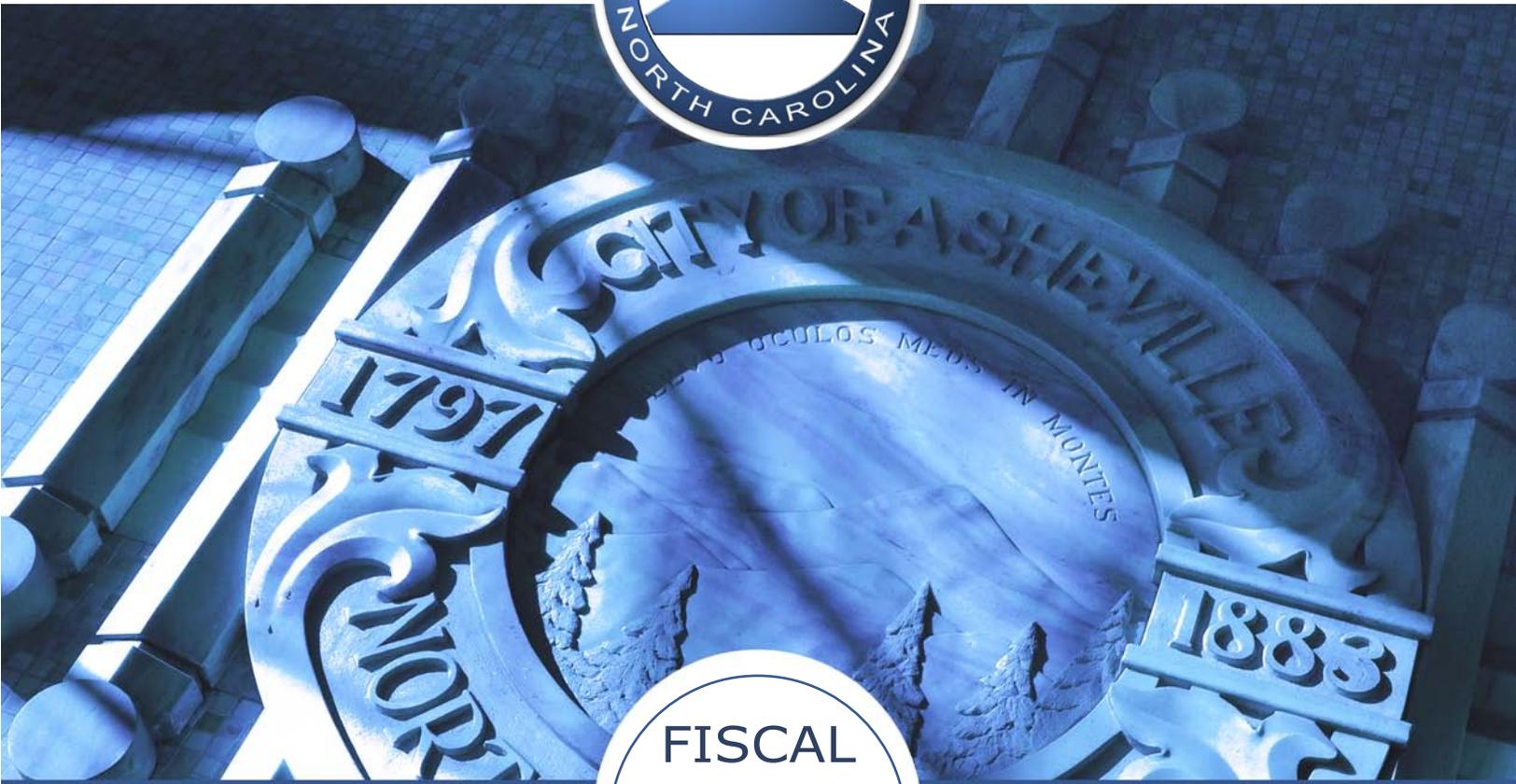


ASHEVILLE

INFORMATION TECHNOLOGY SERVICES



FISCAL
2013
ANNUAL
REPORT



Table of Contents

| | |
|---|----|
| Director's Message | 03 |
| Mission & Vision | 04 |
| Core Values | 05 |
| City of Asheville Strategic Plan | 06 |
| IT Services Strategic Goals | 07 |
| Project Highlights 2013 | 08 |
| Process Improvements | 11 |
| Budget Improvements & Challenges | 14 |
| Issues & Opportunities | 15 |
| By the Numbers | 16 |
| Organizational Development & Recognitions | 20 |
| Community Involvement | 21 |



Director's Message

Q: What do the Southern Conference basketball championship, the Thomas Wolfe cemetery, lower fuel consumption for trash trucks, better tools for emergency responders, improved government transparency and better citizen customer service in Asheville all have in common?

A: It might not be obvious, but they are all part of the portfolio of technology services at the City of Asheville.

Our department is very proud of the work that we did in fiscal year 2013 (the period from July 2012 through June 2013). As I write this, we are forging ahead with FY14, and – just a quick preview! – I think we will also be proud of those accomplishments when the current fiscal year is closed.

All of this is possible because of our stellar business partners. I am fond of saying that there are no technology projects, just business projects with technology components, and that is as true this year as it ever was. So, when you read through this report, remember: we should be proud of our City IT staff, but just as proud of the line departments that reach out, entrust their business to us, collaborate, and arrive at solutions that are more efficient and secure, and that provide better customer service.

As funding levels shrink and expectations rise, the key to success lies in enabling collaboration. Whether that is enabling cloud computing at the organization (which is what powers the Passport Parking app you now see in downtown) or providing automated access to public records (known as “open data”), we will continue to collaborate and jointly seek success.

Open Data Day (page 21) in particular was a huge departure from what you might expect a municipal IT organization to be involved in. But I am convinced that this type of effort, in partnership with other City departments, is key in creating the kind of results that both the City Council and citizens desire. Our department, accustomed to tight collaboration with business partners, is well-suited to help create value as government becomes more collaborative. It will be an exciting year.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Feldman'. The signature is fluid and cursive, with a long horizontal stroke at the end.

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 delivering quality technology solutions 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.

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 community we serve will earn the respect of our peers. We will be busy but not frantic, allowing for planned and quality work.

Core Values

Customer Service

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

Professionalism

We will interact courteously, ethically and with a 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 top-notch competence and knowledge.

Quality of Life

We will foster a productive balance between quality of work and quality of life.



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 data 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 2013

Fire Department Videoconference & Distance Training System

Selected achievement area:   

To improve service and reduce costs, the Asheville Fire Department worked with IT Services to integrate a new Videoconference & Distance Training System into its training activities. The new distance training system allows fire crews to receive training while remaining on duty in their service areas. The system reduces the need to redistribute fire crews and equipment during training events for a savings of \$11,640 per year in fuel, vehicle maintenance and staff overtime. The system was purchased with funds allocated for Fire Department training, and is expected to pay for itself within two years.

The Asheville Tree Mapper

Selected achievement area:   

The City of Asheville's Geographic Information Systems (GIS) team developed the Asheville Tree Mapper using a low-cost collaborative software development approach to data collection. The Tree Mapper provides a comprehensive database of trees in the City and is used to manage tree maintenance activities as well as to provide an overall tree inventory. The Tree Mapper quantifies the value of trees in the urban environment through a series of scored criteria, including the ability to calculate the reduced carbon footprint achieved through urban trees. As a crowd-sourced application, it allows both City Staff and citizens to collect urban tree data (such as size, species and condition) and update that data over time.

Riverside Cemetery Mapping Innovation

Selected achievement area:   

To support Riverside Cemetery's business planning, the City of Asheville's GIS team created a comprehensive inventory and map of approximately 15,000 existing graves and space remaining for additional grave sales. The cemetery database allows staff to project future revenue up to the point that the cemetery is at full capacity. To develop an accurate cemetery map, City Staff used an innovative and low-cost approach to collect new aerial photography using digital cameras and helium balloons. In addition, the City worked on this project with a third-grade class from Isaac Dickson Elementary to support the school's mapping curriculum.



Voicemail & Call Center Upgrades

Selected achievement area:   

The City's voicemail and customer service call center hardware was upgraded to provide faster and more reliable service to the public. The new solution fully supports current desktop operating systems and provides greater flexibility for Customer Service staff. The new system has two servers with failover abilities to offer greater redundancy, which will significantly improve reliability and performance for the Customer Service Division and the customers it serves.



2013 Southern Conference Tournament

Selected achievement area:  

The IT Services Department provided infrastructure and customer service support for the Southern Conference basketball tournament at the US Cellular Center. High-speed data services and phone lines were provided to media outlets, coaching staffs and other support personnel during the three-day event using the US Cellular Center's wireless Internet service, and a number of contracted telephone and data lines were installed specifically for the event. Thorough testing was performed in advance of the event, and the system was monitored through the duration of the tournament. Through effective planning, the event experienced zero downtime related to data or telephone services.

Active Directory Upgrade

Selected achievement area:   

To keep pace with emerging information security threats, and to maintain compatibility with newer computer operating systems, the IT Services Department upgraded the City's entire Active Directory system. The upgrades replaced three end-of-life domain controllers, which were responsible for providing employees with secure access to all City network services, including critical public safety systems. As a result of the upgrades, two of three hardware domain controller servers were virtualized to provide better energy efficiency and greater disaster recovery capabilities.



Bulky Item Truck Route Optimization

Selected achievement area:   

The City's GIS team performed a thorough preliminary evaluation of routes used by bulky-item pickup trucks in the Sanitation Division with the objective of improving the efficiency of vehicle utilization. By comparing vehicle odometer readings with stops at a variety of street addresses identified in the City's GIS repository, truck routes were optimized to achieve approximately a 30% reduction in mileage, which could potentially yield annual fuel savings of \$3,000 per vehicle. The GIS team continues to develop optimized routing procedures that may result in turn-by-turn directions for drivers to reduce mileage and yield significant savings in fuel and vehicle maintenance.

E-mail System Upgrades

Selected achievement area:  

The Technical Services Team enhanced e-mail system security and performance by upgrading the City's aging e-mail servers to a completely virtualized e-mail environment. The new e-mail system provides better performance and greater storage for employee mailboxes while supporting the latest e-mail security standards, as well as enabling better compatibility with mobile devices and modern desktop operating systems. By virtualizing the new e-mail servers, energy costs to provide e-mail services have been reduced by 60% to 80%.

New Fiber Optic Institutional Network

Selected achievement area:  

In collaboration with the Education and Research Consortium of the Western Carolinas, the IT Services Department completed installation of the City's high-speed public safety network. The new Institutional Network connects 12 fire stations and four police stations to emergency dispatchers over fiber optic connections. The network provides the fastest emergency alert notifications available and saves the City of Asheville approximately \$5 million in fiber construction costs. The network also provides connectivity for other City facilities, including the Armory Building, the US Cellular Center and the new parking garage at 51 Biltmore Avenue. The new Institutional Network supports gigabit network speeds at no ongoing cost to taxpayers.



Process Improvements

Helping people through technology initiatives

Open Data Access

Selected achievement area:  

During the fiscal year, more than 221 requests were made from the Open Data Catalog and 199 unique events were registered from citizens who may have never tried to retrieve this data before. This system provides greater access to public information and eliminates the need for staff to manually fulfill the request.

Convert to Paperless Billing for Cell Service

Selected achievement area: 

All City of Asheville bills for cell phones and air cards are now completely paperless. The new electronic billing system reduces the use of paper, eliminates postage costs and saves staff time in processing payments for cellular services.

Emergency Responder Communications Support

Selected achievement area:  

IT Services, in partnership with Asheville Fire Department, provided key support for emergency service communications during the Democratic National Convention in Charlotte using new satellite-based telephone and data service equipment.

UTA APC Bus Counter System

Selected achievement area:  

The new Urban Transportation Associates Automatic Passenger Counting System offers the Asheville Transit System better benchmarks for bus system utilization and passenger habits to help improve speed and reliability of bus schedules. The system also helps identify passenger load and pickup locations to fine-tune bus routes and deployments.

Tower Site Emergency Fuel Reserves

Selected achievement area:  

Underground fuel tanks were installed for emergency generators to provide greater fuel storage at Asheville radio tower sites. The additional fuel capacity will offer more backup power for critical communications systems. Being buried underground, the new fuel tanks will be more resilient during a disaster or weather-related event.



Business Focus



Organizational Development



Security & Reliability



Quality & Timeliness



Measurement & Action

Water Utility Automation Security Improvements

Selected achievement area:  

IT Services improved security of the Supervisory Control and Data Acquisition system (SCADA) by placing all servers behind a firewall. Water technicians have a dedicated workstation to provide secure remote access to SCADA servers. The new server is isolated from the Internet to limit access to authorized staff and prevent security breaches.



Communication Improvements at New City Parking Garage

Selected achievement area:  

Customer service and safety were enhanced in the new parking garage at 51 Biltmore Avenue by installing voice over IP telephone lines so hotel guests and citizens can call the hotel or parking security staff in the event of issues with the gates. There are also blue call boxes throughout the garage that call parking security.

Wireless Priority Service (WPS)

Selected achievement area: 

To ensure that emergency responders and key City Staff can continue to communicate in times of emergency, IT Services added all key personnel to the WPS system with Homeland Security. This service is provided in partnership with the US Department of Homeland Security. The goal of the system is to provide key national security and emergency personnel with priority use of wireless communications during disasters or emergencies that cause congestion or network outages. This service was implemented free of charge.

Virtual Fax System Upgrade

Selected achievement area:  

Concurrent with the e-mail system upgrades, IT Services converted the out-of-date virtual fax system to a virtual machine and upgraded it to use the newest version of fax software. End-of-life telephone line hardware was also replaced with modern network routing equipment. The new fax system supports the latest operating systems deployed throughout the organization.

Guest Wireless System in Development Services Center

Selected achievement area:   

Secure Wi-Fi service was installed in the Development Services Center to provide customers with free public access to the Internet. The system builds upon prior successes at the US Cellular Center and uses similar wireless equipment to provide reliable and cost-effective service.

Security-Awareness Training

Selected achievement area:   

As part of an ongoing security training initiative, IT Services performed face-to-face security-awareness training for more than 750 employees. These events helped employees gain knowledge and awareness about Internet and e-mail security threats, and taught techniques to safeguard their computers and personal information on the City's network as well as at home. Through examples and demonstrations, employees gained a greater understanding of the tactics identity thieves use to obtain confidential credit card or banking information.



Benefits System Interfaced with Munis

Selected achievement area: 

An interface was developed between the City's Munis Financial System and the externally hosted Benefitfocus service that Human Resources uses to support open enrollment. The new interface will save Human Resources between 40 and 50 hours of staff time for the open enrollment period with additional time-savings throughout the year for new employees and midyear changes to benefits.

Redundant Virtual Servers for Disaster Recovery

Selected achievement area:  

The Technical Services Division completed the installation of an additional virtual server host machine at the Public Works Disaster Recovery Site to provide a redundant virtual backup environment for primary systems and to provide a testing environment for the new applications. This will help ensure that critical technology services remain up and running in disasters and other emergency situations.



PCI Audit

Selected achievement area:   

During a compliance audit, the City of Asheville successfully met the Payment Card Industry (PCI) Data Security Compliance Standards required to accept credit card transactions. All businesses and organizations that accept credit card payments must meet the standards adopted by the PCI Security Standards Council to ensure the security of customer credit card information. The audit verifies encryption of servers used to process transactions and network security.



Business
Focus



Organizational
Development



Security
& Reliability



Quality
& Timeliness



Measurement
& Action

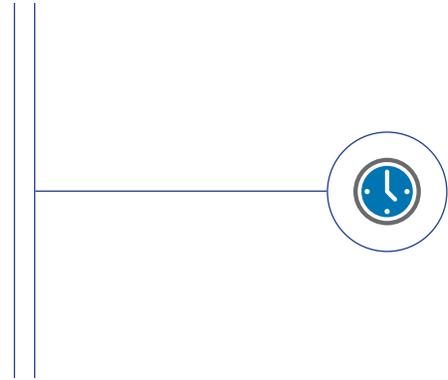
Budget Improvements

| | | |
|---|----------------|--------------------|
| • Internet access | Savings | \$3,960 annually |
| • Fiber network | Cost avoidance | \$4,902,890 |
| • Replace BlackBerry phones | Savings | \$11,000 annually |
| • BTOP grant for Inet rebuild | Savings | \$8,000 |
| • Inet rebuild | Cost avoidance | \$90,000 |
| • Server racks from surplus | Savings | \$5,000 |
| • BTIP project | Savings | \$22,000 |
| • Firefighter distance training | Cost avoidance | \$11,640 annually |
| TOTAL OF SAVINGS AND COST AVOIDANCE: | | \$5,054,490 |

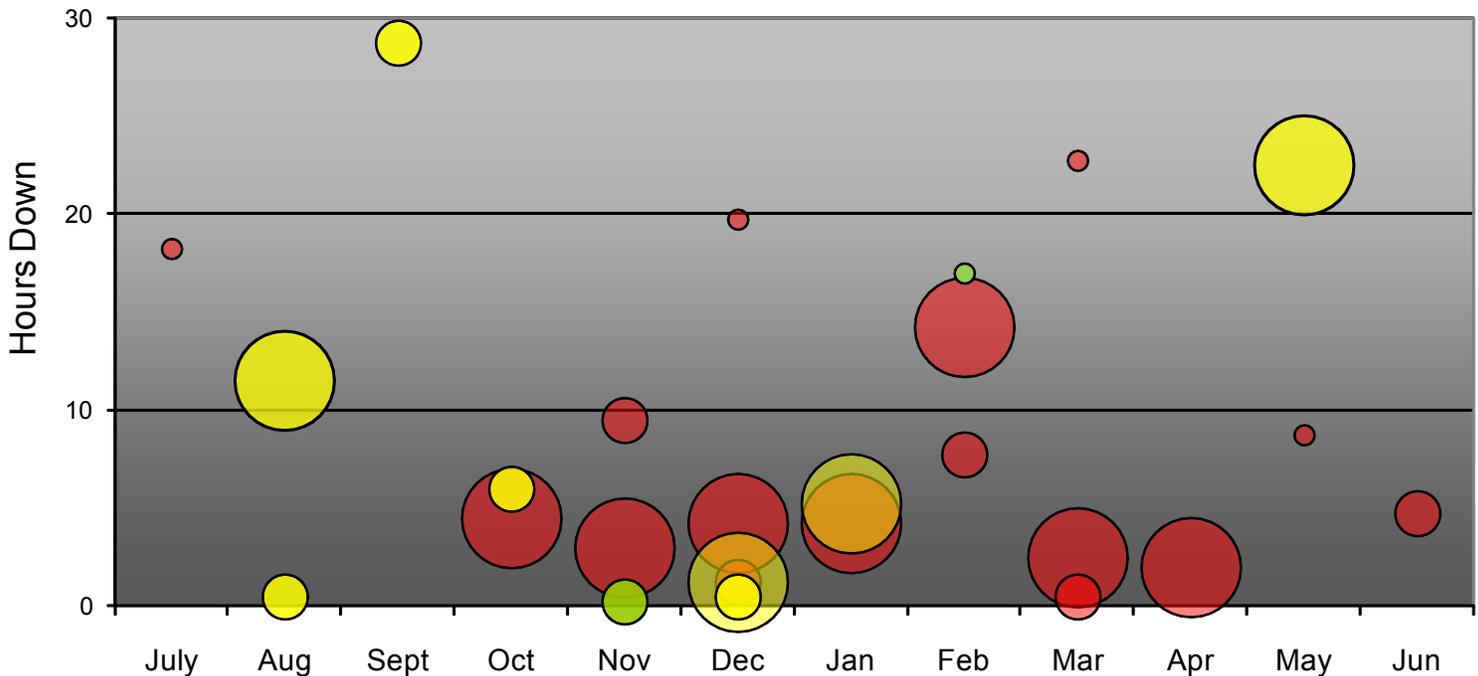
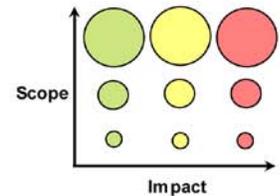


Issues & Opportunities

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 2013



By the Numbers

| | |
|---|---------|
| Number of Cell Phones: | 563 |
| Number of Air Cards: | 345 |
| Radios Managed: | 1,033 |
| Number of IT Employees: | 19 |
| Network Servers Managed: | 97 |
| Number of Infrastructure Devices Managed: | 152 |
| Number of VoIP Devices: | 824 |
| Number of City Employees Full Time: | 1,123 |
| Part Time: | 32 |
| ITS Budget as a Percent of the City's Operating Funds: | 1.92% |
| Number of Desktop & Laptop Computers Managed: | 926 |
| Number of Printers Managed: | 371 |
| Average Work Orders Completed Monthly: | 987 |
| Average Number of E-mails Weekly: | 148,639 |

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

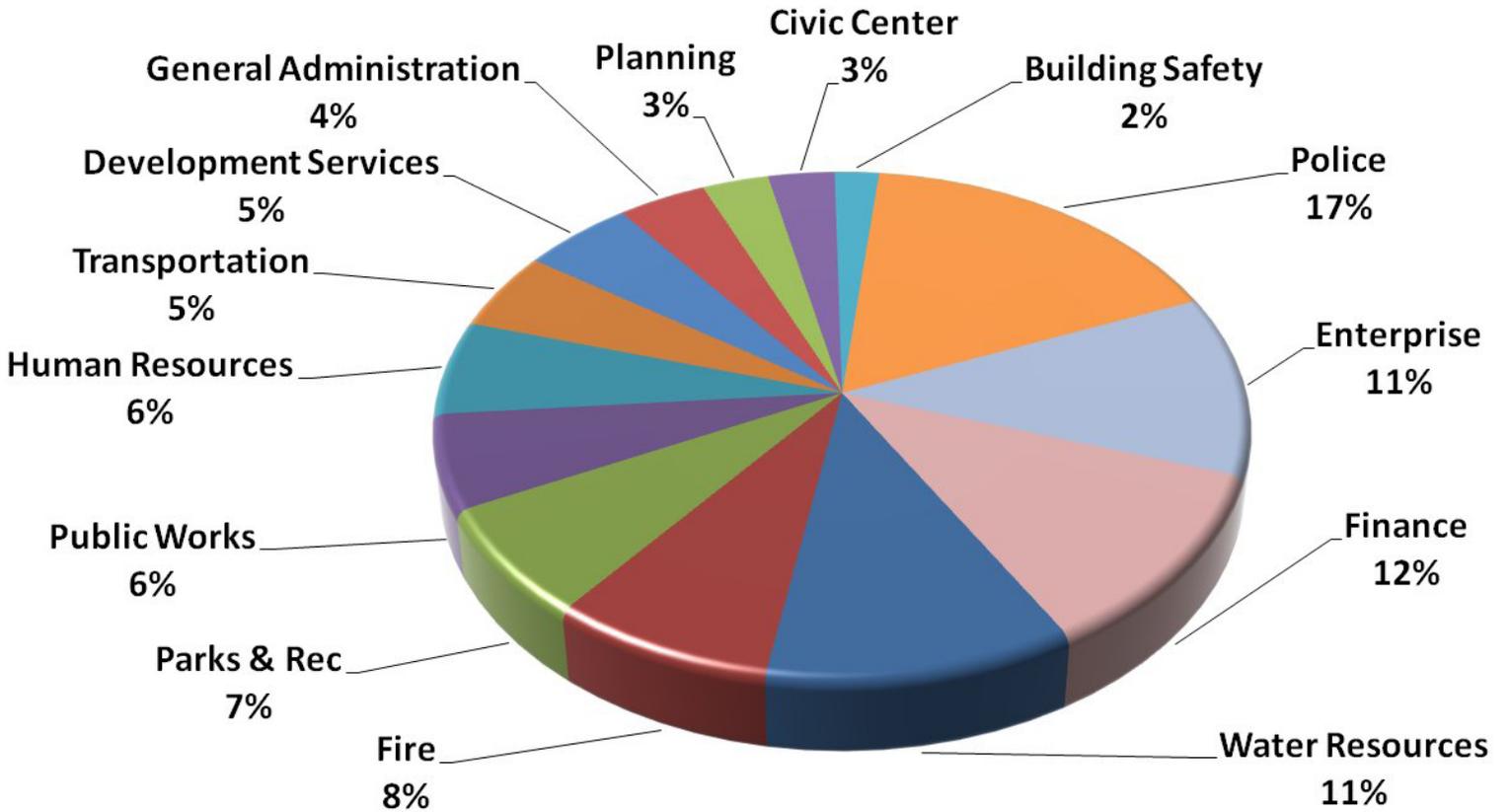
| | Cary | Salisbury | Jacksonville | Buncombe County | Forsyth County |
|------------------------------|----------|-----------|--------------|-----------------|----------------|
| IT Resource Level Rank | 1 | 2 | 3 | 4 | 5 |
| Population | 142,257 | 33,701 | 69,220 | 245,535 | 354,878 |
| FTEs | 1,164 | 448 | 557 | 1,335 | 1,357 |
| IT employees | 28 | 9 | 12 | 54 | 53 |
| # of staff per IT employee | 42 | 50 | 46 | 25 | 26 |
| Central IT Ops budget (\$M) | \$6.86 | \$2.71 | \$2.96 | \$10.10 | \$8.34 |
| Entire City Ops budget (\$M) | \$133 | \$68 | \$86 | \$337 | \$339 |
| IT \$ per employee | \$5,893 | \$6,049 | \$5,314 | \$7,566 | \$6,146 |
| Percentage IT budget/City | 5.16% | 3.99% | 3.44% | 3.00% | 2.46% |

High Point Asheville Wilmington Greensboro

| | 6 | 7 | 8 | 9 |
|------------------------------|----------|----------|----------|----------|
| IT Resource Level Rank | | | | |
| Population | 109,368 | 85,712 | 109,922 | 277,080 |
| FTEs | 1,357 | 1,123 | 993 | 3,143 |
| IT employees | 24 | 19 | 14 | 28 |
| # of staff per IT employee | 56 | 56 | 71 | 112 |
| Central IT Ops budget (\$M) | \$6.61 | \$2.86 | \$2.10 | \$6.44 |
| Entire City Ops budget (\$M) | \$343 | \$149 | \$141 | \$459 |
| IT \$ per employee | \$4,871 | \$2,547 | \$2,115 | \$2,049 |
| Percentage IT budget/City | 1.93% | 1.92% | 1.49% | 1.40% |

Source: Official Municipality Budget Documents

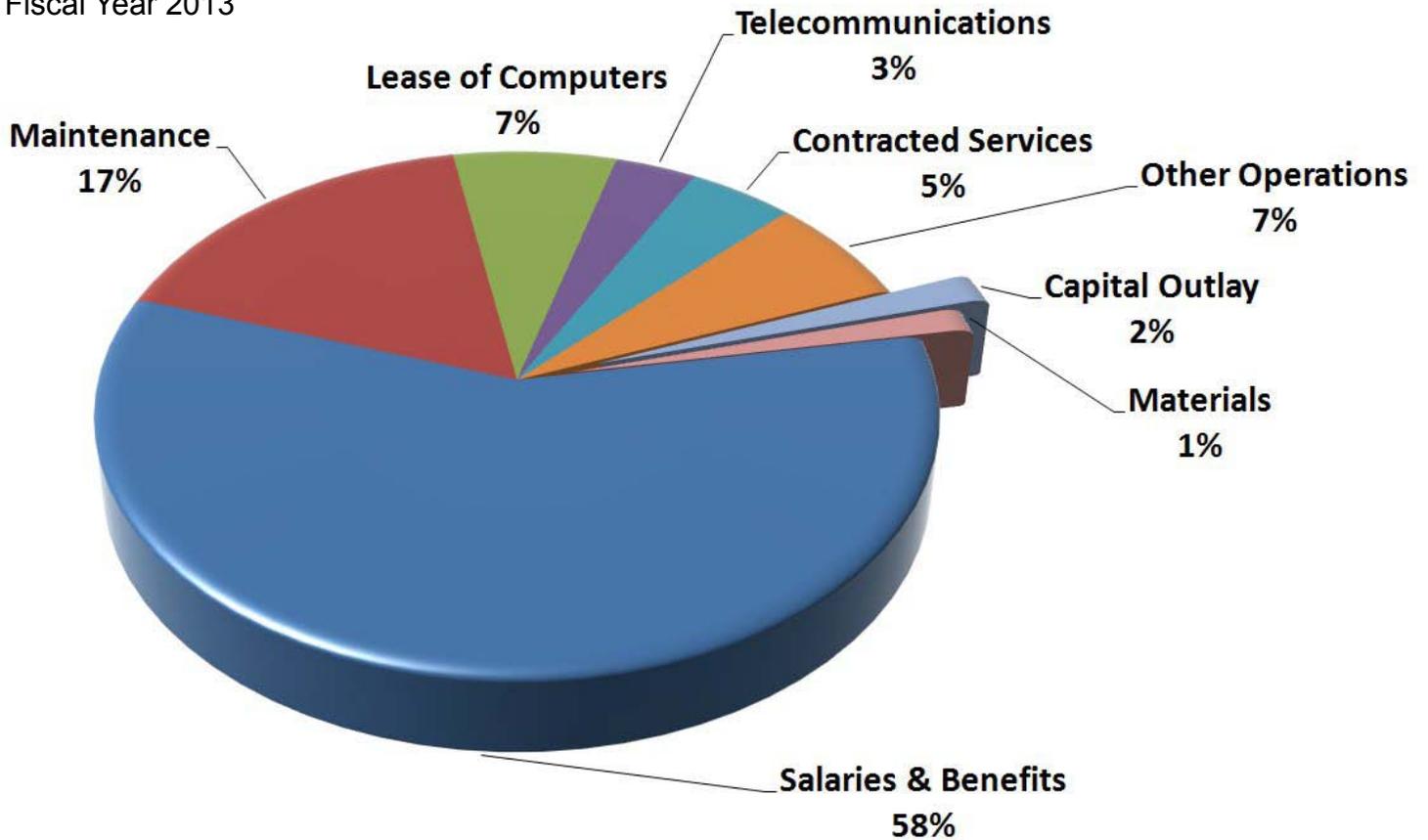
IT Department Utilization for Calendar Year 2013



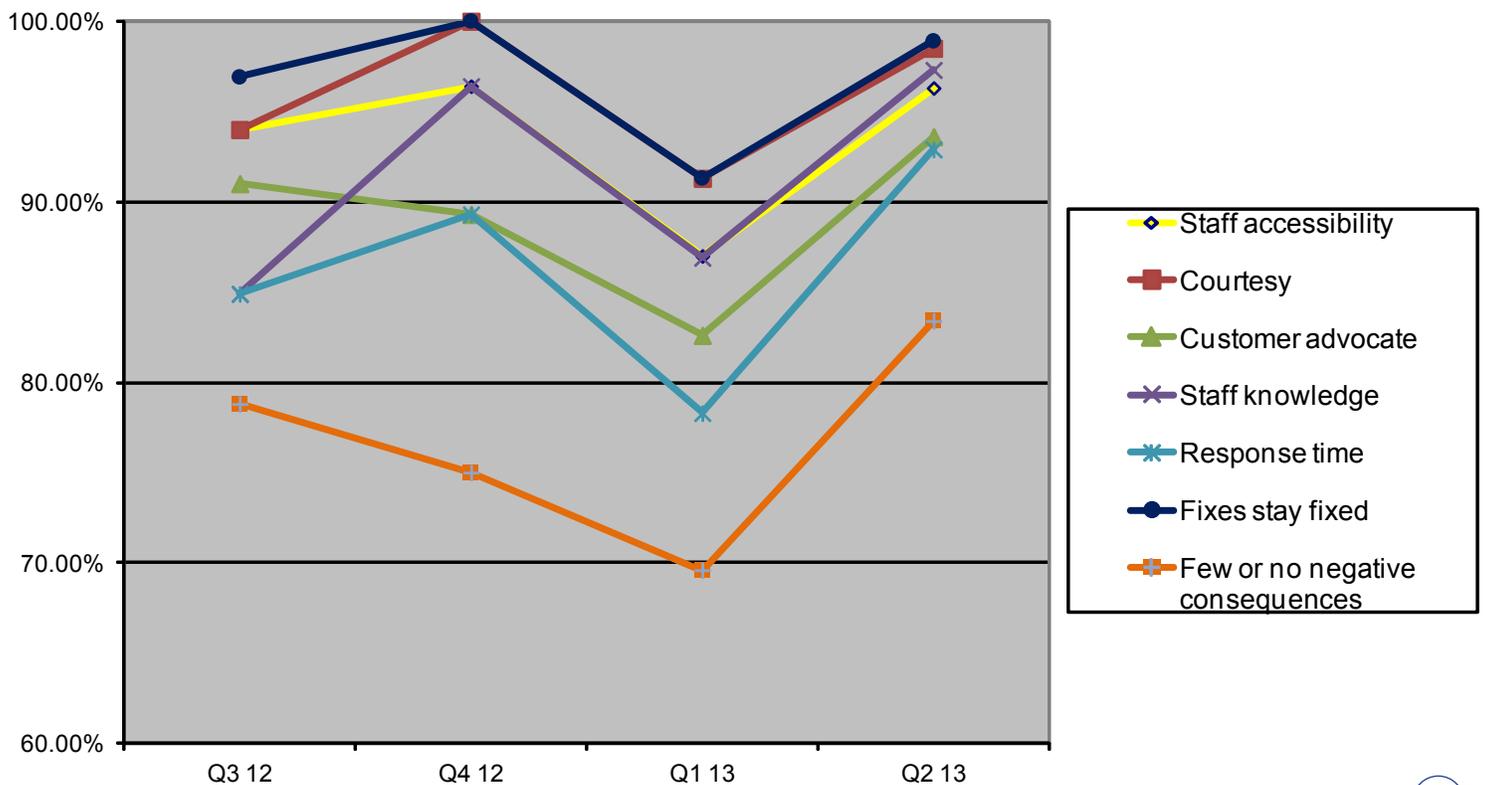
Normal Work Orders Completed Within 24 Hours City of Asheville, IT Services



Expenditures by Type Fiscal Year 2013



Quarterly Trend—"Good or Excellent" Customer Service Survey



Organizational Development & Recognitions

Outstanding Service Recognitions

The following employees were recognized by the IT Services Department for exceptional work during the 2012-2013 fiscal year:

- Stephanie Osbourn, GIS/Application Services
- Dave Michelson, GIS/Application Services
- Tim Reimers, Technical Services
- JJ Wilson, Support Services
- Dawn Call, Support Services
- Kevin Hymel, GIS/Application Services
- Erik Hagen, General Services
- Tom Downing, General Administration
- Diane Meek, Development Services
- Rich Rauschenbach, Fire Department
- Amy Patterson, Purchasing

North Carolina GIS Conference Presenters



February 2013 – Chief Information Officer Jonathan Feldman delivered a presentation at the North Carolina GIS Conference on “Cloud Computing.”

GIS Analyst Dave Michelson also presented at the conference on “Alternative Methods of Data Collection.”

Firefighter Distance Training Initiative



The Asheville Fire Department and the IT Services Department were recognized by the UNC School of Government and the North Carolina Local Government Information Systems Association (NCLGISA) for their innovative approach to providing distance learning for firefighters. The Fire Department’s new Vidyo telepresence system was honored as a quarterly Government Information Grant Award winner for the following cost-saving benefits:

- Provides telepresence links at 11 fire stations for training
- Reduces “out of service” time for fire companies
- Enables companies to respond to calls with no delays
- Reduces travel time and costs for training
- Saves \$11,640 per year in fuel costs

Community Involvement

Open Data Day

On October 16th, IT Services sponsored “Asheville Open Data Day 2012,” held in the US Cellular Center. The conference was designed to create partnerships among media, government, business and communities to solve problems and highlight opportunities related to government data. The event highlighted cutting-edge ideas about sharing information and using technology to improve City government, as well as other organizations that adopt open data practices.



The event included three nationally known keynote speakers, 10 community sponsors, a business track and a technology-hackathon track. Over 130 people participated in the event. Since hosting the event, Asheville has received requests from two other cities asking organizers for assistance in replicating the program in their regions.

Asheville’s First Hackathon

Four IT Services employees participated in or helped organize the Hack for Food Hackathon event at the A-B Tech Haynes Building. The objective of the hackathon was to meet one of the goals of the Asheville-Buncombe Food Policy Council in a short time frame. The event was part of the National Day of Civic Hacking and was sponsored by Code for Asheville, a group of developers, designers, data geeks, leaders and idea-makers who volunteer to help Asheville government and civic organizations adopt open web technologies.

First Reverse Vendor Fair

On April 10th, the City of Asheville hosted the first Reverse Vendor Fair with 42 vendor agencies represented. The City invited area vendors interested in doing business with the City to participate. It was a great opportunity for vendors to speak directly with City department representatives and find out more about what contract and bid opportunities are available with the City of Asheville. IT Services also provided information about its upcoming projects and bidding opportunities.

State Agency Workshops

On April 9th, IT Services provided support for a series of training sessions conducted by the State of North Carolina Office of Historically Underutilized Businesses, the Office of Purchase and Contract and the N.C. Department of Transportation. The training focused on doing business in the state, vendor registration and HUB certification.



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