

# Get Ready for Tomorrow's Mobile Enterprise

Mobility is changing the way business is done; it's time to take control.



WHITE PAPER

Once an add-on to mainstream office work, mobile communications is now pervasive thanks to the combination of powerful new technologies and dramatic changes in the way people live and work. The result: IT leaders at organizations of all sizes, in all industries, must rethink how they do business. Organizations need a mobile-centric strategy that encompasses collaboration, customer experience and future technologies such as the Internet of Things (IoT) and machine-to-machine (M2M) communication.

## Mobile collaboration

When collaboration was office-centered, team members met in conference rooms and plotted strategy on whiteboards. Remote teams joined in with video conferencing systems and shared whiteboards. Mobile collaboration was limited to team members dialing in from cell phones. Now, the same rich collaborative experience that workers enjoy in the office can and should be shared with remote teams and mobile workers who are equipped with smartphones, tablets and laptops and connecting over high-bandwidth wireless links.

Further, there are many more remote and mobile workers than ever before. A new generation of service, information and knowledge workers requires a sophisticated mobile experience for high productivity. IDC forecasts the U. S. mobile worker population will grow from 96.2 million in 2015 to 105.4 million in 2020. At that time, mobile workers will account for 72.3% of the total U. S. workforce, IDC predicts.<sup>1</sup>

This large, new mobile population expects a collaborative work experience that is at least as good as what they get from their own consumer devices.<sup>2</sup> Mobile devices and apps must “just work.” Because businesses have employees and business partners in locations around the world—and workers often travel between those locations—mobility is global. Wherever they are located, workers need a collaboration experience as seamless as being in an office.

## Mobile customer experience

It's not just corporate workers who need new mobile strategies. Retail customers expect to browse, shop and purchase items anywhere they happen to be. And like mobile workers, customers expect a feature-rich experience—one that is responsive, interactive and anticipates their needs. The online experience should consist not only of the web, but voice, text (email, chat

and SMS), image and video. Customers also expect multichannel interaction. When visiting a store in person, they expect a high-quality experience that is consistent with their online, voice and mobile experiences. The margin for error is razor-thin. A lack of coordination between storefront and web, a confusing user interface or high latency will quickly drive customers to competitors. One survey found online shoppers' attention span to be only four seconds.<sup>3</sup>

## Mobility for the future: IoT and M2M

Mobile communications should complement other advanced technologies to create entirely new business capabilities. For example, IoT and M2M communications have sometimes been considered separate realms, disconnected from the mainstream mobile enterprise. But IoT and M2M, when paired with mobility, can open new horizons. Many opportunities lie in improving and even re-inventing the customer experience. For example, collecting large amounts of sensor data on customer purchase history and location can contribute to the development of new, highly personalized strategies to reach those customers, including timely product offers and discounts served up on customers' mobile devices.

## Developing a strategy for tomorrow

Because of the new approaches to business that mobility technologies enable, organizations must respond by developing strategies that embrace the many facets of mobility as a coherent whole. While that may seem like common sense, many organizations are failing to do so. In fact, a recent Webtorials survey finds that 83% of businesses don't have a mobility strategy in place.<sup>4</sup>

However, supporting a motley collection of Bring Your Own Device (BYOD) and corporate mobile devices, VPNs, collaboration tools and wireless LANs on an ad hoc basis is not sustainable. The lack of an enterprise mobility strategy leads to the inefficient use of technology, including high

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1 IDC press release: “IDC Forecasts U. S. Mobile Worker Population to Surpass 105 Million by 2020” <https://www.idc.com/getdoc.jsp?containerId=prUS25705415>

2 <http://www.mitel.com/blog/cc/understanding-impact-new-mobile-consumers-expectations-your-digital-customer-experience>

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3 <http://www.informationweek.com/report-online-shoppers-have-a-4-second-attention-span/d/d-id/1048549?>

4 *Enterprise Mobility State-of-the-Market Report*, Webtorials, survey of 231 IT professionals, January 2016, p.1



costs, management headaches and lost productivity. Further, workers miss important meetings and fail to stay in touch with customers. According to the Webtorials survey, typical respondent companies are losing an average of \$186,000 per week and \$36 million per year.<sup>5</sup> The losses break down according to worker category and salary:

- Knowledge workers – developers, teachers, analysts and engineers: 3.9 hours per week; \$12,493.
- Information workers – doctors, nurses, military personnel and contact center agents: 2.8 hours per week; \$9,283.

- Service workers – retail clerks, maids and construction workers: 2.5 hours per week; \$2,993.

At this point, it's important to note a shift in worker roles. Service workers now comprise the largest worker segment (45%), followed by information workers (35%). In contrast, knowledge workers (20%) have become a distinct minority. Meanwhile, desktop PC users have been declining relative to mobile users. Putting these facts together, it's clear the pendulum of productivity and innovation is swinging toward both service workers and mobile workers across organizations.

A mobile strategy should also take into account cloud-based mobile services. As worker mobility has increased in recent years, cloud-based services have emerged in

<sup>5</sup> *Enterprise Mobility State-of-the-Market Report*, Webtorials, survey of 231 IT professionals, January 2016, p.6

parallel. Now the two overlap to a considerable degree. The result is a plethora of cloud-based mobile applications that enable increased collaboration as well as personal productivity. Although small and midsize businesses were first to embrace cloud-based mobile applications, enterprises now are adopting them as well. Mobile apps hosted by cloud services offer businesses the benefits of pay-as-you-go Opex spending, as compared to Capex spending, which often entails complex annual budgeting as well as greater expense.

## Mobile-centric, not just mobile-enabled

IT leaders should go beyond simply mobile-enabling existing applications. Instead, they should change their approach to develop mobile-centric business strategies from the ground up. A mobile-centric strategy takes into account workers' business needs, all mobile technologies and the IT infrastructure as a whole. A mobile-centric infrastructure roadmap should encompass:

- **4G and 5G networks.** 4G (also known as LTE) networks are broadly deployed, while 5G networks are in the pilot stage. IT leaders should start planning now for 5G, since it is expected to become prevalent over the next three to five years. Capabilities of 5G include the high speeds necessary for high-definition (HD) video streaming, as well as fast internet access regardless of location, whether underground or in a skyscraper. 5G will also support wearable mobile devices, IoT applications such as vending machines and automobiles, and M2M communications through sensor networks.
- **IP-based end-to-end services.** Architecting network services to run from one end of an IP-based network to another is a proven method of achieving a high level of functionality, efficiency and resiliency.
- **Voice over Wi-Fi.** The most economical way to carry out voice communications, voice over Wi-Fi should be implemented wherever Wi-Fi networks are present.

- **Native mobile capabilities.** While many organizations have gained significant benefits from "over the top" applications, which run on top of mobile devices and networks, greater performance and security benefits can be obtained from the use of native mobile device capabilities, such as a smartphone's native texting interface.
- **E-commerce enablement.** By integrating e-commerce capabilities within mobile applications, users gain greater convenience, faster performance and increased security.

## Security, compliance and risk management

As they rethink mobility, IT leaders must also rethink security, compliance and risk management. The greatly expanded use of mobile devices and applications by employees at all levels in an organization, as well as IoT, means that security risks expand as well. And regulatory compliance, which has tightened across a number of industries in recent years, extends to all the new mobile devices and applications in an organization. That means confidentiality of personal data must be guarded in the mobile realm just as in the office.

A sound strategy is needed to protect the plethora of new mobile access points and should include password protection and encryption administered through mobile device management (MDM) and mobile application management (MAM) software. BYOD policies should be reviewed and altered as needed to generate greater security and ease of management. One method is to implement a Choose Your Own Device (CYOD) policy, under which users may bring only one of a few pre-approved devices with them to work.

### Case Study: Louvre-Lens

The Louvre-Lens museum, a contemporary branch of the famous Paris Louvre museum in the city of Lens, France, needed to provide wireless mobile connectivity throughout the museum building and grounds to multiple groups: museum visitors, administrators, security personnel and

maintenance workers. Because each group had different needs, the solution had to provide different capabilities for each.

Museum IT leaders built an IP-based network incorporating Session Initiation Protocol (SIP) and extensible markup language (XML), featuring Mitel technology with integration services provided by INEO Digital. Mobile connectivity is provided across Wi-Fi and Digital Enhanced Cordless Communications (DECT), a digital wireless telephone standard, explained Eric Cassou-Ribehard, who is in charge of information systems at Louvre-Lens.

Visitors to the museum browse 205 works in the 3,000-square-meter Galerie du Temps using multimedia museum guides, mobile devices that communicate over the Wi-Fi network. The 2,000 devices not only provide visitors with details about the artwork they view, but also collect information about the guests' museum visits. In addition, Louvre-Lens provides visitors with free internet access.

Administrators can receive messages as well as faxes from different locations, thanks to the use of SIP-enabled unified messaging. Maintenance and security staff members use mobile DECT phones, which enable them to be reached promptly whether they are inside or outside the building, in an economical manner.

## Enterprise mobility in action

The field of health care is one industry in particular that is being revolutionized by mobility. It wasn't long ago that hospitals banned cell phone use. Now, at many of those same hospitals, cell phones are required and must be turned on. "Our entire hospital communications would collapse without wireless technology, said Marc Bloom, M.D., Ph.D., and director of perioperative technology at the NYU Langone Medical Center in New York.

Many hospitals, including Langone, have built not one but two hospital wireless networks—one for clinical purposes and the other for guests. Both require large amounts of

bandwidth. The use of electronic health records (EHRs) has created the need for higher throughput in clinical networks, while guests expect wireless access to multimedia content in waiting rooms.

Using mobile devices, nurses scan QR codes on patient bracelets to verify identity, document the administration of medicine and track food and water delivery. In addition, nurses can communicate a patient need to a doctor and gain approval for additional medicine via text messages—a significant time saving compared with handwritten or in-person requests.

Adding to bandwidth demand is a growing population of medical devices such as glucometers and infusion pumps that are enabled for Wi-Fi, eliminating a confusing and potentially dangerous tangle of wires in patient rooms. In the future, hospital executives say, they want to enable M2M communications between these devices. And as real-time location systems advance, they will enable medical staff to pinpoint the whereabouts of patients, personnel and medical equipment across the wireless network.<sup>6</sup>

There are plenty of additional implementations that show the powerful capabilities of new mobile technology. For example, airlines including Alaska, Delta and United provide flight attendants with mobile devices for a number of tasks, such as checking work schedules and passenger flight details. Flight attendants also use the devices to sell in-flight concessions and seat upgrades, access company email and intranet sites, and provide in-flight access to online safety manuals.

Thanks to tablet devices, field service workers are reaching new levels of efficiency. Take the case of a local locksmith on a customer call, using his tablet to find a replacement door handle. Accessing an online inventory system, he discovers his local shop does not have the handles in stock, but a nearby co-worker in the field has a spare.

<sup>6</sup> *Signal Boost: The Importance of Wireless Networks in Healthcare*, SearchHealthIT.com, [http://docs.media.bitpipe.com/io\\_12x/io\\_124172/item\\_1153599/ImportanceofWirelessNetworksHealthcare\\_hb\\_final.pdf](http://docs.media.bitpipe.com/io_12x/io_124172/item_1153599/ImportanceofWirelessNetworksHealthcare_hb_final.pdf)

The locksmith sends a text to his colleague asking him to deliver the part, while ordering replacement items for inventory stock.<sup>7</sup>

## Conclusion

Mobile communications has reached a crossroads. Faced with the emergence of new technologies, the global scope of business and a large new population of mobile workers, IT leaders must rethink both mobility and business strategies. Rather than react in a piecemeal fashion, IT leaders should get out in front of the wave by developing a holistic, mobile-centric strategy that not only enables a company's existing business mission to be far more effective, but makes entirely new business strategies possible.

For additional information, please see [www.mitel.com](http://www.mitel.com).

## Mitel technologies address the complete needs of tomorrow's mobile business

**Mitel Mobile Convergence** – delivers the features and functionality of a fixed network to smartphones, to enable connectivity regardless of location, without compromising privacy, cost or access to PBX features.

**Mitel Solutions for Mobile Workers** – provide the same communications capabilities available in the office to mobile workers anytime, anywhere.

**Mitel Solutions for Remote Workers** – provide the same communications and collaboration tools available in the office to remote workers.

**Mitel Private Mobile GSM** – for in-building or campus-wide coverage; offers customers their own Private GSM network using standard GSM mobile handsets.

**Mitel Mobile Extension** – integrates mobile phones into the PBX, providing all services needed to allow your employees to work as mobile professionals.

**Mitel Mobile Client** – allows mobile users to use short-number and extension dialing in combination with Mitel Mobile Extension for accessing traditional communications system services as if they were using their standard features from their desk phones.

**Mitel Embedded Communications** – allows you to quickly snap in messaging, voice calling, video calling, presence and location into your business productivity mobile app.

**Mitel MiTeam Collaboration** – offers messaging, content sharing, whiteboarding and real-time voice and video meetings. As a mobile-first tool built to support how teams collaborate, it integrates into key business applications.

**Mitel MiCollab Client** – works "over the top" with Wi-Fi connectivity and lets workers collaborate with voice, data and sharing applications.

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<sup>7</sup> Enterprise Mobility State-of-the-Market Report, Webtorials, survey of 231 IT professionals, January 2016, p. 6