

The New Face of Government: How E-Government is Reinventing Cities and Counties in the United States

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Abstract

The Internet is changing the face of local government. Since the beginning of government, citizens have always dealt with the public sector face-to-face by going to town meetings or to service counters in City Hall, and by seeing police officers on the streets and at their stations. The new face of government is a web page on the Internet, and the purpose of that page is not just to connect citizens to City Hall—it is to help them find and get the service they need regardless of which public agency provides it.

America's local governments are in the process of "reinventing" themselves. Information technology is opening doors to new ways of streamlining operations and improving service quality. The Internet and World Wide Web provide cities and counties with a new set of tools to advance the reinvention process. There is an explosion of creativity in local governments today. Over 80% of city and county governments have websites. The best are now on their third or fourth generation website and beginning to transform their internal operations to take full advantage of the new capabilities. Much work remains to be done. There is continuing employee resistance, budgetary constraints, and the software for some solutions does not exist. It is an exciting time for cities with vision and the resources to better serve their citizens.

Introduction

A few years ago electronic government (e-government) meant little more than putting public access computers in city hall lobbies and public libraries. Today e-government is an international movement with its own publications, conferences, awards, and heroes.

There are approximately 87,000 governmental entities in the United States. The federal government is just one of them. The others include cities, counties, school districts, seaports, water districts, sanitation districts, and many more. These organizations are part of the service sector. They clean streets, put out fires, investigate crimes, build and maintain roads and waterways, provide educational degrees, treat medical problems, and deliver clean water and electrical power. Many of them are funded by taxes on businesses and individuals, but most supplement their tax revenues with use fees.

In the United States the public service hierarchy is organized as follows:

- Federal
- State
- County

Silicon Valley Issues a Challenge to Local Government

One of the first e-government programs in the U.S. was launched by Smart Valley, an industry-led not-for-profit organization dedicated to helping California's Silicon Valley take advantage of the Internet.

The effort began in 1992 when Silicon Valley's major corporations issued a challenge to the region's twenty-three cities and three counties: "become more efficient or we will leave." At the time, it took months to get a permit to make a small modification to a building. Building codes varied from city to city; building inspectors refused to accept designs that had been approved by the public works departments; and plan reviewers and inspectors knew nothing about designing sophisticated factories for making semiconductors or bio-medical products. At the same time, the cities of Austin, Denver and Phoenix were making calls on Silicon Valley companies to promote their more efficient government services.

The Silicon Valley corporations did not want to leave the area, but they could not afford the high cost of doing business with local governments. At Hewlett-Packard, for example, a three month delay in one remo deling permit cost the company \$3 million in lost business. The Silicon Valley Manufacturing Association conducted a study of complaints and best practices and proved that solutions could be found.

The challenge shocked the cities into action. They reduced the number of exceptions to the building code, and, with industry's help, streamlined permitting processes.

Smart Valley contributed to the solution with a vision of allowing customers to submit and track permit applications on-line. *Smart Permitting*'s goal was to reduce the time wasted driving to City Hall and waiting in line during critical business hours. The project brought 23 cities together, led by the cities of San Carlos, Sunnyvale, San Jose, and Palo Alto. Since the permit tracking software vendors were unprepared for the Internet, the project took several years to bear fruit, but today most cities in Silicon Valley offer some on-line permits, along with on-line plan submission, digital signatures, and virtual reality tours of some project proposals.

Smart Valley also developed Government Guide, a way to navigate the maze of government services based on the resident's address, and Smart Voter, a voter and candidate information service.

For more information see www.jointventure.org/initiatives/smartpermit/.

• Special Districts, including water, schools, harbors¹

In this paper, I will focus on the e-government efforts of just cities and counties. My perspectives come from five years as a member of the board of directors of Smart Valley where I was responsible for e-government initiatives in Silicon Valley, four years of working with fifteen communities to develop economic development programs for taking advantage of high-speed communications, and two years of leading an e-government workshop that has reached almost 100 cities and counties across the United States. I will explain why I believe e-government has caught on in the United States and how egovernment is changing the face of government to the community.

City and county governments are following the lead of businesses like Amazon, E-Bay, Travelocity, and Yahoo by putting information and services

City

¹ Special Districts c an be regional in scope. They may or may not report to another layer of government.

on-line and making them available 24 hours a day, 7 days a week. The result is greater convenience and productivity.

Will the reduction in face-to-face interactions with government weaken our sense of community? It is too early to draw any conclusions, but it is clear that the Internet is changing our relationship with local government forever.

The Forces Driving the E-Government Movement

Three forces are enabling e-government in the United States: 1) a drive to "reinvent" government, 2) the shift to network-based computing, and 3) public demand.

1. Reinventing Government

E-Government in the United States has to be seen in the context of a dramatic shift in thinking about the role of local government in society. In the late 1970's, California voters cut property taxes, a major source of revenues for local government, in half. In the early 1980's, President Ronald Reagan reduced transfers from the federal government to state and local governments by 25%. The recession in 1990 further reduced revenues. At the same time, public and business demand for public services was growing. Governments had to learn to "do more with less." Just as businesses were forced to reengineer their operations to compete in the new economy, governments had to reinvent themselves to survive.

10 Principles for Reinventing Government

- 1. Promote *competition* between service providers.
- 2. *Empower* citizens by pushing control out of the bureaucracy, into the community.
- 3. Measure the performance of agencies, focusing not in inputs but on *outcomes*.
- 4. Are driven by their goals—their *missions*—not by their rules and regulations.
- 5. Redefine their clients as *customers* and offer them choices.
- 6. *Prevent* problems before they emerge, rather than simply offering services afterward.
- 7. Put their energies into *earning* money, not simply spending it.
- 8. Decentralize authority, embracing participatory mechanisms.
- 9. Prefer *market* mechanisms to bureaucratic mechanisms.
- 10. Focus not simply on providing public services, but on *catalyzing* all sectors—public, private, and voluntary—into action to solve their community's problems.

Reinventing Government, Osborne and Gaebler, 1992

In their 1992 ground-breaking book, *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*, authors Osborne and Gaebler wrote,

"Hierarchical, centralized bureaucracies designed in the 1930's or 1940's simply do not function well in the rapidly changing, information-rich, knowledge-intensive society and economy of the 1990's. They are like luxury liners in an age of supersonic jets: big cumbersome, expensive and extremely difficult to turn around. Gradually, new kinds of public institutions are taking their place... Today's environment...demands institutions that **empower**citizens rather than simply **serving** them."² (Authors' emphasis.)

2. The Shift to Network-Based Computing

In part because of cost, in part because of the conservative nature of government, local governments tend to lag behind industry in the adoption of information technology by 5-10 years.

Predominant Architecture in Local Governments:

1970's and 1980's	mainframe computers
mid-80's – mid-90's	timeshare computers
mid-90's – today	personal computers with local area networks
starting 2000's	personal computers with wide area networks

In 1994, when Silicon Valley's Smart Permitting project began, only the most progressive local governments were moving from terminals connected to timeshare computers to desktop computers. In 2001, most office workers have a desktop computer connected to a 10-100 megabit Local Area Network (LAN), but most field workers do not use computers at all. E-mail is not available to all employees in most local governments. In the more advanced cities, field workers use laptop computers and palm-top appliances connected to wireless networks; desktop computers are connected at 100 megabits per second.

"Institutional networks," or "I-Nets," are growing in popularity. These are fiber optic cables that connect all public facilities, including City Hall, the fire and police stations, utilities buildings, community centers and libraries. Some cities use their I-Nets to control traffic signals. These closed networks interconnect all of the operations of local government, enabling greater sharing of information resources. As we will see in the case study of Palo Alto, these networks allow local governments to play new roles—another step in the process of reinvention.

²Osborne, David, Gaebler, Ted, *Reinventing Government*, Addison Wesley, 1992, pages 12, 15.

3. Public Demand

Use of the Internet has grown rapidly in the United States. As of June 2001, about 61% of Americans adults, or 174 million people, had access to the Internet at home or at work.³ About six million homes out of 116 million are connected at high-speed using Digital Subscriber Line (DSL) and Cable Modem-based services. Many people have high-speed access from work or school.

As consumers became comfortable with services like e-mail, chat, Amazon, Yahoo, Travelocity, and E-Bay their expectations for local government services changed. If they can order a book or make travel arrangements on the weekend, why not get a tax form, pay a ticket, or renew an automobile registration without having to take time from work or family. Consumers want to use their credit cards to pay fines and parking tickets, utility bills, and for services. They want to register for classes on-line like they register for college classes. They want to send e-mail to elected representatives like they send messages to a business.

The following table shows the transactions that city and counties seem to be starting with as they launch their e-government programs.

Service	Number and Percent of Cities and Counties Offering These Services Out of 1,565 With Websites in the Fall of 2000
Requests for service (streetlight repair, potholes, etc.)	287 (18%)
Requests for local government records	234 (15%)
Interactive maps	176 (11%)
Registration for programs/services (parks/recreation, etc.)	118 (7%)
Permit application or renewal	77 (5%)
On-line payment of taxes	41 (3%)
On-line payment of utility bills	35 (2%)
Voter registration	31 (2%)
On-line payment of license/permit fees	27 (2%)

Source: University of Maryland study for the International City/County Managers Association

The City of Colorado Springs found that their most popular application is the web cameras that monitor traffic on the highways. Many residents routinely check the cameras on their computers before leaving the home or office.

³ Nielsen//Net Ratings (http://www.nielsen-netratings.com/news.jsp)

Many elected officials have taken note of these new expectations and have encouraged staff members to look into the new technologies. In the early days of the World Wide Web, cities rushed to create websites to get ahead of, or catch up with their neighbors. The websites were not very useful, but they gave everyone some experience with the new technologies, and a better understanding of the costs, benefits, and opportunities.

Today, leading edge cities are conducting surveys and holding focus groups to better understand what services their residents and enterprises want to see on the Internet. City employees are excited about learning new skills. Customers appreciate the convenience of the new services and say "thank you" with new sincerity.

Defining E-Government

Many people in government define e-government as a collection of transactions that can be completed on the Internet, such as paying a parking ticket and renewing a business license.

My work has led me to a broad definition of e-government for local governments, illustrated in the following diagram. This model was developed in partnership with Innovation Groups.⁴ It provides a framework for helping city and county governments develop strategic plans for e-government.



⁴ Innovation Groups is a non-profit organization dedicated to helping city and county managers continuously improve their operations. See www.ig.org for more information.

In this model, e-government includes the full range of computer and communications-enabled government services. The primary customers of e-government are 1) residents, 2) local businesses, 3) employees, and 4) other public agencies. The following is a list of some of the functions in each element of the diagram:

Technology Deployment—computers, networks, home access for employees, wireless access, security technologies, electronic payment processing services, and more.

Internal Operations—timecard vouchering, expense reporting, on line manuals, telephone directories, employee benefits management, meeting room reservations, shared calendars, centralized databases, financial reports, administrative tools for managers, on-line employee training, technical support, and much more.

Services and Transactions—ordering supplies, issuing requests for quotations, making travel arrangements, class registration, customer complaints, inspection scheduling, and permitting for buildings, businesses, parades, use of public parks, and more.

Agency to Agency—data sharing, reporting and transactions between cities, counties, prefectures, states, federal agencies, and many other public organizations.

Community Engagement—meeting agendas and minutes, video streaming of public meetings, e-mail communications, community calendar, voter information, discussion groups, surveys, electronic libraries of public records, and more.

Policy—access to information, regulations for construction of communications trenches and towers for wireless services, fees for on-line services, security, work-at-home programs for employees, protection of privacy, and more.

Benefits, Goals

If the same 24-hour-a-day, seven days-a-week availability and convenience, fast delivery, customer focus and personalization became the norm in the public sector, it would not just make life easier, it would fundamentally change the way people view government itself. – The Economist magazine, June 2000 (emphasis added)

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Local governments are developing e-government services for four major reasons:

- Improve customer service
- Gain operational efficiencies
- Economic competitiveness
- Increase citizen participation in community decisions

Customer Service

Interacting with government often involves a drive to city hall to obtain forms and advice on how to fill them out. Initially cities are putting electronic copies of the forms on line for downloading and printing. Leading edge cities are allowing customers to complete the forms on-line. The data are transferred directly into the city's databases. Some cities also allow customers to pay fees by entering a credit card number on a website.

When calling for information, customers rarely know whom to call. They get routed to the wrong person or have to wait on hold. The first generation of city websites was organized by department. Second generation websites are organized by service, making it easier for visitors to find what they need quickly and avoid making a call, or at least calling the right office the first time.

Some cities are encouraging residents to join topical mailing lists. The Fire Department in Fairfax County, Virginia sends e-mails to people who join their list. Every month a message reminds residents to test their smoke detectors, and once a year, a message reminds them to replace the batteries.

Several cities in the Smart Permitting program now allow businesses and residents to issue themselves permits to do routine construction work, such as replacing water heaters and building an outdoor deck in the back yard. The customer completes the form on line and prints the permit at home. When the work is done, the customer goes on-line to request an inspection. The inspector reviews the work and signs the permit.

Operating Efficiencies

The most dramatic change that occurs when services go on-line is a sharp reduction in the number of phone calls. Services that involve a lot of calls, like building permits, have been able to shift employees from answering phones to providing consulting services to architects and engineering companies and help them increase the quality of their building designs.

The convenience of on line problem reporting for citizens means that service workers are finding out about problems more quickly. Repairs are being made before the problem becomes more serious and affects more people.

Data are being entered directly into computer databases instead of having to be copied from paper forms. This saves time, and on-line error-checking routines prevent bad data from getting into the system. Less paper means fewer filing cabinets and storage facilities.

Network-connected employees are able to access manuals and internal documents on the city or county's Intranet⁵, saving time and reducing the need for paper. Employees are given responsibility to maintain their records themselves, such as address, phone number, marriage, medical programs, time cards, and retirement plans. Managers receive automatic e-mail reminders to prepare employee reviews and administer salaries.

Economic Competitiveness

Doing business with the government can be expensive for companies. In addition to collecting taxes and fees, local governments regulate businesses to ensure the health and safety of the community, and to protect the quality of life. The time it takes to complete forms and pass inspections is a cost of doing business. To help reduce these costs, businesses try to locate where the overall cost of government services is the lowest. Governments are responding to competitive pressures by streamlining their procedures, and putting forms and services on line to reduce the total transaction cost for customers without compromising community goals.

Economic development organizations are building sophisticated websites that provide companies looking for new locations with a wealth of information on the local economy and resources. Some communities provide interactive online maps that allow customers to search for properties with specific features like price range, or a maximum distance from a fire station. By clicking on a property, a customer can find information on the owner, the cost of utilities, and the availability of high-speed communications services.

Economic development websites also help workers get information on the community's quality of life, including access to recreational facilities and the quality of the local schools, and they can provide help with finding and financing a home.

Citizen Participation

Traditionally, the two ways for residents to participate in local government have been to attend council meetings and to write letters. But a resident may not be able to get to a meeting, and writing letters can take a lot of time. The Web and Internet are reducing the barriers to participation.

Cities are posting council meeting agendas on-line, along with background materials on the topics. Some cities now broadcast council and committee meetings on the Internet. People can watch them live, or, if they miss the meeting, they can click on an agenda item and immediately see the portion of

⁵ An "Intranet" is an organization's internal network. It is closed to outside access. Intranets use the same technologies as the Internet, including e -mail and the World Wide Web.

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the meeting of greatest interest. Some cities are now seeing citizens coming to meetings better informed and better able to help their leaders make sound decisions.

Many elected officials and staff members post their e-mail addresses on the city website. The volume of messages from residents is sometimes overwhelming, but it is greatly improving the flow of information Staff members often prefer e-mail to telephone calls because e-mail is easier to schedule.

Other Benefits

Local governments are finding a number of other benefits in e-government, such as,

- Improved quality of technical employees attracted by the opportunity to develop new services on line.
- New excitement in the organization brought on by the opportunity to experiment with new tools and services.
- Fewer customer trips to government offices means less congestion on the roadways, less energy consumption, and less air pollution.

Challenges and Strategies

Despite \$20 billion expected to be spent on moving government into the electronic world over the next five years, more than half of e-government initiatives will fail. – Gartner Group

E-government projects can fail for many reasons—the technology does not work as promised, priorities change, the project takes too long, key staff members leave, or the project fails to meet a real customer need. In this section, I highlight some of the major challenges to successful e-government initiatives and some of the strategies U.S. cities and counties are using to increase the probability of success.

Challenge: Project Costs

The costs of technology continue to fall, but they are still substantial. A project may require new computers, new software, additional programmer resources for development and systems integration, employee training, and marketing programs to reach customers.

Strategies

• Several vendors have recently developed inexpensive "city hall in a box" software – tools that allow small cities to set up



network to connect the City's Information Systems Department to the neighboring cities of Menlo Park, East Palo Alto, and Los Altos. Soon Palo Alto will be providing information systems services to the other cities, running their accounting and asset management systems for a fee. Palo Alto will be able to host their websites and integrate all of the cities' geographic information systems.

For more information see www.city.palo-alto.ca.us.

websites with a range of standard functions, without the need to hire special expertise.⁶

- Since many applications are common to all cities, local governments are forming software-buying consortia to negotiate better prices and share the costs of developing enhancements.
- The first e-government projects should have a quick and high return on investment (ROI). Many cities start by trying to reduce the number of telephone calls by putting more information on the web. As the number of telephone calls goes down, people are transferred into other groups where they can provide consulting services and add greater value to the customer.
- Since it does not matter where a web-based application resides, some agencies are hosting e-government services for all the

⁶ See, for example, Project A (www.projecta.com), and the National League of Cities (<u>www.nlc.org</u> – search for articles containing "total-e").

cities in the region. Participating cities pay usage fees instead of making major capital investments.

- Cities are sharing software that was developed in-house. The City of Sunnyvale, for example, developed a web-enabled permit tracking system then licensed it to other cities.
- Cities and counties are working together to agree on common standards for forms and data collection to make it easier to share applications software, and reduce the complexity for customers who work with several jurisdictions.

Challenge: Technology Risks

Although the Internet has been used commercially for over ten years, many of the tools and protocols are still not stable. Some technology vendors have gone out of business or failed to deliver the functionality they promised. Standards, like Extended Markup Language (XML) tags for government, are still being developed. It is easy to put a form on the Web and collect data; it is much more difficult to transfer the data into a legacy system or allow a customer to search a database that was designed for experts.

Strategies

- At first, the leading edge cities were willing to experiment with new vendors and tools. Today, almost every city and county is going to e-government conferences, seeking out best practices and trying to learn from each other's mistakes.
- Many software vendors have web-enabled their applications packages. It is now much easier to buy, for example, accounting, payroll, maintenance, and customer relationship management packages that are designed for e-government.
- Governments are turning to larger, established vendors instead of small startups.
- Departments are streamlining operations before trying to install a new software system. It is very difficult to adapt a software system to an organization that has evolved complex procedures over many years. It is better to simplify the process, then bring in the computers.

Challenge: Low Usage

Public agencies sometimes launch new e-government services and then are disappointed by the small number of people who take advantage of them.

Strategies

- Cities are learning how to market their new services. They issue press releases, distribute literature, put notices in utility bills, and place advertisements in newspapers and other media. They encourage residents and businesses to join e-mail lists to get announcements of new services.
- Permitting departments are putting computers on the counter and showing customers how the system works when they come in.

- The U.S. government is giving its vendors a deadline for converting to e-commerce for federal procurements. After a certain date, paper bids will not be accepted. E-commerce training centers for government contractors open across the country.
- To further encourage customers to use the new electronic services, agencies are putting extra features on their websites, like the ability to process batches of permits all at once and to set up an account so that business information only has to be entered once.
- When cities and counties conduct focus group studies to find out what services customers really want, they also build a support group in the community and prove to staff that e-government services are strongly desired.
- Because many residents do not have access to high-speed lines, governments are designing services for residents to run efficiently on slow lines. But they include some features that use high-speed lines to encourage more people to get a high-speed connection.

Challenge: Management Resistance to Change

Departments build information systems for their own purposes and are often reluctant to share their data. Once a database is connected to the network, many more people can access it. Department managers sometimes oppose egovernment programs because they see the Internet as a serious threat to their position of power.

Strategies

- Successful e-government strategies are always led by top management. When the City Manager or County Administrator makes it clear that e-government is a priority, middle managers will follow, though there may be several clashes along the way.
- Information systems managers insist that all new information systems be designed for inter-departmental sharing. Department managers become more willing to share their data as they realize that they can be more successful if they can access information now isolated in other departments.
- Senior employees may resist learning how to use computers. Some cities encourage such people to retire early if they refuse to learn new skills.

Challenge: Customer Resistance to Change and Concerns about Privacy Some customers like to pay their bills in person and receive a paper receipt to confirm the transaction. Government offices are social gathering points, especially for older generations. Some people refuse to use credit cards at all, much less trust a credit card number to the Internet. Unfounded rumors abound about criminals stealing credit card numbers by "listening-in" on messages sent over the Internet.

Strategies

- Utilities are putting computers in payment offices and encouraging visitors to use the computers instead of paper forms. This allows customers to continue to visit the office while reducing paperwork.
- Privacy is very important to individuals, but very few government websites have statements that explain how customer information will be used. Public agencies in the U.S. have been slow to recognize this serious weakness.
- Cities and counties are finding that they are collecting more information than they really need. Signatures are sometimes required by tradition, not the law. By collecting less personal information, some governments are reducing privacy and security fears.
- Several cities are putting e-government kiosks in shopping centers and other public places to reach people who do not have Internet access. In some cases the kiosks offer information in multiple languages and are equipped for people with disabilities.

Challenge: Employee Access

There are many internal uses of the network that can increase administrative efficiencies, such as time card vouchering, routing of work assignments, distributing financial reports to managers, and changing employee records such as home address, benefits plans, and medical records. But many employees do not work in offices. They may work in parks, classrooms, police cars, and fire stations. And some employees have never used a computer.

Strategies

- Some cities and counties are setting up computers kiosks in government buildings where mobile employees can get to them. They provide screening for those machines so employees can enter personal information in privacy.
- Cities are encouraging their employees to learn the basics of using computers. In the near future using a computer will be a regular part of every job.
- To help attract employees to use the network some public agencies are providing valuable information on the network. For example, information on special discounts for holidays and restaurants, and tools to help them manage their benefits programs more easily.
- A few cities have provided incentives for employees to purchase home computers with Internet access. They allow employees to pay for the computer and network service

through monthly payroll deductions without charging interest. The home computers can be used for telecommuting and training, and to help children with their homework.

Challenge: Public Access

Governments are reluctant to invest in Internet and web-based applications because some people in their community do not have access to computers, or know how to use them.

Strategies

- Most cities and counties have set up public access computers with Internet access in libraries, transportation hubs, shopping centers, government offices, and community centers.
- Many schools, libraries, and community centers are providing free training classes.
- The cities try to ensure that the public access computers have high-speed connections to provide the best possible experience for the customer.

Challenge: Cost Recovery

Credit card companies charge fees for their use. Fee range from 1% to 3% of the transaction amount, depending on the volume of business. Cities struggle with the question of who should pay the fee–the city or the customer.

Strategies

• Most cities in the U.S. have decided to absorb the cost of credit card fees believing that the efficiencies gained should more than offset the increased cost. The following table illustrates the savings companies have been able to realize using e-commerce.

Transaction	Traditional Systems	Internet	% Savings
Banking	\$1.08	\$0.13	89%
Airline Ticket	\$8.00	\$1.00	87%
Bill Payment	\$2.75	\$0.85	70%
Insurance Policy	\$400-\$700	\$200-\$350	50%

Source: OECD from various sources

There is also evidence that some consumers resist paying extra fees no matter how small.

- In some cases, cities have added a "convenience fee" to transactions for businesses. Most businesses are willing to pay the fee if the service saves them time.
- It is very important that the city have consistent policies about which credit cards it accepts across all departments and for all transactions whether on the Internet or in person.

E-Government Today in the U.S.

The e-government movement has caught fire in the United States. In the next 12 to 24 months almost every city and county will put at least some of its services on-line.

Governments that have invested in second and third generation websites now see a broad array of technologies, applications, and opportunities to choose from. Most software vendors have modified their products to be Internet-ready. Small cities and counties are using the "city-hall-in-a-box" toolkits to start offering e-government transactions in weeks instead of months. The challenge today is where to begin, i.e. which e-government projects will generate the highest returns at the lowest costs and with minimal risks.

In the fall of 2000, the University of Maryland conducted a survey of local governments in the U.S.. One important finding was that only 8.8% of local governments had an e-government strategy, and in some cases, the strategy was simply to post information on the Web.⁷

The following are some of the other highlights of the survey.

- 83.3% of the 1,881 survey respondents have a web site.
- About 18% of those with websites accept requests for at least one service, such as road repairs, or requests for records, permits, or business licenses.
- Less than 3% of respondents allow any type of financial transaction on their website
- About 40% of respondents plan to offer at least one financial transaction in the next year.
- 5.6% of respondents broadcast audio and/or video recordings of council meetings on the Internet.
- Fewer than 20% provide Internet access to all employees.
- 36.2% of respondents say that business processes are being reengineered because of the Internet. 40% report that egovernment is changing the role of city/county staff.
- The biggest obstacles to e-government are the lack of technical staff (66.6%), financial resources (54.3%), and technology and Web expertise (46.7%). Only 12.4% reported lack of support from elected officials as a problem.

In the year since this survey was conducted, many more public agencies have begun offering e-government transactions. Cities and counties are now developing e-government strategic plans. Strategic plans describe the

⁷ Norris, Fletcher, Holden, *Is Your Government Plugged In? Highlights of the 2000 Electronic Government Survey*, University of Maryland, prepared for International City/County Managers Association and Public Technologies Inc., February 27, 2001. www.icma.org . Of 3,749 cities and counties contacted, 1,881 responded. The median size was 25,000 to 49,999 in population

governments' goals, challenges, top priority projects, and the benefits to the community. Strategic plans help elected officials understand the program and help build community support for the projects.

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The most exciting development in e-government is the emergence of regional collaborations. In addition to Silicon Valley's Smart Permitting consortium, the cities in King County, Washington, the cities and counties of Nevada, the cities and counties in northern Virginia, Maryland and Washington D.C., and the Mid-America Alliance in Kansas and Missouri have formed regional partnerships. These partnerships have two goals: share costs and improve the customer experience.

These alliances are developing *regional e-government portals*—one place to go on the Internet to find the right government service for the customer's needs. Regional portals use the customer's address to determine which agency in the region is the responsible agency. The Greater Metro Washington and Mid-America portals are for e-procurement. The King County portal helps builders get construction permits from multiple cities. Residents and organizations do not care about political or jurisdictional boundaries when trying to do business with the government. The regional portals allow customers to connect with the right service provider without having to decipher the web of overlapping jurisdictions.

A second recent development is allowing customers to personalize the local government's home page much like the My Yahoo service is a personal version of the Yahoo service that anyone can create.⁸ A business might want to see specific departments and functions on the first page. A trucking company might want to see road conditions first. A lobbyist might want to see information on current policy issues on the home page. A health worker might be interested in connecting to the public health department first.

The Internet is supporting local governments' efforts to reinvent themselves. E-government is making government more accessible and more convenient for those who have the tools and skills to take advantage of the new services. We must make it easier for all citizens and businesses to access those services. We must also address the concerns of those who prefer face-to-face interaction and ensure that we do not harm our sense of community.

⁸ See, for example, my.ca.gov for the State of California's customizable website.

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Biography

Seth G. Fearey is President of Connected Communities, a consultancy that helps communities understand the importance of the advanced communications services for economic development. Clients include Chicago, Illinois, Washington D.C., Mesa, Arizona, Santa Clarita, California, and nine counties in California's Central Valley.

Before founding Connected Communities, Seth spent twenty years with Hewlett-Packard (HP) in a variety of positions including product marketing, information systems management, and public policy. While at HP, Seth helped found Smart Valley, Inc., a non-profit organization dedicated to helping make Silicon Valley one of the first communities to take advantage of the Internet.

He also serves as President of the Midpeninsula Community Media Center, a non-profit community television corporation that provides television programming of local interest for the residents of Palo Alto, Menlo Park, Atherton, Stanford University and East Palo Alto.

Seth has a Bachelor of Arts degree in Political Science and Psychology from Occidental College and a Masters in Business Administration from Stanford University.

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