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# ENTERPRISE MOBILITY MEGATRENDS

## Enterprise Mobility Megatrends

According to recent research provided by Forbes Inc., in August 2006, enterprise mobility is increasingly becoming a strategic priority for many leading corporations. The study finds employees and customers seeking more timely access to corporate data and information regardless of their location. To keep pace, organizations are investing in their technical infrastructure to offer mobile professionals more ubiquitous, secure and rapid access to corporate information. However, this evolution is not without its challenges, and many of these mobilization efforts struggle with security, network connectivity, cost justification and data management issues.

The research examines the mobilization trends within a range of enterprises and is comprised of 851 business leaders and IT professionals. Specifically, the study explored:

- The business priorities and ultimate justifications driving mobile computing investments
- The current budgets and expected 12-month forecast for mobile computing spending
- The core objectives for mobilization and the extent to which companies have achieved these objectives

Among the most significant findings:

- **Companies are actively offering mobility.** Seventy-eight percent of respondents said that mobile computing is offered in at least some areas of their company's operations, while 36% offer mobility across the entire organization.
- **Enterprise mobility is a strategic priority.** Three-fourths of respondents indicated that mobility was among their top ten IT priorities, with 48% considering it among their top five investment priorities.
- **Mobility is fulfilling key business objectives.** Ninety-one percent of respondents believe they have at least partially realized productivity gains from their mobility efforts, but only 13% feel they have optimized mobility. While mobility is offering fast productivity gains, enterprises still believe there is a huge untapped opportunity for mobility.
- **Security, data management and synchronization, and justifying ongoing cost are top challenges facing mobile enterprises.** As businesses mobilize data and information, they struggle with data security, edge device management and data synchronization between corporate databases and mobile devices. All of these issues create ongoing costs and network and device expenses to burden enterprise technology budgets.
- **Investment in enterprise mobility is increasing among the companies interviewed.** Over the next 12 months, 56% of respondents plan to increase their spending on mobility, most by at least 10%. All totaled, this group would represent $1 billion in spending on mobile computing-related hardware, software, training, services and other costs.
- **Managing mobile devices raises increased security concerns.** With security top of mind in any mobilization effort, safeguarding data on remote devices against loss or theft becomes an important consideration. For nearly one-fifth of IT respondents, mobile device management accompanies security as a challenge to their mobilization efforts. As more and more data makes its way onto edge devices, enterprises must shield them with the same vigor they use to protect corporate data centers.
- **E-mail and messaging lead application investment plan.** Application spending will be directed to mobile e-mail (48%), followed by provisioning and capturing field data (37%) and customer management (30%).

- **Mobile experiences grow opportunities for strategic advantage.** Early successes with "simpler" mobile deployments are exposing enterprises to opportunities for greater strategic advantage through more complex mobile deployments. Respondents earlier in the mobile adoption curve are focusing mainly on e-mail and calendaring, but more-advanced users are seeking strategic advantages through supply chain and sales-related application investments.
- **Market segments demonstrate differences in mobility strategies.** Mobilization is moving beyond simply supporting edge devices with e-mail, to a mode in which data and information are driving the core business process. Respondent companies that hinge their mobility initiatives on device vendors report a wider array of issues and spend more on mobility than those with a more data-centered strategy. Embracing a strong data-centric philosophy as a core value in mobility strategy appears to be a winning approach to evolving the mobile enterprise.

## Introduction

Mobile computing offers a very real opportunity, and business leaders are actively revamping their organizations to mobilize their enterprise data and information. As the transmission of data between edge devices and corporate data repositories becomes a strategic priority, businesses are encountering a host of new opportunities and technical challenges. To explore these trends, Forbes Inc., in conjunction with Management Insight Technologies, collected information from 851 business and IT professionals worldwide to examine how their mobile initiatives were reflected in their business and technology decisions.

In this study, Forbes examined the mobility initiatives inside enterprises with more than 250 employees. Specifically, Forbes identified:

- The business priorities and ultimate justifications driving mobile computing investments
- The current budgets and 12-month forecast for mobile computing
- The core objectives to mobilization and to what extent companies have achieved these objectives

### Research Methodology

Respondents were invited to participate in a Web-based mobile computing study through either an e-mail invitation or a Web intercept placed on Forbes.com. E-mail invitations were sent to both registered Forbes.com readers and third-party panels. Half of the sample was recruited from the Forbes readership base, the other half through panels. (See the appendix for sampling details.)

## Respondent Demographics

Survey respondents were selected to meet certain criteria. Only companies with over 250 employees were admitted. At a minimum, the organization had to have mobility plans. The target audience was a mix of executive- and mid-level business leaders and IT professionals.

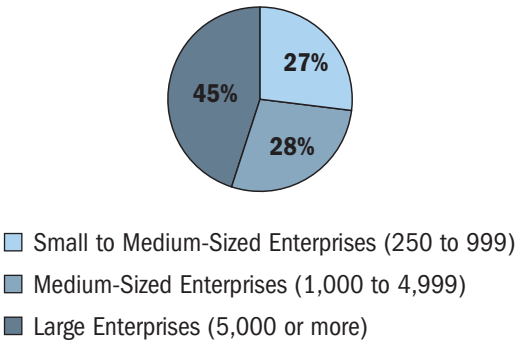
Respondents represented a mix of business and IT with 40% of the respondents coming from business, and 60% coming from IT. A total of 27 different industries were represented in the sample. One-third of the sample came from manufacturing- (14%), computer- (10%) and health care- (7%) related industries. Other defining characteristics:

- There was also strong participation from senior and executive leadership, with 15% of the respondents representing C-level officers (Owner, CEO, CIO, etc.), and another 26% representing senior-level managers and VPs
- Nearly half the sample comprised large enterprises, with 45% of the respondents coming from companies with over 5,000 employees
- Most of the respondents are located in the U.S., with 21% from other points around the globe

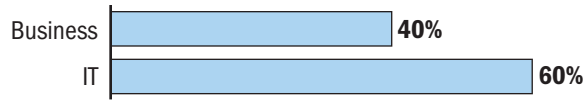
### *Respondent Demographics*

*Approximately how many employees are in your entire organization at all locations worldwide?*

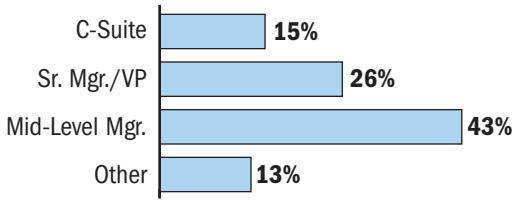
**Number of Employees**




*Which of the following best describes your primary role at work?*




*What is your job title?*



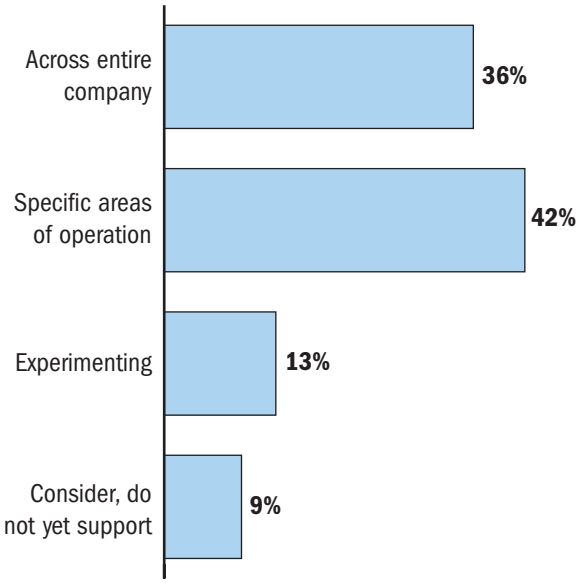

*Source: Mobile Megatrend Study; Sampling time frame: March 2006 (N=851); Forbes/Management Insight Technologies*

## Detailed Findings

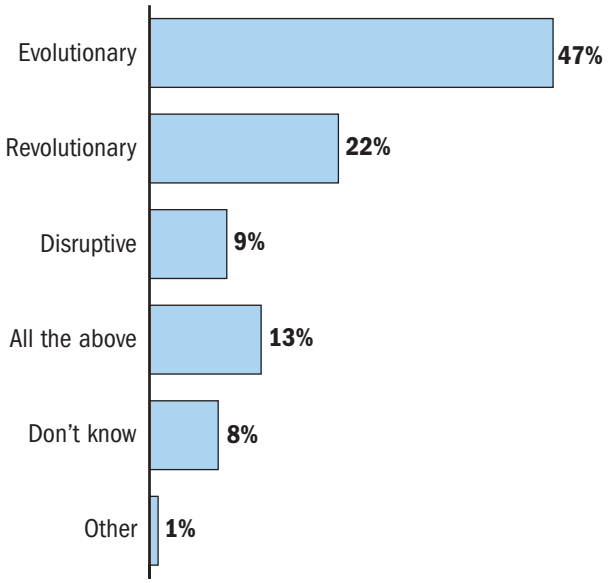
**Mobile computing is pervasive among companies in the study.** Three-quarters of the companies sampled are actively involved with mobile computing in at least some areas of the organization, with a third offering mobility across their entire enterprise. For nearly half (47%), mobility is an evolutionary upgrade to their existing infrastructure, but for another 22%, mobile computing is revolutionizing their business, creating new opportunities that affect the company's business processes and culture. This is particularly true of C-level executives, where 30% see mobilization as revolutionizing their business. Whether they are simply integrating mobile technology into business processes or reinventing themselves around mobility, respondents see value in their mobile initiatives and are embracing the technology.

### *Approach to Mobile Computing*

*Which of the following statements best characterizes your company's approach to mobile computing?*




*Which of the following best describes your company's current investments in mobile computing?*



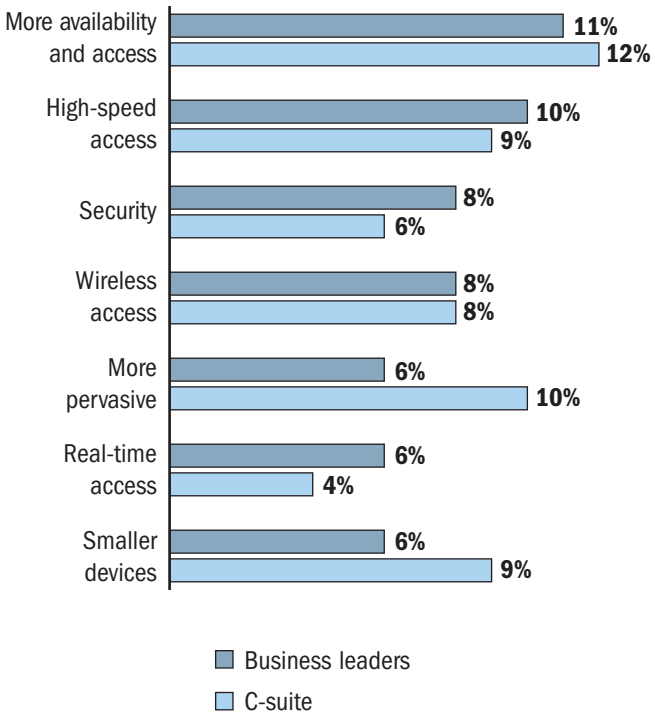

*Source: Mobile Megatrend Study; Sampling time frame: March 2006 (N=851); Forbes/Management Insight Technologies*

**Security and greater access to corporate data are the leading trends.** Offering secure, ubiquitous and rapid access to corporate information is the undercurrent of mobilization. Business leaders view availability and access to corporate data as a leading mobility trend, while IT professionals see security and interoperability as the leading technical trends. C-level executives see mobility becoming more pervasive and moving toward smaller devices. Overall, the business trend is to widen the availability of corporate data to untethered devices. The IT trend is to secure this data movement. However, greater access and better security can be opposing forces in business, suggesting that data management and security are likely to remain hurdles in delivering enterprise mobility.

## *Top Business and Technical Trends*

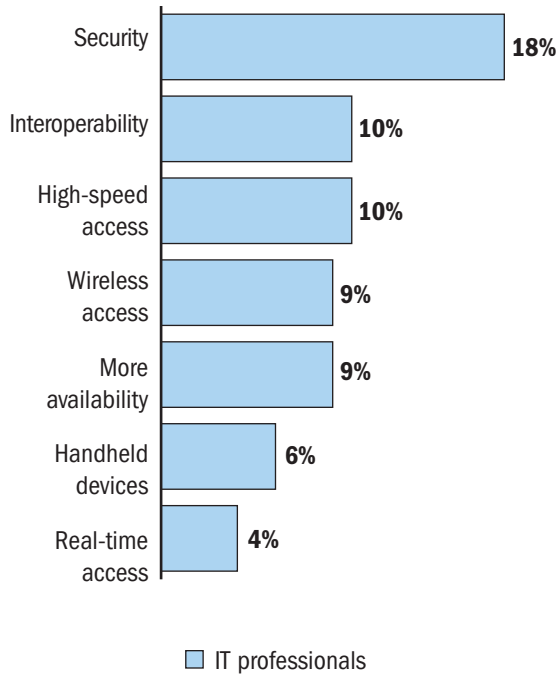
*What do you believe are the top business trends associated with mobile computing in 2006?*

### Top Business Trends in MC




*What do you believe are the top technical trends associated with mobile computing in 2006?*

### Top Technical Trends in MC



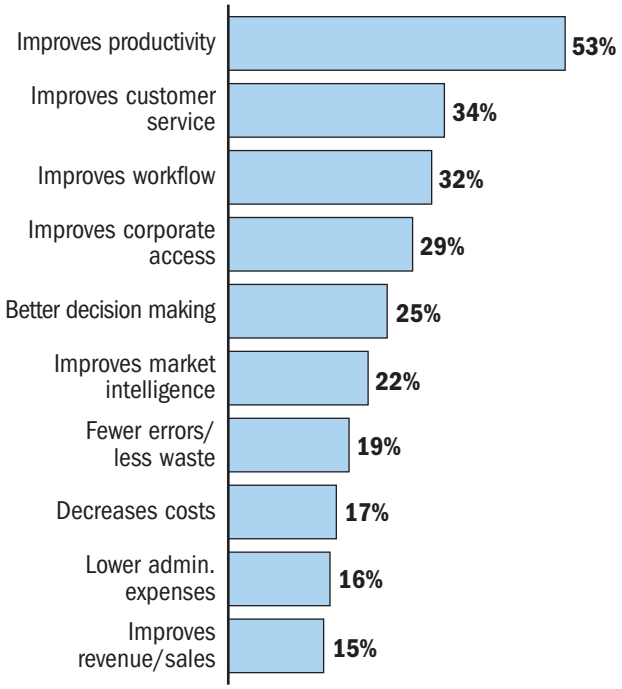

*Source: Mobile Megatrend Study; Sampling time frame: March 2006; Business leaders N=339; C-level N=77 (excludes CIOs and CTOs); IT professionals N=512; Forbes/Management Insight Technologies*

**Improved productivity is guiding mobility investments.** The desire to improve productivity and customer service while delivering real-time access to data is directing mobile investments. And for 53% of respondents, increasing productivity is the top reason for their increased spending. While many of the respondents believe they have realized greater productivity as a result of their mobility investments, only 13% believe that mobile computing has fully improved their productivity. Respondents are seeing the payback from their mobility investments, but most feel that mobility has yet to fully deliver on the business benefits – a situation that is likely to influence the strategic priority and capital investment directed to mobilization.

## *Mobility Computing Investment Justifications*

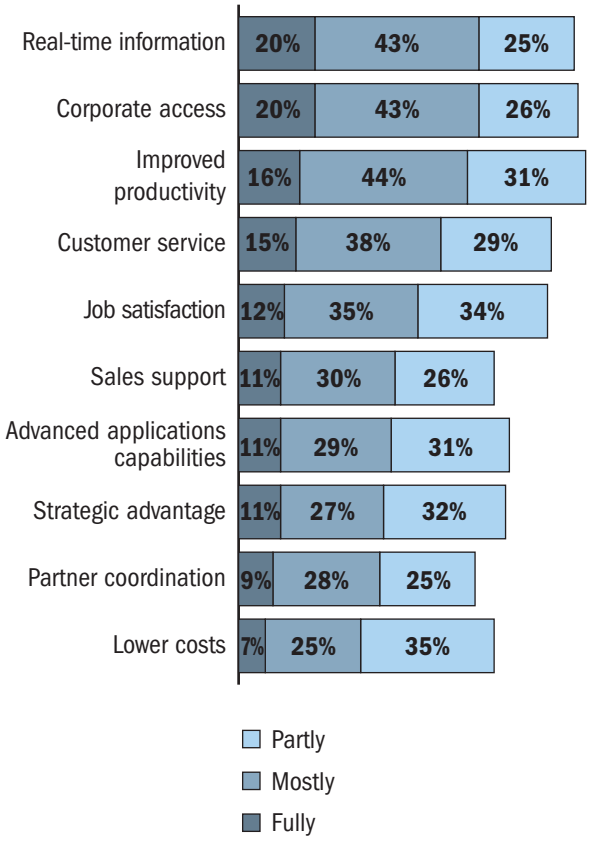
*How does your company typically justify its spending on mobile computing technology?*

### Investment Justification




*To what extent has mobile computing delivered on the benefits listed below?*

### Mobile Computing Benefits Delivered



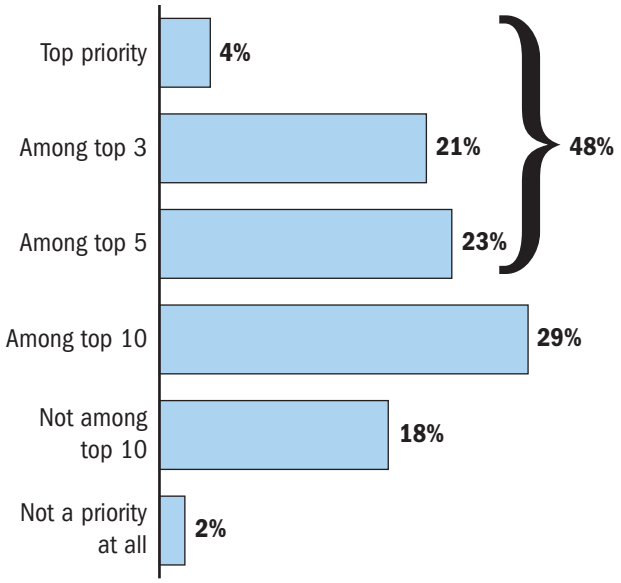

*Source: Mobile Megatrend Study; Sampling time frame: March 2006 (N=851); Forbes/Management Insight Technologies*

**Enterprises place a strategic priority on mobility investments.** The study participants are sending a clear message — mobilization is a strategic component in their business and technology objectives. For nearly half of the respondents, mobile computing was among the top-five priorities for technology investment. This finding is also reflected in their investment plans, with 56% of the companies in the study planning to increase spending on mobile computing over the next 12 months. One-third of companies plan to hold spending at current levels. Few companies plan to decrease their mobility investment, and many place a high priority on mobile initiatives.

## *The Priority and Investment Plans for Mobile Computing*

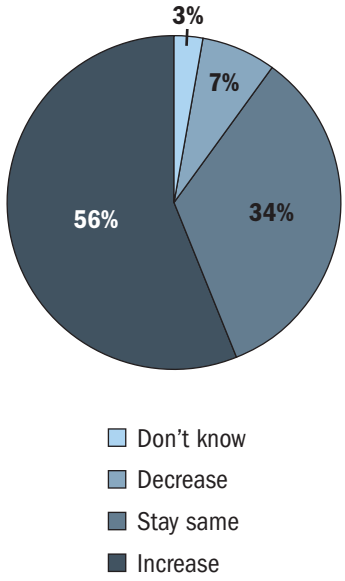
*Please indicate how important investing in mobile computing fits in with your company's other IT priorities.*

**Investment Priority**




*How do you expect your company's spending on mobile computing to change over the next 12 months?*

**Expected Investment Plans**




*Source: Mobile Megatrend Study; Sampling time frame: March 2006 (N=851); Expected Investment Plans N=620; Only asked of those who knew their level of mobile computing investment; Forbes/Management Insight Technologies*

**Respondent mobility spending could top $1 billion.** All totaled, participants in the study expect to invest around $1.4 billion over the next year on mobile computing-related hardware, software, services, training and other related costs. This would represent a $247 million increase over the amount invested by the respondent base 12 months ago. Companies in the study see value in mobilizing their enterprises and are directing capital toward these efforts.

## *Capital Investment Plans*

*Approximately how much did your company invest in mobile computing, including hardware, software, services, training and other related costs in the past 12 months?*
*How do you expect your company's spending on mobile computing to change over the next 12 months?*

**Investment Priority**

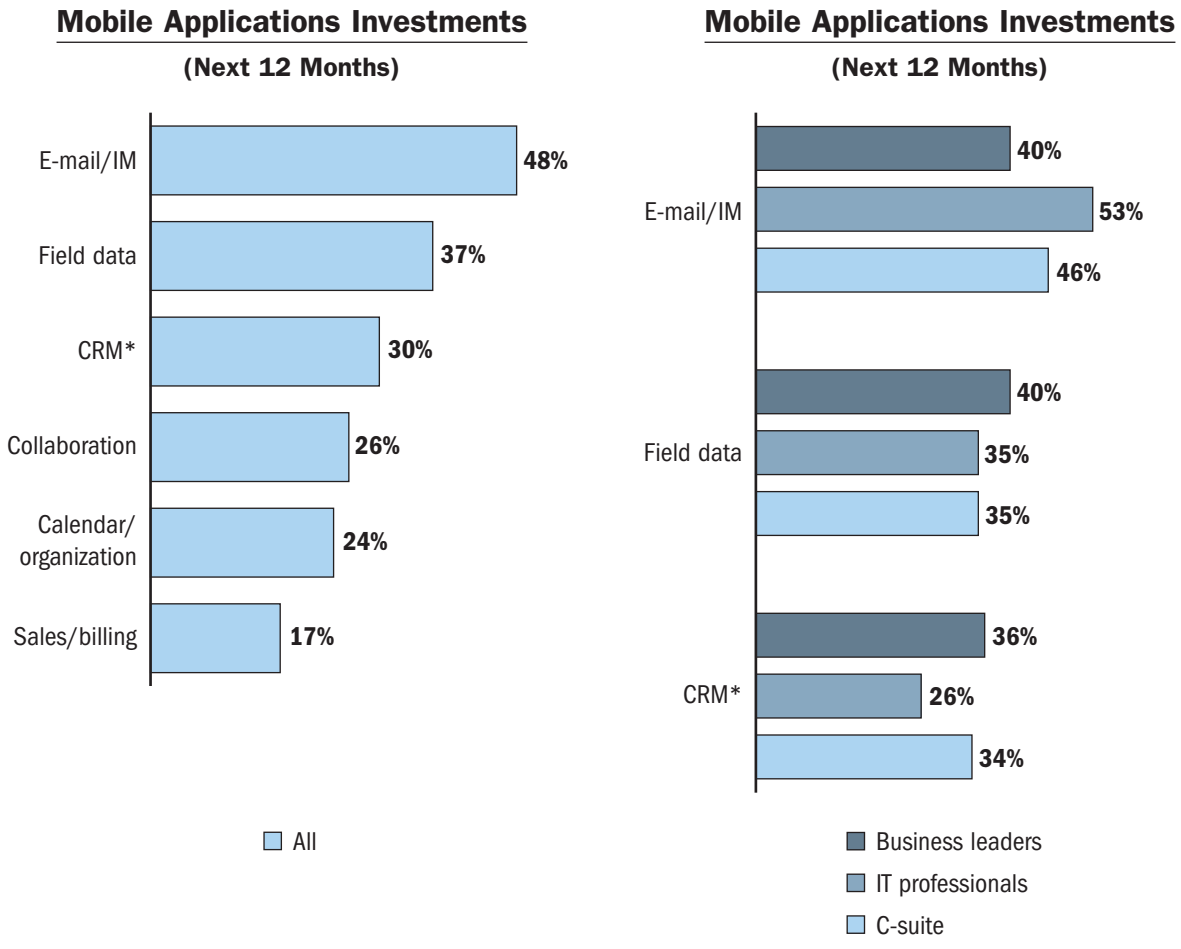
| Investment Trend<br>Next 12 months | Previous Investment<br>Aggregate spending past 12 months | Expected Investment<br>Aggregate spending next 12 months | Overall Change |
|---|---|---|---|
| Decrease 7% | $79 million | $51 million | ↓ $28 million |
| No Change 34% | $337 million | $337 million | $0 |
| Increase 56% | $804 million | $1 billion | ↑ $275 million |
| | Total | $1.4 billion | ↑ $247 million |

*Source: Mobile Megatrend Study, Sampling time frame: March 2006; Expected Investment (N=620); Forbes/Management Insight Technologies*

**E-mail and messaging lead application investment plans.** Much of the application spending will be dedicated to e-mail, field information and data retrieval, and customer relationship management (CRM). In comparison to IT professionals, business leaders are already looking beyond e-mail to more advanced applications like CRM and field data exchanges. While e-mail forms the top layer of application investment planning, the next wave of investment is coming in the area of more-advanced applications that offer mobile workers better information in the field and better resources for customer care.

## *Mobile Application Investment Plans*

*In which of the following mobile applications does your company plan to invest in the next 12 months?*



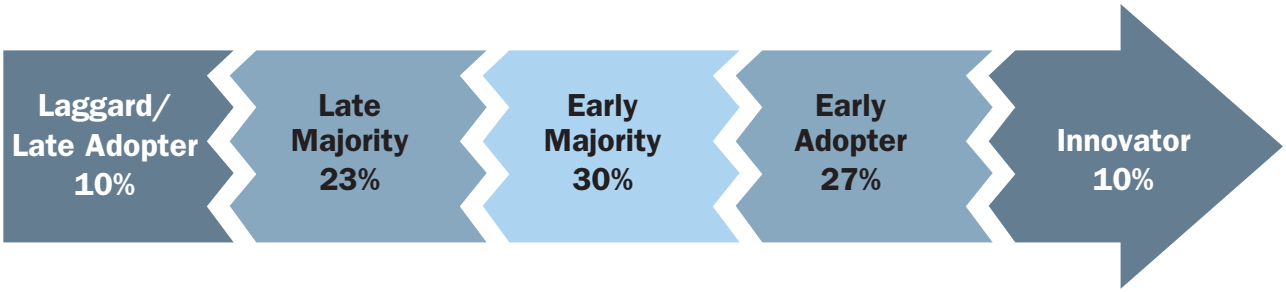

* Customer Relationship Management

*Source: Mobile Megatrend Study; Sampling time frame: March 2006 (N=851); Business Leader N=339, IT professionals N=512, C-Suite N=126; Forbes/Management Insight Technologies*

**Mobile computing experience leads to more-advanced applications and spending.** The characteristics that establish mobility adoption include the timing of a company's first investment, its level of spending on mobile computing and its adoption of more-advanced mobile applications. Companies just beginning their mobility investments tend to be burdened by mobility costs, spending less and mobilizing e-mail. However, those further along in their mobilization are seeing the benefits, spending more and moving toward advanced mobile applications. For example, innovators are now seeing lower administrative costs and investing in advanced technologies like supply chain and sales-oriented applications. So while mobile e-mail and messaging are core applications in the mobile adoption cycle, they also form the foundation upon which more advanced applications will be built and greater capital expenditures will be made.

## *Mobile Computing Adoption*

*Which of the following best describes your company's approach to adopting new mobile computing technology?*




- 46% made first MC investments in 2004 or later
- Less likely to be enabling advanced mobile applications
- Device costs are a top challenge
- Invested less than $25K in last 12 months

- Planning to invest in mobile e-mail & messaging
- A spending increase of over 50% likely in next 12 months

- Made first MC investments in 2002
- Also planning to invest in mobile e-mail & messaging
- Early investments were a reaction to the needs of mobile professionals

- Mobile e-mail and calendaring is a top priority
- Invested between $1 million and $2.9 million in MC in past 12 months
- Employ data management services
- Will increase spending 24% to 50% in next 12 months

- 54% made first investments prior to 2000
- Investing in supply chain and sales applications
- Justify spending through lower administrative expenses
- Obtaining a strategic advantage is top priority
- Last year 24% spent greater than $10 million on mobility

This chart summarizes the key factors that differentiate mobile computing adoption segments. The summary was developed using discriminate analysis.

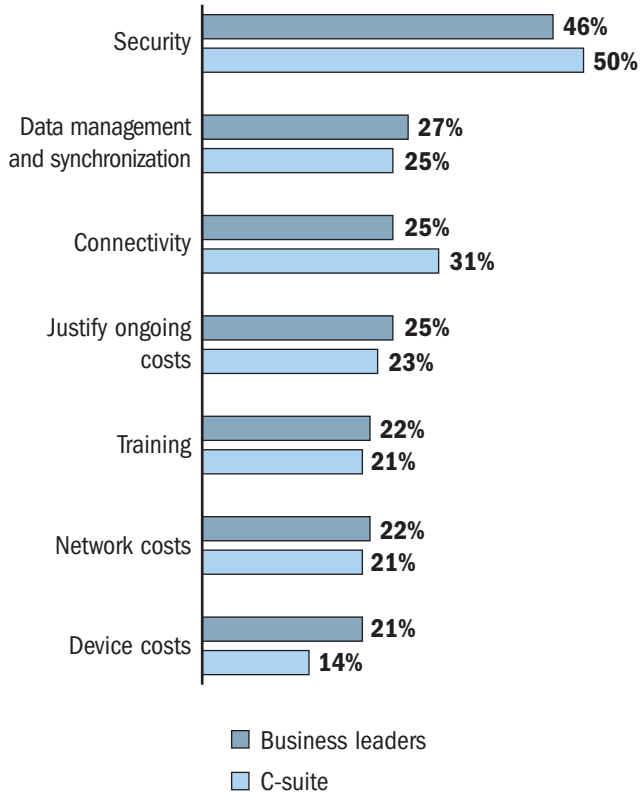
*Source: Mobile Megatrend Study; Sampling time frame: March 2006 (N=851); Forbes/Management Insight Technologies*

**Security and cost are the leading challenges to mobilization.** Security, cost and connectivity top the list of challenges respondents face when mobilizing their enterprises. Among IT professionals, budget and IT costs are a slightly greater challenge than security. Data management is higher on the list of challenges for business leaders than for IT professionals. However, as businesses mobilize data and information, they struggle with a host of obstacles including data security, edge device management and data synchronization between corporate databases and mobile devices. All of these issues create ongoing costs, as well as network and device expenses, that burden enterprise technology budgets.

## *Mobile Computing Technology Challenges*

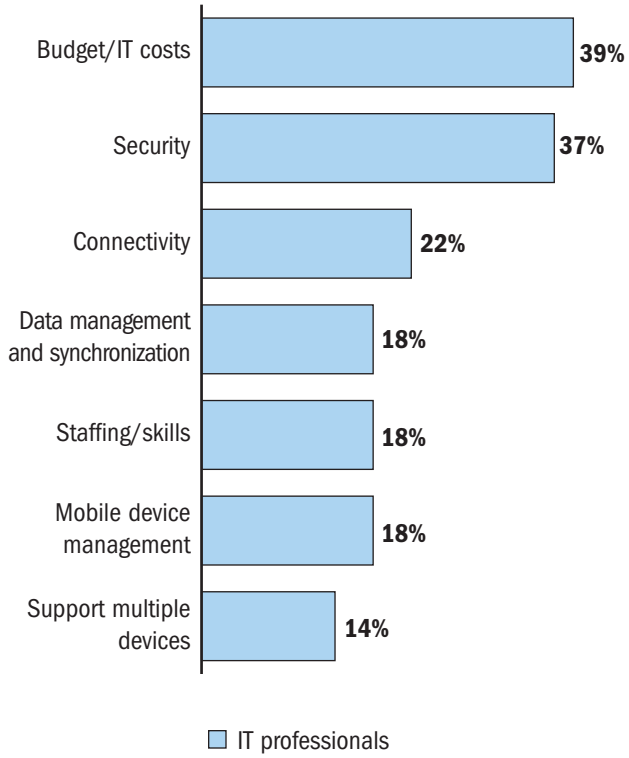
*Which of the following do you believe are the top challenges your company faces in its adoption of mobile computing?*

### Mobility Challenges




*What are your top three challenges associated with deploying and operating a mobile computing environment?*

### Top IT Challenges to Mobility




*Source: Mobile Megatrend Study; Sampling time frame: March 2006 (N=851); Business Leader N=339, IT professionals N=512, C-Suite N=126; Forbes/Management Insight Technologies*

**Segments illuminate differences in mobility strategies.** A segmentation model was developed to look at the different nuances in the respondent base. Business leaders fell into four segments: real-time data needs, lower costs, improved workflow and customer service. IT professionals fell into three segments: field support, data management and those centered on security. The business segments tend to align with their investment priorities, with the group expecting to spend the most on mobility focused on real-time data dissemination and sales support. IT tends to segment more along the lines of its mobility challenges. Business leaders in general expect to spend more on mobile computing than the IT-tasked respondents.

## *Mobile Computing Market*

| Group | Segment | % of Group | Expected Investment (Median)* | Investment Priorities | Top Challenges | Relevant Industries |
|---|---|---|---|---|---|---|
| Business Leaders | Real-time needs focused | 20% | $975,000 | • Real-time information<br>• Sales support | • Data management and synchronization<br>• Real-time access | Manufacturing |
| | Workflow focused | 25% | $750,000 | • Improving workflow<br>• Wider access to corporate data | • Security<br>• Data management and synchronization | Government<br>Healthcare |
| | Customer focused | 28% | $712,000 | • Customer service<br>• E-mail and calendaring | • Justifying ongoing costs | Computer<br>Media/Advertising |
| | Cost focused | 27% | $600,000 | • Decreasing costs<br>• Increasing sales | • Device costs | Business Services<br>Printing/Publishing |
| IT Professionals** | Field support centric | 25% | $544,000 | • Better accuracy/ fewer errors<br>• Decision making | • Connectivity<br>• Training | Manufacturing<br>Transportation |
| | Data centric | 28% | $218,000 | • Improve productivity<br>• Wider access to corporate data | • Data management and synchronization | Computer<br>Finance<br>Retail |
| | Security centric | 27% | $218,000 | • Improve productivity<br>• Improve workflow | • Security<br>• Justifying ongoing costs | Government |

*Source: Mobile Megatrend Study; Sampling time frame: March 2006 (N=851); Business Leader N=339, IT professionals N=512; Forbes/Management Insight Technologies*

**Mobile computing investments planned in next 12 months and includes hardware, software, services training and other related costs*

***20% of this group formed a low-interest segment and were not considered in this analysis*

## Conclusion

Overall, the respondent companies are investing in mobility to improve their existing business process by giving field workers more ubiquitous access to enterprise data and information. The change under way is that field devices are now collecting, transmitting and requesting data beyond simple e-mail and calendaring. And two of the largest-spending business segments list data management and synchronization as one of their greatest challenges.

**The segments suggest weakness in device-driven strategies.** Managing data falls on IT. And those in IT, with a Data Centric view of mobility, note fewer challenges than those falling into the Field Support segment. Data Centric respondents hinge their mobile strategy on their database and middleware vendor. In comparison, the Field Support group is more likely to view a mobile device vendor as the cornerstone of its mobility strategy. In the end, the Data Centric group is more strategically directed and its senior executives are committed, while the Field Support segment is struggling to standardize its technology and attain its productivity objectives.

### *Approaches to Mobilization*

#### Data Centric

**Core to mobility strategy:**
- Database/middleware vendor

**Reason for investment:**
- Senior executives are committed

**Top challenges:**
- Data management
- Performance
- Real-time access
- Application development
- Data duplication

#### Field Support Centric

**Core to mobility strategy:**
- Mobile device vendor

**Reason for investment:**
- Standardize mobile technology

**Top challenges:**
- Connectivity
- Security
- Training
- Achieving productivity objectives
- Mobile device management
- Real-time data management
- Business process change

#### Security Centric

**Core to mobility strategy:**
- Telecom vendor

**Reason for investment:**
- Greater access to corporate data

**Top challenges:**
- Security
- Justifying ongoing costs
- Manageability
- Budgets and IT costs
- Connectivity
- Persistent network access

Enterprises that are strategically positioning themselves for mobility would be wise to ask themselves: What is the business process we are enabling? What data will we need to deliver and what data will we collect? What device will best support the end user in this business process? Toward this end, migrating mobilization efforts from simply supporting edge devices, to a model where data and information are driving the core business process, seems to be the winning approach and an underlying megatrend in mobile computing.

## Appendix — Methodology

**Timing:** Fielded in March 2006

**Approach:** Online Study

**Geography:** Global

**Sample Size:** 851 respondents

**Audiences:** Business leaders

IT professionals

C-suite (Owner, CEO, CIO, CFO, CTO, COO)*

**Segments:** Small and Medium Enterprises (SME) = 250 to 999 employees

Medium Enterprises = 1,000 to 4,999 employees

Large Enterprises = 5,000 or more employees

**Totals:** See table

**Audiences and Segments**

| Total | All | SME | Medium | Enterprise |
|---|---|---|---|---|
| Business | 339 | 94 | 83 | 162 |
| IT | 512 | 136 | 153 | 223 |
| C-Suite | 126 | 57 | 32 | 37 |

Forbes/Management Insight Technologies

** CTO and CIOs are included within the IT Professionals rollup*
*Owners, CEO, CFO, COO are included within Business Leader rollup*