



Economic Recovery and Reinvestment

Call to Action: Modernizing and Securing the Digital Infrastructure of the States

Background

State governments rely heavily on the “digital infrastructure” (the critical information and communications technology infrastructure) to run government. This “invisible infrastructure” is now part of the fabric of state government that supports state programs, enables effective and efficient services and supports our economy. In addition, this infrastructure is the basis for our 21st century economy and allows us to deliver service 24 hours a day seven days a week.

The dilemma confronting all states, during this current economic crisis, is investing and securing modern and innovative digital infrastructure solutions, while supporting basic operational and public services needs. Although state governments have advanced their portfolio with investments in new technologies, high-speed networks, flexible programming and a host of online services, most still live with a “legacy.” Many state systems, networks and applications are obsolete, difficult to secure, costly to operate and a challenge to support. In a recent NASCIO survey¹, State CIOs classified more than half of their IT systems as “legacy” with the majority of this identified group considered mission or business critical. The modernization of state IT legacy systems has emerged as a significant financial, technical and programmatic challenge to the states’ ability to deliver effective and efficient services.

NASCIO urges federal lawmakers and state leaders to discuss the need for a federal-state partnership for investments in digital infrastructure modernization. With rapidly increasing costs to maintain its legacy systems, including software applications, an increasing wave of retirements, and a growing skilled labor shortage, the federal government will deliver \$500 billion to the states to administer programs ranging from Medicaid, unemployment to welfare. A fraction of this funding is used to support the digital infrastructure components that states must purchase, develop, implement, maintain and make secure to carry out the federal programs. Without investments in IT modernization and security, legacy system replacement or renovation, the ability of states to operate as modern organizations and serve its citizens is at risk.

NASCIO supports policies, strategies and investments ensuring a modern infrastructure that enables and supports innovation capabilities, efficiencies and productivity, employment, competitiveness and quality goods and services. Modernization of the infrastructure includes infusing information, communications and technology capabilities in the existing infrastructure such as transportation and environmental management, advancing new priorities such as investments in energy, and improved support for the education and health care services. In order

¹ Digital States at Risk!: Modernizing Legacy Systems, NASCIO, December 2008, www.nascio.org/publications/documents/NASCIO-DigitalStatesAtRisk.pdf

to deliver on the promise of better and streamlined government, stimulus funding must be directed toward modernizing the states' digital infrastructure, which includes:

- Facilities (especially energy efficient data center construction and retrofitting)
- Hardware (including energy efficient equipment)
- Software and systems integration (including business process reengineering)
- Connectivity (including expanding broadband)
- Security, disaster recovery and business continuity (including backup facilities)
- Human resources and operational and support service capabilities (includes IT training for new skill sets)

It is imperative to include security as an element of infrastructure modernization investments. Digital infrastructure security is not only essential to preserve the states' ability to effectively serve citizens, but is also necessary to protect federal programs (such as Medicaid, TANF and others) administered by the state, preserve the privacy of personal and sensitive information and to support mission-critical homeland security activities.

Call to Action

The proposed American Recovery and Reinvestment Plan for the nation must be bold and expansive. State governments are critical to the success and performance of this plan. NASCIO, representing the State CIOs, seeks serious consideration for funding on modernizing the information technology infrastructure and propose the following recommendations:

- ***Broaden the definition of “infrastructure” to include the digital infrastructure*** – (information and communications technology), a critical component of the states' ability to support human services, health care, education, transportation, and public safety and employment services. The need for ICT infrastructure modernization is intertwined with proposed investments in traditional infrastructure needs and will stimulate the economy. The ICT modernization need is substantial, with an estimated \$20 billion required by the states to create jobs and stimulate the economy through digital infrastructure investments.
- ***Reform the federal funding cost allocation to allow states the flexibility to be innovative, reduce costs and more effective in using federal programmatic funds.*** The state IT landscape has changed significantly, yet federal grant funding guidelines do not reflect this new environment. As millions of new federal dollars are spent from the stimulus on IT that supports education, human services, public health, justice and homeland security, a change in attitude toward enterprise IT solutions and flexible commingling guidelines with specific cost-allocation options could greatly improve the return on every federal dollar spent on information systems in the states. This flexibility could also prevent the creation of new “stovepiped” systems. Federal agency interpretations of cost allocation guidelines must become less ambiguous, more consistently applied and allow flexibility with accountability. New funding guidelines should be added to encourage enterprise IT solutions, IT consolidation, and flexible commingling practices could greatly improve the return on every federal dollar spent on information systems in the states.

Economic Impact

Under President Obama's American Recovery and Reinvestment plan, substantial direct and indirect funding for state IT modernization, infrastructure upgrades and security will sustain public sector IT employment and create jobs in the private sector. IT professionals in state government face an uncertain future with the current fiscal crisis and state budget cuts.

According to the U.S. Bureau of Labor Statistics, over 77,000 computer and IT professionals are employed in state government.² In most instances, these are high skill, high wage positions (mean annually salary of \$59,090) that contribute directly to service provision, support priorities of the Governors and are necessary to transform our economy. These are high quality jobs that must be retained, but also retrained with new skills and knowledge. A key part of the IT modernization initiative is training for the new skills required to support new and emerging technologies in the 21st century economy.

At the state level, many capital construction projects, major IT upgrades and related initiatives have been postponed due to the dire budget situation. Federal fiscal relief for the states and directed stimulus funding for IT will result in government purchasing and spending for new data center facilities, hardware, network equipment, security appliances, software and consulting services. Facilities construction, technology manufacturing, distribution and support channels will benefit, including additional private sector job creation and reemployment. President Obama has called for a comprehensive new energy plan for the nation, with energy efficiency as a key component. States are making progress, however substantial investments in green information technology solutions are necessary to reduce energy consumption, reduce the carbon footprint and lower costs. To reap these benefits, states need to build new data centers, retrofit existing facilities, as well as replace aging systems with new energy efficient computing hardware and virtualization technology.

Because state governments rely heavily on the private sector for IT infrastructure, solutions and services to support state programs, it is projected that job creation will be in the private sector. Information, communication and technology represent both a targeted, strategic investment and driver for the jobs related outcomes of the stimulus package. Further, the new economy skills and jobs primarily accrue to the private sector (more than 90 percent), and across a wider range of competitive industries. This occurs because of three complementary strategies:

- The overall impact of the stimulus initiative generates a wide range of high skill, knowledge jobs including telecommunications, computer and electronic products, professional scientific and technical services. This is the cumulative effect of all of the stimulus components.
- Specific information, communications and technology investments in sectors such as broadband, modernization, health, smart grid and transportation, with their significantly above average indirect, induced multiplier and economy wide productivity and new service creation effects results in among the highest ROI from the stimulus components.

² U.S. Department of Labor, Bureau of Labor Statistics, National Industry-Specific Occupational Employment and Wage Estimates, NAICS 999200 - State Government (OES designation), see www.bls.gov/oes/current/naics4_999200.htm

- A bonus, window of opportunity results from the overlap of the stimulus plan timeframe and the public sector modernization imperative called for by the pending retirements in state government. NASCIO's survey on the state IT workforce reported 27 percent of state IT employees will be eligible for retirement. Because of this retirement wave in the next five years, the states will experience a significant loss of IT skills and knowledge. State CIOs will turn to increased private partnerships, outsourcing solutions and other alternate business models to fill the gap.³ The call for IT modernization and replacement of legacy systems and practices, requiring a high performance workplace and workers, provides private sector high skill service and job creating opportunities. These are American jobs in a sector which offers a tremendous advantage in a highly competitive global economy.

The need to invest in our digital infrastructure is well documented in NASCIO's 2008 survey of legacy systems in the states. With the economic downturn, this situation has only become exacerbated. State governments have deferred the investments necessary to upgrade systems and technology services in for programs that support health and social services, education, public safety, transportation and labor. ***The consequences of inadequate investments in IT modernization are real!*** For example, with the jobless rate at an historic level, many states are experiencing unprecedented demand for unemployment enrollment and claims processing. The volume of online transactions has overwhelmed state systems, disrupted service and frustrated unemployed citizens.⁴ In a bad economy, similar programs that face high citizen demands may be at risk in the near future. State CIOs understand the challenges and are prepared to respond with innovative solutions, approaches to manage the portfolio of projects and accountability for results.

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³ State IT Workforce: Here Today, Gone Tomorrow? A National Survey of the States, NASCIO, September 2007, <http://www.nascio.org/publications/documents/NASCIO-HereTodayGone%20Tomorrow.pdf>

⁴ States Swamped by Spike In Jobless Rates, Stateline, Christine Vestal, January 9, 2009. <http://www.stateline.org/live/details/story?contentId=367312>