



Government in a Mobile World

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Government services, staff, and development efforts will be increasingly mobile in coming years as devices and applications continue to proliferate at an astounding rate. Industry experts stress how quickly the change is coming. Within the next five years, "more users will connect to the Internet over mobile devices than desktop PCs." "By 2014," according to Gartner, "90 percent of organizations will support corporate applications on personal devices."

In the current mobile landscape over 1 billion people already own mobile devices. The iPhone App Store holds over 350,000 active apps and the downloads of those apps stands at over 10 billion (there are only 6.9 billion people currently alive on the planet). That's why Gartner put tablets and mobile apps on its list of top 10 technologies that enterprises should invest in for 2011.

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The usual concerns that come with any technology innovation also accompany the mobile world: security, accessibility, privacy, development, deployment. As with any technology, mobile brings its own unique characteristics to these concerns. While critical for government, the single most important fact is that developments in the mobile world will directly impact nearly every aspect of government operations including delivery of services, citizen engagement, allocation of IT resources, staff support, and training.

DELIVERY OF SERVICES

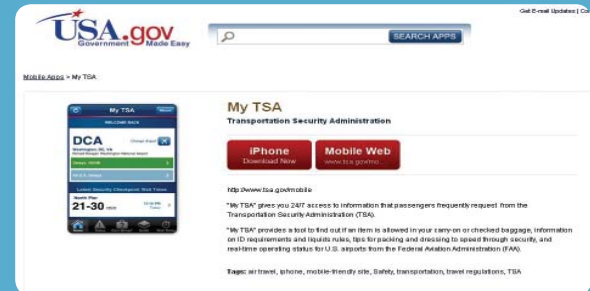
Mobile activity in the business world is fast becoming the norm. The past holiday season featured shoppers using their smartphones to scan product codes in retail stores in order to pull-down price comparisons of similar items at neighboring stores. The sales of eBooks recently surpassed paperback book sales on Amazon. Banking transactions are now commonly conducted via mobile phones. With this new area of use comes the expectation that all services, including government services, should be available in a similar fashion. While many government entities have already entered this arena, all will be expected there soon.

The State of Arkansas is one of the leaders for delivering government services via mobile devices. On <http://mobile.ar.gov>, citizens can access a wide array of services, such as secure payment processing for real estate taxes, voter registration status, employment opportunity search, and others. The services are available on any smartphone operating platform, including iPhone, Blackberry, Google Android, Windows Mobile, and Palm.

Likewise, the New York State Department of Transportation offers a 511NY Mobile Web service and a



USA.GOV MOBILE APPS



The USA.gov website, apps.usa.gov, is a good starting point for discovering more about mobile apps in government. The site currently lists 31 different apps, such as the FBI's Ten Most Wanted, FCC's Mobile Broadband Test, Find a Health Center (near you), UV Index (wherever you are), and Veteran's Affairs Mobile. These are just a small sampling, but give some indication of the range of interests, audiences, and features that government agencies provide via mobile devices.

This site only lists "mobile apps," which are applications designed for and deployed on specific mobile operating platforms and available (for free) through the app stores of these platforms. The other approach to mobile development is "mobile sites" that use standard code (HTML5, CSS3, JavaScript) and can "run" on nearly any mobile device just like a website on a browser. There are pros and cons to each method. Many government agencies develop and deploy their mobile offerings via both methods—511NY is one good example of this dual approach.

511NY Mobile Web app for up to the minute real-time information on traffic, transit, and travel conditions. The mobile Web provides traffic and transit information, and a trip planner, as well as incident, construction, special event, and speed information. Users can access cameras, weather forecasts and alerts, and get travel times for bridges and tunnels.

Mobile service delivery is even more advanced at the international level. In many developing countries mobile phones are often the only internet connection and a simple text message can have a significant impact. In Africa, for example, a mHealth platform called ChildCount+ empowers

**MOBILE STRATEGY FOR GOVERNMENT:
FIVE KEY ELEMENTS**

- **Look inward and outward.** The benefits of mobile extend beyond apps that enhance citizen services to policies, practices, and applications that improve an agency’s workforce performance.
- **Accept that mobile is everywhere and it’s here to stay.** Do not dismiss or delay your adoption of mobile technologies because “it’s just the latest trend.”
- **Recognize that mobile is more than another delivery mechanism.** Mobile brings a new set of capabilities – such as GPS location services, cameras, remote control, and testing – that can be leveraged to redefine how, what, when and where services are delivered.
- **Address security, compliance, and identity management.** Do not take shortcuts around the very real and possibly new security and compliance issues that the adoption of mobile raises.
- **Evaluate mobile apps versus the mobile Web.** If device features are not so critical, a mobile Web approach may be better and vice versa. But apps can also take more time, money, and resources to develop and deploy. Identifying why you are developing and for whom can help you decide.

communities to improve child survival and maternal health by using SMS text messages to facilitate and coordinate the activities of community-based health care providers. The goal is to help reduce child and maternal mortality, by 66% and 75% respectively, by actively monitoring children for malnutrition, malaria, and other childhood illnesses. On another front, Kenya’s iHub—an innovation hub and nexus point for the local tech community in Nairobi—is leading the way for advances to make mobile payment systems work better or to provide more timely and useful agricultural information to farmers. In Singapore, a worldwide leader in eGovernment, nearly 350 mobile government services are available.

CITIZEN ENGAGEMENT

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Two examples from city and state government show how this is being achieved.

The City of Salem, Massachusetts, developed an iPhone app to promote tourism and engage visitors. The app serves as a mobile brochure and tour guide, but then goes a step beyond with timely events listing, coupons, and tickets to attractions that can be looked up and purchased over the iPhone. Because it’s a mobile app, you can look up a restaurant or motel, pull up a map, and get directions from your current location. Based on the success of the visitors app, the city began looking into development of a residents’ app that would synch up with the city constituent services center for reporting problems such as potholes.

The New York State Senate released the first mobile app (available on Android, iPhone, and iPad) by a state legislature, which provides direct access to the latest news, legislation, meeting agendas, calendars, votes, videos, and more. You can also find your Senator, read their blog, track their bills, and more.

The world watched the impact of mobile technology and social media on the “Arab Spring” uprisings in 2011, but citizen engagement with mobile devices extends throughout the international stage and into all aspects of life. For example, one year after an earthquake devastated Haiti, *Survivors Connect*, an organization that uses technology and social media to empower citizens around the world to address slavery and violence, has set up a text message helpline to report crimes in the country. The project, known as *Ayiti SMS SOS*, enables anyone in Haiti to text a central number if they witness or experience an act of violence. A team of trained social workers/helpline operators will



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respond or refer the case to the appropriate authorities. The helpline makes use of near ubiquitous ownership and reliability of mobile technology in Haiti; and texting is cost effective, discrete, and fast.

ALLOCATION OF IT RESOURCES AND STAFF SUPPORT

While the mobile platform may not be the only platform in years to come, it is the platform with the greatest growth, greatest reach, and greatest use among young and emerging populations. IT units need to confront this emergence from two perspectives.

First, development efforts need to take mobile delivery into account, and perhaps even as the primary option. This means design and programming skills have to be upgraded or acquired, since mobile platform skills are not necessarily the same as the general Web or desktop skills. Also, program and business units must be educated to think of mobile delivery in their program planning.

Second, IT units must be prepared to support a variety of mobile devices (phones, smartphones, iPads, tablets, etc.) deployed throughout their staff. The days of desktops and laptops being the only machines assigned to staff are quickly receding. As more work gets done on portable, mobile devices (often at lower cost and more effectively), the demand (and compelling business case) for assignment of these devices to staff will grow. This will put new demands on IT departments to incorporate these devices safely and efficiently within their networks and business processes.

TRAINING AND BEYOND

Typically, new technologies require new training. This may be true for mobile technologies as well, but the real interesting aspect of training is what mobile offers in terms of delivery. The question isn't "What training do we need to deliver mobile," but "What training can we receive via mobile." And that's where the future looks very promising and exciting.

Johnson & Johnson, number 33 on the Fortune 500 list, with over 250 companies in 57 countries, knows the challenges of training a large, diverse, and scattered workforce. Recently, they've turned to mobile devices to deliver media-rich, mobile learning via their staff's BlackBerry smartphones. As a result, they've seen a reduction in compliance issues, improved employee performance, and an engaged and aligned, though remote and highly mobile, workforce. Improved devices, improved software, and

CTG RESEARCH ON MOBILE

CTG is talking with government practitioners to find out more about how mobile is impacting their organizations and work practices. Information gathering workshops are being held with groups at the state, city, and federal levels. Preliminary findings affirm that mobile is a top priority across the board and that agencies see its many impacts affecting three major areas: citizen services and participation, workplace skills and processes, and interoperable collaborations.

Agencies are looking for examples and best practices for mobile implementations, how to assess the ROI and public value, and how to structure business cases for mobile adoption. Nearly all have mobile projects and plans in place or currently under way, ranging from lines of business applications to support field workers to SMS Amber alerts (text messaging) to mobile e-learning. Governments are taking a thoughtful approach, not just looking for a quick, high-profile killer app, but exploring long-range beneficial application of the technology that leverages its capabilities to better serve citizens and government workers.

improved wireless networks have made this possible. This trend will continue to grow, especially as stronger processors and 4G networks bring faster speeds, multitasking, and true streaming multimedia to the mobile, wireless world.

Government agencies have equally pressing demands for informing and training their large, diverse, and increasingly mobile workforce. eLearning via mobile, or mLearning, is an emerging field, but one with great promise, especially as iPads and tablets become more prominent. In a world where over 50 percent of all employees spend up to half of their time outside the office and more than 75 percent of all Internet viewing is carried out on wireless platforms, the potential of eLearning is undeniable. Governments will need to turn to this option not only for their own staff, but to reach out to the public in delivering their information and services. The platform is changing and everything else will change with it.

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