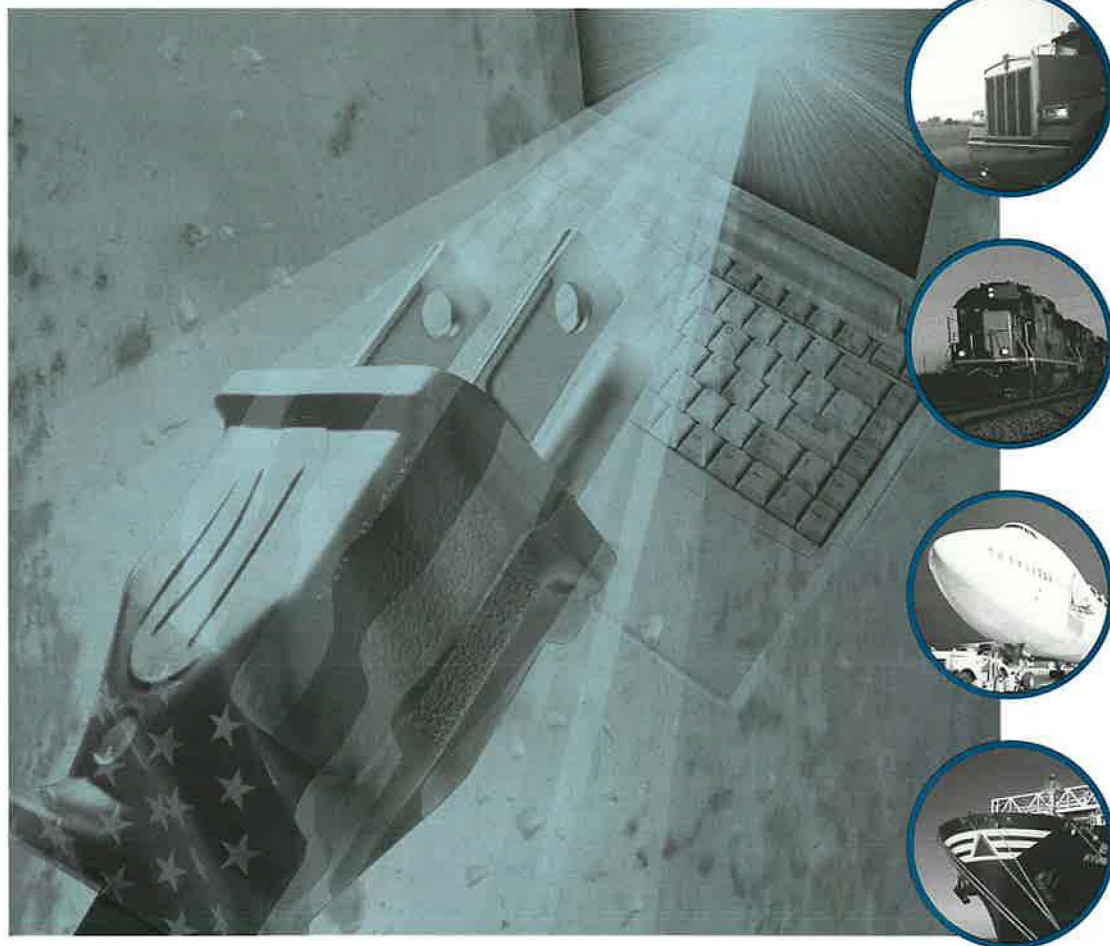


The Promise of E-Government

New Ways of Delivering Transportation Services to the Public

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People shop, pay bills, converse with friends and family, and gather information online in the comfort of their own homes. They want this same Internet convenience and efficiency for scheduling a road skills test or renewing license plates. In a survey conducted by Momentum Research Group and commissioned by the National Information

Consortium, 47 percent of respondents indicated that they wanted the opportunity to renew a driver's license online.

The movement to an Internet-based economy has forced governments at all levels to examine the delivery of services. This fast-paced environment has altered traditional business practices permanently and now is forcing governments to respond.

What Is E-Government?

E-government is the use of innovative information and communication technologies, such as the Internet, intranets, and extranets, to deliver efficient and cost-effective services, information, and knowledge. It represents a commitment by decision makers to strengthen the partnership between public sector organizations and private citizens, business enterprises, public sector employees, and other public sector organizations.

E-government relationships include the electronic delivery of services by government to citizen (G2C), government to business (G2B), government to employee, and government to government. E-government is practical in approach, taking advantage of technological advances.

The emergence of e-government in state departments of transportation has occurred quickly and continues to evolve rapidly. E-government is here to stay—the question is how it fits in. Does e-government save money or cost more? How much more efficient will it make the delivery of goods and services? What are the obstacles? Will e-government meet customer expectations? What are the pitfalls? What about privacy concerns? How does e-government change organizational and management structures? The answers are complex and mostly unresolved.

Drivers of E-Government

Although e-government has evolved rapidly, the driving forces preceded the Internet and the World Wide Web. These forces include

- ◆ The desire to deliver government goods and services at the lowest possible cost,
- ◆ The increase in competition to provide goods and services,
- ◆ The need for expedited business interactions and solutions, and
- ◆ The heightened expectations of citizens.

In response, governments are working to harness the capacity, power, and speed of the Internet. The principles of e-government remain constant:

- ◆ Use the Internet for communication,
- ◆ Follow industry standards for open communication,
- ◆ Use the Internet to streamline processes, and
- ◆ Strive for integration with business partners.

State Responses

Some states have embraced and implemented e-government through public policy and statutes; other states have been slower to act. The resources

required and available to add an e-government component differ from state to state. Nevertheless, all are learning by doing, and much can be gained from collective experience.

Executive Orders

Governors of several states have issued executive orders to implement e-government.

◆ Wisconsin's Executive Order 408, for example, emphasizes G2C interactions and directs the state Department of Administration to give citizens convenient and reliable access to the best possible electronic government as soon as possible.

◆ Virginia's Executive Order 65 (00) established policies and procedures to accelerate and implement e-government and related technology initiatives, and created an Electronic Government Implementation Division within the Department of Technology Planning.

Pennsylvania's Example

Pennsylvania's experience illustrates how fast and how far a state can go with clear direction and a methodical approach to the use of cyberspace. As recently as 1995, Pennsylvania's secretary of education had no computer in his office. Governor Tom Ridge's administration has moved aggressively in the past six years to improve the technology infrastructure, expand the use of the Internet within state government, and advocate the use of the Internet in schools, local governments, homes, and businesses.

Taking cues from the private sector, Pennsylvania has standardized desktop software and centralized data centers. This consolidation will improve maintenance as well as back-up and recovery systems and allow the state to focus on developing and providing content.



Pennsylvania's website features a portal with links to government services and organizations like the DOT.

With leverage as the largest telecommunications customer in the state, officials moved the government's service from dedicated lines to a public network. This allowed local governments, schools, libraries, and private businesses to tap into the state's fiberoptic cable. The result is improved access for rural and underserved urban areas. In addition, the state has developed a single point of entry—or portal—that provides one-stop shopping for such items as licenses, financial assistance, and general information.

Push for G2C

The primary focus of state e-government efforts now is G2C—elected officials want to make government services available electronically, and web-savvy citizens are demanding it. Although costly in the short term because the applications must be developed, G2C e-government will be cost-effective in the long term, when the systems are in place and more people take advantage of the services offered.

According to a report by the Council for Excellence in Government, *E-Government: The Next American Revolution*, many officials expected citizens to be most interested in the convenience of e-government services. However, the survey revealed that 36 percent of respondents thought the greatest benefit would be the power to hold government more accountable. Only 13 percent listed convenience as the greatest benefit, while 23 percent chose greater public access to information, and 21 percent cited more cost-effective and efficient government.

G2C and Transportation Services

Here is a sample of how states are using e-government for transportation services:

- ◆ More than 20 states offer online vehicle registration renewal.

Georgia's Navigator Traffic Page provides real-time transportation information.

Residents of Albuquerque, New Mexico, can report roadway potholes online.

- ◆ Many states have transit route maps showing bus and train routes that provide current and potential riders access to schedules without having to call or contact a transit agency

- ◆ Los Angeles has a real-time traffic map online, allowing citizens to see current traffic conditions before leaving home.

- ◆ Georgia has a site called the Navigator Traffic Page, designed to provide the public with accurate, real-time transportation information for trip planning.

- ◆ The city of Albuquerque, New Mexico, offers an online Pothole Notification Form that citizens can use to notify the city of a pothole or other street failure, such as loose manhole covers, debris in the street, or flooding.

- ◆ Many states provide forms and accept payments online. The Massachusetts Express Lane site has menus to change address; renew registration; request a duplicate registration, license, or Massachusetts identification; order a special plate; and pay a citation.

- ◆ Road Weather, Montana's road weather information system, displays conditions at 59 sites across the state, providing accurate real-time weather information via phone lines and computer networks. This also allows the Montana Department of Transportation's Maintenance Division to schedule personnel and equipment based on current weather and pavement surface conditions, improve response time, increase winter maintenance efficiency, and minimize the traveling public's exposure to hazardous weather conditions on the roadways.

E-Government Obstacles

Slow to change and layered with bureaucracy, governments do not react to market forces that require quick response, such as the ever-changing electronic environment.

Digital Divide

Governments must consider the digital divide—the chasm separating the electronic haves and have-nots. E-government is irrelevant to citizens without access to the Internet. Many Americans regularly use the Internet to conduct daily activities, but people who lack access are at a disadvantage. For this reason, raising the level of digital inclusion is a vital national goal.

State and local governments are joining forces with educational institutions, private-sector entities, and nonprofit organizations to provide access and technology training to those who need it.

Privacy and Security Issues

Customers require the assurance of privacy for electronic transactions. Governments can accomplish this through the use of recognized security tools, an online security policy statement, encryption, and electronic signatures. The public sector must acknowledge and address its stewardship of citizen information; it is in the best interest of governments to ensure security and privacy in the unregulated atmosphere of the Internet.

Role of Leadership

E-government will be better, stronger, and faster with commitment from the top. The Council for Excellence in Government recommends that the federal government should invest as much on advancing information technology as it did on avoiding the potential Y2K disaster. The concerted Y2K effort paid for itself; a similar collaborative approach could imple-

ment e-government successfully.

State and local governments need to learn from each other's efforts. Although the Internet epitomizes speed, building an effective e-government system is best done methodically. Governments need to think things through, have a plan, and follow a strategy. Such an approach is likely to ensure the efficiency and cost-effectiveness of e-government and its services.

Websites

City of Albuquerque, New Mexico,
Pothole Notification Form
www.cabq.gov/streets/failureform.html

Georgia Department of Transportation
Navigator
www.georgia-navigator.com

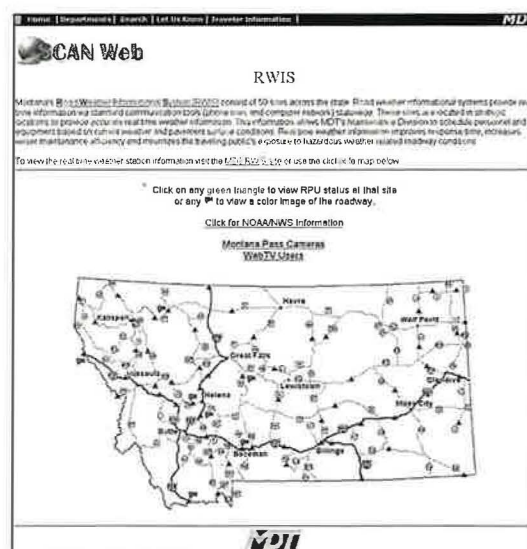
Massachusetts Registry of Motor Vehicles Express Lane
www.state.ma.us/rmv/express

Montana Road Weather Information System
www.mdt.state.mt.us/departments/maintenance/rwis/mdtrwis.html

Pennsylvania PowerPort
www.state.pa.us/PAPower

Virginia Department of Motor Vehicles
www.dmv.state.va.us

Wisconsin Department of Transportation
www.dot.state.wi.us



Montana provides regularly updated information about road and weather conditions throughout the state.

Applying E-Business Strategies to Public Transportation

Many transit agencies are preparing to use the Internet to offer such services as customized itinerary planning and purchases of fare media. The opportunities for transit agencies to lower transaction costs and improve efficiency and services through the Internet also are changing relationships with suppliers and customers. These changes in turn are likely to affect organizational structures.

The declining costs of electronic communications, data storage, and data retrieval are accelerating the opportunities presented by the Internet and other information and communications technologies. Transit managers not only must determine organizational investments in technologies, processes, and personnel to reduce costs and increase productivity, but also must weigh the costs, benefits, and risks of changing the ways services are delivered.

To assist in meeting these challenges, the Transit Cooperative Research Program (TCRP) is developing a new method to research the use of information and communication technologies in public transportation. TCRP's eTransit project (J-09, FY 2000) will identify, develop, and promote research to maximize the benefits of e-commerce and other new technology applications for public transportation and mobility management.

The eTransit project will develop long- and short-term products, emphasizing quick delivery and providing flexible, ongoing, quick-response research to bring electronic business strategies to public transportation and mobility management. The initial round of tasks focuses on seven areas:

- ◆ The supply chain (parts management and inventory management);
- ◆ Regulatory issues;
- ◆ Application service providers (suppliers of leased software);
- ◆ Customer information;
- ◆ Electronic payments and receipts;
- ◆ Training and certification; and
- ◆ Development of a series of articles for electronic magazines (eZines), to speed dissemination and application of research results.

Work is under way in five of the seven areas; products will be available in early 2002. Project updates and product information are posted on the Internet at www4.nationalacademies.org/trb/crp.nsf/All+Projects/TCRP+J-09.