

WHITE PAPER

The Benefits of Microsoft Mobile Messaging

Sponsored by: Microsoft

Kevin Burden

Randy Perry

September 2005

IDC OPINION

Mobile solutions, which tie mobile handheld devices to corporate email and application servers, allow mobile workers to be more responsive, stay collaboratively informed, and leverage corporate data with greater flexibility than what is possible with desktop and notebook PCs. IDC conducted case studies with six companies that have implemented Microsoft's server-based, mobile messaging solution and quantified the productivity returns to end users, as well as the efficiencies and cost savings to IT departments. In this study of companies that have implemented Microsoft's server-based, mobile messaging solutions, IDC found the following direct benefits:

- ☑ Companies in the study paid back the cost of implementation in 4.3 months
- ☑ The one-year return on investment (ROI) of implementing the mobile solution was 129%

While the study focused on tangible benefits, more obscure benefits were also identified. Practical experience with mobile and wireless technologies can ignite ideas for how mobility can bring new levels of agility to the processes and operations that drive a company. In many cases, these ideas that came from using mobile technology were valued as much as the anticipated returns from the investment.

Tangible benefits of server-based mobile messaging solutions came in the form of:

- ☑ Better quality of work life resulting in less employee turnover
- ☑ Efficient management of mobile devices and greater security of mobile data and mobile access
- ☑ Reduced costs from pulling back notebook computers that were used primarily for email and the reduction of Remote Access Service calls

Companies looking to provide a more convenient connectivity method for their mobile workforces and take control/manage the proliferation of mobile devices in their organization should consider server-based mobile solutions.

METHODOLOGY

IDC interviewed six customers using Microsoft Windows Mobile-based Pocket PCs and Smartphones in conjunction with Microsoft Exchange ActiveSync in Microsoft Exchange Server 2003, and asked respondents to quantify the costs and benefits of using the Microsoft mobile solution in terms of productivity increases and cost savings (Table 1). The companies interviewed ranged in size from 2,500 to 30,000 employees. The names of these companies were provided by the study's sponsor, Microsoft.

A standard IDC business value interview and modeling methodology was used in gathering and analyzing the survey data.

TABLE 1

Study Profile

Industries	Healthcare, Retail, Services, Construction
Median number of employees	3,000
Percentage of mobile workers	27%
Median number of IT staff	60

Source: IDC, 2005

SITUATION OVERVIEW

Mobile working — that is, the act of getting one's job done while away from the primary workplace — has been a growing trend in corporations since the advent of portable computing tools, such as notebook computers and dial-up connections. However, mobile working hit a new stride in its momentum when hand-fitting devices with wireless connectivity made workers productive while they were actually moving.

Where laptops simply allowed workers to move the location from where they would do their work, handheld devices are changing how the work gets done. From how workers communicate and stay current, to the company's ability to push the most up-to-date data into the hands of those in the field who can do the most with it, mobile solutions are offering companies the ability to create a new freedom and flexibility for their corporate operations.

Since every industry has workers who have some degree of mobility in their work life, the reach of mobile solutions will broaden over time as companies increasingly rely on the benefits that instant access to data and knowledge bring to their businesses.

Mobile solutions deliver returns on many levels:

- ☒ Extending sales force automation investments so that information is more easily accessible to a sales force that wants to be more responsive to questions on inventory, product information, and price changes
- ☒ Bringing efficiencies to managing field-service professionals, where efficient scheduling, dispatching, and communication can make the difference in whether a technician shows up at the right location, on time, with the correct part
- ☒ Allowing mobile professionals to access and respond to email and personal information management (PIM) from wherever they want

ROI ANALYSIS

Each of the firms studied for this White Paper have deployed Microsoft Windows Mobile-based Pocket PCs and Smartphones in conjunction with Exchange ActiveSync in Microsoft Exchange Server 2003. These firms include hospitals, retail establishments, a technology integrator, a service company, and an engineering and construction business. Their users include mobile professionals, such as executives, sales, doctors, and field service, whose mobility ranged from time on the road, to working full time in the field to mobile within a set location — but all benefit from the ability to send and receive information sooner rather than later.

These firms that had implemented the Microsoft mobile solution respondents were able to generate a one-year ROI of 129% and pay back the cost of the installation in 4.3 months. The three-year TCO per user was \$2,255. A summary of the ROI analysis is shown in Table 2.

TABLE 2

Summary of ROI per 100 Users

Average annual benefits	\$374,431
Investment	\$57,793
3-year net present value (NPV) of benefits at 12%	\$675,789
Three-year ROI = NPV savings/investment	300%
Three-year TCO per user	\$2,255
Payback in months	4.30
One-year ROI = NPV savings/investment	129%

Source: IDC, 2005

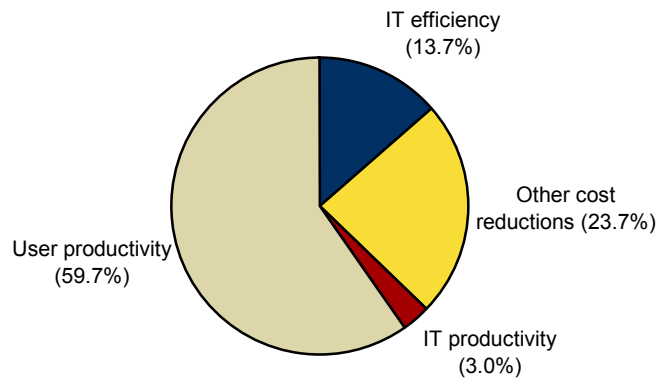
Benefits

IDC was able to identify multiple benefits of deploying mobility solutions with Microsoft Windows Messaging LOB solutions.

- ☒ **Reduced hardware costs.** By pulling back notebook computers from employees that only used them for email, companies were able to show a decrease of over \$1.02 million in hardware costs when outfitting employees with a mobile device and a desktop PC. Respondents also pointed to the savings from requiring fewer VPN servers as well as the cost reduction from fewer remote access services (RAS) calls. Several respondents also reported a drop in telecom costs because users were emailing more frequently and using the device to access corporate data instead of calling back to the home office.
- ☒ **User productivity and satisfaction.** The ability to respond to the immediacy that some emails demand, as well as the ability to access the most up-to-date information whenever users want, from wherever they are, is bringing a new level of convenience to work life. Employees are maintaining or increasing their productivity, while enjoying more flexibility in their workday resulting in a better quality of life. The efficiency that mobile solutions create for corporate operations is also enabling employees to be more effective in their jobs, allowing them to demonstrate a higher level of competency to coworkers, partners and customers. On average, mobile users were able to add 36 hours of productive time annually. Several case study subjects stated that as a result of a more convenient and productive work life, employee turnover decreased.
- ☒ **Efficient management.** Server-based management through Microsoft's Exchange Active Directory console allows IT staffs to centralize control and thwart many of the issues that can plague help desks. Used in conjunction with additional management products such as XcelleNet Afaria, which some case study subjects installed to supplement the Exchange console with tools for asset management, device monitoring, policy/profile management, and other device noncompliance issues contributed to a more secure environment and protected the expected cost savings. IT departments reported a more than 33% reduction in the time spent supporting mobile devices and mobile applications due to centralized management.

The calculated benefit by category of deploying mobility solutions with Microsoft Windows Messaging LOB solutions is shown in Figure 1. The total three-year benefit per 100 users is \$388,765. The greatest part of the total benefit is from improvements in user productivity, but significant benefits are also achieved through cost reductions and improvements in IT efficiency generated by the Microsoft platform.

FIGURE 1



Total savings = \$388,765

Source: IDC, 2005

Productivity — IT Staff

IS departments will be going from managing a single computer per user to potentially an endless number of machines and devices. As mobile devices gain more seamless access to the corporate network and begin to function as tools within business processes, IT departments will be required to exercise the same control that they already exercise over corporate PCs. This includes providing levels of IT support, asset management, and authenticating not only who is accessing the network, but also from what device. How effective an IT department is at managing and securing their mobile environment will have a direct effect on the level of cost savings it can expect to realize.

Sites using Microsoft's mobile messaging solution reported an average monthly time savings of 405 hours across their IT staff. Table 3 illustrates the IT staff time savings of managing a mobile environment by comparing the time spent on tasks before and after implementing Microsoft's mobile messaging solutions.

TABLE 3**IT Productivity**

	Reduction (%)
Network troubleshooting/repair	50
Network performance management	50
Maintaining the configuration database	50
Performing service level management	50
Managing Internet/transactional customer experience	50
Customizing and maintaining the mobile software	50
Problem management/investigation	44
Mobile clients	33
Mobile apps	33
Incident management/resolution/help desk	25
Other	10.2

Source: IDC, 2005

Productivity – End Users

Nearly every benefit that companies recognize as a result of implementing a mobile messaging solution is likely to be tied back, in one way or another, to the boost in user productivity. From increasing profits and cost reductions to heightened customer satisfaction and more customer renewals, the root of these benefits is the user-productivity increase that brought new levels of efficiencies to actions that could not previously be handled immediately.

Microsoft's mobile messaging solution contributes to higher levels of user productivity by giving users the means to access live data and complete tasks in environments that are not conducive to larger notebook PCs. Users pointed to their ability to make decisions faster because the necessary information was either stored on their device, or because the devices' "instant on" and connectivity made the information more accessible. Users also pointed to more efficient workflows as a result of workers remaining "plugged in" to processes while working away from their primary workplace. And, using existing infrastructure with the familiarity of the Windows environment allowed an easier learning curve for end users and IT staff.

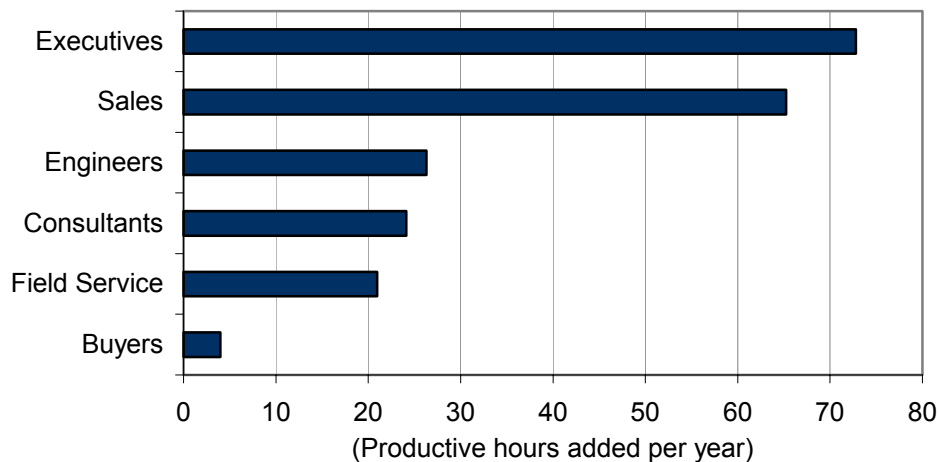
A key measure of user productivity is the amount of time users have access to the network, systems, and applications they need to get the job done. Since a user's productivity is only 80% during an hour without access, alternative connectivity methods enabled through mobility solutions can help prevent the 20% of wasted hourly wage:

- ☒ Reductions in lost time returned 2.8 hours of productivity per year to each user.
- ☒ Better mobile connectivity added 36 hours annually

As shown in Figure 2, mobility solutions add as many as 73 productive hours per year for key company positions.

FIGURE 2

User Productivity: Productive Hours Added per Year



Source: IDC, 2005

CHALLENGES

While mobility is a growing trend within corporations — the increase in user productivity — mobility's most obvious return is often challenged to be a sufficient reason for companies to invest beyond its executives and other preferred few. Even though staying ahead by being more productive than anyone else is a straightforward concept few would dispute, decision makers have to appreciate the value of staying connected, the ability to respond immediately, and the effect those benefits can have on individual performance and, subsequently, the organization's success.

But, since the decision to invest in mobile solutions should not be driven by technology, but rather an identified business need, companies will evaluate the costs and benefits of the mobile solution against the alternative ways of getting the job

done. Some firms could find that accessing data with a notebook computer or thin client through a secure remote connection to be cost competitive to the mobile device option. However, as the costs of the mobile solution and its next-best substitute diverge, decision makers need to weigh the benefits and outlays of the alternatives in a context that considers the accelerating trend that companies be responsive, connected, and collaboratively informed.

CONCLUSION

The popularity of mobile technologies, such as mobile phones, converged mobile devices, WiFi and WAN connectivity is furthering the expectation that companies and their employees be more responsive and accessible. Still, the decision to invest in mobile technologies should never be done for mobility's sake, but instead, driven by a business requirement, or for the efficiencies that come from providing mobile employees with convenient access to the information and applications they need to get the job done. The six companies studied in this White Paper that have implemented Microsoft's server-based, mobile-messaging solution were able to achieve significant direct and indirect cost savings. Companies that approach mobility with the intention to give IT the management tools to enforce its policies are more likely to experience the types of returns and cost savings outlined in this White Paper.

APPENDIX

IDC's ROI Methodology

IDC has developed an ROI methodology that measures the total cost 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, IDC asked for the deployment, setup, upgrade, and maintenance costs, as well as the total cost of the software and training.
2. **Measure the gains** in IT staff and user productivity from deploying the solution, revenue recaptured from reduced downtime, and cost savings from increased IT staff efficiency and lower capital and operating expenses. Even in the full business case, most of the savings were hard dollar savings, and only a small fraction would be considered soft savings.
 - **IT staff productivity** indicates how effectively IT managers and their staff use their time. Besides reducing operation costs, gains in IT productivity can free up staff to implement new initiatives more rapidly, helping to create a competitive edge. Providing the productivity boost required to grow the business while keeping the IT staff headcount level flat is considered a hard savings area because only a fraction of the overall time saved by the team is counted toward a hard ROI result.

- ❑ **User productivity** is increasingly dependent on service uptime as organizations become progressively more network-centric. When users are unable to access network resources, their productivity may be severely impaired. User productivity also suffers when employees have to wait for help desk support or other IT administrative tasks. Because users often are able to move to other business applications when service interruptions or performance degradations occur, only a small fraction of the potential user impact time is counted toward the final ROI result.
- ❑ **Lost revenue.** Higher service availability also contributes to a business' top lines because less revenue is lost due to downtime and potential service penalties are avoided. Additionally, downtime can be costly in terms of diminished customer satisfaction and possible loss of a customer's business.
- ❑ **Cost savings.** IT staff efficiency is a measure of how well the IT management organization can achieve economies of scale and scope of work with its people, tools, and practices. To remain competitive, companies must be able to grow their systems and networks at a faster rate than the IT staff required to support them. Skilled IT professionals continue to be scarce and expensive resource; therefore, companies are expecting existing staff to take on more work and responsibilities. Because improved IT staff efficiency reduces payroll costs, the savings are hard savings. Other hard savings include cost reductions from lower travel expenditures and from reduced spending on hardware, software, communications, and facilities.

3. **Calculate the payback period and ROI for the deployed solution.** From the results of the interviews, IDC was able to calculate the average payback period and rate of return from investing in mobile solutions, as well as the net present value of the savings. IDC also calculated a separate hard ROI using only the hard savings and excluding the soft savings from improved IT staff and user productivity.

IDC bases its calculations on a number of assumptions:

- ☒ Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and manage productivity savings.
- ☒ Downtime values are a product of the number of hours of downtime multiplied by the number of users affected.
- ☒ The impact of unplanned downtime is quantified in terms of impaired end-user productivity and lost revenue.
- ☒ Lost productivity is a product of downtime multiplied by burdened salary and then multiplied by a productivity factor (20–40%) to allow for partial productivity.
- ☒ Lost revenue is a product of downtime multiplied by the average revenue generated per hour. The results are then taxed at 50%.

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. Because every hour of downtime does not equate to a lost hour of productivity or revenue generation, IDC attributes only a fraction of the result to savings. As part of our survey, we asked each company what fraction of downtime hours to use in calculating productivity savings and the reduction in lost revenue. We then tax the revenue at that rate.

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.

Copyright Notice

External Publication of IDC Information and Data — Any IDC information that is to be used in advertising, press releases, or promotional materials requires prior written approval from the appropriate IDC Vice President or Country Manager. A draft of the proposed document should accompany any such request. IDC reserves the right to deny approval of external usage for any reason.

Copyright 2005 IDC. Reproduction without written permission is completely forbidden.