City of Lynchburg

Information Technology Strategic Plan

FY16 – FY18

August, 2015

I. BACKGROUND and OVERVIEW

Every three years, the City of Lynchburg's Information Technology Department (IT) spearheads the development of a new information technology plan for the City. This document is intended to provide the best guidance possible for the City's investment of money and effort in information technologies for the time period FY16 – FY18. To help guide the investment and use of very limited resources, the strategies and actions described in this document will help ensure the City is focused on its highest technology priorities.

As in prior plans, the City's adopted set of principles for guiding investment in information technologies is included. The technology project governance process is also described. These principles and the governance process provide the framework for ensuring that all significant investments in information technology are selected and managed for the benefit of the enterprise and that only those initiatives that provide the greatest positive return on investment will be pursued.

The planning process began with the vision for the City, as developed by City Council. Using this vision and other priorities as articulated by the City's Leadership Team, strategies, initiatives, and specific actions for information technology investment have been identified. These strategies, initiatives, and actions are grouped into three focus areas and reflect the best collective view of the City's leadership of the highest technology priorities.

These strategies, initiatives, and actions are just a beginning point, providing a roadmap for the next three years. Each initiative and action must still be fully evaluated for return on investment and reviewed for approval and funding in the appropriate budget process before being acted upon. The time frames specified for the initiatives and actions in this plan reflect the best estimates possible, but it is fully expected that time frames will be modified as the City responds to changing priorities and economic conditions.

Technology planning is extremely dynamic, given the rapid pace of change in technologies, the shifting economic climate, and other external influences. As has been the past practice, this plan will be revised annually to reflect changing priorities and circumstances.

II. MISSION AND GUIDING PRINCIPLES FOR INFORMATION TECHNOLOGY

The Information Technology Department (IT) is responsible for providing enterprise technology services to City departments. IT operates in a consultative and collaborative manner, partnering with its customers to understand their business needs and aid in aligning technology solutions to meet defined business needs and goals. The mission of the department is as follows:

Mission Statement: *To partner in our customers' success through the provision of high quality information technology solutions and services.*

Shared principles across all City departments are a necessity for the most effective use of the City's technology resources. Nine fundamental principles are defined to guide the City's information technology initiatives and investments. These principles closely follow industry best practices and trends.

1. **Every technology initiative will have a defined business need and department sponsor.**
   - All technology initiatives will be driven by business requirements and prioritized according to the business need and return on investment.
   - Business justifications will determine the technology priorities for the Information Technology Department (IT).
2. **Technology will be shared across departments and applied to common work processes wherever possible.**
   - Technology initiatives will have an enterprise-wide focus when being evaluated, looking for shared applications to reduce redundancy and to eliminate the inefficient use of resources.
3. **Every technology initiative will be evaluated for its full requirements, costs, and return on investment, covering the full life cycle of the initiative, before a solution is developed or acquired and implemented.**
   - The full cost of an initiative, including the requirements for implementation, operations, maintenance, and support will be included when being evaluated.
   - Only those initiatives that have a positive return on investment will be pursued. In other words, just because something <u>can</u> be done does not mean it <u>should</u> be done.
   - All technology initiatives meeting the criteria of the IT Project Governance policy will follow the City's IT governance process for project evaluation and approval.
4. **Common data will be used across departments and shared to the fullest extent possible.**
   - Data will be viewed as an enterprise resource.
   - Data will be captured once and shared wherever needed to reduce costs, redundancy, and duplication of effort.

II. MISSION AND GUIDING PRINCIPLES FOR INFORMATION TECHNOLOGY (continued)

5. **Custom application development will be minimized. "Buy" will be the preference versus "build."**
   - Commercial off-the-shelf software and cloud-based technology services, with minimal customization, will be acquired and implemented to speed the deployment of new business applications and to minimize application development resource requirements.
   - Business processes will be examined and improvements identified prior to acquiring new applications to obtain the desired functionality with minimal customization.
6. **Proven advanced technologies will be pursued.**
   - Technologies that are implemented will reflect emerging trends that meet business requirements, but will also have a proven track record or reasonable assurance of high quality and reliable support.
7. **Proprietary technology solutions will be minimized. Open architectures and standards will be followed.**
   - Technology solutions will adhere to open standards to facilitate data sharing and system integration, to minimize support costs, and to maintain maximum vendor independence.
8. **Technology initiatives will adhere to city-wide technology standards.**
   - All information technology development and operations will conform to a defined set of standards.
   - Standards will be maintained to minimize costs and to ensure systems interoperability.
9. **Technology projects will be managed using a standard project management methodology.**
   - All projects will have a predefined scope, with milestones and deliverables defined**.**
   - When vendors or contractors are utilized, contract management will be assigned and managed to ensure deliverables are produced within the agreed scope and schedule of the project.
   - All new technology initiatives and investments will be evaluated and managed in accordance with these principles.

III. INFORMATION TECHNOLOGY GOVERNANCE

Consistent with the defined set of principles above, all work performed by IT will be governed by approval and prioritization processes that include representatives from City departments. This section describes the various processes to be followed for technology initiatives and work requests to be reviewed and approved. For all Initiatives and Actions described in this plan, each must follow the appropriate governance process in order for the initiative to be prioritized and scheduled, and, if applicable, funded.

Large Projects

The City's Leadership Team, comprised of the City Manager, the Deputy City Manager, and their direct reports, serves as the evaluation and approval body for all large information technology projects. All telecommunications and information technology projects that meet the specified criteria, regardless of funding source, must be reviewed and approved by the Leadership Team. The project governance policy describes this process more fully. In brief, all telecommunications and information technology projects meeting at least one of the following criteria are subject to this policy and governance process:

- The project's development schedule, consisting of the analysis, design, and development or acquisition (including testing) of the proposed solution, is estimated to exceed 6 months;
- The total project cost is estimated to exceed $50,000;
- The project will consist of the development, acquisition or installation of computing or telecommunications technologies not currently supported by IT or the requesting user department;
- The proposed solution will be or has the potential to be used by more than one City department; OR
- The proposed solution is estimated to require additional staff to be hired to develop, acquire, or support the system.

All proposed large projects will be evaluated by the Leadership Team, using the evaluation criteria described in Project Governance policy document. The Leadership Team will then issue its recommendations to be used in the budgeting processes for the proposed funding sources (General Fund, Enterprise Funds, Capital Improvement Program, Technology Fund, grants, etc.). No projects meeting the above criteria should be funded without going through this governance process.

Small Projects and Other Work Requests

Smaller work efforts – those that do not rise to the level of the criteria specified above for large projects – will also be evaluated and prioritized, but through processes generally associated with the user groups of the City's enterprise applications. These applications are:

- New World Systems: for financial management, human resources, and utility billing
- Work Management System (Lucity): for work order processing and asset management
- TrakIT: for community planning, permitting, inspections, code enforcement, and business licensing
- Geographic Information System (GIS).

The appropriate IT Division Manager will conduct regular meetings with the appropriate stakeholders from user departments for each of these application areas to evaluate, prioritize, and schedule work efforts associated with the given enterprise application. Any work requests that do not apply to an enterprise application area are evaluated and prioritized by the appropriate IT Division Manager in collaboration with the requesting department and scheduled as budgeted resources allow. All work requests that cannot be accomplished with existing, budgeted resources must be submitted by the requesting department to the appropriate budget approval process to obtain the necessary funding.

Technology Standards

Information technology standards for hardware, software, and other technologies and services are maintained by the IT Network Services Division. Stakeholders and technical support personnel from user departments review and recommend standards for the City. These standards are published on the City's intranet site. In the event that consensus cannot be reached by this standards committee on a particular standard, the City's Leadership Team serves as the decision making body to resolve the issue, as well as the ultimate authority on technology standards.

IV. CITY COUNCIL STRATEGIC PRIORITIES

To help guide the development of the City's Information Technology Plan, strategic priorities defined by the City Council are utilized to provide guidance for investment in the City's technology infrastructure. These strategic priorities were most recently reviewed and approved by City Council for FY2015. The adopted strategic priorities are framed in twelve "pillars", providing focus for all City initiatives and work efforts:

- *Arts & Culture*
- *Citizen Engagement & Social Capital*
- *Economic Development*
- *Healthy & Active Living*
- *Infrastructure*
- *Land Use*
- *Lifelong Learning*
- *Natural Resources*
- *Neighborhoods*
- *Safe Community*
- *Social Equity*
- *Transportation*

The adopted priorities and the strategies defined under each Pillar by City Council may be found on the City's Internet site. (http://www.lynchburgva.gov/sites/default/files/COLFILES/City-Council-Manager/Documents/Strategic%20Planning%20Doc%20092514.pdf). The strategies and actions described in this Technology Plan serve to support the City-wide strategic priorities.

V. FOCUS AREAS OF THE PLAN

Relying upon the above strategic priorities in discussions with City departments and the Leadership Team, the following Focus Areas, Strategies, and Actions were developed to define the Information Technology Strategic Plan for the City of Lynchburg, covering the time frame of FY16 – FY18. It is assumed that all Actions proposed in this plan will follow the City's policy for information technology governance before being funded and implemented. Consistent with the Principles described in Section II of this document, all Actions will be fully analyzed for their total cost and their return on investment, and only those Actions that provide the greatest positive return will be pursued, subject to the availability of the necessary fiscal resources.

This Plan is divided into four Focus Areas:

Focus Area 1 Governmental Systems
Those strategies that result in reduced costs, increased revenue, improved productivity, or improved customer service in government operations through the use of information technologies.

Focus Area 2 Technology Infrastructure
Those strategies necessary to sustain or enhance the City's information technology infrastructure.

Focus Area 3 IT Management and Operations Processes
Those strategies to improve IT operational efficiency and effectiveness.

Focus Area 4 Organization and Workforce Development
Those strategies necessary to develop and sustain a technology-enabled workforce.

The Strategies and Actions that formulate the Action Plan of each Focus Area are described in the remainder of this plan.

Focus Areas

Focus Area 1 – Governmental Systems: *Those strategies and actions that result in reduced costs, increased revenue, improved productivity, or improved customer service in City government operations through the use of information technologies.*

Strategy 1: Upgrade and enhance City's business applications to maintain release levels and to provide the latest functionality.

Action	Lead	Est. Time Frame
1. Complete Phase 3 of the New World Systems Logos .Net implementation and retire the IBM iSeries platform.	Ferris	FY16
2. Work Management System (Lucity): Upgrade to release 2015.	Ferris	FY16
3. TrakIT: Upgrade to current version when released by CRW.	Ferris	FY16
4. ImageTrends: Upgrade to Elite version, contingent up Fire department readiness and State adoption of new software.	Ferris	June, 2016
5. CAMA/Proval: Maintain at current release level and upgrade to the Microsoft .Net version when it becomes available.	Ferris	FY18
6. Revenue Billing System (RBS): Upgrade to most current release.	Ferris	FY18
7. Enhance Fleet Management's FASTER system.	Ferris	
a. Upgrade to version 6.2.		FY16
b. Determine whether to migrate to web-based FASTER.		FY16
8. Geographic Information System (GIS):		
a. Upgrade ESRI ArcGIS to release 10.3	Johnson	FY16
b. Explore enhancements to My City Services application	Conway	TBD
c. Implement ESRI Community Analyst	Johnson	FY16
d. Explore additional ESRI WebApp templates	Conway	FY16
e. Evaluate ArcGIS Pro for implementation	Conway	FY17
f. NG911 readiness – Assist Emergency Services Department and VITA with GIS component of NG911	Johnson	FY16-18
g. GPS and Mobile solutions – Standardize enterprise solutions for GPS data capture, storage, and data maintenance	Johnson	FY17
h. Implement enhanced GIS services page on City website (ArcGIS Online)	Conway	FY16

Strategy 2: Upgrade enterprise technology platforms to meet the needs of the future.

Action	Lead	Est. Time Frame
1. Migrate to cloud-based email to expand storage capacity for mail system users. a. Pilot program b. Expand to City employees	Hutchens	FY16
2. Migrate all IBM Domino applications to new platforms and retire the Domino platform.	Ferris	FY16-17
3. Advance document management capabilities. a. Upgrade the LaserFiche document management platform to the vendor's next generation technology (Rio) b. Apply new platform to departments' document management and workflow needs c. Integrate to New World Systems applications	Ferris	 FY16 FY16-18 TBD
4. Enhance City website to be more mobile-friendly.	Ferris	FY17
5. Redesign the City's Intranet site (Citynotes) and migrate to the Drupal content management system.	Ferris	FY16
6. Sharepoint: Retire current platform and replace with a to-be-determined product.	Ferris	FY17

Focus Area 2 – Technology Infrastructure: *Those strategies necessary to sustain or enhance the City's information technology infrastructure.*

Strategy 1: Modify the City's technology infrastructure to keep current and maintain service delivery.

Action	Lead	Est. Time Frame
1. Upgrade core switches in Wide Area Network to a higher capacity backbone in conjunction with City Schools.	Hutchens	FY18
2. Retire Windows Server 2003 on all servers.	Ferris Hutchens	FY16
3. Upgrade the Milestone video surveillance system to most current release.	Hutchens	FY17
4. Enhance network storage and file management (Enterprise Vault, DoubleTake, NAS, Veeam)	Hutchens	FY16

Strategy 2: Enhance City's technology infrastructure to meet City departments' business plans.

Action	Lead	Est. Time Frame
1. Expand fiberoptic network to Parks & Recreation community centers. a. Templeton Senior Center, Fairview, and Yoder b. Additional centers – TBD c. Additional centers – TBD	Hutchens	 FY16 FY17 FY18
2. Assist in network engineering for the Fire Department's mobile command center.	Hutchens	FY16
3. Maintain and enhance WiFi networks (public and secure) to improve performance.	Hutchens	FY16-18

Strategy 3: Ensure the City's technology environments are as secure and reliable as possible.

Action	Lead	Est. Time Frame
1. Conduct a network penetration test to identify any vulnerabilities.	Hutchens	FY17
2. Complete the upgrade of the C-Cure building security system and add the IT Center to the system.	Boyers	FY16

Focus Area 3 – IT Management and Operations Processes: *Those strategies to improve IT operational efficiency and effectiveness.*

Strategy 1: Expand the implementation of the IT Service Management initiative to improve IT service delivery.

Action	Lead	Est. Time Frame
1. Design a comprehensive Change Management process and implement in the Cherwell Service Management system.	Ferris	FY16-17
2. Design and implement a Problem Management process, utilizing the Cherwell Service Management system.	Hutchens	FY16
3. Design and implement the Service Level Agreement and Service Catalog components in the Cherwell Service Management System.	Goetz	FY16

Focus Area 4 – Workforce Development: *Those strategies necessary to develop and sustain a technology-enabled workforce.*

Strategy 1: Implement a technology training curriculum to prepare and equip City employees to utilize the City's standard technologies.

Action	Lead	Est. Time Frame
1. Define a core technology curriculum for all City employees with AD accounts.	Goetz	FY16
2. Define a supplemental technology curriculum for advanced and specialized technology training needs.	Goetz	FY17
3. Define GIS web application training for basic, advanced, and specialized tools.	Johnson	FY16-18

Strategy 2: Develop emerging leaders in the IT Department to enable succession of retiring senior managers.

Action	Lead	Est. Time Frame
1. Identify IT staff development needs and priorities, and develop Personal Learning Plans (PLP's) with all IT staff to facilitate career development.	IT Mgt. Team	FY16
2. Facilitate the participation of identified IT emerging leaders in the City's Talent Management initiative.	IT Mgt. Team	FY16
3. Train emerging leaders in IT-specific leadership development areas.	IT Mgt. Team	FY16 - FY17