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Authors:

Alan Webber
Matthew Marden

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Business Value Highlights

268%

five-year ROI

Four month

break even point

\$44,999

in business benefits per
100 users per year

155%

more mobile applications
available to users

38%

more efficient mobile user
management

92%

less time lost due to security
breaches/viruses

The Benefits of Public Sector Organizations Going Mobile Using Microsoft Enterprise Mobility Suite (EMS)

EXECUTIVE SUMMARY

The operating platform for public sector organizations is shifting. The public sector (including national, state/provincial, and local government; education; and public healthcare) is faced with a workforce and a body of citizens who understand the benefits of mobile platforms in their personal lives and in their work lives, increasing overall productivity through access to information, improved collaboration, and communications. The public sector also faces increasingly contracted and strained budgets, forcing agencies and organizations to find innovative ways to become more efficient and effective while remaining secure. In this environment, technology platforms and applications are one of the primary avenues for improvement and a key area of interest for public sector executives.

IDC interviewed five public sector organizations using Microsoft Enterprise Mobility Suite (EMS) to understand how it helps them serve their employees and constituents more effectively and efficiently. These organizations reported that Microsoft EMS enables them to provide employees with cost-effective, secure, and consistent access to applications and data on their mobile devices, which makes them more productive and efficient. As a result, IDC calculates that these public sector organizations will achieve benefits with an average value of \$44,999 per 100 users per year over five years, which results in an average five-year return on investment (ROI) of 268%, through the following areas of value:

- » **Making employees more productive** by extending mobile access to more users and applications
- » **Enabling efficient mobile user and device management**, meaning that less IT staff time is needed to manage and support access to applications on mobile devices
- » **Being cost effective and supporting standardization** across Microsoft's suite of products
- » **Reducing the impact of security breaches** on users and operations through security and analytics features

Situation Overview

We have become a mobile society. From buying our coffee with an app to choosing what restaurant to eat at and what movie to see to looking up recipes at home, most of us have one or more mobile devices we use to access email, messages, the Internet, apps, and more. According to the January 2014 Mobile Technology Fact Sheet from the Pew Internet Project, 90% of American adults have a cell phone, 58% of American adults have a smartphone, and 48% of American adults have a tablet computer. We are becoming more and more a global society dependent on mobile devices as a way of communicating, interacting, and receiving information in both our personal and our professional lives.

Public sector IT is no different from private sector IT departments in that it is forced to transform often by forces outside of its control. We are currently in the third era of public sector IT transformation, and this current era, or Gov 3.0, is focused on delivering broad and pervasive government services to citizens across multiple secure channels and platforms while using mobile platforms for employees and partners to have the ability to work anywhere that their job requires, from the office to the battlefield and anywhere in between.

The Era of Mobile Public Sector

Public sector employees, like others, have enjoyed the convenience from the level of information and interaction that they can have on their personal devices through the commercialization of IT. These same employees also saw the value of bringing personal devices to work and the value these devices provide in their job, thus pushing the public sector forward faster in the adoption of the mobile platform. Under the movement toward Gov 3.0, government agencies from the local level to the national level have been able to derive value, increase efficiency, and increase effectiveness in program and mission accomplishment.

The high adoption of mobile devices by public sector organizations and programs is driven by the benefits provided by these devices. Some of the benefits that public sector organizations and employees have found with mobile devices at work are:

- » **Increased productivity.** One of the largest benefits to the use of mobile devices is increased efficiency and effectiveness — whether it is looking up information in a meeting, reviewing photographs and charts from a remote location, or simply returning an email. When a government employee has the ability to complete a task away from his/her primary computer, more work gets done.

- » **Superior security.** Employees see the benefits of mobile devices and are going to adopt them for work purposes — whether their own device or an organizationally provided device. Most mobile devices in public sector organizations have been employee owned and either used with implicit permission or within a BYOD effort. Shifting from employee-owned devices to organizationally owned and managed devices (with an infrastructure that supports the appropriate management and control of such devices and information) brings a higher level of security to the organization.
- » **Enhanced access.** Closely tied to increased productivity is enhanced access to information and applications. Whether it is through line-of-business applications unique to the government or general applications like maps, weather, or the Web browser, mobile devices open up access to additional applications and correspondingly information when away from the desk or in the field.
- » **Better collaboration.** Outcomes improve through collaboration. Until recently, collaboration has been limited to in person, on the phone, and back-and-forth emails. Mobile devices and applications are changing that, so the breadth of contexts that collaboration happens across is increasing and the depth of the level of collaboration is also increasing.
- » **Expanded service to citizens.** The use of mobile devices will allow government employees to deliver better and faster services to citizens by opening up access to the information stored in public sector IT systems to the point of interaction and engagement.
- » **Improved cost efficiency.** The use of mobile devices potentially improves the cost efficiency of technology in two ways. First, outside of classified or sensitive information, the use of personal mobile devices (BYOD) in a supplementation role has been a cost-effective option for public sector organizations because these devices increase the effectiveness of the employee while only moderately increasing organizational IT support costs and hardware costs. Second, the cost of managing devices, applications, and corresponding infrastructure for a single mobile device is generally smaller than the equivalent for a desktop or laptop computer.

Microsoft Enterprise Mobility Suite

Microsoft's focus with EMS is to make it easier for large enterprise organizations including public sector to effectively manage all of the mobile devices their employees carry from a single platform. The Microsoft EMS platform, which leverages and brings together Microsoft products such as Intune and System Center 2012 R2 Configuration Manager and technologies that provide a comprehensive mobile device management (MDM) solution, takes a user-

centered approach that targets the rise in mobile device adoption along with the increase in enterprises adopting a software-as-a-service (SaaS) strategy (see Table 1). Microsoft EMS is built on four cloud platforms:

- » **Azure Active Directory Premium** provides identity rights and access management (IAM) capabilities including single sign-on, multifactor authentication options, and group-based provisioning for SaaS applications.
- » **Microsoft Intune** provides mobile device management and mobile application management (MAM) capabilities including device management across iOS, Android, Windows 10, device provisioning, settings management, and remote wiping.
- » **Azure Rights Management** is employed for data and document security including encryption and safe sharing of protected files and features in both the cloud or in a hybrid model in conjunction with existing on-premises infrastructure.
- » **Advanced Threat Analytics** is employed to alert for known security issues and risks, look for and detect abnormal behavior on the part of users and aspects of the system, and detect malicious attacks.

TABLE 1

Microsoft Enterprise Mobility Suite		
Hybrid and cloud identity SaaS applications	Microsoft Azure Active Directory Premium	<ul style="list-style-type: none"> • Single sign-on across multiple • Password and group management • Multifactor authentication • Security audit reports
Mobile device management and mobile application management (MDM and MAM)	Microsoft Intune	<ul style="list-style-type: none"> • Mobile device settings management • Mobile application management • Remote wipe
Access and information protection	Microsoft Azure Rights Management service	<ul style="list-style-type: none"> • Information protection and security
	Microsoft Advanced Threat Analytics	<ul style="list-style-type: none"> • Connected to on-premise assets • Malicious attack detection • Detects abnormal behavior

Source: IDC, 2016

The Business Value Of Microsoft Enterprise Mobility Suite For Public Sector Organizations

Study Demographics

IDC interviewed five organizations in the public sector to understand the benefits and costs associated with their use of Microsoft EMS. These organizations, which were leveraging Microsoft EMS to support an average of 4,740 employees with access to applications at the time of interviews, provided experiences from the following perspectives (see Table 2):

- » Public school district in a major metropolitan area
- » Public utility organization ensuring the quality of a community’s water supply
- » Fire department serving a city with a population of more than one-quarter million
- » State government with tens of thousands of employees
- » Board of elections serving a county with more than 1 million inhabitants

TABLE 2

Demographics of Interviewed Public Sector Organizations Using Microsoft EMS		
	Average	Median
Number of employees	11,520	2,100
Number of IT staff	329	60
Number of IT users	11,500	2,000
Number of mobile users with Microsoft EMS	4,740	900
Number of sites/offices	595	38
Number of business applications on Microsoft EMS	209	7

n = 5
 Source: IDC, 2016

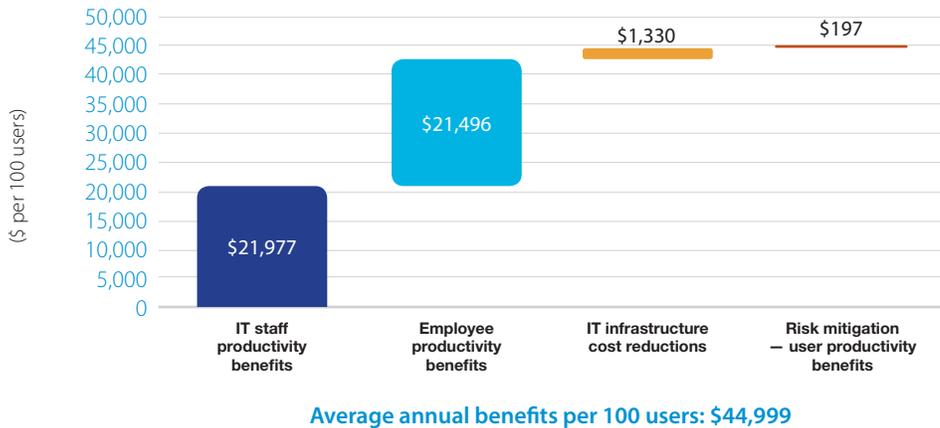
Business Value Analysis

According to interviewed organizations, Microsoft EMS allows them to more effectively and efficiently serve their communities and constituents by providing their employees with cost-effective, secure, and consistent access to applications and data on mobile devices. Based on interviews with these organizations, IDC projects that they will realize value worth an average of \$44,999 per year per 100 users (\$2.41 million per organization) over five years in the following ways (see Figure 1):

- » **IT staff productivity benefits.** Microsoft EMS enables more efficient management and support of mobile users and devices. IDC calculates that interviewed organizations will achieve IT staff efficiencies with an annual average value of \$21,977 per 100 users (\$1.18 million per organization) over five years.
- » **Operational productivity benefits.** Microsoft EMS supports employee mobility, which enhances employee productivity by allowing them to work regardless of location and device and better respond to constituents and colleagues. IDC puts the value of increased employee productivity at \$21,496 per 100 users (\$1.15 million per organization) per year over five years.
- » **IT infrastructure cost reductions.** Microsoft EMS provides a cost-effective suite of mobility solutions while also enabling licensing and infrastructure cost savings. IDC projects that these cost savings will be worth \$1,330 per 100 users (\$71,300 per organization) per year over five years.
- » **Risk mitigation — user productivity benefits.** Microsoft EMS helps organizations limit risk associated with greater mobile application access and reduces the impact of security breaches and viruses on user productivity. IDC calculates that these benefits will have a value of \$197 per 100 users (\$10,500 per organization) per year over five years.

FIGURE 1

Average Annual Benefits per 100 Users



Operational Productivity Benefits of Extending Mobility with Microsoft EMS

Interviewed public sector organizations reported that deploying Microsoft EMS has made their employees more productive by simplifying and extending device, data, and application access. This enables employees to work more efficiently and effectively by allowing them to work with greater mobility and flexibility. Every interviewed organization described at least two groups of employees who are more productive with Microsoft EMS supporting access to mobile applications.

Microsoft EMS and Extending Mobility

Like all organizations, public sector organizations face challenges as they determine how to increase mobility of their employees. On the one hand, their employees want access to mobile applications and data that allow them to effectively do their jobs, but public sector organizations must balance this demand with mobility-related security concerns and costs. An IT manager at the state government discussed how this tension drove its decision to deploy Microsoft EMS: “Our deployment of EMS was driven by a new generation of workers and users that are increasingly mobile. They desire to work at different locations with multiple devices. On an enterprise architecture level, we have to be able to support, manage, and protect them with security controls. The business is kind of driving the IT need to implement a management suite for those type of resources.”

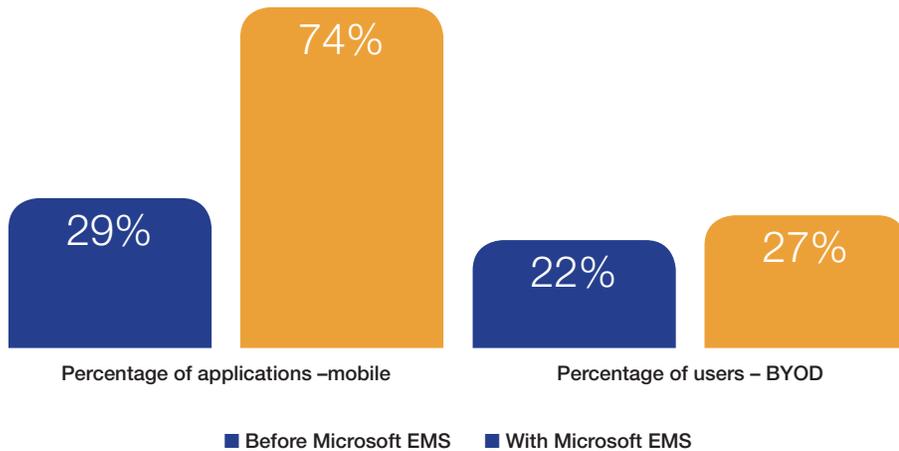
According to interviewed organizations, Microsoft EMS helped them broaden and deepen their employees’ access to mobile applications. An IT manager at the board of elections said that mobile users now have access to all business applications on their mobile devices with Microsoft EMS, up from about one-third of applications. He commented: “The key benefit of EMS has been the ability to keep people in the field and at remote locations connected and to get up-to-date information from those locations in real time. Now, the information flows in both directions.”

Interviewed organizations have more than doubled the percentage of business applications available on mobile devices from an average of 29% to 74% with Microsoft EMS. For these public sector organizations, this means that their employees have the tools needed to effectively do their jobs.

Interviewed IT managers also reported that they are aware of Microsoft EMS’ potential to enable BYOD initiatives. However, at the time of interviewing, these organizations had only modestly increased BYOD penetration at their organizations, going from 22% to 27% of users with Microsoft EMS in place. Despite prohibitions on BYOD at two of the five organizations, it was seen as having potentially substantial benefits for these public sector organizations, including reducing device-related costs (see Figure 2).

FIGURE 2

Mobile User KPIs: Microsoft EMS for Public Sector



Source: IDC, 2016

Making Employees More Productive

By supporting the extension of mobility in terms of the number of mobile users and mobile applications with Microsoft EMS, interviewed public sector organizations reported that their employees are more effective and engaged. As a result, they are able to better serve their

“Employees can now change their passwords on their own and have a single sign-on portal. This has made everyone more efficient. Now, with Microsoft EMS, they can access what they need in a timely fashion without spending a lot of time just getting what they need in the first place.”

communities and constitutions and collaborate more effectively, making them more productive. For purposes of this study, IDC quantified the value of this increased productivity at nearly a day of additional productive work for every employee with access to mobile applications with Microsoft EMS per year. Public sector organizations stressed that this enhanced productivity was at the core of Microsoft EMS’ value:

- » The IT manager at the school district said: *“Employees can now change their passwords on their own and have a single sign-on portal. This has made everyone more efficient. Now, with Microsoft EMS, they can access what they need in a timely fashion without spending a lot of time just getting what they need in the first place.”*
- » The IT manager at the state government explained: *“Microsoft EMS has made our information more accessible regardless of location. We are able to get back to our constituents more quickly without having to return to a base/office to work. Our employees’ office is ‘anywhere they are.’”*

Each IT manager at the interviewed public sector organizations cited improved productivity for at least two groups of users, ranging from engineers to teachers to human resources teams to IT staff members. As Table 3 demonstrates, the reasons for these productivity enhancements varied but generally boiled down to Microsoft EMS enabling individuals to work seamlessly and securely away from their desks, providing easy access to applications on mobile devices, and enabling collaboration between employees and members of the communities they serve.

TABLE 3

User Productivity — Making Employees More Effective with Microsoft EMS			
	Employee Group	Number of Employees	Description
Engineers	300		More effective collaboration between engineers, easier sharing of data and files
Field workers	220		All data needed by field workers available from any place and any device; able to respond to clients and constituents without going back to base office
Teachers	600		Save time with single sign-on portal and the ability to change passwords on own
IT staff	1,500		Provide better services by having the ability to go onsite to support users with greater regularity
Application developers	4		Time freed up from supporting end users can be reinvested in researching and developing new technologies

Source: IDC, 2016

IT Staff Productivity Benefits

Microsoft EMS also enables mobility at interviewed public sector organizations by making their mobile device and user management efforts more efficient. For these organizations, minimizing the time their IT staffs must devote to supporting mobile users can justify extending mobility to more users and more applications. Microsoft EMS makes management and security less burdensome — the organizations’ IT teams responsible for supporting mobile users are 39% more efficient on average, going from requiring 15.8 hours per mobile user per year to 9.6 hours per mobile user per year (see Figure 3).

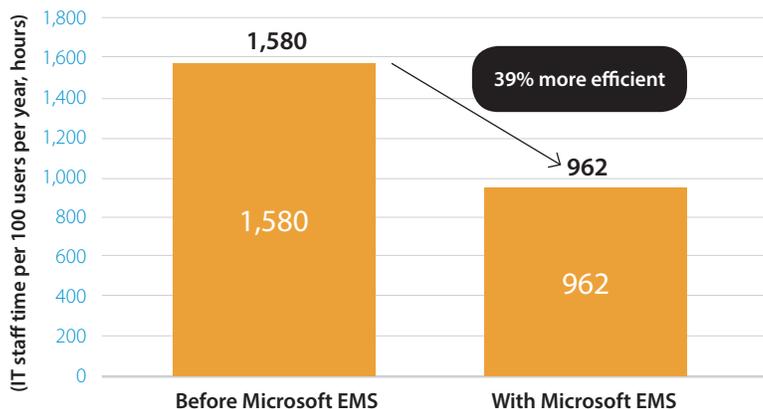
As a result, less staff time is needed to provide robust support to mobile users, freeing staff time that can be used to support other initiatives.

Interviewed organizations reported time savings and efficiencies in activities such as device deployment and replacement, responding to user problems with mobile access to applications, user and device security, patch management, handling user administration and device provisioning, and password management and reissuing. An IT manager at the public school system commented: “I cannot overstate how big a difference it has made to be able to simply log in, manage passwords, and access apps and services through the portal with Microsoft EMS. This is central to what our staff and students need to do every day.”

In addition, interviewed public sector organizations described how Microsoft EMS also makes their IT teams more productive by increasing their mobility. For example, the IT manager at the state government noted: “With Microsoft EMS, we can do more call-based work, with the IT staff in particular being able to go onsite more. Being on location improves the level of service they provide by being more familiar with what is going on out in the field.”

FIGURE 3

IT Staff Efficiencies: Mobile User and Device Management and Support



Source: IDC, 2016

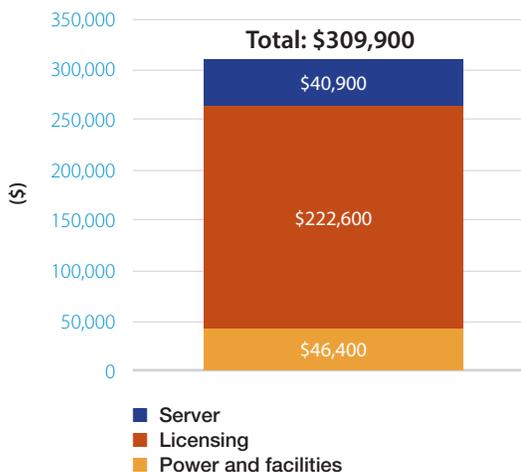
IT Infrastructure Cost Reductions

Interviewed public sector organizations also described Microsoft EMS as cost effective, with several citing this as a driver for their decision to deploy it. An IT manager at the public utilities organization explained: *“Microsoft EMS is a more cost-effective solution than the alternatives we considered. It’s given us the ability to reallocate resources to newer projects. We are now getting a higher-level return from many of the people who were previously stuck doing lower-level support.”* Further, several interviewed organizations talked about how Microsoft EMS fits within their overall efforts to standardize with Microsoft. The IT manager at the board of elections said: *“The adoption of EMS was part of an overall decision to standardize on Microsoft as our primary technology supplier as part of an overall consolidation process. EMS was important in that it helped us make the decision to go with Microsoft. We got what we needed at an affordable cost.”*

In addition to being cost effective, interviewed organizations attributed certain cost savings to their use of Microsoft EMS. For example, one organization reported reducing licensing costs associated with supporting mobile users, and another said that it has retired a number of servers with Microsoft EMS. In addition, several interviewed organizations see potential for substantial device-related savings in the future if they can extend BYOD with the support of Microsoft EMS, and one organization expects to achieve savings in terms of network management going forward. Figure 4 shows five-year IT infrastructure cost reductions with Microsoft EMS.

FIGURE 4

Five-Year IT Infrastructure Cost Reductions: Microsoft EMS for Public Sector



Source: IDC, 2016

“Microsoft EMS has greatly increased our security footprint with the rights management and the ability to deliver documents and control their dissemination accordingly.”

Risk Mitigation

Interviewed public sector organizations also noted that Microsoft EMS has helped them better secure mobile access for users. In particular, they correlated improved device security and reducing the impact of security breaches with their use of Microsoft EMS. The IT manager at the state government said: “Microsoft EMS has greatly increased our security footprint with the rights management and the ability to deliver documents and control their dissemination accordingly.” The IT manager at the board of elections cited his organization’s ability to isolate and remedy breaches in less time as a benefit of Microsoft EMS: “We still have some incidents, but we move on from them much more quickly most of the time.”

For public sector organizations, this improved security posture has a twofold benefit: first, it provides the foundation for extending mobility; and second, it helps mitigate the impact of security breaches and viruses on mobile users. The five interviewed public sector organizations reported that their mobile users lose 92% less productive time on average because of security breaches and viruses (see Table 4). For purposes of this study, IDC has not included this benefit in its financial analysis because of the likelihood that other factors such as firewalls contributed significantly to reducing the impact of such security-related incidents.

TABLE 4

Risk Mitigation, Security Breaches, and Viruses with Microsoft EMS				
	Before Microsoft EMS	With Microsoft EMS	Difference	% Change
Number of instances per year	126	60	66	
MTTR (hours)	4.0	1.0	3.0	
Number of productive hours lost per 100 users per year to security breaches and viruses	194	16	178	

* These benefits have not been included in IDC’s financial analysis because of the likelihood that other steps taken by these organizations (e.g., deploying a new firewall) factored into reducing the impact of security breaches and viruses on users.

Source: IDC, 2016

ROI Analysis

IDC interviewed five organizations using Microsoft EMS to support their efforts to deliver applications and data to employees on mobile devices and recorded their results to inform this study's analysis. IDC used the following three-step method for conducting its return-on-investment analysis:

- 1. Gathered quantitative benefit information during the interviews using a before-and-after assessment.** In this study, the benefits included employee and IT staff productivity gains and infrastructure-related cost reductions.
- 2. Created a complete investment (five-year total cost analysis) profile based on the interviews.** Investments go beyond the initial and annual costs of using Microsoft EMS and can include additional costs, including migrations, planning, consulting, and staff or user training.
- 3. Calculated the ROI and payback period.** IDC conducted a depreciated cash flow analysis of the benefits and investments for these public sector organizations' use of Microsoft EMS over a five-year period. ROI is the ratio of the net present value (NPV) and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

Table 5 presents IDC's analysis of the average discounted benefits, investment, and return on investment for interviewed organizations' investment in and use of Microsoft EMS. IDC calculates that these public sector organizations will invest a discounted average of \$43,336 per 100 users (\$2.3 million per organization) in Microsoft EMS over five years in licenses, staff time to deploy and maintain, and other associated costs. In return, IDC projects that these organizations will realize average discounted business benefits with a value of \$158,332 per 100 users (\$8.5 million per organization) over five years based on the efficiencies and productivity gains discussed in this study. This would result in a five-year ROI of 268%, with breakeven in their investment in Microsoft EMS occurring in an average of four months.

TABLE 5

Five-Year ROI Analysis		
	Per Organization	Per 100 Users
Benefit (discounted)	\$8.5 million	\$158,332
Investment (discounted)	\$2.3 million	\$43,336
Net present value (NPV)	\$6.2 million	\$115,296
Return on investment (ROI)	268%	268%
Payback period	4 months	4 months
Discount rate	12%	12%

Source: IDC, 2016

Challenges And Opportunities

Public sector organizations are being thrust forward into a complex mobile environment that will likely only get more complicated. To be successful, public sector IT organizations need to think long term about technology needs, organizational culture, and security that will provide a mobile architecture that is ultimately effective, secure, controllable, and scalable while providing a comparable user experience to the consumer experience.

From police officers who have tablets or laptops in their cars to building inspectors using a tablet to capture photos of code violations, reference digital building plans, and so forth to public health agencies who use mobile devices to input digital notes directly in the electronic case file, access electronic medical records, and track patient health and outcomes — the public sector is becoming more mobile, bringing tremendous value to the organization, to the community, and to the citizen.

Mobile platforms and devices still have to overcome some challenges primarily around security and device management in order to be fully adopted by public sector organizations, but the number of available solutions for agencies is growing every day. Public sector organizations that want to deploy mobile devices for the first time or continue to deploy additional devices should consider the following for selecting an EMS:

- » Device management and network including remote lock and wipe
- » Comprehensive security at FIPS 140-2 or equivalent minimum
- » AES256 or equivalent encryption of data in transit and at rest

- » Comprehensive application permission management
- » Enterprise control of update deployment
- » Restrict or remove access to hardware such as Bluetooth, camera, and GPS
- » Managed WLAN connectivity
- » Availability of public sector and enterprise applications and manageable store

While taking these issues into account, it is also important to be long-term budget aware and that efforts be made to reduce implementation costs and leverage existing infrastructure and investments. A solution that addresses the evolving security needs of the public sector organizations, that is scalable, that takes advantage of technology familiarity to reduce training and implementation costs, and that builds upon legacy investments goes a long way in meeting the needs of these unique organizations.

Summary And Conclusion

Like enterprises, public sector organizations face pressure to find ways to enable their employees to improve service delivery and program performance within very real budgetary and security constraints. They realize that to better serve their communities, they must provide their employees with the tools necessary to be both efficient and effective. But they have often found it challenging to balance achieving these objective within the constraining factors of budgets, business processes, and legislatively mandated objectives. Still, enabling workplace mobility has become a priority for more public sector organizations as they perceive benefits in terms of employee productivity and operational efficiencies that result from flexible and convenient access to information and improved collaboration and communication among and between employees and the communities they serve.

This has led to greater interest from public sector organizations in technology platforms and applications that promote the enablement and optimization of workplace mobility. The Microsoft EMS platform, which leverages Microsoft products such as Intune and System Center 2012 R2 Configuration Manager and other technologies that provide a comprehensive mobile device management solution, offers a mix of capabilities that support and extend mobility. IDC's research demonstrates that the public sector organizations interviewed for this study are benefiting from deploying Microsoft EMS because it allows them to more effectively and efficiently serve their communities and constituents. In particular, they cited the value of increasing employee productivity by providing their employees with cost-effective, secure, and consistent access to applications and data on mobile devices. As a result, IDC projects

that these public sector organizations are achieving strong value with Microsoft EMS and serving their communities more effectively and efficiently.

Appendix

IDC utilized its standard ROI methodology for this project. This methodology is based on gathering data from current users of Microsoft EMS as the foundation for the model. Based on these interviews, IDC performs a three-step process to calculate the ROI and payback period:

- » Measure the savings from reduced IT costs (staff, hardware, software, maintenance, and IT support), increased user productivity, and improved revenue over the term of the deployment.
- » Ascertain the investment made in deploying the solution and the associated migration, training, and support costs.
- » Project the costs and savings over a five-year period and calculate the ROI and payback period for the deployed solution.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

- » Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and manager productivity savings. IDC assumed average annual salaries of \$84,000 for IT staff members and \$58,800 for other employees.
- » 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.
- » The net present value of the five-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. This accounts for both the assumed cost of money and the assumed rate of return.

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 assessment, we asked each company what fraction of downtime hours to use in calculating productivity savings and the reduction in lost revenue. IDC then taxes 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.

Note: All numbers in this document may not be exact due to rounding.

IDC Global Headquarters

5 Speen Street
Framingham, MA 01701
USA
508.872.8200
Twitter: @IDC
idc-insights-community.com
www.idc.com

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