

E- Government

A Strategic Planning Guide for Local Officials

ACKNOWLEDGEMENTS

Electronic government has become so diverse and ubiquitous - just like technology in general - in its implementation and use that it's virtually impossible to have one person cover the entire spectrum. Nor is it simply the responsibility of one person or job position. So Public Technology, Inc. (PTI) and National Information Consortium (NIC) convened a focus group of leading e-gov officials - a diverse mixture of CIOs, managers and even a finance director - to discuss the topic and then had PTI members review the subsequent drafts of this guidebook. Some people participated in both areas, and their input and the results of their diligence, as you're about to read, are invaluable.

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SECTION I: INTRODUCTION

In Tampa, Fla., homebuilder Steve Roberts used to set aside a few hours when he had to file permits at the city's Construction Services Center. "It's a lot of waiting," he told The Tampa Tribune in December 2000. "If it was possible to do it online, you bet I'd do it. I'd rather sit at my desk than have to spend two hours here."

Today, Roberts and other permit filers are doing just that, conducting business with the city from their office or home, at any time of the day or night. They can thank the city's development of a "portal," a place on the Internet where residents and business can interact with Tampa at their own convenience.

Across the country, in cities and counties, large and small, similar experiences are happening every day. At New York City's Website, you can check on the health inspection record of any restaurant in the city. In Chicago, residents can browse online through the Department of Parks and Recreation's multiple offerings of camps, games and activities, reserve a spot and pay for everything by credit card.

In other local jurisdictions, residents can search the town library's card catalog, find out if they owe any fines or have any books overdue and reserve the latest mystery novel. Residents in Seattle and Virginia Beach can watch from their computer live City Council proceedings, or at their own convenience by downloading a video file of the meeting. In cities like Lynchburg and Hampton, Va., residents can call one city phone number to ask a question, file a complaint or request a service, such as have a tree trimmed or a pothole filled. The city's call center operators, who are available on weekends and evenings as well as during the day, have sophisticated computer databases that allow them to tell the caller just how long it will take the city department to respond to the service request and when the job will be done.

These local governments are on the crest of a new wave that's breaking over much of America's cities and counties. It's called

electronic government - or e-government - and it's changing how citizens interact with government and how government operates. It could even alter how we engage in democracy, making it more transparent and accountable.

Why a Guidebook?

As any local leader will tell you, today's society has become increasingly more complex and so have the institutions for governing. Cities and counties deliver the same services they did 20 years ago and more, but at a level of sophistication that is mind-boggling. At the same time, citizens expect more for the taxes they pay. Not only do they want the best when it comes to police and fire protection, sanitation and road maintenance, but they also want these and other services delivered with the same care for the customer they have come to expect from the private sector.

This era of rising expectation in government comes at a time of rapid computerization. Cities and counties have spent billions of tax dollars on information technology and yet many local leaders are not sure how all this automation will help their jurisdiction rise to the level of an Amazon.com in terms of service delivery.

Meanwhile, millions of Americans are flocking to the Internet, the marvelous Web of computers around the globe that allows us to find and buy those books, buy and sell stock, track down obscure recipes, gather health information or read newspapers and follow weather reports any time, any where. To get a sense of what's happening, take a look at how the Internet is transforming our economy. In 1999, online transactions were worth \$145 billion. By 2004, the estimated value will be \$7.3 trillion.

When it comes to technology, the private sector is not alone. Nearly 70 percent of Americans say investing tax dollars in public sector technology projects should be a high priority, according to the Council for Excellence guide will not serve as a substitute for a well thought-out strategic plan, but it will serve as a roadmap through such issues as leadership, project management, funding, planning, access,

privacy and a host of other hurdles.

The highlights include:

- ◆ Understanding what e-government means and why leadership is so important
- ◆ Why it's so important to think strategically when it comes to e-government
- ◆ How to prepare an effective governance structure to lay the groundwork for e-government planning
- ◆ Assessing a jurisdiction's readiness and willingness to take risks
- ◆ The impact of such key issues as privacy, security and access
- ◆ What to budget for and where to look for financing
- ◆ The many types of services e-government can deliver
- ◆ The importance of partnerships with both private firms and other governments
- ◆ The integral role marketing plays in ensuring success
- ◆ Why performance measurements are so crucial to e-government
- ◆ Understanding the different types of components and tools that go into an e-government service.
- ◆ The future role of e-government in cities and counties.

With the many examples mentioned in this guide about cities and counties that have already begun e-government, local leaders will see that there's no single way to approach this unique strategy. It all depends on the needs and level of readiness of each jurisdiction. The one thing they will all agree on is that the sooner you start, the better. So read on, share the knowledge with your colleagues and then get started.

SECTION II: Understanding Electronic Government for Today...and Tomorrow

What is E-Government?

Electronic government cannot fill a pothole, but it can give a citizen the opportunity to inform its government about a pothole problem and to check on the status of when the job will be done. E-government cannot give a motorist a speeding ticket, but it allows the offender the option of paying the fine from home with a credit card instead of waiting in line and paying with cash. E-government cannot take over the decision-making process during a city council meeting, but it can give citizens the opportunity to find out what's on the agenda, listen or watch a public meeting from home or library and to communicate with their elected leadership through e-mail.

Clearly, e-government doesn't replace the basic functions of local government, but it puts information and services on an entirely new medium that is accessible to citizens, businesses and government employees, according to their needs and priorities, not just government's.

Here are a few e-government definitions:

"Using technology to streamline government by providing efficient and effective services and information to citizens and businesses." Virginia Beach, Va.

"The use of Web-based technologies by government as a delivery channel for applications serving citizens, customers, business partners, other governments and employees." Colorado Springs, Colo.

"The ability for local governments to deliver services and information electronically (using the World Wide Web, touch-screen kiosks, Interactive Voice Response systems) to customers (residents or businesses) 24 hours a day, 7 days a week." Public Technology, Inc.

E-government is about delivering public service in an entirely new way and it's about transforming government to ensure that this new form of service delivery succeeds. The Internet is a key enabler to making this happen, but it's clearly not the only channel government has to use to reach its citizens.

While e-government encompasses many of the attributes of the online world in the private sector, such as electronic commerce, online auctions, customer service and so on, it differs in several major ways. What works in the business world doesn't necessarily work in the public sector. Consider these differences:

- ◆ E-government must be accessible and beneficial to all citizens who qualify for the services, rich and poor, college educated and high school dropouts, the able-bodied and the disabled. Private businesses can target their customers and select the most efficient delivery channel. Local governments, on the other hand, must use multiple channels, some of which can be expensive to operate.
- ◆ The incentive for saving money in local government is for the public benefit. In the private sector, cost savings or new revenue benefits the organization directly.
- ◆ Local governments have limited funds to risk on the latest technology. There's little reward for risk-taking and experimentation, compared to the business world. Businesses, however, can act quickly, with no public exposure, if the risk-taking goes awry.
- ◆ Authority in cities and counties is diffuse and is designed to ensure that government act deliberately, not quickly. Businesses, however, tend to focus on the most efficient organizational structure.
- ◆ Local governments must react to social pressures and can only change their mission through legislation. Companies react to market situations and change whenever management believes it is desirable.

Cross-the-Board Benefits

Citizens have tasted the fruits of online service and they like it. As a result, they are increasingly unwilling to accept sub-standard service from their government. If the commercial sector can answer a complaint or accept an order 24 hours per day, seven days per week, why can't city or county hall do the same?

Meanwhile, local governments realize their vertically organized services increasingly require collaboration across departments. The old bureaucracy, with its dozens of departments, just doesn't fit into today's citizen-centric world, where multiple needs requiring interdepartmental cooperation must be met, not one at a time, department by department.

E-government can help solve these problems. Using the Internet and the concept of a portal - made popular by such Websites as Yahoo! and America Online - cities and counties can reorganize services according to citizen need, not government function. So-called citizen-centric services achieve 50 percent more success in providing easier customer access, increasing service volume, getting better information on operations, reducing employee complaints, reducing employee time spent on non-customer activities and improving their own image, according to a report by Deloitte Consulting.

A portal is an Internet Website that provides citizens with a single door into government. It allows for self-service, whether the citizen is looking for information, wants to sign up to be a soccer coach, check property assessments or pay a fee to use the local recycling center. Portals are available all day, every day, making them convenient and relatively hassle-free.

The databases feeding information to these portals can also be linked to touch-screen kiosks and interactive voice response systems, so that citizens without access to a home computer, can benefit from the same services via public kiosks or touchtone phones.

The portal that aids citizens also can provide businesses the benefits of convenience and time savings, allowing them to incorporate as a new business entity, apply for business permits and file corporate taxes without filling out any paperwork. They can search for business opportunities with government, download and respond to RFPs, bid at government auctions of surplus materials, or put their own supplies up for bid. They can post an electronic catalog of approved commodities that allows employees to search for products, compare prices and issue purchase orders without touching a piece of paper.

In fact, many see online procurement as a significant benefit of e-government. Seattle overhauled its procurement system to take better advantage of technology and has saved \$2.6 million in the two years since re-engineering took place. Harris County, Texas, and Pinellas County, Fla. have turned to cyberspace to auction off surplus equipment and have received better prices and with less overhead than via the live-auction method. Overall, governments save up to 70 percent every time they move a service online, according to Fortune magazine.

CALCULATING THE ECONOMIC BENEFITS OF E-GOVERNMENT

THE CITY OF INDIANAPOLIS HAS DONE THE NUMBERS AND FIGURED OUT WHAT IT SAVES EVERY TIME A PERSON USES ITS ONLINE SERVICE, CIVICNET, RATHER THAN A FRONT DESK CLERK:

AVERAGE LENGTH OF CUSTOMER/GOV'T STAFF INTERACTION:	3 MINUTES
AVG. NUMBER OF INTERACTIONS PER HOUR:	20
AVG. NUMBER OF INTERACTIONS PER YEAR:	28,000
AVG. COST OF ONE CUSTOMER/STAFF TRANSACTION:	\$1.45*
NUMBER OF ONLINE TRANSACTIONS:	13,000
SAVINGS:	\$226,200

CALCULATED BY DIVIDING THE AVERAGE TOTAL COMPENSATION OF AN INDIANAPOLIS STAFF MEMBER (\$40,731 PER YEAR) BY THE AVERAGE NUMBER OF TRANSACTIONS PER YEAR (28,000). SOURCE: INDIANAPOLIS/MARION COUNTY GOVERNMENT

SWITCHING OVER TO E-GOVERNMENT

ARE PEOPLE USING ONLINE SERVICES FROM LOCAL GOVERNMENT? YES AND IN GROWING NUMBERS, ACCORDING TO DATA FROM INDIANAPOLIS AND MARION COUNTY. WHEN THE AMOUNT OF CUSTOMERS WHO HAVE SWITCHED FROM USING TRADITIONAL METHODS TO ONLINE SERVICE REQUESTS REACHES AT LEAST 20 PERCENT IN 12 MONTHS, THAT'S CONSIDERED QUITE GOOD. HERE'S WHAT HAPPENED IN INDIANAPOLIS, WHEN ONLINE SERVICES BECAME AVAILABLE:

<u>SERVICE/TRANSACTION</u>	<u>SWITCHOVER RATE</u>
CIVIL CASE SUMMARIES	68% IN 12+ MONTHS
CRIMINAL CASE SUMMARIES	66% IN 12+ MONTHS
RIGHT-OF-WAY PERMITS*	52% IN 10 MONTHS
INCIDENT REPORTS	15% IN 6 MONTHS
CRIMINAL HISTORY	15% IN 9 MONTHS
ELECTRICAL PERMITS	12% IN 5 MONTHS

* With the right-of-way permits, the time spent on them has decreased from 72 hours to two hours. Source: Indianapolis/Marion County (1999 data)

Government experts believe that Web-savvy governments, with e-government portals, enhance the economic value of their region. They attract businesses that are looking to locate where government is an aid to doing business, not an obstacle. "Governments that succeed in the New Economy will...rely heavily on information technology and the Internet to accomplish their missions..." writes Robert Atkinson and Paul Gottlieb in their report, *The Metropolitan New Economy Index*. They go on to say that metropolitan areas should be at the forefront of providing government services online not only to cut government costs but to improve the quality of life.

Finally, e-government enables governments to operate more efficiently. The same reductions in paperwork and improvements in collaboration that make services more convenient and less costly to run enable workers to perform more effectively. Cities and counties can use the Internet as an internal tool that gives workers access to information, the ability to conduct transactions, such as change employee benefits and collaborate on initiatives across departmental lines.

Transforming government services on to the Internet doesn't come easily. A Website put together by part-time or volunteer help, without a plan, will lead nowhere and provide little improvement to the public sector. By not planning strategically for e-government, cities and counties will find themselves falling further behind the information age. Citizen expectations are growing thanks to the Internet. The longer it takes for local governments to meet those needs, the harder it will be to catch up. By not planning for e-government, cities and counties will miss out on numerous opportunities, some of which could save taxpayer money, while others could improve the quality of life. Ultimately, poor planning will drive the costs of government higher and could result in political fallout at the next election.

Common e-Government Applications

- ◆ Citizen Access to Information
- ◆ Government Functions and Services
- ◆ Directory and Directions to parks and Community Centers
- ◆ Calendar of City-Sponsored Events and Activities
- ◆ Property Information
- ◆ Citizen Services
- ◆ License Renewal and Payment
- ◆ Payment of Parking Tickets, Court Fines
- ◆ Registration for Class and Sports Activities
- ◆ Job Postings
- ◆ Business Services
- ◆ Online Permits, Business Licenses, Court Documents
- ◆ Posting of RFPs and Bid Documents
- ◆ Online Auctions
- ◆ Electronic Posting of Commodity Products with Purchase Order and Invoice Transactions
- ◆ Sales Tax Collection
- ◆ Employee Services
- ◆ Job Postings; Online Application Forms
- ◆ Self-Service Benefits Administration
- ◆ Employee Newsletter
- ◆ Manual of Policies and Procedures
- ◆ Phone Directories
- ◆ Distance Learning Resources
- ◆ Digital Democracy
- ◆ Webcasting of City/County Council Meetings
- ◆ Communications with Council Members
- ◆ Information About Form of Government Legislative Agenda and Pending Legislation.

The Leadership Factor

"It is time for a new generation of leaders to cope with new problems and new opportunities. For there is a new world to be won." John F. Kennedy

As long as computer technology remained buried in the back-end processes of government operations, local leaders felt little incentive to engage themselves in technology-related issues. But that is changing as an unprecedented wave of automation has swept over all sectors of government in the past 10 years, putting computers on most desktops and networking them so that information - at least in theory - could be more easily shared. Today, technology is everywhere in government, accessible to nearly all workers, making it possible for local leaders to change for the better how their city or county governs.

Now with e-government, the push to share information throughout a government enterprise is no longer a debate or a concept; it's reality. But the goal of enterprise wide e-government isn't easy to achieve. It raises new stakes in government, and with it, the need for skilled and committed leaders has become paramount.

"If you have technology across your whole enterprise, you have a competitive advantage as a municipal government, as a city in the regional economy, as a country and, ultimately internationally. The competitive advantage is better policy and better service delivery, because we know more about ourselves and the knowledge is fact-based." - Eric Anderson, city manager, Des Moines, Iowa, and winner of the 1999 PTI Technology Leadership Award (from Government Technology magazine).

Whether the jurisdiction is big or small, there needs to be a person who can champion such a large-scale initiative from start to finish. A leader must align e-government with the community at large, and understand how it will change government from within as well as its impact on citizens and businesses. And a leader must be ready to make changes that will affect staffing, organizational structures, laws and regulations, so that e-government can succeed. A leader must be willing to provide incentives for the adoption of e-government, encouraging its growth through incentives, such as innovative funding. He or she should encourage the staff to think innovatively and even act entrepreneurial. This means actively changing

the least effective, bureaucratic, reactive habits of government into something that's much more proactive.

Clearly, local leaders can no longer afford to remain disengaged or ignorant when it comes to technology issues in their government. In the past, leaders avoided technology issues because of their own uncertainty of how to successfully engage with these new machines. But citizens are demanding government do a better job of keeping up with the times and they have strong doubts government can or will do the right thing, according to the Kennedy School of Government. "If you want to be an effective leader in our networked world, you need to engage information technology issues. The challenge for leaders today is to define an economic, social and political vision for a new kind of society: a knowledge-based society."

SPOTLIGHT: Who has overall responsibility for implementing the e-government strategy or plan?

City manager/CAO office:	24%
IT Department:	52%
Finance Department:	5%

Source: PTI/ICMA Electronic Government Survey 2001

For local governments that have begun to transform themselves through e-government, the importance of having an engaged and effective leader can't be overemphasized. New York City Mayor Rudolph W. Giuliani is known for his assertive attitude toward e-government, which is a common topic of discussion at regular cabinet meetings. Charlotte City Manager Pam Syfert is known for her collaborative, yet knowledgeable approach toward technology and e-government. Her ability to talk intelligently about the subject and to understand its impact at the enterprise level, makes it easier to bring people from different departments together to seek a common solution. It has also strengthened the stakeholders in e-government when it comes

time to deal with the issue on a political level and request funding.

For many jurisdictions, having a chief information officer who has a seat at the table with top local leaders has improved the chances for success when it comes to e-government. That was the case in Miami-Dade County, Fla., where the appointment of a CIO has enabled the government to plan more strategically than in the past.

Government Transformed: Where will E-Government Lead Us?

As the Internet revolution took off, it became fashionable to forecast how technology would transform the American economy. So it's not surprising to find similar attempts being made to predict the future of government once the Internet takes firm hold in the public sector.

Most forecasters would agree that government and, in particular, local government is in what Forrester Research calls "Phase One" or the experimental phase of electronic government. For the most part there are simple applications under way, such as online services for paying parking fines and business licenses, registering for town soccer teams or filing out complaint forms. But as PTI and ICMA found when it surveyed local governments, few cities and counties offer bonafide e-government services. Instead, the majority of jurisdictions with Websites simply offer information.

Integration and Transformation Ahead

But the experimentation phase may be ending. Already, there are signs that government at all levels is beginning to develop more sophisticated applications centered around customer needs that depend on the integration of data from different departments, and use new types of security and payments systems. Some evidence this is happening, or will soon occur, can be found in the launching of one-stop portals in some state and a few local jurisdictions. These portals give local jurisdictions the ability to offer more sophisticated transactions, such as the payment

of tax and utility bills online and some are developing sophisticated authentication applications using digital signatures. San Jose has taken advantage of state law and started issuing business permits online using digital signatures for purposes of electronic authentication and verification. And a number of state portals are already offering so-called life-event services: applications built to simplify citizen-to-government transactions that affect, moving, going to school, finding a job or retiring.

In some communities, customer-centric e-government is beginning to appear, thanks to some early adopters of customer relationship management technology. In Lynchburg, Va., local citizens call just one phone number to file a complaint or request a service - for any department! Trained service reps use a database of scripts to gather information and then answer the customer's needs. This includes telling them when the problem will be fixed and allowing the citizen to check back on the city's Website to find out the status of their request. Similar projects are can be found in Hampton, Va., Kansas City, Mo., and Los Angeles, Calif.

In San Francisco, residents can use a number of communication channels to interact with their local government. Want to order a copy of your birth certificate? You can do it by Internet, phone, fax, mail or in person. San Francisco's multi-channel customer service (and it includes not just birth certificates, but also property and business taxes, parking tickets and a variety of permits) is consider the wave of the future, where options for interaction run deep, but the citizen always comes first.

In other jurisdictions, governments are attempting to integrate the many steps involved in applying for a business permit or license so that companies can visit one Website, fill out one form and have all the necessary processes taken care of automatically. The focus on government-to-business transactions will steadily increase as local leaders recognize the benefits e-government can bring to economic development. At the same time, they will step up efforts to close the digital divide, so that low-

income groups can enjoy a level playing field when it comes to electronic service delivery, whether it's for social services, employment or educational opportunities.

Another sign of changes to come is the increasing use of the Internet for opening government up to the democratic process. Already, local officials accept and respond to e-mail communications, in addition to the traditional phone call, whenever citizens have a concern or a complaint. To help answer questions, many local governments are posting council agendas and proposed legislation on the Internet so that people can see the fine print of their community's policies. More advanced jurisdictions are Web-casting council meetings, or posting video files of proceedings, so that citizens can download and view their elected officials and debates at their leisure, rather than having to attend council meetings live or watch them on cable TV at hours that might not be convenient. Local government Websites are also posting voting information and are investigating the possibilities of offering some kind of Internet voting service in the near future.

Where will this lead?

There are some who believe that these first steps toward electronic democracy will lead toward a more activist government where, through technology, bureaucracy withers away and more people can participate in the process. The result could be less cynicism toward the public sector as a provider of services, such as national healthcare, child care, public transportation, etc.

As electronic government spreads, we could see more partnerships between the public and private sector, with certain firms taking over some aspect of government, such as tax software firms managing tax filings and processing, or auto dealers handling DMV services. At the same time, e-government will take over more of the back-end processing in cities and counties currently done by workers, leaving government more resources to deal with actual service delivery. Already, some state social service agencies are looking into wireless technology to place more caseworkers in the

field because technology has reduced the amount of paperwork they have to do back at the office. The same is happening with child support programs, where online services are handling as much as 50 percent of the routine transactions and queries, leaving case workers more time to deal with the thorniest problems.

These efforts represent the first glimpse of the post-bureaucratic form of government that is expected emerge as the 21st Century gets underway. Just how far these changes go is anyone's guess. Whatever the outcome, it's important to remember that e-government will not just happen. Nor will it occur at some grass-roots level. It will require the involvement of all who will be touched by its capabilities, and it will require strong leadership and a disciplined plan.

SECTION III: How to Plan, Fund and Launch E-Government

Preparing for E-Government: Organize an Effective Governance Structure

Despite broad acceptance of the value and benefits of electronic commerce and e-government, many organizations - including local governments - don't have any organized structure to guide such initiatives. More than 91 percent of local governments lack an overall e-government strategy or master plan, according to a PTI/ICMA survey. And over 80 percent of employees cannot point to an individual responsible for an enterprise Internet strategy, according to Forrester Research.

To succeed with e-government, cities and counties must present a single face to their constituents. Yet our system of government consists of multiple layers, from federal and state authorities, as well as municipal and county entities, down to independent airport and school boards, even irrigation districts.

This structure runs counter to the concept of a single face of government, yet governance models are needed to bring these entities together to create a truly workable e-government, according to the National Electronic Commerce Coordinating Council. "Balancing the need for strong individual leadership with collaborative project development can be a difficult process."

According to the NECCC, critical elements in setting a governance structure are:

- ◆ Deciding who has jurisdiction to ensure that common interests are sustained
- ◆ Ensuring that rational and cost-effective solutions are developed across organizational boundaries
- ◆ Making sure solutions are compatible with each government's personality and priorities
- ◆ Knowing that successful implementation of e-government requires central coordination with enterprisewide involvement.

In addition to these factors, local governments that have already set e-government strategic plans, emphasize these principles for organizing a strong e-governance model:

- ◆ Understand how your organization communicates and work from these strengths
- ◆ Remember there's no quick fix when it comes to e-government planning
- ◆ The larger the government, the harder it is to organize
- ◆ Be prepared to change the old bureaucratic model
- ◆ Always think in terms of the entire enterprise when drafting plans for e-government services and solutions
- ◆ Make collaboration a key component of your governance structure and be prepared to change internal culture to bring this about.

Everybody has different ideas as to who should be involved with organizing for e-government. Besides having a strong leader, most agree that key stakeholders need to be involved. Los Angeles has been planning to implement e-government using a 3-1-1 call center as its core service component. To ensure stability while planning and to overcome the city's traditionally diffuse authority, Los Angeles set up a service center advisory board to provide proper guidance for integrating the call center with the rest of the city government. The board consisted of senior managers from critical departments. In addition, the city appointed a service center general manager responsible for developing, maintaining championing and overseeing implementation of the city's e-government strategy.

Charlotte created a "City Leadership Team" with "ultimate authority over the city's e-government program." The city's manager's office holds the highest position on the team to ensure sound and strong leadership throughout the process. Core team members included senior staff from the departments of finance, corporate communications, utilities, business support services and a select number of business units.

Miami-Dade County started down the path of e-government by appointing a chief information officer, who was charged with the task of developing a “vision for information technology in Miami-Dade,” to define the county’s technology mission and to create the tactical plan by identifying specific services and actions steps that had to be taken. Once the county had a person in a strategic position, with access to the county’s highest executives and an enterprise vision of what needed to be done, Miami-Dade created working groups of stakeholders so that common interests could be shared and issues ironed out.

Another model for a governance structure is to create two leadership teams:

- ◆ An “e-governance leaders group” that addresses issues related to government oversight, funding and policy issues
- ◆ A “e-tactics group” that services the e-governance group and coordinates with agencies regarding implementation plans for online services, budgeting needs for individual agencies, requirements for interagency infrastructure, and so on.

Do You Know Who Your Stakeholders Are?

Stakeholder buy-in is another key element in setting the groundwork for successful governance and organization of an e-government strategic plan. Externally, they can include everyone from teenagers to senior citizens. Special groups, such as minorities and the disabled should be a part of the process. So too, nonprofit groups, local businesses, travel and tourist organizations and, of course, leading educational institutions.

The 10-Step Strategic Plan Process:

1. Initiate and agree on a strategic plan process
2. Identify organizational mandates
3. Clarify organization mission and values
4. Assess the organization’s external and internal environments
5. Identify strengths, weaknesses, opportunities and threats
6. Identify the strategic issue facing the organization
7. Formulate strategies to manage these issues
8. Review and adopt the strategic plan
9. Establish an effective implementation plan
10. Reassess strategies and the strategic plan process

Source: John M. Bryson: *Strategic Planning for Nonprofit Organizations*

Facts About Strategic Planning:

- ◆ Strategic planning is a disciplined effort to produce fundamental decisions and actions that shape and guide what an organization is, what it has done, and why it does it.
- ◆ When you face so many conflicting demands, strategic planning is a process for figuring out your priorities.
- ◆ Strategic planning promotes strategic thought and action. This leads to more systematic information gathering about the organization’s external and internal environment.
- ◆ Strategic planning imposes decision-making
- ◆ Strategic planning enhances organizational responsiveness and improves performance
- ◆ Strategic planning benefits the organization’s people. Policy-makers can better fulfill their role and meet responsibilities

Source: John M. Bryson: *Strategic Planning for Nonprofit Organizations*

A second tier of stakeholders is the other governmental institutions: neighboring local governments, state government and key federal agencies.

Finally, there are the internal stakeholders, including all business units, IT staff and elected officials. Engaging this final tier of stakeholders is often the most challenging, because they may feel the most threatened by the changes sought through e-government and are the best equipped to stymie plans through bureaucratic red tape.

To avoid problems with internal stakeholders, Phoenix had the city manager appoint a citywide task force, involving some, but not all, departments that will play a key role in developing an e-government strategic plan. Working as a team, two of the decisions they tackle is whether an e-government project should be citywide or not, and should it be free or fee-based. Stakeholders must also work out a proof of concept and develop a pilot test to ensure that any proposed project is doable, and can be executed in a short period of time.

Another critical stage in the organizing process is preparing for the change that will occur with e-government. If you are familiar with past information technology projects in the public sector, you are well aware of how technology can alter the business process: speeding up processes, eliminating steps in workflow, giving control of the service

over to customers, making certain jobs redundant.

Knowing beforehand where and when problems will occur as the process is changed from one based on paper and people to one based almost entirely on technology can have a huge impact on the degree to which your e-government project will succeed. Ways to mitigate problems when change occurs include:

- ◆ Balancing need for flexibility with the need for stability
- ◆ Developing risk management skills (see section below)
- ◆ Preparing and improving your staff's project management skills

Passing the Readiness Test

A major step in the planning process is a local government's ability to properly assess its readiness for e-government. This includes not just organizational readiness but also customer readiness. To pass this test, cities and counties need to first survey their internal environment to identify major assets needed for e-government, including:

- ◆ skill sets
- ◆ infrastructure
- ◆ architecture
- ◆ standards

Some local governments may find their staff lack the skills to operate e-government and will require extensive training to bring them up to speed. For other cities and counties, the problem is one of

infrastructure, where lack of investment in hardware, networks and desktop computers has left them unprepared to bring up and launch e-government applications. In particular, local governments need to assess their readiness to support e-government and the technology infrastructure upon which it runs-on a 24-hour x 7-day per week timeframe.

Readiness must also be measured for leadership qualities, legal issues, governance, competency and technology. To find out just how ready they really are, the National Electronic Commerce Coordinating Council put together a quiz for governments and suggested e-government planners score their answers from 1-5, with 1 as "strongly disagree" and 5 as "strongly agree."

LEADERSHIP

1. Our chief executive has issued an e-government mandate
2. There is an e-government culture in our organization
3. Our organization has written an e-government strategic plan
4. Our e-government strategic plan is aligned with our business strategic plan
5. Our organization has an internal marketing plan for e-government initiatives

LEGAL

1. We can identify (through digital signatures or

- biometric technology) parties to an electronic transaction
- 2. Our procurement law has been updated to accommodate purchases and bids via the Internet
- 3. Our organization has the authority to use electronic payment methods to conduct business transactions over the Internet
- 4. We have legislation to resolve liability issues with electronic transactions
- 5. Our organization has electronic document management policies and regulations

GOVERNANCE

- 1. Our organization has a clear governance structure established for the development of e-government
- 2. Our e-government team/ task force can set binding standards
- 3. Our organization has a methodology to justify budgeting requirements
- 4. Our organization has a strategy for funding e-government projects
- 5. Our organization can measure the performance of e-government projects

COMPETENCY

- 1. Our organization has the ability to implement applications in modules rather than all at once
- 2. Our organization is competent in contract negotiation and management skills

- 3. Our organization is strong in project management skills
- 4. Our organization has a strategy for sharing e-government best practices with other departments
- 5. Our organization is competent in system security

TECHNOLOGY

- 1. Our organization has an enterprise-wide architecture or e-government
- 2. Our e-government applications are modular enough to accommodate expected change and growth
- 3. Our technology infrastructure can accommodate planned e-government projects
- 4. Our organization has an e-government implementation plan
- 5. Our organization has an adequate retention and training strategy for its e-government workers

Externally, local governments need to assess their customer's readiness for e-government in terms of:

- ⑧ Social concerns. Not everyone wants to conduct transactions electronically. Some people prefer to pay for dog licenses in person, just as some people prefer bank tellers to ATM machines. Find out where our government touches its citizens the most and

how practical - as well as beneficial it is to change those services into an electronic application.

- ◆ Cultural barriers. How comfortable or competent is your population with the English language? For some, the language barrier makes the Internet an imposing obstacle, not an opportunity.
- ◆ Business readiness. Is your business sector tech-savvy or still heavily reliant on paper or old technology to get the job? The difference can spell success or failure with online government-to-business applications
- ◆ Disability issue. Disabled Americans require equal access to government services. Can your e-government applications serve this segment of the population?
- ◆ Digital divide. Can your jurisdiction's population afford the device necessary to interact with government over the Internet? Are you ready to equip your libraries, community centers and schools with devices, such as touch-screen kiosks and PCs, to bring e-government to this underserved portion of the population?
- ◆ Geographic divide. How remote is your population? Do they have access to adequate telecommunications services for e-government?

Understanding the Issues

Assessing one's readiness for e-government is the first stage in strategic planning. The second stage calls for a more precise evaluation of the issues that can delay or derail e-government at the local level. Specifically, local government must ascertain its level of readiness and maturity when it comes to handling:

- ◆ Risk management
- ◆ Privacy
- ◆ Security
- ◆ Access

RISK. Any time a local government builds a new system using technology, there's always a certain element of risk that comes with the change. But e-government raises the degree of risk, because it goes far beyond the automation of existing systems. It has the potential to change radically how government operates and how it interacts with its constituents. It's crucial that senior local officials learn how to understand and overcome the risk that accompanies such broad and permanent change. They must define the nature and scope of that risk and must decide whether the risk associated with the new is greater than the risk of staying with the old. Most importantly, they must know the difference between managing risk and managing a crisis.

Categorizing Risk

High-risk e-government systems:

- ◆ Involve large dollars or significantly important transactions, such that business or government processes, would be hindered or an impact on public health or safety would occur if the transactions were not processed timely and accurately
- ◆ Contain highly confidential or sensitive data such that release would cause real damage to the parties involved
- ◆ Impact a high percentage of the population
- ◆ Are multi-organizational because they impact the risks of interconnected systems

Medium risk e-government systems:

- ◆ Transact a moderate or low dollar value
- ◆ Data items that could potentially embarrass or create problems for the parties involved if released
- ◆ Impact a moderate proportion of the constituent base

Low risk e-government systems:

- ◆ Are stand-alone
- ◆ Publish generally available public information
- ◆ Result in a relatively small impact on the population

Source: The National Electronic Commerce Coordinating Council

PRIVACY. Surely, one of the biggest effects the Internet has had on the public sector is its ability to allow virtually anyone almost instantaneous access to government records. In the

past, if you were seeking a public record, you not only had to know what you were looking for and where to find it, but you had to have the time to track it down at a records office, which was usually located inside a building somewhere downtown. Today, everything from land title documents to a list of local sex offenders can be tracked down in minutes without ever leaving home.

This rapid acceleration in access to public information has many individuals - and governments - worried that more sensitive and private information may become available to the general public. Citizens have increasingly grown concerned about the kind of personal information that governments collect, how accurate that information is, how the information is being used, and how that information might be shared with others.

As the Internet makes all sorts of information available at the click of computer mouse, more people are raising the notion of “private public information,” where certain components of traditional public records, such as an individual’s name and address, are considered sensitive and should be kept from public view. This notion has to be balanced with the public’s increasing desire for a more efficient government entity that shares certain bits of information with other departments rather than collect the same information repeatedly from citizens and businesses.

Numerous efforts have gone into shaping public standards and policies concerning privacy and data collection from the public. For example, the Federal Trade Commission has established four “Fair Information Principles” as a tool for developing standards in data collection:

1. Notice. Data collectors must disclose their information practices before collecting personal information from consumers.

2. Choice. Consumers must be given options with respect to how personal information collected from them may be used for purposes beyond those for which the information was provided and whether they wish to have that information shared.

3. Access. Consumers should be able to view and contest the accuracy and completeness of data collected about them.

4. Security. Data collectors must take reasonable steps to ensure that information collected from consumers is accurate and secure from unauthorized use.

Public Technology, Inc., and other government associations strongly urge cities and counties to adopt privacy policies, in particular ones that protect individually identifiable information on any government portal or Website. While a policy should reflect the needs and concerns of the jurisdiction that creates it, in general PTI encourages local government policies to address the following points:

- ◆ The scope of the policy should be clearly defined.
- ◆ It should contain a clear explanation of what information is collected and what it is used for.
- ◆ The policy should contain an opt in/opt out clause. This means people have an opportunity to decide if their personally identifiable information can be used for purposes other than that for which it was originally collected.
- ◆ The policy should discuss data security and data retention.
- ◆ The policy should have a clearly defined method for people to review the information government has collected about them.

Not So Sweet: Computer Cookies

In computer slang, cookies have nothing to do with baking. A cookie is a message given to a Web browser by a Web server. The message is then sent back to the server each time the browser requests a page from the server.

The main purpose of cookies is to identify users and possibly prepare customized Web pages for them. When you enter a Website using cookies, you may be asked to fill out a form providing such information as your name and interests. But most cookies are placed automatically in your browser and identify you by a number or code. This information is packaged into a cookie and sent to your Web browser, which stores it for later use. The next time you go to the same Website, your browser will send the cookie to the Web server. The server can use this information to present you with custom Web pages. So, for example, instead of seeing just a generic welcome page you might see a welcome page with your name on it.

Source: Webopedia.com

Who Uses Cookies?

According to a survey by the Civic Resource Group, 40 percent of city Websites use cookies to identify repeat visitors without disclosing this fact to the users.

Privacy - What Cities and Counties Are Doing:

Virginia Beach's privacy policy clearly states when and why the city's Website uses cookies. Personal information is never sold or provided to a third party. When it comes to publishing public information on the Internet, the city always removes any personal identification with the record or document. For instance, real estate data on the purchase price of a home or its assessment won't carry any individual's name or address.

Phoenix has an electronic-privacy task force, which includes individuals from the city's legal department, the city clerk, the courts, police, as well as representatives from any inter-

governmental programs, data security and the city's technology department.

Because North Carolina law limits what can be protected from public scrutiny, Charlotte is grappling with how it can deliver e-government services without compromising the privacy of individuals. Right now, the city is limited to protecting Social Security numbers, juvenile data and an employee's work appraisal. Little else is protected. What is recommended are new standards set at the state or federal level.

Like Virginia Beach, Miami-Dade County has found its privacy policies under scrutiny when attempts were made to publish property assessment information, which contained the names of individuals. The county is following state law and suppresses the names of individuals. The goal is avoid creating new laws at the local level and to work within the framework of state laws. Government attorneys and policy leaders handle privacy policy issues.

SECURITY. Along with having a well-written and well-practiced privacy policy, local governments can ensure the privacy of sensitive information and gain the trust of its citizens by developing a solid security system for its e-government services. However, what is considered a solid security system for one jurisdiction may be too much for another. Some jurisdictions may be willing to trade off on having an elaborate but cumbersome security system in return for a more efficient level of services.

Charlotte points out that while its information assets must be protected, "system security must not create prohibitive complexity or reduce flexibility. Customer information also needs to be protected from internal and external misuse. Privacy systems should safeguard the personal information critical to building sites that satisfy customer and business needs."

It's also important to remember that security isn't just a technology issue. The overwhelming evidence suggests that breaches in Internet security don't come from external attacks, but from within an organization. Some of the breaches occur out of carelessness or

ignorance: an employee who accidentally downloads a virus from the Internet or installs unauthorized software. To prevent these disasters from happening, local governments need to change the way their people think about protecting their information and systems.

Security starts with a well-understood security policy, which should cover physical, data and network security. To protect against outside intrusions, technology departments can purchase firewall software to keep out intruders and software that monitors network traffic to identify unauthorized attempts to upload or change information or cause damage to data and files.

For local governments that offer sophisticated e-government services, involving transactions or legal documents, a technology known as public key infrastructure (PKI), or digital signatures, can provide a highly reliable and trusted form of security. PKI uses encryption to protect sensitive data from tampering and is considered one of the best-developed efforts to date for authenticating individuals involved in Internet transactions, while also ensuring confidentiality and overall security. But PKI has its drawbacks. Local governments have to make sure such transactions involving electronic signatures are legally binding. PKI is also expensive to build and operate and without adequate infrastructure, it can slow down the electronic processing of the transactions.

Internally, local governments can maintain security through a variety of tools. One of the more advanced to date involves biometrics. By electronically scanning a person's face, hand, fingerprint or eye retina and comparing the image with a database of other images, computers can identify who the person is with a high degree of accuracy. A number of federal agencies, including NASA, use the technology to ensure security among its employees. Now state and local governments are beginning to use the technology as well. For example, Oceanside, Calif., uses small, one-finger scanners to identify employees who log on to the city's computer network. The scanning devices are faster than using PIN numbers and the security system saves on labor costs.

However, biometrics and PKI are not perfect. That's why an organization should also have a disaster recovery plan that identifies mission critical applications and provides a sound methodology for bringing them back into operation as quickly as possible after a disaster or security breach. The plan should be tested and updated regularly. The systems and data should be backed up regularly with copies stored securely away from the primary processing location.

ACCESS. As applications on the Internet grow in number, they have also grown more sophisticated and complex. Images and graphics play a leading role in conveying information and instructions to users when there's limited space available on the computer screen. Unfortunately, this trend is leaving people with disabilities out in the cold. With one in five Americans having some kind of impairment, making technology accessible is important to the widespread use of e-government.

Some of the key problems disabled people face when visiting Websites are:

- ◆ Colorful graphics that are not accessible to blind people, because software that reads aloud the content of the site to the user recognizes photographs, images or icons only by saying "image." Tables and frames are also confusing for text-to-speech software and hard to decipher.
- ◆ Multiple hyperlinks and icons spaced close together are hard to navigate by people with motor skill difficulties who cannot easily manipulate a mouse.
- ◆ Programs that flash messages or change color in a strobe effect make the Website hard to access for some people with neurological conditions.

To make its Website more accessible to the disabled, one state has recommended that Web designers include a text description for non-text elements, such as bullets, images and symbols, avoid using frames, moving text or blinking text and, finally, have text transcriptions accompany audio clips, and video clips should include an audio description.

At the local level, Phoenix has developed restrictions on content so that disabled persons can use assistive technology, including text-to-speech and text-to-Braille translators and not run into any access difficulties. New York City's Office of New Media has implemented an ADA (Americans with Disabilities Act) compliance checklist that is now required for agency staff who post updates to the city's Website.

San Jose's home page on the Internet is linked to a page entitled "Access Instructions" for users with disabilities where they can find out how to use the Website and how the city has implemented standards to ensure that everyone has access to information and services. This includes posting text files along with popular PDF (portable document format) documents, tagging every graphic image so that it can be "read" by the user or has a link where a description of the image or photograph can be read.

Section 508 - Federal Guidelines for Accessibility

Section 508 refers to a federal law that requires the federal government to purchase technology products that are accessible to people with a wide range of disabilities. This covers everything from computer hardware and software to fax and copy machines. In addition, the law requires federal agencies to ensure that government electronic information meet a series of accessibility standards. While the rules under Section 508 do not mention how other governments will be affected, there is a general consensus that 508's accessibility guidelines will be far reaching. Already, many states have tried to include accessibility standards in the design of Web portals.

Access is also an economic issue. With more than half of U.S. households equipped with a computer and with four out of five of those PCs hooked up to the Internet, it appears that the digital divide is slowly closing. The National Telecommunications and Information Administration (NTIA), which has been measuring the digital divide for several years, pointed out that rural and urban areas enjoy virtually identical rates of dial-up access, and

the gender-based gap in technology has virtually disappeared. As for the racial divide, recent studies have shown that while Internet access among African-Americans stood at 30 percent in 1999, the lowest penetration rate among all ethnic groups, the gap was expected to close by two-thirds by 2005. More importantly, this progress has occurred more quickly than expected.

Yet most experts agree that completely erasing the gap between rich and poor, white and black, remains an elusive and complex goal. Until everybody has equal access, those with Internet service and a computer will enjoy an educational and competitive advantage over those who do not.

To combat this problem, cities and counties are trying several different approaches. For instance, in La Grange, Ga., the city with a population of 25,000 has partnered with a local cable firm to bring free Web access to all citizens by equipping all of its cable TV subscribers with set-top boxes and wireless keyboards that allow them to surf the Internet and send e-mail. La Grange believes that by subsidizing Internet access this way, it can move toward e-government and other benefits (including distance learning) much more quickly.

Seattle launched a multi-million-dollar effort to improve Internet access for its citizens at the city's community technology centers. Funding came from a federal grant and multiple corporate sponsors to modernize equipment and create technical literacy programs at nine tech centers in low-income neighborhoods and high-unemployment areas.

Atlanta is using \$8 million from its cable franchise agreement to fund the construction of 15 cyber centers, where any resident can use computers to access the Internet and receive computer training.

Meanwhile, private sector Internet providers, such as AOL, realize that typical marketing efforts don't succeed in minority neighborhoods and are using less conventional marketing methods, some of which involve partnerships with the public sector.

Implementing E-Government: What to Look For

At this stage, a local government's planning team should begin laying the groundwork for actual design, development and deployment of an e-government project. The implementation plan describes what will be done. Traditional information technology planning steps are also taken at this point, including the selection of the right approach to start, a cost-analysis of the project, determination of funding and scheduling.

In addition, implementation will involve some nontraditional efforts by a local government. The e-government team will have to establish a marketing plan to entice users to the online services. They will have to lay the groundwork for partnerships - both internally between departments and externally with vendors and other governments - to create an enterprisewide e-government application with the best value. Finally, they must make plans on how they will measure the performance of something that has never really existed before in local government: an electronic service delivery system.

Stage one of any implementation plan is selecting the right approach. Those who have worked on e-government projects suggest local governments consider the following approaches, individually or in combination:

- ◆ High Visibility. If the desire is to be the first with a new application or to be viewed as highly progressive, then local governments should consider an implementation plan that delivers an application or applications that have high visibility among citizens.
- ◆ Fast Delivery. If speed is of the essence, local governments should tackle the kind of project that can be up and running on the Internet in a relatively short period of time. The good news here is that the development of Internet applications have matured to the point where there's now a broad selection of government-related services that can be Web-enabled quickly.

- ◆ Integrated, Enterprise Service. Some governments would prefer to build slowly, but cover all the bases on the first project, including a fully customer-oriented approach. Organization is the key, but the impact can be extremely beneficial. Some examples include an end-to-end e-procurement system for suppliers or an integrated social service application for residents.

In addition to weighing these options, local governments must also factor in which projects should be given priority. From the different approaches mentioned above, it's clear that local governments have the choice of doing something either fast or slow, but clearly not all. In the strategic planning process, priorities must be set based on a number of criteria, according to the National Electronic Commerce Coordinating Council, including the following:

- ◆ Customer Service Improvement
- ◆ Government Operational Efficiency Improvement
- ◆ Political Return

How Cities Are Addressing the Digital Divide

- | | |
|--|-----|
| ◆ Public access terminals in city/county facilities: | 83% |
| ◆ Working with public schools: | 45% |
| ◆ Federal programs: | 7% |
| ◆ Programs or donations by the private sector: | 14% |
| ◆ Kiosks: | 14% |
| ◆ Community technology centers: | 13% |
| ◆ Training/technical support for citizens: | 23% |

Source: PTI/ICMA Electronic Government Survey

The Essential Points of an Implementation Plan:

1. Establish a project manager or coordinator
2. Identify major e-government applications, the functions they will perform and priority order
3. Identify project benefits
4. Identify known project limitations, problems and risks, and plan action to overcome, solve or deal with them
5. Identify relevant databases and links with legacy systems
6. Project costs at least one year into the future
7. Identify project timeframes and milestones
8. Develop marketing plan
9. Identify potential partnerships for data, application and project cost sharing
10. Ensure that training and communication with staff are planned throughout implementation
11. Measure performance of project

Source: Public Technology, Inc.

cities and counties internally try to do this. Others hire experts.

- ◆ **Maintenance.** The costs required to keep e-government operational - remember, this is a 24-hour, 7-day-per-week operation.
- ◆ **Integration.** The ultimate goal of e-government is to offer services that cover the enterprise and fold independent services into a more comprehensive delivery system. That requires integration, another cost issue.

E-Government Funding: More Choices

FACT: Forty-three percent of governments identify lack of funding as a major internal barrier to moving government online.

Source: Forrester Research

Costs: What You'll Have to Budget For

The biggest question any local official will ask is, what's this going to cost? The answer is, of course, it depends. Research groups have put the cost of building a portal on the Internet somewhere in the range of several hundred thousand dollars to several million, depending on the types of applications and services offered. But in a survey of local governments by PTI and ICMA, barely 11 percent of respondents said they were spending \$100,000 or more on e-government activities. The vast majority was planning to spend less than \$10,000, an amount that is far too low to build an enterprise e-government operation.

Realistically, local governments need to pay attention to costs in the following areas:

- ◆ **Infrastructure.** This covers all the hardware, software and network wiring costs needed to deploy and run e-government applications.
- ◆ **Orgware.** This includes: staff, designers, training, reengineering and other human and organizational costs related to e-government.
- ◆ **Application development.** Designing and developing e-government applications need to be accounted for as well. Some

Funding information technology projects in government has always been a problem and the issue isn't going away with e-government. The traditional budget process - with its emphasis on year-at-a-time, bottom-up, incremental modifications - tends to overlook innovative IT projects that cross program and budget year boundaries. Aggravating the situation is the high cost of IT projects and the fact that many of the benefits can be hidden, such as indirect cost savings, improvements in customer service and greater worker productivity, all of which is hard to measure.

But local governments are trying to break out of the box when it comes to funding e-government projects. Realizing that enterprise electronic services means looking beyond funding for a single year for a single department, cities and counties are turning to a variety of funding approaches. Here are some examples:

Appropriations. In a brief sampling, most local governments still use the traditional appropriations process to obtain funding for e-government process. It's the most recognized and accepted practice for government IT funding, yet it's also the least flexible, given the dynamic nature of technology in general and e-government in particular.

Fee Revenue. Some local governments have funded e-government projects through their own form of user fees and revenue. For example, Virginia Beach built an interactive voice response service for permitting. The electronic system generates revenues for the city, from which a portion is earmarked for e-government projects. The money is then used to fund the startup of e-government projects. Similarly, Miami-Dade County relies on fees collected from an enterprise licensing system run by the county as a source of funding for e-government projects that meet a certain criteria.

Technology Bonds/Capital Financing. A handful of state and local governments have turned to bonds as a way to fund large-scale IT projects, including the development of e-government portals. Technology bonds allow governments to spread the cost of technology projects over several years and to remove the projects from the vagaries of the annual appropriation process. Massachusetts has funded more than 100 IT project this way. New York City has an aggressive capital funding program underway for e-government projects. Phoenix has also used bonds to pay for its e-government initiatives. Because the bonds have to be approved by citizens, the city believes bond-funded IT projects carry more clout and can be more strategic in design.

Internal Grants. Some local governments will create a pool of funds - generated by nontraditional revenue stream or through other sources - and will provide grants as seed money to departments or agencies that wish to pursue e-government projects. While grants can be a useful way for a cash-strapped agency to begin work on developing an online service, this kind of piecemeal funding can dilute efforts to create enterprisewide applications. Cities and counties should try to ensure that projects funded in this manner are developed in a coordinated fashion so that the jurisdiction doesn't end up with islands of unrelated online services.

Outsourcing. Local governments are leveraging their limited technology budgets by developing partnerships that use private-sector funding in the development and delivery of

electronic services. Kent County, Mich., entered into a partnership with National Information Consortium that initially combines county and NIC capital to create a site that in the long run will be supported by services fees, cost savings and other non-traditional sources as user levels rise.

Ad Revenue: A Mixed Message

As local governments explore nontraditional methods for funding e-government services, one intriguing source is advertising revenue. The use of banner ads on commercial Websites is well known though few, if any, Internet companies have become profitable on banner ad revenue alone. Still, the lack of success hasn't deterred a few companies from proposing the idea of public sector advertising, nor has it deterred a few state and local governments from experimenting with the possibilities as a way to defray the cost of running a Website. After all, municipal bus companies carry ads and government-owned stadiums sell naming rights to companies, so why not sell ad space on government Websites, which receive a lot of traffic?

The basic concept is that an advertiser pays a government for the right to run an ad based on such things as click rates for ads, costs-per-impressions, hits, etc. For example, an advertiser may pay \$50 for every 1,000 views or requests of an ad that take place at the Website.

While just 2 percent of jurisdictions responding to the PTI/ICMA survey allow advertising on its Websites, two large cities - Honolulu and Salt Lake City - have signed deals with a company called EgovNet, to bring advertising to their portals. So far, the amount of ad revenue generated has been below expectations, according to published reports, though the potential exists for some cities to earn as much as \$100,000 annually. But other jurisdictions have questioned the wisdom of having commercials appear on a public sector Website, as well as the conflicts of interest that may arise from the belief that government is tacitly endorsing a commercial product or service, several governments have jumped on the bandwagon.

E-Government Applications: What to Offer Citizens, Businesses and Government

When Tampa launched its e-government Website, local officials touted the fact that residents could now interact with their government electronically in 12 different ways. The choices ranged from the simple - contact local officials or file a complaint - to the more complex - renew business licenses, pay a water bill or reserve a park shelter.

Most of Tampa's applications focused on what is often referred to as G-to-C, or government-to-citizen services. These are the handful of applications that most citizens conduct with their local governments most of the time. The services also, for the most part, fall into the category sometimes referred to as foundation applications. They allow people to retrieve information, fill out simple forms and conduct basic transactions, such as pay a parking fine,

Local Governments & Advertising

Does your local government allow advertising on its Website:

YES: 2%

NO: 98%

Source: PTI/ICMA 2001 Survey

reserve a book at the library or a baseball field at the local park. Most local governments - especially those just beginning their e-government initiatives - are focusing on foundation applications.

But e-government services are much more than this. As cities and counties continue to incorporate online applications into their operations, local officials will be able to offer services that integrate data and services from multiple departments. Already, some states are offering online social services that combine welfare services with job searches, training, distance learning and childcare. Others are beginning to offer multiple online services assembled around life events: moving, going to school, healthcare for children and the elderly,

and finding a job..

E-government also includes G-to-B (government-to-business) and G-to-G (government-to-government) applications, which includes both employee-based services and Internet transactions between different levels or branches of government (local-state-federal; police-courts-corrections, for example). Clearly, e-government offers local officials entirely new ways to slice and dice government services and operations, while providing ease of use, convenience, better customer service, higher productivity all at lower cost.

Creative San Carlos

One of the best-developed city Websites also happens to be one of the oldest. San Carlos, Calif. (pop. 28,000), went live with its Website back on May 10, 1994. Today, it's an award-winning city portal that offers a variety of interactive services that includes everything from a robust online business permit system to a variety of citizen complaint forms. With its diverse collection of videos presenting major policy statements by local officials, agendas and minutes from public meetings, the San Carlos site is also a model of transparent democracy in action. And because of its longevity, San Carlos' experience with using the Web provides other local officials with a laboratory of how to build an effective Internet site cost-effectively.

Local Government's Wish List for Interactive Electronic Services

- 4.4% currently offer online payments of fines/tickets
- 95.6% plan to offer such services
- 9.2% offer online payment of taxes
- 90.8% plan to offer such services
- 5.7% offer payment of utility bills
- 94.3% plan to offer such services
- 3.4% offer online payment of license/permit fees
- 96.6% plan to offer such services

Source: 2001 PTI/ICMA Survey

Foundation Applications

Every local government offers basic online services, either as way to provide low cost, online services quickly to its constituents or as part of a package of services that may include more interactive, transactional applications, as in the case in Tampa. With foundation applications, visitors to the Website can find information, download forms and communicate with departments and individuals via e-mail. Foundation applications may also provide a certain level of interaction, such as the use of “intelligent” forms that will calculate fees based on what a developer submits for a business permit application, or will create a list of properties of similar value based on what an owner enters for assessment value.

Many early government sites categorized the information and forms by department, simply copying what has existed in the real world. Since then, government officials have realized that using the Web to create a hierarchical, mirror image of itself isn't helpful to visitors, nor does it take advantage of the Internet's ability to connect disparate pieces of information so that the user can quickly drill down into the details, depending on what's required. Visit a commercial site, such as Yahoo! or Amazon, and see how easy it is to jump from one category of information to another, without getting hopelessly lost. Similarly, view some local government sites that have matured, such as New York City, Miami-Dade County or Virginia Beach, and notice the simplicity of design makes it easy to retrieve information, download forms or conduct a transaction.

Local Online Services: A Partial List

- ◆ Adoption Request form
- ◆ Alcohol permits
- ◆ Anti-graffiti program application
- ◆ Assembly/parade permits
- ◆ Bid registration
- ◆ Building permits
- ◆ Business licenses
- ◆ City job search
- ◆ Court Filings
- ◆ Deed lookup
- ◆ Jury duty status

- ◆ Police reports
- ◆ Parking ticket payments
- ◆ Property registration
- ◆ Property value lookup
- ◆ RFP submittal
- ◆ Restaurant inspection information
- ◆ Sanitation service schedule
- ◆ Sex offender registry
- ◆ Tax filings
- ◆ Unclaimed property
- ◆ Vital records
- ◆ Water bill payment

Transactional Applications. A great deal of attention has been given to the fact that some cities allow drivers to pay parking fines, a utility bill or park and rec fees online. Transaction services are appealing for their convenience. The oft-repeated phrase, “get online, not in line” speaks volumes about the control customers have over simple transactions with local governments when they conduct business on the Internet instead of driving downtown and spending time at the department counter.

Transaction applications can help individuals greatly, but the right ones are extremely beneficial to businesses. The business permit and licensing example mentioned at the beginning of this guide exemplifies how the right kind of transaction can do wonders for the commercial sector. Miami-Dade County created a building re-inspection fee payment system as part of its e-government initiatives and was able to gain a 20 percent adoption rate without any advance publicity or marketing. County Registry of Deeds has also taken a similar approach and offered title companies, banks and attorneys similar online services when it comes to searching for a title to property.

What's been missing from some of the early transactional services is integration. For example, some parking ticket services are not much better than mailing a check in by mail. Some cities have not bothered to integrate their parking fine payment systems and other transactional services with their accounting systems. In the case of parking fines, online users still have to wait five days for payments to be processed, instead of immediately.

Fortunately, local governments are learning from their experiences and that of other jurisdictions and are creating much more functional, productive and efficient online services. For example, Chicago's Park District offers hundreds of classes, camps and activities in its many parks throughout the year. Recently, it launched an Internet service that allows Chicagoans to forego the drive and wait and to register online from home. The service even has a "shopping cart" tool for those who want to load up on choices. Not only can users register and pay online, but also the service is tied into the district's financial system so that the transactions are conducted in realtime, without the traditional paperwork and red tape. City residents love the convenience, but city officials also love the gains in productivity. Virginia Beach has a similar parks and recreation registration system that also uses IVR technology to accept phone-in registrations.

Other local governments are building similar services for electronic procurement. Approved suppliers can post an electronic catalog of their products, from which government buyers can search, select and issue a purchase order. For those jurisdictions that provide buyers with purchase "credit" cards, the entire transaction can be conducted online without paperwork. The Houston-Galveston Area Council has had great success with its new online purchasing system, and officials recently expanded its reach nationwide.

Electronic procurement services also include such applications as automatic notification to vendors about RFP's, according to their area of specialty, and electronic acceptance of bids, as well as automatic ranking of bids so that purchase officials can sort them more easily. Another category is the online auction, where cities and counties can sell off surplus products and buy commodities or special equipment at low cost through an electronic auction process.

Local Governments Like E-Purchasing

Does your local government currently purchase products over the Internet?

YES: 53%
NO: 47%

Does your local government currently post requests for bids or requests for proposals on its Website?

YES: 31%
NO: 69%

Source: PTI/ICMA 2001 Survey

Charge It - Using Credit Cards for Government Transactions

When a citizen pulls out the plastic card to pay a parking fine or for a dog license, local governments must pay credit card companies a surcharge of 2 percent or 3 percent. The fees are levied by the companies to cover administration, profit and the costs of defaulted accounts and fraud. But the cost of the surcharge typically isn't in government budgets and credit card companies prohibit "sellers" from passing credit card fees on to purchasers as surcharges on transactions. A lot of cities and counties don't like the idea that when someone pays a \$20 parking fine, they only collect \$19.60, nor is it legally clear in some cases they can collect less than what has been set by government statute.

For years now, governments and credit card companies have disagreed over the level of risk associated with government-to-citizen transactions. Many in government argue that public-sector transactions are lower in risk than that of typical retail transactions in the private sector and that credit card companies should be able to forego some costs and reduce their fees as a result. But card companies disagree, saying that administrative costs and fraud risk are the same in either sector. And, they maintain, the surcharge buys government greater efficiency by minimizing accounts

receivable, stimulating cash flow and reducing paperwork. Credit card companies, while prohibiting governments from passing on the surcharge to citizens who use charge cards, have been allowing the collection of fixed convenience fees. Some jurisdictions allow the convenience fee, while others forego it for small transactions, such as a \$25 parking fine. In the case of paying taxes by credit card, jurisdictions that offer such a service, do so through a third party which keeps the convenience fee - usually a percentage of the tax paid - and passes on to the government 100 percent of the taxes owed.

Government-to-Employee Applications

What can be done for citizens and businesses can also be done for government employees. E-government is also about serving workers internally more efficiently. When a local government uses e-government technology to distribute information, enhance communications and conduct transactions, it provides tremendous opportunities, according to Colorado Springs' e-government strategic plan. With the right applications, local governments can reduce internal operational costs. Inhouse e-government projects, sometimes referred to as "intranets," have proven extremely valuable, especially in the human resource arena and for training. Local governments can post and accept applications for new job openings, as well as provide new employees with a menu of information and services regarding benefits and courses to improve their job skills. Some of the suggestions made by cities and counties include:

- ◆ Employee bulletin boards
- ◆ Job postings and job application forms
- ◆ Self-service employee information updates
- ◆ Self-service benefits administration
- ◆ Distance learning resources

SECTION IV: Partnerships, Marketing and Technology

As technology projects in government grow more complex and expensive, the idea of partnerships has been bandied about as a way to share resources, expertise, benefits and, of course, costs. Until recently, partnerships have had mixed results at the local level. For example, cities and counties have tried partnerships as a way to share geographic information systems and intelligent transportation initiatives, but often the results have fallen short of the original goals.

With the rapid growth in electronic government, cities and counties are once again looking to partnerships as a way to move rapidly into this field and to make up for the lack of resources in developing e-government applications. Numerous companies have stepped forward to partner with local governments and to help develop a variety of e-government services (see sidebar on convenience fees). As a result, there's been a lot of confusion about what's considered the best type of public-private partnership for e-government services.

The best way to gauge your partnership needs is to follow the strategic planning process outlined in this guide. Identify your jurisdiction's strengths and weaknesses. Establish leadership early on to ensure there's someone to champion the jurisdiction through the decision-making process. It's important to determine what kind of partnership you want: for a one-time project, or for an ongoing need.

In general, local governments partnerships with a private firm can take three forms:

1. Local government buys services and tools from an e-government vendor
2. Local government allows an e-government partner to run or maintain its Website, or develop and maintain a specific application
3. Local governments contribute information, access or services to a private e-government site.

When it comes time to select an e-government partner, here are some things to consider:

- ◆ Insist on having an open system architecture
- ◆ Carefully evaluate the potential benefits and drawbacks of signing a long-term, exclusive deal with one partner
- ◆ Make sure e-government applications link with your back-end legacy systems (i.e. financial, accounting, etc.)
- ◆ Make sure partner has a strategy to migrate systems as technology evolves
- ◆ Be sure policy is set by a public body
- ◆ Ensure that partner can keep content up to date and will work with you on a marketing strategy directed toward customer
- ◆ Don't let purpose of the partnership stray from your community's core issues and concerns
- ◆ Perform due diligence on partner before entering into any agreement
- ◆ Make sure partner's technology allows for secure transactions
- ◆ Have an exit strategy in case expectations are not met..

National Information Consortium (NIC), the largest e-government partner with states, cities and counties, has had extensive experience with partnerships and has developed the following "tenets" based on what local government officials have said they like when it comes to partnering. The tenets recognize the unique roles that the jurisdiction and the private-sector partner have within the partnership.

Local government role and responsibilities

- ◆ The jurisdiction is responsible for establishing web-related policies and providing management direction and oversight. For example, it is the local government's responsibility to identify security thresholds, privacy policies, and decisions related to online advertising.
- ◆ Local government databases and information are managed and maintained locally by the jurisdiction, while data

necessary for the electronic service delivery is extracted on a need-to-have basis by the private partner.

Private partner role and responsibilities

- ◆ The private sector partner is responsible for providing e-government expertise, the technology, applications, and marketing the electronic services to the public.
- ◆ The private partner aggregates all services on a single electronic platform with one architecture, one payment and credit card system, and one look and feel to all electronic services.
- ◆ The look and feel of the jurisdiction's Website effects the local government, not the private partner.
- ◆ The private partner provides e-government leadership to the local government and continuously updating and expanding electronic services.
- ◆ The private partner regularly reports to the local government on the levels of use, and quantifies cost savings and benefits.

Government Partnering with Government

In the very early days of e-government local governments began providing links to pertinent state and federal Websites so that citizens and businesses could extend their search for services and information outside of what local governments could provide. At the same time, local governments discovered the benefits of partnering with neighboring jurisdictions to share information, costs and benefits. More importantly, local governments began to recognize that people have trouble differentiating between city, county, state and even federal government services. E-government provides a means to merge disparate government services into a more cohesive and understandable format. How far that merging goes depends on a number of factors, but the trend is beginning to happen.

For example, Charlotte has partnered with Mecklenburg County in a number of traditional government functions, such as planning, police

and procurement, but has so far found it difficult to find the best approach for merging services over the Internet. These two jurisdictions are not alone. Surrendering ownership of certain services and content for the greater good of government isn't easy. Instead, local governments are turning to very specific types of intergovernmental partnerships to help out one another, rather than attempt to create a mega-government Website.

For example, Oakland County, Mich., is offering free Internet service to its 61 local government entities. The effort springs from the county's installation of nearly 400 miles of fiber-optic backbone in the county. Similarly, in Chicago, the city has created a fiber-optic network, known as CivicNet, which brings high-speed Internet connections to parts of the city that don't have such access. And in Silicon Valley, a group of cities partnered to develop a more efficient building and permitting system. The result is "e-Permits" a Web-enabled application that allows the public to apply for, pay for and obtain a number of building permits through the Internet.

Marketing: If You Build It, Will They Come?

When Forrester Research Inc., conducted a survey about electronic government, it found that, despite offering more services online, two-thirds of governments interviewed don't actively market sites, relying instead on word of mouth to drive interest. Here's what one local official said: "We can't really market and don't have a culture that includes marketing. We're really a nonprofit. We issue press releases. People simply don't know what's offered and I'm not sure they necessarily care."

In the private sector, marketing is an integral part of business. Without it, companies wouldn't know who to sell their products to and at what price, and so on. With its captive audience of citizens to serve, local governments haven't had to worry about such issues until recently. But with the growing emphasis on customer service and increasing demands for greater accountability on how tax dollars are spent, cities and counties find themselves not just

providing services but "selling" them to "customers" as well. Charlotte points out that while "our market may not necessarily be a competitive one, we do need to consider how we will promote our e-commerce services."

That's especially the case with e-government, which taxpayers aren't mandated to use, but local governments are investing millions of dollars. As an entirely new form of service delivery, e-government has to be marketed to its audience. Yet few do it. Most cities and counties leave marketing out of their strategic plans for e-government entirely. But with millions of tax dollars at stake, cities and counties can't afford to make a mistake by failing to properly market these new services to their constituents. Nearly every official who has been involved with strategic planning for e-government will tell you that marketing must be integral to the overall plan.

There are two types of e-government marketing strategies:

Internal. This involves educating the entire enterprise about the potential and benefits of e-government. To do so, cities and counties will have to establish department liaisons to share information; they will have to put on internal road shows or technology days, where e-government can be demonstrated to rank and file staff. Publicity campaigns must be orchestrated to showcase the success of e-government. Some jurisdictions have developed brochures; others have created videos that can be downloaded for viewing. Dallas County, Texas, publishes an internal e-government newsletter that educates employees on e-government while providing updates on the latest Dallas County electronic services.

External. To reach its citizens, local governments have turned to their local community cable channel, bus advertising and publicity through the local media to market e-government to citizens and businesses. Some jurisdictions start by putting their Website address on everything the government prints: library bookmarks, utility bills, as well as "ads"

on the Website and in newspapers. Charlotte suggests local governments ask themselves these questions:

1. To what extent will the e-commerce services be promoted to customers?
2. What role will multimedia (TV, radio, billboard, print, Web) play in the marketing campaigns or the e-commerce initiative?
3. What Web alliances can be made for the promotion of e-commerce?
4. How easy will it be for the customer to interact with the site?

What some local governments have done:

In Phoenix, any new online service is considered “owned” by the department from which the application originates. Because departmental employees know their customers the best, they play a key role in developing a marketing plan and in presenting and pushing to the new service. The city uses all of its communication channels to market its online services, including community cable channels, utility bills, press releases and through local community groups.

Virginia Beach took its marketing seriously when it shortened its city’s URL to www.vbgov.com. Since then, the city has plastered the URL address on everything that the city sends out, from business cards to press releases.

New York City uses focus groups to test new online services before launching them.

Other jurisdictions, such as Miami-Dade County, rely heavily on their internal government communications staff to help devise publicity and marketing plans, as well as strategies to reach the local media, when a new service is launched. Another strategy is to use contacts with local chambers of commerce and associations to spread the word. Another ploy is to push e-mail announcements to target groups of customers (be careful how this is conducted. Many Internet users are extremely sensitive to what they consider as SPAM, the electronic version of junk mail.)

Performance Measurement: How Do You

Know What Works and What Doesn’t?

How do you know whether your e-government project is making progress or succeeding? Performance measurement can help provide assurances and be accountable to both policy leaders and the public that the system is meeting objectives. By measuring outcomes according to criteria agreed to by all stakeholders, local governments can be relatively sure if the project is meeting standards. And if not, it has documented proof of where the problems are occurring, whether it’s with customer satisfaction, adoption and use by customers, reductions in errors or improved accuracy.

Once there is agreement on how to measure performance, the actual task isn’t that hard, thanks to technology. Some jurisdictions, such as Colorado Springs, use sophisticated software that measure Website usage rates. The software can track user hits, user sessions, where site visitors are coming from and a host of other useful measures. Software technology can tell a local government the number of transactions that are taking place and the dollar volume collected through electronic payment systems. Local governments can also measure performance by keeping track of the number of new features and applications available on the jurisdiction’s Website and the usage volume for those new applications.

Here are some guidelines when establishing performance measurement goals:

- ◆ Establish baseline and benchmarks
- ◆ Set goals and monitor ability to meet those goals
- ◆ Measure customer satisfaction adoption rates, errors and accuracy
- ◆ Educate for continuous improvement
- ◆ Make sure the project’s scope is correct
- ◆ Don’t roll out applications unless there are internal service agreements to provide the service.

Douglas County, Nev., has a county staff of 26 serving a population of 42,000, so the term “large” doesn’t come to mind. But what the county’s Website lacks in size and style, it makes up with grit, determination and a sense of what a small government site should offer its visitors.

The county tried to look at the Web site from the point of view of the user, not the information provider. The result is not just a site that makes it easy to find information, but is beginning to change the way Douglas County government work and that includes offering services beyond the normal 8-to-5 work hours.

Features of the site include a property tax search service, the ability to pay utility bills and extensive information on local elections and the county court. But the most popular service is for online marriage licenses. Part of the county includes South Lake Tahoe and a lot of people from around the world who want to come here and get married. To help the newlyweds-to-be, the county site provides detailed information on how to obtain a license, as well as a downloadable application form.

Despite having just one staff person manning the site, Douglas County has been able to attract nearly 12,000 hits on a weekly basis and has managed to collect \$100,000 in revenue from its payment service. In 2000, the county received a “Best of the Web” award from the Center for Digital Government.

Technology: The Architecture of E-Government

The technology of e-government is far too complex to be explained in any detail for a guidebook of this type. However, local government leaders should be knowledgeable about the general issues concerning architecture, infrastructure, components and standards during the strategic planning process.

There are some general rules and guidelines that information technology departments in the private sector are adopting for e-commerce and

that bear a direct relation to the development of e-government in the public sector. The most important trend is toward development of a single architecture that will enable cities and counties to build the computer infrastructure once and then leverage it across many applications and throughout the government enterprise. This is a sharp departure from the past, when separate departments developed individual computer architectures based on nonstandard infrastructures for specific programs. In other words, one department used one type of hardware, operating system and software, while another department would work from something completely different. The result has been the development of the now-clichéd “information silos” or “islands of automation.” Each silo or island required its own data center and staff to maintain, as well as its own customized - and costly - software. Governments have found themselves saddled with expensive systems, many of which are full of redundancies, but are unable to share information effectively, if at all.

That approach has been turned on its head, thanks to innovation and the Internet. Local governments are developing new architectures based on standards and less costly, commercial software. Not only is less expensive to develop applications, but it can be done more quickly and the applications can be leveraged by many departments, while the information can be shared more easily. In the development of its e-government architecture, Los Angeles outlined these advantages to developing a single enterprise architecture:

- ◆ Minimizes operating costs by creating a the building blocks once and leveraging them across many applications
- ◆ Minimizes training costs by leveraging personnel who are trained on the common platform across many department applications
- ◆ Develops in-house expertise and allows staff to become specialists in the enterprise architecture environment
- ◆ Reduces the time it takes to deploy applications because of reduced development and integration time.

Components and Tools: Some of the Basics

Every e-government system consists of hardware (PCs, servers, mainframes), software (the programs that tell the computers what to do) and the network (hardware and software that enables computers to share information). In addition, there's the Internet, that vast public network of personal computers and servers that uses an accepted set of protocols, software and standards to enable global information sharing, communications and commerce.

There is a broad range of technologies that any IT department must deal with for e-government. These include everything from Web servers, operating systems and database management systems, to middleware, data warehouses and Web browsers. However, there are certain Internet tools local officials need to pay close attention to if they plan on building and operating a highly efficient e-government Website and portal. These tools include:

◆ **Content management software:**

As government Websites grow in size and volume, a daunting problem has been managing the content - all the documents, forms and so on - that fill the site. Typically, departments are given the task of providing the content. Often lacking are tools that allow them to create, modify and remove content without having to become some kind of software expert. Content management software can perform the necessary tasks, as well as others, such as indexing, according to the needs of the individual or department, without having an expert on hand every time a change is made or some new content is added.

◆ **Search Tools:**

Given the wide range of information that can be found on a local government site, search tools play an important role in helping users find what they are looking for. There are numerous search engines available, but cities and counties also need tools that will index the large amount of content on their Websites as well as

create a structured directory of content for sites with a broad range of topics.

◆ **Web performance tools:**

Already mentioned in the section on performance management, these tools help by gauging usage through the number of hits a site has, user sessions and so on.

◆ **Customer relationship management software:**

The term CRM refers to methodologies, software and Internet capabilities used in such a way that an organization can manage customer relations in an organized way. For example, a local government could build a database about constituents and the services they use so that departments could keep track of problems and alert individual taxpayers about a new service that might interest them, as well as tell them when a complaint has been handled, such as fixing a pothole or expanding hours down at town hall. Many local technology officials believe CRM will play a critical role in e-government as its use expands to handle more complex and important operations.

◆ **Business intelligence tools:**

These tools are used for gathering, storing, analyzing and providing access to data that can help local leaders make more informed decisions pertaining to government operations. The tools are not essential to e-government in its early stages, but are becoming part of enterprise applications in the public sector for forecasting the impact of policy and management decisions on the business of government.

◆ **Security tools:**

An entire industry has grown up around Internet security. From network firewalls and intrusion detection software to public key infrastructure and biometric systems for authenticating users, local governments will find a broad range of tools, methodologies available and consultants to explain how everything works. Some technology solutions are simple, others are complex. Typically, the more robust the security system, the more likely it will impact the performance of applications.

Standards: Insuring Technology Succeeds

To many, this is the most important issue in the field of information technology. It can become a heated topic, primarily because of the constant pressure for change and innovation and what that does to standards. What's considered standard today may be obsolete tomorrow. But the value of standards has been underscored by their success with the Internet. Without certain standards, the Internet would have never been so globally accepted as it is now.

According to the Los Angeles e-government strategic plan, "standards ... are fundamental to the development of a single, secure, enterprise-wide infrastructure to support the city's development of products and services for the Web."

Standards set a common framework as well as guidelines for the development of applications that can be used in e-government. According to Los Angeles, the following guidelines are used for e-government applications:

- ◆ Development standards define scenarios for applications and the software, hardware, database and operating systems applicable for each.
- ◆ Development standards reduce costs for creating and maintaining applications.
- ◆ User interface standards provide a common look and feel for the city's Website.
- ◆ IT management standards describe the application lifecycle and the roles and responsibilities for each phase. These standards also set the framework for developing online content and for defining processes and responsibilities to ensure tasks are completed in a timely manner.
- ◆ Security standards cover the risk assessment requirements, security policies and procedures, and standards for security tools.
- ◆ Support and performance standards establish metrics and system performance factors
- ◆ Interface standards provide guidelines for developing a data interface and management strategies.

Final Words

If anyone is still seeking further evidence that electronic government is here to stay, they need to look no further than what happened on Capitol Hill in Washington, D.C., in July 2001. There, a meeting was held for various government leaders and experts to testify on the merits of Senate Bill 803, "E-Government Act of 2001."

Representing the local government sector, Costis Torgas, PTI president, summarized the importance of e-government in a series of guiding principles. They speak directly to the heart of the matter when it comes to deciding why our cities and counties need e-government and how it should take root:

1. E-government encompasses the improvement of service delivery to the citizen, the creation of economic activity and the safeguarding of democracy. Each of these dimensions is important in its own right and must be addressed in any e-government investment
2. E-government must be oriented towards the citizen. The citizen does not care what level of government or agency provides the needed service, therefore inter-agency and inter-governmental dimensions are essential.
3. E-government demands an E-citizen. Before we can call an e-government program successful, it must be made available to all citizens, not just those who can afford to pay or can find the electronic infrastructure available today.
4. E-government provides an opportunity to re-engineer the way government operates. Merely automating existing services is inadequate and does not match the potential of this promising technology.
5. E-government is an opportunity to establish viable and sustainable partnerships between the private and public sectors under which each side provides capacity in areas of competitive advantage.

Good luck and get started!

RESOURCES

1. Associations and Organizations

Center for Technology in Government
University at Albany
1535 Western Avenue
Albany, NY 12203
518/442-3892
www.ctg.albany.edu

International City/County
Management Association
777 North Capitol Street, NE, Suite 500
Washington, D.C. 20002
202/289-4262
www.icma.org

National Association of Counties
440 First Street, NW
Washington, D.C. 20001
202/393-6226
www.naco.org

National Electronic Commerce Coordinating
Council
202/624-5451
http://ec3.org

National League of Cities
1301 Pennsylvania Ave., NW
Washington, D.C. 20004
202/626-3000
www.nlc.org

Public Technology, Inc.
1301 Pennsylvania Ave., NW
Washington, D.C. 20004
202/626-2400
www.pti.org

2. Books & Reports

E-Government Strategic Planning: A White Paper
(National Electronic Coordinating Council, 2000)

Eight Imperatives for Leaders in a Networked
World: Guidelines for the 2000 Election and
Beyond
(John F. Kennedy School of Government, 2000)

The Enterprise Portal: Organizational Issues
Funding and Related Concerns. A White Paper.
(NECCC, 2000)

Information Technology in Local Government: A
Practical Guide for Managers
By Jerome Schultz
(International City/County Management Associa-
tion, 2001)

Local Government On-Line: Putting the Internet to
Work
By John O'Looney, Ed.D, Ph.D
(ICMA, 2000)

The Metropolitan New Economy Index
by Robert Atkinson and Paul Gottlieb
(Progressive Policy Institute, 2001)

Privacy Policy Issues: A White Paper
(NECCC, 2000)

Risk Assessment Guidebook for e-Commerce/e-
Government
(NECCC, 2000)

Risk and Reward: Helping Local Government
Leaders Understand Technology Risk and Liability
Issues
(Public Technology, Inc.)

Strategic Planning for Public and Nonprofit Orga-
nizations: A Guide for Strengthening and Sustain-
ing Organizational Achievement
By John M. Bryson
(Jossey-Bass, 1995)

Untangle the Web: Delivering Municipal Services
Through the Web, By Mark LaVigne
(Center for Technology in Government, 2001)

3. Internet sites for local governments and companies mentioned in this guidebook

City of Atlanta
www.ci.atlanta.ga.us

City of Colorado Springs
www.springsgov.com

City of Charlotte/Mecklenburg County
www.charmeck.nc.us

City of Chicago
www.cityofchicago.org

City of Des Moines
www.ci.des-moines.ia.us

Douglas County
cltr.co.douglas.nv.us

Harris County
www.co.harris.tx.us

City of Honolulu
www.co.honolulu.hi.us

City of La Grange
www.lagrange-ga.org

Miami-Dade County
www.co.miami-dade.fl.us

New York City
www.ci.nyc.ny.us

Oakland County
www.co.oakland.mi.us
City of Phoenix
www.cityofphoenix.org

Pinellas County
www.co.pinellas.fl.us
City of San Carlos
www.ci.san-carlos.ca.us

City and County of San Francisco
www.ci.sf.ca.us

City of San Jose
www.ci.san-jose.ca.us

Salt Lake City
www.ci.slc.ut.us

City of Seattle
www.ci.seattle.wa.us
City of Tampa
www.ci.tampa.fl.us

City of Virginia Beach
www.virginia-beach.va.us

Center for Digital Government
100 Blue Ravine Road
Folsom, CA 95630
916/932-1300
www.centerdigitalgov.com

National Information Consortium
www.nicusa.com
877/234-3468

4. Publications

Government e-business
3141 Fairview Park Drive
Suite 777
Falls Church, Va. 22042
703/876-5100
www.fcw.com/geb

Governing
1100 Connecticut Ave., NW
Washington, D.C. 20036
202/862-0032
www.governing.com

Government Computer News, State & Local
8601 Georgia Avenue, Suite 300
Silver Spring, Md. 20910
301/650-2000
www.gcn.com/state

Government Technology
100 Blue Ravine Road
Folsom, CA 95630
916/932-1300
www.govtech.net