

## WHITE PAPER

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# Mobile Line-of-Business Applications for the Midsize Business: An ROI Analysis

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## EXECUTIVE SUMMARY

Mobile solutions continue to make inroads into companies of all sizes. Once perceived as an ad hoc solution or tool, mobile solutions have become key components of core business processes. The general availability of a variety of converged mobile devices on several operating systems, the lowered cost of rate plans, and increasing availability of vertically focused mobile applications are all contributing to the growth of mobility.

For midsize businesses — businesses of 50 to 1,000 employees — the launch of increasingly affordable converged mobile devices and the decreasing cost of mobile data plans have enabled business owners and IT decision makers to justify the cost of investing in mobility. Mobile operators and vendors recognize the potential of this market and are focused on meeting the needs of these midsize businesses.

To validate and quantify the business benefits of Windows Mobile within midsize businesses, IDC conducted in-depth interviews with executives at 19 companies ranging in size from 50 to 1,000 employees from various industries in Asia/Pacific, North America, South America, and Europe, the Middle East, and Africa (EMEA). IDC found the following direct benefits in the companies interviewed:

- ☒ The average payback period for the implementation of a Windows Mobile solution in midsize businesses was 7.9 months.
- ☒ The average return on investment (ROI) of a Windows Mobile solution for these companies was 402%.
- ☒ The companies invested an average of \$2,250 per user annually over three years to deploy the mobile solution and were able to achieve annual benefits that averaged \$12,193 per user (see Table 1).

**TABLE 1****ROI Analysis for Deploying Microsoft Mobility Solutions**

Item	Average per user
Three-year cost of investment	\$6,750
Annual cost savings and increased revenue	\$12,193
Net present value of three-year savings	\$23,358
Payback period	7.9 months
ROI over three years	402%
Hard-costs-only ROI over three years	212%

Source: IDC, 2008

In this White Paper sponsored by Microsoft, IDC analyzes the ROI and value proposition around mobility solutions available to the midsize business. The White Paper examines key market requirements for mobility solutions, alignment with business goals for mobile workforces, key challenges, and the impact of mobility solutions on costs and business value.

## INTRODUCTION

### Market Readiness

Companies around the world are seeing productivity gains, positive revenue growth, and the extension of the mobile workforce all because of the pervasiveness of mobile solutions. With an increasing number of success stories emerging due to mobile deployments, companies continue to invest in data-dependent solutions.

IDC predicts that the global mobile worker population will exceed 1 billion by 2011. These workers will have to be equipped in order to do business outside their primary work location. In the United States, mobile workers will account for 73% of all workers.

For businesses with 50 to 1,000 employees, a number of developments over the past 24 months have played a pivotal role in driving the adoption of, interest in, and success of mobility. This is especially true on the lower end of the market where, up until now, mobility was historically viewed as a convenience rather than a critical business tool.

The launch of several increasingly affordable converged mobile devices (CMDs) in 2006 led the way for companies of fewer than 1,000 employees to acquire devices that were capable of basic data functions including email, contacts, and calendaring. For more technologically savvy companies, more advanced applications including customer relationship management and field force automation also became more accessible because of these devices.

Another driving factor in the increasing adoption of mobility by midsize businesses is the decreasing cost of mobile data plans. This development goes hand in hand with the availability of new devices. Business owners and IT decision makers could better justify the cost of investing in mobility as both device costs and data plans became more affordable to this segment. Mobile operators have increased the availability of pooled minute plans that provide ease of use for IT managers and end users as well. Corporate liability is also becoming relevant for this segment as it provides companies with the ability to manage costs, standardize device selection, and monitor use by employees or by departments.

With these CMDs in hand, midsize companies were able to easily integrate mobility into their existing IT infrastructure. Microsoft, for example, with its Small Business Server (SBS) and Microsoft Exchange Server, allows for easy integration and extension of email and personal information management (e.g., calendaring and contacts) to mobile devices — allowing workers to easily be hooked up and have access not only to email but also to corporate applications. Certain verticals have seen the adoption of applications that extend beyond email. Financial, transportation and logistics, manufacturing, and healthcare have adopted applications that help to improve worker productivity.

In the past couple of years, companies employing fewer than 1,000 employees have shown strong interest in mobility solutions. Mobile operators and vendors alike see the potential of this market and are now intently focusing on how to meet the needs of this market without just scaling down enterprise-grade messaging, applications, or devices. Their needs are unique, and suppliers are beginning to understand that. As this understanding continues to be improved, more midsize businesses will see the value and continue to expand their mobility investments.

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## **Microsoft Mobility Solutions**

The Windows Mobile operating system powers advanced, easy-to-use devices that allow customers to send and receive email, browse the Internet, and work on mobile versions of familiar Microsoft Office software, as well as thousands of third-party applications.

Today, end users have a choice of more than 150 mobile devices from more than 50 manufacturers, and these devices are offered through more than 125 mobile operators. With recent announcements of new converged devices — including the Sony Ericsson Xperia X1, the Samsung BlackJack II, HTC Touch, HTC Touch Diamond, and other popular devices from Motorola, Palm, HP, HTC, and others — the market is finally witnessing perhaps the most compelling devices to run the Windows Mobile operating system.

Furthermore, Microsoft is putting together a broader, more cohesive mobile story as it seeks to deploy mobility, not as a separate platform but rather as an extension of existing business systems. In addition to taking advantage of a customer's initial technology investment in Microsoft Exchange Server and Microsoft Office, Microsoft can address the needs of midsize customers and larger enterprises alike with mobile versions of products such as SQL Server, Office Communications Server, Microsoft

Dynamics CRM, .NET, and more. With the addition of System Center Mobile Device Manager, IT managers are able to manage Windows Mobile devices much like they manage Windows-based PCs. Microsoft partners also deliver a rich offering of Windows Mobile solutions to address a broad range of customer needs. To date, there are more than 18,000 available third-party applications, representing a range of vertical market segments and horizontal business applications.

In addition to third-party applications, the following Microsoft products were mentioned in customer interviews:

- ☒ **Microsoft Windows Mobile.** Microsoft Windows Mobile 6.1 is built on the existing power and functionality of the Windows Mobile platform. In addition to capabilities such as access to email, calendar, and contacts and features such as Internet search, Windows Mobile includes Microsoft Office Mobile so that customers can access Word, Excel, and PowerPoint documents from their mobile devices. After initial troubles with battery life, crashes, volatile memory, and other complexities, Windows Mobile has entered into a new era in which Microsoft has largely solved many of these problems and is able to focus purely on improving the platform's capabilities and user experience.
- ☒ **Microsoft System Center Mobile Device Manager.** In April 2008, Microsoft announced the availability of System Center Mobile Device Manager, providing IT managers with the means to manage Windows Mobile devices in a manner that is consistent with the way in which they manage Windows-based PCs. In addition, it protects sensitive files, emails, contacts, and other information stored on the device through file encryption and device wipe/lock in case the device is lost or stolen. It comes with mobile virtual private network (VPN) software for enhanced security for access to company data and applications residing behind the corporate firewalls. Furthermore, it leverages Microsoft's widely deployed Active Directory/Group Policy enterprise network directory, allowing IT professionals to set and control corporate policies in a single environment.
- ☒ **Microsoft Sync Framework.** Microsoft leverages its existing back-end enterprise servers and synchronization technologies, such as Exchange ActiveSync for Direct Push or Microsoft CRM Mobile that syncs with the Dynamics CRM Server, to provide mobile capabilities (as opposed to having to deploy a mobile-specific server). With the advent of Microsoft Sync Framework, Microsoft is laying the foundation for a single extensible synchronization platform for synchronization across the entire range of Microsoft enterprise servers. The Microsoft Sync Framework enables collaboration and offline scenarios for applications, services, and devices. In combination with SQL Compact, the Sync Framework allows for the flexibility to get at multiple data stores.

## QUANTIFYING THE BUSINESS BENEFITS OF MOBILITY

To validate and quantify the business benefits of mobility solutions within midsize businesses, IDC conducted in-depth interviews with midsize customers of Microsoft Exchange and Windows Mobile. IDC asked detailed questions about the implementation costs in deploying the software, the cost savings, and other benefits realized. IDC then applied its proprietary ROI methodology (see the Appendix) to the results to determine the average payback period and ROI realized by the surveyed companies.

### Study Methodology

For this study, IDC interviewed executives at 19 midsize companies from various industries in Asia/Pacific, North America, South America, and EMEA. The companies included businesses in healthcare, manufacturing, insurance, professional services, construction, utilities, retail, and agriculture. The companies ranged in size from 50 to 1,000 employees; most had a workforce of fewer than 500 employees (see Table 2). The company names and contacts were supplied by Microsoft.

**TABLE 2**

#### Demographics

Average number of users	252
Average number of devices	241
Devices per IT staff	162
Geographic representation	Asia/Pacific, North America, South America, and Europe, the Middle East, and Africa

Source: IDC, 2008

From the results of the interviews, IDC determined the average ROI and payback period that the surveyed companies realized from deploying Windows Mobile solutions based on increased user and administrative staff productivity, improved operational efficiency, other cost savings, and higher revenue from increased sales.

### Benefits

The benefits in this study fall into five categories:

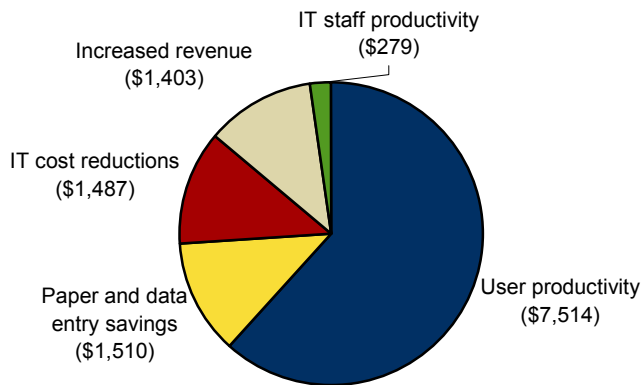
1. User productivity increase — the increased time that users have to perform business operations
2. Business process cost reduction — line-of-business (LOB) cost reductions

3. IT cost reduction — IT budget capital and operations cost reductions
4. Increased revenue — revenue generated through faster time to market and more efficient sales activities
5. IT staff productivity increase — the increased time that IT staff have for activities to support business operations

The distribution of benefits is shown in Figure 1.

**FIGURE 1**

**Average Annual Gains from Deploying Microsoft Mobility Line-of-Business Solutions**



Source: IDC, 2008

***User Productivity***

Since deploying the mobile line of business solution, all of the customers in this study found improved user productivity. Field service representatives now spend more time in the field rather than in an office because they do not have to report to a desk for an Internet connection or fax machine. Before the mobile solutions, users would have to fax invoices and receipts, monitor their email from a PC, and use a cell phone. Field reps would wait for their work assignments at the office and, after each assignment, report back to their office to enter information about the assignment at their PC. Now, they get the assignment, complete the job, and enter the results via the mobile device. The mobile LOB solutions allow users to spend more time with their customers. One company noted that its field representatives used to spend an hour with each customer, but the efficiency of the mobile applications has reduced that time to 40 minutes. Each sales representative has that extra time for client development or travel, and the company does more business per sales rep.

For the repair technician and salesperson, the mobile LOB solution is their lifeblood. Through their mobile device, they have access to all the critical information they need, including contact information, directions, sales/repair orders, and inventory. Their productive time outside the office is much improved. Users have the convenience of finalizing contracts at the customer site using the mobile device.

"The devices have a touchscreen, so the customers actually sign on the screen to accept the terms of engagement," one customer said. The agreement can then be emailed back to the home office, entered into the system, and assigned to project management.

On average, midsize businesses that have deployed Windows Mobile will save \$7,514 per user annually over the next three years.

### ***Business Benefits***

With the mobile LOB deployment, data is sent electronically to the home office, vendors, or customers. This means the company is saving dollars that would have been absorbed by data administration costs. One customer mentioned, "We have seen a savings of overtime being reduced because of the paper administration time. Also, the call center time of the operator has been reduced. They don't have to 'reenter' the data by reading the fax." In addition, users are printing fewer pages of information because their essential data is loaded and accessible in their handheld. The savings on reducing business process costs such as data entry and paper creation, handling, transfer, and storage are just over \$1,500 per mobile user per year.

One customer mentioned, "We have seen a savings of overtime being reduced because of the paper administration time. Also, the call center time of the operator has been reduced. They don't have to 'reenter' the data by reading the fax."

Sending data electronically has improved the speed of data transfer as well as accuracy and data standardization. Representatives at a motorcycle reseller used to evaluate the condition of a given motorcycle by their own individual standards. But with the deployment of the mobile devices, the home office created a uniform evaluation method that ensures all of their purchases meet the desired level of quality.

Because users have more time to entertain more customers and acquire new accounts, more revenue-driving work is being done. With more productive time, each user can now manage more projects per month than in the past. This is a direct correlation with greater revenue. Customers also bought printers for the mobile devices that can produce a receipt for their customer while the sales representative is still onsite. The analysis showed that on average, printing a bill for the customer at the point of engagement decreases the receivables delay from 26 days to 4 days. A customer mentioned, "Previously, the company mailed the invoice to the customer, and it took one week for the mail to reach the customer. But now the service personnel can immediately print out the invoice on the spot. So this one week mailing time was eliminated."

The companies in this study enjoyed average revenue increases of \$1,403 per year per user.

### ***IT Cost Reduction***

The mobile LOB applications enable companies to consolidate their mobile data and telephony infrastructure so that fewer systems need to be purchased and supported. IT departments are more efficient because their companies have reduced the number of phones and laptops since the deployment. In the past, access to voice and data required both cell phone and laptop. The mobile device offers a single technology that consolidates their functions and reduces the number of pieces a user must carry.

Telecommunications fees for long distance and local calls for access have been reduced, and the infrastructure costs to support RAS have been all but eliminated. Consolidating voice and data services with one piece of hardware has cut the total cost of those services by \$827 per user per year.

IT departments are avoiding paying overtime salaries. In the past, technicians would perform maintenance and repairs during the day and then track and edit incident reports after the normal workday. Because fewer incidents are reported and incident resolution is faster, these technicians spend fewer hours per week working overtime. This company said, "The cost reduction for overtime was on the order of a half million dollars per year."

The analysis showed that over the next three years, the average company will save \$1,487 per user annually.

### ***IT Staff Productivity***

The IT department productivity increase is directly related to having fewer mobile device types to support — fewer incident reports, more automated responses to users, and fewer total pieces of technology to manage. Mobile device operating systems require less maintenance than laptop operating systems on average as well. One customer noted that the time his IT staff spent on OS management was cut in half because "before, we needed to spend more time on the touch-ups in the system itself."

The help desk productivity has been improved because mobile users are reporting fewer incidents than laptop users. One company reported that the number of calls to the help desk has been cut in half. The length of these calls is shorter as well. The customer said, "On average, the laptop calls were between 10 and 15 minutes because when you use a laptop, it is more complicated. And with the mobile device, a call is about 7 or 8 minutes."

The average annual IT productivity benefit is \$279 per user.

### ***Investment***

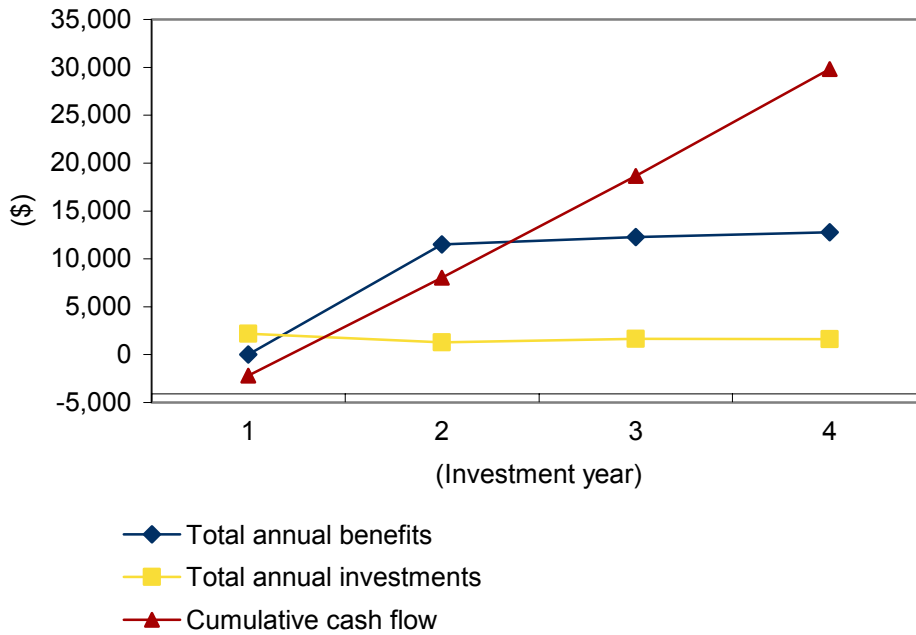
IDC sought to capture the benefits of the line-of-business application in the mobile environment, which meant we also had to understand the total costs associated with the total solution from initial planning and deployment to ongoing operations over a three-year period. On average, companies spent \$1,687 per user annually.

- ☒ Application and wireless software — includes initial costs to purchase and in some cases customize the application software to run in a mobile environment, plus annual licensing costs (17% of total costs)
- ☒ Server hardware — includes the costs of a dedicated server to run the mobile application (In some cases, customers did not have to purchase a dedicated server but merely had to support mobile users with the existing application servers. Even if they had to purchase dedicated servers, they could run their mobile application on one or two processor servers; thus, server investment was very limited.) (<1% of annual costs)
- ☒ Mobile devices — covers a wide variety of devices and price points from smartphones (\$180) to application-specific tablets (\$3,500) (28% of annual costs)
- ☒ IT labor — includes cost to deploy initial solution and annual support and maintenance and includes third-party consulting as a supplement to internal labor (24% of annual costs)
- ☒ Training — includes primarily user training on the mobile applications but also includes IT training (4% of annual costs)
- ☒ Wireless services — Annual data services and telecom services accounted for the largest costs. In some cases, only data services were contracted. (26% of annual costs)

Figure 2 shows that while costs tend to be flat after the investment year, benefits per year increase. Over time, users become more proficient with the technology, IT staff manage the devices more efficiently, and business processes become smoother. The analysis shows that three years after the deployment, the cumulative cash flow equals \$29,829 per user.

**FIGURE 2**

Benefits, Investments, and Cash Flow over Time



Source: IDC, 2008

## ROI Analysis

### Methodology

IDC uses a three-step process to measure benefits and costs and calculate the ROI. The customer interviews provide the data that drives the ROI analysis.

- 1. Measure the impact of the solution(s).** IDC examined benefits offered by the mobile LOB solutions:
  - Reduction of IT cost: IT labor, voice and data services, hardware (devices), and software (LOB applications)
  - Increase in IT productivity: Environment growth over time, with overhead remaining flat
  - Increase in user productivity: More useful work time
  - Increase in business benefits: Includes lower business process costs such as paperwork costs (materials and labor), reduced administrative time, elimination of redundant processes, and increasing revenue realization

2. **Capture the investments.** IDC uncovered the annual and ongoing costs of the following:

- ❑ Software — LOB application and wireless
- ❑ Hardware — back-end server and mobile devices
- ❑ IT labor — installation and annual management
- ❑ Services — mobile data and telephone and consulting
- ❑ Training — user and IT staff

3. **Develop the investment and benefit data in a three-year forecast ROI model to calculate payback and the return.** IDC uses the discounted cash flow method to calculate the net present value (NPV), ROI, and payback period over three years. As a standard, IDC uses a 12% discount rate.

A summary of the companies interviewed, the mobile solutions deployed, and the benefits achieved are included in Table 3.

**TABLE 3**

Interview Summaries			
Business Type	Country	Solution	Benefits
Agriculture	Argentina	Grain buyers and traders able to make pricing decisions and transactions with farmers at grain elevators using Windows Mobile solution by partner BIT.	Able to grow business without additional hires and improve relationships with farmers.
In-home computer maintenance	Australia	Computer techs use Windows Mobile smartphones that include Microsoft CRM for onsite access to customer records.	Replacing laptops with "always on" smartphones saves in hardware costs and time to power up and connect laptops.
Retail maintenance services	Australia	Wireless dispatching solution developed by Microe Pty Ltd. to geographically dispersed field technicians; used over Telstra network.	Ability to optimize and prioritize dispatch scheduling, faster job turnaround, increased field technician productivity.
Installation and service of prefabricated baths and sinks	Japan	600+ PDAs and smartphones running Windows Mobile are used to dispatch field reps and record results of assignments.	Reductions in overtime, paper, and ink saved over 100 million yen in one year.

**TABLE 3**

## Interview Summaries

Business Type	Country	Solution	Benefits
Motorcycle reseller	Japan	Automated process for onsite evaluation and purchasing of motorcycles.	250 field personnel average one extra site visit each day, increasing revenue by \$700,000 in one year.
Workplace safety inspection services	Spain	A mobile in-field forms-based solution used by 415 inspectors to track safety and health risks; developed and deployed by partner Kinetical.	20% increase in field technician productivity; more effective communication with clients.
Food services	Spain	A mobile sales force automation solution was integrated with the company's SAP back end by partner Consultia.	30% more visits to customers, improved customer satisfaction and fewer returns through faster, more efficient order entry and processing.
Automotive services	United Kingdom	Windows Mobile PDAs are used to assist with mobile vehicle inspections and damage tracking.	20% increase in processing volume, increased productivity, improved data accuracy and reporting.
Restaurant chain	United Kingdom	470 staff at 42 restaurant sites use Symbol devices running Windows Mobile to wirelessly take and communicate orders.	Streamlined order processing resulting in an average annual revenue increase of £150,000 per site, improved customer experience, and increased satisfaction.
Bindery and laminating equipment manufacturer	United States	A mobile field service automation solution called PartsArena by Infomill Ltd.; 115 reps use the solution on Windows Mobile devices over the Verizon Wireless network.	Faster and more efficient field technician response; time savings of approximately 30 minutes per day per person; increased sales due to time saved.
Energy	United States	SAT Corp.'s IntelaTrac software enables plant staff to capture and access key performance data on Windows Mobile devices.	A significant reduction in plant downtime and reduction in lost power generation revenue; 15–20% increase in user efficiency; increased job satisfaction; 100% payback within five months of deployment.
Retail auto parts	United States	Mobile field sales automation and remote order entry solution used by approximately 400 field employees.	Improved field productivity, increased customer satisfaction, shorter transaction cycle.

**TABLE 3**

## Interview Summaries

Business Type	Country	Solution	Benefits
Transportation and logistics	United States	A Windows Mobile solution using Countermind's Delivery Driver Support System helps more than 1,000 drivers, customer service agents, and clerks automate inventory management and package delivery.	More than \$2 million in additional revenue, faster delivery throughput, improved productivity for drivers, reduced clerical costs, and better customer service.
Medical device manufacturer	United States	130 marketing, sales, and call center employees use a Windows Mobile and Dynamics CRM solution on the Verizon Wireless network.	Increased revenue per sales rep; increased sales force productivity through decreased administrative workload; improved flow of customer and sales data from the field.
Winery	United States	Wireless sales force automation system, integrated with Microsoft Dynamics by partner Elypsis; uses Verizon Wireless network.	50% reduction in overall cycle, nearly 100% reduction in data errors, 50% increase in inside sales productivity.
Construction	United States	Mobile project monitoring, management, and contractor dispatching over the Verizon Wireless network.	Shortened project cycle time, reduced error-related cost, faster time to market with new homes.
Energy	United States	SAT Corp.'s IntelaTrac solution is used on Windows Mobile devices to gather and transmit information from field facilities to a central monitoring site.	Improved data quality and timeliness, resulting in improved preventative maintenance decisions and less plant downtime.
Agriculture	United States	Remote monitoring and troubleshooting of packing machinery performance by approximately 40 engineers and operations employees.	More efficient use of technical staff, faster break-fix cycles, improved product quality and customer satisfaction.
Beer distributor	United States	Mobile field service automation solution integrated with ERP by partner Rutherford and Associates; used on a Verizon Wireless network by 169 sales and delivery employees.	Improved order efficiency, faster availability of ordering and cash flow data, improved driver efficiency, improved customer satisfaction.

Source: IDC, 2008

## CHALLENGES AND OPPORTUNITIES

While mobility continues to see uptake in companies of 50 to 1,000 employees, challenges still need to be overcome. The biggest challenge for companies in this segment is that they do not understand the business benefits mobility can provide to their business. It is up to mobile operators and vendors to articulate how mobile solutions will improve their business directly. They need to understand the benefits in tangible terms and relating specifically to their individual business problem.

Another challenge for organizations adopting mobility — especially those companies with a blue-collar workforce — is usability. Migrating workers from traditional pen and paper forms completion to digital interfaces on mobile devices with a small form factor is not insignificant. Time needs to be spent training staff and showing how the solution will benefit individual workers and, at a macro level, the organization.

Not all midsize businesses are equipped with robust IT departments. And, often, these IT departments are not in a position to handle the additional burden that mobility will inflict on workload and complexity. Device management and security, as well as activating and provisioning, are important factors for an organization to deploy, manage, and control. Companies with small IT departments will struggle with the burden that mobility adds. In many cases, the average number of devices per employee exceeds one, which is a significant departure from traditional IT responsibilities of managing a single laptop per user.

While these companies, in many instances, are too small to consider the assistance of a managed mobility service provider, the need may exist. Options are emerging that incorporate software as a service (SaaS) to help manage a mobile investment. SaaS provides an option to help alleviate the strain on IT while still gaining the benefit of enterprise-class applications. It also provides the necessary structure and protocol to help gain control of mobile devices and rate plans that exist within the company.

Cost should not be left out of the discussion on challenges facing midsize businesses. While mobile operators continue to make innovative and more affordable rate plans, the investment in mobile devices and applications is not insignificant and should not be underrated in terms of hindering adoption.

Despite the challenges that mobility adoption still faces, it can provide opportunities to companies. First, it allows extension of the workforce outside the four walls of the organization. Workers are able to be more productive and accessible. Workers are able to be more responsive to colleagues, customers, partners, and suppliers by having access to email and collaboration tools outside the office. Decision making can be expedited, customer requests can be quickly addressed, orders can be fulfilled, and appointments can be scheduled without the need to be tied behind a desk.

Extending corporate applications — including customer relationship management, field force automation, sales force automation as well as financial tools — to mobile devices provides real-time information to end users.

## APPENDIX: CASE STUDIES

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### **Motorcycle Reseller in Japan**

A motorcycle reseller with just under 700 employees, headquartered in Japan, deployed Microsoft CRM applications to increase its field representatives' productivity and reduce its operations costs. The company buys, refurbishes, and resells used motorcycles. Each of its 250+ company representatives travels to evaluate several motorcycles per week.

Before using the business applications, all representatives had their own method of inspecting the motorcycles and their own interpretations of quality. Because the evaluation process was subjective, the company's purchases ranged widely in hardware condition. A business manager said, "*There were big differences in how these motorcycles were evaluated from region to region and from person to person. And that is why we decided to deploy this system ... to improve the assessment process.*" With the deployment of the Microsoft business applications, the company now purchases only those motorcycles that meet its quality criteria.

Prior to Microsoft applications, laptops were used to store the motorcycles' information. But the data and photographs could have been months old. Now the home office transmits the most current pictures and data to the reps at the customer site. Because the customer is receiving accurate and current information, expectations are met a greater percentage of the time.

The productivity of the representatives has been improved by the standardized quality evaluation. Before the deployment, a representative would spend approximately one hour per customer. But now, a customer visit lasts only 40 minutes because the evaluation process is largely automated. The representatives have more time to develop customer relationships, travel to the next appointment, evaluate more merchandise, and increase their total sales. "The user has more time for conversation with the customer. They have more time to travel to the next customer's place. The users can spend more time doing things that they couldn't do before," a manager mentioned. The company estimates that each field representative can visit an additional customer per day on average — more customer visits have driven up revenue \$700,000 per year.

The Microsoft business applications have allowed the company to provide better customer service, improve the quality of its product, and increase its sales through greater user productivity.

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### **Residential Computer Service Company in Australia**

An Australian technology consulting outfit specializes in computer provisioning, repair, and networking support for residential customers. It wanted to build a "geek squad"-like reputation — smart, quick, and cheap. The company deployed Microsoft CRM mobile business applications to increase individual technician productivity, enhance home office operations control, and provide flexibility in scheduling truck rolls.

To maximize control and flexibility, rather than set work schedules days or weeks ahead of time, the company adds assignments to the database in real time. The applications allow the company to track each technician's progress on each job and then minimize wasted travel cost and time by sending the technicians to the next, closest site. Technicians may begin the day with a given schedule, but their progress is mapped against the changes in jobs added or removed from the database. The home office shifts the schedules, rearranging the assignments to complete the greatest number of jobs per day. A manager mentioned, "The moment that a customer calls in to our contact center and books a technician, within a minute that information appears on that technician's PDA. So those schedules are changing throughout the day." Since the adjustments are made in real time, there is no risk of a technician driving toward one site, only to be told to turn around and report to another.

Customer service is a priority at the company, and it is delivering high-quality, quick results because of the agility afforded by the Microsoft mobile solutions. The near-paperless environment supports the quick and cheap aspect of its services. Customers accept engagements by signing directly on the handheld so that the transaction is finalized at the point of contact. Optimization of travel and automating the business transactions have allowed the company to maintain a high level of customer support while achieving a rapid growth rate. One year ago, there were only two technicians — now there are 50. The company expects to grow its support staff to 250 technicians within the next two years.

The technicians save time because they do not have to turn on a computer, log in, and then receive their next job — the information is already loaded into the devices and can be retrieved immediately. A manager added, "If they relied on a traditional laptop and wireless network, they'd have to turn it on, connect it to the network, wait for it to synchronize. So at four or five jobs per day, they would lose probably a half hour per day." Even 30 minutes of lost time per day translates into 115 hours lost per year, or \$4,500 lost per technician annually.

Another advantage is that the technicians are carrying fewer devices. The company has seen financial benefits since it is not purchasing laptops, wireless cards, and cell phones. All of these functions are provided by the PDA alone.

Because of the Microsoft business applications, technicians ensure high productivity and the company has great flexibility in managing workloads. The company offers smart, quick, and reliable services to its customers with costs far lower than those of the competition. Overall, the company was able to realize benefits of \$7,922 per user annually in increased productivity and reduced operations costs at an investment of \$1,100 per user.

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## **IDC's ROI Methodology**

To quantify the business benefits of technology solutions, IDC has developed an ROI methodology that measures the total costs of deployment and the sum of the savings achieved. The methodology calculates the ROI in a three-step process:

1. **Ascertain the investment** made in the purchase and implementation of the solution and the associated training and maintenance costs. To get an accurate assessment of the investment in deploying Microsoft Exchange and Windows Mobile software, IDC asked for the purchase, installation, and maintenance costs; the cost of any additional infrastructure required; and the loaded costs of the incremental IT staff required to support the Microsoft software.
2. **Measure the gains** in user and administrative staff productivity from deploying the solution, the cost savings from increased operational efficiency and other factors, and additional revenue from increased sales.
  - ❑ **Productivity savings.** Productivity reflects how effectively users and administrative staff utilize their time. To determine productivity savings, IDC multiplies increases in the productive time of users and administrative staff by their burdened salary (salary + 40% for benefits and overhead) and then multiplies by a further 40% to account for users spending part of their time on activities that are collateral to the job they are paid to do.
  - ❑ **Cost reduction.** Costs can be cut by improving operational efficiency, which is a measure of how many users an administrative person can support. Savings can come from reducing the number of administrative staff needed or from avoiding hiring additional staff to support growing numbers of users. Costs can also be cut by reducing training needs, eliminating other software or tools, or avoiding wasteful processes and practices.
  - ❑ **Increased revenue.** Mobility opens up myriad opportunities to boost sales. IDC taxes the increased revenue at 50% when calculating the revenue gains from deploying the mobility solution.
3. **Calculate the payback period and ROI for the deployed solution.** From the results of the interviews, IDC determines the net present value of the savings over three years from investing in Microsoft Exchange and Windows Mobile software and calculates the average payback period and rate of return. The net present value of the three-year savings is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. Further, because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

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