DIGITAL COUNTIES SURVEY

EXECUTIVE SUMMARY

Center for Digital Government's Report from the 2009 Digital Counties Survey

Underwritten by:

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CENTER FOR DIGITAL GOVERNMENT
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The National Association of Counties (NACo) and the Center for Digital Government in association with *Government Technology* magazine and the Digital Communities program recently completed the seventh annual Digital Counties Survey. This survey forms a vital component of the longest running suite of national surveys of government information technology (IT) initiatives. The surveys are conducted each year to benchmark excellence and innovation in the public sector's use of information technology. Increasingly, survey results are used in strategic planning by a growing number of jurisdictions as well as for research by public policy think tanks. They also frequently receive editorial coverage from major media outlets, including *The Wall Street Journal*, *USA Today* and *The New York Times*.

In broad terms, the Digital Counties Survey seeks to forward three basic objectives:

1. to identify and document how counties are using technology to transform service delivery and internal operations;
2. to identify emerging or best practices implemented by counties; and
3. to recognize those counties that use technology to provide a high level of service to their citizens and provide a model for other jurisdictions.

The 2009 survey was conducted during particularly difficult economic times, identifying and documenting how the nation's counties are managing through the crisis bringing particular attention to the role of digital technologies in acting in smarter and more sustainable ways.

The Center thanks Hyland Software, developers of OnBase, and Quest Software, Inc. for underwriting the 2009 Digital Counties Survey and for supporting our nation's counties.

All U.S. county governments were invited to participate in the survey and respondents were grouped into one of four population categories as follows:

- Less than 150,000 – 20 percent
- 150,000-249,999 – 20 percent
- 250,000-499,999 – 29 percent
- 500,000 or more – 31 percent

In each of these population categories, the top 10 counties are adjudicated based on how comprehensive and innovative their IT programs are in support of government operations, as well as serving citizens and businesses. Specifically in the 2009 survey, 22 questions and more than 100 data points probed the extent of:

1. implementation and adoption of online service delivery;
2. the planning and governance that makes the transformation to digital government possible;
3. the infrastructure and architecture that also makes the transformation possible; and
4. an open-ended section that allowed counties to discuss their initiatives in their own words.

In recognition of their hard work and innovation, the survey's top digital counties were honored at a national awards ceremony which coincided with NACo's national conference in Nashville, Tenn., July 24-28, 2009. "As counties face the budgetary challenges of 2009 and beyond, they are finding Information Technology essential for effective and efficient government," said NACo Executive Director Larry E. Naake. "Not only are county governments using technology to continue delivering services with fewer resources, they are using innovative technology to communicate more effectively with their citizens and businesses. The Digital Counties Survey illustrates the innovation and tenacity of counties across the country."

2009 WINNERS

The top 10 counties in each category are adjudicated based on achieving a higher total score than their contenders. This is interpreted to indicate that they have accomplished a fuller implementation of the benchmarks represented in the questions. This serves as a good overall indication of the level to which their information technology programs are comprehensive and innovative.

Center for Digital Government Executive Vice-President, Cathilea Robinett states, "Despite challenging economic circumstances, America's counties are continuing to use new tools such as social media to engage and encourage citizen participation and feedback. Additionally, counties are moving forward in very responsible ways by green and sustainability efforts, energy efficiency monitoring, e-waste recycling and government transparency. We heartily congratulate all the winners!"

TOP 10 DIGITAL COUNTIES BY POPULATION

500,000 or more:

1st: Oakland County, MI
2nd: Montgomery County, MD (tie)
2nd: Sacramento County, CA (tie)
3rd: King County, WA
4th: Fairfax County, VA (tie)
4th: Orange County, CA (tie)
5th: Alameda County, CA (tie)
5th: Anne Arundel County, MD (tie)
5th: Prince George's County, MD (tie)
6th: Bernalillo County, NM (tie)
6th: Orange County, FL (tie)
6th: Westchester County, NY (tie)
7th: Los Angeles County, CA (tie)
7th: Wake County, NC (tie)
8th: San Diego County, CA
9th: Hennepin County, MN
10th: Tulsa County, OK

250,000 to 499,999:

1st: Loudoun County, VA
2nd: Dutchess County, NY
3rd: Hamilton County, IN
4th: Dakota County, MN
5th: Douglas County, CO
6th: Placer County, CA
7th: Washoe County, NV
8th: Ottawa County, MI
9th: Solano County, CA (tie)
9th: Washtenaw County, MI (tie)
10th: Anoka County, MN

150,000 to 249,999:

1st: Roanoke County, VA
2nd: Dona Ana County, NM
3rd: Scott County, IA
4th: Yuma County, AZ (tie)
4th: Peoria County, IL (tie)
4th: Frederick County, MD (tie)
5th: Racine County, WI
6th: Cumberland County, PA (tie)
7th: Gaston County, NC
8th: Jackson County, OR
9th: Saint Lucie County, FL
10th: Delaware County, OH

Less than 150,000:

1st: Charles County, MD
2nd: Gloucester County, VA
3rd: Nevada County, CA
4th: Skagit County, WA
5th: Olmsted County, MN
6th: Stearns County, MN (tie)
6th: Albemarle County, VA (tie)
7th: Napa County, CA
8th: Martin County, FL
9th: Columbia County, GA (tie)
9th: Franklin County, VA (tie)
10th: Sutter County, CA

MAJOR FINDINGS

IT clearly played a significant role in local government responses to 2009's economic downturn. And while savings from such things as IT consolidation, green technology initiatives and moving more services online didn't lessen reliance upon federal grants — nor forestall staff cuts — according to respondents, IT initiatives did ease some of the challenges. For example, Software as a Service (SaaS) projects increased among survey participants by nine percent. With unavoidable staff cuts hitting local government IT departments, SaaS served as one quick solution when the employees devoted to application maintenance had to be let go.

The percentage of respondents engaged in data center consolidations increased from 66 percent to 83 percent, bringing both subsequent cost savings and green IT benefits to even more jurisdictions. Citizen notification technologies also provided small savings, while Web 2.0 initiatives gave many agencies flashy new tools with few added costs. Money set aside from the American Recovery and Reinvestment Act (ARRA) for broadband projects allowed some local governments to plan new initiatives without additional local costs.

Measures to Deal With the Economic Downturn

In looking at the combined survey results from different population categories, this year's survey documented tremendous efforts to find new sources of funding such as fees, grants and federal stimulus monies. In addition, reductions in staff and operating hours, and IT consolidation of servers, data centers and operating hours are being pursued by more than two-thirds of responding counties. Joint service delivery between agencies and jurisdictions is being employed by more than half of the counties.

For example, the Oakland County, Mich., IT Department pilot for the county's internal, secured Cost Reduction Blog — for cost-saving suggestions submitted by employees — resulted in a savings of more than $650,000.

Facing the challenge of doing more with less, Roanoke County, Va., implemented several measures including a hosted Citizen Relationship Management (CRM) system; call center agents now have improved data entry, search capability and overall accessibility. Through the system, citizens can submit requests via the Web for things ranging from damaged signs to missed trash pick-up. Feedback from citizens has been great and is expected to increase as roll-out continues enterprise-wide.

Consolidation efforts are contributing cost-saving measures in both large and small counties:

- In Miami-Dade County, Fla., (population 2,387,170), the "ServiceDirect" customer service relationship (CSR) center has been consolidated with the 3-1-1 Answer Center's CSR. The integrated system receives transactions from the portal, 3-1-1 Answer Center and from departmental legacy systems. This has allowed tremendous cost-savings due to the elimination of 15 in-person centers.
- Boone County, Mo., (population 146,048) has consolidated 39 physical application servers to just four servers using virtualization.
- One of the key technological deployments in Orange County, Calif., (population 3,010,759) was migration from the county's legacy mainframe environment to an Open Systems platform with virtualization.
- Hennepin County, Minn., developed a Grant Tracking System, including structured workflow, to manage and coordinate grant applications. The business driver for the system was the need to maximize external funding opportunities across competing departments. Also, the Hennepin Justice Integration Program (HJIP) relies on data sharing among cities, counties, and the state of Minnesota to maximize the business value to taxpayers and ensure public safety.

A breakdown of the range of measures taken to offset budget shortfalls can be seen in the following graph:

Measures to Deal With the Economic Downturn	Percentage
Pursuance of funding streams (fees, grants, federal stimulus) to lessen dependence on general fund	86%
Reductions in force (staffing) and operating hours	69%
IT consolidation (data centers, servers, applications and staff)	68%
Cross-agency and/or cross-jurisdictional joint service delivery	57%
Agency consolidation, mergers and elimination	43%
Cuts in public service delivery	32%
Increased reliance on third parties (private, commercial and not-for-profit)	29%

Cloud Computing and SaaS

With local agencies being forced to layoff IT staff, cloud computing has offered one solution allowing these agencies to subsist with fewer staff. Cloud computing is Internet-based computing where shared resources, software and information are provided to computers and other devices on-demand, like a public utility.

One of the cloud computing service delivery models, Software as a Service — commonly referred to as SaaS — is being promoted by some vendors as one direction the applications industry can evolve to provide increased benefits. Since last year there has been a nine percent increase (35 percent to 44 percent) in counties that are underway with production-level use of one or more SaaS applications.

Status of Software as a Service 2009 Digital Counties Survey	Percentage
Production-level use is underway for one or more applications	44%
Under review for potential future use	22%
Not currently under consideration	19%
Limited use or proof of concept underway	10%
Defined and adopted as a component of the enterprise architecture	6%

Montgomery County, Md., for instance, uses several SaaS applications including job applications and tracking, performance management and crime reporting. They recently added a SaaS domain to their enterprise architecture. The county supports SaaS as a solution to help minimize single points of failure by distributing application origins while maintaining information privacy and application reliability.

Charles County, Md., released a Citizen Notification Service — a SaaS product which provides its citizens with the ability to register for and receive electronic notifications by e-mail, phone or text regarding weather, health, safety, public meetings, events, activities and other county news. Via the website, any citizen can browse or search all of the active Charles County notifications.

One of the successful cost-saving measures for Loudoun County, Va., was the implementation of global sourcing of services and products. Also Skagit County, Wash., which operates the regional public safety system and has several multi-jurisdictional cost-shared services such as e-mail, financial, and networks including state agencies, is exploring cloud computing models for themselves and for partnering with other Washington counties.

Greening of Counties

With the increased emphasis on data center consolidation this year — generally undertaken for economic and security reasons — an important green side-benefit is reduced power consumption.

NACo notes on its website, "As good stewards of the environment, counties assume a significant role in spurring the movement toward green building, energy efficiency and renewable energy. … Counties can also assist in the research and development of renewable energy to help the country move towards energy independence." This year's survey sought to determine the degree that IT strategies and practices aligned with the county's overall sustainability program or climate action plan. Less than one-quarter of respondents (23 percent) felt that their IT strategies were fully aligned to environmental sustainability plans or programs. Nearly two-thirds of respondents (64 percent) felt their IT strategies were somewhat or fairly aligned and less than one-tenth (eight percent) felt they were not aligned.

Additionally, we asked what steps the county had taken through IT to ensure climate and environmental sustainability. The most significant actions to date have been data center and server virtualization and consolidation (83 percent), hardware refresh policies that reflect energy efficiency best practices (80 percent), and server consolidation and virtualization (73 percent).

"Greening" or IT Measures for Environment Sustainability:

- Data center consolidation and virtualization – 83% (up from 66% last year)
- PC, laptop and server refresh policies using energy efficiency best practices – 80% (up from 66% last year)
- Server consolidation and virtualization such as The Green Grid Initiative (www.thegreengrid.org) – 73%
- Using e-waste recycling efforts and earth-friendly disposal – 61%
- Established metrics and installed energy efficiency monitoring instruments – 42% (up from 31% last year)
- Transparency about the resulting carbon footprint using initiatives such as the Carbon Disclosure Project (www.cdproject.net)

Orange County, Fla., for example, is virtualizing and consolidating servers, storage and infrastructure, and have been reviewed by their local utilities as being 97 percent energy efficient. Their methods include purchasing only servers with energy star ratings, sealeze strip brushes for floor cut outs and xeriscaping at the Regional Computing Center (RCC), consolidation of computing equipment, monitoring power usage, shutting monitors after 20 minutes of inactivity for power consumption savings, and putting computers to sleep from 8:00 pm – 6:00 am for power consumption savings. Using similar methods, Dakota County, Minn., has reduced energy consumption and virtualized over 90 percent of their servers.

King County, Wash., created the Eco-Cool Remodel Tool, a "green remodeling" virtual house showing green techniques for remodeling or upgrading, plus links to retrofitting and resource efficiency inventive programs. Initial user rates were nearly double those predicted (17,261 per month).

Announced on Earth Day April 2009, the Los Angeles County Solar Map is an Internet portal where residents can find information about the solar potential of their home. Residents simply type in their address, and total roof area, the roof area suitable for solar, the system size they can install, amount of electricity that can be generated, the cost savings per year and carbon dioxide savings per year, and then links to reputable installers, rebate programs and cost estimates are displayed. Direct cost savings include $400,000 for county buildings and potentially millions for cities, utilities and solar installers.

The Fairfax County, Va., portal contributes to the county's green IT initiative with more than 600,000 payment transactions online — $123 million in online revenue was generated in 2008.

Hamilton County, Ind., replaced 80 percent of their rack servers with blade servers; yielding a 19 percent power savings per machine and over 50 percent reduction in physical footprint. If any of the 44 virtual servers fail, they can be replaced within minutes with no effect on users.

Citizen Participation and Government Transparency Online

Transparency is not new. The modern open government, open records and open meetings movement is generally dated from 1967 and the passage of Florida's Government-in-the-Sunshine Law*, which was a catalyst for many other voter-led initiatives in other states. In the 1990's, the commodity Internet rekindled the movement with a dual promise of digital government (information and transactions) and digital democracy (citizen participation and visibility on how decisions are made). In short order, it established the portal and online services as a permanent part of the service delivery landscape.

The continuing growth of citizen participation opportunities and transparency through the Web is a significant trend. Of particular note:

- 71% have county governing body meeting minutes available online, archived and searchable
- Nearly one-third of survey respondents provide citizen request and complaint tracking
- Listservs: Increased 23% in one year (from 20% to 43%)
- Blogs: Increased 24% in one year (from 16% to 40%)

In King County, Wash., one of last year's technology highlights was the use of Web 2.0 in election monitoring, in which poll workers used live-blogging, photo-sharing, and other Web 2.0 capabilities to document and improve on the openness of elections.

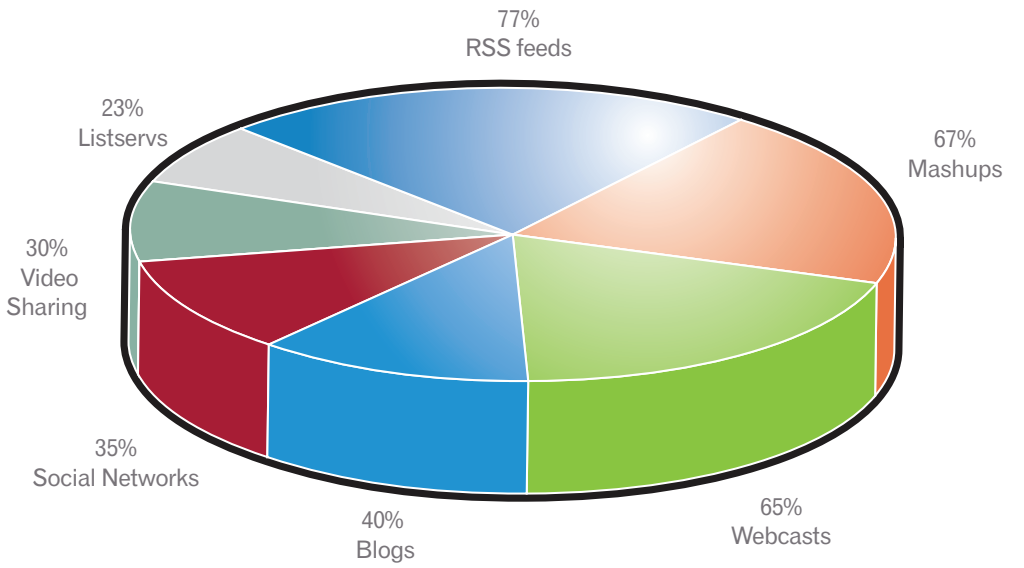
Government blogs are being used to increase citizen participation opportunities. For example, the Blogin Cafe, created, hosted and staffed by the eGovernment team in Oakland County, Mich., at the Arts, Beats and Eats festival last year, provided more than 2,600 festival-goers an introduction to blogging. As a result of the blogging, the county received valuable input about everything from local

*Florida's tradition of open government dates back over a century to the passage of the Public Records Act in 1909. Its 1967 sunshine law is more well known. At the federal level, Congress passed the Freedom of Information Act in 1966.

government, to the economy and environmental issues. In Scott County, Iowa, the County Auditor, GIS Coordinator and Webmaster all have blogs.

Many jurisdictions have implemented citizen electronic notification systems which can not only increase communication, but also provide cost-savings. For example, Los Angeles County's eNotify is a comprehensive, fully integrated, opt-in approach to alerting constituents with information regarding upcoming events, meetings, alerts, and activities organized by the Department of Public Works. In addition, eNotify combines geographical data with public service announcements to inform residents of important services in their area such as household hazardous and electronic waste collection events, recycling events, road closure information, and business services workshops and seminars. Used by 88 city staff, eNotify has saved approximately 480 person hours and $12,000 annually.

Center for Digital Government's 2009 Digital Counties Survey – Website Features



New Web Technologies Assist Government Transparency

Government transparency and interaction features on the San Diego County website have contributed to citizen involvement and government transparency. They include streamed and archived video of board meetings, a site devoted to emergencies staffed 24/7 in disasters, easy links to the county's presence on YouTube, Twitter, and Facebook (utilized in the H1N1 flu outbreak) and a Parks and Recreation Google map application.

The Yuma County, Ariz., website uses free or low-cost Google services and open source software. The portal has great examples of the use of social media and Web 2.0 on a shoestring. The facilities locator, for instance, was "implemented and tested in only a few hours and no actual dollar cost." Some of the site's best features are good use of mashups (a mashup is a lightweight Web application that blends/mashes together information from two different data sources into a new application) and citizen alerting.

Dutchess County, N.Y., has added a speech-enabling (text-to-speech) service as well as a language translation tool to their website by incorporating the free Google language translation service. Mashups such as this one are one of the fastest growing Web utilizations by counties.

Since last year, mashups and RSS/Web feeds have increased 30 percent. Noted features:

- 77% (up from 47% last year) have RSS/ Web feeds
- 67% (up from 37% last year) have mashups – data from two or more sources or feeds that form a new integrated application
- Two-thirds (65%) have Webcasts – streamed audio and video, live and archived, including civic cable channel
- More than one-third (35%) are making use of social networks, such as Facebook, MySpace and LinkedIn
- Nearly one-third (30%) are using video sharing sites such as YouTube, Blip.tv and Hulu

Broadband and Wireless Infrastructure

As previously noted, several counties applied for ARRA broadband grants. The predominate interests identified by respondents, were Public Safety 700/800 Mhz Radio and Wi-Fi. Nearly all respondents favored networks run by private companies or public/private partnerships.

The CIO of Nevada County, Calif., chairs a local Broadband Leadership Council that is proposing a project for ARRA funding. The local Broadband group is working to get federal funding to develop a wireless infrastructure for local providers.

The Cook County, Ill., Bureau of Technology is responsible for "Project Shield," a county-wide broadband wireless network being deployed with the support of the U.S. Department of Homeland Security grant funding. Project Shield enables the county to install a network infrastructure that incorporates interoperable mobile, video and data systems using advanced wireless technology. This network enables first responders from Cook County and 128 municipalities located therein to share video, text, image, and video surveillance information within and across jurisdictional boundaries.

Several questions in this year's survey intended to capture continuing broadband trends. The survey sought to identify the underlying thinking about a county's technological approach to wireless. Respondents were asked to indicate their strategic directions regarding wireless. (More than one could be selected.)

County's Technological Approach to Wireless Infrastructure 2009	Percentage
None	7%
Mesh	26%
IEEE-based Broadband Metropolitan Wireless Access (Wi-Max, Wi-WAN)	27%
Broadband Cellular	60%
IEEE-based Broadband Wireless Access Point (WiFi)	70%
Public Safety 700/800 Mhz Radio	79%

Counties were also asked how broadband networking — both wireless and wire line broadband community-wide networks — were being built.

County's Approach to Broadband Build-out:	None	County-Owned Utility	Private Provider	Both
Wire line broadband:	25%	3%	32%	26%
Wireless broadband	23%	6%	32%	23%

Sacramento County, Calif., has implemented wireless hot spots in county buildings where public meetings are frequently held in addition to secure wireless and wire line broadband networks. The Office of Communications and Information Technology is also adding four additional radio sites, upgrading the Public Safety radio system that serves all Public Safety agencies in the Sacramento region, and using high-speed licensed wireless point to point WAN connections to replace costly circuits.

Along the same lines, the counties were asked to indicate how such network build-outs — both wireless and wired — were funded.

County's Approach to Broadband Funding:	None	Advertising (directly or through third party)	Public Appropriation	Subscriber Fees/ Charge Backs	Combination
Wire line broadband:	30%	0%	14%	23%	17%
Wireless broadband	29%	10%	18%	18%	21%

Implementation of Web Tools and Applications

Inter-relating the types of services available online with the extent of interactive transactions possible presents an overview of how far the Web interface with citizens has evolved. Examined based on specific services to citizens, we see in the sample of services in the following chart that there are wide differences in both online availability and the nature of possible transactions offered, and that there is room for expanding services online.

Status of Online Services 2009

*Submit online means submissions that are not yet fully integrated with back-office systems.
**Transact means a secure end-to-end transaction that includes submission and payments as authorized.
***IVR=Interactive Voice Response
****Transact via Mobile Device means the website has been configured so that it can be read on mobile devices

Online Services	View and Download (Print & fill)	Submit Online*	Transact** Online	Transact via IVR***	Transact via Mobile Device****
Building Permits	46%	20%	28%	19%	5%
Public Procurements (Bids or RFPs)	65%	27%	23%	1%	3%
Court Services (jury duty, court date)	35%	14%	25%	8%	3%
Law Enforcement Reports	41%	16%	16%	2%	3%
Library Card or Materials Renewal	20%	28%	42%	6%	5%
Property Assessment/ Tax Information	45%	34%	47%	12%	6%
Tax Filing and Payment	32%	31%	62%	22%	6%
Parking Tickets or Traffic Citations	16%	12%	35%	11%	5%
Citizen Request/ Record Request/ Complaint Tracking	24%	38%	26%	4%	5%
Special Event/Use Permits	33%	12%	14%	2%	3%
Code Enforcement Other Than Traffic Citations	32%	15%	9%	2%	4%
Employee Self-Service Online	27%	25%	35%	3%	2%

Online services range from paying traffic tickets and requests for information and records to doing business with counties.

The new library summer reading program application in Gloucester County, Va., encourages patrons (both children and adults) to interact with the library by allowing patrons to log books they wish to read and track their progress. It can be used both in the library and from home.

The Dona Ana County Inmate Search and Archival System provides a Web-accessible interface for

the Detention Center, District Attorney, bondsman and county residents to search for current and archived inmate information. It's a secure system that provides different levels of access by using a mirror image of the actual database and therefore does not jeopardize the security and operability of the original data such as booking dates, court dates, charges and bonds. A subset of the original database is loaded every 15 minutes allowing fresh information and more efficient use of server resources.

Conclusion

This year, beyond any shadow of doubt, the Digital Counties Survey documented real and substantial uses of technology to cope with sharp declines in tax revenue. In the face of severe economic challenges, the survey highlights the fact that many governments have not wasted this opportunity to enforce greater IT efficiency. Economic measures have fostered more austere approaches in many government activities, including IT. These approaches can very well continue even after the economy rebounds.

The Digital Counties Survey was underwritten by Hyland Software, developers of OnBase, and Quest Software, Inc., and reflects the common vision of the Center for Digital Government, a national research and advisory institute on information technology policies and best practices in state and local government, and the National Association of Counties (NACo), a full-service organization that provides legislative, research, technical and public affairs assistance to county governments. Created in 1935, NACo continues to ensure that the nation's 3,066 counties are heard and understood in the White House and Congress.

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