

Information Technology and the States:

Public Policy and Public Interests

**Computer Science and Telecommunications Board
National Research Council
Washington, D.C.**

Overview

This activity is the first, planning phase for an anticipated comprehensive project that will assess issues arising from expanding and foreseeable investments in information technology at the state level. For this activity, staff of the National Research Council's Computer Science and Telecommunications Board (CSTB) will conduct background research into the nature of state information technology (IT) planning and investment, consult widely with experts across the country and in a range of disciplines, and focus on experiences in a few states. They will review the relevant literature, identify key state-level players and analysts, and conduct a series of interviews with key players. Up to two mini-workshop meetings will allow for broader discussion of issues and collection of inputs, and additional input will be solicited electronically and through professional networking, with outreach to professional organizations (e.g., NASCIO), the academic research community, and public interest advocacy groups. This research will lead to a refined set of study questions and insights into the nature, mix, and candidates for the study committee that will be empanelled for the second phase. They will be documented in a brief summary plus an elaborated proposal for the second-phase effort. This project is sponsored by the Knowledge, Creativity & Freedom Program of the Ford Foundation.

Project Description

Information technology is becoming prominent in activities of state governments. "E-government" takes a variety of forms in different states, varying with affluence, geography, leadership, and other factors.¹ It may become increasingly important as a channel for delivery of social services, a major set of activities at the state level, as well as for increasing the transparency of government activities and their accessibility to citizens and residents located anywhere in the state. State e-government activities illustrate how the selection and use of technology may be shaped by budget constraints, competing priorities, and uneven oversight. Consequences affect civic engagement across diverse populations, evoking concerns about the digital divide² at a time when the spread of home computing systems, once increasing rapidly, seems to have plateaued, and populations that may be harder to serve may end up with fewer tools and resources—and therefore diminished benefit from state government. Understanding

¹ See, for example: Patterson, Darby. 2001. "State of the Digital State," *Government Technology*, June-December, available at <<http://www.govtech.net/magazine/>>.

² The digital divide is, itself, an issue that calls for further study in specific contexts. CSTB oversaw a review of the literature, commissioned by the National Science Foundation, and a series of workshops aimed at understanding the challenge of evidence-based analysis of a multi-dimensional problem. See Friedlander, Amy. 2002. More than Connected: Americans' Access to High Technology—A Review of the Recent Literature from the Perspective of Time. Paper prepared for the Computer Science and Telecommunications Board at the request of the National Science Foundation, January 4.

these trends is valuable in the early 2000s, given the emergence of new uncertainty associated with a slow economy, hardship in the telecommunications industry, and a realignment of priorities and goals at all levels of government arising from the new commitment to homeland security.

Why are states moving to e-government? Part of the motivation is improvement of internal workings, within and among government units. Part of the motivation is improvement of information flows between government and citizens and between government and businesses.³ These motivations may be linked to "smart growth" and to broader initiatives for balancing a range of public interests or for meeting public needs, for example in such areas as education, health care, or even arts and culture. And part of the motivation—more abstract, more given to rhetoric, and perhaps hardest to measure—is improvement in civic engagement.⁴ Whereas much of e-government looks like e-commerce, and therefore treats people as consumers, civic engagement, or e-democracy, focuses on people as citizens.⁵

From this perspective in particular, questions arise about how the decisions are made that shape the investments that drive e-government. At the federal level, those decisions are made with relative transparency in a context replete with oversight. At the state level, those decisions may not be made with transparency, given the differing natures of state governments (e.g., differences in size, complexity/structure, and professionalism). As various key players—from state regulatory agencies (PUCs) to chief information officers⁶ (CIOs) to state legislatures—move to shape public investments, who is accountable to whom and for what can be surprisingly unclear.

Transparency and accountability are particularly important for addressing some of the special or salient concerns associated with e-government. For example, trust is an important dimension in systems that people are required to use. "Trust" includes privacy and security, and there is a history in government systems of failure to understand that security can help to protect privacy, but may not, unless privacy has been factored into the design.⁷ The drive to meet homeland security imperatives makes understanding the interplay of privacy and security especially important, with state-level activity growing in such arenas as critical infrastructure protection (which includes telecommunications and other information infrastructure) and law enforcement (e.g., increased networking and information sharing among law-enforcement agencies, the courts,

³ For a broad discussion of e-government, with emphasis on fitting technology to mission, see: CSTB. 2002. *Information Technology Research, Innovation, and E-Government*. National Academies Press, Washington, D.C.

⁴ For a brief survey of issues, see: CSTB. 2001. "Democratic Processes in the Age of the Internet: A Framework for Action," White Paper, available at <www.cstb.org/whitepaper_democratic.html>.

⁵ (At least for those who can claim that status...and even for others, e-democracy is concerned with rights and responsibilities, as opposed to sales and marketing.)

⁶ See, for example: Dixon, Chris. 2001. "The Role of the State Chief Information Officer," NASCIO issue brief, March 1, available at <<http://www.NASCIO.org>>.

⁷ For example, in working with the (federal) Internal Revenue Service, a CSTB committee advised that agency to devote additional, separate resources to privacy rather than lump it in with security, and its recommendations led to the creation of the Office of the Privacy Advocate at that agency. See CSTB. 1995. *Continued Review of Tax Systems Modernization for the Internal Revenue Service*. National Academy Press, Washington, D.C.

attorneys general, and correctional facilities). Another important dimension is universal access. PUCs have long attended to universal service, that is, assuring service across income groups, but the rise of computer-based systems underscores the demand for a broader concept of universality, supporting access across ability groups as well as income (and posing more challenges than accessibility for conventional telephony). Transparency and accountability implicate funding, raising questions about budgeting, planning, and specific funding mechanisms and the nature of associated decision-making and opportunity as well as real costs. Funding, in turn, raises questions about approaches to risk- and cost-sharing and how interests are balanced. Thus, for example, the investments associated with e-government are often linked to discussions of public-private partnership (e.g., for investments in state-government communications networks), and sometimes, as falling costs increase what a state government entity can do itself, trigger complaints about public-private competition that may constrain government activities but raise citizen costs.⁸

Understanding how these issues play out among different states is important for developing a realistic social action/change agenda, which would be an outcome of the second-phase, comprehensive study that this first-phase activity will serve to frame and focus. This phase-one project will involve several tasks, presented here in approximate order:

- Identify and engage a group of advisors, drawing on professional networking and prior CSTB activities.
- Conduct a review of the literature to develop a baseline understanding of the kinds of information assets and other resources that exist on this topic and what different disciplines, organizations, and perspectives should be acknowledged and/or investigated.
- Conduct interviews with experts from multiple disciplines, organizations, and perspectives to develop understanding of current activities, plans, and prospects as well as past experience, problems that have arisen, and other concerns.
- Organize one to two mini-workshops convening groups of experts for interactive exploration of selected issues.
- Prepare a brief written summary, which will not have policy recommendations, but which will capture key insights and present key questions warranting further, in-depth study. This will be accompanied by a proposal for a comprehensive study.

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⁸ This issue has been raised at the federal level in the context of information dissemination; it would be useful to compare and contrast federal and state experiences. See, for example, National Research Council. 2003. *Fair Weather: Effective Partnerships in Weather and Climate Services*. National Academy Press, Washington, D.C.