



**SURPRISE**

ARIZONA



INFORMATION TECHNOLOGY SERVICES  
STRATEGIC PLAN  
FY 2017

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# Information Technology Services Strategic Plan – City of Surprise

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## **EXECUTIVE SUMMARY**

Advances in various forms of workplace technology to include cloud computing and software as a service, have made the application of technology more economical to purchase, easier to install, easier to use, and easier to upgrade. There has been a tendency to view technologies as quick, easy, and low-cost remedies that meet short-term needs of maintaining and/or enhancing services while using fewer resources. This approach may meet short-term needs but does not always address longer-term citywide needs. This fosters the development of “islands of technology” which limits the City’s ability to share information across organizational boundaries and to access information from other systems for consistent business analytics.

Both internal and external environments of the City are continually changing, and technology plays a critical support role in the development, implementation and enhancement of municipal services. As a result, the City recognizes the need to outline a framework for the selection, use, and support of technology that aligns with City vision, resources, business needs, and processes. Therefore, a citywide approach based on standards, consistency, and compatibility will make more cost-effective and efficient use of technology.

Activities in this plan are designed to:

- Create an enterprise-wide focus on application development
- Encourage cooperation with other government agencies to be more efficient
- Preserve and modernize core business infrastructure
- Improve public and business access to the City information and services through online services using mobile devices
- Provide a reliable, compliant and secure IT infrastructure
- Advocate for Leading Edge, World Class Technology Solutions

## **Purpose**

The Information Technology Strategic Plan is a document with emphasis on defining short-term needs and planning for long-term requirements in selecting cost-effective and practical technological solutions. By outlining effective management of the technological infrastructure, a strong emphasis can be placed on both external and internal customer services.

This Plan, similar to all strategic planning, is a process - not an end result. The Plan is a working tool to link the City's needs and goals with information technology to provide improved government functions and enhanced customer service. The Plan is intended to allow for change over a period of time and serves as a broad guideline for action that will continue to serve as a driver of our IT vision and strategy and will be revised as technologies emerge and the City's needs change.

## Overview of Services Provided

Information Technology Services is the central technology provider for the City.

The Department has two primary responsibilities: First, to provide centralized information technology services required by city departments.

- Provide and support a secure centralized network, telephony, and computer technology
- Support and maintain software applications and the data infrastructure enabling effective business analysis
- Mitigate risk of loss to the city's information and computer resources, and develop security policies and guidelines
- Provide a spatial data repository, tools, and services for city departments so they can create, maintain, represent, and analyze geographic information

GIS has and will continue to dramatically transform the way governments operate. Governments have recognized the value of looking at information spatially, which can lead to improved decision making and more accurate and speedier analysis of information. Public Safety, Economic Development, and Community Development rely heavily on GIS.

Second, to provide vision, leadership, strategic planning and innovative technology that will benefit the City and improve services provided to its citizens.

- IT Technical Services
  - Infrastructure (networks, telecommunications, cabling)
  - Operations (servers, data storage, backup/recovery)
  - Computers/Mobile Devices/Printers
  - Help Desk
  
- IT Application Services
  - Enterprise Resource Planning
  - Application Support Services
  - Database Services
  - Business Intelligence Services

- E-Services for Public
- IT Security
  - Network and Data protection
  - Credit Card, Medical and Federal Compliance
  - Physical Security
  - Access Control
- GIS – Geographic Information systems
  - Master database for city infrastructure
  - Addressing
  - Geospatial data for land use and urban growth planning, permit tracking, legislative redistricting
  - Public Safety analytics

## **IT STRATEGIC GOALS & OBJECTIVES**

### **Vision**

We see a vision dedicated to using technology to enhance and promote a digital city, to connect citizens to their government, and to live in a future that uses digital technology that is flexible and responsive to the citizens we serve.

### **Mission Statement**

Information Technology Services is the City’s centralized department responsible for providing strategic technology direction. Staff is highly skilled in Operations, Networking, Application Development, Information Security and GIS. The IT department is committed to providing innovative, secure, reliable, and integrated technology solutions, collaborating with city departments and the community to provide the most effective and efficient services.

Our Information Technology Services provide secure, reliable, and integrated technology solutions in alignment with the City’s strategic plan, while delivering excellence in customer service.

In support of this mission, we will:

- Partner with internal and external stakeholders to understand their information technology needs.
- Provide leadership and planning for the effective and strategic use of emerging technologies.
- Ensure the confidentiality, integrity, and availability of data.
- Demonstrate technical and operational excellence through a commitment to professionalism and continuous improvement.

- Maintain the highest level of protection of Information Technology assets and reduce overall threats.

## **Values**

- We are Integrity
- We are Professional
- We are Accountable
- We are High Quality Service Providers
- We are Customer Focused
- We are Surprise!

## **Aligning IT Strategy to City Strategy**

The long-term strategic objectives of the department are directly linked to the City Council's Strategic Plan and support the General Plan 2035.

## **IT Governance**

The Information Technology department reports to the Assistant City Manager and carries out the policies and procedures of the City Manager. The City Manager carries out the policies of the Mayor and City Council.

## **Our Customers**

The Information Technology Services team understands that, ultimately, the services we provide are for Surprise citizens. Every city service provided relies on the network, telephony, and data infrastructure administered by Information Technology. We provide technological service to every division in the City, including Public Safety.

Our Application Services designed and built a portfolio of applications deployed to [www.surpriseaz.gov](http://www.surpriseaz.gov) that directly service Surprise citizens.

## **Cooperation with Other Government Agencies**

The need for governmental cooperation in the area of information sharing has never been greater with shrinking budgets and increased services to citizens. Today there is a shared RCN fiber network that may be used for co-location for redundancy for a future disaster recovery site.

## **Guiding Principles**

Align Information Technology goals with the City's Strategic Plan and the General Plan.

Attract, develop and retain Information Technology staff with the expertise and talent to support the City's IT Strategic plan.

Promote enterprise-wide applications and the sharing of data between agencies.

Place a high priority on security and protecting the City's networks and data, in recognition of the ever increasing need for cybersecurity, and awareness of cyberthreats.

Place a high priority on PCI/HIPAA/ACJIS compliance.

Acquire hardware and software that rank among the leaders in the industry, looking at the most efficient solution that may include the cloud or software as a service.

Continue to define hardware, software and information security standards as requirements change.

Proactively seek and provide world class operating and application software, balanced by their compatibility with the City's current infrastructure.

Improve system performance, reliability, availability, and data integrity.

Place a high priority on training to better use technology, ensure compliance and security and improve customer service.

Continuously improve communications with our customers in order to cultivate business partnerships.

Continuously improve processes to include Standard Operating Procedures and Service Level Agreements.

Be innovative and investigate new technologies that may provide the best solution to our customers' needs.

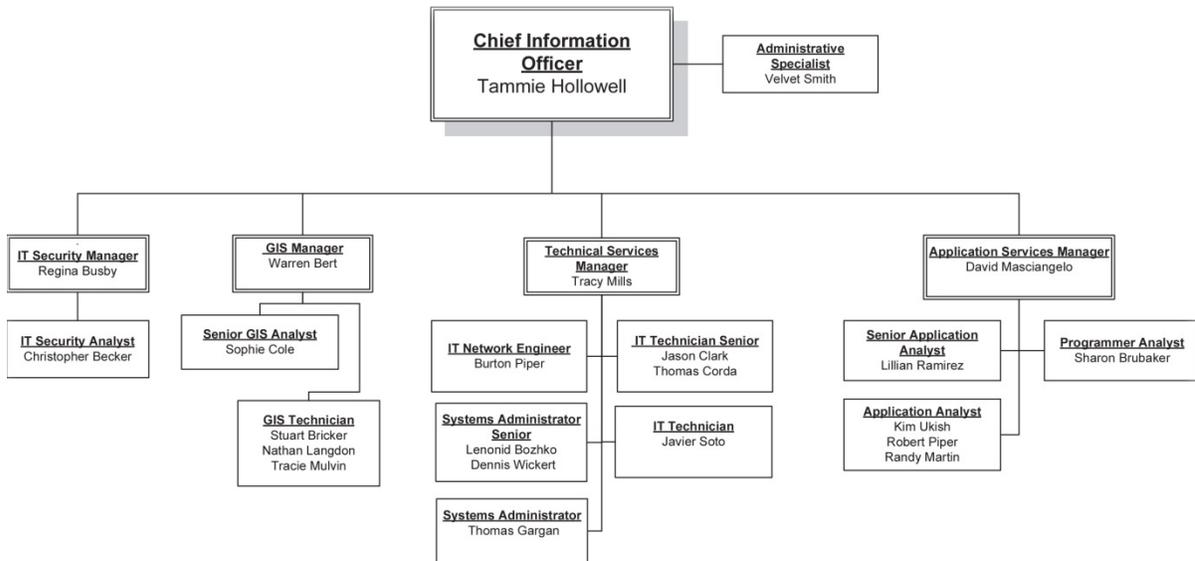
Participate in projects with other government agencies that are mutually beneficial.

## **IT Strategic Goals and Objectives**

- Implement a 3-5 year plan to replace the financial and permitting legacy systems with an ERP solution.
- Ensure that networks and technology equipment is maintained to obtain maximum performance and reliability.
- Install a digital network that connects all sites
- Enhance the customer service function to support users and departments to the highest level.
- Support the core technologies of data networks, telephony services, application systems, and police and fire communication systems.
- Provide for disaster recovery services in the event of normal and catastrophic failures.
- Standardize technology acquisition processes
- Centralize all technology purchase approvals to achieve the maximum cost effectiveness.
- Follow the Surprise Procurement Code
- Empower Technology users
- Acquire hardware and software to support departmental and user goals
- Organize, promote and support user groups for both project-oriented and department-oriented users.
- Develop a comprehensive end-user training and education program using various learning techniques and tools
- Protect and secure the City's networks and data

# ORGANIZATIONAL STRATEGY

## Our Team



## Service Excellence

The department achieves its mission, vision, and values first and foremost through service excellence. And service excellence is built on positive, proactive attitudes and behaviors that put the needs and concerns of our customers first. (Our customers are generally other employees, of course, but they are also visitors, developers who choose to build in our city, volunteer colleagues, potential employees considering whether to accept an offer to work within our organization, civic and charitable organizations, and other members of the community who rely on our knowledge, skills expertise, and leadership to support and guide our citizens, business owners and visitors.

Winning teams don't get where they are simply by having talent. They reach the top because they cooperate and combine that talent with teamwork and shared vision. They remain at the top by perpetuating those attitudes and behaviors consistently. We are committed to delivering service through professional excellence with personal concern in an efficient manner.

## **Human Resource Strategies**

Information Technology personnel are required to possess a wide range of skills when hired usually including multiple years of hands-on experience. They must possess core competencies in their particular specialty such as database, hardware, networks or specific applications, but also must have superior non-technical skills such as good communication, problem-solving, and analytical skills, along with flexibility, and the ability to be agile.

Recruitment and retention are critical to the success of the department.

Staffing levels for the Information Technology Department are driven by several factors. The primary factor is the number of employees and other users of technology and the service levels expected by those users and city management. Secondary factors include the number of computer applications supported, the complexity of computer applications and the number of electronic services provided for citizens. The number of city employees is commonly related to the population of the city.

## **CHALLENGES AND/OR EXTERNAL THREATS**

### **Emerging Technologies**

Online Services (digital city), mobile devices, cloud computing, and virtualization are the major forces influencing technology today and in the future. As businesses continue to offer more services through the Internet, consumers are expecting governments to do the same. The “24 x 7” government is what consumers and businesses will expect — a government without walls, doors, or clocks. Furthermore, most citizens do not care about which branch of government they have to deal with; they just want the convenience of paying their utility bills, permits, licenses, and parking tickets online.

Mobile devices have rapidly grown in the past two years and along with it the need to connect to our email and networks. Providing the best solution without compromising security has been a challenge to balance.

Another major technology trend is cloud computing and software as a service. We look at every business need to determine the most efficient solution. City IT outsources select IT functions that make sense. We currently contract with consultants for those projects that require tailored expertise and have an end in sight. Our Job Applicant (NEOGOV) and Performance Management systems (GPS) are good examples of projects and functions that are currently hosted. We should evaluate the use of Cloud computing where it is smart to do so and where it has proven successful; an immediate example would be our City IT Disaster Recovery Plan; Cloud computing for disaster recovery has a proven, successful track record and is widely accepted across many private and public industries and local governments alike.

Virtualization is an effective way to reduce IT expenses while being more efficient and agile to handle today’s IT demands. Both server and desktop virtualization have become a proven technological advancement in addition to leaving a smaller footprint for green initiatives. The majority of our servers are currently virtualized and our CIP plan includes desktop virtualization.

## Cyber Threats

The IT department is focused on securing technology services to protect against cyber threats , which are increasing in scope and frequency. At the same time, the IT department will continue to evolve, and enable innovative ways for city departments to share information and services. Critical to our success is a strong foundation of governance practices that promote transparency and efficiency. The IT security workforce is a top priority. The IT department will invest in the IT security workforce to ensure it is prepared to support our evolving information, cybersecurity, and technology needs.

The IT department will protect sensitive data through robust security and privacy programs, implement and monitor compliance with security and privacy policies, standards, and practices, raise awareness of information security risks and train and educate technology users, and implement next generation security tools.

We are constantly monitoring the network for vulnerabilities and threats using the most updated software. The following protective measures are in place:

- Web Filtering – Monitoring and restricting internet access and blocking malicious web sites
- Penetration Testing – Performed periodically to evaluate computer and network security by simulating cyber-security attacks from internal and external threats
- Risk Assessments – Performed annually by a disinterested party
- External and Internal Vulnerability Scans – Scans our internal and external devices network for vulnerabilities. Scan detects and identifies potential points of exploit, detects and classifies system weaknesses in computers, networks and communications equipment and predicts the effectiveness of countermeasures.
- Anti-virus software – Monitoring, detecting and cleaning all city computers.
- Patch Management Software – Ensuring all computers are updated to protect against the most recent threats.
- Network Access Controls – Restricts network access to those computers found to be not in compliance
- External Network Security Device – High performance network appliance and software that protects our network perimeter against intrusion

The following protective measures are on target for full production this fiscal year:

- Full Disk Encryption– Protects information on desktops and laptops by converting it into unreadable code that cannot be deciphered easily by unauthorized people.
- Mobile Device Management – USB Management currently in place. Deploying, securing, monitoring, integrating and managing mobile devices, such as smartphones and tablets in the workplace is continuing.

## Compliance

New laws, rules and regulations across regional, local, national and international borders continues to intensify. Regulatory compliance is not just about playing defense. It also offers an opportunity to consistently strengthen our city through strategic, proactive measures—such as best practices, employee training, internal controls, and benchmarking. These measures can

uncover value, even as they help assure compliance. The City of Surprise is working towards compliance with the following standards, regulations, and laws:

Payment Card Industry (PCI-DSS) – Addresses the security of credit cardholder sensitive data.

Health Insurance Portability and Accountability Act (HIPAA) – Addresses the security and privacy of health information.

Arizona Criminal Justice Information Services – (A/CJIS) – Addresses the security of the state of Arizona and federal criminal justice information.

As **cybersecurity** challenges continue to have a major impact on local government, it will be important for Surprise to address these and other technological innovations in the coming years.

## **FINANCIAL STRATEGY**

### **Operational Resources related to Technology**

The yearly operating budget is designed to fund on-going day-to-day expenses along with contractual obligations such as support and maintenance contracts for previously purchased products, software licensing costs and one-time expenses. These capital-like expenses include an on-going program of technology refresh (asset replacement) which is required to provide products that are up-to-date and eligible for support from the vendor or manufacturers.

### **Capital Projects**

The Capital Budget process is basically a link between Planning (Capital Improvement Plan) and the budgeting function. The Capital Improvements Plan is a multi-year plan that outlines current capital and infrastructure needs, future anticipated needs, current projects, and future costs to the community. It addresses both repair and replacement of existing infrastructure and purchase of capital equipment as well as the development of new facilities to accommodate future growth and/or to improve services.

The Capital Budgeting Process projects out five to fifteen years into the future; however the funding is approved by the City Council only for the following fiscal year. Because of the changing nature of technology products, it is very difficult to project more than three years into the future for specific products. The goal of the department is to provide technology standards that will stand for several years.

Following are the funded FY 2017 CIP Projects :

- Continuation of the Enterprise Resource Planning (ERP) Solution for HR/Payroll, Utility Billing and Permitting Systems
- Asset Replacement

The 15 year plan initiatives that have not yet been funded include:

- Asset Replacement
- Virtual Desktops
- Increase Wireless in City Facilities/add redundancy
- Upgrade Network Infrastructure
- Document Management
- E-Discovery for legal holds
- Data/File Categorization for records retention
- Endpoint Security Solution
- Security Info and Event Management
- Centralized Security Management
- Disaster Recovery
- Infrastructure to support any new CIP Projects citywide

## **NEXT STEPS TO IMPLEMENTING THE VISION**

Implementing the City of Surprise IT Strategic plan will take planning and funding over the course of many years. The plan will be implemented in a phased approach to enable the department and the organization to absorb the changes.

### **Accomplishments, Enhancements, and Efficiencies 2015-2016**

- Implemented eCitation & eCrash to improve officer safety, decrease data entry time, improve data accuracy and transmit citation and traffic collision data electronically between departments and other public safety agencies.
- The City Hall camera upgrade project has been completed.
- Replacement of aging hardware and software, including Police Voice recording system.
- Physical and cyber security throughout the city has been enhanced.
- Impervious surface data acquisition and analysis for the storm water system.

### **Future:Major Initiatives and Policy Issues**

- ERP Phase 1 – Financials projected completion July 2016. ERP Phase 5 – Utility Billing projected completion December 2016. ERP Phase 2 – HR/Payroll projected completion January 2017. ERP Phase 3 – Licensing/Permitting projected completion March 2017.
- Centralized Mobile Device Management.
- Asset replacement and technology refresh will continue.
- Data Security, Disaster Recovery and Compliance will continue to be analyzed, exercised, identified, and enhanced.
- GIS Data Dictionary and Public facing internet web mapping application