



SURPRISE

ARIZONA



INFORMATION TECHNOLOGY SERVICES
STRATEGIC PLAN
FY 2019

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Information Technology Services Strategic Plan

EXECUTIVE SUMMARY

Today's digital city requires enough broadband to allow connectivity to just about any device. We have been challenged with mobile devices and now with the "Internet of things" (IoT) and with 5G on the horizon, be ready for a device explosion. Along with the WI-Fi capabilities and sensors to allow digital capabilities, comes the perfect storm for malicious activity. Our City needs a plan to embrace the latest technology and yet still secure our users, information and network against constant cyber threats.

Both internal and external environments of the City are continually changing, and technology plays a critical support role in the development, implementation, security and enhancement of municipal services as we embrace the digital world. 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. Again, balancing optimal performance while protecting the users, information, and network from both internal and external threats.

Activities in this plan are designed to:

- Create an enterprise-wide focus on application integration
- Encourage cooperation with other government agencies to be more efficient
- Transparent communications to customers and stakeholders
- Maximize public and enterprise access to 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

This Information Technology Strategic Plan is a document with emphasis on planning for long-term requirements (3-5 year) in selecting cost-effective and modern 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. This 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. This 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. A separate annual operational plan will provide the goals and accomplishments.

Overview of Services Provided

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

The Department has two primary responsibilities:

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

Second, 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

IT Technical Services

- Infrastructure (networks, telecommunications, cabling)
- Operations (servers, data storage, backup/recovery)
- Computers/Mobile Devices/Printers
- Help Desk
- Asset Management

IT Application Services

- Enterprise Resource Planning
- Application Support Services
- Database Services
- Business Intelligence Services
- Online Services for the Public

IT Security Services

- Network and Data protection
- Credit Card, Medical and Federal Compliance
- Physical Security
- Access Control
- Technology Security Awareness Training

Geographical Information Systems

GIS dramatically transforms the way governments operate. Governments have recognized the value of looking at information spatially, which maximizes accurate and faster decision making analysis of information.

- 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 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 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 is used for co-location for redundancy for a future disaster recovery site. We participate in the Maricopa Association Government Technical Advisory Group, the AZCIO group and several national and local cybersecurity groups.

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 cyber threats.
- Place a high priority on credit card, health and federal 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.

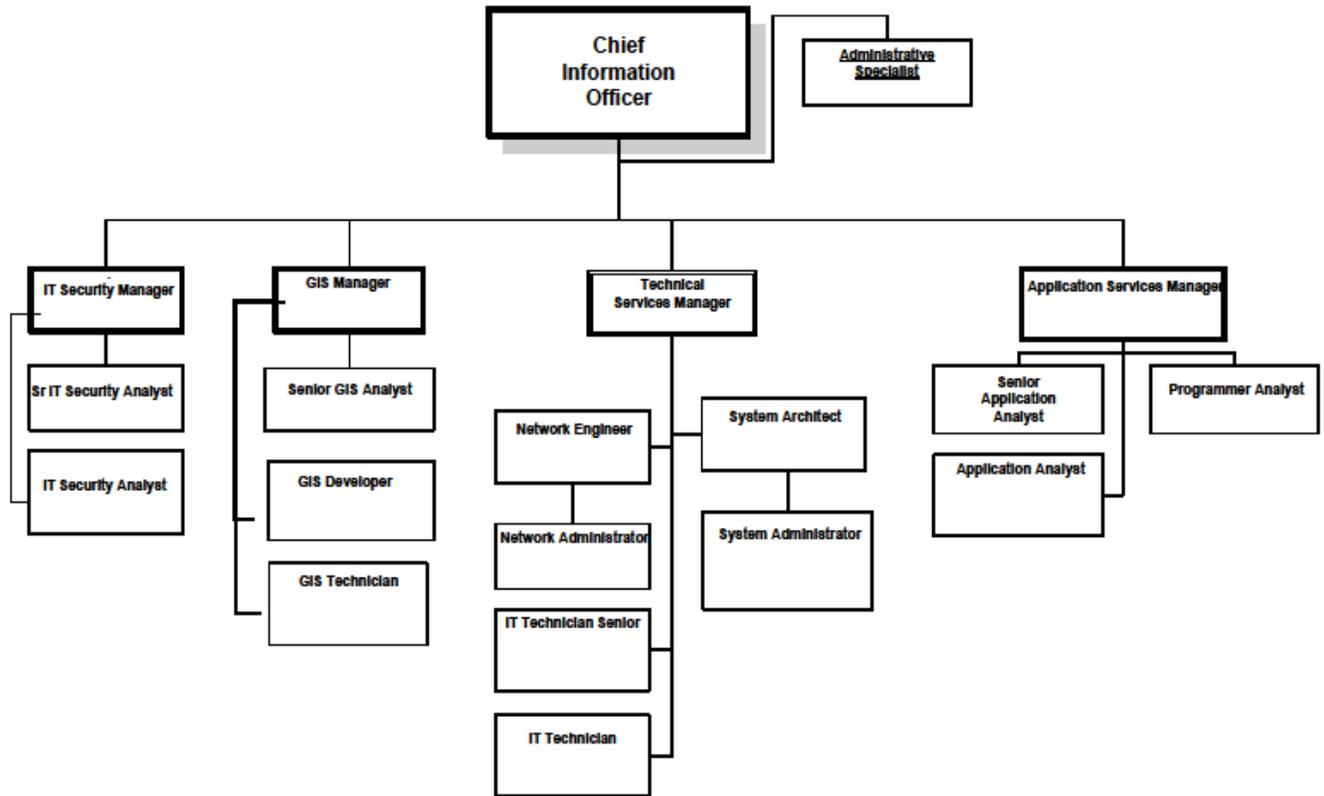
IT Strategic Goals and Objectives

- 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 service excellence
- 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 using business intelligence
- Acquire modern hardware and software to support departmental and business goals
- Organize, promote and support user groups for both project-oriented and department- oriented users.
- Protect and secure the City's networks and data
- Security Awareness Training

ORGANIZATIONAL STRATEGY

Our Team

City of Surprise IT / GIS



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. Although our customers are generally other employees, 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

Expectation of continued growth in connectivity for mobile devices and digital services. 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 device utilization has rapidly grown in the past two years and along with it the need to connect to our email and networks. Providing simple user access without compromising security is 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. 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

Additional protective measures are on target to include micro segmentation to provide internal control of traffic within the data center to enhance our data center's security posture in the event of cyberattacks.

Compliance

New laws, rules and regulations across regional, local, national and international borders continue to increase. 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 – (ACJIS) – 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 challenges 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 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 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.

NEXT STEPS TO IMPLEMENTING THE VISION

This IT strategic plan, along with the IT operational plan, are living documents that guide our efforts while continually being accessed and revised to meet the current technology demands.

This plan is where we want to go the next 3-5 years and the operational plan will provide the goals and initiatives to get us there.