

DIGITAL STATES SURVEY

DIGITAL STATES & THE SECOND
GENERATION OF DIGITAL GOVERNMENT

REPORT OF MAJOR FINDINGS FROM THE 2004 DIGITAL STATES SURVEY



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Produced by
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Underwritten by:
Hewlett-Packard
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Digital States and the Second Generation of Digital Government

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"Moving beyond e." The phrase embodied a season of soul searching within the public sector information technology (IT) community about the future of technology use in the public sector. From Harvard's John F. Kennedy School of Government, Gartner, Meta and the Center for Digital Government, to the National Association of State Chief Information Officers (NASCIO), the National Electronic Commerce Coordinating Council (NEC3) and its member organizations, these practitioners, observers and analysts have all sought to understand a post dot-com landscape that has been reshaped by a sustained and bruising public sector revenue recession.

It was not that e-government wasn't good, it was just that it wasn't enough. There was general agreement that there was a need to look beyond the portal – to the applications that were behind them, to the architecture that tied them together, to the infrastructure (including other channels) that delivered them and the business processes that needed to be re-engineered and automated to make it all work. This larger effort extended well beyond common definitions of e-government and was reminiscent of the language of government modernization that was popular when big iron dominated public sector IT. All of it – from the pixel layer that faces the citizen to the recesses of the data center — fits under the rubric of digital government. Not bound to a single technology or delivery means, digital government offers a comprehensive view of a new platform for governing.

Moving beyond e also meant developing a new set of measures to assess the progress of governments in building and using the new platform. When the Digital States survey was created in the mid 1990s, its originators – The Progress and Freedom Foundation – forecast where governments could go as they began to use digital technologies in service to the citizen. After five rounds of surveying conducted over six years, many states had largely caught up with – and even surpassed – the original vision and its attendant benchmarks.

It is against this backdrop that the Center for Digital Government sought to develop a new benchmark against which to measure government progress in the continuing campaign for modernization in the opening decade of the new century. In consultation with state CIOs and their staffs from across the country, new survey categories and criteria emerged that were better suited to measuring where state IT programs were going (or needed to go) – not just where they had already been.

Digital States is the nation's original and only continuous survey of state government use of information technology in service to the citizen. The retooled Digital States survey is intended to measure what matters during the second generation of digital government.

The all-new 2004 Digital States survey provides a benchmark for the next generation of digital service delivery, reflects contemporary citizen expectations and the technologies used to meet them. With over 60 measurements in four broad areas — service delivery, architecture and infrastructure, collaboration, and leadership – the survey results provide an expansive view of state-level IT programs through a new approach that states can use to help measure their progress toward the effective use of information technology.

First Look at the Second Generation of Digital Government

"Information technology is one of the most powerful tools used by state governments to serve their citizens," said Cathilea Robinett, executive director of the Center, in announcing the list of Digital States for 2004. "In the hands of some incredibly talented and knowledgeable leaders, states have advanced to an entirely new level of digital government."

Michigan, long known as an industrial-era powerhouse built on auto and steel manufacturing, has emerged as the leader, capturing first place in the survey, followed by Washington, Virginia,

Top 25 Digital States

- 1st Place: Michigan
- 2nd Place: Washington
- 3rd Place: Virginia
- 4th Place: Indiana
- 5th Place: Arizona
- 6th Place: South Dakota
- 7th Place: Tennessee
- 8th Place: Utah
- 9th Place: Arkansas
- 10th Place: Colorado (*tied*)
- 10th Place: North Carolina (*tied*)
- 11th Place: Massachusetts
- 12th Place: Illinois (*tied*)
- 12th Place: Kentucky (*tied*)
- 13th Place: Maine
- 14th Place: Montana
- 15th Place: Maryland
- 16th Place: Mississippi
- 17th Place: Minnesota
- 18th Place: Wyoming
- 19th Place: Kansas
- 20th Place: Florida
- 21st Place: North Dakota
- 22nd Place: Nebraska
- 23rd Place: Nevada
- 24th Place: Pennsylvania
- 25th Place: Wisconsin

Indiana, Arizona, South Dakota, Tennessee, Utah, Arkansas, Colorado and North Carolina (with the latter two tied for 10th).

The governors of the top three states have internalized the value of digital government in meeting the goals of their respective administrations – from the high level objectives of making their states great places to live, work and raise a family to the bottom line considerations of delivering services at lower cost.

“We’re using information technology to support and enhance the core functions of Michigan government and to position our state as a global economic powerhouse in the 21st century,” said Michigan Gov. Jennifer M. Granholm. “Information technology is playing a critical role in every aspect of our work. Whether it’s helping us work with local governments and the private sector to improve efficiencies or helping us create jobs through economic development initiatives, information technology is at the heart of Michigan’s state government.”

Washington state’s second-place finish reflects continuing leadership and innovation in digital government. It was first recognized in 1997 as the nation’s original digital state – a distinction it maintained for three consecutive years.

“Our participation and consistent high ranking in the Digital States Survey points to the leadership, dedication and hard work of our state agencies to deliver the best possible online service to the citizens of Washington,” said Washington Gov. Gary Locke. “We are committed to a future that uses technology to make government more efficient, cost-effective and user-friendly.”

Moving up from sixth place in 2002, Virginia earned its way to third place in 2004 through an ambitious effort to be more efficient and effective with scarce taxpayer resources. At the request of Virginia Gov. Mark Warner, a huge IT reform effort is under way in the state moving its highly decentralized IT infrastructure, services and resources into a consolidated, centralized program. “Our efforts have positioned the commonwealth [of Virginia] to not only achieve significant cost savings, but to improve the efficiency of vital services and give taxpayers a better return on their investment,” said Gov. Warner.

Our colleagues at *Government Technology* magazine have profiled other Top 10 finishers in the Digital States survey.

In companion features to this report, editor Steve Towns notes a new round of consolidation without centralization – a development that is unique to a networked world — and contributing editor Blake Harris writes that the success of three leading states is tied to a commitment to an architectural view of digital government.



The themes they identify – that the best of government IT extends far below the surface and the focus on more than building a pretty portal – are borne out by the numbers.

Major Findings by the Numbers

The 2004 Digital States survey was developed around three major propositions in benchmarking the transition to digital government. Each will be discussed in turn together with the related results.

A. IMPLEMENTATION AND ADOPTION: *FINISHING WHAT WE STARTED*

The *Digital States* survey’s first measure focuses on implementation and adoption of online services across the 50 states. It measures the range and variety of the suite of online services (with allowances for state-to-state variation), the maturity of the implementation in terms of providing automated end-to-end transactions, and the level of adoption of the service in moving volumes of routine transactions to a less expensive delivery channel.

In developing the new survey, the Center attempted to get beyond the mandates that characterized the heady dot-com days of the late 1990s – such as “everything e by 2003” – to encourage the development and maintenance of a suite of self service applications that deliver value to users and the government alike. To that end, the Center developed a list of 25 common applications across nine categories of services – customer care, recreation and travel, public safety, health and consumer services, social services, licensing, professional licensing, employment and labor, and

¹ 43 states provided complete responses to the 2004 survey.

tax and revenue. The list was intended to be a representative – but not exhaustive – listing of the types of online transactions provided by state government and those that citizens and business can reasonably expect. The Center also solicited up to five other entries, selected by responding states themselves, that reflect individual state priorities, the results of which suggest that Uniform Commercial Code (UCC) searches and filings belong on the list of 25.

In 2003, the Taubman Center for Public Policy estimated that only 12 percent of governmental Web sites worldwide “offer fully executable online service” (or seamless end-to-end transactions). The implementation section of this year’s Digital States survey sought to determine whether, and to what degree, state governments were exceeding the modest worldwide statistic. As Table 1 details, the results are encouraging with each of the 25 applications having been fully implemented in at least a third of responding states, and many in two-thirds or more. (The implementation numbers exclude applications in states that are under development or provide only partial functionality.)

Implementation is only half of the puzzle. At the risk of over simplification, and to rehearse the well worn adage from The Field of Dreams, implementation addresses the first half – “If you build it...” – while adoption statistics affirm the prediction that, “... they will come.” Here again, Table 1 indicates strong take-up rates for a number of common applications and widely variable adoption rate for others.

Implementation			Adoption		
	Fully Executable (of responding states)	n=	Range	Average	n=
Customer Care					
Online customer assistance system	58%	25	51–100%	86%	6
Recreation and Travel					
Fishing & hunting licenses	88%	38	1–69%	13%	12
State parks & campsite reservations	65%	28	10–66%	38%	12
Traffic flow	63%	27	70–100%	91%	7
Public Safety					
Criminal history background check	42%	18	24–100%	80%	10
Real Time Alerts (homeland, amber, weather)	63%	27			— ²
VIN validation search	42%	18	92–100%	97%	6
Health & Consumer Services					
Certificate ordering (birth, marriage, divorce, death)	44%	19	20–70%	40%	6
Credential status look up (doctor, dentist, nurse)	72%	31	23–100%	85%	12
Hospital accreditation status look up	30%	13			—
Contractor status look up	49%	21	24–100%	83%	9
Social Services					
Benefits application & status checking	19%	8			—
Child support billing & payment	36%	14			—
Adoption/ foster parent application	14%	6			—
Licensing					
Master business licensing	28%	12			—
Business registration renewal	42%	18	6–85%	43%	6
Vehicle registration renewal	67%	29	1–75%	17%	8
Driver’s license renewal	37%	16			—
Professional Licensing					
Physician renewals	44%	19	10–78%	38%	8
Nurse renewals	65%	28	13–82%	37%	12
Employment and Labor					
Job search	98%	42	21–100%	68%	15
Unemployment insurance application	72%	31	15–100%	52%	11
Tax and Revenue					
Individual income tax filing and payment	67%	29	27–80%	48%	7
Business tax filing & payment	70%	30	1–80%	33%	9
UI Employer tax & wage report filing/payment	67%	29	6–50%	26%	7
State Selections					
Uniform Commercial Code (UCC) Filings		—	6–87%	62%	12
Uniform Commercial Code (UCC) Searches		—	50–95%	77%	7
Professional Licensing (other)		—	19–95%	57%	7
e-Procurement		—	55–100%	91%	7
Education Assistance and Resources		—	27–100%	75%	6

Table 1: Implementation and Adoption of Self Service Digital Government

² Adoption rates are not listed for application types in those cases where data were available in fewer than 10 percent of all states. The open ended nature of the state selections makes it impossible to calculate the national implementation level of these applications.

The state selections are instructive for a number of reasons. Beyond the state selections in Table 1, states also volunteered information about a wide range of online applications, ranging from classic services such as legislative bill tracking services, client eligibility, employee services and unclaimed property searches to topical applications such as criminal history background checks and online sex offender searches, and even to sleeper applications such as restaurant inspections, teen curfew permits and traffic ticket payment services.

It is worth noting that the average adoption rate for the state selections is 66 percent, compared to an average take-up of 58 percent across the list of 25 pre-selected applications. The eight-point spread may suggest that states understand what is needed by the constituents and deploy applications to meet them.

There are two final notes on adoption rates. First, tracking adoption rates is an immature practice. They were available in only 16 percent of all application types in the list of 25 although, interestingly, states are tracking statistics in 37 percent of the state selections, suggesting that when take-up matters, take-up gets measured. Second, adoption rates can be retarded because the online services languish in obscurity – often because of a historic reluctance to spend taxpayer funds on advertising and promotion among public entities. There is still room to move in such an environment. Take the state of Indiana, where they had long sent professional license renewal forms and postage-paid envelopes to nurses each year. The practice was discontinued when an online renewal application launched. The bulky mailing was replaced with a full color postcard that invited licensed nurses to renew online by going to a prominently displayed Web address. There was a phone number on the card to request paper forms but – in a single year – Indiana realized a nation leading 82 percent adoption rate for the licensing of nurses.

The suite of online services developed are not captive to World Wide Web. The AccessDelaware Project leverages the state portal into a multi-channel environment by using VoiceXML (VXML) that makes Web content available on the phone. Ultimately, it is the goal of this project to build up a portfolio of voice applications that are available through a toll free number — this menu of applications will be the voice equivalent to the state's Delaware.gov Portal. VXML, a voice-based Internet technology, allows people to navigate the Internet by using their voice and a phone instead of their computer. Instead of pointing, clicking and typing with a mouse and a keyboard, callers can simply answer questions until their search for information is sufficiently narrowed, while expanding the reach of Delaware agencies in delivering information and services to citizens.

Customer Care

With an expanding suite of online government services now available, it is reasonable to ask about who stands behind the portal and their related applications.

States were asked if they provide an online citizen service area where constituents can request services, report problems or complain about services, and complete citizen satisfaction surveys about the state's services.

No, not at this time.	37%
Implementation is scheduled by December 31, 2004, or the service center exists but is not yet accessible through one click from the Web site's front page.	7%
The online citizen service area (real-time Internet Relay Chat (IRC) help site, call center not e-mail) on the state's Web site is accessible through one click from the Web site's front page.	42%
The Web citizen service area has the attributes listed in "c" above, and utilizes the same database as the telephone call center.	14%

Table 2: Online Citizen Service Area

Former Iowa CIO and Legislator Richard Varn, now a senior fellow with the Center for Digital Government, has long observed that governments do not have a department of citizen service despite the fact that delivering services is government's primary function. In the absence of such a department, states are using online support and call centers to help citizens that have problems navigating their Web properties or completing transactions. Over half of responding states do, another third do not and the rest are working on it.

Accessibility, privacy, presentation and satisfaction

States were asked to indicate which response best represents the status of the following components of the state's Web property development policies and practices.

	None	Recommended	Required	Code template & model available to developers	Routine part of application development
Accessibility standards and guidelines	0%	9%	30%	12%	49%
Accessibility testing and management tools	5%	28%	9%	12%	47%
Online privacy and security notices	2%	2%	21%	23%	51%
Internet as primary means for meeting public notice, public disclosure requirements	16%	49%	9%	7%	19%
Online customer satisfaction surveys following transaction	26%	51%	2%	9%	12%

Table 3: Accessibility, privacy, prevention and satisfaction

The results of deliberate policy decisions to make public sector Web properties accessible and secure are seen in the relative maturity of state practices related to accessibility. Significantly, 91 percent of responding states require adherence to accessibility standards. Roughly half have integrated accessibility as a routine element of application development and are using accessibility testing and management tools. Equally impressive are the 95 percent of states that require online privacy and security notices on their Web properties, with half of them making them a routine part of application development.

Half of the responding states recommend both the use of the Internet as primary means for meeting public notice, public disclosure requirements and to follow up on transactions with an online customer satisfaction surveys but only a third (35 percent) have migrated to the Internet as a primary channel for public disclosure and only a quarter (23 percent) are making a habit of asking their customers about their experience with online government.

B. CAPACITY AND COLLABORATION: THE NEW PLATFORM FOR GOVERNING

NASCIO says that enterprise architecture is not a project, but a program. The Digital States' second measure builds on this programmatic view, which is also reflected in a states' IT infrastructure and policy framework for managing vital public assets. Taken together, architecture, infrastructure and policy provide a new digital platform for governing – increasing productivity, efficiency, cost effectiveness, and (ultimately) satisfaction with government. This new platform lends itself to inter-governmental collaboration – the key to effective data sharing, streamlining service delivery across agency lines and amortizing costs across two or more jurisdictions.

The second measure is tied to the second proposition in the new Digital States survey, which was that the transformation of the relationship between citizens and their government cannot be achieved at the application layer alone. Successful online service delivery relies on a new robust platform for governing — as does the much ballyhooed goals of intergovernmental collaboration — both of which requires that the shared infrastructure is sufficiently robust and that its relationship to applications is defined in an overarching architecture that agencies are expected to follow.

Collaboration by Governmental Function and Across Traditional Boundaries

	Advisory role; agency by agency	b. Defines or adopts data standards, & makes budget recommendations	c. b, plus includes local or federal partnerships	d. c, plus private sector or non-profit partnerships	Joint governance of applications by multiple jurisdictions
Criminal justice (including homeland security)	7%	2%	28%	19%	44%
Information security response (CERTs, ISACs, etc.)	14%	12%	39%	23%	12%
Health and telemedicine	12%	7%	16%	46%	19%
Education, lifelong learning and workforce training	9%	5%	16%	33%	37%
Economic vitality: Rural and urban development	12%	7%	2%	53%	26%
Digital records retention	17%	37%	23%	7%	16%
Intergovernmental data sharing	18%	7%	28%	28%	19%
Intergovernmental infrastructure sharing	7%	16%	21%	21%	35%
Enterprise business process planning	21%	42%	16%	7%	14%

Table 4: Intergovernmental Collaboration

The results in this category are noteworthy in that they reflect a period of transition in each discipline. The areas where governments have been working collaboratively the longest – criminal justice, economic development, education and health – have brought local, state and federal governments together with the private sector or non-profit organizations. The challenge ahead is to move joint governance of shared applications into the mainstream. Even in disciplines where there is a long track record of intergovernmental collaboration, joint governance has become a reality in less than half – in some cases, much less than half – of states.

Three quarters of states have moved beyond standard setting and budget recommendations in intergovernmental data sharing (75 percent) and infrastructure sharing (77 percent), but also confront joint governance of shared resources as they move forward.

Importantly, almost three quarters of states (74 percent) have begun to lean on their neighbors to create mutual aid networks for responding to information security responses.

Digital records retention and enterprise business process planning emerged as the least mature areas of intergovernmental collaboration. On the former category, the paper-based and arcane legislation for records retention has not yet been reconciled with the artifact-free world of digital records. As to the latter, enterprise business process planning requires all players to give up individual control and turf in favor of the greater good. It's a perennially tough sell, and not because of the technology.

IT Strategic Planning, Project Review and Project Management

States were asked if they have a strategic plan for deploying technology across state agencies and departments.

The state is or will be developing its IT strategic plan.	5%
The state IT strategic plan will be completed by December 31, 2004.	19%
Yes, the state has an IT strategic plan.	16%
Yes, the state has an IT strategic plan and it has been updated since 2002.	60%

Table 5: Strategic IT Planning

Three quarters of responding states have a strategic IT plan in place, including 60 percent which report they have updated it in the last two years. Dogged allegiance to a strategy is an underrated virtue during times of rapid and severe change, but the adage of "planning your work and working your plan" may be the IT's last best defense when government is buffeted by the budgetary storms. Keeping the plan current, as the majority of states can attest, help to keep the IT program aligned with state budget priorities and business needs.

States were asked if they have a project review mechanism in place for initiating and overseeing IT investments and does it use a formal project management process for executing IT projects.

The state uses neither at this time.	2%
The state has a project review mechanism in place.	33%
The state has a project management process in place.	7%
The state has both a project review mechanism and a project management process in place.	58%

Table 6: Project Management and Review

IT governance and project management are hard work and represent rare competencies in both the public and private sectors. A project review process at initiation and a disciplined project management through completion are both necessary, but neither is sufficient by itself. More than half of responding states (58 percent) have both in place. Curiously, a third of states (33 percent) review projects at initiation, but apparently without the benefit of follow-on project management to push projects over the finish line.

State architecture development

	None	Partial or under development	Full and adopted	Required	Reviewed and updated in last 18 months
Internet/Intranet Standards and Protocols – including portable data, portable logic, authentication, directory services, hyper text presentation, e-mail and secure e-mail.	2%	40%	23%	2%	33%
Network Transport Standards and Protocols – including internet working standards, network transport infrastructure, wireless networking, videoconferencing and circuit switched infrastructure, and video distribution.	0%	37%	14%	12%	37%
Computer Operating System Standards – including host level computer, desktop, handheld, middleware, and client-server.	2%	42%	14%	9%	33%
Information and Data Standards – including data base systems, data architecture and digital records retention, and geospatial datum, metadata and data theme content standards.	2%	58%	9%	5%	26%
Information Security Standards – including security policies, standards and guidelines; annual audit requirements, and disaster recovery (resiliency) plans.	0%	33%	16%	7%	44%

Table 7: State IT Architecture

State CIOs, under the auspices of NASCIO, have helped to raise enterprise architecture from an obscure and arcane technological consideration to a strategic element of business planning by state executives. NASCIO is supporting state and federal efforts in this area with a third iteration of its Enterprise Architecture Tool-Kit and a follow-up Architecture Assessment Tour.

The Digital States benchmark for these activities indicates that, on average, over half of states (57 percent) have (at least) full and adopted architectures across five categories:

- Internet/Intranet Standards and Protocols 58%
- Network Transport Standards and Protocols 63%
- Computer Operating System Standards 56%
- Information and Data Standards 40%
- Information Security Standards 67%

That said, a minority of states require adherence to state architectures for proposed projects and even fewer have refreshed their architectures to reflect technological changes in the last 18 months.

As *Government Technology* contributing editor Blake Harris notes in his companion case studies of South Dakota, Colorado and Indiana, architecture is no less than the glue that holds today's government together.

Developing an enterprise architecture has emerged as the next big idea in government's continuing efforts to unify disconnected information silos and deliver services more efficiently.

In essence, enterprise architecture is about integration — integration or sharing of data, integration of processes and applications, and where appropriate, integration of business functions.

Much has been done, but there remains much more to do. Architecture holds the key to tying formerly discrete agencies together within a single jurisdiction at the edges, not to mention a more complete realization of intergovernmental data sharing.

State IT infrastructure

	Not available	Ad hoc/agency-by-agency	Enterprise/federated approach specified in strategic IT plan	Enterprise/federated approach, plus demand is partially aggregated or consolidated	Enterprise/federated approach, plus demand is fully aggregated or consolidated
Service Management – including provisioning and performance monitoring; maintaining quality of service; ensuring resiliency; data centers and server hosting environment (Web, file, print, e-mail)	0%	7%	19%	67%	7%
Knowledge Resource Management – including content management, business process automation, directory services, registries and repositories and digital archive	0%	53%	9%	33%	5%
Transport Management – including local area network services in individual agencies; wide area network/citywide backbone service; and message queuing, filtering, metering, routing and monitoring	0%	7%	19%	44%	30%
Security Services – including identity management, encryption, access control, authentication and single sign-on, security infrastructure and defenses	2%	21%	21%	51%	7%
Shared Utilities – including portals, e-mail services, calendaring and scheduling, payment services (bill presentment, i-checks, credit cards, ACH) and help desks	0%	19%	9%	65%	7%

Table 8: State IT Infrastructure

The results in the infrastructure category provide important clues to what the Center has identified as a new season of consolidation without centralization. As detailed below, only 21 percent of responding states describe themselves as having a centralized IT program. Some 42 percent report having a decentralized program, while the remaining third (35 percent) have staked out middle ground in organizing themselves. Yet, as Table 8 shows, approximately three quarters of states report either full or partial consolidation of key infrastructures — Service Management (74 percent), Transport Management (77 percent) and shared utilities (72 percent). Clearly, centralization is not a guarantee of full consolidation given the single digit responses in all but one infrastructure element above. Nor is centralization a pre-condition for aggregating demand and consolidating around shared infrastructures.

A. INSTITUTIONALIZING INNOVATION: *LEANING INTO THE FUTURE*

The Harvard Business Review noted a shift in the strategic value of information technology – away from agency-to-agency advantages to focus on sector-by-sector comparisons. It argues that if a sector of society – including government – “lags in harnessing the power of the technology, it will be vulnerable to displacement.”³ Beyond the downside risks of not acting, continuing advances in digital technologies create new opportunities for doing the public’s business better, while making innovation continuous and iterative. This measure, using open ended questions, also provided an opportunity for states to describe their successes in their own words and expand on responses in sections A and B.

States were asked to describe their accomplishments and plans in five of eight categories of activity:

- 1. Results:** The most significant results from the last biennium in using IT to meet a public mission and/or solve an agency service delivery business problem, including self-service opportunities for business partners, clients, and the general public;
 - 2. Designing the Virtual Enterprise:** The most significant architectural efforts under way in state government (including but not limited to Web services and open source), drawing particular attention to their impact on government operations and capacity;
 - 3. Building the Virtual Enterprise:** The top enterprise-wide technologies the state is prioritizing this year (including but not limited to business process management, enterprise content management, enterprise resource planning and customer relationship management.
 - 4. Location Aware Applications:** The state strategy and efforts to tie service delivery to geographic locations by incorporating advanced mapping (GIS) into both core and Internet applications;
 - 5. Leading Edge of Public Demand:** The emerging service delivery challenges and how the state is implementing innovative services or enhanced levels of services to meet them in the next 12-18 months;
 - 6. Collaboration:** The major collaborative projects between the state and neighboring jurisdictions (city, state, state or federal agencies) to deliver online services, including partners and the collaboration goal(s).
 - 7. Converged Networks:** The state strategy and efforts to develop or acquire converged network capability, providing high speed, secure wire line and wireless transport for voice, data, video, and other media; and
 - 8. CIO Agenda:** The work of the state CIO as catalyst and collaborator in chief during the campaign for digital government in saving money, creating sustainable policy framework and governance structure, and using technology to transcend individual agencies and political subdivisions.
- The responses revealed a tremendous volume and variety of work being done, often out of public view, by states across the country in building a digital platform for governing. With the state rankings complete, the Center for Digital Government is now collaborating with the NASCIO’s Government Transformation and Innovation Committee on a follow-on joint analysis of the responses that will be shared broadly to help with the important work of institutionalizing innovation.

Digital States in Context

Digital states do not just happen. They are the result of purposeful leadership, deliberate planning and strategic investments in government modernization. The Center is frequently asked to identify what sets leading jurisdictions apart from the rest. To that end, the Center examined a wide range of contextual data (separate from those on which state rankings are based) to begin to identify the structural characteristics of a digital state.

³ Nicholas G. Carr, “IT Doesn’t Matter,” Harvard Business Review, May 1, 2003

Over the years, the public sector IT community has been subject to wide pendulum swings between decentralization and centralization as the preferred approach to organizing governmental IT organizations. Increasingly, the merits of each pole are defined negatively, as a reaction to the problems of the situation inherited by a new administration. Centralization is often a reaction to uncoordinated or profligate spending, and unnecessary duplication among agencies. Central control is embraced as a way to mine efficiencies out of duplicate infrastructures, and – done well — offers consistent service delivery and cost effectiveness as the prize for the Herculean task of consolidation. Conversely, decentralization is often a reaction to poor service, inadequate capacity and lack of trust in central provider. Rarely a deliberate strategy, a rush to decentralization by agencies brings with it high levels of customization around individual agency business needs, high levels of duplication among agencies acting separately and a level of fragmentation that thwarts statewide planning.

Figure 1 plots the structural orientation of the top 10 states against that of all 50 states in 2004. The consolidation programs in Michigan (#1) and Virginia (#3) are evident in the top 10 profile while the larger group of states skews toward decentralization. Still, the critical mass of states cluster around the middle, balanced position, which is characterized by:

- Retaining internal control of core functions, while maximizing cost efficiencies, bringing together functions that are frequently duplicated across organizations, offering these services more efficiently and at lower cost through shared services;
- A competent and credible service provider or shared service organization that is typically cost recoverable and the services of which are competitively priced;
- Balancing the needs of enterprise with those of agencies to act autonomously; and
- Combining public sector mission with private sector discipline.

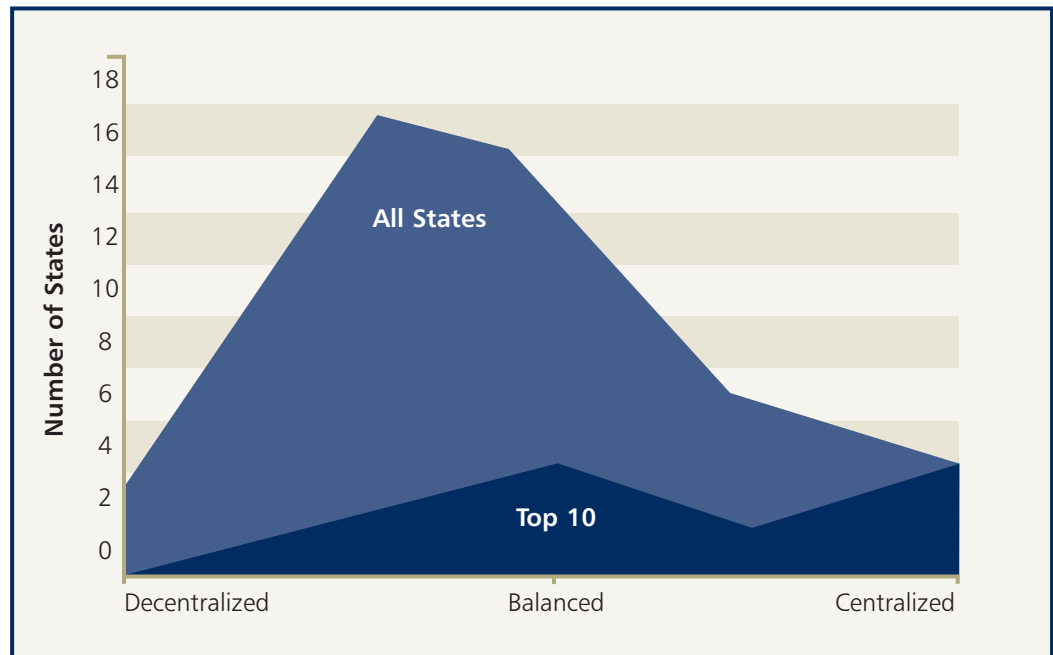


Figure 1: The Level of Centralization in State IT Programs (2004)

In contrasting the top 10 states in the 2004 survey with all states, the review also found that:

- All of the top 10 states have an enterprise IT Board for setting policy and overseeing projects from initiation to production, compared to 78 percent of all 50 states;
- All of the top 10 states have CIOs vested with policy making authority, compared to 86 percent of all states; and,
- All but one of the top 10 states have CIOs as a cabinet-level appointment, compared to 56 percent of all states.

The top 10 states have CIOs with responsibility for operations, and project management and authority over funding decisions at approximately the same level of all 50 states – seven out of 10 or 70 percent. The CIO turnover rate is largely the same between the two groups (averaging a third per year over a 12-year period) although, significantly, two of the longest-serving CIOs in the country — Laura Larimer in Indiana and Otto Doll in South Dakota – have led their states into the top 10. Similarly, the rate at which states appoint new CIOs by promoting candidates from

within are also largely the same between the two groups — 32 percent in the top 10 states and 37 percent in the larger group.

The funding models for state technology agencies are similarly common across the states. The majority of both the top 10 and all states use:

- *Revolving Funds* or charge-back models to recover costs for providing computing and network services (including, in some cases, enterprise applications);
- *Overhead Charges* or direct general fund appropriations to support policy and project oversight functions; and,
- *Combinations* of general fund, federal funds, and special funds (including bonds) to pay for application development.

The Future of the Digital States

The retooling of the Digital States survey recognized that the future of digital government necessarily meant the continued build-out of citizen- and business- facing service delivery channels on the use shared infrastructures and adherence to a common architecture that would tie formerly discrete government entities together.

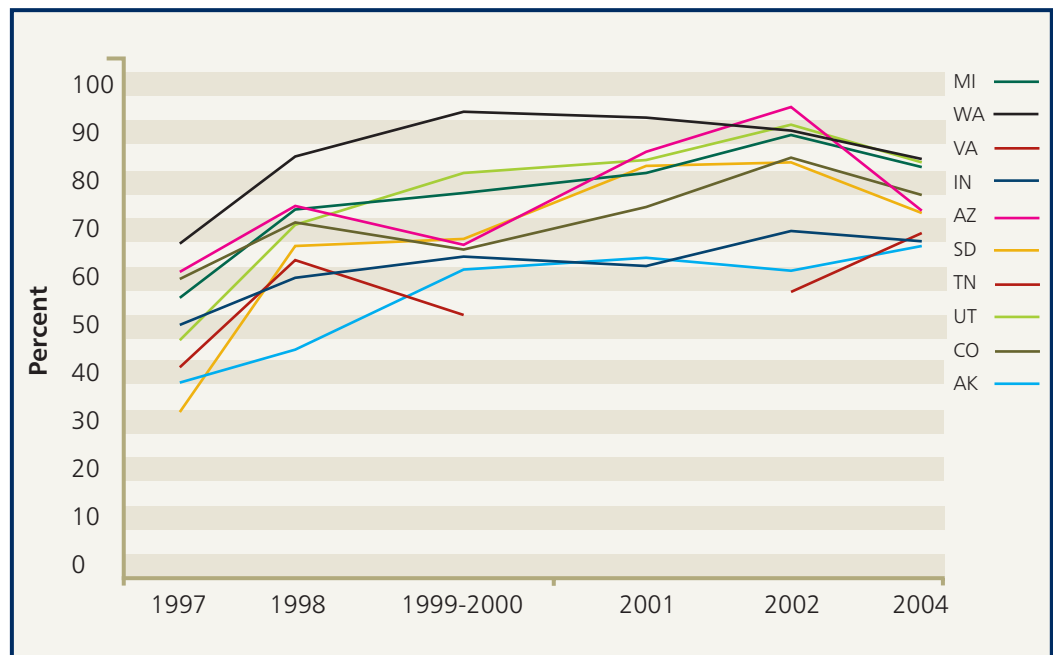



Figure 2: Historic Performance of Top 10 States

In that light, the results of the 2004 survey were encouraging because many of the states that have performed well over the years also performed well against the new criteria, while creating room in the top 10 for states that had labored to develop the needed architecture and infrastructure to support a new generation of service delivery.

As Figure 2 indicates, the new survey also raised the bar on all states as reflected in the total earned scores this year in contrast to those from earlier Digital States surveys. Indeed, like the original, the new benchmark forecasts where governments can go now as they continue the campaign toward digital government. And there is room for even the top performers to grow and mature in the years ahead – witness that even the top finishers earned only 83 percent of the available points. Converted to a letter grade, it is a solid "B" – suggesting that the finish line may be in sight, but we're not there yet.



The Digital States survey was underwritten by Hewlett-Packard and Microsoft and conducted by the *Center for Digital Government*, a national research and advisory institute on information technology policies and best practices in state and local government, in cooperation with *Government Technology* magazine.

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