FIVE STEPS FOR CREATING YOUR MOBILE ENTERPRISE APPLICATION STRATEGY

Abstract
As the adoption of smartphones and tablets continues to grow in both the consumer and enterprise space, mobility is quickly transitioning to the second wave of mobility predicated on applications. The consumerization of enterprise mobility – the notion of people bringing their own devices into the workplace, and hence following broader consumer trends – has now moved on to the application front. Organizations are now quickly recognizing the power and value of providing mobile applications to both their employees and their customers. This document is meant to provide organizations five recommended steps for developing a holistic end-to-end mobile application strategy.

STEP 1: DEVELOP THE BUSINESS CASE
Before writing a single line of code, or even deciding which platforms you will be developing your mobile applications for, your organization needs to have a very clear and compelling business case made for the investment in this mobile application. In other terms, what are the goals/objectives and expected outcomes that come from the existence of this application? Potential objectives would include:

- Enhancing your customers’ perceived brand experience;
- Increasing the business velocity of your workforce and partners;
- Attracting new customer and revenue opportunities;
- Enhancing your current customer experience;
- Showcasing your corporate culture as a “hip” and/or forward-thinking entity.

Once you have made the decision on what the high level objectives are, you will need to dive deeper and decide whether you are targeting internal or external...
constituents and what kind of application you are looking to develop. Common use cases for:

- Internally facing applications could include dashboards, line of business apps (e.g. transaction processing), training or HR materials, or workflow automation (e.g. expense report approvals); while
- Externally facing applications could include interactive branding, customer relationship management/self-service tools (e.g. banking apps) or time and location-based promotional offers.

It’s important to note – and a point that The Enterprise Mobility Foundation cannot stress enough – that organizations must consider their externally facing applications as an integral part of their mobile enterprise application strategy. It’s not a question of B2B vs. B2C mobile applications. Mobile B2C applications can have as much (if not more) impact on your organization than any internally facing mobile B2B application.

FIGURE 1: CONSIDERATIONS AND CONSTITUENTS FOR YOUR MOBILE ENTERPRISE APPLICATION STRATEGY

Source: The Enterprise Mobility Foundation
Last but not least, you will need to bring together a team of internal constituents that will be involved in developing, deploying, promoting and supporting the application(s). Because of the fact that there are so many different kinds of use cases for mobile enterprise applications (both internally and externally), you will in all likelihood need to create a team comprised of individuals from a wide array of departments who can bring to the table the perspectives of the various constituents that will be involved in the final work product (see Figure 1).

**STEP 2: PICK THE “RIGHT” ENGINEERING STRATEGY**

Mobile enterprise application development can be as daunting a challenge as it can be an exciting opportunity. Because of the fact that there is no clear winner in the mobile platform wars, organizations need to build their mobile enterprise applications for Android, BlackBerry, iOS and Windows Phone...in both smartphone and tablet sizes.

One approach that organizations are increasingly considering as a means of mitigating the cost of custom development for four platforms is to build HTML5 based applications. While this certainly does provide some economies of scale (and a hedge on the eventual fallout in the mobile OS war), the challenge with this Lowest Common Denominator approach is that it does not provide a way to leverage the native APIs and capabilities of each platform and form factor. Additionally, it’s important to note that not all mobile browsers – even WebKit-based browsers – render pages in the same fashion.

One alternative that shows great promise – and one that The Enterprise Mobility Foundation believes deserves strong consideration – is to create HTML5-based applications that reside in native containers. This “best of both worlds” approach allows organizations to reduce the custom platform-specific development needs, all while being able to easily leverage the core functionality of the various platforms. Other technical decisions remain unanswered, unfortunately.

Specifically, there are many tools available in the market today for developing these mobile enterprise applications, including custom application development, Mobile Enterprise Application Platforms (MEAPs), mobile application frameworks and even emerging cloud based solutions. Each option has its pros and cons and your internal plans and scenarios will dictate what is the best approach for your organization. While you may want to “test the waters” on your first mobile enterprise application, you must also consider the scenario when your organization has scores of mobile enterprise applications. You will want a
scalable solution that will allow you to quickly update whatever it is you have already created as well as allow you to leverage what you have already created for any new mobile enterprise application.

STEP 3: PICK THE DISTRIBUTION MODEL

While your organization’s externally facing applications will undoubtedly find their way to the public “App Stores,” these delivery vehicles are certainly less than ideal for distributing internal applications. Internally facing applications – almost by definition – will contain sensitive corporate data that no CISO would ever want to possibly be seen by your organization’s competition. Additionally, while many internally facing mobile applications are currently being developed in a custom fashion, organizations need to start thinking today about the internal applications that they may eventually purchase from third party ISVs.

Current large-scale purchasing solutions via public app stores are less than ideal in terms of:

- Purchasing methods (typically via credit card as opposed to a purchase order)
- Not providing opportunities for discount volume pricing; and
- Often leave the ownership of the application in the hands of the employee as opposed to the employer.

These (and other) scenarios make a strong case for organizations to deploy their own internal app stores.

Internal enterprise app stores provide organizations a means for easily and securely deploying thousands of mobile enterprise applications (both custom and off the shelf) to the various employee groups (geographic, departmental, seniority). Enterprise App Stores also provide organizations the opportunity to ensure that the various employee groups are offered only the applications they need for their work (i.e., mandatory applications), all while offering employees additional “optional” applications. One of the most important points to consider when selecting an internal mobile enterprise app store is to understand how deeply the solution integrates with your directory services (e.g. LDAP, Active Directory, etc.). This deep integration becomes critical as your organization develops its plan for mobile application management.
STEP 4:  DEFINE YOUR APPROACH TO MOBILE APPLICATION MANAGEMENT

As mobile devices become managed more like traditional PCs, organizations will need to leverage scalable tools for deploying “standard” applications. Much like there are standard images for laptops, IT departments will also need to provide their employees a standard set of applications and configurations to help their employees maximize the benefits of their mobile devices. Also, as mobile applications become more pervasive, IT departments will need to explore ways to ensure that employees are limited in what they can install and remove from their mobile devices (regardless of ownership of the device(s)). This requires management tools.

Currently, the term Mobile Device Management is being used as an umbrella term for all things related to mobility management. **It is critical to note that mobile application management is distinct from mobile device management.** Some of the key features your organization will need for mobile application management include:

- User authentication / authorization / grouping
- Over The Air (OTA) application provisioning
- Automated application configuration
- OTA application updates
- OTA application backup
- OTA application removal
- Application White and Black list management

STEP 5:  ENSURE THE SECURITY OF YOUR APPS

As mobile devices, mobile applications and cloud-based solutions continue their explosive growth, one of the most important things that organizations will need to focus on will be information loss protection and prevention for both consumer and corporate data. This is particularly important when you are developing applications in highly regulated industries such as finance or healthcare where the data you will be accessing is neither your corporate data, nor your employees personal data, but instead the (e.g. health or financial) data of a third party.

Beyond password enforcement, you will need to take into account encryption for not only the secure data tunnel, but during the transaction processing, as well as
when the data is “at rest” on a device. Additionally, some mobile platforms are more susceptible to viruses and malware than others, and as such you will have to take security measures that are more traditional associated with desktop or non-mobile computing.

Should a data breach occur – or even a potential one from a lost or stolen device – your organization will also need a plan in place for mitigating the information loss, as well as a means for reporting the (potential) loss to the appropriate local, state, national and industry authorities. These policies need to be communicated – particularly in the case of internally facing applications – to your employees in a fashion that makes it part of their human resources/employment record. It should include terms around how quickly an event should be reported as well as the necessary steps they should be taking and a general understanding of what the impact of their actions may have on their employment and the organization.

**BONUS STEP: Monitor and Measure**

While the concept of monitoring and measurement is certainly not new, it does often get overlooked because of the perceived complexities of measuring a meaningful ROI or finding tangible success metrics. In enterprise mobility however, tangible ROI can be particularly elusive, especially for horizontal applications. The classic example is that of email. Everyone understands the value of mobilizing email, but how does one go about measuring that value? In many respects, The Enterprise Mobility Foundation believes that ROI for mobility has to be based on a leap of faith where organizations understand that mobility is changing the way we go about working and interacting with other businesses.

That said, organizations can monitor and measure certain things related to mobility, such as downloads, usage, and application performance. This is particularly relevant for compliance monitoring and enforcement where your organization may have defined certain business policies that employees must be using new mobile applications and tools. Additionally, this kind of monitoring and measurement will provide important feedback loops to better understand how well the application is being perceived by its user base and hence provide information regarding future versions and feature/functionality improvements.
CONCLUSION AND RECOMMENDATIONS

There is no question that the future of (enterprise) mobility is based upon the applications that individuals will use for either personal or professional reasons. As you follow the five steps outlined in this document, The Enterprise Mobility Foundation suggest you always keep in mind the following five principles:

- **Mobilize processes and people…not just apps**
  
  The greatest opportunity from mobility - particularly in the context of enterprise mobility - does not come from the new hardware, software or services model that are emerging, but instead how it will affect our personal and professional lives. Focus on what mobility can do to make your employees more productive and delight your (internal and external) customers.

- **Understand not just your target audience, but also your target outcomes**
  
  In cinema, there is a famous quote that says: “Build it, and they will come.” While certainly an attractive and perhaps whimsical statement, it is also naive when one considers the investments in time and money required to develop high-grade mobile enterprise applications. Even if you are developing free B2C applications, you need to make sure that it is an effective “loss leader” for a broader and higher level, financially accretive, outcome.

- **Mobile application development is about trade-offs**
  
  As with any emerging industry, mobile application development currently offers developers a wide array of tools and methods for developing those applications. As opposed to getting stuck in “analysis paralysis” trying to determine what is the best long-term strategy for developing applications, understand that the landscape is very fluid currently and that things will change. Pick a development process that works best for you today, while understanding that in all likelihood, your organization will have to re-evaluate that choice in the not too distant future.
• **HTML5 is not a panacea (yet)**

There is currently a tremendous amount of hype surrounding HTML5 and its promise of providing one singular means for developing applications across (almost) every platform possible. The Enterprise Mobility Foundation suggests we take this promise with a few grains of salt. Firstly, HTML5 is expected to be ratified as a standard in 2014. Organizations must remember that three years in mobility is a veritable eternity and that the landscape will have undoubtedly changed by the time HTML5 is fully ratified. Additionally, other programming languages, including the original HTML specification, were supposed to provide one means of writing for all platforms. Unfortunately, 15 years later web developers still must tweak their code for the various browsers and operating systems. While HTML5 certainly does offer many compelling advantages in its current form, we must all remember that it is still an evolving standard.

• **Mobile Application Management is a MUST for internal applications**

Regardless of the tools your organization will use to develop its internally facing mobile applications, mobile application management will be a critical component of the long-term success of your mobile application strategy. The Enterprise Mobility Foundation believes that organizations must leverage tools such as mobile enterprise app stores to deploy, manage and remove applications from employees’ mobile devices in a secure fashion that is convenient for both the IT department and the employees of your organization.