

TRANSFORMING BUSINESS WITH MOBILE ENTERPRISE APPS

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Executive Summary: *Now a days mobile applications are much more accessible due to high-speed mobile networks; third and fourth generation networks provide more than enough bandwidth for personal and professional use, with email and mobile app stores almost ubiquitous on today's devices. By 2013, over 80% of handsets sold in mature markets will be smartphones, with a text keyboard, 3G & 4G connectivity and multimedia features. Mobile applications have become an important strategic imperative to many leading enterprises. This research develops a conceptual multi-phase framework of mobile transformations by integrating the emerging literature on mobile business and enterprise transformation with best practice approaches employed in industry. While the potential value and impact of enterprise mobility is understood, only little is known about the transformational capabilities of mobile applications. The framework provides a basis for future mobile enterprise oriented studies, enhances our understanding of mobile application opportunities, and facilitates the development of appropriate mobility strategies.*

Keywords: **Mobile Enterprise Apps, Business Transformation, MEA,**

I. Introduction:

Mobile applications in business have been available for 12 years, mainly in large utility companies with substantial mobile workforces. In recent years, mobile applications for all business types have started to evolve. Whether these are applications developed specifically for your business, or simply ones your employees use as part of daily life for activities such as reading the news, looking for directions or finding train information via a smartphone, applications are changing the way we do business. The lines are blurring between business and consumer applications: if you can see your Facebook updates on your smartphone why not track your customer orders? Employees, who experience mobile applications in their personal life, expect their company to keep up to date with the technology and provide applications that are efficient and easy to use.

Increased demand from consumers and competition in the market are together putting downward pressure on the price of smartphones. At the same time, processing power and features are improving. This is partly due to the competition between device manufacturers and operating systems, with five key operating systems available: Apple, , Google Android, RIM (BlackBerry), Nokia Symbian-QT and Windows Mobile. There are so many enterprise apps building tools available in market to create apps for all platforms, e.g. Appbuilder, Snapii etc.

II. Rising Demand for Mobile Devices:

Smartphones and netbooks are driving demand for mobile broadband and Wi-Fi networks, as these devices become the primary means for people to get online. Consumers are using wireless broadband to connect to the Internet. This trend holds promise for developing countries, where many consumers cannot afford a laptop or personal computer, or have no access to fixed-line broadband services. Smartphones operating on a mobile broadband network can provide access to the Internet at a low cost, particularly if operators provide handset subsidies to “seed” the growing broadband wireless market. [16].



Fig:-1 Smartphone with full of Apps

The rapid growth of smartphones and “app stores” has brought a wide range of mobile applications to the market, driving customers’ fascination with their new, high-tech handsets. Many of these apps make use of smartphone

Decrease in costs & Business Maturing:

Increased demand from consumers and competition in the market are together putting downward pressure on the price of smartphones. At the same time, processing power and features are improving. This is partly due to the competition between device manufacturers and operating systems, with five key operating systems available: RIM (BlackBerry), Google Android, Nokia Symbian, QT, Java, Apple and Windows Mobile. Development costs of applications have also decreased, even for small departments with very few mobile employees. Every operating system provides a software development kit and over 300,000 applications have been developed to date. Developers are now highly skilled and costs are attractive enough for adopting simple business applications. Moreover, software packages and SAAS (Software As A Service) offerings can minimize the effort required to fulfill business requirements.

III. Increased Use of Mobility by Consumers and Employees:

These days, consumers are at the forefront of the smart device revolution. Their appeal: greater convenience and utility. By allowing access to information anytime and anywhere for real-time decision-making, mobility has empowered consumers in a multiplicity of ways. These devices are indispensable, changing

cameras, Global Positioning System (GPS) location capability and Internet access, resulting in new features that many consumers find useful. Other apps, while seemingly irresistible, rank a bit lower on the usefulness scale.

“We are impressed by the pace of mobile application adoption within organizations,” said CJ Desai, senior vice president, Endpoint and Mobility Group, Symantec. “This cultural change from refusing mobile devices not long ago, to actively distributing and developing mobile applications, has introduced a new set of challenges and complexities for IT staff. Encouragingly, from a security perspective, a majority of organizations are thinking beyond the simple case of lost or stolen mobile phones.”

Mobile App Adoption Drivers



Response base: 573

Source: Aberdeen Group, September 2011

Fig:-2 Mobile Apps Adoption in 2011-12

IV. Benefits of Mobile Advertising

Today, mobile advertising has grown to its full potential and businesses have made huge profits with this platform. Mobile ads hit the right

the way news, music, games and social media are consumed. They are also transforming shopping behavior, providing consumers with more information at their fingertips than retail associates themselves. Employee preference to use smart devices at work to access business information is growing rapidly, according to a recent IDC study that surveyed 3,000 workers from nine countries. The study adds that half the respondents used their devices to work while on vacation, 29% used them in bed, 20% while driving, and 5% when at a place of worship. With employees relying more on consumer technology for work and personal purposes, the line dividing employees' personal and professional lives is blurring fast.

These are just a few of the benefits and features available to marketers should they decide to tap in to the ever growing world of mobile advertising, and there is much more to it than the points listed above. What campaigns work best, how to target your audience, and the most important factors leading to campaign success are key things you'll need to know in order to run a successful mobile marketing platform for your business.

target audience at their point of need. This makes it more effective and popular as a marketing strategy.

- The market for mobile advertising is expected to grow to 1.5 billion by 2013, according to a recent survey. Businesses are thinking of leveraging this platform for enhancing opportunities and driving performance. It becomes mandatory for organizations to utilize mobile ads to cater to a wider market.
- It is a cost-effective means of marketing the company's products and services. It is less expensive than all the other traditional means of propagating the brand. It saves the money put for printing ads and proves to be a more effective medium of increasing sales.
- It addresses the targeted audience at their point of need. Smartphone users always keep their devices within their hands reach, and keep checking it regularly. A mobile ad creates excitement among the customers and also encourages them to talk about it in their friends' circle. It encourages free publicity and can actually increase the product sale.
- It can be easily used to build a customer database. When customers opt to receive an ad then that information can be used for customer retention and loyalty marketing. This ensures that the customers stick to a particular brand and gain its discounts and deals.
- Mobile ads prove to be more personal and intimate. Customers are likely to pay more heed

VI. Benefits of Enterprise Mobility:

Business Benefits

Increase workforce productivity, Increase operational efficiencies, Improve decision-making with comprehensive real-time information, Increase customer and employee satisfaction with multi-channel user experiences (all major mobile OS and Desktop/Web), Reduce multi-platform application development, deployment and maintenance costs, Optimize IT resources; no device-specific skill-sets required.

There's clearly a great opportunity for mobile developers to get involved in the enterprise. But be warned: developing these apps presents a different set of challenges. Many enterprise mobile platforms have expensive delivery systems and often demand a higher level of technical complexity than consumer apps. The learning curve can be steep, but the opportunity is growing exponentially.

Benefits for Mobile Apps Users:

Field force workers can be alerted to a change in schedule and gain instant visibility on customer requests or cancellations, giving them greater flexibility to switch at the last minute.

Better preparation means that material (from spare parts to contracts) can be assembled before going to the point of activity which leads to fewer return visits.

to an advertisement that is promoted on the mobile platform than any other mode.

- It definitely frees the marketer from the barriers of time and location. As mobile devices always accompany customers everywhere, they can receive it anytime, anywhere. Also, it remains stored within the cellphone for future reference.

V. Size and scope of the enterprise app opportunity

Big companies are hungry for business apps. In fact, nearly 4 in 5 large companies would like to purchase mobile applications for various business uses, according to a survey (via Supply Management) of company execs conducted and published by Partnerpedia, a mobile app development services company [13].

But don't expect them to buy apps from popular apps stores managed by the likes of Apple. The business community takes issue with purchasing business tool apps through these consumer-focused stores for a variety of reasons. The top reason is a lack of business focus, a concern named by nearly 58 percent of respondents. Other concerns focus on the inability to own or control app licenses and the potential problems associated with security (or rather a lack of it). Additionally, organizations also cited a lack of volume purchasing or PO purchasing as another reason why they would prefer not to purchase apps from consumer-

Parallel data collection while the activity is being performed means less (if any) time needed at the office or at home to complete the paper work; collecting data on the spot results in fewer administration or reporting errors.

Fewer support staff and supervision are required to run paperless processes (due to electronic forms) speeding up office functions

Mobile applications can achieve financial benefits due to faster information being returned from the sales or field force team, enabling more efficient bill processing.

Mobile work forces are more flexible, and can confirm customer orders and schedule customer requests sooner.

Mobile applications can also support the option to bill on premises by credit or debit card; this can substantially decrease payment timescale experience and brand image Mobile applications improve the overall experience for customers and employees, resulting in a positive impact on sales and overall business efficiency respectively.

Less errors, less missed appointments and faster administrative processes improve the quality of service for the customer. With a better view of customer requests and travelling time, mobile workers can respond more quickly to customer demands.

Improved safety (due to alarm buttons or geo-localization), greater autonomy (due to the right information being accessible on the mobile phone) and greater sense of accomplishment, as

focused stores.

Sensing business opportunity major software vendors are hoping to follow in Apple's footsteps and open up their own so-called enterprise app stores, which sell not only their software but software and services from an ecosystem of partners and resellers. It should be noted that the term "enterprise app store" is used in this case as a vendor-hosted electronic marketplace serving up apps to customers. This shouldn't be confused with another meaning of enterprise app store, whereby a company serves up apps to employees.

Global software giant SAP has launched the SAP Store, and more are sure to follow. The SAP Store serves up some 1,500 different solutions across computing categories: mobile, cloud, on-premise, PC-based. Hundreds of solutions are added every quarter. Apps can vary in price from a few bucks to millions of dollars. SAP's 190,000 enterprise customers around the world have access to the store. A couple of million unique visitors came into the store in the first year. SAP is now actively recruiting app developers with a dedicated partner program.

VIII. Mobile business apps market to reach \$53bn in 2017 – Strategy Analytics:

In its Global Mobile Enterprise Business Application Revenue Forecast 2011-2017 report, Strategy Analytics predicted that 200 million

efficiency bottlenecks are removed.

Mobile applications provide green benefits, now reported in most annual reports, reducing both usage and waste of natural resources, and providing additional cost savings.

Due to optimized routes and suppression of unnecessary travel, with fuel and car fleet maintenance reduced accordingly.

VII. Why brands need to invest in a mobile relationship strategy

Dealing with this disconnect requires a shift in mindset. Mobile advertising is a fantastic way to acquire customers. But we've seen over the past 10 years that making that investment effective long-term, means holding on to those customers. Mobile must be viewed as a relationship channel, deserving of a retention strategy.

A solid strategy builds a relationship by offering customers benefits or rewards they genuinely value, to keep them coming back to the mobile channel. For example, nearly 70% of tablet owners make a purchase on their device every month, yet brands will only be able to capitalize on this trend by developing a more in-depth mobile relationship.

For example, BMW ran a mobile campaign for snow tyres, targeting all customers who purchased a vehicle in the summer with a timely reminder message in October, when the snow started falling. By personalizing the message with the recommended tyre for the individual

mobile workers will use at least one business-focused app this year. Over the following years, both the number of mobile workers using business apps and the number of apps available will grow rapidly [12].

The prediction is based on a survey of 1740 organizations in seven countries conducted last year. The market for business-focused mobile applications will more than double in the next five years, according to market research Strategy Analytics.



Fig:4 Smartphone with so many enterprise apps

The survey found that collaboration and productivity apps such as email and messaging are more widely than business apps such as sales force automation (SFA) and field support apps.

The report claims that employees now expect the applications they use for work to be



customer's car and an option to call, or get a call back from their closest dealer, BMW was able to significantly increase effectiveness, and capitalize on the unique functionality of mobile[15].



Fig:3 Source: Isopix/Rex Features.

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available on their smartphones and tablets. According to Mark Levitt, director of business cloud strategies research at Strategy Analytics, this means that companies that build mobile business applications must deliver the kind of user experience that workers are used to from consumer apps.

"Transforming the business user experience to be more like the consumer user experience is not only doable with the right approach and commitment to change," Levitt told Information Age. "It is what business workers expect from mobile apps developed for smartphones and tablets."

Spending on mobile enterprise business apps will more than double from \$26 billion in 2012 to \$53 billion in 2017, research firm says.

Conclusion:

The 3rd generation of mobile applications (apps) based on Smart phones and tablet PCs are completely changing the way mobile software is developed, distributed and consumed. In particular mobile enterprise applications (MEA) have a disruptive effect on existing enterprise software and require rethinking in the software industry. Despite their impact, MEA have not been considered

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sufficiently in literature [6].

According to Gartner, mobile apps in the enterprise are expected to bring in almost \$40 billion in revenue by 2016. Enterprises create their own apps for a multitude of reasons: to maintain control of their brand, meet compliance needs, customize apps for a specific purpose, and more. And these apps are used for a variety of purposes — from improving employee communication and managing customer relationships, to providing helpdesk services, tracking expenses and monitoring company sales [17].

The consumer mobile apps market is huge. There are over 1.5 million downloadable apps in the Apple App Store and Google Play alone, accounting for over \$25 billion dollars in revenue [4]. Competition fierce and developers compete to create an app that stands out from the pack.

But there's another burgeoning market mobile developers should take a look at. According to Gartner, mobile apps in the enterprise are expected to bring in almost \$40 billion in revenue by 2016. Enterprises create their own apps for a multitude of reasons: to maintain control of their brand, meet compliance needs, customize apps for a specific purpose, and more. And these apps are used for a variety of purposes — from improving employee communication and managing customer relationships, to providing helpdesk services,

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tracking expenses and monitoring company sales. The list goes on almost indefinitely.

Mobile is more obvious - smartphones are more popular than ever, and 1.2 billion of them are set to enter the market over the next five years. Enterprise tech, though less visible in daily consumer life, has received a staggering amount of investment capital over the last few years — and it will continue to grow. A predicted \$4.5 billion enterprise software market by 2016 has been punctuated by recent massive enterprise acquisitions, including Microsoft MSFT +1.74%'s purchase of Yammer and Oracle ORCL +1.51% snapping up Taleo [14].
