IT Innovation Strategy

On behalf of the IT Alliance for Public Sector (ITAPS), an alliance of leading technology companies offering the latest innovations and solutions to public sector markets, we urge you to focus on development of an innovation strategy and wish to share with you our recommendations to help inform and drive investment in information technology (IT) goods, services and solutions as the means to achieving success with such a strategy. We’ve outlined below our recommendations for the key elements of such a strategy and elaborated with narratives and case studies of similar successes in other locales. A focus on innovation will help drive your state further into the information age. We look forward to the opportunity to further discuss with you these recommendations and how they lead to success.

1. Make the private sector your partner.

The private sector is the source of innovation and investment in new technologies. Your administration’s innovation strategy should leverage that expertise by partnering with industry as appropriate to help speed identification and adoption of new capabilities and the efficiencies they can deliver. This partnership should include forming an “information technology kitchen cabinet” of senior IT executives to serve as a sounding board for problem-solving for the myriad of state technology challenges your state will face. The state of Michigan’s chief information officer (CIO) created such a group to meet regularly to discuss and advise on technology policies. This type of collaboration between the public and private sector allows government agencies to tap into well-vetted commercial sector ideas in order to achieve mission critical objectives.

2. Adopt a culture of innovation and instill it into the administration of state government.

An administration’s investment in new ideas turns innovation into a cultural value that pervades every level of state government. Establishing an innovation strategy will help to establish a process to identify the type of projects to undertake and set the tone for a culture of openness. Innovation can be viewed through several lenses, from continuous improvement to operational and substantive issues. The California Franchise Tax Board (FTB) focused reformation of its “Enterprise Data to Revenue System” with the help of a top tier IT company. The collaboration focused on the operational infrastructure and modernized IT systems and processes. This included increasing self-service capabilities, improving the FTB’s compliance operations, and enhancing its automated return validation capabilities. This modernization is expected to raise more than $4.7 billion during the first 66 months and add $1 billion annually thereafter in state tax revenue. Working with its IT partner to automate manual processes and adding modernized payment services to enhance data consistency and consolidation, California can now invest in additional services to improve citizens’ lives.

3. Focus on securing state IT assets.

State information systems contain a broad variety of sensitive data, making them high targets for cyber attacks. Building and sustaining a secure information technology environment for state government entities should be central to this administration’s innovation strategy. The Framework for Cybersecurity in Critical Infrastructure (Framework), developed by a range of industry and government stakeholders (including state governments) and released in February by the National Institute of Standards and Technology (NIST), is an effective tool to help states manage their cybersecurity risks, and state agencies should be strongly encouraged to use it. In fact, the National Governors Association and the National Association of State CIOs (NASCIO) officially encourages states to adopt the Framework as a common language in which to build a strategic cybersecurity plan that provides leadership and stakeholders a
better understanding of the security stance within state governments. Inventorying a state’s cybersecurity risks, staying abreast of evolving threats, and updating hardware and software in a timely and consistent fashion are essential to detecting, managing and mitigating cybersecurity risks.

While IT companies are heavily investing in cybersecurity of their products and services, they are also making strong commitments to their own IT infrastructures to remain competitive for government contracts. As a result, IT companies are very useful partners in states’ cybersecurity efforts. Texas offers an example of using private sector innovation to better secure state government networks. The Texas Department of Information Resources (DIR) enhanced its statewide IT and communication services by migrating to an IP-enabled network to better address cybersecurity risks. Working with its telecommunication partner, Texas is on the cutting edge of IP convergence and can now offer a variety of telephone and data systems for the state enterprise in a secure fashion. Because it is deployed in conjunction with the service provider, these security measures straddle the connection of state networks to detect and even prevent attacks as well as isolate and segregate a threat to prevent the problem from rippling through the network. With safe and secure citizen services being a priority for every state governor, an IP-enabled network can allow voice to be separate from other traffic using virtual local area networks that are protected even though they are on the same physical network as data traffic.

4. Invest in new technologies.

When faced with decades-old legacy systems, looking to technology solutions may exponentially drive efficiencies and transform government operations. After a state-issued mandate required Ohio public universities to reduce energy spending by 20 percent by 2014, Cleveland State University looked at typical cost-cutting strategies, including assessing technology hardware operation. It discovered that there were over 2,500 print devices being maintained by various departments, many with limited usage patterns. By partnering with their IT vendor to manage the university’s print services, they garnered dramatic energy savings. The university reduced its print devices by 86 percent, lowered its production of paper copies from 41 to 32 million pieces annually, and cut energy usage from 425,000 to 200,000 kilowatts per hour. Cost savings skyrocketed to $685,000 in the first year.

Even with depressed revenues, a state innovation strategy can transform limited budget resources to take advantage of on-demand, shared resources offered by adopting a cloud first strategy. Cloud services are becoming critical for meeting the challenges of exponential data growth and cybersecurity issues. Utah’s success is built on using new technologies to meet citizen expectations. After consolidating into a single IT organization, it was able to focus resources and offer almost 1,100 online services. Utah has launched a weekly unemployment insurance claims program which has completely eliminated paper-based processing. The University of Utah’s analysis indicates that there is a $13 savings for every transaction performed online. From a procurement perspective, cloud first is a viable technology option for budget-constrained state governments that cannot afford to maintain legacy systems and their costs.

5. Build smarter IT procurement.

As part of an innovation strategy, your administration should identify unfriendly business regulations and archaic procurement practices, many established decades before the advent of the computer and the Internet, that threaten to slow the acquisition of innovative technology solutions by state agencies and local governments. Streamlining procurement processes can be aided by aligning terms and conditions of IT contracts so that they converge on commercial norms and practices such as protecting corporate intellectual property rights, fairer indemnification provisions, and reasonable limitations of liability.
Additionally, failure to tailor IT contracts to accommodate new technologies such as cloud services may exclude capable vendors and jeopardize a state’s ability to accommodate new technologies that deliver more value for less money. When the most capable tier one IT companies do not participate in competitive bidding because of onerous procurement terms, a state is left with undercapitalized or potentially less competent firms as the providers for technology needs. A state’s adoption of business-friendly procurement strategies is essential to arriving at agile solutions, increasing speed to market, and successfully managing IT projects.

6. Leverage big data.
Your innovation strategy should include a multi-year plan to identify, define, and manage state data as a priority step to being able to leverage and unify volumes of data from disparate sources and perform complex data analysis to measure performance and improve service to constituents. It is pivotal to transforming government and promoting an innovation discourse. The challenge is to ensure that it is user-responsive and there is clear proof of value. One Midwestern state governor tasked his IT and budget teams to develop an enterprise-wide, data management system to assist state agencies to better use the huge volumes of data stored in various systems and make it constituent-centric. Working with a tier one vendor, the state recognized a 90 percent increase in data compression for more efficient data management, over five billion rows of data were integrated from state agencies, and database queries are now 1000 times faster. This data unification offered more complex analyses to uncover new insight and provides a high-security environment to protect personally identifiable data. It has demonstrated the art of the possible. Now Indiana can easily obtain deeper insights into areas of improvement across multiple state agencies.

7. Promote open data.
Wherever possible and legally permissible, an innovation strategy should call for the release of data as the new default for government, while taking into account appropriate privacy, confidentiality, and security considerations. This starts by identifying and inventorying data sets and ensuring that data throughout its life cycle is easy to find, accessible, and machine readable, therefore contributing to job creation and economic growth. Open data transformation is taking many forms. Utah, for example, manages more than 2.5 million vehicle titles and registrations every year, 2,700 dealership and body shop licenses, and 12,000 sales licenses. The online overhaul brought a higher level of customer service and reduced state costs. In fact, Utah leads the nation in online registration.

Working with highly dependent data systems across multiple state agencies, however, can be complex. IT vendors understand the complexity and interrelatedness of projects and how software development projects can be particularly challenging. One software technology company worked with the California Department of Motor Vehicles (DMV) to employ service virtualization using a capture, model and simulate process which shortened the development lifecycle, allowed debugging sooner and lowered the costs. The California DMV anticipates its costs for mainframe use will drop 50 to 60 percent as a result. By allocating state monies for innovative IT projects, the state can improve constituent access to data, employ new, efficiency-inducing technologies, and increase government flexibility.
8. Improve speed of services.
An innovation strategy should track the innovation trend in the private sector and leverage agile development methodology, mobility, and other commercially proven hardware and software solutions, which can magnify speed to market and improve citizens’ lives. Faced with 800-900 health-related 911 calls daily and hundreds of millions of dollars of unpaid ambulance bills, the city of Houston recognized that when individuals needed assistance, a significant number of those calls did not require transportation to a hospital emergency room. Identifying that one ambulance trip can cost $1,000, the city installed new tablets with cameras that provided first responders the latest innovations in mobile computing to evaluate patients in the field. Physicians in dispatch centers assisted emergency responders to determine the response to the presenting health emergency, including whether hospital care was warranted. Integrating this technology has drastically decreased the number of 911 repeat calls and increased response times due to faster performing, more reliable equipment.

And for those who must avail themselves of a state’s safety net, it can put food on a family’s table. Converting state fund distribution from checks to electronic payment cards (EPC) is one example where states can disburse funds quickly and securely without compromising services to constituents. In fact, the right payment card can produce dramatic savings and eliminate mailing delays. State governments can use EPC for a variety of programs such as tax refunds, temporary assistance for needy families, workers’ compensation, pension payments, unemployment insurance, and government employee payroll. One technology vendor helped states save millions by partnering on over 30 programs in more than 20 states to distribute a total of $34 billion in payments in 2012. The commonwealth of Pennsylvania alone saved $57 million over five years by delivering unemployment benefits via EPC with its innovation partner.

9. Expand cross-jurisdictional collaboration.
The Great Recession strained local and state budgets alike. While local economies are improving, the downturn forced collaborative projects between states, state and local governments, and local agencies. Your innovation strategy should identify those collaborative opportunities to tap into new funding streams, save costs, and enhance services. The Los Angeles County and USC Healthcare Network collaboratively realigned, enjoyed some of these benefits, and also earned an Energy Star Certificate from the Environmental Protection Agency in the process. With four major hospitals and 19 clinics, it determined that every unit was running its own procurement process and IT hub. Switching to one main IT hub and hosting all major applications for the system was step one of a multiple step project. It also decommissioned 5,000 old PCs and monitors and 200 old servers and brought online new Energy Star-qualified models. Recognizing that staff left computer monitors and equipment on, IT staff also configured the new equipment to default to sleep mode after five minutes of nonuse. The hospital system’s hardware project will save thousands of dollars annually. Projects of this sort can be scaled to the state enterprise or expanded more broadly across multiple local governments with state coordination.

10. Grant broad oversight authority to a state CIO.
Your innovation strategy should put the state chief information officer in the Cabinet in order to provide direct access to senior executive levels of this administration. The CIO should also have broad authority to oversee all state agency IT procurement strategies to effectuate robust innovation and maximize technology investment impact across the state enterprise. Without the direct line of executive engagement, IT investments are likely to be disjointed and cannot be planned or integrated with other key players.