Harnessing Mobility:
How Mobility Acts as an Enabler for Digital Transformation
Wal-Mart is using mobile technologies to transform the shopping experience for customers and improve operational process. Its mobile app features a shopping list and ‘Store Mode’, which notify customers about offers, price and location of required items in the store. The company has tested an app feature that allows customers to scan products with their mobile devices as they shop and then checkout and pay with a single scan at the register. This resulted in reduced in-store wait times, improved shopping experience and revenues – customers who use the Wal-Mart app make an average of two extra trips to stores and spend 40% more per month compared to non-app users. Wal-Mart has also launched a mobile app for suppliers, which provides them real-time access to the store’s inventory data. This initiative improved in-stock levels and increased efficiency of Wal-Mart associates.

Wal-Mart has recognized the transformative impact that mobility can bring. However, Wal-Mart is an exception to the norm. The reality is that most organizations are either not using mobile technologies to transform their business or do not have an effective strategy in place.

Our research with the MIT on digital transformation showed that only 8% of companies are using mobile technologies to transform their customer experience, and 14% for operational processes. We also conducted a separate study to understand the extent of usage of mobile technologies for 80 leading companies across sectors and the impact of this usage on their end-users (see Research Methodology on page 5 for details).

Our study reveals that only 18% of companies are in the advanced stage (‘Top Performers’) of mobile maturity. ‘Top Performers’ offer feature-rich mobile apps, adopt organization-wide mobility and continuously focus on improving mobile capabilities through investments and strategic alliances (see Figure 1). Companies such as Wal-Mart, Citigroup and Vodafone fall under this category.

Mobile maturity of a company has been defined as a measure of the number of mobile websites and applications launched by a company, their presence across mobile platforms, depth and types of features of these mobile apps, implementation of mobility around internal processes (enterprise mobility, BYOD) and company’s overall focus on mobile technologies (investments, partnerships, future plans, mobile apps update frequency and award or recognition for mobile initiatives).

Figure 1: Mobile Maturity of 80 Leading Companies across Sectors

Our study reveals that only 18% of companies are in the advanced stage (‘Top Performers’) of mobile maturity.
Most companies (86%) in the ‘Top Performers’ category belong to the Telecom, Technology and Financial Services sectors. Further, 56% of the companies in the initial stage (‘Beginners’) of mobile maturity belong to industries that have been slow in adopting mobile technologies – Oil & Gas and Pharmaceutical sectors, for instance (see Figure 2).

We also observed that companies with high mobile maturity witnessed high end-user uptake. We found that one out of every two ‘Top Performers’ registered high end-user uptake of their mobile applications. At the same time, only one in six ‘Followers’ and none among ‘Beginners’ achieved high end-user uptake (see Figure 3).

Most of the ‘Top Performers’ (86%) belong to the Telecom, Technology and Financial Services sectors.

End-user uptake is a reference to the number of reviews and installs of mobile apps by end-users, popularity of mobile apps (average rating by end-users on major app stores, G+ score) and ease of use (average size, compatibility across multiple versions of mobile operating systems and mobile devices, charging model of mobile apps and multiple language support).

56% of companies in the initial stage (‘Beginners’) of mobile maturity belong to the Oil & Gas and Pharmaceutical sectors.
We found that one out of every two ‘Top Performers’ registered high end-user uptake of their mobile applications, while only one in six ‘Followers’ and none among ‘Beginners’ achieved high end-user uptake.

Manufacturing and Consumer Products companies have invested extensively in mobile initiatives, but end-user uptake is still significantly low. For instance, we found that a leading automobile group, producing more than 5 million vehicles annually, introduced over 25 mobile applications. However, it managed to register only moderate adoption by end-users – on an average less than 300 reviews and 5,200 installs per app.

Figure 4: Mobile Maturity and End-User Uptake of Mobile Applications by Companies across Sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>Mobile Maturity</th>
<th>End-User Uptake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Services</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Retail</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Pharma</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Consumer Products</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Technology</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Telecom</td>
<td>Low</td>
<td>High</td>
</tr>
</tbody>
</table>

Figure 4 illustrates the overall sectoral positions based on the average mobile maturity and end-user uptake for leading companies in each sector. In the rest of the paper, we explore how companies can use mobile technologies to transform the three key areas of customer experience, operational processes and business model transformation.
Our Mobile Maturity and End-user Uptake Research

Methodology:
We conducted an extensive research on mobile initiatives of a wide range of companies, in order to analyze their mobile maturity level. This was followed by analyzing adoption levels, ease of use and popularity of these mobile initiatives. All companies were rated on a scale of 0 to 5 (where 0 was the lowest and 3 was the highest rating).

Companies Analyzed
We considered the top 10 companies across eight sectors based on the Forbes 500 list (May 2013). The sectors are: Financial Services, Retail, Consumer Products, Oil & Gas, Pharmaceuticals, Manufacturing, Telecom and Technology.

Key Parameters
1. Mobile Maturity
   - Mobile applications and websites: Companies were rated based on the number of mobile applications and mobile websites as well as their presence across iOS, Android, Windows and Blackberry app stores.
   - Depth of offerings: This parameter included number and type of features offered in mobile apps including m-commerce capabilities. Low to moderate depth of offering indicates features such as account information, product features and locations list specific to a sector. Advanced features includes m-commerce capabilities, location-based services, QR code and Augmented Reality.
   - Implementation of mobility around internal processes: This parameter considered the number of mobile applications for employees and implementation of mobile initiatives such as Enterprise Mobility or BYOD program.
   - Overall mobility focus: Under this parameter, companies were rated based on the investments, partnerships and future plans for mobility, update frequency and recognition for mobile apps.

2. End-user Uptake
   - Adoption level: We defined adoption level as total number of reviews and installs of all mobile apps released by a company.
   - Ease of use: The ease of use of mobile applications were rated based on the average size, charges (free or paid), customization across multiple mobile devices, OS version compatibility and multiple language support provided.
   - Popularity: This parameter rated companies based on the average rating of end-users and sharing (G+) of apps on Android platform.
Mobility offers new opportunities to improve customer knowledge, drive sales and personalize customer experience. Despite these benefits, our research with the MIT showed that, on an average, only 36% of companies across industries use mobile for promotion, sales and services* (see Figure 5).

Our research with the MIT showed that, on an average, only 36% of the companies across industries use mobile for promotion, sales and services.

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**Figure 5: The Untapped Opportunities – Percentage of Companies Using Mobile to Drive Customer Experience**

<table>
<thead>
<tr>
<th>Industry</th>
<th>56%</th>
<th>48%</th>
<th>48%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hi-Tech</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail</td>
<td>38%</td>
<td>36%</td>
<td>36%</td>
</tr>
<tr>
<td>Telecom</td>
<td>36%</td>
<td>34%</td>
<td>48%</td>
</tr>
<tr>
<td>Average across</td>
<td>32%</td>
<td>26%</td>
<td>36%</td>
</tr>
<tr>
<td>industries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer Products</td>
<td>35%</td>
<td>26%</td>
<td>30%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>30%</td>
<td>15%</td>
<td>33%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>33%</td>
<td>15%</td>
<td>27%</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>31%</td>
<td>23%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Source: Capgemini Consulting and MIT Center for Digital Business, November 2012

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**Figure 6: Mobile Technologies Drive Customer Experience across the Sales Cycle**

- **Sales process**
  - Sales Promotion
  - Sales Transaction
  - Delivery & Consumption
  - Customer Service
  - Loyalty Management

- **Mobile enablement solutions**
  - Product/price comparison tools
  - Events updates on mobile to drive store visits
  - M-coupons
  - M-commerce platform
  - Virtual sales assistants/stores
  - Shopping-list builder apps
  - Navigation apps
  - Shipment alerts/tracking apps
  - Products/services consumption feedback through mobile channel
  - Dealer/repair shop locator apps
  - Automated repair processing (Telematics)
  - Click-to-call for service
  - Mobile alerts/notification for product/service renewal
  - Mobile loyalty programs/apps

Source: Capgemini Consulting Analysis
**Mobile Applications Help Promote Sales**

Personalized m-coupons, product and price comparison tools and in-store events’ updates on mobile devices act as important sales and marketing tools. For instance, in the US, Best Buy has launched a comparison shopping app that allows customers to compare product features and prices, and also find the nearest Best Buy store that has the desired product in stock. Moreover, when a shopper turns on the app inside the Best Buy store, information pops up on the screen displaying special deals available at that store.

**Mobile Technologies Create Virtual Storefronts for Enhancing Sales Transactions**

Mobile technologies can also be used creatively as virtual sales assistants to drive customer engagement. For instance, For instance, Macy’s ‘Backstage Pass’ QR codes offer customers essential tips, information on the latest trends and advice from prominent fashion designers on their mobile devices. When shoppers scan the QR codes featured on in-store signage they are connected to a short video of the designer who shares fashion information. So customers interact directly with the designers about the products, thus transforming their smartphones into virtual sales assistants.

**Mobility Helps Involve Customers in the Delivery Process and Build Engagement**

Some companies innovatively use mobile technologies to engage customers in tracking orders and delivery status. For instance, Domino’s Pizza turned ordering a pizza into a game. Using its mobile app, customers can order a pizza and track it go through the process from order to delivery on their mobile devices. It makes pizza ordering a fun game and engages consumers in pizza delivery. This benefited Domino’s as its mobile sales accounted for 22% of online sales in 2012, which was larger than the entire company’s sales in 1999.

**Mobility Improves Customer Service Management**

Mobile technologies enable quick resolution of customer issues and improve customer service. For instance, ‘Insure’ mobile app by ICICI Lombard, a general insurance provider in India, allows customers to initiate an accident claim process using their mobile phones. The app uses the phone’s camera to take a picture of the damaged vehicle and then sends these pictures, with a claim request, to the company’s datacenter. So, a surveyor can look at the damage, remotely, and take decision on the claim or get a closer inspection done.

**Mobility Drives Customer Loyalty**

Mobile-enabled incentive programs help organizations in gaining quicker insights about customer behavior and designing customized and instant rewards. For instance, Starbucks’ mobile rewards app enables customers to pay and earn reward points (‘Stars’), which can be redeemed for free drinks, refills and food. The app also allows customers to search for the nearest store, send ‘eGifts’ to their contacts and receive special offers through the app. The app has gained wide popularity with more than 10 million active users and over 3 million mobile payment transactions occurring every week.
Mobile Technologies Improve Operational Efficiency and Productivity

Organizations are realizing that mobility can also be used to improve internal operations and enhance employee productivity. Our study with the MIT showed that 66% of companies agree that use of mobile technologies can transform operational processes. However, as in the case of customer experience, many are yet to tap into its true potential. For instance, a survey found that only 25% of mobile apps for employees were being adopted and about three-fourth of all IT departments reported that investments in mobile apps did not result in the value or impact they expected.1

“66% of companies agree that use of mobile technologies can transform operational processes.”

Our in-depth research also revealed that many companies have neither offered advanced features in their mobile apps nor have internal app stores, which are critical elements in integrating workflows and bringing in automation. We found that 59% of organizations across sectors have not utilized full potential of mobility to improve operational processes (See Figure 7).

Mobile technologies enable quicker access to information and enhance interactions among employees which results in improved internal operations across business functions (see Figure 8).

Figure 7: Deployment of Mobility to Improve Internal Operations

<table>
<thead>
<tr>
<th>Technology</th>
<th>70%</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telecom</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Consumer Products</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Retail</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>20%</td>
<td>80%</td>
</tr>
<tr>
<td>Oil and Gas</td>
<td>10%</td>
<td>90%</td>
</tr>
</tbody>
</table>

- % of companies extensively using mobility for internal operations
- % of companies with limited mobile initiatives for internal operations

Limited deployment = Pilot or selective implementation of mobile initiatives
Extensive deployment = Organization-wide implementation of mobility with more than 5 enterprise mobile applications to improve operational processes

Source: Capgemini Consulting Analysis

1 Internal app stores are accessible only to organization’s employees and authorized users such as contractors and partners. They deliver applications securely to internal stakeholders. The common apps hosted on internal app stores include productivity, sales, collaboration and workflow management apps.
ICICI Lombard equips its surveyors with tablets to complete the claim process efficiently and remotely. This improved their productivity by 30%-40%.

Mobility Improves Sales Force Interactions

The use of mobile technologies equips sales representatives to visually display products, access marketing content and collaborate more easily with customers. For instance, GE Capital is piloting a productivity application for its sales staff. The application combines data from GE Capital’s suppliers such as Siebel, Salesforce, LinkedIn and Google to deliver real-time insights on sales prospects. It also combines geo-location data to help sales representatives target prospects at trade shows and complete their finance application at that place. As a result of rolling out this application, one-third of all credit applications to GE Capital now originate from mobile devices.

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Mobile Technologies Make Supply Chain Management More Efficient

Mobile technologies enhance the effectiveness of an organization’s supply chain. They allow companies to capture and validate data, offer access to inventory and process payments, all within a mobile environment. For instance, 68% of respondents in a recent survey identified mobile technologies as the most influential technology in the supply chain.

Mobile Technologies Boost Performance across Internal Organizational Services

Organizations can create mobile versions of their internal applications thereby transforming transactional activities and tasks into simple clicks on an app — reducing time and enabling employees to be more productive. For instance, Cisco has simplified its approval process through its ‘My Approvals’ app that brings multiple approval streams and notifications into one location by helping employees submit approval and expense reports via the app.

Figure 8: Use of Mobile Technologies to Improve Operational Processes

<table>
<thead>
<tr>
<th>Key Processes and Activities</th>
<th>Mobility Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accomplish business tasks efficiently</td>
<td>Mobile offers flexibility for employees to work from any location</td>
</tr>
<tr>
<td>Coordinate across departments to get required information</td>
<td>Real-time access to information</td>
</tr>
<tr>
<td>Lead notifications and management, conduct product demonstrations</td>
<td>Interactive demo on handhelds, instant order taking &amp; payment processing</td>
</tr>
<tr>
<td>Access to prices, order booking &amp; tracking</td>
<td>Price lists and comparison tools on mobile</td>
</tr>
<tr>
<td>Forecast, procure and manage raw materials and end-products inventory</td>
<td>Mobile scanner, data capture validation and access to inventory system</td>
</tr>
<tr>
<td>Track movement of order and goods, manage warehouse transactions</td>
<td>Order and delivery tracking, and status alerts on mobile device</td>
</tr>
<tr>
<td>Forecast, organize and manage workforce</td>
<td>Mobile apps for leave, travel and expense requests and approvals</td>
</tr>
<tr>
<td>Manage leave, travel and expense requests</td>
<td>Mobile access to HR and ERP system</td>
</tr>
</tbody>
</table>

Source: Capgemini Consulting Analysis
Mobile Innovatively Transforms Traditional Business Models

The use of mobility can open up new avenues for charging models, enable creation of a geographically-redundant business and help create more efficient operating models for companies.

Mobile Technologies allow Creation of Innovative Charging Models

Mobile devices, apps and new platforms are helping companies to roll out innovative mobile-based offerings. For instance, the use of mobility in a pay-as-you-drive model is changing the way automobile insurance premium is calculated. In this model, a device is installed in customers’ cars that relays data about their driving habits back to the insurers. Progressive Corp., an American insurer, has launched a car insurance plan that offers an optional pay-as-you-drive insurance discount program. The discounts amount to as much as 30% based on safe driving habits. This change in the insurance business model has helped the company create new offerings and capture growth opportunities. Progressive Corp. reported that its expense ratio specific to pay-as-you-drive programs reduced by 40% between 2010 and 2011. Moreover, annual premium from the program exceeded $1 billion out of a total $16 billion in net written premium for 2012.

Mobility Helps Create More Efficient Operating Models

The transformation of business models is not only confined to innovating with products or services; it also includes improving operational efficiencies. For instance, m-health initiatives have helped hospitals transform their business models. It enables hospitals to have electronic medical records supported by mobile devices rather than paper-based records. This information helps in introducing new services enabled by mobile technologies, which could earlier only be provided by being physically present in hospitals or clinics. One such example is of Kaiser Permanente, the US-based integrated managed care consortium, which has transformed its business model by offering medical records of its 9 million members through an android app. As a result, the organization's patients can now make appointments, check lab tests, order medicines, and communicate with their physicians using their mobile devices.

Similarly, ‘Hailo’, a mobile app for virtually hailing a cab, bridges inefficiencies in the traditional taxi market by directly connecting customers with drivers. It uses GPS technology to help taxi drivers pinpoint a passenger’s location. For consumers a mobile app provides a map to show the real-time location of an arriving taxi and a brief profile of the driver. It also offers a secure pay by credit card facility. Since inception in 2011, it is already being used by more than two-third of black-cab drivers in London, has almost 300,000 customers and registered over $100 million in sales in 2012.

Kaiser Permanente, the US-based integrated managed care consortium, has transformed its business model by offering medical records of its 9 million members through an android app.
What Factors Impede the Adoption of Mobile Technologies?

The business opportunities offered by mobility also present challenges around data security, device management, return on investment and IT integration.

Ubiquitous Information Access through Mobility Brings in Significant Data Security Risks

The migration to a mobile work environment presents security and control issues for enterprises, which acts as a deterrent to adoption. Access to corporate information on mobile devices used by employees makes a company vulnerable to data security thefts. For instance, a survey conducted across 6,000 organizations revealed that 41% of respondents perceived mobility as a leading IT risk. Their key concerns included device loss, data leakage, unauthorized access to corporate information and malware infection.

Evolution in Mobile Technologies Makes Device Management Difficult

A key challenge with mobility is the pace of new technology development. This development spans mobile devices, applications and platforms. According to a study conducted in 2012, 41% of respondents mentioned that new mobile devices such as smartphones and tablets were not compatible with their existing IT infrastructure. Supporting new devices running on disparate operating systems and enforcing security policies will require constant monitoring and continued investments.

Inability to Quantify Costs around Mobility Support makes ROI Measurement Difficult

Cost estimates around support for a growing portfolio of mobile technologies remain unclear; this can hinder acceptance of organization-wide mobility. Typical cost-heads include new devices such as smartphones and tablets owned by the company, infrastructure costs such as mobile device management, security software and additional storage capacity. In addition, it also includes customer- and employee-specific application development and management costs.

Aligning Mobility with Technology Initiatives Requires Significant Reconfiguration around Network Design and Policies

Integrating organization-wide mobility with other technology initiatives such as cloud computing or social media tools is another key challenge. For instance, introduction of mobile devices such as tablets that connect directly to a central management information system would require modifications in overall network design. It would also need configuration, security policy, or network management changes.

A survey conducted across 6,000 organizations revealed that 41% of respondents perceived mobility as a leading IT risk.
Roadmap to Build an Effective Mobile Strategy

CxOs cannot afford to ignore the growing preference of customers and employees towards mobility. At the same time, embracing mobile technologies in an unstructured manner creates security and control issues, and results in inefficient business processes and disorganized IT infrastructure.

We believe that organizations need to adopt a structured approach based on the customer life-cycle, organizational setup and existing business model (see Figure 9).

First, organizations should outline their overall mobility strategy and define clear objectives. These objectives can be around customer experience, operational efficiency or business model.

Second, it is important to assess infrastructure capabilities. This will involve determining the mobile application strategy – whether organization wants to go with native or web apps. It also involves defining the right device management solutions.

Such solutions enable IT departments to manage the diverse range of mobile devices that may be used across the organization. Another key area that organizations need to assess is the support services model for mobile initiatives. They need to affix responsibility for support functions when devices are used in a variety of models – in the field, in conjunction with personal data and employee personal devices, among others. Organizations also need to adopt a systematic security approach that covers mobile devices, enterprise applications and network access.

The mobility plan should also be compliant with existing organizational guidelines. For instance, organizational HR teams will need to understand how mobile initiatives impact compensation structures or how employees can manage professional and personal content on company-provided devices, among others.

The next phase involves deployment of mobile initiatives. A first step to actual implementation is to understand best practices across industries. Typical challenges around deployment result from the lack of a clear governance structure. As such organizations should ensure that rollout is preceded by the establishment of a solid governance model.

Once organizations have understood the implementation best practices and rolled out a governance model, they should then identify the key target groups, processes and functions where deployment of mobile technologies will be prioritized. The technology architecture supporting mobile should also effectively integrate with back-end and other existing systems. These deployments need to be closely managed across both end-user devices and platforms.

Finally, it is critical to define key metrics to measure and monitor the performance of mobile initiatives. Organizations need to keep pace with the developments in mobile technologies to ensure that their initiatives are in line with the changing technology landscape and end-user preferences.

The needs, challenges and approach to mobility are specific and unique to an organization. There is no ‘one-size-fits-all’ strategy to successfully adopt mobility. It will depend on multiple factors such as nature of the business, industry-specific end-user expectations, IT maturity levels and budgets. Organizations need to formulate a clear roadmap that enables them to leverage the full potential of mobility.

Figure 9: Mobile Strategy Framework

Source: Capgemini Consulting Analysis

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2 A native mobile app is an application developed for a specific platform such as Android, iPhone, Blackberry
3 A web app is written in a cross-platform technology such as HTML5 and can typically run across a range of devices across platforms
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