Information Technology Strategic Plan

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1 - Introduction

1.1 - Scope and Objectives

This document, entitled Information Technology Strategic Plan (ITSP), was prepared for the City of Rancho Palos Verdes by NexLevel Information Technology, Inc., to present a summary of findings and recommendations which will provide improvement in the City's technology service delivery. The ITSP also identifies longer-term projects that the City could implement in order to better support technology while providing improved services to its customers.

The ITSP will enable the City to more effectively allocate its information technology resources and obtain greater benefits for its investments in information technology. The plan does not attempt to predict the future; but rather, helps the City be better prepared to respond to new and/or changed technology priorities.

In general, strategic planning provides the basis for organizations to proactively change and manage their information technology environment (including processes, organization, people, and infrastructure), to remediate service delivery issues, to obtain greater benefits for the investments being made in information technology, and to improve an organization's ability to more effectively respond to future technology priorities.

The question then, is not whether the City needs to change how it governs, manages, delivers, and uses information technology services, but rather, how this change should be implemented. The ITSP answers this question by providing:

- A collaborative framework for the identification, definition, and prioritization of information technology projects that reflect the City's needs, priorities, and resources
- A baseline strategy for the implementation of the information technology projects that can be maintained and modified by the City as priorities and resources change.

Terminology

To avoid confusion, concepts and observations in this report regarding the use of information technology in general are spelled out ("information technology") or abbreviated as "IT", while "IT Organization" is used for references to the City's technology service provider (Prosum) or other technology support functions within City.

1.2 - Document Organization and Contents

The document is organized as follows:

- **Introduction** (this section): Provides information regarding the scope and objectives of the project, the organization and contents of this report, and the methodology used to develop the ITSP
- **Current Technology Environment:** Provides information that was developed in the course of the assessment phase of the project regarding how the City governs, manages, and delivers information technology services
- **Information Technology Strategic Plan:** Provides a description of technology trends that are useful in evaluating future projects, a discussion on ITSP enablers that should be addressed for successful plan implementation, and a strategic project roadmap including information regarding the relative business value, level of effort, level of risk, and cost for each of the projects
- **Conclusion:** Provides perspectives on the establishment of a foundation to enable the City to obtain improved returns

for its investment in technology as well as information to facilitate the City's future success in planning, governing, and implementing technology projects

- **Appendix:** Provides a list of ITSP projects with project sponsor, a reference to the genesis of each project, and a description of the project.

1.3 - Project Methodology

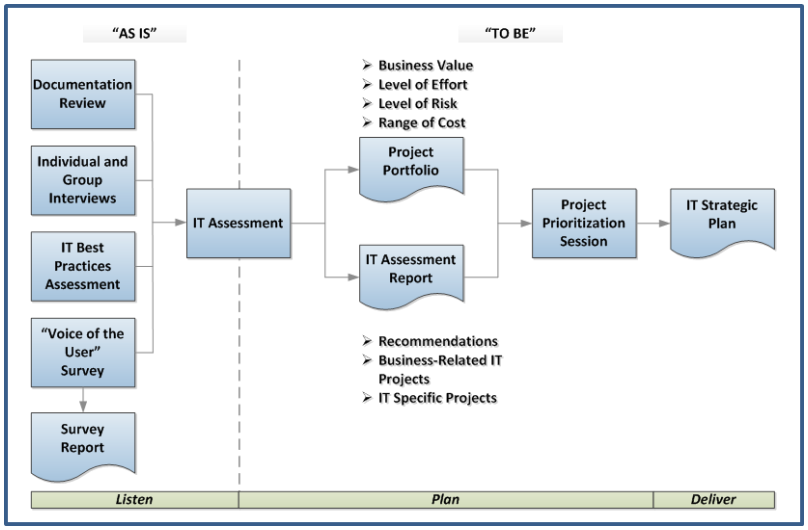


Figure 1 – "Listen, Plan, Deliver Methodology"

Figure 1 depicts the methodology used by NexLevel to develop the ITSP for City. NexLevel's "Listen, Plan, Deliver" methodology is composed of three phases:

- **Initiate** – During which NexLevel met with the City's Project Steering Committee to review and confirm the project schedule and to identify relevant documents that were reviewed in the course of the project

- **Analyze** – During which NexLevel performed an analysis of how the City governs and manages information technology, how information technology services are delivered, and how they are used, including an assessment of the degree to which City conforms to information technology best practices. The assessment included an analysis of the gap between the City's current conformance with information technology best practices, average conformance for similar public agencies, and the recommended target for conformance

  The assessment provided realistic and achievable recommendations for the City with the objectives of enabling it to obtain greater value for its investment in information technology, and/or realize improvements in the governance of information technology, and the delivery of information technology services

- **Strategize** – During which NexLevel worked with City to develop a project "portfolio," a prioritized list of information technology projects that was reviewed by City decision-makers and stakeholders in the Project Prioritization Workshop. The results of the workshop provided the basis for the development of this ITSP.

2 - Current Technology Environment

2.1 – IT Assessment Steps

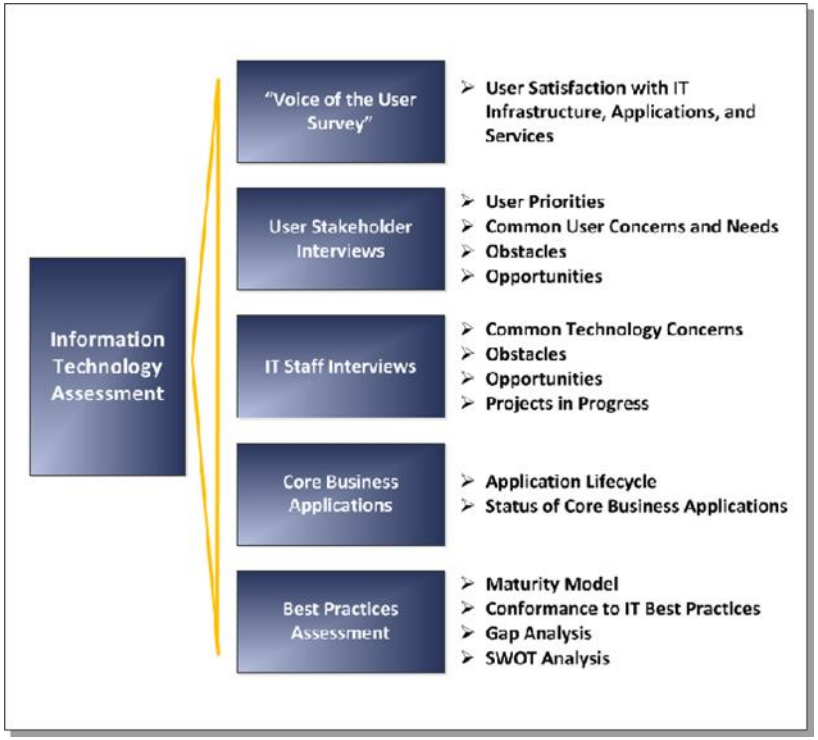


Figure 2 – Scope of Information Technology Assessment

As depicted in Figure 2, Scope of Information Technology Assessment, NexLevel performed a review of how the City presently governs, manages, delivers, and uses information technology services. The key findings from the Information Technology Assessment Report, August 26, 2016, are provided below.

2.2 - User Survey

A Technology User Survey was conducted between June 1, 2016 and June 17, 2016. Of the approximately 73 City employees sent the survey, 51 employees participated – a response rate of 80%.

"Table 1, Summary of Key Service Metrics", provides information regarding how respondents rated technology services provided by IT for the "Satisfaction Rated" survey questions. For each question, NexLevel has provided the satisfaction percentage.

Table 1 – Summary of Key Service Metrics

Survey Question	RPV Satisfied %
How satisfied are you with the support hours of service provided by IT?	92
How satisfied are you with the process to report issues to IT or request services from IT?	94
How satisfied are you with the time it takes IT to resolve or correct your problem?	96
How satisfied are you with IT's communication through the issue resolution process?	98
How satisfied are you with IT's follow-up on the service provided?	94
How satisfied are you with the City's network availability?	93
How satisfied are you with the Internet speed access?	93
How satisfied are you with the control of spam and unwanted email?	100
How satisfied are you with IT's communications on service outages and upcoming maintenance?	98
How satisfied are you with the availability to use mobility, wireless, and remote access?	94
How satisfied are you with the business applications you use?	90
How satisfied are you with the training provided for the business applications used within your Department?	93
How satisfied are you with IT's control of malware and prevention of viruses?	100
How satisfied are you with IT's enforcement of the City's password policy?	98
How satisfied are you with IT's ability to recover lost or damaged files?	96
How satisfied are you with IT's understanding of the City's business objectives?	100
How satisfied are you with IT's understanding of your department's operational objectives?	100
How satisfied are you with IT's planning efforts?	100
How satisfied are you with the City's GIS solutions?	100
How satisfied are you with IT's GIS support?	100
How satisfied are you with the overall support you receive from IT?	100

A review of these metrics finds that:

- Overall, survey respondents rated their satisfaction with the services provided by IT and Prosum at a very high level
- All "Service Satisfaction" related questions scored 92% or higher, and these ratings are in line with the comments provided in the survey and during the user stakeholder interviews (see next section)

2.3 - User Stakeholder Interviews

In the course of the development of the IT Assessment Report, NexLevel conducted face-to-face interviews with a range of City executives, managers, and staff including;

- City Manager's Office
- City Clerk
- Human Resources
- Emergency Preparedness
- Finance
- Public Works
- Recreation and Parks
- Community Development

In general, departments are looking forward to the implementation of new business applications already underway, and expect them to assist in their daily operations and improve their ability to serve the public and internal City staff. Specific activities related to these applications include:

- Finance is in the final stages of replacing the current legacy system (SunGard Naviline) with Tyler Technologies Munis solution. The HR, benefits and payroll staff are also anticipating the consolidation of employee data within the Munis system in the future
- Public Works has recently replaced their manual, paper driven operation with Cityworks to electronically manage requests for service and work orders from the public and City departments. The new system will eventually address current deficiencies and provide a level of efficiency for requests, work status, project costing and reporting that is not currently available
- Community Development is currently using the Tidemark (Accela) system to manage its planning, permitting, inspections, and code enforcement activities. The department has recently completed an RFP process and selected the SunGard "TRAKiT" system which was approved by City Council in December 2016. Implementation began in January 2017 and is expected to be complete in January 2018.
- The expanded use of GIS is of interest to many departments. Data associated with an address, parcel, lot, APN, as well as a wide variety of assets such as streets, signs, storm drain, park amenities, trees, etc. can be made accessible to both staff and the public through software tools and links on the City's website
- Additional departments have expressed interest in expanding the use of technology in their departments by further leveraging current systems, assessing systems to confirm best fit, and integrating current systems where possible to eliminate redundancy in data entry and reporting. Specific projects have been included in the project roadmap to address these areas

Observations and concerns identified in the course of these interviews included:

- Many departments expressed frustration with the City's Microsoft Lyncs VoIP (voice over IP) telephone system. An RFP was issued and a Cisco Call Manager system was selected; implementation was completed first quarter of 2017
- Some concern was raised regarding network connectivity in remote City locations (described as slow or, at times, non-existent). As part of a Capital Improvement Project, IT is working with Public Works to install fiber to the remote City locations as street fiber is being installed
- Public Works is in need of additional sewer operations and water quality monitoring software, especially for the Abalone Cove Sewer District functionality. This is a high-risk function, and the City may want to consider a Supervisory Control and Data Acquisition (SCADA) system to monitor operations
- Several departments expressed a need for the City to provide a defined strategy for the use of the intranet (SharePoint), along with training on how to better leverage intranet features and functionality
- A number of business processes were noted that could be improved through the use of automation such as contract management, project cost accounting, and performance evaluation software

2.4 – IT Interviews

NexLevel met with the City's IT Manager and GIS Coordinator, along with representatives from Prosum, the City's contracted IT support contractor. Observations and concerns identified in the course of the interviews included:

- City IT has three primary service functions: technology planning/oversight (IT Manager), geographic information system (City GIS Coordinator), and user support (Prosum)
- City IT is very aware, and supportive, of the major application projects either planned or recently implemented within the City (Munis, TRAKiT, Neogov). While City IT has limited business application support resources, they expect to provide assistance as needed to help coordinate activities with application vendors throughout system implementation and the subsequent support transition period
- The City began a project to digitize maps, permits and other permanent records several years ago. Contracts, and tract maps have been mostly completed, but blueprints and permits for Community Development and Engineering are planned in order to preserve the records and link them to the new electronic systems to make them easily accessible
- Technology projects planned during the next several years include additions to, and improvement in, the infrastructure (servers, storage, routers, switches, etc.), expansion of fiber connections to and wi-fi availability at City facilities, disaster recovery planning, device and application mobility, email archiving, and GIS layer creation/maintenance
- The IT Manager has encouraged the City to implement a technology governance structure to ensure that technology projects focus on and augment the business priorities of the City. The IT Manager believes it will be equally important to create a structure that is not burdensome and at the same

time brings a high-level of communication among departments

- GIS is experiencing many of the same obstacles and challenges that prevail for the City's other enterprise information systems, including technology governance (to ensure GIS is included when departments are planning new GIS related initiatives), resolution of conflicting departmental priorities, and a lack of staffing. The City has the foundation for an excellent GIS program, but the program may not be sustainable in the long-term without appropriate guidance and the dedication of sufficient resources
- At the time of development of this IT Strategic Plan, Help Desk statistical reporting has been manual. Prosum is currently migrating its Help Desk software to ConnectWise from AutoTask. ConnectWise will offer automated reporting and an on-line portal for the City to follow ticket activity and Prosum's work queues
- Based on Q1 2016 data, the Prosum on-site employee averaged 5 calls per day. Total calls handled by Prosum (Help Desk and infrastructure alerts) for the same period was 164/month. When a work ticket is closed, Prosum sends a survey to the customer. For Q1, Prosum reports a 98.1% user satisfaction level
- Network and infrastructure monitoring and capacity alerts are being handled by Kaseya software
- Prosum has recently assisted City IT with an uninterruptible power supply (UPS) replacement project and a HyperV infrastructure implementation initiative
- Prosum recommends City IT pursue an increase in hard disk capacity for all future workstation purchases, a phased implementation of expanded backup equipment, a separate server array located at a secondary site (Hesse Park) once connected by fiber optic for a minimum level of infrastructure redundancy, and the eventual migration to MS Office 365 for Exchange migration and long-term archive/retrieval

2.5 - Core Business Applications

The City has a portfolio of core business applications, listed below in Table 2, Core Business Applications, along with the business functions that each performs, and a recommended disposition for each.

Table 2 – Core Business Applications

Application	Business Functions	Recommended Disposition
Active Network	Recreation class registration / facility rentals	Evaluate
ADP	Payroll / HR / Benefits	Replace
AutoCAD (Ascent)	Engineering drawing development	Retain
Bay Access Control (Bay Alarms)	Generates staff entry cards and controls buildings access	Evaluate
Budget (Access Database)	Budget forecasting / planning / reporting / analysis	Evaluate/Replace
City Web-Site (CivicPlus)	Public web access / notifications	Retain
Citysourced	Service Request Entry	Retain
Cityworks (Azteca)	Fixed assets and work order management	Retain
Cognos	Financial reporting (Naviline)	Replace

Application	Business Functions	Recommended Disposition
Crystal Reporting (SAP)	Data reporting tool	Retain
Geocortex	GIS staff and public viewer	Retain
GIS (ESRI)	Geographic Information System	Retain/Expand
GovInvest	Liability management / actuarial data	Retain
Graffiti Tracking (Open Space Mgmt.)	Graffiti reporting / removal	Retain
Granicus	City Council video streaming / playback	Retain/Expand
Intranet (MS SharePoint)	Departmental Sub-Sites	Retain
Laserfiche	Document management	Retain/Expand
Cisco Unified Communications VOIP	Telephone / messaging	Retain
Tyler Technologies Munis	Financials / business license	Retain
NEOGov	Applicant management	Retain
OpenGov	Financial data portal	Retain
Point of Sale(s) (Cougar Mountain; Denali; Active.net; Tidemark; Security Gate	Park Gift Shop sales and inventory / gate security; business license renewal; alarm billing (Sheriff)	Evaluate
RealQuest (Core Logic)	Subscription service that allows staff and independent contractors to access parcel, tax and Assessor data	Retain
Sketchup PRO	3D Rendering/Procedural Drawing	Retain
Tidemark	Planning/Permitting/Inspections/ Code Enforcement	Replace (In Process)

NexLevel's recommended disposition for the core business applications are further defined as follows:

Retain – The City should continue to use the application

Evaluate – The City should perform an evaluation to determine whether continued use of the application is consistent with the City's business needs and priorities

Retain/Expand – The City should retain the application, but enhance it by either augmenting the business functionality provided by the application or expand the use of application by extending its use to other City departments

Replace – The business application should be replaced as soon as practicable

2.6 - Best Practices Assessment and Gap Analysis

NexLevel uses a comprehensive list of best practices that are categorized into six separate dimensions to evaluate the City's compliance with IT best practices. The dimensions are separated into two categories and include:

- Shared Ownership: Those dimensions where the IT organization shares ownership for IT best practices conformance with City management and the user community, including:
  - **IT Governance** – Practices related to the City-wide direction regarding the use of information technology, the leadership and reporting structure of the IT organization, degree of management overview, and the tracking of the delivery of technology services
  - **Service Delivery** – Practices related to coordinating the processes involved in providing customer support including training, help desk, and service delivery management, and the establishment of service level

agreements (SLAs) and tracking of conformance with them

- **Business Technology Applications** – Practices related to the management and support of the application systems supporting business operations

- IT Ownership: Those dimensions where the IT organization is primarily responsible for best practices conformance, including:
  - **Infrastructure** – Practices related to the acquisition, utilization, and maintenance of equipment (such as servers and storage devices), operating systems, support software, and network services
  - **Security** – Practices related to the effective use of policies and standards, user conduct, software tools (filtering, monitoring, etc.), and audits to validate that material and software resources are used only for their intended purposes
  - **Administration** – Practices related to the management of the technology support organization in terms of budget, maintenance agreements, software licenses, and the development and maintenance of current and accurate documentation on all technology activities

NexLevel assessed the degree to which the City conforms to the best practices in each of these dimensions based on the information developed in the course of the user interviews and based on a best practices self-assessment completed by City IT. Table 3, Comparative Conformance to IT Best Practices, provides a breakdown of the City's conformance to each of the information technology best practices categories.

Table 3 – Comparative Conformance to IT Best Practices

IT Best Practice Dimension	City % Conformance
IT Governance	30%
Service Delivery	73%
Business Technology Applications	63%
Infrastructure	57%
Security	73%
Administration	67%
***** TOTAL:**	**61%**

NexLevel recommends that organizations work to achieve at least 50% conformance with best practices, with 65% being a reasonable target considering both the costs related to achieving this level of conformance and the value of the benefits that are obtained.

Based on the information provided in Table 3, the City has achieved the "minimum" 50% conformance in all categories other than IT Governance, which was rated at 30%. The other categories are near the 65% target level, indicating that the City is in a relatively good position in terms of IT best practice conformance.

The City's best practice conformance results are then plotted by dimension and level of organization maturity in Figure 3, IT Best Practices Conformance. Each of the rings in Figure 3 represents a level of best practice conformance with:

- The outer most (red) ring representing the lowest level of conformity to IT best practices (less than 20%)
- The orange ring representing a level of conformance to IT best practices that is typical of reactive organizations (21% to 50%)
- The tan ring representing a level of conformance to IT best practices that is typical of proactive organizations (51% to 80%)

- The green rings at the core of the diagram representing the highest degree of conformance to IT best practices (greater than 80%).

The width of the bands is proportional, with the bands representing the Reactive and Proactive levels being the widest since they cumulatively represent a range of 60% conformance to IT best practices. Most public-sector organizations fall somewhere within this range of conformance to IT best practices.

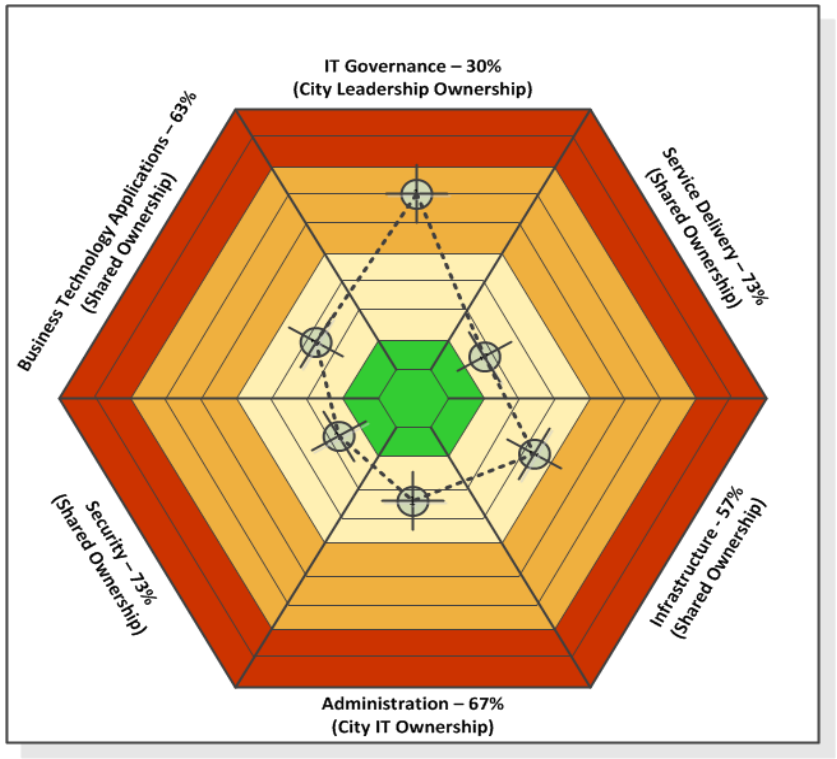


Figure 3 – IT Best Practices Conformance

NexLevel has plotted the results of the assessment for each of the best practice dimensions within the rings (the gray target points) and then connected them together to provide an overall picture of the City's conformance to the IT best practices.

The City's overall conformance to IT best practices is within the Proactive level of the maturity model in five of the six dimensions (Business Technology Applications, Service Delivery, Infrastructure, Administration and Security), with only IT Governance falling in the Reactive level.

Figure 4, Gap Analysis, depicts the gaps between:

(a) NexLevel's assessment of the City's present level of IT best practices conformance (61%)

(b) A target level of IT best practices conformance (65%) that represents a reasonable level of return on investment (ROI) for the City's expenditures for information technology.

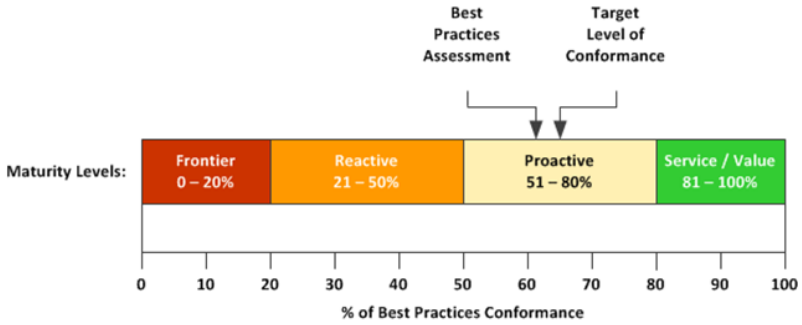


Figure 4 – Gap Analysis

2.7 - IT Assessment Recommendations

The IT Assessment Report provided a series of four recommendations for the City to enable it to better govern, manage, and deliver information technology services. The

recommendations, along with their associated actions, are briefly described below.

Recommendation 1 - The City should implement a structured approach to information technology governance

- The City Manager should create a standing agenda item within the Executive Department Head meeting to discuss activities associated with the strategic deployment of technology within the City
- The IT Manager should establish technology user sub-committees, as needed, to address specific application implementations (Finance, Land Management, GIS, etc.) or major project initiatives
- The IT Manager should annually address the City Council to present a "state of technology" in order to increase technology awareness within the City, align technology with business process, and "market" technology project success

Recommendation 2 - The City should develop IT Disaster Recovery, Business Continuity, and Cybersecurity Plans

- The City and its external IT service provider (Prosum) should develop a formal Business Impact Analysis and Business Continuity Plan to define its requirements for business resilience
- City IT and Prosum should conduct a risk assessment with the objectives of identifying potential single points of failure within the City's information technology environment and the actions required to mitigate them
- The City should evaluate the use of alternative service providers for key business applications in the event that the main server room is disabled
- City IT should develop an Information Technology Disaster Recovery Plan and periodically exercise the plan to validate that the plan works as intended, to identify potential improvements to the plan, and to familiarize key staff members with the disaster recovery process
- City IT should continue to routinely contract with an independent, certified firm to conduct external network vulnerability and penetration tests to identify security gaps and identify areas for improvement
- City IT should work with Prosum to develop a security plan to remediate the identified vulnerabilities and to provide a continuing approach to security management including periodic threat assessments and the development of plans to detect and respond to security breaches
- The City should periodically review and update its security policies including the implementation of an annual process where City employees would be required to review and sign-off on the security policies, particularly with regard to employee responsibilities for the protection of City information and systems

Recommendation 3 - The City should develop a GIS Roadmap

- The City should develop a roadmap for GIS (the City may be best served by contracting with an external GIS specialist to assist it in the development of the roadmap)

- The City should determine the long-term requirements for the ongoing maintenance of data layers within the GIS system and provide the resources necessary to foster growth and City-wide use of the GIS system

Recommendation 4 - IT should plan for further adoption of IT Best Practices

- The City should assign a qualified project manager (existing department member, IT Manager, or outside contractor) and implement basic project management standards to each major technology project or initiative
- The City should consider centralization of core application support under IT and secure the necessary funding to accomplish this
- The City should develop and require the use of standard templates for all major technology projects
- City IT should take steps to improve all technical documentation
- City IT should create tactical operational plans for the day-to-day operation of the City's technical infrastructure
- City IT should develop an IT Service Catalog describing the services that are and are not provided by the City along with service agreements with City departments
- City IT should adopt a more comprehensive approach to the proactive management of the existing sourcing contract with Prosum, including the periodic review of service metrics, capacity statistics, project plans, and periodic surveys of user satisfaction with the services provided
- The City should adopt an effective and comprehensive approach to the management and refreshment of its physical technology infrastructure
- The City should create, monitor, and enforce a "core" set of technology policies and procedures
- As time allows, the City should create a "supplemental" set of technology policies and procedures which are appropriate for the City

2.8 - SWOT Analysis

The changes in information technology and how information is used have been profound. Within a relatively short timeframe, developments including reliance on the Internet, mobile computing, mobile applications, etc., have transformed information technology from a back-office productivity tool to a strategic enabler for the delivery of information and services. This significant shift influences the assessment of the strengths, weaknesses, opportunities, and threats facing the City.

Figure 5, SWOT Analysis, is a method for analyzing technology delivery. In this model, the upper sections of the chart are tactical and look at the strengths and weaknesses of the technology organization, while the lower sections of the chart identify the opportunities and threats facing the City regarding its use of information technology.

As a result, the SWOT Analysis considers both strategic factors (that impact how organizations govern information technology and set strategic directions) and tactical factors (that relate to information

technology management and service delivery). Tactically, the analysis considers the strengths and weaknesses that affect the ability of an organization to manage and use IT; strategically, the analysis looks at the opportunities and threats that affect an organization's ability to continually derive benefits from information technology and to manage its total cost of ownership (TCO).

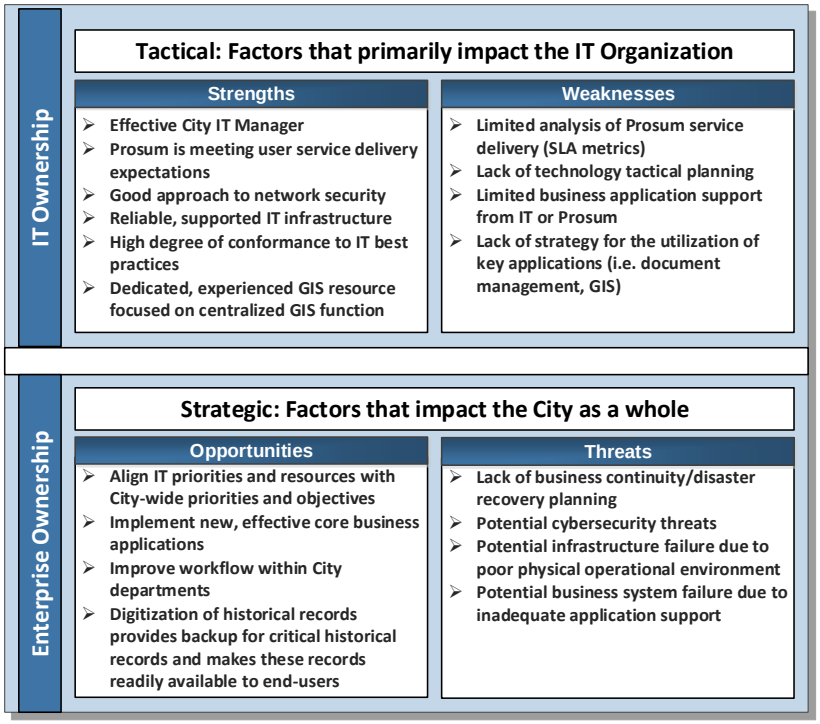


Figure 5 – SWOT Analysis

Looking at the City in this framework, NexLevel found that on balance the City has both significant strengths and opportunities. The key findings include:

- Strengths: The IT Manager has established a good rapport with City departmental users. He has also built an effective service delivery relationship with the technology provider, Prosum. Prosum, in return is getting good customer reviews for their work in supporting the City's computing environment. The City and City IT have taken reasonable and appropriate steps to secure the network from intrusions and conducts regular perimeter testing and vulnerability scans.

- Weaknesses: City IT's accomplishments, with limited staff resources, have come at a price. For example, City IT has little or no documentation for the IT infrastructure, common procedures and checklists such as change management do not exist, and IT does not have formal procedures to manage the City's business application portfolio. Of greater concern is the lack of formal project management for the up-coming major software implementations (Finance and Land Management). In addition, City IT does not closely monitor, nor is it provided, detailed metrics relative to Prosum's service delivery. This data would provide the evidence to proactively measure service and ascertain if the City is receiving a good return on its investment from the outsourcing provider.

- Opportunities: Assuming that the City is committed to making a concerted effort to improve processes and procedures, particularly with regard to the implementation of major business applications (Finance, Work Order Management, and Land Management), it could realize a number of opportunities including improvements in agility and sustainability, improved return on its investments in information technology by strategically aligning the investments with the City's operational needs and priorities,

and improved communication and collaboration between the departments and City IT.

- Threats: If the City does not make any changes to the current physical technology environment, the City is at risk of experiencing disruptions in the provision of information technology services to the City departments and the public. In addition, well-designed and regularly tested disaster recovery plans are essential in order to ensure continued service to the City which is depending more and more on the use of technology equipment and applications to conduct routine operations.

3 – Information Technology Strategic Plan

3.1 – Introduction

Change is a constant concern for public sector executives who must often respond to increased public expectations and new mandates with limited resources and information technology environments that are not agile. Without a strategic plan to manage and respond to change, organizations tend to become reactive rather than proactive and, as a result, obtain reduced benefits for their investments in information technology. Strategic planning enables organizations to find a balance between immediate and long-term needs. It follows that the process for the development of a strategic plan needs to take the same considerations into account.

3.2 - Plan Development

NexLevel is committed to the concept that information technology needs and priorities should be aligned with business needs and priorities. While there are a number of means to accomplishing this alignment, the most effective is to integrate business planning and technology planning within a common framework, and this is the basis for our project prioritization workshop where technology priorities are set by the organization's business stakeholders.

Figure 6, Planning and Prioritization Process, depicts the methodology that was used in the development of the project roadmap that is the core of the ITSP.

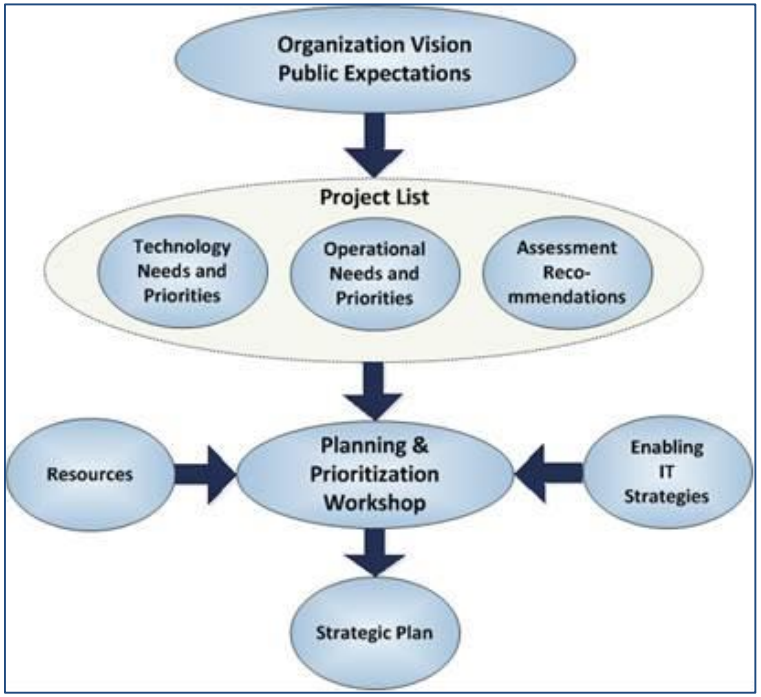


Figure 6 – Planning and Prioritization Process

The inputs to the project prioritization process included:

- The organization's vision (business direction and priorities) and public expectations
- The operational and technology needs and priorities that were identified by the City's stakeholders and the recommendations presented in the IT Assessment document. Detailed descriptions of identified projects are provided in the Appendix of this report
- Although staff resources most commonly come to mind (and indeed, staff resource availability is often a critical

limiting component in planning technology projects), project funding, particularly the ability to provide stable funding for information technology over the course of the ITSP, is similarly critical

- Emerging technologies and developments can facilitate the achievement of the City's priorities, some of which are only now being developed.

3.3 - Information Technology Trends

As mentioned previously, it can be insightful to examine information technology trends to establish a framework for strategic planning. Assessing the successful application of these technologies by other governmental entities can be helpful to the City in its on-going planning efforts. Technology developments, when applied to business needs, will assist the City in meeting the demands of its constituents, while operating in a fiscally sound and cost-effective manner.

NexLevel believes emerging technology trends should be at the forefront of the planning process, helping enable the City to continually improve its ability to deliver IT services more effectively and to get more value (i.e., quality and productivity) from existing staff resources and external service providers. Some of the more noteworthy trends include:

➲ Integration of Operational and Technology Planning

Planning documents often speak to the need to align technology plans and directions with business or operational needs and priorities – generally this implies a two-step process in which operational plans are developed and then technology plans are crafted to support them. NexLevel believes that this process is not as effective as it could be since the transformative impact of technology should be considered in the course of developing business plans, not afterwards. Industry best practices and research confirm that organizations that integrate business and technology planning in a common framework achieve better results than those that do not.

➲ Resource Management

The governance of the use of technology has multiple levels. At the simplest level, governance is generally concerned with promoting the coordination of information technology priorities, directions, and objectives across the organization to prevent siloed projects that are undertaken without full consideration of organization-wide processes or existing investments. At more complex levels, governance becomes concerned with the long-term allocation of IT and departmental resources (budget, staff resources, and technology resources) to obtain higher returns on the organization's investment in technology and to ensure that the organization has a sustainable funding model for information technology.

One of the paradigm shifts related to the adoption of higher levels of governance is related to viewing technology costs in terms of programs (i.e., looking at all costs related to the use of a technology including initial capital / acquisition costs, support costs, enhancement costs and replacement costs) over its lifespan rather than in terms of individual projects. The development and maintenance of program costs for technology is a key component in the development of sustainable funding plans.

➲ Electronic Document / Content Management

Electronic Document / Content Management systems are enabling technologies that make workers more effective by reducing their need to perform non-value added document-related tasks and minimizing their dependence on paper documents.

➲ User-Centric Service Delivery

Technology organizations need to look at service delivery from a user / customer-centric perspective rather than by functional and/or organizational silos. User-centric organizations are based on cross-functional teams that include a variety of team members with different skill sets working together to deliver services. These organizations provide IT services by providing information and system access when and where they want it, thus empowering users. IT delivery teams in these organizations are generally led by "Customer Service Team Leaders" and supported by a Customer Service Manager and senior IT managers, who allocate IT staff members to the cross-functional teams.

➲ Strategic Sourcing / "Cloud" Services

Strategic sourcing is based on the concept of obtaining and using the most effective service provider to respond to user needs and enabling permanent IT staff members to focus on high-priority, high-value tasks and technologies while allocating non-mission critical "utility" functions that require less organization-specific knowledge to lower-cost service providers. For many organizations in both the public and private sector, so-called "cloud" based services including infrastructure as a service (IaaS), desktop as a service (DaaS), and software as a service (SaaS), offer an alternative to initial capital expenditures, the recruitment of additional staff members or the procurement of traditional staff-supplementation services (contractors).

Organizations tend to keep mission-critical applications or applications that contain highly-confidential information in-house while sourcing utility functions to reduce costs and to achieve a higher degree of consistency in service delivery. Key benefits of sourcing include:

- The ability to obtain services under the terms of a service level agreement
- The ability to obtain service coverage for extended hours of operation, including 24x7.

➲ Mobile Computing and the "Consumerization" of IT

Together, mobile computing and the "consumerization" of IT trends represent a significant opportunity to improve the effectiveness and timeliness of service to the public; however, they are also vexing for enterprise IT planners since users need access to enterprise information and services from portable devices that are subject to loss and damage using public networks that are not secure, and they are increasingly doing so with devices of their own choosing, adding complexity (and thus cost) to the process of mobile device management and potentially exposing the enterprise to cyber-attacks.

Nonetheless, mobile computing is a "game changer" in the public sector, enabling information to be entered or updated on a real-time basis and eliminating the need to capture information on paper or offline and then enter or upload the information in the office, and providing real-time information access when it is most needed (i.e., in responding to incidents and emergencies).

➲ Organizational Change Management

Increasingly, organizations find that organizational change management (OCM) is a critical component in obtaining long-term benefits from the implementation of enterprise systems (business applications) which are intended to improve operations or minimize the impact of implementation activities on daily operations. OCM provides a framework for assessing the impacts and managing the effects of a project or system implementation on existing business

processes, changes in organizational structure, or changes in culture (including changes in focus and change in performance metrics).

Although OCM has its roots in the private sector, it has become more visible in the public sector as executives have fewer tools (such as bonuses and other incentives) to get line managers and staff to initially buy into change and remain committed. OCM places a focus on improving communication, setting expectations, and working to minimize the impact of misinformation. This has proven to be particularly critical in dealing with represented classes of employees. The implementation of effective OCM capabilities has become a critical factor in enabling organizations to maximize the value that they receive from the implementation of enterprise systems.

➲ Project Management Office (PMO)

Project Management is generally regarded as a tactical activity whose primary function is to record project progress and to generate status reports. While this is an important component of project management, the overall scope of project management has greatly expanded with the need to implement enterprise-level and mission-critical information technology projects.

Whereas the focus of project management in the past was on milestones and deliverables, enterprise projects require additional focus on communication and collaboration and require a more strategic form of project management that includes:

- Collaborative project planning
- Change and issue management
- Risk management
- Resource management
- Contract and vendor management
- Communication management

A staff member who has limited, but suitable experience and/or a professional certification in project management may capably perform the tactical aspects of project management as part of their current job duties. However, they may be challenged to perform the more strategic aspects of project management which require significant experience (management and technical knowledge), strong interpersonal and communication skills, as well as application functional experience.

These individuals, often referred to as senior project managers, tend to be highly paid and highly sought after. Few agencies can afford to have a senior project manager for every enterprise or mission-critical technology project, so they tend to form a “Project Management Office”, or PMO, where a single senior project manager provides guidance, assistance, and oversight for less experienced staff members and serve as a trusted project resource for senior management.

There a number of approaches for the implementation of a PMO or to provide similar services for the organization including:

- Having the organization’s IT Manager perform the PMO function with the assistance of staff
- Having a dedicated PMO staff within the information technology organization
- Obtaining PMO services from an external service provider on an as-needed basis

3.4 – IT Plan Enablers

Introduction

As the City begins the implementation of projects identified in the ITSP, NexLevel recommends that the following critical factors be addressed as quickly as possible. It is NexLevel's opinion that, if the City does not proactively address them, existing issues will persist, and the ability to implement the ITSP will be at best hindered, and at worst, be completely hampered.

These enabling recommendations are the foundation upon which the execution of the ITSP is built and each is addressed in the remainder of this section.

Technology Governance

Technology strategic plans are often likened to roadmaps in that they chart the optimal route for an organization from where they are today ("the current state") to where they need to be ("the target state"); however, there are other similarities as well. Just like any trip, the destination may change as may the stops along the way, and as anyone who has travelled with family knows, there are often those who ask questions:

- "Do we really have to go?"
- "Are we there yet?"
- "Can we get there faster?"

These questions are all too familiar to organizations that are working to transition their technology environments to a target state, and underscore the critical role that technology governance, coupled with well-defined and measurable objectives, plays in the transformation of technology environments. Governance comes into play in the definition of the target state and the interim objectives as well as in the prioritization of the individual projects that comprise the roadmap and in the assignment of resources to the projects.

Technology governance is generally defined as the leadership, communication structure and processes that ensure the organization's information technology sustains and extends its business strategies and objectives. More specifically, governance helps ensure that:

- Technology priorities and funding are aligned with the business goals and objectives (strategic alignment)
- Technology is a business enabler and maximizes benefits (performance measurement)
- Technology resources are used responsibly (resource management)
- Technology risks are managed appropriately (risk management)
- Technology delivers value to the organization (value delivery).

Critics often complain that technology governance stifles organizational agility; however, the reality is that the converse is true: it enables organizational agility by allowing organizations to allocate their technology resources to the most critical projects and to keep technology objectives aligned with business objectives and priorities.

Yet despite the vital nature of technology governance, organizations often struggle to establish and maintain it. Part of the problem is that technology is still relatively new compared to the traditional functions of organizations and the need for technology governance is not engrained in organizational culture in the same way as budgeting, for example. Just as it is not possible to run an

organization without having well-defined procedures for budgeting, technology governance is vital for organizations that need to obtain the highest possible return for their investment in information technology. Governance is the key factor that transforms a technology strategic plan from being "shelfware" to being a tool to drive organizational effectiveness.

In the absence of a formal IT governance process, decisions regarding technology directions and priorities can be inconsistent, leading to the diversion of resources from long-term infrastructure projects, additional costs, delays, false starts, the adoption of applications and technologies that seem promising at first but that are dead-ends, and disagreement among departments as to the allocation of scarce resources. An ad-hoc process also makes it difficult to ensure the alignment of technology plans and priorities with its long-term goals. The key difference in a collaborative IT governance process is that the stakeholders, and not the IT organization, are responsible for the success of technology projects. As a result, more often than not, obstacles are overcome and projects succeed.

The need for an effective approach to IT governance is driven by a number of additional factors, including:

- Organizations need to change to remain effective. The research is compelling that organizations that integrate business and IT planning under a common framework utilize technology more effectively and are more agile and responsive
- The public is increasingly aware of the cost of technology initiatives and public officials are exposed to criticism when these projects take longer than expected, involve additional costs, or do not meet their intended goals
- Applications are less siloed today than they were in the past. Applications are either increasingly dependent on the timely exchange of accurate information with other applications or used by multiple departments resulting in not just the integration and sharing of data, but the integration of business processes as well. When organizations consider replacing legacy applications, they need to find and maintain a balance between: (i) applications that are a better fit for departmental requirements and processes; and (ii) enterprise applications that provide economies of scale and facilitate the sharing of information, but that provide less flexibility in meeting departmental requirements
- Policy makers increasingly need real-time access to information and performance metrics
- Increased public demands for information have led to a greater need for transparency
- The increased deployment of public-facing applications including web pages, mobile apps, kiosks, and IVR systems not only makes the public aware of information system and service outages, but also of data accuracy and timeliness issues
- Finally, effective IT governance enables the IT organization to act as a change agent, rather than as a regulator telling users what they can and can't do.

The scope and responsibilities of an effective technology governance structure should include:

- **Oversight of the Strategic Technology Plan:** Provide input to, and review of, technology project priorities and timelines

- **Strategic Direction/Alignment:** Provide input and feedback relative to each planned activity. This dialog will ensure appropriate priority and efficient and effective use of technology systems and services
- **Technology Project Review:** Review of technology projects for consistency and compliance with plans to ensure business systems are supported by the existing platforms and that they can be easily integrated, as needed, with other applications
- **Policy Guidance and Enforcement:** Review of technology policies and guidelines, approval of policies, and communication to staff to ensure compliance
- **Foster Communication:** Provide a forum for the interchange of ideas, review of technical implementations, and facilitation of intra-departmental communications.

And finally, an effective technology governance structure must play a pivotal role as the implementation of the technology plan progresses. Just as in any trip, priorities may change and obstacles may be encountered; technology governance is needed to make informed decisions as to how best to allocate resources, re-align projects, and ensure the plan is a "living" tool and does not become "shelfware".

Executive Leadership

Whereas technology organizations were previously responsible for implementing and maintaining the infrastructure and centralized applications, these same organizations must now be service managers and service brokers in addition to service providers. In the past, network, systems, and database administrators were the core of IT organizations. Today, business analysts and project managers are needed to support departments with hybrid technology environments that include centralized, departmental, and cloud-based applications. This necessitates changes in how IT organizations are managed, staffed, and funded.

The most profound change in information technology has not been the shift from on-premises computing to the cloud, but rather the shift from using IT as a back-office productivity tool to using IT as an integral (and often mission-critical) component of how the organization delivers services to departments (users).

When technology was a back-office utility function, the general goal was to provide these services at the lowest possible cost and downtime was an inconvenience. Today, with IT being an integral component of service delivery system, downtime is readily evident and has an immediate impact on the organization's ability to deliver services.

In order to provide an enterprise perspective, it is important for organizations to make informed decisions regarding technology expenditures, where to spend the money, when, and on what. Organizations that do not have processes for technology management may survive, even thrive, but research has confirmed that:

- Organizations that align their IT strategies with their overall strategic business objectives obtain greater value (measured in terms of the return on investment (ROI)) for their investments in information technology than those that do not
- Organizations that integrate IT planning and business planning under a common framework do better still.

The successful implementation of organizational and procedural changes must take into account behavioral and organizational culture factors as well. Change, even change that is ultimately

beneficial, is subject to resistance, and skepticism. Ultimately, the changes that prevail are those that:

- Have strong executive sponsorship
- Have immediate and tangible benefits and are "owned" by management and staff
- Become anchored in the culture of the organization (what has been called the "new normal").

Executive management's role in regard to change and the use of technology comes down to what's best for the organization as a whole. Without direct involvement of senior management, the effects of poorly managed technology include:

- Significant expense that may have been avoided
- Ineffective (or no) application Integration
- Failure to meet City-wide business goals
- Inability to stop projects early
- Failure to consider new technology and services.

3.5 - Development of the Project Roadmap

Figure 7, Development of Project Roadmap

Figure 7, Development of Project Roadmap, depicts the steps involved in the ITSP creation process, each of which is discussed below.

Project Descriptions

Throughout the course of the project, City-wide, departmental, and information systems projects were identified and documented by NexLevel. A list of the proposed information technology projects, identifying each project's sponsor, its scope, objectives, benefits, and drivers is provided in the Appendix to this report.

Project Assessment

NexLevel developed an assessment of the relative level of effort, level of risk, cost, and business value for each of the projects in the project list. Table 4 - Estimated Cost, Risk, Level of Effort, and Business Value, provides a summary of each project's potential cost, level of effort, level of risk, and business value, as well as an assessment of project weighting based on the level of effort, risk, and business value.

For each of the projects identified, the table provides:

- Project title and owner / sponsor
- Project status (In Progress or New)
- The estimated level of effort (1=Low, 3=Medium, 5=High)
- The estimated level of risk (1=Low, 3=Medium, 5=High)
- The estimated cost, low to high, in $000's
- The estimated business value of the project based on the degree to which the project contributes to:
  - Community engagement
  - Business enhancement
  - Cost reduction
  - Technology replacement

Each of these has been rated (1=Low, 3=Medium, 5=High), and a total score has been derived based on the average of the five factors

- A project weighting based on the level of effort, level of risk, and business value, on a scale of 1 to 10, with 10 representing a project with the maximum combination of level of effort, risk, and business value.

Project Prioritization Workshop

On September 1, 2016, NexLevel met with the City's IT Manager to develop a prioritization framework for the proposed information technology projects that were identified during the IT Assessment activities. Of critical importance during this meeting was the prioritization of projects in order of overall importance to the organization, while also acknowledging and taking into account the limited IT resource availability for project implementation. NexLevel, City IT and management continued to refine the project schedule over the subsequent months, and it was finalized in February 2017.

Figure 8, Project Roadmap, depicts the results of the prioritization workshop.

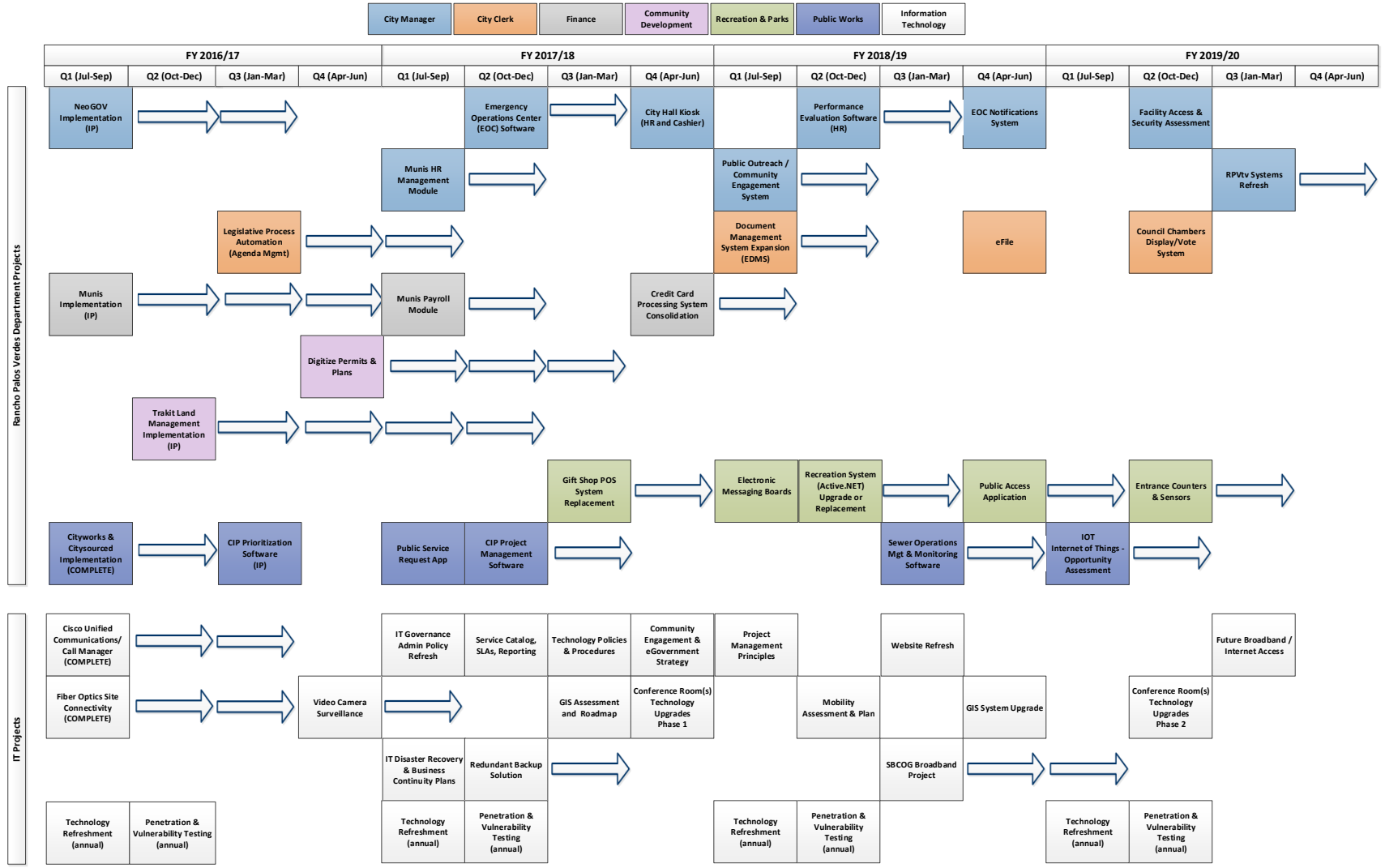
Table 4 – Estimated Cost, Risk, Level of Effort, and Business Value

Project Title (This worksheet formatted for Legal Size printing.)	Owner/Sponsor	Status (IP - In Progress, H - Hold, C - Complete, N - New, NS - Not Started)	Level of Effort (1=Low, 3=Med, 5=High)	Risk (1=Low, 3=Medium, 5=High)	Est. Cost - Low Range (in thousands)	Est. Cost - High Range (in thousands)	Assessment of Business Value 1=Low 3 = Medium 5=High					Assessment of Priority Weighted Scoring					Notes
							Community Engagement	Business Enhancement	Cost Reduction	Technology Replacement	Cumulative Business Value	60% Level of Effort	40% Risk	100% Business Value	Weighted Score (1 to 10)	Mid-Range Cost ($000's)	
"In-Process" Projects																	
Automashion CIPS - CIP Prioritization and Tracking Software	Public Works	IP	3	3	$ 8	$ 10	3	5	3	1	3.0	1.8	1.2	3.0	3.0	$ 9	
Electronic Messaging Board	Recreation & Parks	H	1	1	$ 80	$ 120	5	1	1	1	2.0	3.0	2.0	2.0	3.1	$ 100	
Munis Implementation	Finance	IP	5	5	$ 400	$ 450	3	5	3	5	4.0	0.6	0.4	4.0	3.0	425.0	
NEOGOV Implementation	City Manager (HR)	IP	3	1	$ 10	$ 15	5	5	3	1	3.5	1.8	2.0	3.5	3.6	12.5	
Penetration & Vulnerability Testing	IT	IP (Annual)	5	5	$ 5	$ 10	1	5	1	1	2.0	0.6	0.4	2.0	1.7	$ 8	
Technology Refreshment	IT	IP (Annual)	1	3	$ 75	$ 100	3	3	1	5	3.0	3.0	1.2	3.0	3.5	$ 88	
TRAKiT Implementation	Community Development	IP	5	5	$ 440	$ 500	5	5	3	5	4.5	0.6	0.4	4.5	3.3	470.0	
			Total		$ 1,018	$ 1,205										$ 1,111	
"New" Pending Projects																	
ACTIVE.NET Replacement Assessment	Recreation & Parks	N	5	5	$ 10	$ 15	5	5	1	5	4.0	0.6	0.4	4.0	3.0	$ 13	
Agenda Management Automation	City Clerk	N	3	1	$ 15	$ 20	1	3	3	1	2.0	1.8	2.0	2.0	2.6	$ 18	
CIP Project Management Software	Public Works	N	3	3	$ 20	$ 30	3	5	3	1	3.0	1.8	1.2	3.0	3.0	$ 25	
City Broadband Project	SBCOG	N	3	1	$ -	$ -	5	5	1	5	4.0	1.8	2.0	4.0	3.9	$ -	Cost estimate for this item TBD pending scope definition
City Hall Kiosk	City Manager	N	1	1	$ 10	$ 15	5	5	1	1	3.0	3.0	2.0	3.0	3.7	$ 13	
Council Chamber Display / Vote System	City Clerk	N	3	3	$ 15	$ 25	5	5	1	5	4.0	1.8	1.2	4.0	3.7	$ 20	
Credit Card Processing System Consolidation	Finance	N	3	3	$ 5	$ 10	3	5	3	5	4.0	1.8	1.2	4.0	3.7	$ 8	
Digitizing of Historical Permits and Plans	Community Development	N	3	1	$ 100	$ 150	3	5	3	1	3.0	1.8	2.0	3.0	3.3	$ 125	Actual cost depends on volume of documents converted
eFile	City Clerk	N	3	3	$ 10	$ 15	5	5	3	1	3.5	1.8	1.2	3.5	3.4	$ 13	
EDMS Expansion	City Clerk	N	3	3	$ 15	$ 20	3	5	3	1	3.0	1.8	1.2	3.0	3.0	$ 18	
Emergency Operations Center (EOC) Software	City Manager	N	3	3	$ 25	$ 30	5	3	3	1	3.0	1.8	1.2	3.0	3.0	$ 28	
Entrance Sensors & Counters	Recreation & Parks	N	1	3	$ 20	$ 25	5	3	1	1	2.5	3.0	1.2	2.5	3.2	$ 23	
EOC Notifications System	City Manager	N	3	3	$ 15	$ 20	5	5	3	1	3.5	1.8	1.2	3.5	3.4	$ 18	
Facility Access & Security Assessment	City Manager	N	3	1	$ 15	$ 25	1	3	3	1	2.0	1.8	2.0	2.0	2.6	$ 20	
Gift Shop POS System Replacement	Recreation & Parks	N	1	1	$ 5	$ 10	5	5	1	5		3.0	2.0	-	1.7	$ 8	
HR Module in Munis	Finance	N	5	5	$ -	$ -	3	5	3	5	4.0	0.6	0.4	4.0	3.0	$ -	The cost for this was included in the Munis implementation project
IT Governance	City Manager	N	1	1	$ 20	$ 25	1	3	1	1	1.5	3.0	2.0	1.5	2.7	$ 23	
Internet of Things (IoT)	Public Works	N	1	3	$ 75	$ 100	1	3	3	1	2.0	3.0	1.2	2.0	2.9	$ 88	
Performance Evaluation Software	City Manager (HR)	N	3	1	$ 5	$ 10	1	5	3	1	2.5	1.8	2.0	2.5	2.9	$ 8	
Public Access Application	Recreation & Parks	N	3	3	$ 10	$ 15	5	1	3	1	2.5	1.8	1.2	2.5	2.7	$ 13	
Public Outreach / Community Engagement	City Manager	N	3	1	$ 10	$ 15	5	3	3	1	3.0	1.8	2.0	3.0	3.3	$ 13	
Sewer Operations Mgt. & Monitoring Software	Public Works	N	3	5	$ 20	$ 50	3	3	1	1	2.0	1.8	0.4	2.0	2.2	$ 35	
			Total		$ 420	$ 625										$ 523	

Table 4 – Estimated Cost, Risk, Level of Effort, and Business Value (continued)

Project Title (This worksheet formatted for Legal Size printing.)	Owner/Sponsor	Status (IP - In Progress, H - Hold, C - Complete, N - New, NS - Not Started)	Level of Effort (1=Low, 3=Med, 5=High)	Risk (1=Low, 3=Medium, 5=High)	Est. Cost - Low Range (in thousands)	Est. Cost - High Range (in thousands)	Assessment of Business Value 1=Low 3 = Medium 5=High					Assessment of Priority Weighted Scoring					Notes
							Community Engagement	Business Enhancement	Cost Reduction	Technology Replacement	Cumulative Business Value	60% Level of Effort	40% Risk	100% Business Value	Weighted Score (1 to 10)	Mid-Range Cost ($000's)	
IT Projects																	
Community Engagement & eGovernment Strategy	IT	N	3	3	$ -	$ 5	5	3	1	1	2.5	1.8	1.2	2.5	2.7	$ 3	
Conference Room(s) Technology Upgrades	IT	N	3	1	$ 15	$ 20	1	3	1	3	2.0	1.8	2.0	2.0	2.6	$ 18	
Future Broadband / Internet Access	IT	N	3	3	$ -	$ -	5	5	1	5		1.8	1.2	-	1.0	$ -	Cost estimate for this item TBD pending scope definition
GIS Roadmap	IT	N	3	3	$ 10	$ 20	3	3	1	3	2.5	1.8	1.2	2.5	2.7	$ 15	
IT Disaster Recovery & Business Continuity Plans	IT	N	5	5	$ 20	$ 30	3	5	1	1	2.5	0.6	0.4	2.5	2.0	$ 25	
Mobility Assessment & Plan	IT	N	3	3	$ 5	$ 10	3	5	1	3	3.0	1.8	1.2	3.0	3.0	$ 8	
Project Management Principles	IT	N	1	1	$ -	$ 5	1	5	3	1	2.5	3.0	2.0	2.5	3.4	$ 3	
Redundant Backup Solution	IT	N	3	3	$ 25	$ 50	1	3	1	3	2.0	1.8	1.2	2.0	2.4	$ 38	
Service Catalog, SLA's & Reporting	IT	N	3	1	$ 5	$ 10	1	5	1	1	2.0	1.8	2.0	2.0	2.6	$ 8	
Technology Policies & Procedures	IT	N	3	3	$ -	$ 5	1	5	1	1	2.0	1.8	1.2	2.0	2.4	$ 3	
Video Camera Surveillance	IT	N	3	1	$ 20	$ 30	3	3	3	1	2.5	1.8	2.0	2.5	2.9	$ 25	
Website Refresh	IT	N	3	1	$ 10	$ 20	3	3	1	3	2.5	1.8	2.0	2.5	2.9	$ 15	Standard planned refresh of the look and feel
			Total		$ 110	$ 205										$ 158	
			Grand Total		$ 1,548	$ 2,035										$ 1,791	

Figure 8 – Project Roadmap



4 - Conclusion

Information Technology Building Blocks

In closing, it is appropriate to comment on the nature of information technology and the establishment of a foundation for the effective use of business application systems. Figure 9, Information Technology Expenditures and Return on Investment, depicts the relationships between the components of an organization's information technology infrastructure, the organization's cumulative total cost of ownership (TCO) for information technology, and the return on investment (ROI) for those expenditures.

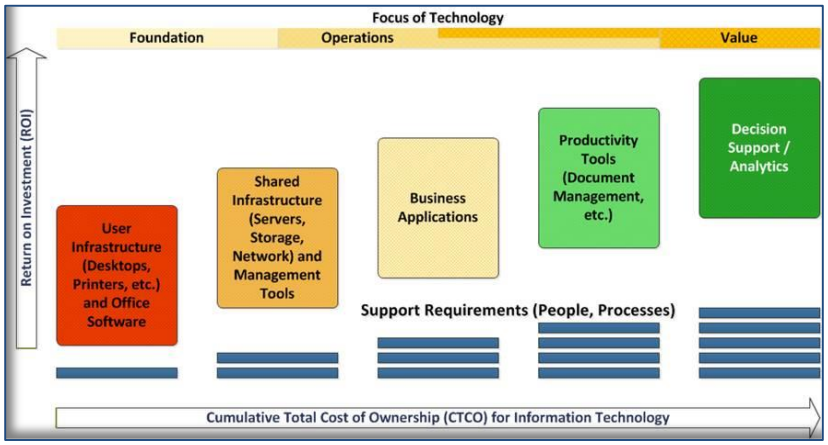


Figure 9 – Information Technology Expenditures and Return on Investment

The implementation of any end user business application (and the ability for an organization to realize its benefits) is dependent on the successful implementation and the supporting components of the information technology infrastructure, including the shared infrastructure (i.e. servers and storage devices), end user infrastructure such as desktop PCs, and enabling technologies.

Weaknesses in any of these supporting components can significantly impede the effectiveness of a business application by reducing availability, performance, and reliability. Faced with an application that is slow or not available when needed due to infrastructure issues, users often resort to the use of ad-hoc databases and spreadsheets. These "shadow IT" applications defeat the basic reasons for implementing an integrated business suite in the first place and further reduce the organization's ROI while introducing significant security and data consistency issues.

It is thus important for the City to look at its overall technology environment at a high level and ensure that the foundation for all applications remains solid.

The ITSP is a valuable tool to ensure technology is procured, implemented, and managed in a cost-effective approach that maximizes the benefits to the City and its customers.

Technology Resources

The ITSP strives to set reasonable expectations as to when the projects will be initiated and completed. However, a project's eventual start date will be driven based on factors that cannot be predicted at this time including funding, budget approval, available resources, and contingencies. While the intent of the ITSP is to support the City's budgeting process by providing direction and input necessary to justify expenditures, it is not meant to include detailed specifications, requirements, or recommended vendor solutions. The ITSP assumes that City staff will follow appropriate planning and procurement processes for each project that include

activities such as detailed requirements analysis, formal evaluation and selection, and implementation methods.

As projects are initiated, staff resources will need to be allocated as appropriate. The City may find it necessary to supplement existing resources with consultants, temporary personnel, and other vendor staff. This will be particularly important during the implementation of complex systems which may require both current operational personal and supplemental staff for testing and implementation.

Information Technology Strategic Planning as a Process

The ITSP is the result of a comprehensive, City-wide planning effort that provided the opportunity for management and staff to review, discuss, and integrate their technology needs into a common framework. It seeks to provide a common understanding of the City's technology priorities and serves as a tool to provide an overall picture of what is to be accomplished and why.

While the creation of the ITSP represents the culmination of only one step in the planning process, it also marks the beginning of another step – one through which City leaders must work together to create an environment that supports the ITSP. The City must now work closely together, communicate, and be supportive as they begin a journey to create an organizational sense of purpose that goes much deeper than any vision statement, mission statement, or plan can communicate.

Support for the ITSP will need to come in terms of priorities, dollars, policies and practices. Successful implementation may mean making compromises, and it will mean exercising patience, taking an organization-wide perspective, and maintaining a continued focus on revising the plan as events take place. And finally, it will take cooperation, communication and flexibility to adapt to changing needs, technologies and resources.

5 - Appendix

Project Descriptions

The project descriptions provide the initial list of projects that were identified by the City during the ITSP process. Please note that as the project roadmap was refined, some projects were:

- Added
- Completed
- Combined with other projects
- Deleted by the participants in the Project Prioritization Workshop

For each project the appendix provides:

- Status of the Project (Completed, In Progress or New)
- Project Title
- Project Owner(s)
- Project details, including:
  - Description
  - Objectives / Benefits
  - Driver(s)

Status	Project Title / Owner	Details
Complete	**Cisco Unified Communications/Call Manager** **IT**	**Description:** The City's Microsoft Lyncs VoIP (Voice over IP) telephone system does not meet the needs of the City departments as it lacks support and functions of the previous system. Staff have indicated that simple tasks such as transferring a call now takes multiple steps and other features are more cumbersome. Cisco Call Manager has been selected as the result of an RFP process and was recently implemented. **Note that this project had been in progress and was completed during the IT strategic planning process.** **Objectives / Benefits:** The new system will provide the features, functionality, and ease of use to meet the City's needs, better system support, and a more user-friendly experience for the public. **Drivers:** Increased efficiency and provide enhanced experience for the staff and public interaction when using the City phone system.
Complete	**Cityworks Implementation** **Public Works**	**Description:** The Public Works department has recently completed Phase I of implementing the Cityworks Work Order Management System. This project is to complete installation of the core system modules to meet the department requirements specified through procurement. After the initial go-live of the system, additional features and system functionality will be leveraged for Phase II, including access via mobility by other departments to complete internal service orders and to track the status through the use of the "CitySource" app. The solution will be leveraged for Asset Management Maintenance in the department in the future. **Note that this project had been in progress and was completed during the IT strategic planning process.** **Objectives / Benefits**: The Cityworks system will streamline the recording, tracking and managing of service activities (work orders) and reporting for the department. The system will assist in department resource scheduling and associated time keeping, managing preventative maintenance activities, provide inventory management, and allow field workers access from the mobile technology. **Drivers:** Provide tools to replace departmental manual processes with electronic automation which will increase efficiencies and productivity.

Status	Project Title / Owner	Details
Complete	**Fiber Optics Site Connectivity** **Public Works / IT**	**Description**: This project is to continue the installation of fiber to the remote City sites by using the street fiber currently being installed as part of a CIP project (Stoplight Synchronization) by Public Works. **Note that this project had been in progress and was completed during the IT strategic planning process.** **Objectives / Benefits:** The remotes sites will benefit from increased connectivity speed and reliability through the use of the fiber cabling. The fiber installations will additionally support the security camera system requirements. **Drivers**: Increased bandwidth, speed and reliability.
In Progress	**Automashion CIPS CIP Prioritization and Tracking Software** **Public Works (Engineering)**	**Description:** The Public Works Engineering group working with the IMAC committee has developed specifications for a system that will track and prioritize CIP projects. The system is currently functional and expected to be fully implemented in April 2017. **Objectives / Benefits:** Allow for weighting and open discussion of project priorities between staff, IAC and City Council. Also allows for the tracking of a wide variety of information associated to CIP projects. **Drivers:** Efficiency, communications, tracking and better reporting.
In Progress (On Hold)	**Electronic Messaging Boards** **Recreation & Parks**	**Description:** Electronic message boards were proposed for two sites (Hesse Park and City Hall). City Council showed an interest in the implementation, but put them on hold temporarily. When started, the implementation will require software, connectivity, and future on-going support. **Objectives / Benefits:** To provide electronic signage to assist in communications with the public for City activities, announcements, event directions, closures and or emergency information. Provides visual signage and specific messaging as needed. **Drivers:** Additional means for dissemination of City information, announcements, directions and alerts.

Status	Project Title / Owner	Details
In Progress **(Finance – complete; HR – In Progress)**	**Munis Implementation** **Finance**	**Description:** This project is to complete implementation of the Tyler Munis Enterprise Resource Planning (ERP) system that will replace the current Sungard - Naviline solution. Finance has recently completed the implementation of the financial and accounting modules. The rollout also includes transition of the City human resources and payroll processes from ADP to the Munis modules. The new system will include business process improvements through automated workflows, mobile connectivity, enhanced reporting and integration to other City enterprise solutions. **Objectives / Benefits:** Provide the City with a robust ERP solution to support day-to-day financial business processes, personnel /employee lifecycle management and ease of access to ERP data through reporting tools. The cloud based solution provides for vendor oversight of hardware and release upgrades. **Drivers:** To provide newer technology to enhance the management of financial operations, provide avenues for effective electronic processing, ease of access to data and transparency.
In Progress	**NEOGOV** **City Manager (HR)**	**Description:** The City recently contracted with NEOGOV and is in the initial phase of implementing the Recruitment/Applicant Processing phase of the project to streamline and assist in the open position/applicant management steps at the City. The City will follow the Phase l go-live with Phase II - On Boarding to streamline the new hire process for new employees and plans on an interface to Munis to eliminate redundant data entry. **Objectives / Benefits:** Provide efficiencies through on-line self-service portal for the recruiting and application to hire processes at the City. In Phase II, new employee processing forms, mandatory video training, insurance processing, etc. can be managed and processed electronically via workflows within the NEOGOV system. **Drivers:** Replace the manual applicant/hire processes and eliminate redundancy in data entry.

Status	Project Title / Owner	Details
In Progress **(Annual)**	**Penetration & Vulnerability Testing** **IT**	**Description:** The City should continue to routinely contract with an independent, certified, firm to conduct external network vulnerability and penetration tests to identify security gaps and identify areas for improvement. **Objectives / Benefits:** Routine penetration and vulnerability testing is a framework to plan for the prevention, detection, and remediation of intrusion attempts or other vulnerabilities to prevent network failure, loss of data and other security intrusion. **Drivers:** To assure that the City network is secure and continually improved to address new vulnerabilities as identified.

Status	Project Title / Owner	Details
In Progress **(Annual)**	**Technology Refreshment** **IT**	**Description:** As part of the IT Assessment, it is recommended that the City establish a technology equipment and infrastructure replacement plan. This project is to complete a refreshment plan and should include a replacement schedule to ensure that all City computer / hardware equipment is regularly refreshed and the City infrastructure is maintained. **Objectives / Benefits:** Validate the Citywide inventory of IT supported computer desktop hardware, peripheral equipment, infrastructure and establish a plan and regular fund for replacements, upgrades and improvements. This equipment may include but is not limited to communications equipment, servers, data storage, desktop and laptop computers and operating systems, etc. **Drivers:** To help assure a reduction in down time due to old equipment and improve user productivity with better operating machines on a regular basis.
In Progress	**TRAKiT Implementation** **Community Development**	**Description:** City Council has recently approved replacing the current Tidemark solution. The new SunGard - TRAKiT system will support the building permits, planning, review and inspections processes involved in the City land management activities. The future system should include replacement of the custom Crystal reports currently used by the department. **Objectives / Benefits:** With the implementation of a new system, the City will gain efficiencies through automated electronic processing for the public and internal staff via forms and workflow, on-line applications, payments, automated IVR/online request for inspection scheduling and status look-up. The new solution will provide for field mobility for City staff to access data and complete updates while in the field. In addition, the system should be leveraged for different permit types issued at the City. (i.e. Special Events, Filming, etc.) The system will provide for integration capabilities to other City systems for sharing of data and eliminate redundancy of data entry. Associated to this implementation is the digitizing of the historical permits, and associating them to the parcel in TRAKiT. **Drivers:** Replace older software solution that will provide for productivity enhancements for the City staff and the public customer.

Status	Project Title / Owner	Details
New	**ACTIVE.NET Replacement Assessment** **Recreation & Parks**	**Description:** The current ActiveNet Recreation Software system has been identified as potentially in need of replacement. This project is to complete a formal review and assessment to determine whether to upgrade from Class to Active.net or procure a new system to support the future needs of the City. **Objectives / Benefits:** To define the department's requirements for City classes and activities management, and facility management and rentals. A new system could support additional department functional areas including future volunteer management, pass and membership oversight, parks equipment inventory and usage, donations, etc. **Drivers:** Identify a best fit replacement software solution to allow the department to support services to the community.
New	**Agenda Management Automation** **City Clerk**	**Description:** The City Clerk staff currently use Granicus for City meeting video and agenda management but the generation, review and approval of reports to Council are still managed outside of the systems. (The staff report generation and approval process uses a set of network file folders.) This project would look at what additional processes would benefit from leveraging the Granicus suite of products and simplify additional pre-meeting, meeting and post meeting processes. **Objectives / Benefits:** Research the possibilities to leverage additional Granicus modules (i.e. Minutes Maker, Speaker Management, Electronic Voting with Vote Record Display, Legislative Items Tracking, Boards and Commissions Management, etc.) to leverage a single interfaced solution. **Drivers:** A consolidated system will provide efficiencies in the legislative processes at the City.

Status	Project Title / Owner	Details
New	**CIP Project Management Software** **Public Works (Engineering)**	**Description:** The Public Works Engineering group has recently implemented the Automashion CIPS system that ranks and weights CIP projects, tracks information and reports on for the engineers and IMAC advisory committee, but would benefit by an application for project management, financials, etc. As part of the review of software supporting this area the staff have requested project management software to track projects and consolidate associated data, to provide status reporting of the projects and enhanced data sharing internal and externally. **Objectives / Benefits:** Consolidate multiple systems and assist in the streamline of data entry redundancy and oversight of the City Capital Improvement Projects. **Drivers:** Greater efficiency and better reporting.
New	**City Broadband Project** **SBCOG**	**Description:** The South Bay Council of Government (SBCOG) is working on a project in coordination with all of the affiliated cities to form a City owned broadband (fiber optic) network throughout the area, to be used by agencies and business for high speed internet access. **Objectives / Benefits:** Provide inexpensive high speed internet service to government agencies, (municipalities, schools, agencies) throughout the area, but can also be leased commercially to attract business or other economic activities (leasing dark fiber, etc.). **Drivers:** Future infrastructure planning.
New	**City Hall Kiosk** **City Manager**	**Description:** This project is to identify current processes that would be enhanced by inclusion in a Lobby Kiosk(s). The kiosk would provide citizens with directional and status information on City department services, allow for online payments or looking up information, applying for employment, and assist in guiding the public in steps through a process. **Objectives / Benefits:** The goal is to provide accessibility to those that do not have access to a computer via a City kiosk and provide for self-service of information or processes. **Drivers:** Easier Public access to City data and self-service events where possible.

Status	Project Title / Owner	Details
New	**Community Engagement & eGovernment Strategy** **IT**	**Description:** This project is to complete the definition of the City's Community Engagement and overall eGovernment strategy. The defined strategy will provide the departments with an understanding and direction to follow when future departmental technology efforts require interface with the public. **Objectives / Benefits:** The absence of a defined strategy on how the City wishes to communicate and interface with the public will cause inconsistencies in the approach and implementation of community outreach. A formal strategy will set clear business objectives and direction for the future when technology is used to reach the public. **Drivers:** To provide consistency across the City departments when interfacing with the public.
New	**Conference Room(s) Technology Upgrades** **IT**	**Description:** This project is to evaluate the current City conference rooms and to identify and standardize the equipment available in the rooms. (i.e. electronic white / smart boards, projection capabilities, larger monitors, conferencing equipment, etc.) **Objectives / Benefits:** To provide standardized conference room equipment throughout City, maximizes usage of all available rooms and increases efficiencies in supporting electronic devices. Provide improved ability to conduct video meetings and conference calls. **Drivers:** The various conference rooms throughout City facilities have differing levels of sophistication and types of equipment causing some conference rooms to be underutilized. Maintenance of divergent equipment and systems increases IT required support time.

Status	Project Title / Owner	Details
New	**Credit Card Processing Systems Consolidation** **Finance**	**Description:** The Finance Department is interested in opportunities to consolidate the number of credit card processing systems in place at the City. This project is to review the current processing and cashiering systems (i.e. Active.net, Cougar Mountain, Abalone cove Parking Access Gate, TRAKiT, etc.) the City is using and determine if there is opportunity for consolidation. **Objectives / Benefits:** The objective is to determine if the City can leverage one of the current systems for all electronic financial transactions. This includes review of the Munis system capabilities and for future mobile payment processing. **Drivers:** Eliminate redundancy of system where possible and stream line multiple systems.
New	**Council Chamber Display / Vote System** **City Clerk**	**Description:** Provide for iPad voting capability for City Council. **Objectives / Benefits:** Update the current voting system in support of City Council. **Drivers:** Improves process and presentation of City Council votes and enhances public experience.

Status	Project Title / Owner	Details
New	**Digitizing of historical permits and plans** **Community Development**	**Description:** All of the City's permanent parcel, building, engineering and planning records are currently stored in filing cabinets without any backup. Digitizing these records will provide for a backup, but also allow for efficiencies if those records can be scanned into the City's Laserfiche system and linked to parcels in the new TRAKiT system. **Objectives / Benefits:** Backup of records in case of disaster, efficiencies associated to easily accessible electronic records. **Drivers:** Efficiency, disaster recovery and customer service.
New	**eFile** **City Clerk**	**Description:** Implement a system to allow electronic filing and administration of Statements of Economic Interests (FPPC Form 700) and Campaign Statements. When the filer creates their filing on-line, the system validates each required area in the filing to ensure required information is provided. **Objectives / Benefits:** Reduces the amount of time spent to track and maintain filing Statements of Economic Interest. **Drivers:** On-line efficiencies.

Status	Project Title / Owner	Details
New	**Electronic Document Management System (EDMS) Expansion** **City Clerk**	**Description:** The City is successfully using Laserfiche to digitally capture and store many of the City's permanent records. Currently the Clerk's staff are the only persons adding content to the system on behalf of all the departments. This project is to identify the next steps for other departments to assist in providing digital content for inclusion to the system. This would involve defining the processes and procedures for the departments, and the steps for Clerk staff to approve and accept submission of the department records / documents to the system. It may be determined that additional department scanners may be needed and or user licenses to complete the expansion. In addition, as the City implements several new enterprise systems they should be looked at for ways to interface to Laserfiche to intake content and images without printing to scan and prevent rekeying of data. **Objectives / Benefits:** Continue to leverage the current investment of Laserfiche by expanding its use to other departments and automating manual records requests through electronic forms and workflow. Continuing to add electronic content will allow City staff and the public to search and locate documents / records 24 x 7 through on-line capabilities. **Drivers:** To reduce physical paper storage requirements and management of paper in-house or stored off-site. Providing access to enhance transparency through self-service abilities via City website.

Status	Project Title / Owner	Details
New	**Emergency Operations Center (EOC) Software** **City Manager (Emergency Prep)**	**Description:** As part of the completion of the new EOC facility this project is to identify and purchase EOC software and equipment to fully outfit the City's Emergency Operations Center. The software system should provide tools for notifying, communicating, assigning and tracking resources, and keeping elected officials and the public informed during a disaster. The system should provide a tool to follow the priorities identified in the future City Disaster Recovery and Continuity Plan for continuation of IT related services in the event of a disaster. Any system implemented should provide connectivity with the County Sheriff system where possible. **Objectives / Benefits:** While the City has a dedicated EOC location and a strong City-wide EOC Team, the EOC lacks the software and computer hardware that would provide the optimum response ability in the event of an emergency. Providing additional tools will help ensure an organized response to a disaster to maximize the benefit to the community. **Drivers:** Implementing an EOC software solution provides for a reliable resource for responding to and managing a City emergency.
New	**Entrance Sensors & Counter System** **Recreation & Parks**	**Description:** The Recreation and Parks Department provides oversite and management of the City preserve and there is currently no way to capture a count of attendance or usage. This project is to research and procure an automated sensor and counter system and the necessary associated hardware. **Objectives / Benefits:** Counter systems are used to monitor pedestrian and bicycle use in urban parks / preserves and provide an approximation of attendance. The data collected from automatic counters will help the City better understand the usage patterns of parks, recreation facilities and trails. **Drivers:** Increased knowledge of the actual attendance flow also helps in the management of resource personnel and in the development of maintenance schedules.

Status	Project Title / Owner	Details
New	**EOC Notifications System** **City Manager (Emergency Prep)**	**Description:** Reverse 911 is a computerized system that will allow the City to contact thousands of recipients in minutes during emergencies. Can be used to notify the general public of an incident in their neighborhood. This project would look at available systems and procure a solution for the City to support its emergency operations. **Objectives / Benefits:** We will have the ability to quickly target a precise geographic area and saturate it with thousands of calls. Bilingual messages can be recorded and included in outgoing messages. It can target any neighborhood within the City. **Drivers:** To equip the City with a comprehensive warning system. In conjunction with all the other warning mechanisms the Reverse 911 Emergency Notification System will be one more aid in getting emergency messages to the public and making a safer community.
New	**Facility Access & Security System Assessment** **City Manager**	**Description:** This project is to access and implement a central system for access to City facilities in the future. Features to include the ability for staff to grant access to specific City facilities (i.e. yard, parks, centers, etc.) locations via card / fob access. **Objectives / Benefits:** Provide a safe and secure building access system. When fiber optics is installed at Hess, Ryan and City Hall, there will be more ability for potential security interconnectivity **Drivers:** To move support and maintenance of current and future system to IT or Public Works form HR.
/New	**Future Broadband / Internet Access** **IT**	**Description:** Project will result in interconnection of cities in the area with high speed fiber (gig speed). **Objectives / Benefits:** Slow performance limits the City, its businesses and its resident's ability to access applications in the cloud and reduces staff productivity; updating available service will better serve the needs of the City, embrace the digital economy, smart city initiatives, integrated utilities and next-generation economic development. **Drivers:** Project undertaken by the South Bay Cities Council of Governments (SBCCOG) to interconnect cities in the area with high speed fiber (gig speed).

Status	Project Title / Owner	Details
New	**Gift Shop POS System Replacement** **Recreation & Parks**	**Description:** This project will research available options for the replacement of the existing "Cougar Mountain" Gift Shop POS system. **Objectives / Benefits:** Provide a modern, efficient and technologically sound method for processing customer transactions; improve customer service and public experience. Provide interface to City's financial system to ensure accuracy in accounting for and reporting Gift Shop income. **Drivers:** Dissatisfaction among department staff with performance and functionality of the existing POS system.
New	**GIS Roadmap** **IT**	**Description:** This project is to establish a GIS Enterprise Roadmap to identify how the City GIS system can further support information sharing at the City. GIS has the ability to provide a single geographic access point to documents and information and has the ability to leverage data and documents currently used by the City. **Objectives / Benefits:** Ensure the City obtains optimum benefits from GIS to support business requirements. Integration between the GIS system and other City systems should be considered in all future system implementations when possible. **Drivers:** Shared access to Citywide information via GIS.
New	**HR Module in Munis** **HR**	**Description:** The Finance department is implementing the finance and payroll portion of Munis, as a phase 2, HR will be implementing the HR, Benefits and Employee Self-Service modules. **Objectives / Benefits:** Integrate HR functionality with the Payroll functionality inside the system providing for efficiencies and more functionality. **Drivers:** Integration of business systems.

Status	Project Title / Owner	Details
New	**IoT Internet of Things - Opportunity Assessment** **Public Works**	**Description:** The internet of things (IoT) is the internetworking of physical devices, vehicles, buildings and other items through the electronics, software, sensors, and network connectivity enable these objects to collect and exchange data. (The IoT is "the infrastructure of the information society.") The IoT allows objects to be sensed and/or controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computer-based systems, and resulting in improved efficiency, accuracy and economic benefit. **Objectives / Benefits:** This project is to identify future opportunities to enhance the departments support, management of City buildings, parking, vehicles, infrastructure, streets, lights, waste, etc. through new technology opportunities. These devices collect useful data with the help of various existing technologies and then autonomously flow the data between other devices. **Drivers:** IoT is one of the platforms of today's Smart City, and Smart Energy Management Systems.
New	**IT Disaster Recovery & Business Continuity Plan** **City Manager (IT)**	**Description:** Develop and implement an IT Disaster Recovery and Business Continuity Plan for the City. This project will ensure recovery priorities are based on business and operational imperatives for recovery of core applications in the event of an unplanned event or outage. The plan may include periodic updates / tests to validate success in the time of need. **Objectives / Benefits:** Access to core systems in times of disaster is pivotal for City functionality and to maintain applications that are necessary for the safety of the public. The effort will include determining the business recovery requirements, prioritizing system recovery, validating adequate backup and recovery strategies, creating a formal plan inclusive of processes and procedures, and periodic testing of the final plan. **Drivers:** Ability to recover City information in the event of a disaster to assure business continuity.

Status	Project Title / Owner	Details
New	**IT Governance** **City Manager**	**Description:** This project is to establish a semi-formal structure and process for the acquisition and management of City technology. IT Governance should include standard processes for requests for technology, decision / prioritization processes, ongoing oversight of technology implementations, and to develop and support technology standards and policies. **Objectives / Benefits:** Provides the organization with established processes for the acquisition and implementation of technology. Improves communication about technology projects, provides for organization-wide input into technology decisions, and establishes the process for prioritization of technology needs. Includes development of formal policies relating to technology (i.e. social media, mobility, purchases, etc.). **Drivers:** A properly executed IT Governance structure will assist the City in maintaining technology standards and processes.
New	**Mobility Assessment & Plan** **IT**	**Description:** This project will identify the mobility needs at the City and budget for the software and hardware (laptop, iPad or other mobile devices) to support secure remote access to City department applications, GIS, and for staff that spend most of their time in the field. Remote access will require wireless connectivity City-wide or hotspots. The City is currently in discussions and working with the South Bay COG on a broadband / wireless initiative and regarding the needs of the County Sheriff that will be patrolling the City Preserve. **Objectives / Benefits:** The City looks increase its use of mobility within the new enterprise applications being implemented at the City (i.e. Munis, Cityworks, TRAKiT, etc.) and productivity of City staff and the ability to perform real-time completion of work in the field. **Drivers:** Address increasing mobility needs for City staff and support areas.

Status	Project Title / Owner	Details
New	**Performance Evaluation Software** **City Manager (HR)**	**Description:** Today the employee performance evaluation process is manual and paper driven. This project is to identify and implement an electronic performance evaluation system or to consider leveraging opportunities available as the City implements the new Munis ERP system. **Objectives / Benefits:** Performance evaluations are tracked differently within City departments after HR provides a monthly list to department supervisors. After receiving monthly notices the entire process is completed manually. Personnel Actions are paper-based and processed through manually for approvals. There is no ability to track the status of Personnel Actions / Performance Reviews with the manual methods in place. **Drivers:** Reduce retro-active personal action requests based on late evaluations and improve management of entire process.
New	**Project Management Principles** **IT**	**Description:** This project is to complete definition of formal technology project management methodologies and principles as recommended in the IT Assessment. **Objectives / Benefits:** All technology projects should be managed through consistent and proven project methodology principles, including project charters that provide a clear scope and objectives of the effort, a high-level schedule (major milestones and deliverables), the project participants and their respective roles and responsibilities, the processes for issue, risk and change management, budget tracking, a communications plan and status reports to assure all involved are aware of the project activities. **Drivers:** Consistency for technology projects and greater chances for success.

Status	Project Title / Owner	Details
New	**Public Access Application** **Recreation & Parks (Preserve)**	**Description:** This project would look at available opportunities to use mobile apps to enhance the public experience while visiting City parks, walking the Preserve and using the Community Centers by providing access to the rules, educational information, level City trails difficulty, way finder tools, etc. **Objectives / Benefits:** Identify and procure mobile software that can be configured for the City and will benefit the public visiting the City and taking advantage of the available amenities. **Drivers:** Provide the public with mobile applications to provide an enhanced customer experience.
New	**Public Outreach / Community Engagement System** **City Manager**	**Description:** This project would investigate available solutions that engage the public for input based on demographics, location, HOA, etc. **Objectives / Benefits:** Identify and procure software that can be configured for the City to engage targeted City audiences. Provides avenue for constituent feedback and input by collecting data and providing output reports. **Drivers:** Provide the City with public outreach capabilities.
New	**Redundant Backup Solution** **IT**	**Description:** This project is to identify and procure a redundant server environment and/or backup appliance solution that will reside in a separate location from the City. **Objectives / Benefits:** The City should update its backup and recovery strategy with a solution that provides backup of unlimited devices/storage, allow for customized backup polices and scheduling, provides ease of access and recovery of data when needed, and the ability to increase backup requirements easily. **Drivers:** Provide a secure and redundant means of recovery of City data in the case of disaster and business continuity.

Status	Project Title / Owner	Details
New	**Service Catalog, SLAs, & Reporting** **IT**	**Description:** The City IT should develop and adopt an IT Service Catalog describing the services that are and are not provided by the City IT with defined SLA's. The service catalog should provide a comprehensive approach to the proactive management of the existing sourcing contract and include the periodic review of service metrics, capacity statistics, project plans, and periodic surveys of user satisfaction with the services provided by the support vendor. **Objectives / Benefits:** Complete IT Service Catalog, SLAs, and reporting as defined in IT Assessment recommendations in support of the City departments. The catalog will provide standards to measure against, the ability to report on service level statistics to assist in managing both delivery to the departments and oversight of services delivered by the contracted service provider. **Drivers:** To follow best practices in service delivery oversight and reporting.
New	**Sewer Operations Management & Monitoring Software (SCADA)** **Public Works**	**Description:** This project is to define the requirements, identify the best fit system, procure and implement a sewer monitoring system to assist the Public Works group with sewer plant management and discharge monitoring. **Objectives / Benefits:** The City has small sewer pump operation and is looking for a software solution to help in management, monitoring and reporting for this area. **Drivers:** The City manually manages, operates and reports in this area and is looking for automation where possible.

Status	Project Title / Owner	Details
New	**Technology Policies & Procedures** **IT**	**Description:** A core component of technology best practices is the establishment and enforcement of policies and procedures. Effective policies and procedures guide the use of technology to ensure a secure, reliable, and supportable environment. This project is to complete creating and/or updating City technology policies and procedures as recommended in the IT Assessment. **Objectives / Benefits:** The City should create, monitor, and enforce the "Core" set of technology policies and procedures and as time allows, create the "Supplemental" policies and procedures identified in the IT Assessment. **Drivers:** The establishment of policies and procedures and the education of the user departments regarding the need to conform to them is a critical component of the implementation of IT best practices.
New	**Video Camera Surveillance** **IT**	**Description:** This project is to implement video camera technology to provide increased security and visibility to remote City locations. Cameras can be placed at fiber optic connected locations at PVIC, City Hall, Hesse Park, and Ryan Park, and the City should annually review the need for additional sites and include in an annual technology refreshment plan. **Objectives / Benefits:** To provide remote visibility and surveillance to City parks, community centers, the preserve and facilities. With the addition of video cameras to these areas, the City provides a proactive deterrent to crime and captures suspicious activities on video for the City to follow-up when needed. It is important to note that to comply with state regulations, these benefits would only be achieved at a steep cost to the City: video storage requires a significant amount of costly disk space, and exposure to PRA requests would also necessitate the implementation of a video management solution and could result in significant staff time in reviewing and transforming video for requests. **Drivers:** Security cameras provide proactive monitoring of City land and facilities and provide higher level of security.

Status	Project Title / Owner	Details
New	**Website Refresh** **IT**	**Description:** Project to refresh the City website. **Objectives / Benefits:** This project will comprise a standard planned refresh to the website look and feel. **Drivers:** The need to keep the City website up to date with current standards and to present the best image of the City to the public.