The New Mobility

BY JOHN CHANEY

HOW TECHNOLOGY IS TRANSFORMING WORKPLACE COLLABORATION

Not long ago, creating a mobile project team simply meant setting everyone up with a cell phone. As phones became smarter, wireless networks improved and data plans came down in price, contractors began to make mobility more meaningful. A new marketplace developed that offered construction-specific mobile apps for a variety of tasks, such as remote time entry, punch lists and even basic cost estimating. This quickly evolving technology has significant implications for how construction professionals communicate and perform their jobs. Additionally, the increasingly widespread use of smart devices is changing the playing field for mobile app and software providers alike. >>

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According to a March 2012 Bloomberg Television broadcast, mobile technology is exploding faster than any technology in the last 100 years. It took 13 years for 60 percent of the U.S. population to adopt the Internet and 10 years for AM radio. Smartphones took just eight years. Additionally, a majority (50.4 percent) of U.S. mobile subscribers own smartphones, up from 47.8 percent in December 2011, according to a recent Nielsen study.

The increased use of mobile, Internet-connected devices profoundly affects productivity. Software built on a mobile-based platform allows users to share data instantly with customers, saving time and money spent on physically traveling back to the office to enter data. As such, mobile app development for the construction industry is flourishing. Web-based software and handheld devices embody "the new mobility"—a generation of hardware and software tools built for online use that will transform how construction teams perform by enabling them to work better together.

FROM TRANSMISSION TO CONNECTION

The convergence of computing and communication technologies is providing a new platform for applications that connect individuals and help them work together. Until recently, fostering a connection meant linking individuals, such as a technician in the field to a project manager in the office. The advent of push-to-talk technology transformed individual voice transmissions to group connectivity. This opened the door to connectivity in the construction industry and mobile technology takes it a step further. New web-based technologies are helping all participants in construction projects connect less through voice and more through data.

Third-party apps help groups in the office and field share valuable business data. Multitudes of apps are available that can do anything from calculating measurements for raw materials to processing invoices and reviewing blueprints. Although apps allow team members to share data, they have inherent limitations when integrating with existing software.

Mobile apps are transaction-based, pushing data back and forth between the field and office. They are also separate applications operating outside of the company's

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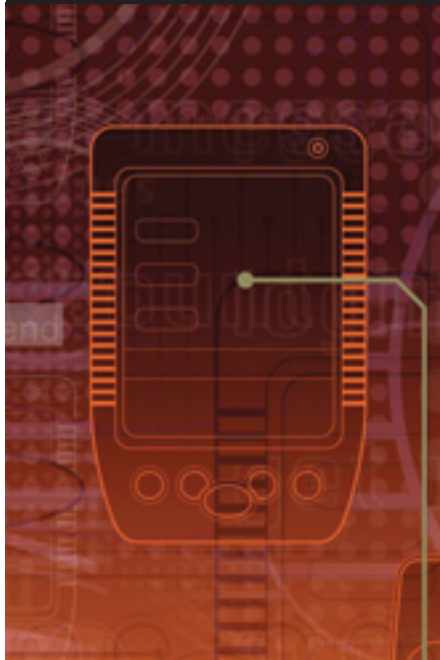
larger installed software system. Because they run in addition to another system, there's the risk of data not synchronizing with the office software. While this is good for individual tasks, the adoption of browser-based business management software is becoming more prevalent.

The increased use of the Internet as a platform for software development has substantial implications for software design and use. Because software developers are building in the cloud, contractors will start seeing more software as full-featured releases accessed by Internet-connected mobile devices. Accessing data from the field will no longer be a case of installing a third-party app on a mobile device, but rather a case of accessing the software from the cloud. Even enterprise business software providers recognize the power of mobile applications with apps for order processing, production scheduling and customer relationship management available on handheld devices.

Microsoft's 2012 SMB Business in the Cloud survey found "paid cloud services are expected to double in five years, while the number of the world's smallest companies using at least one paid cloud service will triple in the next three years. Cloud computing delivers more of what small and mid-size businesses [SMBs] need: cheaper operations and faster, better fusion of vital information to virtually any device." The research also found 59 percent of companies currently using cloud services report significant productivity benefits from information technology, compared to just 30 percent of SMBs not yet using the cloud.

FROM TRANSACTION TO PROCESS

Mobility has increased the amount of information that is exchanged, but more information is not always a good thing, as those with overflowing email inboxes can attest. Discrete transactions and communications move information around; systems that help organize, track and disseminate this information can help contractors turn the chaos of data overload into usable knowledge that streamlines workflows and improves business processes. Phone conversations using voice services and data entry apps are important and will remain so, but the next logical step is to take business software to the field. There's a saying that form follows function, but in business function often follows form. The way project teams function often is shaped by the form of tools they're given.

Without mobility, data simply comes into and is pushed out of the system. The new mobility moves information from piecemeal transactions to streamlined processes. Project information can be tied to a larger home system using the web—offering pre-analyzed data that doesn't need to be reconciled between separate systems. The goal isn't to just get data out of transactions, but rather to get business intelligence from the main system.

Instead of using a third-party app installed on a mobile device, project managers use their Internet-connected smartphone or tablet to access their company's software in the cloud. Exchanging data between disparate software pieces will no longer be an issue because web-based software eliminates the need to rely on outside apps to make the broader system work in the field. Software developers won't need

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to worry about app failures when hardware or operating systems are upgraded.

FROM 'ME' TO 'WE'

Collaboration has been a buzzword in the construction industry for years, but how does this general concept translate to real change in the way contractors do business? Real change occurs when concepts move from discussion to implementation, and with new technology and tools that focus on the team rather than the individual. New levels of teamwork are being implemented across the industry. Some contractors are using technology to create better project teams by opening up their software to strategic partners. Construction rarely is completed by one company; it's almost guaranteed that contractors will work as a group to build a project. The team that embraces mobile technology is truly collaborative, with project members using any Internet-connected device to access and share information.

Software is evolving from locked down, proprietary databases to cloud-based systems that make true collaboration possible. A general contractor can securely and selectively open its system to collaborate with subcontractors throughout the job, from pre-construction to active construction tasks such as budgeting, bidding, scheduling, tracking change order requests, logging expenses and verifying the status of change orders before work begins. Cloud computing lets contractors connect by accessing and sharing information via the Internet in real time.

The new mobility allows contractors to move from individualized productivity to collaboration across multiple organizations. Contractors don't need to worry about third-party software not synchronizing with their business management software. With browser-based design, contractors can securely open up select parts of their system to vendors, subcontractors, owners or consultants—truly fostering the mobility of data to multiple team members.

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