Little Hoover Commission
March 26, 2015

Testimony from:
David G. Fletcher
Chief Technology Officer
Utah Department of Technology Services

I have been involved with the implementation of new technologies in the state of Utah for 25 years, almost 8 of those as the Chief Technology Officer. I appreciate the opportunity to share our digital government experience with the Little Hoover Commission and the state of California.

Shortly after the Mosaic Browser was introduced in 1993, as the Director for the Utah Division of General Services, I created my first government website. It was something new and exciting, something that was about to dramatically impact the way the Division did its business, as well as every other agency in Utah state government. My life has been tied up with digital government ever since that time.

In 1998, we had realized the difficulty of hiring internal staff with the skills necessary to create all of the online services that we envisioned, so we created the Utah Electronic Commerce Council (UECC) and contracted with NIC USA to begin the development of online services for the State. The UECC involved representatives from most state agencies and prioritized the work activity of Utah Interactive (NIC's local branch). At that time, many agencies still did not understand the business value of the internet and were reluctant to adapt to online service opportunities. We created an online newsletter called Capitol Connections and were able to get the Governor to do a monthly employee video message.

In 1998-2000, I served as the State Y2K Coordinator. Rather than look at the Y2K issue as only a problem, we took it as an opportunity. We created online, interactive systems for reporting compliance status and required agencies to submit regular updates online. Agencies became accustomed to using the internet as a primary vehicle for doing business.

In 2001, the Governor hired Dr. Phil Windley, the founder of iMall and former VP of Excite@Home. At that time, the state transitioned all web activities to the Utah.gov domain as a way to develop consistent, citizen-focused branding and required in administrative rule that all state-sponsored websites utilize the new domain. We created the Product Management Council (PMC) and each department-level agency was required by the Governor to assign a high-level executive as the product manager over the agency's website. The PMC met monthly from 2001 until 2014 with the primary objective to ensure the best delivery of digital government services and coordinate activities between agencies.

In 2002, the CIO recognized the value of blogs and paid for subscriptions to Radio Userland (one of the first blogging services) for the first 200 state employees to accept his challenge to maintain a blog. This was our first dive into social media and it was an important step towards our goal of becoming a more open government.

Since 2002, Utah has made consistent annual progress towards its goal of providing high quality, high value digital government service. Each year, we add 50-75 new online services to the portfolio. These services are identified in the Utah Master Data Index which tracks a growing array of digital government assets, including government social media feeds, mobile applications, digital maps, online reports, open data services, blogs, digital video, etc. These assets are tagged and identified in a way that allows them to be utilized throughout the Utah.gov ecosystem.

In 2005, the Utah legislature passed a bill to consolidate all IT services and assets into a single department. This consolidation has had a major impact on the way that Utah delivers its digital government services. Once the department was created, 38 state-owned data centers were consolidated into 2 data centers, significantly decreasing the resources that were required to support the State's IT infrastructure. The result has been a reduction in IT costs of over $127 million, while actually increasing the resources allocated to creative, citizen-facing activities.

Utah's Digital Government Portfolio

- Over 1100 online services
- A primary domain (Utah.gov) with 295 sub-domains
- 30 million pages of web content
- 1500 social media feeds
- Over 1200 open data sets
- Dozens of YouTube channels

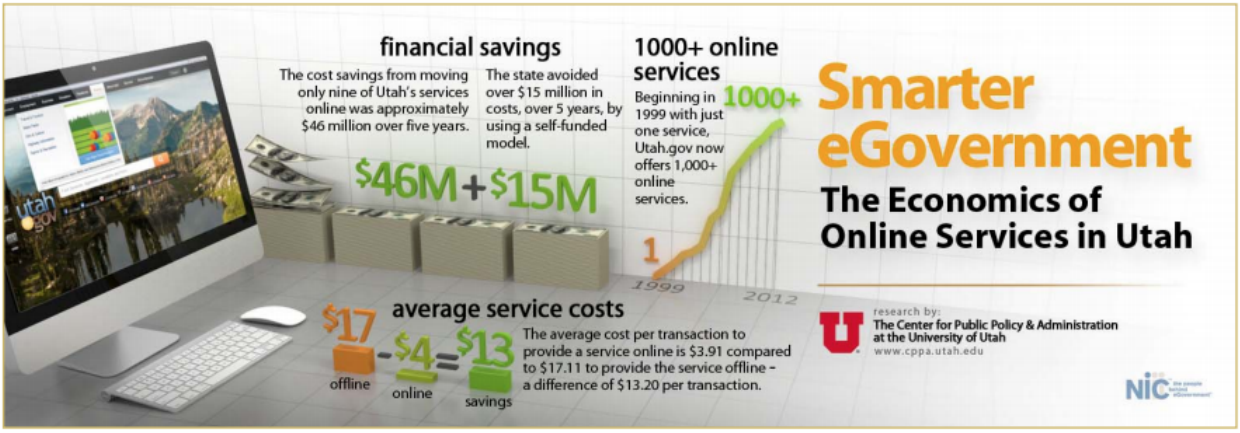
I began reporting on the number of online services back in 1999, when we had less than 100 services. By 2003, we had about 400 services and the adoption rate was climbing as citizen awareness became more widespread. Today, we are approaching a level where most services which can reasonably be supported online are available online. All of these digital assets are tracked through a system we call the Master Data Index (MDI). The MDI is a mechanism for tracking digital assets in a way that they can be identified and shared throughout the Utah.gov ecosystem.

Measuring Value

In order to ensure the success of digital government, Utah's strategic egovernment plan is based on an extensive set of metrics which is reviewed regularly. At a high level, those metrics include:

- Number of online services available
- Number of monthly unique visitors
- Monthly page visits
- Number of online service transactions
- Savings resulting from digital transactions
- Citizen feedback from individual online service response surveys
- Social media metrics

In order to more effectively understand the value proposition associated with the delivery of Utah's online services, in 2012 the Center for Public Policy & Administration completed a study which examined five years of cost data. The study revealed that the average cost of an online service in Utah was less than $4 per transaction, compared to $17 for traditional service delivery methods.



This third-party study confirmed the value of our emphasis on delivering service through the digital channel. In 2014, we identified over 34 million online transactions.

In 2014, Utah (with a population of 2.9 million) averaged 1,518,303 unique visitors to the Utah.gov domain. With over half our population accessing the site on a monthly basis, we want to ensure the very best experience possible. Every year, we review the latest technologies, trying to ensure that we can incorporate new ideas that will improve the user experience. In addition to adding new services, we work to maintain and improve existing services based on citizen feedback.

Representative Online Citizen Services

- Hunting and Fishing Licenses
- Driver License Renewal
- License Plate Renewal
- Safety and Emission Inspections
- Animal Travel Permits

- Order Utah Travel Guides
- Immunization Reporting
- Birth, Death, and Marriage Certificates
- Online Job Referrals
- Unemployment filing

Utah.gov services are also designed to help Utah's economy remain strong and vibrant. Millions of online job referrals connect Utahns with new job opportunities and help Utah businesses find the best employees. Utah's one-stop business registration service (OSBR), live in 2003 has become a model for similar services around the country and saves businesses about 80 hours in the process of incorporation and starting the business. OSBR allows users to register with all necessary state agencies and many local governments through a single online process and has been used to register over 250,000 businesses. These kinds of innovative services have helped keep Utah's unemployment rate about two percent or more below the national average.

Utah has also measured the satisfaction of business with its online services. Ninety-one percent of Utah businesses say that the state's online services save them time. Eighty-six percent confirm that Utah's digital government makes it easier to do business with the state. We want to elevate these numbers to 100% and continue to analyze ways to improve our online business service portfolio.

Representative Online Business Services

- One-Stop Business Registration
- Annual Business License Renewal
- Professional Licensing Services (all)
- Continuing Education
- Trademarks
- Notary Training and Registration
- Unemployment Insurance
- Controlled Substance Database
- State Construction Registry

As with citizen services, Utah emphasizes adoption rates as a way to increase return on investment. Governor Herbert has four priorities for state government. Currently, those priorities are jobs, education, self determination, and energy. The state's digital government projects support these objectives.

Each year, every agency works with the Department of Technology Services to create an IT plan which identifies all of the projects that will be undertaken during the fiscal year. When the project is created, it becomes part of the enterprise project portfolio which is submitted to the state legislature for approval. Once it is approved, resources are allocated to the project. Projects are carefully tracked to ensure they are completed on time and within budget. The

state has a high rate of success with these project metrics. DTS has a central project management office that oversees and tracks all IT projects.

Utah has a single sign-on model that supports authentication and security across a large number of services. For businesses that interact frequently with the state this can facilitate an easier payment system.

Security and Privacy

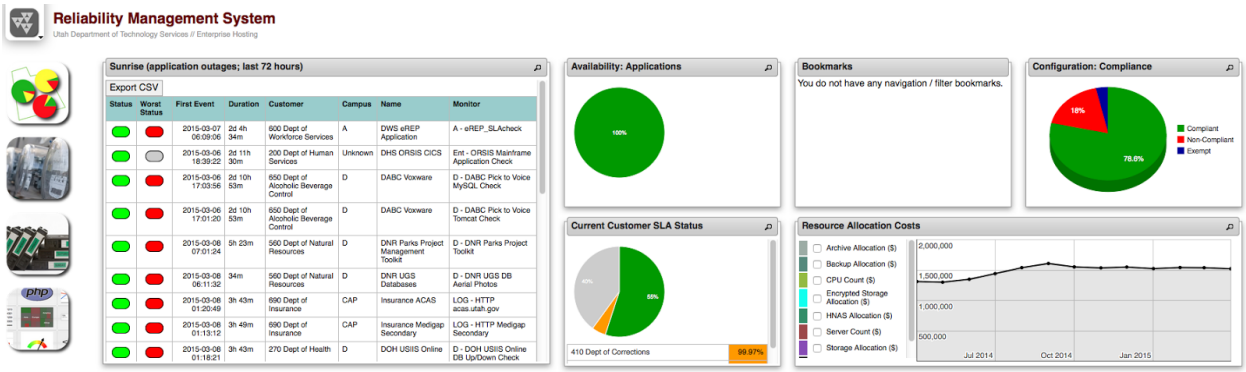
Digital government is based on trust. With 34 million transactions a year, Utah is committed to ensuring the integrity of every transaction. Utah experienced a security breach in 2012 of health data that was not related to our delivery of online services. That experience reinforced the emphasis and commitment that we have made security and privacy. As a result, we reviewed the security of each application and service in the digital government portfolio. Here are a few components of our updated security posture.

- Encryption at rest and in transit for ALL private data
- Mobile Device Management service required for all state employees using mobile
- Redundant environment in primary and secondary data centers

Utah.gov standards include a standard header and footer for each page containing security and privacy information. These standards help ensure consistency in the way that services are developed and help citizens understand the conditions by which government receives and manages their personal data.

The Utah Department of Technology Services created a Reliability Management System that tracks the status of all critical services to ensure that they are continuously available. This real-time system uses an extensive array of sensors and monitors. Any anomalies are

reported in real-time as well as on a daily sunrise report that is reviewed by the Chief Operations Officer among others.



Service level metrics are agreed upon measures by the individual agencies and the Utah Department of Technology Services which is responsible for ensuring that all service levels specified and paid for by the agencies are achieved.

Accessibility and Mobility

Utah was the first state to create a mobile app for the iPhone in 2007, shortly after the device was first released. In 2013, Utah published a state mobile strategy. The strategy has two simple objectives:

1. Increase the productivity and effectiveness of the State's increasingly mobile workforce through efficient provisioning and technical support.
2. 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.

To increase mobile accessibility and promote a great user experience for this fast growing sector of Utah.gov users, the state’s Technical Architecture Review Board established a standard in 2009 that all new websites would use responsive design. By 2014, mobile users comprised over 26% of all unique visitors to Utah.gov.

The Utah Department of Technology Services also works closely with deaf and blind service agencies to promote accessible computing for all users. The Department provides regular training to its developers to increase knowledge and awareness of accessible computing issues and programming techniques.

Current Priorities

Each year, the Department of Technology Services is required to submit a strategic plan to the state legislature. The plan is designed to support the business objectives of the state which include the Governor’s priorities, individual agency initiatives, and objectives created by the Senate and the House through the legislative process. Input from citizens, interest groups,

the Utah business community and other stakeholders is incorporated throughout this entire process. Department leadership works with IT directors which are assigned to every agency to determine what enterprise level activities are need to create success across the entirety of this plan.

A Consolidated IT Enterprise

As mentioned earlier in this testimony, IT services and assets in the executive branch of Utah State Government were consolidated into a single department in 2005. Originally, the department had almost 1000 employees. The department has addressed the needs of statewide IT services with the following command and support structure:

- CIO
  Department Head, Oversight and management of all department activities, including all IT contracts with external providers
- COO
  Statewide data center and network and all other core IT infrastructure services, enterprise systems development
- CTO
  Innovation, Digital Government and IT Technical Architecture & Standards, Open Data
- CISO
  Statewide Information Security
- Finance
  Budget and rates for all IT activity, asset tracking and inventory
- Audit
- AGRC
  Geographic Information Systems
- IT Directors
  Assigned to each department, oversees agency development and ensures compliance with service level agreements
- IT Service Management
  DTS maintains an enterprise help desk environment and tracks all relevant metrics, response time, performance, etc.
- Architecture Review Board
  Proposes, reviews and establishes statewide IT standards / architecture

When the department was created, the Legislature was concerned about creating an agile IT workforce that could be responsive to the changing dynamics of technology. All IT positions were re-positioned as non-merit or at-will, which they felt would provide greater flexibility to management in obtaining workers with the necessary IT skills. To compensate for this change in status, employees were given a salary increase.

The majority of the staffing reductions that have occurred since that time, however, have been the result of attrition. The consolidation of all executive branch IT into a single organization

has enhanced the ability of the state to rapidly design and implement new ways of doing business which are more cost effective.

- Consolidation and migration of email services to the cloud
- Consolidation of data centers
- Integration of all wireless services and support
- Statewide IT support model using cloud-based ITSM

Emerging Trends and Technologies with Relevance

Each year, the digital government team that coordinates developments on Utah.gov holds a one-day retreat to examine new technologies that might have relevance to digital government and explores ways for these to be incorporated into what we do next. These idea sessions generally pay off in a variety of ways and help create a dynamic development environment that keeps our design staff engaged and promotes better user experience for citizens.

Additionally, we review external assessments of emerging technologies, such as the Gartner HypeCycle to determine which of those technologies have applicability to government.

What's Next

Because Utah is close to accomplishing many of its past goals with respect to digital government (such as high adoption of online services), we are exploring new ways to use technology to deliver value to the state. These are a few of the technologies we are currently looking at:

- Artificial Intelligence
  We are looking at ways to bring AI and smart analytics into the state portal to improve online interactions.
- Data-driven Government
  Big data and analytics are creating new opportunities to improve the way government services are delivered.
- Internet of Things
  Sensor networks provide real-time information that help Utah more effectively manage the business of government. These include things like the Road Weather Information System, Intelligent Transportation Systems, Real-Time Health Monitoring, water management networks, etc.

I have attempted to summarize a great deal of activity and a very large ecosystem in this brief written statement. To date, our efforts have been extremely well received overall both by statewide decision makers, including the governor and legislators, as well as the public at large. I believe they have helped to improve the public's perception of Utah state government in general. We still have a lot of work and will never really be done.

I have had many opportunities to communicate with my colleagues in the great state of California. Prior to returning to Utah, I had the opportunity to live in Monterey, in Merced, and in Southern California, so I am quite familiar with your diversity and your opportunity. The world looks to California as a center of innovation. I would encourage California government to build and expand on these strengths. Here are a few ideas which I believe would help:

1. Encourage and support great leadership. Carlos Ramos has a great reputation nationally as a state CIO. Make sure you retain such leadership and help remove roadblocks that can frustrate solid IT leadership. Constant turnover in IT leadership can be one of the biggest detriments to progress. Because IT encompasses a statewide mission that should continue to expand, I believe the CIO should report to the Governor and always have a seat on the cabinet.
2. At some point in time, California should consider statewide IT consolidation. It may be a challenge and the political turf associated with this challenge may be difficult to overcome, but I would guess that potential savings may amount to at least hundreds of millions of dollars.
3. Continue to be a voice for digital government. For whatever reason, California was slower than some states to create very many online services. In the last 5-7 years, I have seen quite a bit of progress in that area. Continue to build on that.
4. Support CalCloud and similar initiatives. Legacy systems over 15-20 years old should all have been replaced by now.
5. Develop an IT strategy with a small portfolio of enterprise IT initiatives that can only be accomplished by having agencies work together in cooperation with the State CIO (I would say about 10). Direct the CIO or his appointee to report to the cabinet on a monthly basis on the progress of these initiatives.
6. To avoid redundancy, I suggest that ALL IT projects and procurements should be approved by the Department of Technology Services. A business case should be required for all projects of significant size that ensures that the most important alternatives have been examined.
7. The first goal in the California state IT plan is “Responsive, Accessible, and Mobile Government”. This is an important focus in a state where 30% of the population is already accessing government via mobile devices. The current project portfolio should relate directly to these kinds of goals to ensure that the way budget is spent is associated with strategic goals. Each goal should have metrics that can demonstrate whether the state was successful in achieving these goals.
8. Consider hiring a Chief Digital Officer. In the state of Utah, I typically fill this role as the CTO, but in a state the size of California, government should appoint someone who oversees statewide digital government initiatives. This person could report to the CIO. The Chief Digital Officer would oversee the state portal and coordinate enterprise digital government initiatives similar to Rachel Haot, CDO of New York State.

For many years, the US led the world in egovernment. According to the 2014 survey on e-government by the United Nations, the United States is now ranked 7th and has been

dropping each year. As government, we need to provide the best service possible to our citizenry and in today's world, this often means digital. With California leading out, we can regain this leadership role as a country.

Thank you for the opportunity to meet with your Commission. I am excited that California is part of our quest to improve public service through the effective use of technology and look forward to observing your progress.