



Information Technology

2012 Profile Report

A look inside Sacramento County's IT operations

Sacramento County Uses Technology to Do More with Less for Smart, Efficient Growth

Four years ago, Sacramento County published the first countywide IT Profile that included information from all County departments on IT staffing, budget, and service delivery, as well as documenting concerns and future technology initiatives of interest to the County.

Following the 2008 IT Profile, Sacramento County has endured four years of consecutive budget reductions, which had significant impact on County programs serving our residents as well as on the County IT operation. The County 2008 IT Profile serves a valuable tool and a baseline for assessing the County IT operation in 2012.

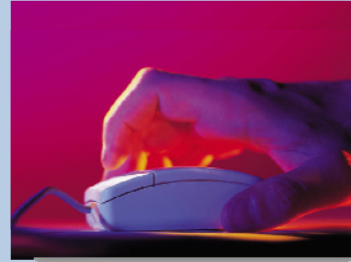
Despite the budget short falls, County IT has had a significant role in streamlining the County operation and reducing cost. Some of the major projects that have created significant efficiencies and cost savings include the countywide VoIP rollout, server's virtualization, Employee and Manager Self Service, and the COMPASS Time Interface projects.

To assess the collective Sacramento County investment in technology, the Assistant County Executive Officer Nav Gill and I partnered to create the 2012 Countywide IT Survey and distributed the survey to all Sacramento County departments.

I would like to thank the departments for their feedback, as it has been extremely important to help capture our total countywide IT investment, which will guide the County's technology policies and strategy for smart, efficient growth in the years to come.

Thank you,

Rami Zakaria, Sacramento County CIO



From the Countywide IT Plan:

Countywide IT goals and objectives are based on this statement:

The purpose of information technology is to enable the County to achieve its business goals and objectives

Sacramento County IT Strategic Areas

Access to Services

Expand Electronic Access to County Services

Infrastructure

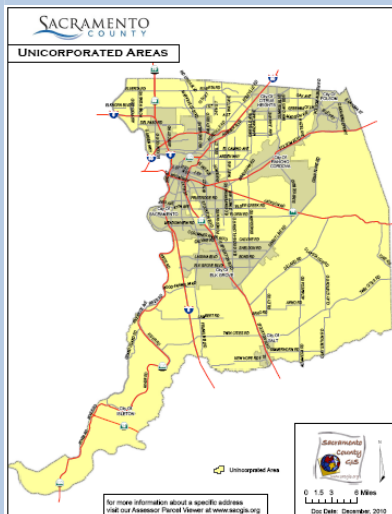
Enhance the County IT Infrastructure to provide a robust, stable, scalable and secure foundation

IT Service Delivery

Manage internal IT service delivery from a County Wide Perspective

2012 Sacramento County

- Incorporated in 1850 as one of the original 27 counties of the State of California.
- 7th most populous county in California.
- The US Census estimates the County population at 1,428,355.
- Approximately 994 square miles in the middle of the 400-mile long Central Valley, which is California's prime agricultural region.



A Look Inside Sacramento County IT

County Budget:
~ \$3.625 billion

County employees:
~11,320

IT Budget:
~\$108.3 Million

IT Workforce:
Employees: 501
Contractors: 44

Servers: 991

Server Rooms:
96 in 14 IT
Departments

Server Room Space:
41,384 square feet

Who do we support?

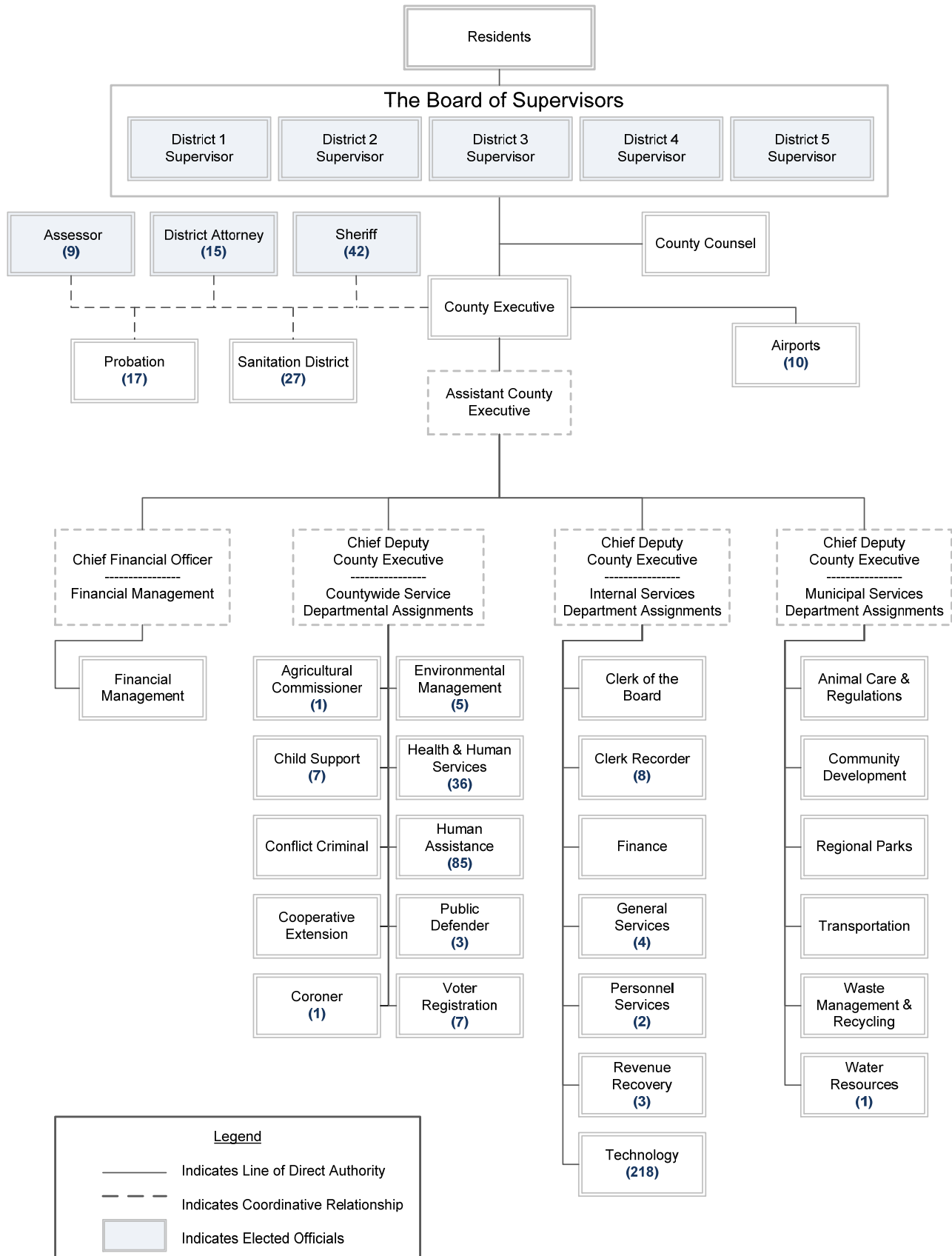
- 276 work sites for 41 departments and commissions.
- Over 150 external law and justice, health and human services, and business partners.
- The Criminal Justice Information System (CJIS) supports 60 Federal, State, and local agencies.
- The Enterprise Content Management System supports 28 County departments and Special Districts.
- The public safety radio service covers 1000 square miles with over 13,000 subscribers

Survey methodology

In an effort to baseline key countywide information technology (IT) information and assets, the Chief Information Officer and the Assistant County Executive Officer of the County of Sacramento conducted a countywide survey in February 2012.

1. All County departments were given the survey, 33 responded. The District Attorney declined to complete the survey, but provided limited information verbally;
2. The CIO estimates the study represents about a 97% sampling of countywide data based on the responses;
3. The responses were reviewed for anomalies and respondents were contacted to validate / correct their entries;
4. Staffing, servers, IT spending, and device counts were validated against authoritative data sources.

The County Organization Chart FY2011-12 with IT Staffing

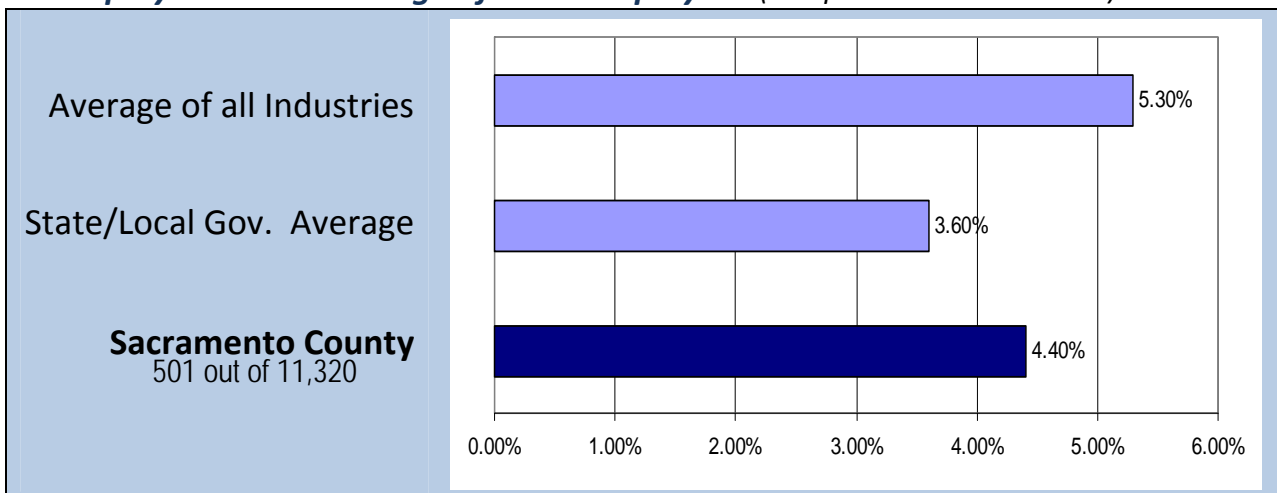


Distribution of the Staff and Contractors providing IT support

Department	Employee	IT Contractor	Total	% Internal FTEs
	FTEs			
Technology	218	10	228	96%
Human Assistance	85	0	85	100%
Sheriff's Department	42	2	44	95%
Health and Human Services	36	1	37	97%
Airports	10	10	20	50%
Probation	17	5	22	77%
Sanitation District	27	13	40	68%
District Attorney (estimate)	15	0	15	100%
Assessor	9	0	9	100%
County Clerk-Recorder	8	0	8	100%
Child Support Services	7	0	7	100%
Voter Registration	7	0	7	100%
Revenue Recovery	3	3	6	50%
EMD	5	0	5	100%
General Services	4	0	4	100%
Public Defender	3	0	3	100%
Personnel Services	2	0	2	100%
Agricultural Commissioner	1	0	1	100%
Coroner	1	0	1	100%
Water Resources	1	0	1	100%
County totals	501	44	545	92%

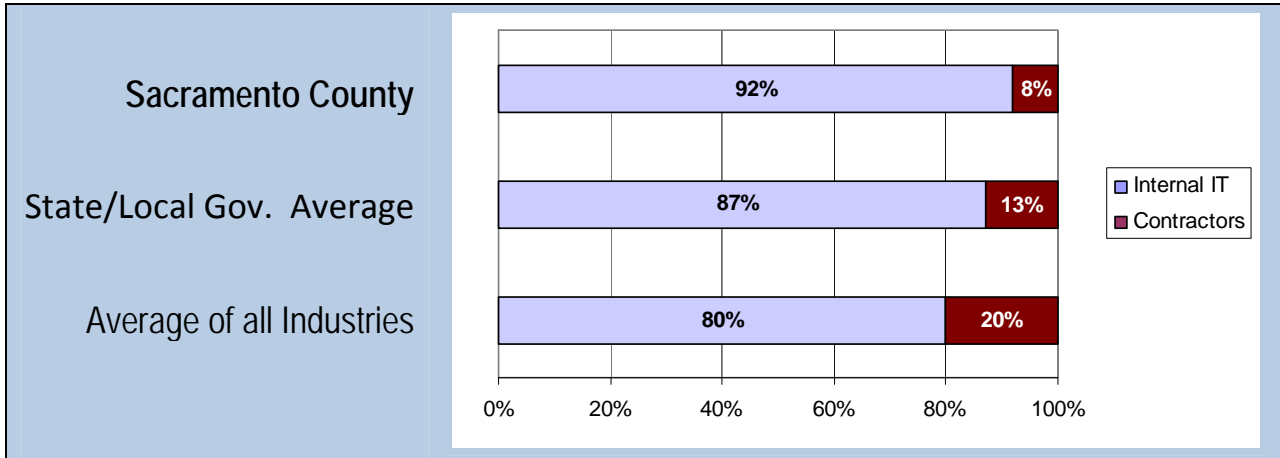
545 IT Employees and Contractors compared to 703 in 2008.

IT Employees as Percentage of Total Employees (compared to 4.7% in 2008)



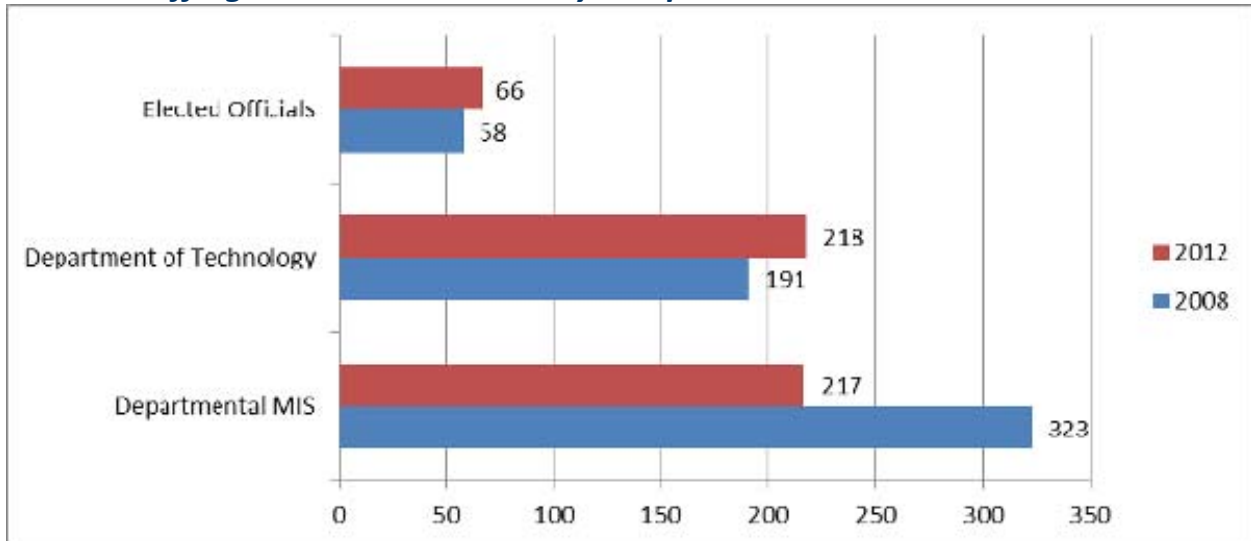
Data from Gartner Group Report G00229659, January 16, 2012

Contractors vs. Internal IT Staff (compared to 81% employees & 19% contractors in 2008)



Data from Gartner Group Report G00229659, January 16, 2012

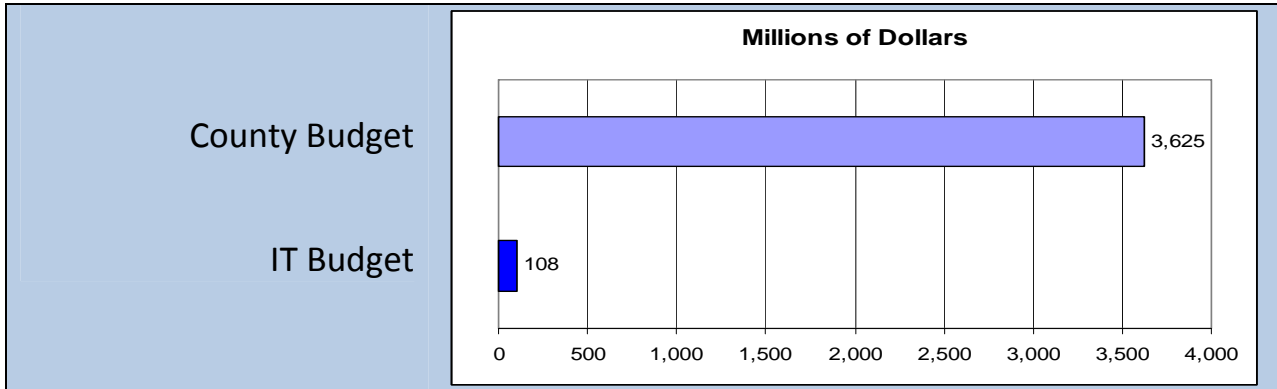
2012 IT staffing in Sacramento County compared to 2008



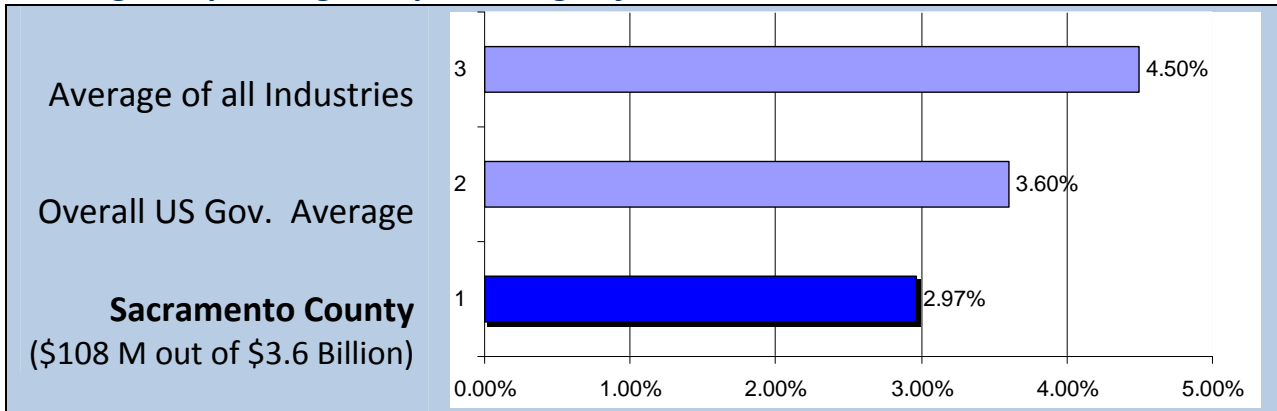
- On July 31, 2011, the County Board of Supervisors merged the Office of Communications and Information Technology and Municipal Services MSA/MIS to form the Department of Technology. As a result the Department of Technology staffing increased to 232. In addition, one FTE from the Board of Supervisors and two FTE's from DRR moved to the Department of Technology increasing staffing to 235.

How much does the County pay for IT Service and Support?

IT spending compared to County budget (2.97% compared to 2.94% in 2008)

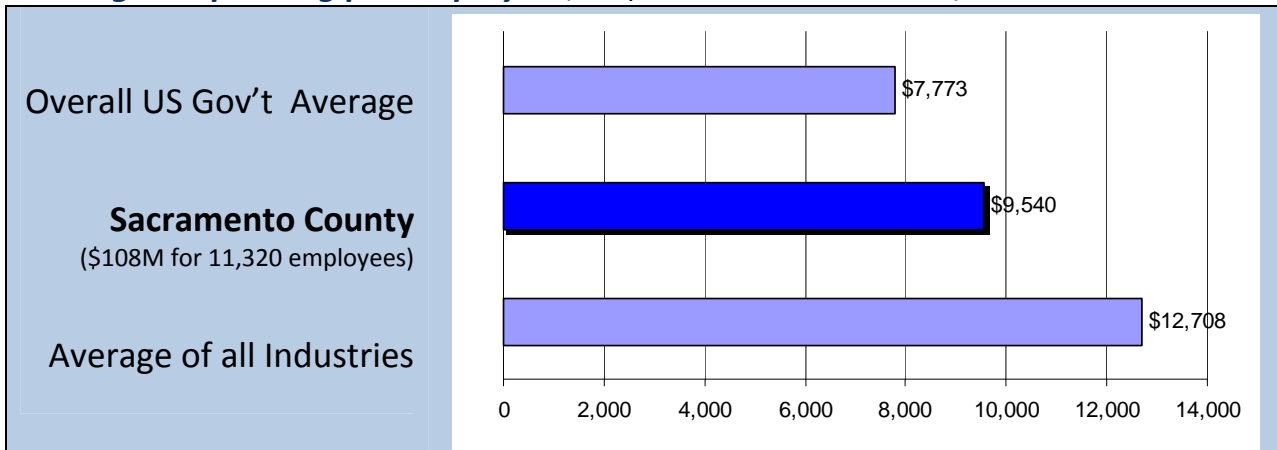


Average IT spending as a percentage of Revenue 2011 (compared to 2.94% in 2008)



Data from Gartner Group Report G00229659, January 16, 2012

Average IT Spending per Employee (compared to \$10,414 in 2008)



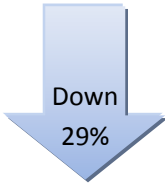
Data from Gartner Group Report G00229659, January 16, 2012

**Budget
FY 2011-12**

\$108.3M

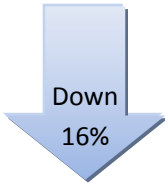
Total IT Budget compared to \$153M in FY08-09

Compared to FY08-09



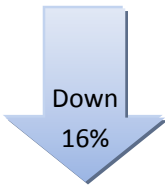
\$24.2M

recovered from federal and state claims compared to \$28.9M in FY08-09



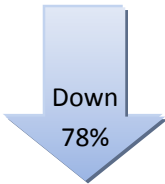
\$59.6M

Salaries for IT County Employees compared to \$71.1M in FY08-09



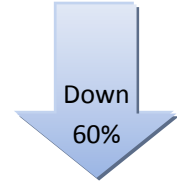
\$4M

spending on IT contractors and consultants compared to \$18M in FY08-09



* 1.9M from countywide IT staffing contracts; 2.1M from dept. IT consulting contracts

Central contracts and purchase orders



Category	2008	2011
Computer maintenance support	5,755,411	4,671,251
Hardware, software, maintenance, and training	9,925,677	4,544,338
Network Equipment and services	N/A	4,045,916
Laptops, desktops, printers, monitors	12,814,388	3,389,699
Mainframe software, storage, peripherals	7,033,654	2,497,800
IT Contractor Staffing	17,959,645	1,901,394
Personal Computer software	3,630,471	1,357,574
ISP Hosting Services	285,845	506,605
Wireless Data Services	413,737	436,841
IT supplies, peripherals	232,586	105,830
Grand Total	58,053,502	23,457,254

Source: Department of General Services

IT Budget > \$1 Million

These account for 95% of IT spending

Department	Total IT budget	% of total IT Spend
Technology	52,967,498	49%
Human Assistance	9,901,957	9%
Health and Human Services	8,114,694	7%
Sheriff's Department	7,229,102	7%
Airports	4,566,193	4%
Regional Sanitation District	3,780,146	4%
Probation	3,505,804	3%
Sewer District	3,185,004	3%
County Clerk-Recorder	2,663,500	2%
District Attorney	2,500,000	2%
Voter	1,484,998	1.5%
Assessor	1,350,358	1.5%

PC Devices

Distribution: 17% Laptops, 83% Desktops

Operating System	Number of Devices
Windows 95	0
Windows 2000	7
Windows 7	2,855
Windows XP	9,166
Total	12,028

- Windows XP end of support is scheduled for the spring of 2014.

Desktop Management

62.5% or 10 out of 16 respondents use Microsoft SCCM as at least one of their desktop management tools. Other tools used include: WSUS, BMC, LanDesk, DameWare, AD Group Policy, and SMS.

Mobile Devices

Cellular vendors:

Vendor	Voice only cell phones	Data and voice devices
Sprint	536	177
Verizon	697	435
AT&T	1275	147
	2508	759

12,028

Desktops supported
Compared to
14,704 in 2008

Down
16%

2,485

Laptops supported
Compared to
2,791 in 2008

Down
11%

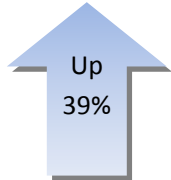
3,267

Mobile devices
such as PDAs,
blackberries,
iPhones, cell
phones

Source: cellular
vendors

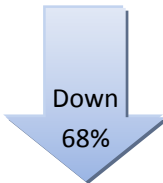


IT Services



25

Respondents use the Enterprise service desk Compared to 18 in 2008



9

Respondents use a department or agency help desk compared to 28 in 2008

61,470

Calls processed by the County Service Desk.



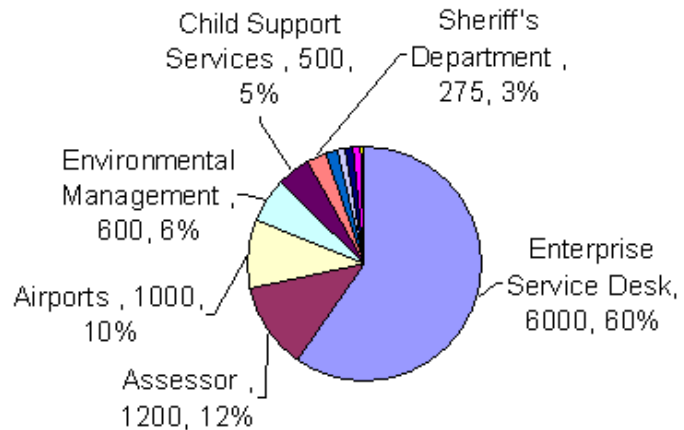
23.1

average service desk speed to answer calls in seconds

Respondent's primary help desk support

Department Help Desk systems vs the Enterprise Service Desk

Calls Taken Per Month

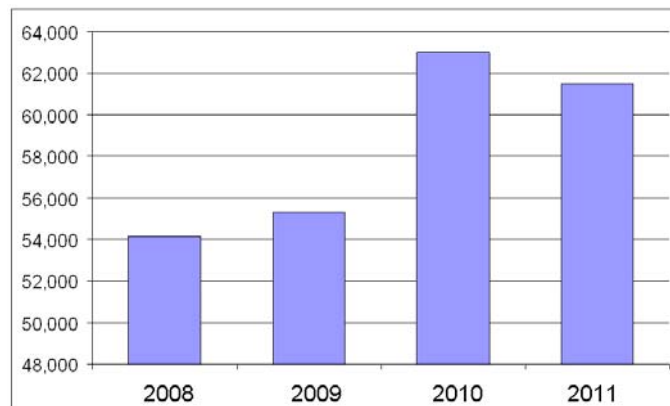


Help Desk tools used:

- Applix (iET Solutions) & Infra (EMC) used by the service desk with other products in departments including: Trackit, Peregrine, FogBugz, COMPASS, Sharepoint, and Test Track Pro.

Enterprise Service Desk Performance

Number of tickets per year



IT Services

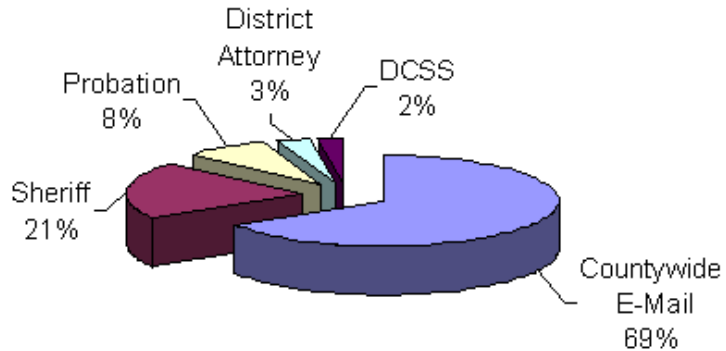
15,850

Total Email boxes compared to 16,407 in 2008

Department	Email boxes supported
Countywide	10,500
Sheriff	3,300
Probation	1,200
DA	500
DCSS	350
Total	15,850

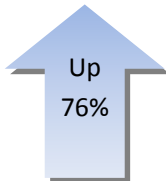
DCSS Converting to the countywide mail service in May 2012

Sacramento County Email Infrastructure



9,366

VoIP phones deployed As of March, 2012 compared to 2,200 in 2008



Deployment continues in 2012 and expected to wrap up in 2013.

Savings as of March, 2012 have reached \$930,000 and continue to grow as more departments move to VoIP.

Sacramento County Voice over IP

Sacramento County initiated a project in 2009 to complete the conversion of all County phones to VoIP.

The goal was to eliminate a redundant and aging voice network and to decommission dedicated voice network circuits.

The estimated savings at the time of completion is \$1.5 million annually.

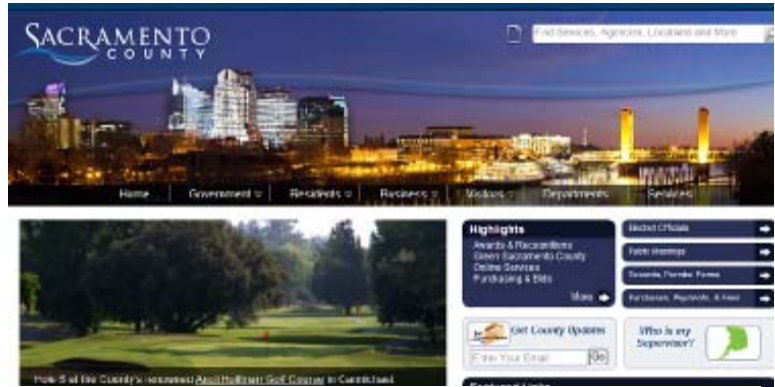


E-government in 2012

The County web site now ranks 14,493 based on unique views out of a worldwide estimated total to 550 million sites.

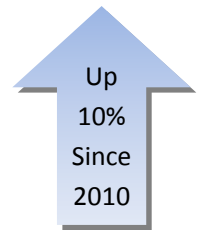


www.saccounty.net gets **over 138,000 unique visitors a month.**



Online Property Tax Payments FY 2011:
\$50,145,714 collected via 30,150 online Transactions

All online County Departments FY 2011:
\$75,503,592 collected via 10,478 online Transactions



- Source: Department of Finance

Online Services in 2012

The County continues to move more services online, allowing constituents to access the information and services they need when they need them.

Services

- Apply for a business license
- Apply and pay for building permits
- Schedule inspections
- Register rental housing
- Renew pet licenses
- Search for lost pets
- Pay traffic fines
- Marriage appointment scheduling
- Pay utility bill
- Neighborhood cleanup by appointment
- Purchase a parks pass
- Book a tee time at County golf courses
- Find Your Polling Place,
- View Your Sample Ballot Booklet,
- Opt Out of a mailed copy of your sample ballot booklet.

Information

- Use e-Map-It to locate property, utilities and district information, locations and maps for area facilities and features
- Fictitious business name search
- Voter registration verification
- Restaurant inspection results
- Current creek levels
- Jail and inmate information
- Building inspection status
- Flight information
- Find a park

Reporting

- Water waste
- Illegal dumping
- Road and sidewalk issues
- Crime reports
- Disease incidents

Sacramento County Makes Consumer Protection Mobile



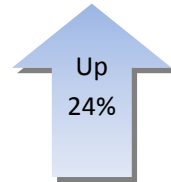
Launched in 2011:

Food inspection mobile phone applications for the iPhone and Android platforms.

- First-of-their-kind apps to enable the public to easily learn about a food facility's inspection compliance, with maps and access to the full inspection report on smartphones.
- Received over 700 app downloads, about equally split between the Android and iPhone platforms.
- Almost one-third of the traffic that visits the Sacramento County food inspection website is from mobile devices – m.ffi.saccounty.net

Sacramento County Electronic Document Management

In 2008, twenty-one departments were using FileNet Content Services; in 2012 that number had increased to twenty-six, a 24% increase in adoption of ECM technology.



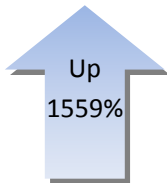
DHA undertook a very large back-file imaging project to scan and index all existing case files as well as changing their day-to-day business processes to scan all paper documents on a daily basis. They changed their mailroom into a scanning facility. As a result they were able to increase efficiencies in customer service as well as reduce costs

- Clients can now go to any DHA site and their case file will be electronically available
- DHA was able to manage nearly double the case load with automation
- Consolidated staff into fewer buildings reducing facility costs, without disruption to the clients.
- Reduced document storage, eliminated the need to request closed case files from storage.

In 2012, The County Implemented **Kofax Transformation Module (KTM)**; which streamlines document preparation and provides for efficient indexing and separation of documents.



Employee and Manager Self Service in 2012



5,923

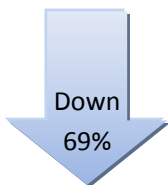
Use MySacCounty in 2012 compared to 357 in 2008.

Future enhancements includes, Absence Request Automation, W2, Benefits and Employees Evaluation

MySacCounty, the County's portal to service the individual personnel needs of County employees, has grown tremendously over the last four years.



Employee and Manager Self Service on track to eliminate manual timesheets processing and printed forms



4,600

Number of printed timesheets in 2012 compared to more than 14,500 in 2008.

The County continues to actively pursue paper reduction through this automation as well.

Through the interactive viewing of pay advices and web-based timesheet entry, the number of hardcopy forms has been significantly reduced.

With the growth in the use of MySacCounty, 4827 employees have now elected to opt out of receiving hardcopies of their biweekly pay advices.



Cost Effective IT By The Numbers

70 Percent

We began 2010 with 35 percent of the data center server environment virtualized.

By year-end this rate increased to 70 percent, and **we remain on track to virtualize 70% of our environment over the next few years.**

80 Percent

We began 2008 with 20% of County staff on VOIP phones. By the end of 2012, we expect more than 80% of County staff to be using VoIP



Department of Technology Efficiencies

\$1.275 Million the OCIT & MSA/MIS merger **generated 1.275 in savings.**

\$930,000 VoIP implementation **has resulted in \$930,000 of savings** to County departments. **The savings are expected to reach 1.5 million when all departments are on VOIP.**

\$540,000 Audits of all data circuits and phone lines deleted disconnected lines from billing and correcting erroneous billing data for a **\$540,000 annually savings.**

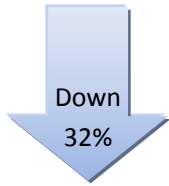
\$350,000 Through virtualization we avoided buying 120 servers **saving the county \$350,000** after buying new hardware and software.

\$250,000 Audit of Countywide cell phone plans and features **saved over \$250,000** for departments across 3000 phone plans.

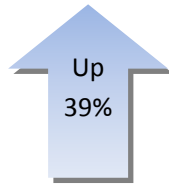
\$210,000 savings realized by partnering with Regional Fiber Team members to replace recurring cost circuits with fiber connections.

\$46,390 savings (52%) on the reduced cost for the connection for the County data center Internet (and at the same time doubled the bandwidth).

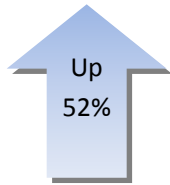
Infrastructure



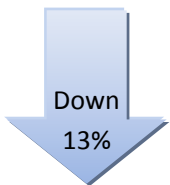
14
Number of respondents supporting their own server rooms compared to 19 in 2008



96
Rooms with servers supported by the 14 IT organizations Compared to 70 in 2008



44,698
approximate total square footage of all server rooms compared to 29,382 in 2008



991
Number of servers in use Compared to 1,133 in 2008

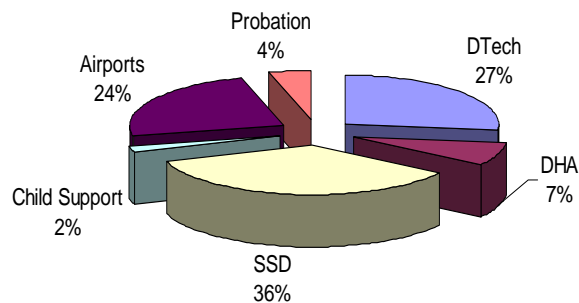
Respondents with server rooms

2,700 square feet of free space available on the raised floor of the data center, one of the two server areas in the Department of Technology

Department	# of server rooms	Sq ft for server rooms
Sheriff	50	14,000
Department of Technology	2	10,686
Airports	4	9,500
Human Assistance	23	2,877
Probation	2	1,720
Child Support Services	5	738
Assessor	2	350
Regional Sanitation District	2	349
Environmental Management	1	320
Sewer District	1	270
Voter Registration	1	216
Ag Commissioner	1	162
Personnel Services	1	100
Coroner	1	96
Totals	96	41,384

Distribution of server room space

Top 6 or 97% of all server space



Infrastructure

14

Number of respondents reporting that they backup their data themselves compared to 19 in 2008

14

Respondents use offsite storage for their backups compared to 16 in 2008

5

Respondents using offsite replication of their data compared to 4 in 2008

Server Type	#	Pct
Application	428	43
Database	156	26
Web	77	8
Print	37	4
Email	33	3
Active Directory	30	3
Other	229	23

Virtualization

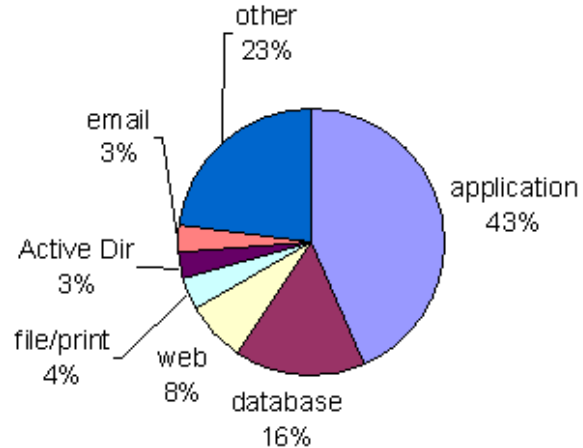
11:1 ratio of virtual machines to host virtual servers. 1,001 virtual machines running on 93 servers.

35:1 The Data Center is achieving virtualization consolidation ratios as high as 35:1 with some systems and the associated power consumption reductions.

Industry average is 4.88 according to Gartner 4Q11 IT Spending Forecast

What is in the server rooms?

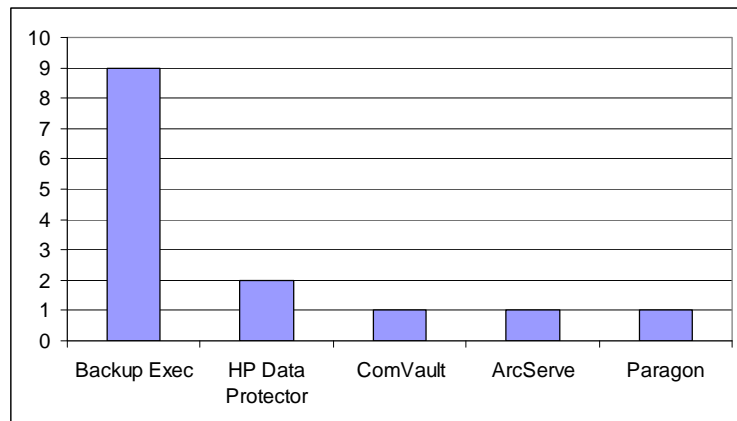
The county owns and operates 991 servers broken down by the following uses:



- Other: VMware, video surveillance, DNS, FileNet, middleware, video conferencing, NetApp

Backup software used by respondents who backup their own data.

(compared to 7 different utilities in 2008)

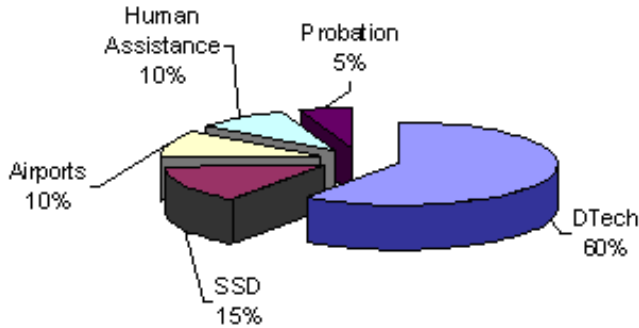


County Data Center	2009	2010	2012
Storage capacity (terabytes)	312	363	493

100% The ERP system, COMPASS, is 100% virtualized.

Network Support

Distribution of respondents managing network switches. These account for 99% of all switches reported to be managed.



Department	FTEs	switches	routers	Fire-walls	Wireless access pts
Technology	16	795	142	16	177
Sheriff's	3	200	20	10	100
Airports	2	135	1	1	143
Human Assistance	1	130	27	0	0
Probation	1	71	0	0	20
Environmental Management	0	6	1	0	1
Voter	1	6	1	1	1
Coroner	0	3	1	1	1

County Data Center	2009	2010	2012
Internet Network Bandwidth	100Mb	200Mb	400Mb
Wireless access points	46	68	177

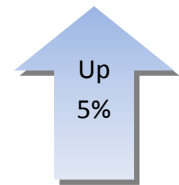
93 Gigabytes of wireless network traffic each week going through the wireless access points



Cisco 7600 series router

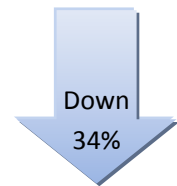
1,346

8 respondents report managing a total of 1,346 network switches compared to 13 with 1,276 in 2008



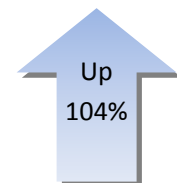
193

7 respondents report managing a total of 193 network routers Compared to 9 with 291 in 2008



443

Wireless access points in service Compared to 217 in 2008



Connecting People to Information



Over the past three years, SRRCS has invested over \$7.38 million by adding 4 new radio sites and upgrading the microwave equipment connecting the radio sites.

2012 Statistics:

140,969 calls and incidents processed by the Communications Center.

61,470 calls processed by the Enterprise Service Desk.

23.1 seconds – average service desk speed to answer calls (goal 30 seconds)

160% increase in wireless access points managed by DTech.

2008 – 46 wireless access points

2010 – 68 wireless access points

2012 – 177 wireless access points

Voice and Data Networks

\$1.5 million This two-year project will convert over 13,000 legacy phones to VoIP and realize an **estimated ongoing savings of \$1.5 million per year.**

The public safety two-way radio service covers 1000 square miles with 12 sites and **13,464 subscribers across 56 agencies.**

During an average month subscribers use over 9 million seconds of airtime (equivalent to one person talking continuously for 17.5 years)

Major infrastructure upgrades:

Upgrade	Benefit	Value
Wireless	Improved coverage, enhanced user experience	2x increase in network performance
WAN	Improved capacity	10x increase in bandwidth
VoIP	Improved quality and capacity	37% reduction in monthly costs
Net App	Reduced time for data backup and restore	80% reduction in storage space requirements



Network & Internet Security Applications

Spam Filtering: A security measure that helps to reduce the amount spam that enters the e-mail inboxes of those using an email system.

100% of respondents on COSWAN are using the countywide Ironport service for email spam filtering. This does not include the Sheriff and District Attorney.

Web Filtering: a term for software designed and optimized for controlling what content is permitted to a reader, especially when it is used to restrict material delivered over the Internet.

79% of respondents use the countywide web filtering service provided by M8E6. Other products used include: ISAForeFront, Trend Micro, Websense, and OpenDNS.

Laptop Encryption: software that scrambles the contents of the hard drive to prevent unauthorized access in the event the laptop is lost or stolen.

88% of respondents report using the countywide hard disk encryption service from Pointsec. Other utilities used include: PGP, Truecrypt, and Bitlocker.

Email Encryption: refers to encryption, and often authentication, of email messages, which can be done in order to protect the content from being read by unintended recipients.

50% of respondents who encrypt emails report using the countywide email encryption service: Post X. Other utilities used include: WinZip, Office, and PGP.

Vulnerability scanning: a software system that scans devices (servers, PCs, network equipment, etc.) connected to the County wide area network to identify devices that are open to known security vulnerabilities (e.g.: patching level)."

93% of hosts connected to the County wide area network are automatically scanned at least once a month.

The County uses a tier 1 Intrusion Prevention System to safeguard its network.

During 2011:

- **Over 1 trillion connections** to the county were attempted.
- **500 billion of these were blocked as hostile** to the county – known malware, spam, unknown addresses, etc.
- **The Intrusion Prevention System filtered out 90%** of the remaining 500 billion attempted connections.
- **End result – only 2% of attempted connections are allowed as legitimate**

DTech continually uses a 'defense in depth' approach to proactively monitor and patch vulnerabilities in servers and workstations on the County wide area network.

Top IT Concerns

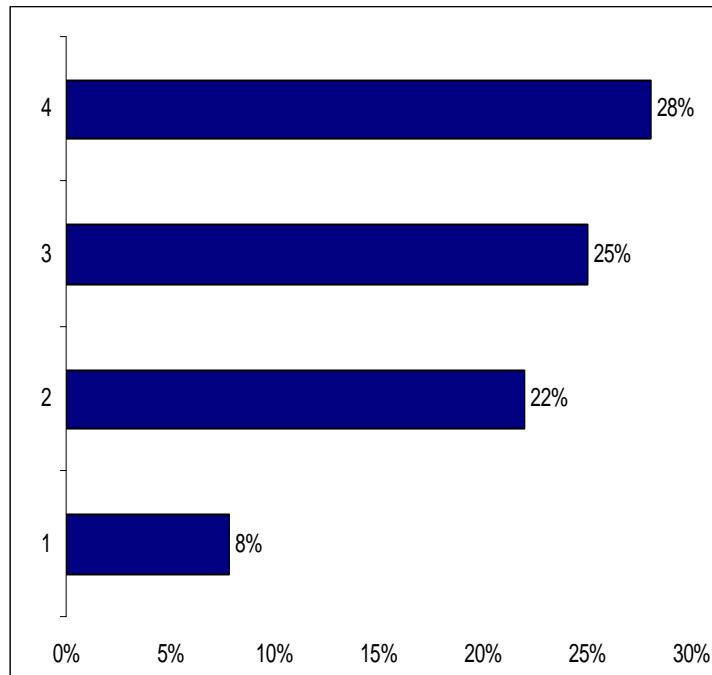
40 comments submitted by respondents

10 state a desire to **reduce costs** or maintain reasonable costs for IT services.

9 are concerned about **ongoing service and support issues** for their department operations.

8 state an **interest in new technologies** and solutions.

3 are concerned we need **better countywide planning** for the future of IT services in the County.



Looking Ahead

What new technologies, if any, are you interested in exploring in the next one to three years?

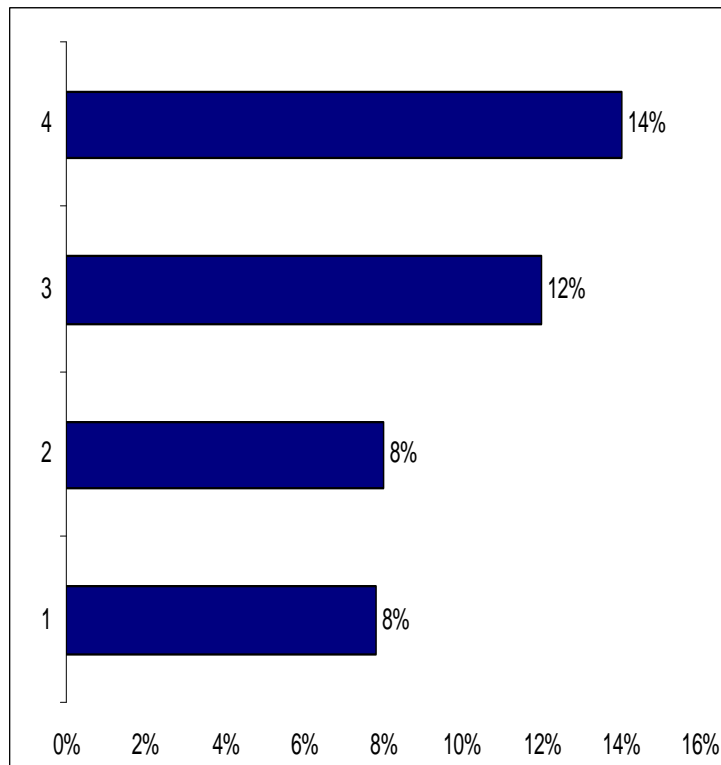
64 comments submitted by respondents

9 stated a desire to look at **mobile computing** technologies, services, applications, and devices

8 said we should look for ways to **extend the use and capabilities of existing systems** and solutions

6 said there are **major new systems** or replacement systems in the near future

5 stated interest in improving and expanding **video conferencing** capabilities



Acknowledgements

The authors wish to thank their colleagues who completed the IT questionnaire and those who reviewed working drafts of this document.

Department	Respondent
Chief Deputy County Executive	David Villanueva
Agricultural Commissioner	Julie Jensen
Airports	Steve Baird
Animal Care and Regulation	Tara Diller
Assessor	Kathy Kelleher
Building and Code Enforcement	Bob Davison
Child Support Services	Pedro Marengo
Clerk of the Board of Supervisors	Kathy McClellan
Community Planning and Development	Manuel Mejia
Conflict Criminal Defenders	Fern Laethem
Coroner	Greg Wyatt
County Clerk-Recorder	Jim Person
County Counsel	Julie Inclan
County Executive	Karen Zazzi
Department of Technology	Alan Douma
Environmental Management	Geoff Marsh
Finance	Jim Person
General Services	Darcie Pillsbury
Health and Human Services	Ray Reis
Human Assistance	Rob Schultz
Personnel Services Department	Bryan Door
Probation	Scott Porter
Public Defender	Jim Wheeler
Regional Parks	Liz Bellas
Revenue Recovery	Dan Stevens
Sewer District	Catherine Wild
Sheriff's Department	Mark Wong
Transportation	Michael Guiver
Voter Registration and Elections	Robertta Kanelos
Waste Management and Recycling	Doug Kobuld
Water Resources	Susan Purdin



County of Sacramento Board of Supervisors 2012

**Phil Serna, 1st District
Jimmie Yee, 2nd District
Susan Peters, 3rd District
Roberta MacGlashan, 4th District
Don Nottoli, 5th District**

**Brad Hudson
County Executive**

www.SacCounty.net

Published by:

**Rami Zakaria
Chief Information Officer**

County of Sacramento
799 G Street, Suite 709
Sacramento, CA 95814
ZakariaR@saccounty.net
(916) 874-7825