



Asheville Information Technology Services

Annual Report, Fiscal Year 2012





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Challenges and Innovations



Director's Message

This annual report marks a change in the City of Asheville IT Services Department's annual reporting. In previous years, we reported on calendar years rather than fiscal years. But, in the spirit of continuous improvement, we have moved the annual report to the fiscal year to better reflect our business model, and to more accurately report on resources allocated during this period of time. As you read through this report, remember that it reflects a period of July 2011 through June 2012, which is the same as the City's budget year. This change allowed us to accurately indicate funding levels for this accomplishment period.

FY12 was a challenging time for IT Services. We experienced an increase in demand, a changing and more demanding information security environment, relatively flat resourcing, service outages, and worked to overcome implementation issues with a new regional utility billing system. But it was also a time of significant accomplishment, where staff innovated in ways that reduced and avoided costs for the City of Asheville taxpayer, met City Council goals, and received national recognition for meeting these goals.

FY12 was also the first time that we've organized a community event. It's an unusual role for a government IT service organization to take! But in a time of shrinking resources and increasing demand, we've seen that partnerships outside of our four walls have taught us how to do more with less. And, we believe passionately that when we reach out to the technology community, that we not only help the community that we serve, but also end up as smarter, more capable technologists, better able to fulfill the operational and financial expectations that citizens and our fellow employees have for us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jonathan Feldman'. The signature is stylized and fluid, with a long horizontal line extending to the right.

Jonathan Feldman, MSM
Director, Information Technology Services
City of Asheville, North Carolina

Mission

The City of Asheville’s Information Technology Services department strives to provide excellent customer service by providing quality technical deliverables with a high level of professionalism and responsiveness. We adhere to principles of technical and fiscal stewardship with an end goal of a high quality of life for employees and citizens.

Core Values

Customer Service

We will provide customer service in a responsive and timely manner.

Professionalism

We will interact courteously, ethically, and with commitment to continuous improvement.

Stewardship

We will earn trust by practicing fiscally responsible management that ensures system integrity and availability.

Expertise

We will be advocates for our customers by developing and maintaining competence and knowledge.

Quality of Life

We will recognize the importance of balancing the relationship between quality of work and quality of life.

A VISION FOR A BETTER FUTURE.

IT Services will be considered a credible and effective business technology service organization by our customers. Our impact on the business we serve will earn the respect of our peers. We will be busy but not frantic,



City of Asheville Strategic Plan

Affordable

The City of Asheville will offer a standard of living that is affordable and attainable for people of all incomes, life stages and abilities.

Fiscal Responsibility

The City of Asheville will support a stronger, more prosperous community by making smart investments that accomplish lasting, tangible returns.

Green & Sustainable

Asheville will be the southeastern leader in clean energy and environmental sustainability.

Job Growth & Community Development

Asheville will support a dynamic and robust local economy with balanced and sustainable growth.

Safe

Asheville will be one of the safest and most secure communities when compared to similar cities.



IT Services Strategic Goals



Business & Citizen Focus

Ensure that technology services are focused on business requirements of City Staff and citizens; display innovative leadership in automating City processes to save labor, improve efficiency and reduce expenses.



Organizational Development

Pursue organizational development strategy, including staff industry certifications and industry accreditation.



Security & Reliability

Significantly improve security and reliability by continuously improving infrastructure and creating a culture of security awareness.



Quality & Timeliness

Utilize test environment and automated deployment systems to ensure that employees and citizens receive quality, timely IT products.



Measurement & Action

Monitor and act on metrics regarding workload, capacity and network health to enable proactive management of resources.

Selected achievements towards these goals may be found throughout this annual report with the symbols associated to the goal.

Project Highlights 2012

Utility Billing System Improvements

Selected achievement area:  

As part of the City of Asheville's Business Technology Improvement Project (BTIP), IT Services integrated utility billing into the Munis system and eliminated a legacy enterprise application. This provides an integrated utility billing system, as well as cash receipting and general ledger integration to the Munis financial system.

Employee Self-Service System

Selected achievement area:   

The City of Asheville implemented an online Employee Self-Service system in the Munis system to enable employees to enter hours online and to decrease the time requirement to get hours into payroll. The new system streamlines record-keeping by allowing employees to modify their demographic data (address, email, emergency contacts, etc.) online without HR intervention.

Development Services Center Application Improvements

Selected achievement area:  

The Development Services Center selected Accela as the “best of breed” application to support permitting and related workflows in the DSC. This system will improve services for residents and developers by providing the ability to submit plans online and acquire and pay for a standalone permit via a Web portal without having to come into the DSC. Anticipated go-live date of this application is March 2013.



Public Safety Radio System Relocation

Selected achievement area:  

Relocated critical radio infrastructure to downtown radio tower to improve public safety communication within buildings. The move of the radio tower site has the potential to significantly reduce costs in the future and has tremendously improved in-building radio coverage for public safety personnel.



Automated GIS Data Analysis

Selected achievement area:    

The City of Asheville's GIS team enhanced data analysis capabilities and increased flexibility without adding costs. The redesigned GIS database provides a new paradigm for data analysis to be built by subject-matter experts in the database, rather than an individual user's ability to perform complex data analysis using complicated software. Staff can now make better decisions based on data without having to be data analysts.

Building Security Enhancements

Selected achievement area:  

This project provides better access control within City buildings by allowing card access to employees. The project also consolidated several aging individual security systems into one point of management and maintenance.



Business
Focus



Organizational
Development



Security
& Reliability



Quality
& Timeliness



Measurement
& Action

Data Center Downsizing

Selected achievement area:  

In an award-winning effort (see page 20), the City of Asheville’s IT Services team completed the data center clean-up, rewire and downsizing as part of the green initiative resulting from virtualizing servers.



Desktop PC Rightsizing Phase I

Selected achievement area:   

Asheville IT Services successfully deployed over 215 computers within 90 days using a “service catalog” strategy to match computer capability to IT services consumed. By converting from an operations lease to capital financing, the City of Asheville will save more than \$108,000 over four years.

Generator Telemetry Improvements

Selected achievement area:   

To support public safety activities, the City of Asheville installed generator monitoring devices at the City’s tower sites. These devices notify IT staff, facility staff and the maintenance vendor of any trouble that may occur with the generators. The devices notify each party when a generator has started, and also provide key maintenance information so that proactive maintenance can be done.



Process Improvement

Helping people through technology initiatives

Unused Data Circuit Audit

Selected achievement area:  

An internal audit discovered data circuits that were no longer being used due to changing business needs; disconnection saved the City \$567 per month.

Civic Center Recycling Kiosk

Selected achievement area: 

This kiosk was created by a joint venture between the City Sustainability Office and students at AB Tech. The students came up with this idea as a way to increase awareness of recycling. When there are events in the U.S. Cellular Center or on the streets, such as Bele Chere, these kiosks are set up with quizzes about recycling and information for people to test their knowledge or learn more. There are also informational handouts that citizens can take. This project promotes recycling without having a staff member present.

Server Virtualization Upgrades

Selected achievement area:  

IT Services upgraded all virtual servers and virtualization software, allowing for more memory to be installed and avoiding an end-of-life situation with the previous operating system.

Riverside Cemetery Mapping

Selected achievement area:   

Through a partnership with City Parks and Recreation staff, began mapping approximately 15,000 graves for better cemetery record keeping, which allows cemetery managers to calculate remaining space available for grave sales.

Nature Center Wireless

Selected achievement area:  

With the installation of a new wireless connection to the City's central network, the WNC Nature Center's Internet access is now 18 times faster. This improvement also includes an ongoing annual savings of \$14,000 for the Nature Center.



Water Meter Reading Software

Selected achievement area:   

In partnership with Water Resources Department, a new software system was fully implemented that allows the Water Department to perform automated meter reading instead of manual reading, saving significant staff time.

Water Valve Location Mapping

Selected achievement area: 

In partnership with the Water Resources Department, IT Services provided training and technical assistance for locating water valves with GPS for better water infrastructure data. This system will be used to locate and document all water valves for valve exercising and tracking. This process will save staff time and provide quicker location of valves during water emergencies.



Procurement Card Processing

Selected achievement area: 

Assisted Finance with the automation of procurement card processing. This provided automated internal coding for City purchases, and this process provides a “cash back” opportunity for the City.

DeltAlert System

Selected achievement area:  

The City of Asheville replaced the Code Red Emergency Notification system with DeltAlert, a new system that offers better features including data ownership. The new system also saves \$35,000 annually for three years.

Business License Lockbox Processing

Selected achievement area: 

In partnership with Finance, implemented a system that simplifies collections and processing of accounts receivable, called “Lockbox Processing.” It is anticipated to save at least a month of labor per year and shorten payment-to-deposit window from 30 to 0 days.

Open Enrollment

Selected achievement area:   

New software and terminal deployment lets City employees select their benefit coverage choices online instead of using a paper-bound process, helping with City Council’s “green” strategic goal, and eliminating data entry labor.

Database Server Consolidations

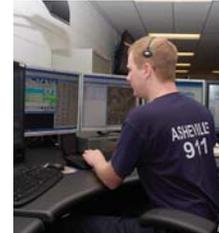
Selected achievement area:  

To increase database reliability, IT Services consolidated multiple SQL databases to a single SQL Server instance, simplifying configuration and eliminating two physical servers.

Public Safety Answering Point (PSAP) Backup

Selected achievement area:  

Equipment was moved from Emergency Response Center to the Municipal Building to provide a better work environment for dispatchers.



Cyber-Security Education and Enhancements

Selected achievement area:   

Because of an industry-wide trend of fraudulent emails, IT Services increased security awareness with employees via a poster campaign, training and ongoing reminders from IT staff



Business Focus



Organizational Development



Security & Reliability



Quality & Timeliness



Measurement & Action

Budget Improvements

• PC Rollout	cost avoidance	\$108,000
• Email archiving	cost avoidance	\$12,000
• SCADA Circuits	savings	\$5,040
• Data Circuits	savings	\$6,804
• Nature Center	savings	\$14,000
• Delta Alert	savings	\$35,000
• Telephone circuits	savings	\$4,235
• Smartphone re-engineering	savings	\$8,500
• Maintenance Fees	savings	\$10,000

TOTAL OF SAVINGS OR COST AVOIDANCE: \$203,579



Significant Challenges

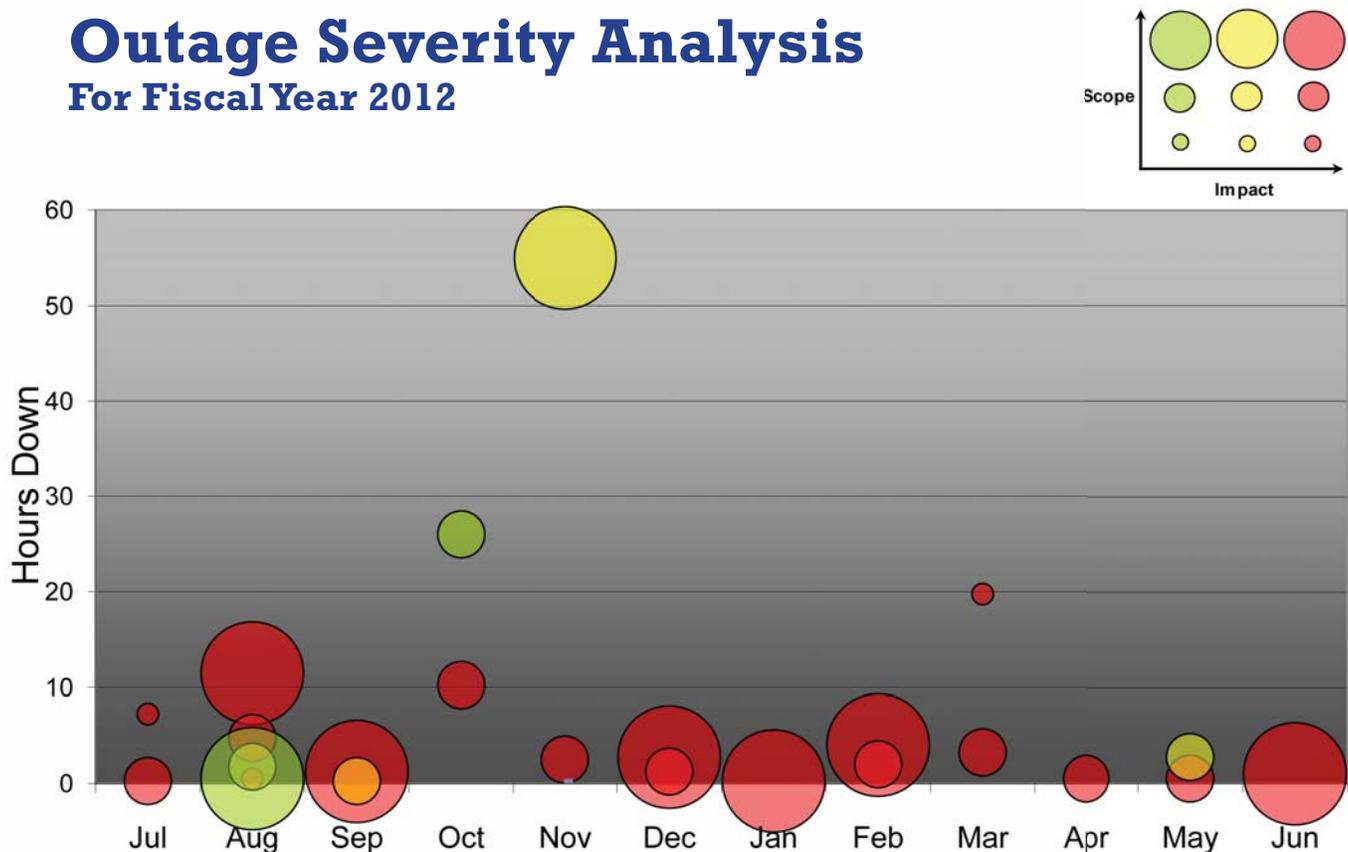
- Citywide Email Outage – The outage was the result of a failed controller in a server. To fix the problem, IT restored the server to a virtual partition and ultimately moved the email system to a new physical server.
- Data Center – Equipment failure due to air conditioner problem and broken temperature alarm. Rapid installation of a new alarm system was successful.
- Maximo Server Failure – Maximo, the Water Department’s computer maintenance management system, experienced a significant outage. This outage affected customer service until the server was rebuilt and all data was restored from backup.
- Evidence Room – The District Attorney’s Office requested that IT Services rapidly deploy new computers, printers and other equipment for a new evidence room for the Asheville Police Department.
- Utility Billing Go Live – IT Services worked with vendor to resolve issues with the meter-reading software that caused massive overtime charges and customer service delays. The issues involved pulling the meter reads into customer bills.
- Email Fraud “Phishing” – Averted what could have been a compromise to privacy and security of our customers by quickly locking down users who were tricked into offering sensitive information to fraudulent emails (known in the industry as “a phishing scheme.”) Recognized needs include more security awareness and training as well as software safeguards.

Issues & Opportunities

Back in 2007, IT Services started to measure what we call “human metrics” of downtime. “System metrics” — which are what IT departments typically measure — tell us how we have impacted the system. Our “human metrics” tell us how we have impacted the customer. We measure in real time between an incident and its closure. We feel that this is the best way to measure business impact.



Outage Severity Analysis For Fiscal Year 2012



By the Numbers

Number of Cell Phones:	559
Number of Air Cards:	327
Radios Managed:	1,033
Number of IT Employees:	19
Network Servers Managed:	91
Number of Infrastructure Devices Managed:	175
Number of VoIP Devices:	792
Number of City Employees Full Time:	1,058
Part Time:	31
ITS Budget as a Percent of the City's Operating Funds:	1.71%
Number of Desktop & Laptop Computers Managed:	920
Number of Printers Managed:	377
Average Work Orders Completed Monthly:	962
Average Number of Emails Checked for Viruses Weekly:	510,180

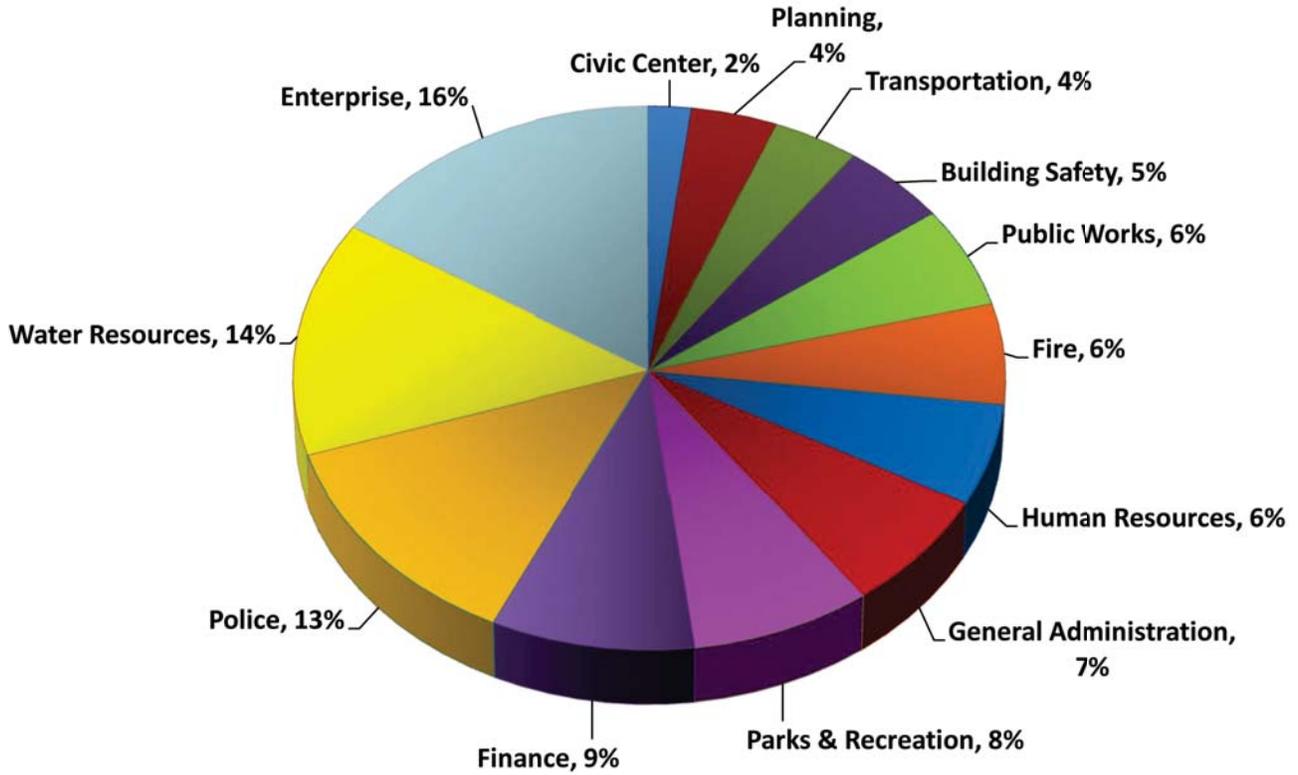
Comparison of Resourcing Levels by City for Information Technology Services in NC

	Cary	Jacksonville	Buncombe County	Salisbury	Forsyth County
IT Resource Level Rank	1	2	3	4	5
Population	136,203	77,343	245,818	33,722	360,679
FTEs	1129	548	1358	436	2067
IT employees	24	13	50	8	61
# of staff per IT employee	47	42	27	55	34
Central IT Ops budget(\$M)	\$6.72	\$2.90	\$8.20	\$1.43	\$7.45
Entire City Ops Budget(\$M)	\$179	\$96	\$333	\$69	\$387
\$ per employee	\$5,952	\$5,292	\$6,038	\$3,280	\$3,604
Percentage IT budget/City	3.75%	3.02%	2.46%	2.07%	1.93%

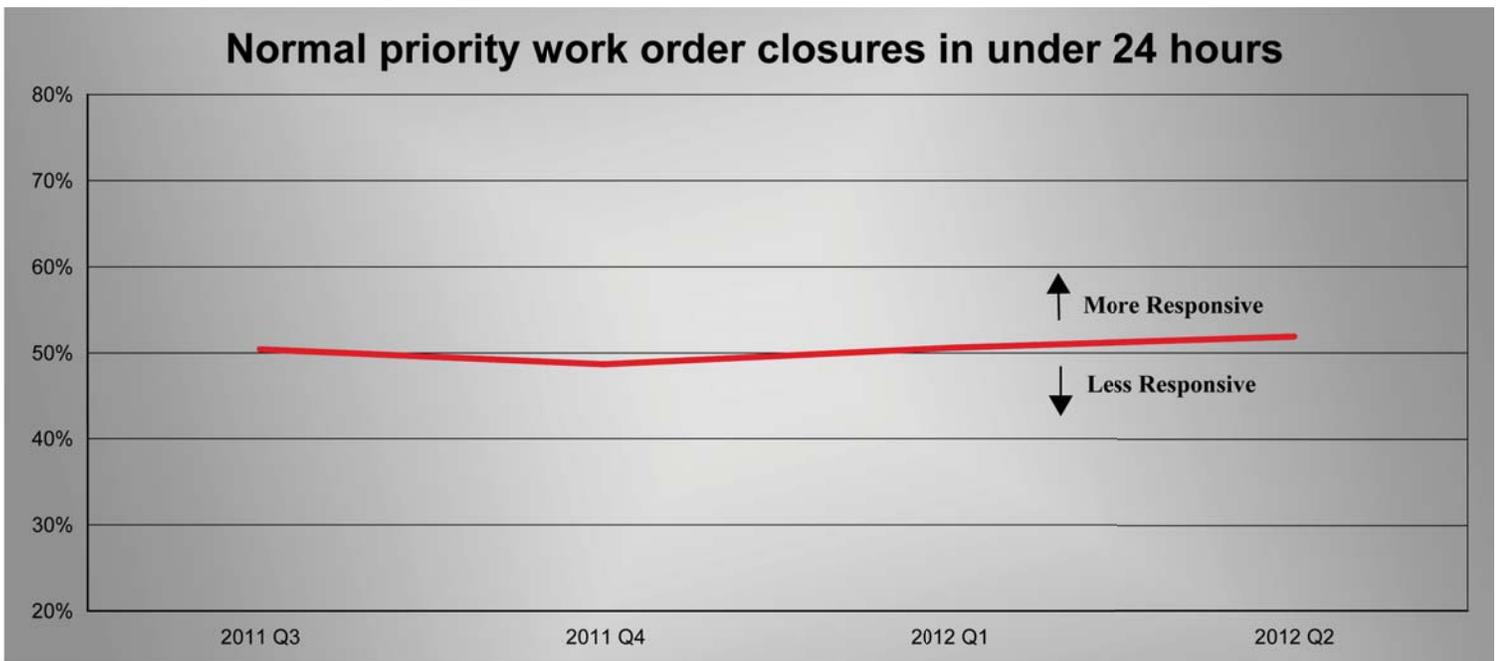
	High Point	Asheville	Wilmington	Greensboro
IT Resource Level Rank	6	7	8	9
Population	104,788	83,746	106,882	270,063
FTEs	1349	1058	981	3081
IT employees	20	19	14	29
# of staff per IT employee	29	56	70	106
Central IT Ops budget (\$M)	\$6.07	\$2.26	\$1.86	\$6.01
Entire City Ops Budget(\$M)	\$318	\$132	\$128	\$438
\$ per employee	\$4,500	\$2,136	\$1,896	\$1,951
Percentage IT budget/City	1.91%	1.71%	1.45%	1.37%

Source: Official Municipality Budget Documents

IT Department Utilization for Calendar Year 2012

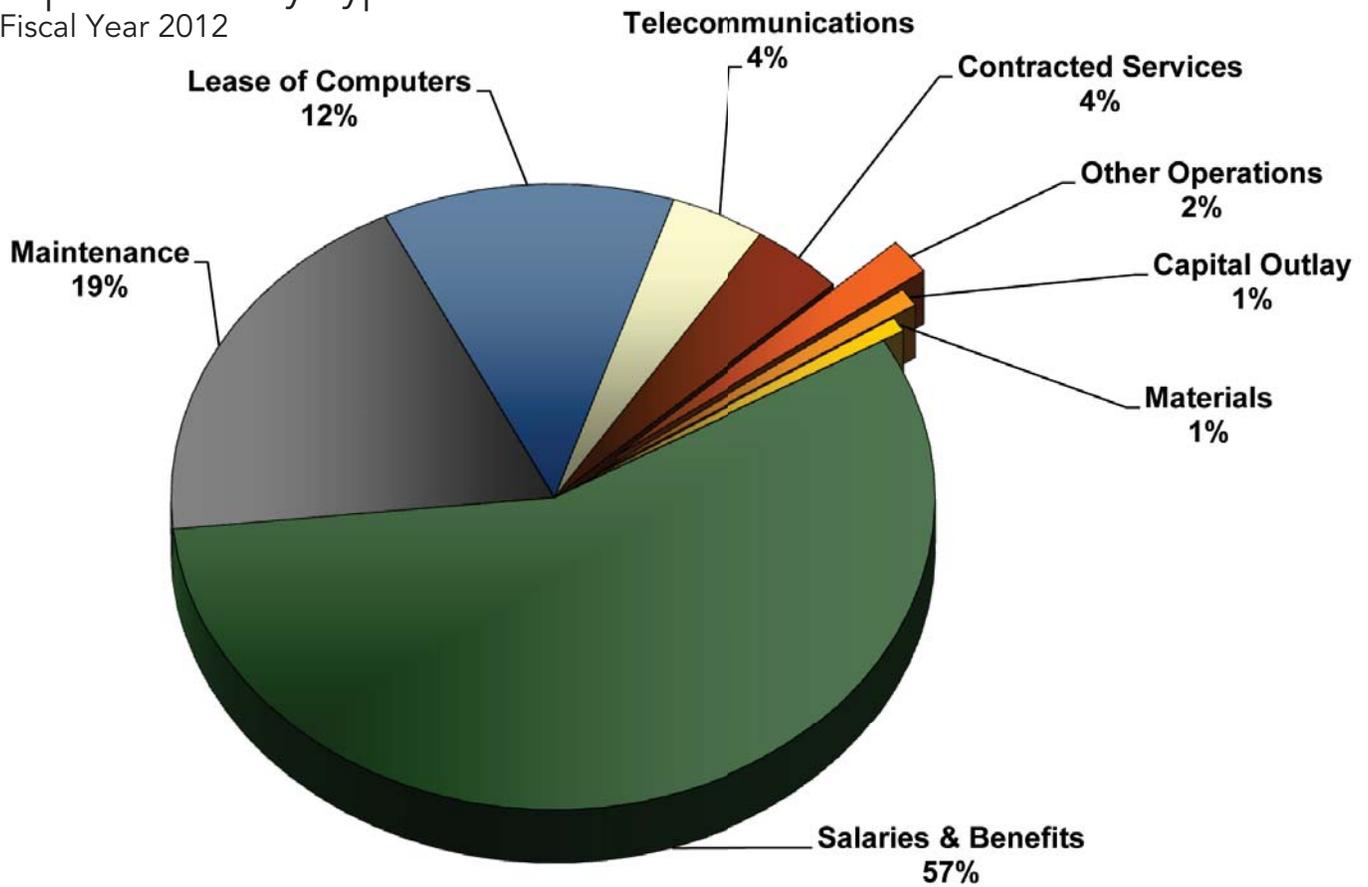


Normal Work Orders Completed Within 24 Hours City of Asheville, IT Services

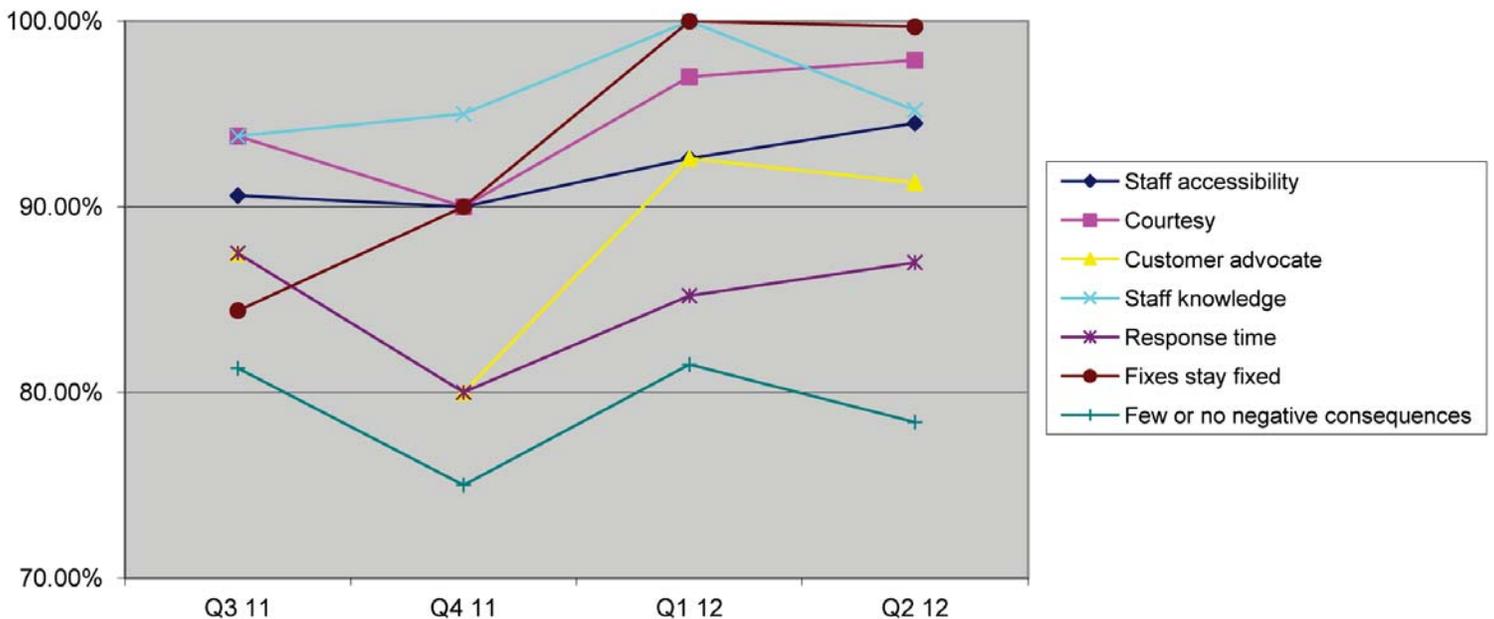


Expenditures by Type

Fiscal Year 2012



Two Year Quarterly Trend—"Good or Excellent" Customer Service Survey



Organizational Development & Recognitions

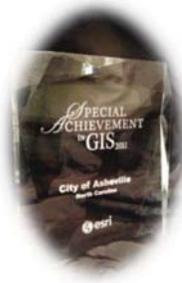
Interns

- Brian M.
- Margarita A.
- Andrew W.
- David H.
- James W.

IT Urban Picnic Awards

- Jeff Reble - Outstanding Leadership
- Jason Williams - Outstanding Dedication
- Kathy Wilson - Unsung Heroine
- Gina Zachary - Excellent Customer Service
- Jonathan Feldman - Got Your Back Award

ESRI Special Achievement in GIS



Like many cities across the country, Asheville is concerned about increasing investment and attracting new businesses, as well as retaining existing jobs and companies in the region. To do that, several years ago, the City created Priority Places, a Web- based geographic information system tool that promoted economic development by enabling citizens, business owners, investors and government agencies to identify optimal locations for their activities. This award recognized the long-term success of this tool.

Asheville, NC: Green PC & Data Center Initiative



The City of Asheville's Green PC and Data Center Initiative greatly contributed to City Council's environmental objectives of significantly reducing the City's energy use and carbon footprint. Through virtualization, cloud computing and service catalog-enhanced PC rightsizing, this initiative employs new technologies to meet these goals while efficiently serving staff and citizen needs.

This initiative has downsized the City's data center footprint, reduced energy consumption by between 60% and 87% compared with prior energy use and will reduce electronic material wastes in the affected areas by more than 60%.

Measurements of reductions in energy use have been tracked both in kilowatt-hours consumed and British thermal units (heat generated). The measurements from before to after the project reveal a significant advancement toward these goals.

Asheville high-speed public safety wireless system receives international recognition as best practice!



ASHEVILLE — A threefold improvement in cardiac emergency survival rates and a 20% improvement in structure fire response rates. That’s what was at stake when an unintended consequence of a change in state law presented the City of Asheville with the loss of a multimillion-dollar fiber optic network connecting over 22 city facilities. Among those facilities were 13 community fire stations and police substations where losing affordable access to data and emergency communications was not an option.

“The City was faced with paying \$450,000 annually for continued use of the fiber network,” said City of Asheville IT Services Director Jonathan Feldman. “To continue meeting the public safety needs of the community, and City Council’s goal of fiscal responsibility, we needed to think outside the box.” Feldman noted that this amount of money represented almost a half cent on the tax rate.

From October 2010 to January 2011, several Asheville departments, including IT Services, Asheville Fire Department, and Building Safety, constructed an extensive wireless point-to-point network. Skyrunner, a local business serving the Asheville area, provided highly cost-effective and cutting-edge radio equipment. The compact and energy-efficient radios permitted installation at a greatly accelerated pace where traditional radio systems could not be reliably installed.

GMIS (Government Management Information Sciences), an international organization of government IT workers, recognized the City of Asheville for its innovative and cost-effective solution to this important service to citizens. The “Best Practice” award acknowledges the City for its initiative, timeliness and cost avoidance by building the replacement network for less than \$20,000.

“The GMIS Best Practices Award is extremely important because it represents trailblazers and risk takers who find innovative, creative and exciting, and sometimes genius ways of doing things that others haven’t thought of,” said Janet Claggett, Second Vice President of GMIS International. “The time constraints and money constraints made the project that much more challenging, and the fact that the City of Asheville was able to pull together an innovative plan within their budget, really blew the GMIS International board away.”

“We are pleased that the wireless broadband technology that we work with on a daily basis is gaining wider recognition as a reliable and cost-effective solution for many critically important wide area networking needs,” said Don Davis, President of SkyRunner Inc., a key partner of the City’s during the construction phase of the project.

“This was one of those occasions to take a problem and turn it into an opportunity,” said Technical Services Manager Wanda Burgess, whose division managed the wireless project. “By partnering with other departments, public agencies and the private sector, Asheville has been able to maintain critical services to the public at greatly reduced costs.”

Community Involvement

In August, IT Services sponsored “Asheville Cloud Computing Day 2011,” a mini-conference that was held in the Municipal Building. The event shared cutting-edge ideas about cloud computing, a technology to improve City government, as well as other organizations that adopt it.

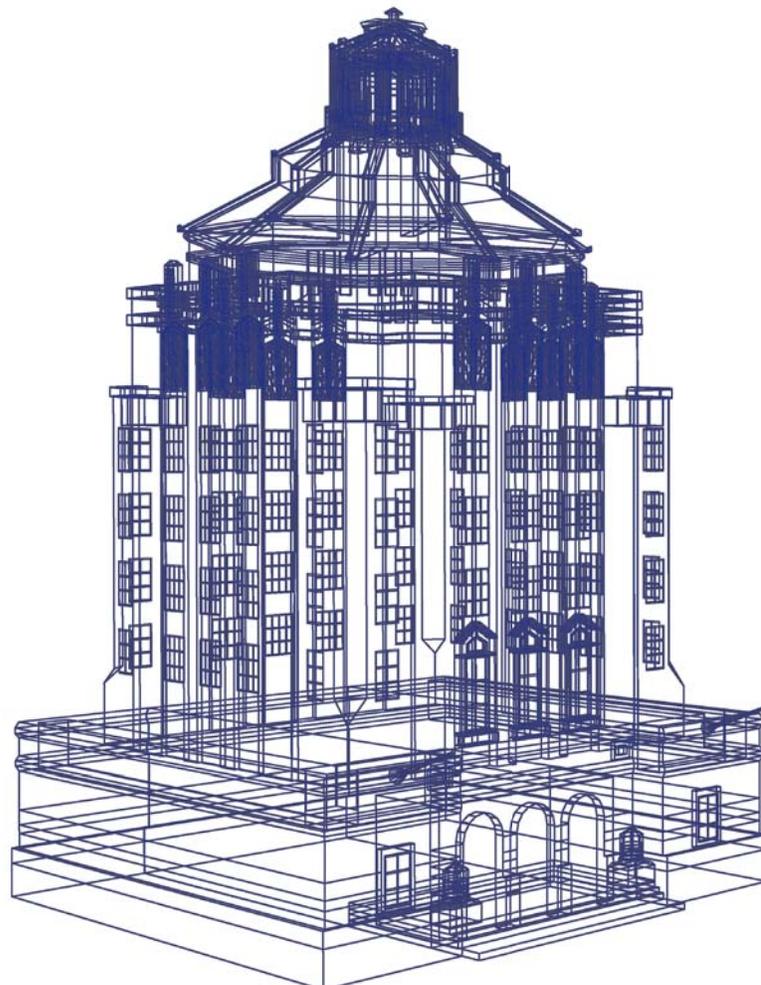
The speaker lineup for the event included the following:

- “Servers are Software: The Advantages of Cloud Architecture” - Joe Emison, VP, Research & Development, BuildFax
- “How Citizens Can Use Open Data to Create New City Services” - Trevor Lohrbeer, CEO, Lab Escape
- “Beyond the Server: The Rise of Cloud-Based Desktops” - Steven J. Vaughan-Nichols, contributing editor, CBS News and ZDNet
- “The Playground of Today’s Tech Innovators: How Cloud Computing Changes the Game” - Troy Tolle, CTO, DigitalChalk



ATTENDEE COMMENTS:

- “I was pleased at how well the event was attended. It’s nice to know that WNC has a vibrant technology community.”
- “Thank you . Excellent, well worth my time.”
- “Great event! Kudos to the City of Asheville IT team.”
- “Well done! I look forward to future events.”





3rd Floor City Hall 70 Court Plaza Asheville, NC 28801 p (828) 259.5510 f (828) 259.5509

