

# The Secret Behind Successful Mobile Apps

BY: [Colin Wood](#) | April 30, 2012

The demand for mobility is burgeoning, and as agencies plan their own mobile apps or Web portals, they often find themselves with more questions than answers.

Mobile apps promise to increase productivity and save time and money — heck, the work will practically do itself. A well designed app can cure warts and baldness, make project leaders run faster and jump higher. Amid these grand claims and true success stories from governments with developed mobile presences, many agencies tread carefully toward their mobile futures, hoping to avoid the mistakes others have made.

One lesson governments have learned is that creating a nice-looking, easy-to-use app isn't enough. These apps must seamlessly integrate into the agency's back-end systems — otherwise they create more work for employees who must manually re-enter the information submitted through the app into the appropriate system or workflow.

## Infrastructure Upgrade

"I think what you're seeing is a lot of the customers focusing on the end-user perspective," said David Nero, technology director for the city of Boston. To be sure, thinking about the user is important, he said, but agencies can't ignore the back-end operations that support the end-user experience.

Boston has moved into the mobile space aggressively, launching services like Citizen's Connect, which lets smartphone users report potholes and other problems to the city. Along with these new apps have come dramatic upgrades to the systems behind them.

"Boston has had to almost turn over its infrastructure," Nero said. "What I learned fairly quickly was all the demand — storage, network bandwidth; we were really taxing that part of the organization. It doesn't get a lot of publicity because who cares about storage? Who cares whether your servers are virtualized or not?" But those things turn out to be very important.

There are new options for addressing those needs, Nero added, such as software as a service or infrastructure as a service, that ought to be considered. Because technology changes and demand grows so quickly, it's important to invest in flexible, scalable infrastructure.

Those investments can make or break an agency's mobile strategy — if users are frustrated by low speeds or other technical issues, it won't matter how great an app is. Where traditional IT organizations have focused on operations, there's been a culture shift toward using innovation to meet customer needs, he said. "Traditional IT organizations are really battling against this."

## Hey, Nice Back End

Robust back-end development isn't just for users — it ensures that an organization doesn't wind up chasing its tail. While searching for vendors for Salt Lake City 311, the city's CIO, Bill Haight, said most vendors' claims of comprehensive back-end integration fall short of the mark. "We found that those interfaces, where they did actually exist, were rudimentary at best," Haight said. "We believe that it is doing a disservice to our people to put a system out there that essentially only sends them an email or that they have to actually go back and do a whole bunch more work."

Salt Lake City chose Accela for its mobile 311 deployment based on the company's back-end integration capabilities, Haight said. The Salt Lake City 311 app sends the user's location, either via geotagging or

manual entry, along with the service request to the city and the information is automatically entered into the system and routed to the correct employee based on geographic location.

“It’s better for us to be a bit slower out of the chute and maybe not quite as bright and shiny as some of the other municipalities across the nation have been,” Haight said, adding that the time saved through automated back-end integration has been worthwhile.

## **But I Want It Now!**

On the other hand, New York City was quick to offer mobile services, releasing a mobile app for the city’s hugely popular 311 system in late 2009. But the speedy rollout came at the cost of excluding some functionality and back-end integration, said Andrew Nicklin, director of research and development for the city’s Department of Information Technology and Telecommunications (DoITT). The app has been downloaded about 23,000 times since it was released.

“The application we have now is not heavily extensible, and it’s not driven by modern APIs [application programming interfaces] at all,” Nicklin said. “If we were to start from a blank slate, the whole thing would have to be service oriented and we would be exposing some set of services for the public to be able to build applications.”

New York’s 311 app doesn’t have all the functionality of the city’s 311 website and some of the input processes aren’t automated, but getting it released early allowed the city to gather user feedback.

“When the opportunity presents itself for us to put together another version of the application, all of that will be incorporated,” Nicklin said. “If we were going to be launching the application now, we wouldn’t have that experience and knowledge. I think getting out the gate early was very valuable to us. It helps us mature our offerings faster and offer better capabilities.”

Ultimately every development process comes down to weighing speed against perfection, said Nicholas Sbordone, director of external affairs for DoITT.

“Nothing’s going to be a perfect solution,” he said. “You balance what may be a very optimal solution, but that’s going to take a longer time with something you can get up, put out there and put on a test run and build on it for the future. I think we landed in the second consideration there.”

## **Starting Out**

Pennsylvania isn’t afraid of new technology, but there are many factors to consider, said state CIO George White.

“We have a lot of agencies that are interested in mobility, but they really don’t know where to start,” White said. “How do we go about bridging the gap between where we are and where we’re going?”

Many workers want to use their iPads at work, for example, but just because something is possible doesn’t mean it’s a good idea. “You have to demonstrate a business use beyond just email,” he said. “There’s a cost associated with enabling those technologies.”

Pennsylvania plans to bring in a consultant to address the state’s many questions, White said. How will security be addressed? How do you ensure the technology is flexible enough for the future? What exactly is the value added for investment in a given technology? And who will develop the apps? “We don’t have people who are skilled with the [Apple] iOS platform or Android platform,” White said.

In tough budgetary times, training is often one of the first areas to be cut, and hiring new developers is sometimes not feasible. As an alternative, White said Pennsylvania is considering relationships with universities that will allow the use of software developed by computer science students.

If the program is successful, that’s one bridge crossed with many more to go. For Pennsylvania, there’s

wisdom in being wary — organizations with developed mobility programs like California got where they are partially through trial and error, and errors can be expensive.

## **Build It and They Won't Come**

California is a leader when it comes to mobility, but the state does things differently today than it used to, said Nancy Johnson, who until several months ago was acting director of the state's Office of Technology Services.

"I've been in a lot of IT shops where we had a lot of cool tools, and we would build it and think they would come. It just doesn't happen that way," Johnson said. "If you're building something that your customer doesn't need or want, it's going to fail, even if it works."

The key, she says, is to build something that somebody wants, needs and will use — not just from a mobility perspective, but in any system. California ensures that it's on the right track through maintaining strong partnerships with users and customers, she said. Technology Secretary Carlos Ramos meets regularly with his officers to identify common problems across agencies in order to create shared solutions that will be heavily used throughout the organization, Johnson said.

California announced on Feb. 10 the release of the third version of its mobile template, a starting point for agencies wishing to develop mobile interfaces for the state's Web portal. But the fact that California has embraced mobility is incidental, said former California CTO Adrian Farley, who recently became CIO of the state Department of Justice.

"Mobility is just an extension of the strategy we've had for a long time, which is to create the most efficient, effective and service-oriented experience for the residents and businesses of California," he said. A secure Web portal backed by robust networks was the best solution for the types of services offered by state government, he added.

"Using HTML5 allows us to really be more effective and efficient in the way we deliver services," Farley said. "We don't have the budget, the time or the personnel to create siloed applications."

Each day thousands of Californians access online services made available by 35 state departments. At peak periods, a quarter or more of the Web traffic comes from mobile devices, according to California Technology Authority officials. Catering to that demand without duplicating efforts has gone a long way for the agency's success, Farley said. "Usability is really the foundation for all the work that we do," he said. "And obviously, there needs to be a strong business case for any investment in technology. So once that decision has been made, it really is all about the user."

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