

The real impact of mobile technologies on the workplace

Workplace and mobility



Mobile technologies have driven tremendous changes in the way we create, collaborate and connect with people, upending traditional notions of the workplace and the nature of work. The changes are still evolving, but we've learned a few things along the way.

To amplify the benefits of mobility and minimize the risks, let's take stock of what we know now about the best ways to embrace mobile technologies in the enterprise — and take a realistic look at some emerging technologies and how they might alter the equation.

Not everything is a nail

As mobile technologies proliferated, companies often pursued an aggressive “mobile first” strategy, only to discover that not every business need could be solved with a mobile app. As their views have matured through experience, companies are now recognizing that users require a spectrum of devices to achieve maximum efficiency. For example, while claims processing in the field can be handled effectively with a smartphone or tablet, entering detailed claims data is more efficient when it's done on a device with a full keyboard.

Still, the introduction of mobile devices, the consumerization of IT and the ability to access data anywhere have rapidly and profoundly changed everything. As IT learned from the bring-your-own-device (BYOD) movement, the balance of power to determine how and where work is performed has firmly shifted from the enterprise to the worker, and this is a reality that all enterprises must accept. With so much power and mobile access at their disposal, users will find ways to complete tasks in the way that suits them best.

Meanwhile, devices and applications didn't stop evolving with the smartphone. In fact, the evolution of applications has accelerated dramatically. Marketing tools have evolved from press releases to YouTube snippets and tweets. Tools such as Prezi, and even Microsoft Sway, changed how we presented materials. Data visualization tools such as Tableau and Power BI play roles once held exclusively by spreadsheets. Email has morphed into messaging, with players including Facebook, LinkedIn, instant messaging, SMS and iMessage. SharePoint and file shares are giving way to cloud sync and share capabilities such as Dropbox, Box, Citrix ShareFile, Google Drive and Microsoft OneDrive.

This means that organizations need to approach the tools of a modern worker and workplace differently.



The gig economy is already here

As the tools have changed, so has the modern worker's very role. Old notions of one person performing one job for decades simply aren't flexible enough to offer companies the agility and flexibility they need. Work has become more about the tasks or activities as part of a broader plan or strategy, leading to growing ranks of independent workers and the growth of the "gig economy." A 2017 study conducted by MBO Partners revealed that 42 million workers in the United States, representing nearly 47 percent of the total adult workforce, are or have been participants in the gig economy.¹



In reality, this number is low. Many of us are living the "gig" model today — even if we have only one employer.

Jobs are becoming more granular, increasingly broken down to a project or task level, with decreasing emphasis on the number of hours someone works. Instead, the activity and its role in a sequence of dependencies are becoming the atomic "thing" people care about. Each activity is frequently part of a broader ecosystem or strategy, and it has constituents, stakeholders and other players. This model already exists. For example, think of the actors and screenwriters on a movie. Do you know who any of them work for? You know them for the roles they have fulfilled — what they have written, directed, produced or acted in — not the production company that hired them.

This highlights two key aspects of work: the activities and the people (the actors, stakeholders and constituents). All activities need at least one person, and for now, these are humans. Today, jobs aren't so much a single person performing a single role as they are a collection of people performing a collection of tasks. One person can be involved in many activities, and much of the work that gets done is accomplished by teams who switch roles and tasks seamlessly.

Technology needs to "lean in" here to track activities and help people connect, collaborate and communicate. These are key building blocks to a modern workplace. By tracking, measuring and exposing activities and projects, we get a consistent view across the organization, including the capacity of the workforce and the demands placed upon it. A project-centric marketplace enables individuals and teams to align their skills, interests and passions with the available projects; maximize their enjoyment and productivity; and increase the likelihood of project success.

Not surprisingly perhaps, technology companies are starting to adopt a marketplace model. They have benefited from the skewed distribution of their employee base. Projects advertise internally for resources, and individuals apply for roles on the team via a marketplace.

¹ MBO Partners State of Independence
In America 2018
[https://www.mbopartners.com/
state-of-independence](https://www.mbopartners.com/state-of-independence)

“Work anywhere” is wrong

When mobile technologies came to the enterprise, many companies tried to use them to allow employees to “work anywhere.” While it seems empowering to tell employees that they’ll have that unfettered ability, companies still need to create the right spaces for the activities people need to accomplish. Areas to think, create, communicate, collaborate or connect deliver a much more positive experience and a positive upswing in output. For each activity, a set of requirements leads to a best-suited environment — a closed room to conduct an interview, an auditorium to present an idea to a large group of people, a coffee shop to get to know a new mentor or a client’s office to present a new proposal.

Similarly, other locations or environments may be entirely unsuitable for the task at hand. For example, a quick email check can be done unobtrusively in most places, but it’s inadvisable in others. Imagine receiving a human resources review in an open-plan office or conducting a detailed project review in a corridor. Both are examples of locations unsuited to the task at hand.

“Cones of silence” may not be practical in most buildings, but the thoughtful design of walls and layouts makes it possible to create spaces for ad hoc team meetings, intense project reviews, personnel interviews and performance reviews, as well as quality thinking space. Facilities, IT and technology can all collaborate to make these spaces compelling and enable people to be more productive. Get this right and morale, output and collaboration can improve dramatically.

Mental health and good social interaction are key for productivity. Yet old models of forced working from an office do not scale or meet the desires or expectations of the workforce. Organizations have an opportunity to create the right balance of environment and tools, to make work sites into desired locations. Even when individuals can’t make it to an office, they can feel part of the community.

Change is constant

As influential as these trends have been, several technologies are coming that could have just as profound of an effect on the workplace. And similarly, it can be hard to predict exactly what that effect will end up being.

Artificial intelligence

Artificial intelligence (AI) is at the peak of expectations — not bad for a domain that has been over 60 years in the making. The simple internet search engine — putting the world’s opinion and knowledge at everybody’s fingertips — has effectively augmented the human. Today, AI is still “humanish,” applying voice, image and video analysis to tasks such as image recognition, sentiment analysis and routing of voice (or support) calls.

As AI evolves, a combination of machine intelligence and automation will augment humans with intelligent helpers that can handle tasks such as proactively fixing a device before the user is even aware of a problem or automatically translating, transcoding and documenting meetings and actions.

This will free up humans to work on areas that require higher-level logic, creativity, emotion or empathy.



The growing capabilities of AI will help insulate mobile, immersive environments from external threats, dynamically adjusting to minimize risk. AI is not optional here. We will need to bring the power of machine language and automation to bear so as to react quickly to any threat.

We will soon see AI assistants “talking” to AI assistants who are, in turn, talking to other AI assistants to quickly and efficiently execute the tasks we desire. Integration among agents will open up a world of richer communication, deeper knowledge and fuller understanding as it brings the insight together with recommendations just in time and in the right format for decisions to be made and actions to be taken.

A secure baseline

Even with the current level of mobile apps, we all understand what poor connectivity feels like. But with 5G networks, we will begin to see cellular performance on a par with traditional WiFi. Coupling improved performance with the ability to apply quality-of-service standards will make the communication fabric begin to function as a true service foundation.

Workers will be able to experience real-time video or virtual reality (VR) capabilities without performance impediments. Improved handoffs between WiFi and cellular connections will create seamless experiences as we move between environments.

While this is extremely promising, we already know it will create a huge attack surface that needs to be protected and secured. Boundaries of security will need to be drawn more clearly as the value of data continues to grow. While technology will play a role in identifying and managing digital assets, external forces such as new regulations (think General Data Protection Regulation) will play a role in setting the rules.

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Capabilities such as these become the underpinning for many of the new interaction models — maintaining the user experience wherever the users roam.

New interaction models

User-centered design has become less the exception and more the rule. As new levels of foundational capability become available, we’ll need to look beyond simple user experience. Technology and culture change will drive a different set of interaction models.

Verbal- and gesture-based mechanisms enable people to be productive in new ways, initially driven by industry use cases where the environment is hazardous, or when a user’s hands are occupied with a task and unable to interact with the technology.

After decades of videoconferencing, webinars and other virtual collaboration methods, workforce culture has become increasingly accepting of virtual meetings, which are sufficient to engage in a compelling manner. Consumer adoption of Instagram, Snapchat and other visual media is accelerating the acceptance and relevance of videoconferencing in the workplace, particularly as millennials enter the workforce.

VR built on avatars and common project-based work areas will become more prevalent and faster, enabling teams to carry out tasks that require a higher degree of engagement, such as brainstorming. Project teams will become increasingly dynamic as people join, contribute and move on as needed — with people often supporting many projects at the same time.



With VR and an increase in contextual information, we will be able to model a digital twin (a digital replica of a physical asset, system or process) for organizations, processes and individuals — not just for large-scale machinery. The additional insight will power modern workspaces and ensure frictionless interaction in any environment or building, powering concepts such as the “nearest” printer (even when you are in an airport).

Augmented reality (AR) is already being applied in the enterprise. For instance, a field engineer can call a specialist in to help fix or certify a repair remotely. Linked in real time via AR, the specialist can “see” the same thing the engineer sees, and the two can talk to each other. The expert can annotate the “video” live, highlighting the area of focus and giving instructions for dealing with the issue that needs attention.

Measure the impact

Technology is erasing boundaries that have set expectations for decades about how and where we work. No longer tethered to specific locations, workers can create new identities that are defined more by their interests and skills than by specific titles.

As companies adapt to the new order of work, more discoveries await that may reveal the true, far-reaching nature of the changes that are occurring. Technology’s impact on productivity is rewriting the definition of the word. Its influence on culture is breaking down old models and rebuilding new ones.

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