State of Utah
Mobile Strategy

Utah Department of Technology Services
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Secure

Productive

Accessible

State of Utah Mobile Strategy

A recent survey of smartphone owners revealed that 82% of users believe there are critical apps that they cannot live without for more than 24 hours. People around the world report that they now use their smartphones every day to do everything from waking up in the morning, checking email, navigating to work, finding dates, and ordering dinner. Twenty-three percent said that smartphone use was a key ingredient in their daily happiness. This evolution to smart mobile devices has been rapid and unprecedented. It is also having an impact on government services. Government workers are finding ways to use their mobile devices to increase efficiency, process important workflows and respond to citizens. Over the past five years, smart mobile devices have made their way into the state workforce. A growing number of users are going mobile to access state websites and services. This strategy is designed to address this huge change in the way state employees work by providing them with tools and support that will improve workforce efficiency as well as employee satisfaction. It will also seek to address major changes in the way increased mobility has and will impact the way the public interacts with government in Utah.

Goals of the Mobile Strategy

Briefly stated, the mobile strategy encompasses two major goals:

- Increase the productivity and effectiveness of the State's increasingly mobile workforce through efficient provisioning and technical support.
- Ensure that highly mobile Utah citizens are able to access and utilize the State's online services and information regardless of the platform they choose to utilize.

Utah workers have been using mobile devices for many years, these include cell phones, laptop computers, PDAs, etc. With the advent of smarter devices in recent years, the way users access state computing resources has changed dramatically. The Department of Technology Services must continue to adapt its support and development resources in order the meet the demands of these changes.

Current Environment

As of March 2013, Utah already has made a significant amount of progress in adapting to this new environment. Utah was the first state to develop an iPhone app as well as the first state government to pioneer the use of mobile-friendly responsive design in its web portal. Many other state and local governments have adapted Utah's iPad Guide to help users adapt to tablet-based computing. Although Utah has been a leader in several important areas of mobile computing, much remains to be done. This strategy identifies gaps and opportunities in Utah's mobile environment and provides a roadmap for progressing towards a more comprehensive and effective mobile future.

Creating an Environment that Supports Mobility

In order to create a sustainable, mobile architecture that meets the needs of Utah state agencies, business, and the public at large, the state must adapt the technology architecture in multiple areas, in particular:

- the use and selection of mobile devices by state employees
- leveraging and enhancing the state's cloud strategy and resources
- technical support for internal and external users
- coordination and training of development resources
- mobile security and privacy

The Department of Technology Services recognizes its role in supporting technology that meets the needs of state agencies and employees. With the rapid evolution towards increased use of mobile technologies, DTS is committed to helping its customers achieve the greatest benefit from their use of mobile devices and services.

- DTS will work with customers to identify and provide access to productivity resources for mobile state users.
- DTS will prioritize support resources for the most-utilized mobile systems in Utah state government
- Mobile Device Management (MDM) tools will be deployed to support security, application deployment, and devices

- DTS will work with agencies to improve governance structures that facilitate innovation and intra-agency delivery of digital services on mobile devices.

Privacy and Security in a Mobile World

Privacy and security are issues that, if not adequately addressed, can create problems for employees and for the state. Mobile security is a shared responsibility between users, agencies and the Department of Technology Services. In order to promote the safe and secure adoption of mobile services, DTS will provide tools and policies for mobile users designed to protect the interests of the State, its assets, and its data.

Many state employees may choose to utilize their own mobile devices while connected to state networks or other digital resources. In order to protect employees and the interest of the state, DTS will have policies in place that support best practices for Bring Your Own Device (BYOD) standards. The current mobile device policy, approved in 2012, stipulates that any device connecting to a restricted state resource will comply with the following:

1. Connect to restricted/confidential or internal data through State networks using the security protocols required by DTS. This may include use of secured network connections and use of State approved Virtual Private Network (VPN) services.
2. Receive and install security and other operating system updates from the operating system vendor.
3. Use a device and/or screen saver password. Portable computing devices must, at a minimum, be password protected in accordance with State security policies.
4. Be identified as an approved device on State Networks. Personally owned devices connecting to State secured networks will be registered using the approved DTS mobile computing device registration process within the UMD. Re-registration may be required periodically at the discretion of DTS and by the owner of the device when it is changed or physically updated.
5. Agree that DTS may restrict the access of any mobile computing device to secured State networks if the mobile computing device

presents a probable and demonstrable threat to the integrity of State data or other computing resources.

6. Users of personally owned mobile computing devices that are registered to connect to secured State network and computing resources agree to:
    1. Allow the State access, for discovery purposes, to the content stored on the device;
    2. Give the State the right to remotely disable or wipe the content of the mobile device in the event the device is lost or stolen.
    3. Not require State support services for the personally owned mobile computing device;
    4. Pay the approved rate for synchronization of email, contact, and calendar services. The rate may be paid by the agency as deemed appropriate; and
    5. Hold the State harmless for any damage to the device or its operating system and related software as a consequence of using State secured network or other computing resources.

Increasing User Accessibility while Mobile

Mobile devices have many capabilities that can enhance accessibility for users that have difficulty with sight and sound. DTS will work with agencies to:

1. Identify mobile resources for employees with disabilities
2. Work to ensure that existing and future mobile apps and services address the needs of users with disabilities

Mobile Devices Require a New Development and Design Strategy

The smaller screen sizes for mobile devices, which generally range from 3" to 11", require a different approach to the design of applications and websites. Many existing websites are almost unusable by smartphone users. In addition to the smaller screen sizes, developers must account for the fact that users frequently use their device in both portrait and landscape modes. Finally, designers for mobile should account for the touch interface that is critical for mobile users.

In order to create the best user experience, all new and redesigned websites and applications that might be accessed by smartphones or tablets must use a responsive or mobile friendly design. Web developers and designers should refer to Part 5.0 of the Utah Web Standards: Mobile Platform Design Guidelines for Touch-Enabled Devices.

Moving forward, DTS supports a collaborative support infrastructure for mobile developers that will also address the need for mobile application version management. Design and development guidelines have been recommended by the Mobile Strategy Team and will be refined and presented to the Architecture Review Board for the following areas:

- Creating agency websites with responsive design
- Creating iOS Applications
- Creating Android Applications
- Standard Development Tools
- Standard approach for web API development

Public facing mobile applications will be managed through a common application deployment process to external application markets, including the Apple App Store for iOS and Google Play for Android applications. DTS will support a managed deployment process for internal mobile apps through a statewide MDM system.

Creating efficiencies and job satisfaction through mobile government

Increased mobility for state workers can not only make them more efficient, but has also been shown to have a positive impact on worker satisfaction. In order to maximize both of these benefits, DTS will work with agencies to provide resources to improve worker productivity. When properly enabled, the mobile worker can perform many functions in the field rather than having to return to the office or another fixed location.

In "Gov on the Go" by William Eggers and Joshua Jaffe, the authors have identified five ways to improve the productivity of government workers through mobility:

1. Reduce time spent on data entry

2. Enable better situational awareness for frontline employees
3. Enable work from any location
4. Improve accuracy and reduce the effort involved in performing tasks
5. Enhance collaboration and data sharing among employees/ agencies

Utah will work to implement efficient mobile tools and environments that promote these productivity objectives.

DTS will work with agencies to provide resource guides that help employees understand how to better utilize their mobile devices. These guides may include:

- iPad User Guide
- Android User Guide
- Cloud Applications and Services

In addition, DTS should work with customers to identify additional tools that can be utilized to improve productivity. These tools could include:

1. Secure cloud storage for the mobile worker
2. A State of Utah Mobile Collaboration Guide
3. Mobile Workflow
4. Business intelligence tools for the mobile worker
5. Location services for mobile

DTS will also work to improve the mobile service support structure and provide employee self support capabilities such as online training and self-provisioning resources.

Supporting the Mobile Public

Although only 13% of Utah.gov accesses were from mobile devices in 2012, this number is growing rapidly and will continue to grow in the foreseeable future. For many, mobile access is becoming the primary means for accessing the web. If Utah agencies expect to adequately service this part of their constituents, they must adapt websites and services to mobile platforms. We can deliver a better user experience by using responsive design on all agency websites and developing integrated

mobile applications for the highest demand mobile services and information. Utah's mobile strategy can help stimulate innovation as it supports key state objectives, including education, jobs, and energy development. By working together, agencies can package applications and services that will be more useful to the public while reducing the complexity of interacting with government.

Measuring Success

The eGovernment Office in DTS will work with agencies to establish metrics for measuring the success of mobile initiatives. A baseline of existing mobile applications and services has been developed and will be updated as new services are completed. The metrics that will be used to measure the success of the mobile strategy may include:

1. Number of mobile application downloads
2. Percent of web access via mobile devices
3. Efficiencies created within government through the use of mobile technologies
4. Bounce rate for mobile web visitors
5. Percent of primary agency websites that are mobile-friendly / use responsive design (statewide measure)
6. Number of mobile applications created and supported (statewide measure)
7. Integration with third party applications that leverage use of state-provided data

DTS plans to establish mobile innovation as one of its Success Framework projects in the future as a way to increase efficiency for state employees and will establish appropriate measurements as part of that project.

Mobility Roadmap

#	Owner	Milestone Action	Month 1	Month 3	Month 6	Month 12
1	ARB	Determine what mobile devices and OS will be supported by DTS.	x			
2	IT Directors	Department plans for mobile apps / services		x		
3	Operations, Security, ARB	MDM implementation plan and policies			x	
4	Security	Review and update all security policies related to mobile devices and services.		x		
5	IT Directors, Product Managers	Department websites with Responsive / Mobile Friendly design				x
6	CTO, ARB	Android User Guide			x	
7	CTO, ARB	iOS User Guide Update			x	
8	CTO, ARB	Mobile Development Training			x	
9	CTO, ARB	Define Mobile Metrics		x		
10	ARB	Plan for DTS mobile cloud utilities			x	
11	IT Directors, Product Managers	Department mobile app(s)				x
12	CTO, ARB	Mobile Collaboration Guide			x	