

Enterprise Mobility State-of-The-Market Report

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Introduction and Key Findings

This State-of-the-Market Report provides quantitative insights and qualitative analysis on how companies are using Enterprise Mobility today and how they plan to use it in the future. For the study, Enterprise Mobility (EM) is defined as the business practice, supported by underlying technology, that allows employees to work away from their assigned work location using mobile devices and cloud services to perform business tasks. EM applications include, but are not limited to, real time communications (voice, video, text, email, and fax) and collaboration (audio/video conferencing, web meetings, and desktop sharing). EM can also support other business applications such as sales support, contact center features, and technical field support. EM access is provided to smartphones, tablets, or laptops.

The study results and analysis are based on responses from 231 IT professionals directly involved in the operations, planning, design, or implementation of enterprise communications networks; answers from equipment manufacturers, service providers, VARs, and consultants were excluded from the study. The key finding was that 83% of companies have yet to fully deploy EM across their company. Specifically, just 17% of respondent companies had fully deployed EM, while 53% had partially implemented EM in their organization, and 29% were still in the planning phase. Less than 1% had no plans to support EM.

Respondents were well balanced by company size: 19% answered for small businesses with fewer than 100 employees, while another 25% came from organizations with 100 to 499 employees. About 23% of responses represented organizations with 500 to 2,499 employees, and the remaining 33% came from organizations with 2,500 or more employees. While the survey was distributed to a global sample, 83% of responses were from North America, with the remainder coming from the rest of the world.

The study looked at how three different kinds of workers needed EM, while also measuring how many in each category had access to it. Employee categories and their respective representation in the work force included the “knowledge worker” (at ~38%), the “information worker” (at ~36%), and the “service worker” (at ~25%). To determine the organizational value of EM, the analysis quantified how much productivity time was lost without effective EM. Interestingly, the survey discovered that service workers lost nearly as much productive time due to ineffective mobility support as did information workers - proving that service workers are increasingly dependent on EM.

Ineffective EM costs in dollars were even more dramatic given the difference in labor costs by worker category: potential annual costs were \$12,493 for knowledge workers, \$9,283 for information workers, and \$2,993 for service workers. When factoring in the company size and the mix of workers for respondents, the typical respondent company is losing about \$186,000.00 per week or, even more impressively, \$36M per year.

Other key findings:

- 99% of knowledge workers accessed work-related apps when away from their assigned work location.
- Laptops rate as the single most useful business tool when outside the office.
- Document sharing and collaboration, audio conferencing, and mobile clients for smartphones and tablets were the three most important applications for EM to support outside the office.
- 38% of those surveyed said that access to the apps and content they needed outside the office did not meet their needs.
- Mobile Device Management (MDM) tools are considered essential to manage administrative, security, and EM performance.

The Need for Enterprise Mobility

Survey results showed that the need for EM varies widely by job requirements. To demonstrate this variability, respondents were asked to describe the nature of their organization’s workforce in three broad categories, including “knowledge worker,” “information worker,” and “service worker” using these definitions:

- *A knowledge worker is an employee whose job involves developing and using knowledge rather than producing goods or services. Examples include developers, teachers, analysts, engineers, etc.*
- *An information worker is an employee who needs information to do their job but does not necessarily create new knowledge. Examples include doctors, nurses, members of the military, contact center agents, etc.*
- *A service worker provides a service using little or no information to do their job. Examples include retail clerks, maids, construction workers, etc.*

As shown in **Figure 1**, respondent organizations counted 38% of their work force as knowledge workers, 36% as information workers, and 25% as service workers.

Respondents were then asked to estimate how many workers used EM for access to their organization’s real time communications systems, business applications, or business information when away from their assigned work locations. Not surprisingly, knowledge workers were the most likely to use EM, service workers used it the least, and information workers were somewhere in

between. For example, 99% of knowledge workers accessed work-related apps when away from their assigned work location, while 28% of service workers never used it. Most companies had at least some employees who used EM, regardless of their job descriptions. Detailed results are shown below in **Figure 2**.

Figure 1: Respondent Workforce Composition

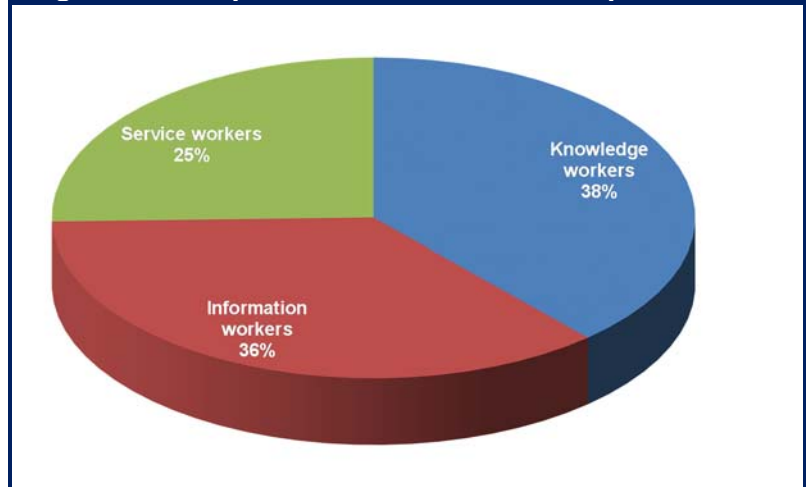
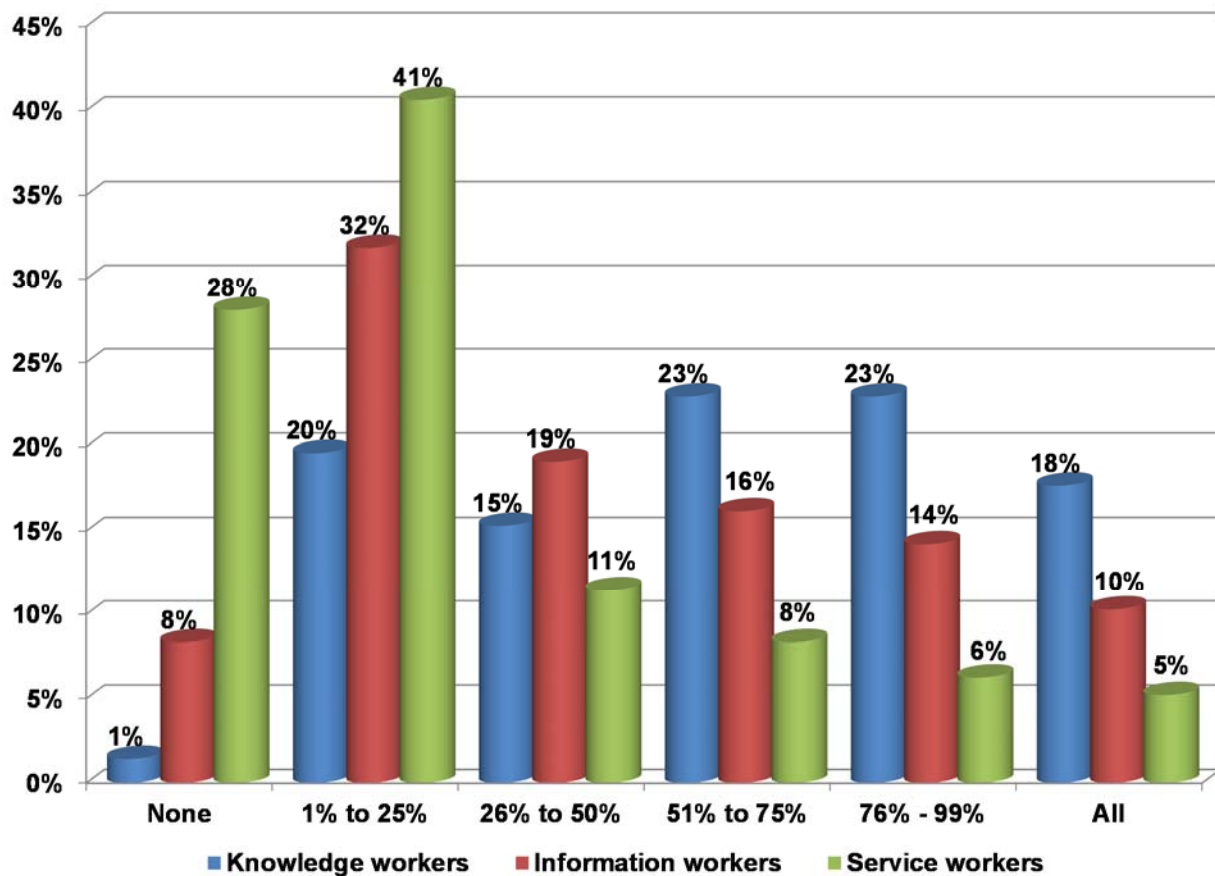


Figure 2 Enterprise Mobility Use Away From Assigned Work Location



As a percentage, how many employees in your organization use their mobile device (smart phone, tablet, laptop, etc.) for business use away from their assigned work location?

Analysis:
Why is this important?



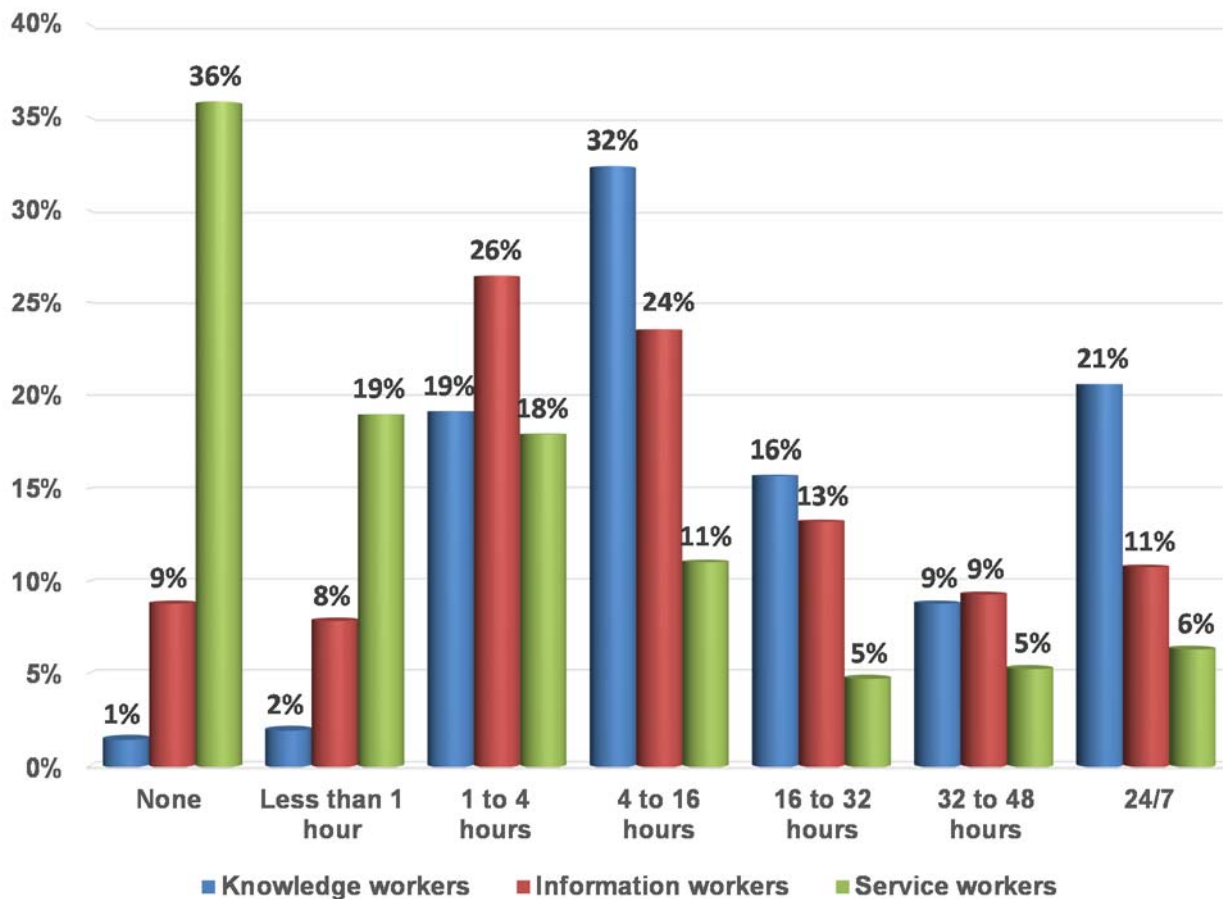
The need to support EM for knowledge and information workers is well understood. However, even companies that are largely comprised of service workers have at least 72% of employees who use EM to access work information or communications / collaboration applications some of the time when away from their assigned work location.

Despite the need demonstrated for EM, only 17% of respondent companies had fully implemented a platform to support it while 53% had partially implemented EM and 29% were still in the planning phase.

The Value of Enterprise Mobility and Opportunity Costs

Because time is money in business, respondents were asked to specify by worker category how much time employees spent to access corporate assets via enterprise mobility. Knowledge workers, already more likely to find more occasions to use EM as shown above, were also likely to spend more time per occasion accessing corporate information and applications. Among knowledge workers, 32% spent from between 4 and 16 hours a week using EM, 25% used it between 16 and 48 hours a week, and 21% used it around-the-clock. Service workers spent far less time, with 55% spending less than an hour a day using access outside their assigned work location. Additional details about time spent are shown below in **Figure 3**.

Figure 3: Time spent using EM services



When away from their assigned work locations, approximately how many hours per week do workers in your organization or company need access to mobile real time communications and collaboration or other business applications?

Information was also supplied by respondents about the work time lost when employees were unable to access company assets and applications via EM. This data was coupled with information from the US Bureau of Labor Statistics, using four job sample job titles to define an average salary base for each of the three employment categories. Given standard assumptions about labor costs, a dollar value was assigned for time lost, with the calculations shown below in **Figure 4**.

Figure 4: Labor Losses without Enterprise Mobility

Knowledge Worker		Information Worker		Service Worker	
Software developer annual salary	\$ 93,350	Doctor (Internist) annual salary	\$190,530	Retail Salesperson annual salary	\$25,760
University Professor annual salary	\$ 68,970	Registered Nurse annual salary	\$ 69,690	Delivery Driver annual salary	\$33,870
Civil Engineer annual salary	\$ 87,130	Police Officer annual salary	\$ 59,530	Housekeeper annual salary	\$22,500
Financial Analyst annual salary	\$ 92,250	Customer Service Rep annual salary	\$ 33,890	Carpenter annual salary	\$45,590
Average salary	\$ 85,425	Average salary	\$ 88,410	Average salary	\$31,930
Loaded labor rate @ 1.5 x salary	\$ 128,138	Loaded labor rate @ 1.5 x salary	\$132,615	Loaded labor rate @ 1.5 x salary	\$47,895
Hourly rate @ 1920 hours worked / year	\$ 66.74	Hourly rate @ 1920 hours worked / year	\$ 69.07	Hourly rate @ 1920 hours worked / year	\$ 24.95
Average hours lost per week	3.9	Average hours lost per week	2.8	Average hours lost per week	2.5
Average \$ lost/ year @ 48 weeks worked	\$ 12,493	Average \$ lost/ year @ 48 weeks worked	\$ 9,283	Average \$ lost/ year @ 48 weeks worked	\$ 2,993

Service workers in select occupations have depended on EM for years. For example, UPS delivery drivers have used mobile terminals [since 1991](#) when the company introduced its Delivery Information Acquisition Device to 60,000 employees. More recently, airlines (including Alaska, Delta, and United and others) have provided flight attendants with mobile devices to check work schedules and passenger flight updates, sell in-flight concessions and seat upgrades, and access company email and intranet sites- even providing in-flight access to online safety manuals.

Entrepreneurial field service workers are also embracing EM to improve customer service and improve efficiency. For example, a local locksmith uses his tablet to find a replacement door handle while on a service call at the customer's home. Accessing the internal inventory system, he finds that his local shop does not have any replacements in stock, but a nearby colleague in the field has a spare. The locksmith arranges via text for his co-worker to deliver the part, while he orders additional replacement stock from his laptop to rebuild needed inventory.

The bottom line: as more EM platforms are deployed, employers will continue to improve service worker productivity and the distinction between the information worker and the service worker will continue to blur.

Among the respondent organizations, each company lost an average of \$12,493 annually for each knowledge worker employed, \$9,283 lost for information workers, and \$2,993 lost for service workers. While the value is unique for each organization based on wages paid by position, the opportunity costs for a suboptimal EM solution is obvious.

To realize the scope of this loss, consider the demographics of the companies responding to the survey. Among the respondents, the average company has 4,000 employees. As noted above, these companies have an average of 38% knowledge workers, 36% as information workers, and 25% service workers.

Thus, using the loss per worker above, the typical responding company is losing about \$186,000.00 per week, or, even more impressively, \$36M per year. Of these losses, over 90% comes from lost productivity among knowledge workers and information workers.

Device Preferences and BYOD for Enterprise Mobility

EM platforms need to support multiple devices including smartphones, tablets, and laptops. As a metric to gauge the most mission-critical business, the survey asked respondents: “If you could have only one tool from the following list to use for your business needs, which would it be?” The results, shown below in **Figure 5**, were mixed. Just over half of the respondents picked a laptop and only 2% named a desktop phone as the single most important business tool.

Respondents each had valid reasons for their selection. Laptops won out over other devices because of their versatility and portability. One respondent commented that the “laptop provides the most functionality. It can use softphone, desktop class apps, it is portable, and it is not limited like netbook or tablet. With a cellular modem or Wi-Fi it can connect from anywhere.” Another added, “Most of my work functions require PC-style access; some . . . require IE-specific access, only available by Windows PC.”

Smartphone advocates focused on device mobility, flexibility, and ease of use. Comments from different smartphone proponents included, “that is what I use the most;” “small and always carried;” “easiest, convenient, and becoming more powerful;” and “it can do everything – voice, email, calendar, view docs, etc.”

Tablet proponents liked their choice because it balanced portability, versatility, and screen size. One commented saying, “We have a mobile workforce and the weight of laptops is sometimes an issue with nurses in the field. It would be nice to have one light device that can support data and voice applications.” Another added, “It is mobile, Wi-Fi capable, easy to use, compact and easily integrates with most of our internal applications.”

Not surprisingly, the survey results also suggested that enterprises are not only supporting a range of devices but also a range of device owners. Bring Your Own Device (BYOD) policies were in place for nearly every organization, as shown by **Figure 6** below. Organizations were most likely to own desktop phones and computers, netbooks/Chromebooks, and laptops; tablet ownership was evenly split; and smartphones were slightly more likely to be owned by employees than companies.

Figure 5: Choosing the Single Most Important Business Tool for EM

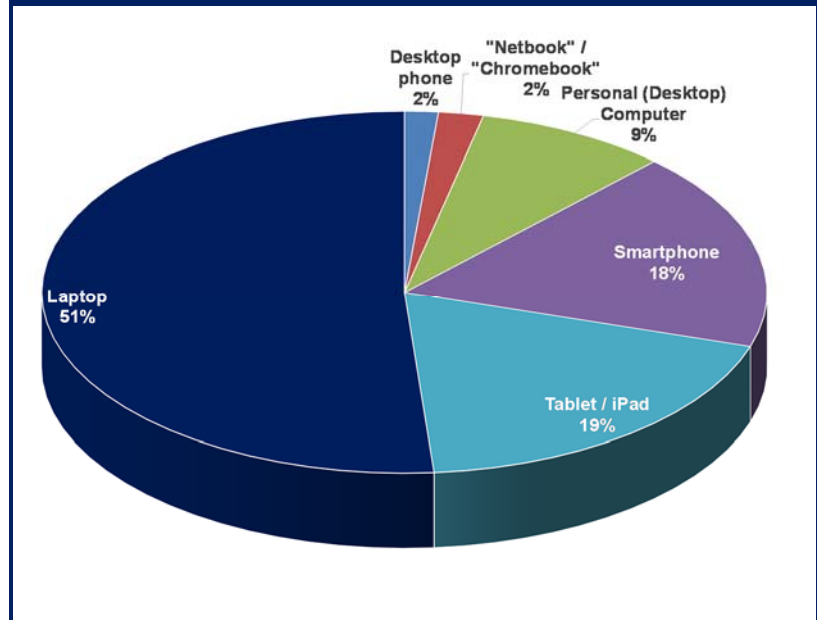
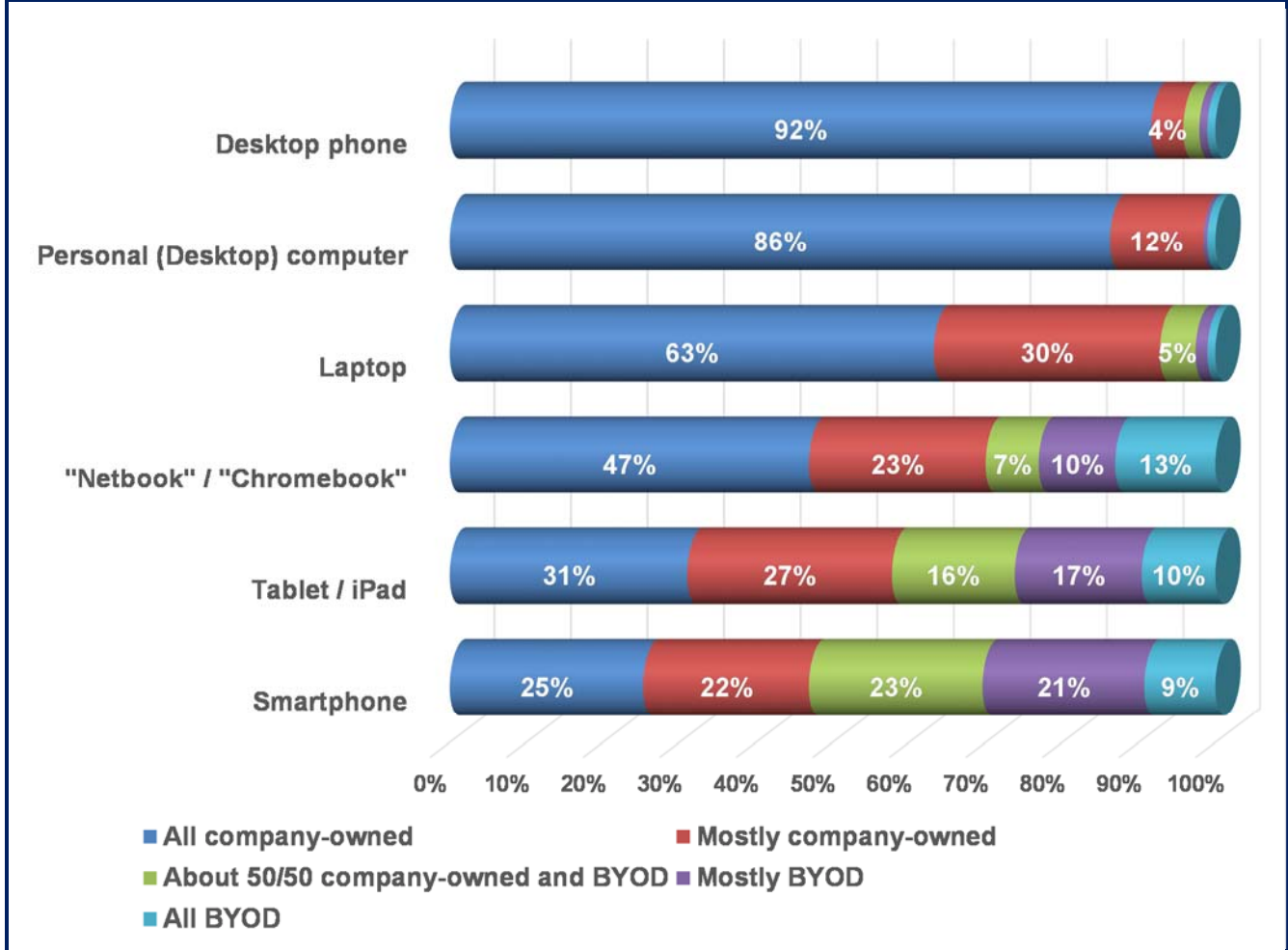


Figure 6: BYOD Tool Ownership



**Analysis:
Why is this important?**



To provide best-in-class EM support, a business needs to assure security, quality of service, interoperability, and ease of use. Providing quality of experience can be challenging when the IT organization does not control things like mobile device operating systems, browser editions, and employee-installed security software. Wireless carriers and Wi-Fi networks also affect performance, and these performance factors are less controllable when the employee owns their mobile device. Fortunately, appropriate mobile device management (MDM) tools and techniques can mitigate some of the associated risk and potential performance pitfalls.

Enterprise Mobility Applications

Because the ultimate objective for EM is to offer access to the same applications and content outside the office that is being provided inside the office, respondents were asked to evaluate the relative importance of communications and collaboration feature support in both places. The results for the top ten most important applications and content that respondents need are identified below in **Figure 7**.

Document sharing and collaboration, audio conferencing, and mobile clients for smartphones and tablets were the three most important applications for EM to support outside the office.

Figure 7: Relative Ranking for Content and Applications Access



Respondents were then asked to rate how well the access provided to important applications and content met their business needs. When inside the office, 82% of respondents were satisfied with their access. Surprisingly, 15% said that their access inside the office was unsatisfactory.

When outside the office, 58% were pleased with EM access to the business applications and content they needed to do their jobs. However, 38% said that access outside the office did not meet their needs.

Figure 8: Meeting User Needs In and Outside the Office



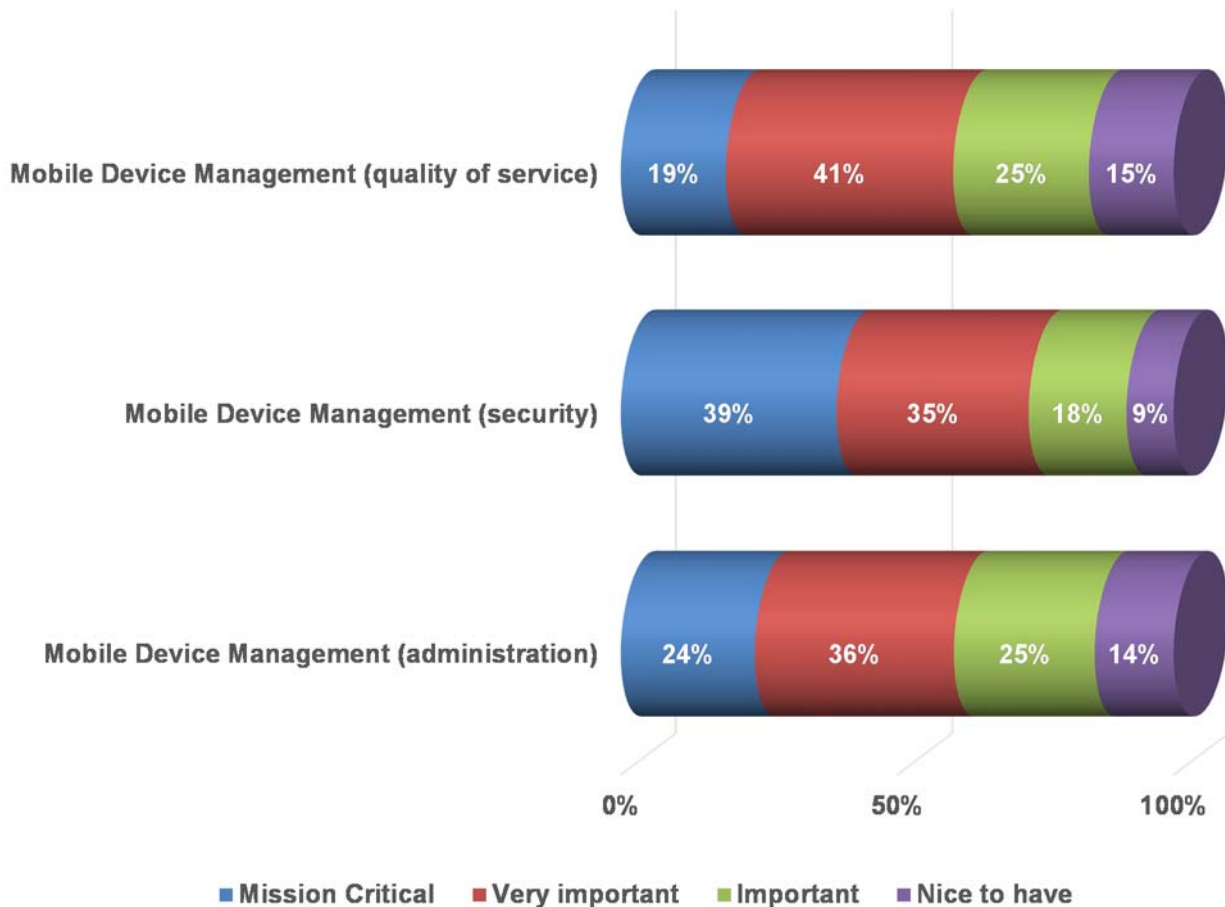
How well does your access to applications and content availability in the office / outside the office live up to your needs?

Enterprise Mobility Management and Support

For the IT manager, EM management tools are considered essential. Mobile Device Management (MDM) tools offering administration features, security, and performance management were considered mission critical or very important by most respondents as shown in **Figure 9** below. Security was the most important aspect for MDM tools, with 39% considering it mission critical and 35% considering it very important. On average, only 13% considered MDM a “nice to have” option, and 6% said they did not need it.

Encryption was considered necessary by most as another tool to manage EM security. When using Wi-Fi access points, 89% considered data encryption critical or very important, and 67% considered voice/video encryption as critical or very important.

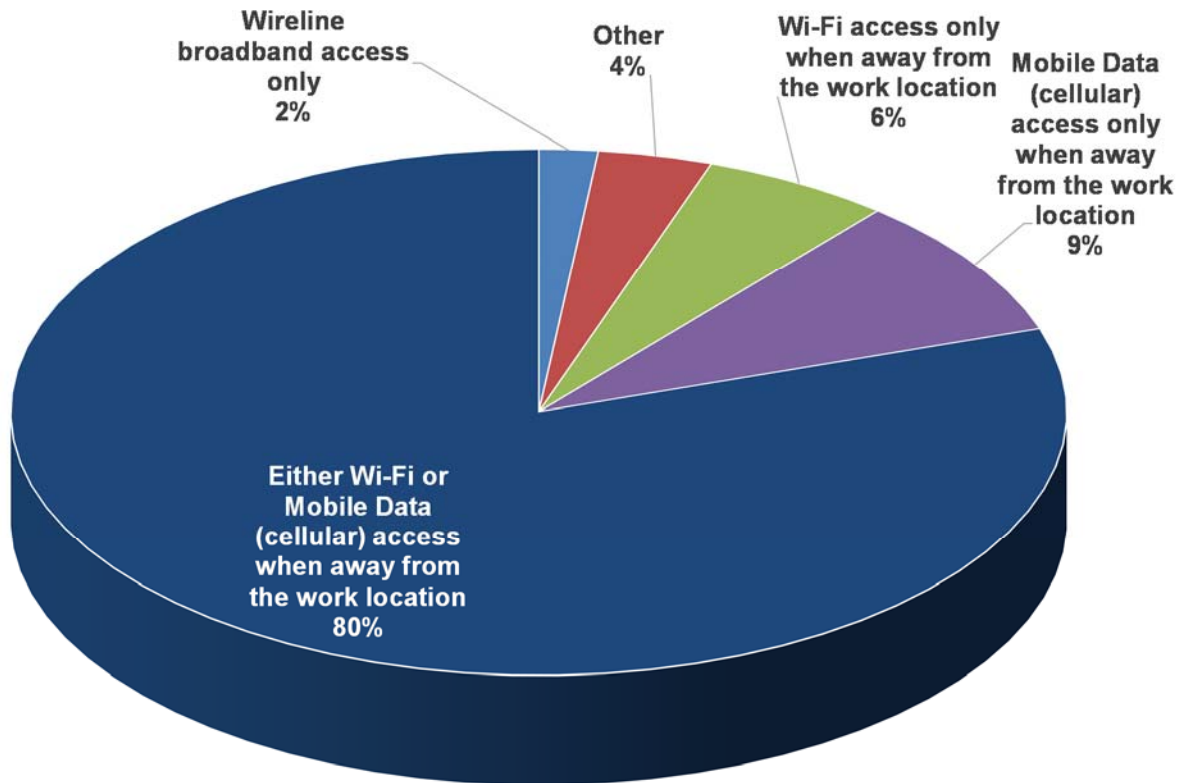
Figure 9: Mobile Device Management (MDM) Tools for EM



How important are each of these mobile device functions?

Respondents were clear that they want a transparent user experience for mobile access using Wi-Fi and wireless carrier networks because, as shown below in **Figure 10**, 80% of EM access outside the office uses both Wi-Fi and carrier networks.

Figure 10: EM Network Access Outside the Office



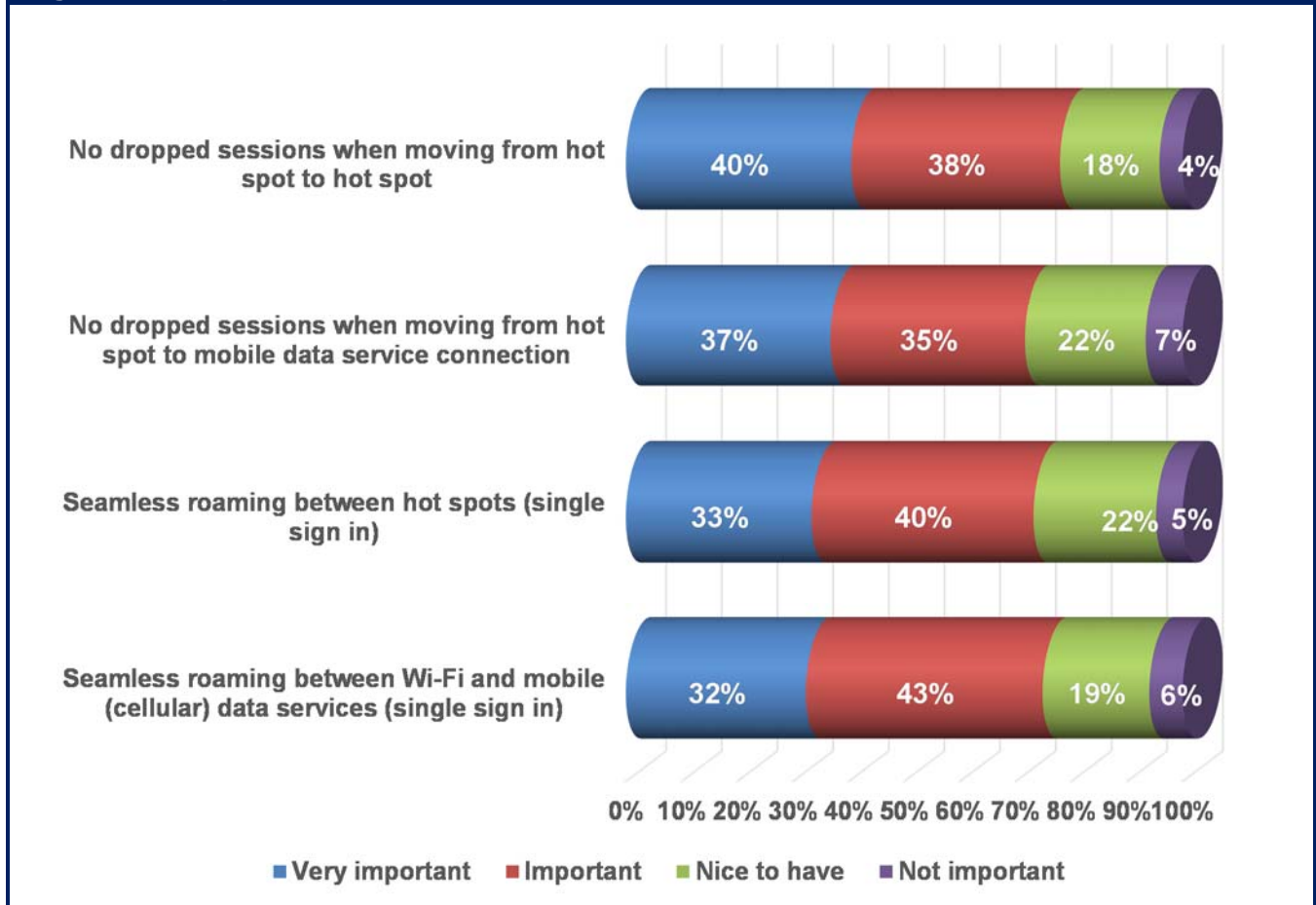
Which best describes how enterprise applications and content are accessed on a worker's mobile device outside the assigned work location?

While mobile data access is more ubiquitous than Wi-Fi, most users who don't have unlimited mobile data plans prefer to use Wi-Fi access because the cost for Wi-Fi access is generally cheaper than the cost of mobile access based on data usage. Wi-Fi hot spots can also offer a more stable connection than the mobile network in some environments such as in a home basement or rural areas that still depend on 2G cellular service for data. Users want a choice of EM access technologies that balances ubiquity, reliability, security, and cost.

Another factor affecting the EM experience is roaming and dropped sessions. In most circumstances, users can easily move between cell sites and still maintain their voice call or data session. However, roaming isn't always seamless between a Wi-Fi hot spot and a mobile data service, raising another user concern.

As shown in **Figure 11**, about three-quarters of those surveyed consider the ability to move between Wi-Fi hot spots and the ability to roam seamlessly between Wi-Fi and cellular networks as either important or very important.

Figure 11: Importance of Wi-Fi features on a mobile device



**Analysis:
Why is this important?**



While IT managers can easily manage seamless roaming between hot spots in the office, they often have little or no control over dropped sessions outside the office. While the technology is available to provide this, special business arrangements with network service providers (including those who offer Wi-Fi hotspots and those who offer mobile data access) are needed to enable seamless roaming. One respondent commented on this dilemma, asking “on what planet is seamless roaming the same as single sign in”?

Summary and Conclusions

Enterprise Mobility (EM) enables employees to work away from their assigned work location using mobile devices and cloud services to perform business tasks. According to respondents, document sharing and collaboration, audio conferencing, and mobile clients for smartphones and tablets were the three most important applications for EM to support outside the office.

Despite the need demonstrated for EM, only 17% of respondent companies had fully implemented a platform to support it - 53% had partially implemented EM and 29% were still in the planning phase. As a result, 38% of those surveyed said that access to the apps and content they needed outside the office did not meet their needs.

Incomplete or insufficient EM support can be costly: when factoring in the time lost and the salaries by worker category, responding organizations lost \$12,493 for knowledge workers, \$9,283 for information workers, and \$2,993 for service workers. The aggregate is even more dramatic: based on company size and the mix of workers, the typical respondent company is losing about \$186,000.00 per week or, even more impressively, \$36M per year.

The justification for EM support is clear among those surveyed. IT managers who need to understand their own organizational needs can use the questions and results from this study to build their own business case. They are likely to find the need for EM support equally compelling.

About Larry Hettick

Larry is the Editorial Director and a Senior Research Fellow at Webtorials. A thirty-year telecom veteran who has managed products for service providers and infrastructure supplies, he has provided industry analysis focusing on Unified Communications for the last 15 years. Before joining Webtorials, he spent a decade working with Current Analysis, where he remains a contributing analyst. Hettick also authors Network World's bi-weekly VoIP and Convergence Newsletter.

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