquarters in Dallas, Texas we offer our clients specialist mobility software, services and advice. Sky is a delivery focused organization with a deep level of business understanding and a proven track record. We supply world class SAP mobility solutions and specialist consulting services through our **Mobility Centres of Excellence**.

Americas



Dallas, Texas

EMEA



London, UK

Asia Pacific



Melbourne, Australia

Sky's solutions have been implemented across the globe, therefore you can be assured that when you deploy a Sky Technologies mobile solution you are joining a blue chip client base who are already realizing the benefits of mobilizing SAP.



To read more about Sky Technologies, please visit us at www.skytechnologies.com or contact us via info@skytechnologies.com.