Enterprise Mobility Report
Unwiring the Enterprises
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1. Executive Summary

Enterprise mobility is taking off as smartphones and tablets are fast becoming part of day-to-day business operations. High ROI, boost in productivity and opportunities to interact directly with consumers are driving enterprises to mobilize their systems, processes and people. Mobile applications, after their stupendous success in personal lives, are swiftly gaining prominence at the workplace. It can't be denied anymore- mobilizing the enterprise is imperative. The decision makers, facing the challenge of up-front costs versus the benefits of mobile adoption, would like to have answers to several decisive questions, before deploying mobility in their enterprises.

» Will mobility bring a genuine competitive edge to the business?
» How will mobility align with the processes and people and add value to it?
» Will mobility aid in reducing cost and influencing bottom-lines? And, to what extent?
» What are the key issues in acquisition and deployment of mobile applications?
» How will mobility address near-term challenges and future needs?

This paper answers the above and related questions as it dwells on the current state of enterprise mobility with special focus on the role of mobile applications in the workplace. It also touches upon various critical elements in enterprise mobility and provides insights on the benefits, drivers, ROI and challenges to the deployment of mobile enterprise apps.
2. Transformation - The Mobility Way

Enterprises are undergoing a dynamic transformation as the next generation of technology revolution is being led by mobile devices and applications. Several factors are at play - smartphones have become ubiquitous and tablets are making major inroads into the enterprises. Employees who have information at their fingertips in their personal lives are demanding similar convenience at the workplace. Consumers, used to online-shopping and on-the-go usability of mobile are demanding access to products and services on their device. Bandwidth, an influential factor in the massive adoption of mobile devices, has widened its range and speeds. The ubiquity of devices complemented by advanced technology has laid the foundation for mobile applications to extend their role and performance from personal use to enterprises. Game-changing factors like faster return on investments, increased productivity and the desire to interact directly with consumers are driving the organizations to embrace mobility. Consider this:

According to a survey conducted across US and UK-

- 90% of IT managers in companies planned to implement new mobile apps in 2011.
- Worldwide enterprise mobile data revenues are expected to reach $133 million by 2014.
- 297 million smartphones were sold in 2010. Tablet sales were estimated to grow to 55.7 million units worldwide in 2011.
- Mobile worker population worldwide will reach 1.2 billion in 2013 accounting for 35% of the global workforce, according to a report from IDC.

These points clearly illustrate that enterprise mobility is steadily gaining traction. The process of unwiring enterprises started a few years ago and has now moved to the next level. Welcome to the Mobility Revolution!

Why enterprises are adopting mobility?

» Low total cost of ownership (TCO) and quick return on investment (ROI).
» Increased productivity.
» Direct customer engagement and improved satisfaction.
» Quick decision making.
» Mobile work-force.

1 Kelton Research
The transformation led by mobility is causing paradigm change in business processes, work-culture and engagement with the audience. Organizations have two ways to respond: make mobility a part of their core IT strategy or procrastinate and lose ground to their pro-active rivals.

**IT support for personal devices in enterprises.**

- Does not provide any support for personal devices: 29%
- Provides limited support to certain types of personal devices: 15%
- Provides limited support to all personal devices: 14%
- Supports certain types of personal devices: 18%
- IT supports all personal devices: 9%
- Our mobile policy prohibits use of personal devices for work: 12%
- We don’t have an official policy: 3%

Source: Forrester Research, Enterprise and SMB Networks and Telecommunications Survey, North America and Europe, Forrester Research, Managing Mobile Complexity, and The Mobile Platform Wars Escalate

**Mobile app adoption stage in enterprises.**

- Have not deployed any mobile applications: 5%
- Currently pilot testing one or more mobile applications: 30%
- Have mobilized one application only: 15%
- Have mobilized two applications: 20%
- Have mobilized three applications: 15%
- Have mobilized more than three applications: 25%

Source: IDC, Mobile Enterprise Software Survey
Big displays, cutting-edge functionality and faster processing power aided with high-speed Internet connections have caused a massive proliferation of smartphones in enterprises. A survey predicts that smartphones will exceed the total number of desktops and laptop shipments by 2012. However, as people realize the merits of tablets over smartphones, it is the tablets that are set to act as a catalyst in enterprise mobile computing. Tablets provide the usability of a laptop and mobility of a smartphone—

- Enable multi-tasking, talk to a colleague while editing a document—something not very convenient with a smartphone.
- Bigger screens make product demonstrations and presentations to clients easy.
- Makes data entry precise and faster. Encourages substantive correspondence as creating big documents becomes easy.

![Computing Platforms Unit Sales Forecast, 2010 - 2014](image)

![Tablet as part of mobility strategy in enterprises](image)
The usability and mobility benefits of tablets coupled with expanded applications lay the path for driving enterprise mobility in the future.
4. Mobile Enterprise Applications- Powering The Transformation

It’s not only the ubiquity of mobile devices but the soaring acceptance and usage of mobile applications that is adding muscle to enterprises. From CRM to Human Resources, it is the apps that provide support to the workforce and allow them to engage with the company resources. A few years ago, there were few serious enterprise-level apps but today we have a significant collection of mainstream enterprise apps spread across a wide range of business operations—from Sales to Marketing and Operations. There are many companies who have armed their workforce with multiple applications for accessing work-related information and performing various functions, on the move and are considerably benefitting from it.

A study in 2011 revealed that 65% of companies in United States and United Kingdom had planned to deploy five or more apps while 21% organizations look forward to deploy 20 or more apps. In short, what was an exception yesterday is becoming a norm today.

Why companies are rushing-in to deploy mobile apps?

» Demand from workers.
» Business apps are maturing.
» App development costs have considerably decreased.
» Evolution in support and security.

Number of new mobile app implementation in enterprises.

Source: Kelton Research
Still, we find there are many companies that continue delaying to deploy mobile apps. Security of corporate data and cost concerns are found to be the major reasons, firms have not deployed mobile apps in their operations. However, as the acceptance widens and enterprise mobility further evolves, companies that are reluctant to deploy applications will soon have no reason to delay. The reluctance to adopt new technology will recede as the Total Cost of Operation (TCO) for mobility drops and the benefits of business apps becomes more visible. Mobile apps in businesses will soon become all-pervasive and essential, just like the web and PCs.

i. How will mobile applications transform business functions?

Mobility will streamline operations and provide real-time information leading to improved productivity, lower costs, effective and faster decision-making. Here's how mobility will impact major business functions of an organization:

Sales

One of the early adopters in the enterprise and key beneficiary of enterprise mobility will be the Sales team. Access to real-time information from Customer Relationship Management (CRM), Enterprise Resource Planning (ERP) and other company systems will aid the sales team in providing customized service, fast and effective decision making and increased customer satisfaction.

- Account management - customers, prospects and channel-partners.
- Lead management - real-time new lead notifications as updated in your CRM.
- Allows your vendors and channel partners to view prices, requirements, stocks etc.
- Retailers and salesman at shops can get the latest price list of products, stock availability, booking orders and payment processing etc., on their device.
- Enable product demonstrations and other selling activities.
- Access to your ERP system and get stock of the inventory, track orders and delivery.
- Plan your travel, visits and other work activities with a calendar and scheduling app.
- View and create reports, update and analyze your sales & revenue data.
- Provide comprehensive view of client complaints, problems and history.
- Enable systematic workflow information between various participants in the process.
- Plan your travel, visits and other work activities with a calendar and scheduling app.
- Enable your customers to log complaints and get real-time solutions as they do on your website.
- Minimizes the role of customer support center and reduces costs
- Analytics and Reports.

Service and Support

Service and support functions always call for easier ticketing management, faster delivery and trouble-shooting process. Mobilizing your service and support functions will allow your customers to enter service requests on-the-go and get real-time status. On the other hand, your service team will get access to client history helping them to better understand the client requirement.
Supply Chain

Businesses would immensely benefit from mobilizing supply chain. It will allow quick information sharing with various stakeholders in the supply chain thus enabling smoother work flow. Moreover, real-time access to data will ensure proper monitoring leading to on-time delivery.

- Inventory Management by providing information on stocks, raw materials, procurement, etc.
- Track movement of goods, orders and supply.
- Shop floor management to forecast, deploy, monitor, and manage your workforce.
- Update inventory information through barcode scanning.
- Enable common warehouse and shop floor transactions.
- Analytics, reports and other documentation.

Human Resources

In current enterprises, where a large part of the workforce is geographically dispersed and is constantly on-the-move, mobilizing human resource functions will speed-up important processes. Managers would be able to take decisions on leave requests, submission of time-sheets, resource-allocation or any other HR related issue, etc., from anywhere and anytime leading to better time-management and lowering of costs.

- Human Resource Management system to forecast, organize and manage human capital.
- View various approval requests like leaves, travel, relocation, etc.
- Take inputs from managers on team requirements.
- Get access to other corporate metrics and provide insights to top management.
- Performance Appraisals and other key meetings via video-conferencing.

Management

People at the top of organizational hierarchy must always have access to key information and data for faster decision-making and effective leadership. Providing them real-time access to key performance indicators of the company like sales figures, margins, stock movement, etc., on their mobile will help them in optimal management of time and take on-the-spot decisions.

- Dash board providing information on various corporate metrics on sales, production and other business functions.
- Top executives will have real-time access to sales, project status, revenue and margins, etc.
- Advanced Decision Support System and Analytics.
- Reports, charts and other company information.
- Information sharing with other executives and unit heads.
Manufacturing

Timely information on orders, inventory management, workforce, etc. will allow managers and supervisors to make better decisions on the floor leading to effective utilization of resources and reducing waste.

- Process Management by giving access to various information and data for work hours, approvals, raw materials, manpower, finished products, etc.
- Access to supply chain management.
- Performance overview and information sharing through reports and analytics.
- Manager and supervisors can view and review product design.
- Deep insights for delivery heads and other decision makers.
- Interface between suppliers, vendors and other stakeholders.

ii. How are businesses managing key issues in acquisition and deployment of mobile apps?

Decision Making

Key decisions on the acquisition and deployment of mobile apps in enterprises are taken by IT departments in conjunction with respective business unit heads.

Source: Computerworld
Platforms - Diversity, Preferences and Selection criteria

As enterprises move toward integrating mobility into their operations, a critical challenge to address is the diversity in platforms, particularly when choosing the Bring-Your-Own-Device model. Each employee will use a device of his own liking and organizations have to build-in an infrastructure that supports all major device platforms. Standardizing on a single platform while not considering other platforms will be a major barrier to full-scale adaption of mobility. When asked in a study1 - How many different platforms or Operating Systems will your company be supporting- nearly 38% of companies participating in the survey across US and UK support already are or planning to support five or more platforms whereas 58% companies expect to support 20 or more platforms.

The companies also need to keep an eye on the market trends carefully to ensure they aren’t caught off guard when popularity of platforms surge or wane in user preferences.

Adoption Stage

It’s not surprising that most of the organizations are at initial stages of adoption with focus being laid on providing email/messaging and scheduling, etc., on mobiles to their workforce. However, we will see the focus shift to adoption of mobile applications in core business processes such as CRM, ERP, and Sales Force Automation, etc. in the near future.

Current and future adoption of various mobile apps in enterprises.

Source: CIO Strategy Forum Market Pulse, Mobile Technology Strategy and Investments

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1 Kelton Research
Acquisition and Development Preferences

In the early years of enterprise mobility, we have seen a high degree of preference for in-house app development among enterprises. However, developing applications in-house is a complex process that runs the risk of under-estimating budgets and skilled resource requirements. Therefore, we are witnessing a shift in strategy where enterprises are opting for custom applications from a third party that will save money, time and effort of the organizations and allow them to focus on its core business tasks.

“Packaged processes will be most relevant for complex but commonplace processes where there are numerous interactions between multiple touch points of disparate applications, but no business advantage to having a differentiated business process. In such cases, custom development would be unnecessarily expensive and time-consuming. The “sweet spot” for packaged processes will be integrating packaged applications for widely used but routine processes, where many different enterprises use and even link – the same commonly occurring processes.”

- Gartner

Source: Forrester Research, Enterprise And SMB Networks And Telecommunications Survey, North America And Europe, Q1 2010

NOTE: Respondents were permitted to select multiple options, and totals may not equal 100 percent.
Native or Web

When it comes to choosing between Native or Web applications, native apps clearly seem to be the preferred choice among enterprises. Native apps offer many advantages over web applications such as access to APIs, allowing users to save data and reload it later, running offline and enabling customization of a phone's capabilities. However, some businesses also opt for mobile web applications and mobilization of web apps for a phone depending on their requirements and overall mobile strategy.

Customization Requirements

Enterprises that are deploying packaged mobile applications or extensions to existing packaged applications are required to do some level of customization to suit their requirements. Most of the customization is handled in-house whereas in some cases it is done through a third-party.
iii. ROI of Mobile Applications

Return on investment (ROI) is the most called-upon metric for judging the success for any mobile app deployment in enterprises. Decision-makers, at the end-of-the-day, want to know whether mobility adoption in the business has delivered desired results and is translating into visible results in terms of higher revenues, increased sales, and better productivity or cost-efficiency.

According to a study by University of Texas, a 10% increase in data intelligence and accessibility can bring $17 million in new product revenue for a Fortune 1000 company. Enterprise mobile apps can trim down costs by making processes leaner, boost productivity and improve service levels.

Key determinants to ROI of enterprise mobility include:

- Higher customer satisfaction
- Shortened sales cycles
- Increased productivity
- Lower operational costs
- Increased sales
- Higher revenues

A study conducted by BlackBerry to examine a company’s ROI in adapting BlackBerry solutions came out with interesting results-

- **Productivity** - The study revealed that, on an average, employee’s productivity increased by one hour per day because of using a smartphone. In monetary terms, for an average yearly salary of $100,000, this provided a yearly benefit of $12,500 per user to the company.
- **Workflow** - The workflow efficiency increased by 38% as employees were able to maintain their contribution to team workflow even when they were outside the office. Based on the average annual productivity of $88,500 determined by National Competitiveness Council, the company gained $33,630 per employee annually due to boost in workflow.
- **Immediacy** - As per the study, employees on an average sent and received 24 emails/day and approximately 9 of these emails were time-sensitive. On a conservative value of $5 each time-sensitive email/day provided an annual benefit of $4,400 per user to the company.

The total benefit of adopting BlackBerry solutions in the company was over $50,000 per employee per year.

ROI will depend on the scale and level of mobility adoption in the enterprises. Companies that have moved beyond arming their workforce with mobile devices, provided e-mail, messenger and calendaring, etc., and deployed mobility solutions into business processes have found a higher ROI. The upfront costs of deploying mobile enterprise apps is still high but as newer, less costlier app development solutions emerge, the ROI will move higher leading to better economics for organizations.
iv. Drivers and Influencers.

Increased mobility of workforce

One of the critical drivers in the rapid mobilization of enterprises is the changing needs and work-culture in the enterprises. Work is no longer confined to four walls of an office. The workforce is spread in various locations, working in different time-zones and a major part is on the move. They require adequate tools to perform various business activities and to collaborate with other members of the team.

A report on U.S. workforce reveals:

- 57% make work-related calls.
- 48% check email.
- 42% use Internet or an intranet to search for work-related information.

The above figures are just the tip of the iceberg, but they do suggest that mobility in enterprises has become absolutely necessary and workers will use mobile devices for work even if their organizations don't adopt mobility. Moreover, organizations that allow mobility at work have been found to attract best of young talent and improve higher morale among employees.

Cost Savings

Mobilizing the workforce and operations cuts-down costs. Facing the challenge of shrinking margins in a frail economy, enterprises are adopting mobility to curtail costs.

Productivity

According to a study by IDG, organizations that allow employees to use mobile devices have reported to increase productivity by 65%. Productivity is one of the major driving forces behind the organizations equipping their workforce with smartphones and tablets.

Customers

Enterprises are looking for new ways to beat the competition and be the first to reach the customer. Mobile devices through its various applications allow companies to reach customers, promote and pitch products, influence their buying decisions and facilitate buying of products— all in a few minutes.
v. Challenges to adoption of mobile apps in organization.

**Security fears**

Of all the concerns on adoption of mobile applications, the most dreaded word is: security. Data security concern plagues enterprises. In a study by an analyst firm, eight out of 10 enterprises reported that information security is their top concern and said that mobile devices and apps increase their organizational vulnerability.

**Cost concerns**

There are up-front costs involved in employing enterprise apps. The platform fragmentation makes organizations to develop and deploy apps for each platform, increasing the expenses. Even though there is little to debate about the ROI, the upfront cost concerns are still holding many enterprises from employing mobility. Additional ROI will be realized with evolution in the application development process that will bring a cross platform approach allowing companies to write apps once and deploy on all platforms thereby bringing down the upfront and recurring expenses.

**Challenges to mobile app adoption in enterprises.**

- **Security fears**: 75%
- **Cost concerns**: 54%
- **Lack of direct experience**: 25%
- **Other**: 2%
- **Nothing**: 8%

*Source: Kelton Research,*
5. Looking Ahead

Apple’s iOS and Google’s Android will gain more prominence as they continue eroding RIM’s Blackberry share in the enterprise OS space. Mobile Enterprise Application Platform (MEAP) will also gain acceptance in addressing issues like diversity in devices and platform fragmentation. Enterprises will come up with formal mobility strategies, policies and models as they gain experience in mobility adoption. The emergence of secured and cost-effective solutions will address key concerns like technology costs and security fears. Cloud technology and SaaS (Software as a Service) vendors will play a major role in hoisting enterprise mobile applications. Applications powered with technologies like Near Field Communication (NFC), Augmented Reality, etc., will get smarter and will occupy larger space both, within and outside the organizations. On devices, powerful tablets will surge in usage and slowly replace smartphones in enterprises.

For enterprises, the path will get a little complicated as they move beyond the initial phase of adoption of mobility and look to optimize ROI by integrating business processes with the mobility infrastructure. Fortunately, the scope and potential of mobile devices and applications in enterprises is widespread. As mobile technology evolves and organizations gain in mobile maturity, we will see innovative ways of leveraging mobility by the enterprises. Experience coupled with imagination will be the guide as businesses move ahead towards making the most of mobility.
About [x]cube LABS

[x]cube LABS is one of the leading mobile apps development and consulting firm, headquartered in Dallas, U.S and with offices in New York and Hyderabad, India. With expertise across all the major mobile platforms, [x]cube has delivered over 500 apps till date and has an enviable client list comprising of some of the biggest brands like GE, Intel, Texas Instruments, Hasbro, Mattel and 24 Hour Fitness. [x]cube’s understanding of the mobile space and technology, complimented by its rich experience across all the major industry verticals and the capability to deliver end-to-end solutions, make [x]cube the perfect mobile consultant of choice.

To integrate your enterprise people, processes and products with customized, avant-garde mobility solutions or to explore mobility opportunities in your enterprise with our experts, please feel free to contact us at connect@xcubeLABS.com.

We encourage you to continue exploring our website (www.xcubeLABS.com) to find out more about our services.