The City of Gilroy

IT Assessment Report

Prepared by:

NEXLEVEL
A DIVISION OF SDI PRESENCE

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**Section 1 - Introduction**

### 1.1 - Scope and Objectives

This document, entitled IT Assessment Report, was prepared for the City of Gilroy to document the findings and recommendations that were developed in the course of completing the IT Strategic Operating Plan (IT Plan). NexLevel worked collaboratively with the manager and staff of the Information Technology Division (ITD) which is responsible for supporting the City’s information technology infrastructure, more than thirty business applications, and users located at City Hall and other facilities within the City.

The scope of the IT Assessment included:

- A review of the information technology challenges and opportunities facing the City based on interviews with ITD’s Manager and staff members.
- An assessment of the degree to which ITD conforms to IT Best Practices based on a checklist that was completed jointly by ITD and NexLevel and then reviewed and modified by NexLevel based on user interviews and review of ITD documentation.
- A review of the information technology trends that are driving how public sector organizations are funding and governing information technology as well as delivering information technology services to their user communities.

### 1.2 - Organization and Contents

As depicted in Figure 1, Document Organization, this document consists of the following sections:

- **Section 1 – Introduction (this section):** Provides information regarding the scope and objectives of the report, its organization and contents, and background information regarding the City of Gilroy that is relative to the IT Assessment Report.
- **Section 2 – Executive Summary:** Provides a summary of the development of the IT Assessment and the findings and recommendations that resulted from it.
- **Section 3 – IT Assessment:** Provides information regarding the assessment of the City’s process for the governance, delivery, and administration of information technology services including an overview of how the assessment was developed, summary notes from the interviews conducted
with ITD’s management and staff, a review of the City’s conformance to IT best practices, a gap analysis, and a SWOT analysis.

- **Section 4 – Findings and Recommendations**: Provides information regarding the findings that were developed in the course of the IT Assessment and the recommendations that were identified to enable the City to remediate them.

- **Section 5 – Conclusion**: Provides NexLevel’s perspective of the most critical opportunities and challenges facing the City in the future and the steps that it will need to take to meet the challenges and to realize the opportunities.

**Terminology**

Please note that in order to avoid confusion, the City’s Information Technology Division will be referred to either by its full name or as “ITD,” while references to information technology in general will either be spelled out or referred to as “IT.”

### 1.3 - Background Information about the City

<table>
<thead>
<tr>
<th>2017 City Council Goals, Vision, Mission</th>
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<tbody>
<tr>
<td><strong>Strategic Plan Goals 2017</strong></td>
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<tr>
<td>- Maintain a Financially Sustainable, High Performing City</td>
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<tr>
<td>- Grow the Economy through Business Development</td>
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<tr>
<td>- Develop a Vibrant Gilroy Downtown</td>
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<tr>
<td>- Upgrade City Infrastructure and Facilities</td>
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<tr>
<td>- Create a More Livable Gilroy Community for All</td>
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**City Vision**

- Safe and family friendly Community
- Thriving downtown
- Arts and culture
- Complete neighborhoods
- Accessible recreational and leisure opportunities
- Green City - Environmentally friendly
- Easy access and mobility
- Balanced local economy
- Inclusive Gilroy community for all

**City Mission**

- Financially sound
- Customer friendly and effective
- Excellent municipal services
- Engaged community, both residents and businesses

Gilroy is best known as the Garlic Capital of the World, and home of the annual Garlic Festival in July. But the city is also known for its peaceful residential environment, its award-winning parks, golf course and recreation programs, and for its urban forest, for which the city has won Tree City USA awards annually since 1979.

Gilroy is a growing community with a population of about 55,936 (2017), representing over 2.7% of Santa Clara County. Gilroy serves as the center of a rural area of about 50,000. Projections have shown a potential population growth of over 10% in the next 5 years.

Gilroy, a charter city, is a center of government activity for the region. The Gilroy City Council is made up of seven members with four-year terms, including a separately elected mayor, who can serve any number of terms.

The City’s Information Technology Division provides technology-based services to facilitate the City’s mission of service to the community by working cooperatively with staff to identify technological needs and to develop, evaluate and recommend technological solutions required to achieve the City’s objectives including the maintenance of network infrastructure, telecommunications, and application software systems.
Section 2 – Executive Summary

2.1 - Context: The Need for Agility in the Delivery of IT Services

Organizations in the public sector have experienced profound changes in how information technology products and services are delivered as well as in the ways in which they use these products and services to meet community requirements and expectations. The IT environment continues to evolve with new and different product offerings, service delivery methods, and heightened security risks as do public expectations for the availability of information and services, especially on mobile devices. Organizations must be prepared to respond to, and manage, this ever-changing environment by remaining current with industry trends and by being able to adapt and change with the environment.

Figure 2, The Need for Agility in IT Service Delivery and IT Governance, illustrates this concept.

“"The secret of success is not predicting the future; it is creating an organization that will thrive in a future that cannot be predicted.” – Michael Hammer, author and noted authority on Business Process Re-Engineering
As depicted in Figure 2, a number of factors are driving the need for increased agility including:

- **Mission-Critical IT**: The transformation in the use of information technology from a back-office function (where the focus was often on reducing costs) to its use as an integral, and often mission-critical, component of how organizations deliver services to the community.

- **Digital Government**: The public’s expectations for the availability and usability of information and information technology, often remotely, and from “any device, anywhere, and anytime”, are continuing to increase.

- **IT Innovation**: The continuing innovations in information technology that brought IT out of the computer room and into the hands of internal users and the public, and out of the work-place and the home into the mobile environment.

- **TCO / ROI Balance**: Organizations are being increasingly held accountable for their total cost of ownership (TCO) for information technology and the return that they are obtaining for their investments in IT (ROI) – which means that IT spending needs to be closely related to organizational priorities and specific outcomes.

- **Cyber-Security**: Cyber-security and the protection of information assets have emerged as critical priorities as public organizations increasingly adopt public-facing digital services.

- **Business Intelligence**: The real-time use of information to monitor and assess organizational performance and to evaluate the impact of changes in processes and staffing on organizational performance.

In this changed environment, the ability to be “agile” is critical. Gartner (a leading information technology research and advisory services firm) defines agility as “the ability of an organization to sense environmental change and to respond efficiently and effectively to that change” and not surprisingly, it has become a critical success factor for government in the digital age. In order to be agile, organizations must implement processes to continuously govern information technology (and re-align priorities and re-allocate resources as business objectives and priorities change) and to adapt IT delivery processes as new services become available.

The purpose of the IT Assessment is to provide information, findings, and recommendations that enable the City and ITD to be agile and consistently govern and manage the delivery of information services to the internal user community as well as the public.

### 2.2 - Summary of Information Technology Assessment

The IT Assessment was developed based on information gathered in the course of interviews with ITD’s manager and staff, the results of an IT Best Practices Self-Assessment completed by ITD, and interviews conducted with all City departments, members of the City’s executive team, and several City Council members. NexLevel looks at conformance to the IT best practices in the context of levels of organizational maturity including:

- **Frontier Level** – This level of maturity is associated with 0 to 20% conformance to the IT best practices and is characteristic of newly formed organizations.

- **Reactive Level** – 21 to 50% conformance to the IT best practices. Most of the organizations that NexLevel has worked with since adopting this methodology in 2014 fall into this level with all-time average being just over 45% conformance. Organizations at this level of maturity are
typically more concerned with managing their total cost of ownership for information technology than they are with optimizing the value that they receive for this spending (return on investment). For these organizations, information technology is just a cost center.

- **Proactive Level** – 51 to 80% conformance to the IT best practices. Typically, NexLevel works with its clients to help them progress into this range of conformance. At the proactive level, organizations seek to find a balance between total cost of ownership and return on investment and often see information technology as a strategic asset that enables them to provide higher levels of service to the City’s internal users and the public (directly and indirectly).

- **Service and Value Level** – greater than 80% conformance to the IT best practices. This organizations continue the trend towards value and derive much higher returns for their investments, although at greater expense. The Service and Value Level is not seen as frequently in the public sector except where organizations provide services (for a fee) to other jurisdictions.

Overall, the IT assessment found that the City is conformant to 43% of measured technology best practices which places the City within the upper tier of the Reactive Level of the maturity level which is close to the average (45%) for prior assessments of this type conducted by NexLevel. Service Delivery, Infrastructure, Security / Information Protection, and IT Administration are either within the Proactive Level of the maturity model or close to it and are elements of strength for the City. IT Governance and Business Applications rank lower, due to the highly informal processes used as well as the age of the City’s business applications (such as SunGard) and the lack of a detailed Application Portfolio to manage them.

### 2.3 - Summary of IT Assessment Findings

Table 1, Summary of Findings, reviews the findings that were developed in the course of the IT Assessment. For each of the findings NexLevel has provided a brief assessment of the finding along with an assessment of its impact on City operations (business impact), the relative difficulty (considering the relative level of effort, cost, and risk) to remediate the finding, and an estimated priority that is a product of both the business impact and the estimated difficulty. The findings and recommendations are discussed in greater detail in Section 4, Findings and Recommendations.

<table>
<thead>
<tr>
<th>High-Level Findings</th>
<th>Assessment of Business Impact, Difficulty to Remediate, and Priority</th>
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| (1) The City does not have a formal technology oversight committee to establish priorities and allocate resources to meet City business objectives. | Business Impact: High  
Difficulty: Low  
Priority: High |
| (2) ITD should be expanded to meet up-coming technology initiatives, assist in the implementation of major projects, and deploy expanded technology best practice recommendations. | Business Impact: High  
Difficulty: High  
Priority: High |
| (3) The City should implement basic project management procedures to guide the acquisition, selection, and deployment of new finance, land management, and police records management applications. | Business Impact: High  
Difficulty: Low  
Priority: High |
<table>
<thead>
<tr>
<th>High-Level Findings</th>
<th>Assessment of Business Impact, Difficulty to Remediate, and Priority</th>
</tr>
</thead>
</table>
| (4) The City does not have a strategic roadmap for the City-wide use of GIS, collaboration with regional partners (such as the County), or for the use of data layers in support of asset management, land management, CAD, or other City systems. | Business Impact: High  
Difficulty: Medium  
Priority: High |
| (5) The City does not have a content/document management strategy for the use of Laserfiche including workflow, and the elimination of unstructured document repositories on network drives which inhibit the sharing of documents and reduce productivity. | Business Impact: High  
Difficulty: Medium  
Priority: High |
| (6) The Police Department uses a number of applications that are not necessarily supported by ITD. There is no comprehensive inventory and subsequent plan as how to support, upgrade, integrate or share data. | Business Impact: Medium  
Difficulty: Medium  
Priority: Medium |
| (7) ITD does not have a robust, well-tested technology disaster recovery plan for the resumption of mission-critical applications in the event of major interruption in technology services. | Business Impact: High  
Difficulty: Medium  
Priority: High |
| (8) The City does not have a formal cyber-security plan nor has ITD performed network and general security vulnerability testing. | Business Impact: High  
Difficulty: Medium  
Priority: High |
| (9) ITD does not have a software application portfolio to track the life-cycle of software and vendor support. In addition, the City does not have an application software update/refreshment plan for its business applications. | Business Impact: High  
Difficulty: Low  
Priority: High |
| (10) ITD and the City have not created an application training plan for new implementations or ongoing training for new employees, refreshment training for existing staff, and training to more fully utilize the business applications in-place. | Business Impact: Medium  
Difficulty: Medium  
Priority: Medium |
| (11) The City does not have a current, comprehensive set of technology policies and procedures to guide employees as to the secure, proper use of hardware and software. | Business Impact: Medium  
Difficulty: Medium  
Priority: Medium |
| (12) Procedures and services provided by the ITD Help Desk are not well-defined. | Business Impact: Medium  
Difficulty: Medium  
Priority: Medium |
Section 3 – IT Assessment

Figure 3 – Components of IT Assessment

Figure 3, Components of IT Assessment, depicts the scope of the IT Assessment which included:

- A review of documentation provided by ITD.
- Interviews with ITD’s manager and staff.
- An assessment of the degree to which the City conforms to a set of information technology best practices that included the completion of an IT Assessment Checklist which was completed jointly by ITD and NexLevel and modified by NexLevel based on user interviews and review of ITD documentation. This review supported the development of the findings and recommendations discussed in Section 4, Findings and Recommendations.
- A gap analysis that was developed to assess the gap between the City’s conformance to the IT best practices and a desired target state.
- A SWOT analysis that looks at the City’s strengths, weaknesses, opportunities, and threats based on all the information gathered in the course of the IT assessment.

3.1 - Documentation Review

ITD provided a number of documents for NexLevel’s review including, but not limited to, the ITD budget, City’s agreement for services, Project management plan (Website, 2013), Technology polices, Technology use policy (2017 proposed), Network diagrams, Fiber connections diagram, Polygon configuration procedure, Printer installation procedure, SunGard database backup training/test/refresh procedure, SunGard database permission procedure, Opening Outlook folders procedure, Outlook room scheduling procedure, and Telephone conference call procedures.

3.2 – ITD Interviews

ITD has three primary functions: end-user support, network and systems administration, and business application support. Support for the City’s GIS program has been sourced to LynxGIS, a Santa Cruz-based company, and managed by Public Works. In the course of the IT Assessment, NexLevel spoke with the IT Manager as well as ITD staff members. The interviews were focused on current projects and responsibilities, challenges, and opportunities and are summarized below.
IT Manager and Staff

The IT Manager has been with the City for over 4 years. At the time he came on-board the City had been without IT leadership for a number of years and although IT was well budgeted for one-time expenditures, it was experiencing several challenges including problems with PC deployment, running SunGard on older Dell servers that were nearing end-of-life, business application issues, a core switch that was obsolete, and reduced funding/staffing for ongoing operations. Over time, those challenges have been resolved but the City’s IT infrastructure and business applications aged during the years of limited budgets due to the recession and the City is now in “catch-up” mode. ITD is presently budgeted for four positions (one of which is vacant), prior to the recession ITD staffing varied from 6.5 to 7.5 staff members. ITD also relies on external service providers to supplement existing staff or to provide specialized services. Recruitment of additional IT staff has been problematic, for example, the position of Applications Analyst remains vacant due to the City being unable to successfully recruit a qualified IT professional to fill the position.

The City does not have a formal IT governance process, most decisions regarding information technology come through the budgeting process (Decision Packets) and proposed IT expenditures are included in departmental budget requests or in ITD’s budget. For the most part, IT purchases are routed through ITD, but departments have sometimes gone out and procured IT on their own, with the problem being that eventually the departments will require support from ITD. This has resulted in the procurement of software without obtaining sufficient services from the vendor to handle items such as the extraction, cleansing, and importation of data from the legacy system.

The City does not have a bring-your-own-device (BYOD) policy – eligible staff members receive City devices. ITD is responsible for mobile device management but ITD staff believe the City would be better served if a stipend was provided for staff to select and purchase their own mobile devices.

Issue and Request Tracking

ITD has implemented BMC’s Track-It! product for capturing user requests and problem reports. Requests can be called in, e-mailed, or communicated in-person, and ITD strives to get all of them recorded in Track-It! as well as the resolutions as the initial steps in creating a knowledge base. On a busy day, ITD may get as many as 10 requests although the average is four, and the number of open requests on any given day is approximately four. Most problem reports from the users are related to printers. [Please note that user responses to the “Voice of the User” Survey indicated that they most often contact ITD for desktop problems (65%), Email (43%), and business applications (35%)]. ITD is still implementing Track-It! and has implemented some workflows and is transferring inventory information from the old tracking system, Spiceworks, to Track-It!. Track-It! provides functionality for self-help features but ITD has yet to deploy it.

Infrastructure

Servers are deployed in three separate server rooms in the City including one at City Hall, one at the Police Department, and one at the Old Annex (Annex), all within the Civic Center campus. The Annex and the Police Department have emergency diesel generators, but City Hall does not. At the time of this writing, the City Council has approved the purchase of a generator for City Hall which will be installed by mid-2018. In addition, as part of the latest infrastructure equipment refresh initiative, ITD designed the systems to provide redundancy between the sites so essential applications can continue running should one of the sites be lost.
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Projects

Departments are trying to catch up and replace older business applications as quickly as they can. Projects planned and/or completed include (in addition to ERP and LMS):

- PD has upgraded CAD and plans to replace RMS.
- Public Works wants to implement an asset management system.
- The Clerk has implemented Accela MinuteTraq for agenda management and Council Members are getting MS Surface Pros.
- ITD needs to update exchange server.
- The City’s document / content management system (Laserfiche) is due for an upgrade from release 8.1.

Challenges

Challenges being experienced by ITD include:

- Obsolete and/or aging IT infrastructure including older switches (ITD needs to upgrade the network to provide gigabit bandwidth before bringing up new applications)
- Users find it difficult to differentiate between problems related to business applications versus problems related to hardware / network.
- Although the server environment is largely virtualized, ITD is supporting a wide range of server OS’ ranging from Windows Server 2003 to Windows Server 2012 as a result of older applications that are not compatible with newer releases of Windows Server.
- Shortage of resources for project management and application management.
- Staff fatigue from the number of IT projects being requested by the user community.
- Have implemented directory services (AD) but are not yet aging passwords – they still have too many applications that require separate user-ids and passwords which are a burden to both the users and ITD.
- The City has a single connection to the Internet which limits fault tolerance and will be a problem should the City elect to make greater use of cloud-based business applications (SaaS – software-as-a-service).
- Have not yet performed a network penetration analysis (but funding was provided in the City’s last budget cycle for this effort).
- Have not received funding for a Business Resiliency Plan / Business Impact Analysis to identify mission-critical business applications and infrastructure.
- The City has not yet implemented a policy for the use and management of social media so departments generally operate independently.
- The City contracts CivicPlus for web site management. ITD staff and the City’s PIO oversee the web site and departments update their own page content using the CivicPlus Content Management System (CMS).
3.3 – User Interviews

NexLevel interviewed a range of user stakeholders including the City Administrator, City Clerk, Community Development (Building, Inspection, Code Enforcement, Planning, Economic Development, and Housing), Public Works (Engineering, Water, Streets, Fleet, and Facilities), Finance, Fire (Chief, Operations and EMS, Emergency Management, and Training), Human Resources, Police (Chief, Communications / Administration, Patrol, and Investigations), and Recreation. NexLevel also conducted interviews with City Council members. The interviews generally focused on what information technologies / business applications were currently in use, what organization in supporting them, and what challenges and/or obstacles the interviewees were experiencing with either the information technologies and business applications or the support provided for them. These interviews are summarized below.

City Council Members

NexLevel conducted interviews with Council Members Cat Tucker and Peter Leroe-Munoz. These interviews differed from the department interviews in that they focused on:

- The vision for the City’s use of information technology.
- Community expectations regard the use of information technology to provide access to City services and information.
- Council’s view of the City’s current use of information technology.
- Council’s willingness to fund information technology initiatives.

Each interview is summarized below.

Council Member Peter Leroe-Munoz

1. What is your vision of technology for the City?
   - The City doesn’t have an overarching technology vision, but from his perspective, the most important aspects are:
     a) Update hardware and software when possible. The City should strive to be in-line with other governments and not fall too behind. The City will not be a technology leader, but should effectively use what they can afford.
     b) The City should use technology to improve staff efficiencies. The City is currently behind, and the Council realizes it must invest to give staff more, and better, tools.
     c) The City should be focused on the security of systems and networks. Is the City doing enough (hardware, software, and training) to ensure systems and data are protected? He does not want a ransom attack to surprise the organization and prevent it from operating. Is the City being proactive relative to security?

2. What does the community expect from the City in terms of information technology?
   - Local businesses have expressed a desire to interact more electronically with the City in order to perform their work more efficiently. Processes that could be completed by filing forms on-line rather than coming to City Hall are very important to local businesses.

3. What is the Council’s view of the City’s current use of information technology?
   - Council Member Leroe-Munoz stated that the City Administrator and City Clerk have been moving technology forward within the City and he views that as very positive. He feels both are
strong advocates for technology and have implemented new and helpful systems (for example, agenda management).

4. Is the Council willing / able to fund information technology initiatives?
   Although the City is facing some resource challenges, the Council has always been supportive of initiatives that save money and improve staff efficiencies. The Council is willing to invest if there is substantial evidence of significant return on investment.

Council Member Cat Tucker

1. What is your vision of technology for the City?
   a) The City does not have a documented strategy for information technology and the Council Member hopes that the IT Strategic Plan will provide it.
   b) The City needs systems that will streamline business processes and provide efficiencies. Several Council members were surprised as to how dated the City’s information technology environment (infrastructure, applications, etc.) is and they are aware that investments will need to be made to get everything up to date.
   c) It is believed that department heads have been reluctant to come before the Council asking for new information technology due to the high cost and lack of resources; they have just gotten along with what they have.

2. What does the community expect from the City in terms of information technology?
   The City is growing, and many technology savvy individuals are moving into the area. They expect services to be provided on-line. Simple tasks must be available to them on the City’s web site (for example, water heater permits). The web site must be simple, common needs (fee schedules) should be easy to find, and data must be available (example, search for documents).

3. What is the Council’s view of the City’s current use of information technology?
   a) The Council Member expressed the opinion that it seems that a majority of City staff members believe that IT is under-staffed.
   b) Support from ITD has been an issue. The Council Member has experienced some problems with remote connectivity and a substantial increase in the amount of Spam email.
   c) Cyber-security is a large concern. All remote transactions must be secure and personal information must be protected.

4. Is the Council willing / able to fund information technology initiatives?
   It was noted that the City is faced with many budget issues (additional PD officers, new fire station, etc.) so getting money for big-ticket items will be difficult; however, the Council Member is an advocate for the effective use of information technology and believes that City staff should have the tools they need to provide services to the community. If a funding request for information technology helps City staff and the community, it will get a sympathetic ear from the Council.

City Administrator

The City Administrator believes that the overall use of technology within the City is “behind the times” and would like to move faster in the deployment of new hardware and application systems. The City was unable to invest in IT during the recession, so the infrastructure suffered as did the overall use of information technology and software throughout the departments. For the current fiscal year, the Council invested $1 million for infrastructure improvements as well a $2 million for an ERP and $1
million for LMS. The City Administrator recognized that ITD is understaffed and that up to two additional FTEs could be added if justified.

Additional future City-wide priorities for information technology include cyber-security awareness and threat prevention, mobility and the use of mobile devices, and the use of analytics and performance measurements (provided that the infrastructure and databases are in place to support them). It was also noted that major IT projects should be well-planned and delivered on-time and on budget. From an organizational perspective, the City Administrator feels the IT organization should report to his office rather than to Finance to improve executive commitment, focus, and financial control for the City’s use of information technology.

City Clerk
The City Clerk has been very progressive in the use of information technology including the recent replacement of Granicus with Accela’s MinuteTraq product which, along with ITD’s deployment of Surface Pro tablets to City Council members, has enabled the City to discontinue the printing and distribution of agenda packets. Although they are experiencing some initial problems, the Clerk plans to implement MinuteTraq for the rest of the City’s Boards and Commissions. The City has also adopted a records management policy and a records retention program.

Current Use of Information Technology and Challenges
Other information technology projects and challenges include:

- The City has Laserfiche for document and content management. They are presently using Laserfiche version 8.1 and would like to upgrade to Avante to get the benefit of the workflow features in the new version. The City has a project to digitize City record starting with active documents and then moving on to inactive documents (some of which are stored on micro-film or micro-fiche), and has sufficient Laserfiche licenses to support the project.
- They are also using Netfile (Netfile.com) for the filing of FPPC Form 700 (Statements of Economic Interests) by elected officials, members of City Boards and Commissions, and City employees and hope to expand the use of Netfile in the future.
- The City’s Municipal Code is available online through Civic Publishing.
- The Clerk’s office noted that ITD has been very responsive to their needs, but Accela has been a problem due to their being located on the East coast.
- The Clerk has experienced Internet slowdowns in the afternoon.
- Responding to public records requests are very time-consuming and any use of technology to improve the process would be helpful.

Information Technology Needs
Future IT needs include:

- Procurement and implementation of a PRA management tool.
- Implementation of an Intranet site for City employees.
- Implementing a central repository for contract documents.
- Access to a database of registered voters within the City.
The ability to electronically submit recorded documents to the County.

Community Development (Buildings, Inspection, Code Enforcement, Planning, Economic Development, and Housing)

Current Use of Information Technology and Challenges
Community Development is responsible for a wide range of activities; the needs in each of the areas interviewed are summarized below:

Buildings, Inspections, and Code Enforcement

- Using SunGard Community Plus – functional but antiquated – problems with GIS integration. Sometimes it seems that they are working for the software rather than the software working for them – and the product is now out of support.
  - Difficult to print invoices and permit cards.
  - Not integrating well with SunGard Finance – i.e., Business License payments, wastes time.
  - Also shares information with Public Works regarding properties that are within the City versus within the unincorporated area of Santa Clara County.
  - They must pull up all the possible fees for a permit and then delete them one by one to get the fee that they want – this is a problem and can get back-logged at the counter.
  - Fire Inspections uses the Business License and Permit modules in SunGard, but don’t know when an application for a Business License was processed or whether the zoning of the property is consistent with the proposed use.
  - They also provide a pre-treatment program for Morgan Hill and this is cumbersome to do in SunGard.
  - SunGard cannot support their need for queries, i.e., to make sure that all permits for a location are current and that all invoices have been paid or to schedule inspections to minimize travel time and fuel consumption.

- Presently people must call and schedule an inspection - want to give people the ability to schedule inspections automatically by telephone or through the web.
- Using iPads or Surface Pros to enter inspection information in the field – in future would like to have this information automatically transferred to the LMS with the ability to attach images and to retrieve as-built diagrams in the field.
- There are problems with the City’s GIS – the entities / location database is corrupt, the data is not current or accurate, and it is not reliable. GIS will need a lot of work before it can work with the new LMS.
- Tracking “Weed Lots” using Excel rather than GIS.
- Getting tablets and plan to “VPN” into SunGard from the field – will also use tablets to carry documents (such as plans, etc.) into the field from the office.
Housing (HCD)

- HCD is not automated for the most part, other than a dedicated web-page that they don’t have a lot of time to support, and the City’s SunGard system, Housing relies on Excel spreadsheets and MS Access databases. It was noted that the web-page is not “Smart Phone friendly,” not intuitive for the public, nor user friendly.

Planning and Economic Development

- Using SunGard – feel that it was “foisted” on them by Finance. The software environment has been “as is” for nearly two decades with little change. They are experiencing a number of problems with SunGard including inconsistent data. It was noted that they still have some manual files that pre-date SunGard.
- They are using MetroScan and have found that it meets their needs – although there are some inaccuracies in the data in MetroScan, it has information that is not in GIS.
- They noted that Code Enforcement has created multiple ad-hoc applications and databases over the years, some built using MS Access. Each inspector has their own database for contact management and there is no interface between permitting and code enforcement.
- They “minimally” use GIS. Vendor support seems to be very inconsistent, have been waiting for an updated zone map for five years. Aerials in GIS have not been updated since 2005 although these should be available from the County. This makes it difficult to generate 500’ notices to neighboring properties regarding development permits – they tried to use MetroScan but ended up requiring applicants to provide a list. They cannot produce even the most basic maps from GIS.
- As a result of limited options for mobility, they use a lot of paper in the field.
- The implementation of MinuteTraq for Council Agenda has raised some concerns about how best to include large map files in the Agenda Packet.
- Special Event Permits are a problem since they involve multiple departments and have no ability to digitally collaborate with them in the permitting process – resort to phone calls and Email.
- PRA’s are a problem for them – too many disparate databases – they are still running the pre-SunGard DOS-based Sierra planning system on an old Windows XP machine in Code Enforcement.
- They have experienced problems with data being lost on the “R” drive and other network drives and restoring the data has been difficult.

Information Technology Needs

In addition to the procurement and implementation of a LMS solution to replace SunGard, Community Development has a number of information technology needs including:

- The ability to use drones to perform roof inspections and record video.
- The ability to better use mobile devices in the field, including the ability to download plans and other documents.
- Electronic plan checking.
They want to provide more information to the public and provide the ability for the public to schedule appointments, inspections, etc.

Finance

Current Use of Information Technology and Challenges
The primary business application for Finance is SunGard – it used for all financial functions (Payroll, Accounts Receivable, Accounts Payable, Purchasing, the City’s fee schedule, etc.) as well as for utility billing (approximately 14,500 customers of which about 12,200 are residential), and Business Licenses (approximately 4,000). Budgeting is done outside of SunGard using City Vision and Excel spreadsheets (the spreadsheets are pushed out to the departments for their review and the information from the revised spreadsheets is then manually entered into City Vision. Staff stated that City Vision is not user-friendly and tends to be cumbersome to use. Other functions, such as bank reconciliations, are also performed outside of SunGard using Excel spreadsheets. Reports are generated using Cognos. They are also using Laserfiche for manually scanned documents.

Notes about SunGard included:
- The City hasn’t been keeping up with upgrades – they are paying annual maintenance fees for customizations that were never implemented.
- Utility Billing is using a 3rd party, InfoSend, to mail bills and to support the customer portal. The mailing process requires a number of manual steps such as mail merges.
- Human Resources is not using SunGard other than for initial onboarding and payroll items - Human Resources Action Forms (HARAF) are completed manually and maintained in hardcopy files.
- They estimate that SunGard is meeting 80% of their requirements for Utility Billing.

Information Technology Needs
IT support is seen as responsive, there are just not enough of them. As a result, the users have taken on some support functions and they rely on a former ITD staff member to handle special projects. The opinion of the group was that SunGard is often the roadblock, not IT.

The City is planning to prepare a RFP for a replacement for SunGard with the objectives of being able to move to as much of a paperless environment as possible, streamlining business processes, making it easier for users to get information into the system and to generate queries, and enabling members of the community to do business with the City remotely rather than coming in to the counter.

Fire
The Fire Department has three stations in the City and is coping with increased population density in the same footprint. As a result of the passage of Measure H in November 2016, a proposal to annex 721 acres of mostly farm land for development was halted, and this has impacted Fire (one of the stations is not optimally located) as well as restricted the City’s opportunity to realize increased revenue through development. Fire is budgeted for 40 FTEs but has not gotten there yet, therefore using information technology to improve staff efficiency is critical. Fire obtains most of their support from ITD and feels that ITD is meeting their needs.
Current Use of Information Technology and Challenges

Fire uses a variety of solutions including:

- CAD and a Fire RMS (FireHouse, which is supported by an external service provider), MDTs, and iPads (for patient information).
- PulsePoint.
- WebEOC (for the City’s Emergency Operations Center).
- Target Solutions for training in the Fire Stations.

Some units such as Fire and Safety Inspection are still using three-part forms and Fire is managing staff scheduling using an Excel worksheet. Fire is experiencing connectivity problems in the rigs when responding to incidents and noted that GIS has not been updated in nearly a decade so that streets and structures developed since the last update are not in GIS. The department is just getting a “Text to 911” service and would like to be able to better leverage data to make decisions.

Information Technology Needs

Fire has a number of information technology needs including:

- MDT upgrade / replacement.
- AVL and/or autonomous Fire engines (future).
- Replacement of the FireHouse RMS which is aging, particularly looking for a solution that would support the automated / intelligent scheduling of Fire Inspections, recording of the results of the inspection, and the issuance of notices to correct deficiencies.
- Asset management is a problem (for example, they are using an Excel spreadsheet to track the life of hoses) and need to track the status and maintenance of Firefighters personal protection equipment (coats, etc.).
- Hazardous materials application for rail shipments.
- Opticon system for traffic signal preemption.
- Better access to, and use of, social media platforms for public education.

Human Resources

Current Use of Information Technology and Challenges

Human Resources (HR) reported that they don’t seem to have a lot of highly-automated processes – they make use of SunGard and Excel spreadsheets as well as a number of other services such as NeoGov. They noted a number of difficulties with SunGard including problems with support and the functionality provided including:

- SunGard support has been spotty and generally non-responsive to their needs, particularly regarding training.
- The application is not easy to use (not even to extract information) and not a good match for their requirements, i.e., SunGard’s functionality does not effectively support the City’s monthly payroll. HR reported that they spend a lot of time bringing up electronic timesheets, but that not all departments are using the feature.
Reporting is a problem for them. The reporting requirements mandated by the Affordable Care Act (ACA) are complex. Generating reports from SunGard using Cognos has been difficult – Cognos is not easy to use and appears to be designed more for IT professionals than end-users.

HR has been directed to work with departments to fill vacant positions as quickly as possible. They are using NeoGov for applicant management and CalOps for job postings also. NeoGov has been very productive for them and expect to eventually roll it out to the rest of the City. They have also automated the process for interview panels using iPads to see panel results, trying to get out of the binder business.

HR is using FlippingBook (an online publishing tool) for new employee onboarding and orientation.

HR is working to update employee IT policies and thinking that they will leverage Lexipol (which is also being used by the PD).

The City does not have an Intranet site, and this limits the City’s ability to communicate with staff and to make resources readily available to them.

Employee performance evaluations are being handled using SunGard Personnel Activity Tracker then scanning the completed evaluations into LaserFiche.

HR also accesses license data (classification, expiration, etc.) for City employees from the Department of Motor Vehicles (DMV).

Safety training is being handled through Target Solutions.

HR would like more support from ITD but recognizes that ITD is short on staffing. ITD has a vacant, budgeted position but the City has been unable to fill it, the feeling is that Gilroy’s compensation levels may be lower compared to neighboring cities to their north.

Information Technology Needs
HR is working with Finance on the development of requirements for an ERP system to replace SunGard with the objective of obtaining a more integrated solution to their needs that has workflow capabilities and that would provide employee self-service features.

Police

Current Use of Information Technology and Challenges
The Police Department makes use of a wide range of information technology products and services with support from “all over the place.” The number of solutions, their age, the lack of integration between them, and the variety of support channels create a major problem for the department. Technology current being used includes (excluding State and County provided services such as CLETS, CJIC, and LiveScan):

- Tiburon CAD (updated two years ago) and Tiburon RMS (updated seven years ago) – these products are problematic since Tiburon was acquired by TriTech and the future of the legacy products is questionable.
- Electronic traffic citations.
- Body-worn cameras (two different products, one of which is being phased out) as well as WatchGuard for in-car cameras, and mobile license plate readers (the department also has a static LPR that is not presently in service).
- An Animal Control Database (custom developed using MS Access).
- Crossroads (crossroadsoftware.com) for accident investigation.
- CopLogic from LexisNexis for incident and accident reporting.
- 911 phone system and Project 25 (P25) radios and microwave.
- Lexipol (Lexis Nexis policy management software for public safety).
- I/P cameras for street surveillance.
- Crimereports.com (Motorola / Socrata) for community engagement, crime mapping.

The department also has number of applications used for various business functions including ID cards for community watch and taxi drivers, projection systems in conference rooms, magnetic card readers for access to areas of the department, and a building security system. The department also has access to GIS and to Laserfiche (but they are not presently using the latter). The department has found the support from Lynx GIS to be very responsive – a GIS support person is on-site every Friday. Telephone lines from the PD go direct to the telco central office and are not on VoIP.

Challenges include:

- The department wondered if the City, as a whole, and ITD are looking at the “big picture” in making IT decisions. Although ITD has a dedicated support person on-site, there is no plan for his replacement and ITD is challenged to provide the same level of support when he is out and he is nearing retirement.

- The Tiburon RMS is not conformant with the requirements of the National Incident-Based Reporting System (NIBRS). This is critical since the current Uniform Crime Reporting (UCR) system will be transitioned to NIBRS only data collection by 2021. The current RMS is also not highly functional; officers are manually compiling notes in the field and then must enter the data into the RMS when they get back to the station. The Tiburon RMS does not provide features such as workflow which would enable the automated distribution of assignments and documents. Information that should be simple to find, such as the clearance rate, is not readily available in the RMS.

- In general, most information technology in the department is ten years old (they have only switched out desktop computers once in that time frame).

- CAD issues with connectivity – when MDTs lose connection to CAD officers experience problems logging back in (same as Fire).

- The department is using a system of beats for patrol that was developed in the 1980s and needs better data and metrics in order to revise the beats to better meet the needs of the community.

- The department is making use of social media for community outreach but is finding the process very laborious – need a solution that would enable the publication of content to multiple social media platforms rather than manually updating the content in each site.
Information Technology Needs

- The department needs to upgrade / replace the Tiburon RMS and eventually the Tiburon CAD system. The department has initiated the preparation of an RFP for RMS replacement, and foresees the need for replacing CAD in the future as well, but that will require “all hands-on deck.”
- Refreshment of over-aged computers and switches.
- The department could use more training in the use of automation.

Public Works (Engineering, Water, Streets, Fleet, and Facilities)

Current Use of Information Technology and Challenges
Public Works is responsible for a wide range of activities; the needs in each of the areas interviewed are summarized below. At the time of the interview Facilities and Fleet had just been moved to Public Works. A general note was that they have experienced several break-ins at the Corp Yard resulting in the theft of cars and tools – improved security, including notification that gates have been opened and video surveillance. The general opinion of the group was that ITD has been as helpful as they can be with limited resources.

Engineering

- Using a variety of solutions including AutoCAD and StreetSaver plus a lot of spreadsheets. Would like to have an application to track the life-cycle of traffic signals.
- Time reporting is a problem – cannot charge time to projects.
- Using “ClickShare” wireless presentation system in conference rooms.
- It seems that no one in the City is the steward for GIS and data accuracy suffers as a result.
- The PD is implementing CrossRoads for them (traffic monitoring and accident investigation).
- Need asset management for signage.
- The City needs a Customer Relationship Management (CRM) system so that issues reported by the public can be routed to the appropriate person(s) and tracked.

Facilities

- They are using Mainsaver for asset management, the software works but is cumbersome to use with a “1985-style Windows user interface,” users in the City can enter work orders in Mainsaver but feel that they need a better solution.
- Timesheets are prepared and approved manually.
- The City has issued badges, but they are not RFI enabled – still rely on keys to access City facilities, 130 people with keys to City Hall alone.

Fleet

- Also using Mainsaver, find it difficult to create work orders and often end-up creating work orders after the fact.
Vehicle maintenance being tracked in an Excel spreadsheet – they are unable to generate reports to evaluate the cost to repair a vehicle versus the cost to replace it. Preventive maintenance is being calculated based on time rather than number of miles or hours of operation since last PM. Invoices for PM or repairs performed by outside contractors are entered into Mainsaver unless a PO was generated for the service.

Using Phoenix to manage the fuel station – runs on an old PC that is not connected to the network, fuel consumption captured in Phoenix is then manually entered into Mainsaver.

Also responsible for maintenance of emergency generators, has no information on where they stand regarding PM so now checking them all.

WiFi in the shop at the Corp Yard has been a problem. It should be noted that network connectivity from the Corp Yard could be problematic as it also the location of the City’s backup EOC.

Parks

GIS has not been useful for them. There is no staff support for GIS within the City, the aerials have not been updated, and the data in GIS tends to be dated and inaccurate so use Google Maps rather than GIS. Public Works has a tree inventory in GIS, but it is not complete (trees in non-developed areas may not be included).

Irrigation systems are remotely controlled (all new development is required to have radio accessible irrigation controllers).

Parks is using the City’s web-site but feels that the City needs a dedicated web master as well as dedicated support for Channel 17.

Streets

Responsible for everything other than Water / Parks / Tree Inventory.

Still using a lot of spreadsheets to manage data – did analysis at Corp Yard, have 14 staff members sharing two desktops.

Have CCTV inspection software but will need to be able to store the video (has obtained three bids).

Using spreadsheets to manage resources and track resource needs – they are developing performance measures and will need to cost programs in the future but don’t have the automated tools they need to do this.

Water

Using Wonderware for SCADA – it is working but would like to see if they could replace it with Ignition. A concern is that SCADA is on the City network – not isolated on own network.

They have a meter-reading system for approximately 9,000 AMI meters (out of a total of some 14,000 meters) – would like to eventually make usage data available to the public through the City web-site but not there yet.
Information Technology Needs
The Director for Public Works had been in the position for less than six months at the time of the interview as have many of his managers. His vision for the department is to focus on strategic goals and address hardware and software issues with regard to asset management, work order management, and customer relationship management. He sees that:

- Enterprise GIS is critical for the department – accurate and timely data is the foundation for everything that they need to do. This is their top priority.
- The need a project management system (have more than 35 projects currently under way).
- Public Works is planning to implement Cityworks as the City’s standard asset management system – the plan being that it will be linked to GIS and generate work orders. Working on the contract, but also open to other solutions (the City had previously purchased Cityworks in 2015 but put the implementation on hold).

Recreation
Current Use of Information Technology and Challenges

- Community outreach through the City’s web-site and social media is important for Recreation. In addition, to the City’s web-site they are making use of Constant Contact, Facebook, Next Door, Twitter, and Hoot Suite. Recreation would like to be able to publish content to all these sites through a single interface rather than manually updating the content for each which is very time consuming. They have just received some guidelines for content on the City’s web-site but have no restrictions for social sites.
- They are using Active.Net for class registrations and park and facility reservations. It is felt that Active charges a lot for the service and the reports that they provide are not always intuitive, particularly when they must track attendance for contract classes or where scholarships have been provided. There is a defect in Active.Net that allows people to register for free if there has been a mistake in setting up the dates for the class. Sometimes their web-site will freeze up during peak usage periods. They also have a problem with the integration of Active.Net with SunGard. Recreation would like to find a replacement for Active.
- They are using CivicPlus for Commission Meetings.
- Using SunGard for time reporting – but has proven to be very cumbersome for part-time recreation employees.
- They have TeamSideline.com for managing / scheduling league play – has been working well.
- They publish an Activity Guide three times per year, with a distribution of 17,000 copies they also publish an 8-page summer brochure using MS Publisher and that is printed by an outside vendor.
- They have experienced a number of miscellaneous issues with information technology including connectivity problems at the pool, a membership card printer that is not supported by IT, projectors that are outdated, and problems with printers including a fire.
- They are experiencing problems with desktop performance – not sure if they have a network issue or if the desktops need to be updated (managers have MS Surface Pros).
Information Technology Needs

- Recreation would like to find a replacement for Active.
- Would like to improve interaction with the public including mobile applications, and a capability for Customer Relationship Management (CRM) to handle community questions and issues.
- Would like to use Kronos or ADP as a substitute for time entry in SunGard.
- Would like to replace meeting room projectors with newer devices that can connect with a Smart Phone.
3.3 – Enterprise Business Applications

![Business Application Lifecycle Diagram]

Figure 4 – Business Application Lifecycle

Figure 4, Business Application Lifecycle, depicts NexLevel’s view of the stages in the life of a business application and the actions that organizations should take as a business application ages. In this model, organizations should:

- **Assess** promising business applications that are prototypes or that are just emerging into the marketplace (i.e., with a small number of implementations).
- **Procure, Retain, or Expand** the use of business applications that have reached a stage of maturity (i.e., the product provides a full range of functionality and the vendor has the resources required to support and enhance the functionality).
- **Evaluate** business applications that are beyond the point of their peak viability and/or that are entering into a maintenance phase (where the vendor will provide fixes for software defects but little in the way of new functionality).
- **Replace** business applications for which support may be limited or discontinued in the near-future.

Using the City’s SB272 Enterprise Systems Catalog as the basis, NexLevel has reviewed the status of each of the business applications listed and provided a recommended disposition in Table 2, Disposition of Business Applications.
Table 2 – Disposition of Business Applications

<table>
<thead>
<tr>
<th>Product *</th>
<th>Vendor</th>
<th>Purpose</th>
<th>Custodian</th>
<th>Recommended Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accela MinuteTraq</td>
<td>Accela</td>
<td>Agenda Preparation, minutes, and packet distribution</td>
<td>City Clerk</td>
<td>Retain</td>
</tr>
<tr>
<td>Active.Net</td>
<td>Active Network</td>
<td>Recreation programs management, online registration and payment</td>
<td>Recreation</td>
<td>Retain (1)</td>
</tr>
<tr>
<td>Amerinational Loan Servicing</td>
<td>Amerinats</td>
<td>Online loan management</td>
<td>Community Development</td>
<td>Retain</td>
</tr>
<tr>
<td>ArcGIS</td>
<td>ESRI</td>
<td>GIS database and mapping system</td>
<td>Public Works</td>
<td>Retain (2)</td>
</tr>
<tr>
<td>AutoCad</td>
<td>Micro Desk</td>
<td>PDF/AutoCad Viewer plan review</td>
<td>Public Works</td>
<td>Retain</td>
</tr>
<tr>
<td>Calopps.org</td>
<td>City of Foster City</td>
<td>Public employment resource system</td>
<td>Human Resources</td>
<td>Retain</td>
</tr>
<tr>
<td>CAD/RMS</td>
<td>Tritech</td>
<td>Computer Aided Dispatching and Records Management (Tiburon)</td>
<td>Police/Fire (CAD only)</td>
<td>Replace (3)</td>
</tr>
<tr>
<td>CivicPlus CMS</td>
<td>CivicPlus</td>
<td>City’s website</td>
<td>Information Technology</td>
<td>Retain</td>
</tr>
<tr>
<td>CommunityPLUS</td>
<td>SunGard</td>
<td>Permitting, Inspections, Code Enforcement</td>
<td>Community Development</td>
<td>Replace (4)</td>
</tr>
<tr>
<td>FinancePLUS</td>
<td>SunGard</td>
<td>Accounts Payable, Accounts Receivable, PO Management, Payroll, Timesheets</td>
<td>Finance</td>
<td>Replace (5)</td>
</tr>
<tr>
<td>Firehouse</td>
<td>ESO</td>
<td>Fire records management</td>
<td>Fire</td>
<td>Replace (6)</td>
</tr>
<tr>
<td>Laserfiche</td>
<td>ECS</td>
<td>Records management, document management, online forms</td>
<td>City Clerk</td>
<td>Retain (7)</td>
</tr>
<tr>
<td>Mainsaver Connect</td>
<td>Mainsaver</td>
<td>Asset and work order management</td>
<td>Public Works</td>
<td>Replace (8)</td>
</tr>
<tr>
<td>MetroScan Online</td>
<td>CoreLogic</td>
<td>Online property information</td>
<td>Community Development</td>
<td>Retain</td>
</tr>
<tr>
<td>NeoGov</td>
<td>NeoGov</td>
<td>Job recruitment</td>
<td>Human Resources</td>
<td>Retain</td>
</tr>
<tr>
<td>Online Biller</td>
<td>Online Biller.com</td>
<td>Online utility bill payments</td>
<td>Finance</td>
<td>Retain</td>
</tr>
<tr>
<td>PastPerfect</td>
<td>PastPerfect Software, Inc.</td>
<td>Museum collection management</td>
<td>Recreation</td>
<td>Retain</td>
</tr>
<tr>
<td>PowerPlan</td>
<td>PowerPlan, Inc.</td>
<td>Budgeting</td>
<td>Finance</td>
<td>Replace (9)</td>
</tr>
<tr>
<td>Sympro</td>
<td>JP Morgan</td>
<td>Municipal and performance bond management</td>
<td>Finance</td>
<td>Retain</td>
</tr>
<tr>
<td>Team Sideline</td>
<td>TeamSideline</td>
<td>Sport team contracts &amp; scheduling</td>
<td>Recreation</td>
<td>Retain</td>
</tr>
<tr>
<td>Track-It!</td>
<td>BMC Software</td>
<td>IT Help Desk ticket mgt. &amp; inventory</td>
<td>Information Technology</td>
<td>Retain</td>
</tr>
<tr>
<td>WhenToWork</td>
<td>WhenToWork,Inc.</td>
<td>Employee Scheduling</td>
<td>Recreation</td>
<td>Retain</td>
</tr>
</tbody>
</table>

Notes:
* Please note that in addition to the software products identified in this catalog, the City also has a variety of SQL queries, Excel spreadsheets, and custom applications developed and maintained by ITD.

(1) The Recreation staff indicated that they are experiencing numerous operational issues with the Active.Net application and consider it very expensive for the functionality received. The City should re-evaluate this application, determine if it can, or will, be meet its business needs.
requirements and work with the vendor to improve the product. If this is not possible, then the City should begin the acquisition process to replace Active.Net with a more effective product.

(2) The Geographic Information System (GIS) is operating under a proven, well-supported application (ESRI); however, the City’s use and on-going support of the application is in a state of uncertainty and lacks a City-wide use strategy. The City should create a go-forward GIS strategy. See Section 4, Recommendation No. 4 (Business Applications – GIS Roadmap).

(3) The Tiburon software application is nearing product end-of-life. Tiburon was acquired by TriTech in 2015 and are marketing/developing the TriTech applications with less focus/support on the older Tiburon software. Therefore, the PD should begin to develop a strategy for the replacement of the CAD application. The RMS application must be upgraded/replaced by January 2021 in order to avoid non-compliance with NIBRS requirements.

(4) The City has issued a consulting support RFP to assist in the acquisition and implementation of a new land management information system. Vendor selection is expected in March 2018.

(5) The City has issued a consulting support RFP to assist in the acquisition and implementation of a new finance/human resources/payroll information system. Vendor selection is expected in March 2018.

(6) The Firehouse software is currently being supported by an outside consultant as the vendor (ESO) has not been responsive to the Fire Department’s needs and requests for service. This application should be replaced with a modern, robust fire management system.

(7) The City has implemented Laserfiche as its document management application. The City Clerk should create a City-wide Electronic Content Management strategy for the full deployment of Laserfiche in conjunction with the implementation of the new finance and land management systems. See Section 4, Recommendation No. 5 (Business Applications – ECM Strategy).

(8) The implementation and use of Mainsaver (work order management) has not been effective. The application does not meet a majority of the needs of the current public works staff; therefore, a detailed requirements analysis should be completed and matched to the latest version of Mainsaver or, based on the needs analysis, the City should acquire a new application that meets the needs and is closely integrated with the City’s GIS application.

(9) As the City implements a new finance system, the budget model should be evaluated and deployed if it meets the needs of the City. If not, implementing a newer version of PowerPlan or a new, stand-alone budget module may be the best course of action for the City.
3.4 - IT Best Practices and Organizational Maturity

This section of the report provides information regarding the City’s conformance to IT Best Practices including NexLevel's maturity model for best practice conformance and the benefits related to the best practice conformance.

Figure 5, Levels of IT Best Practice Conformance, provides a conceptual framework that NexLevel uses to depict IT best practices conformance based on a maturity model. The model is based on five levels of maturity ranging from “Frontier” (where the IT organization is largely unstructured) to levels of progressively higher conformance to best practices as organizations adopt well-defined and repeatable processes.

Each of the levels in the model have different characteristics each of which impacts the ability of an organization to better manage its total cost of ownership (TCO) for IT and to derive greater benefits for those investments. These include:

- **Frontier Level**: Organizations at the Frontier Level have fewer than 20% of their processes in conformance with best practices. This level of maturity is characteristic of new and/or re-organized IT organizations where roles, responsibilities, and processes are generally not well defined.

- **Reactive Level**: Organizations at the Reactive Level have between 21% to 50% conformance to the IT Best Practices. They generally have well developed procedures including formalized processes for incident reporting and tracking and are committed to customer service but spend a disproportionate amount of their time and resources “fighting fires.” Organizations at this level of maturity tend to be primarily focused on managing the cost of information technology rather than finding a balance between cost and value.

- **Proactive Level**: Organizations at the Proactive Level have between 51% to 80% conformance to the IT best practices. They have many of the same attributes as organizations at the Reactive Level, but with the key difference that they continually seek to improve service delivery by finding long-term solutions to common problems such as improving user competency, self-reliance, and training so that they do not need to call IT for support as often. This is the “turning point” for many organizations since they are better able to use their IT resources for strategic purposes rather than reactively responding to the same problems. These organizations are often focused on the value that they obtain for their investments in information technology.

- **Service and Value Level**: Organizations at the Service and Value Level have more than 80% conformance to IT best practices. They continue the trend towards value and generally derive much higher returns for their investments in information technology, although at greater expense. The Service and Value Level is not seen as frequently in the public sector except where organizations provide services (for a fee) to other jurisdictions although some organizations find...
that some components of the Service and Value Level (particularly at the higher end, i.e., greater than 90% conformance) are useful particularly with regard to delivering IT-based services to the community.

The vertical dotted line between the Reactive and Proactive levels of the model illustrates a key metric regarding IT best practice conformance. Organizations with less than 50% conformance are generally reactive in responding to user needs, while those with better than 50% conformance are generally proactive and are better able to anticipate user needs. NexLevel has observed that many organizations achieve between 40% to 60% conformance to the IT best practices and, as a result, often have some of the characteristics of both the Reactive and Proactive levels of the model.

NexLevel recommends that organizations work to achieve at least 50% compliance with best practices (i.e., on the border between the Reactive and Proactive levels), 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.

Caveats Regarding Best Practices
Several cautions about IT best practice conformance are appropriate. Although NexLevel attaches considerable importance to best practice conformance as an essential building block for the effective delivery of IT services, an IT organization need not meet or exceed every best practice in order to provide effective customer service. A higher degree of conformity to best practices, however, generally enables an IT organization to better sustain service delivery levels over time and to more successfully cope with external and internal factors that have the potential to disrupt the ability to effectively deliver IT services.

NexLevel has noted that a high degree of conformance to the IT best practices does not necessarily result in the delivery of quality services to the user community or user satisfaction with the services. As depicted in Figure 6, Factors Enabling IT Service Delivery, the ability of an IT organization to execute (i.e., to provide IT services that are responsive, sustainable, and agile) is dependent not only on best practices conformance but also on enabling factors such as organizational mission and vision, organizational culture, as well as IT funding and IT organization and staffing.

**Figure 6 – Factors Enabling IT Service Delivery**
Each of these enabling factors is briefly discussed below:

- **Organizational mission and vision:** Organizations with well-defined business plans including detailed statements of their mission and vision are generally better prepared to align their investments in information technology with their business objectives and priorities.
- **Organizational culture**: Culture, especially with regard to an organization’s continuing commitment to the strategic governance of IT and to user ownership for information technology, also plays a key role in the delivery of effective IT services.

- **IT funding**: This is one of the most common limiting factors for most organizations. Adequate and sustained funding plays a key role in ensuring that the IT organization has the resources needed to keep business applications and the infrastructure supporting them on current versions/releases and that patches are applied in a timely manner.

- **IT organization and staffing**: IT staffing (which is often related to funding) has a significant impact on service delivery. The best practices are heavily weighted toward the development and use of formalized procedures and supporting documentation since these provide the basis for sustaining and improving services and service levels:
  - Procedures and documentation enable IT staff to be more productive but are not a substitute for sufficient IT staff (considering the number, experience, and qualifications of the staff members). Similarly, if the procedures and documentation are out of date because there are insufficient resources to keep them current, best practice conformance does not necessarily translate into improved service delivery.
  - Organizational structure also plays a key role in determining the effectiveness of IT services, since IT organizations that are structured and staffed to support infrastructure are not necessarily well equipped to support end-users.

If we were to compare two organizations, each needing similar IT services and service levels and each having the same degree of conformance to the IT best practices, the organization with the most enabling factors (especially with regard to IT funding, organization, and staffing) will obtain greater benefits for its spending on information technology.

### 3.5 - City’s Current Conformance to IT Best Practices

The assessment of the City’s conformance to the IT best practices was performed in a two-step process:

- NexLevel worked with ITD to complete an IT best practices checklist which asked them to rate whether the City was fully conformant, substantially conformant, minimally conformant, or non-conformant to each of the IT best practices.

- NexLevel then reviewed the checklist and modified the responses (as needed) based on the information provided by ITD in the checklist, the review of the ITD’s documentation, and the interviews with user stakeholders and ITD staff. The revised checklist, including both the initial responses provided by ITD and NexLevel’s review is provided as Appendix A.

NexLevel has broken out the IT best practices into six categories, or dimensions, including:

- **IT Governance**: Practices related to the governance of the City’s information technology environment including the development and maintenance of operational and information technology strategic plans, and alignment of information technology spending and priorities with the organization’s overall objectives and priorities. The organization’s leadership / management team is responsible for conformance to the IT best practices in this dimension.

- **Service Delivery**: Practices related to coordinating the processes involved in providing customer support including training, help desk, service delivery management, and the establishment of
service level agreements (SLAs) and tracking conformance to them. The City’s leadership / management team (and sometimes the user community as well) and the IT organization(s) involved share responsibility for IT best practices conformance in this dimension.

- **Business Technology Applications**: Practices related to the management and support of the application information systems supporting business operations. The City’s leadership / management team (and sometimes the user community as well) and the IT organization(s) involved share responsibility for IT best practices conformance in this dimension.

- **Infrastructure**: Practices related to the acquisition, utilization, and maintenance of equipment (such as servers and storage devices), operating systems, support software, and network services. The City’s leadership / management team (and sometimes the user community as well) and the IT organization(s) involved share responsibility for IT best practices conformance in this dimension.

- **Security / Information Protection**: 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. The City’s leadership / management team (and sometimes the user community as well) and the IT organization(s) involved share responsibility for IT best practices conformance in this dimension.

- **IT Administration**: Practices related to the management of technology budgets, maintenance agreements, software licenses, and the development and maintenance of current and accurate documentation on all technology activities. The IT organizations supporting the user community are primarily responsible for best practices conformance in this dimension.

Figure 7, IT Best Practice Conformance, depicts the results of the evaluation of the City’s conformance to the IT best practices. Each of the colored bands in Figure 8 represents a level in the IT best practice maturity model, with the outer most (red) ring representing the Frontier Level of organizational maturity (the lowest level of conformity to best practices) and the core of the diagram representing the Service and Value Levels (the highest degree of conformity to best practices). In between, the orange band represents the Reactive Level of the maturity model and the light-yellow band represents the Proactive Level of the maturity model. The concentric hexagons within the diagram represent 10% gradients in IT best practices conformance and they allow more precise plotting of conformance within each dimension.

The width of the bands is proportional, with the bands representing the Reactive and Proactive levels being the widest since they represent a range of 60% conformance to the IT best practices. NexLevel has plotted the results of the assessment for each of the best practice dimensions within the rings (the target points) and then connected them together to depict where the City is from an overall perspective in relationship to the maturity model.
As shown in Figure 7, the City is more conformant in some dimensions of the model than in others, although on an overall basis, at 43% the City is within the upper tier of the Reactive Level of the maturity level which is close to the average (45%) for prior assessments of this type conducted by NexLevel. Service Delivery, Infrastructure, Security / Information Protection, and IT Administration are either within the tan band representing the Proactive Level of the maturity model or close to it and are elements of strength for the City. IT Governance and Business Applications rank lower, due to the highly informal processes used as well as the age of the City’s business applications (such as SunGard) and the lack of a detailed Application Portfolio to manage them.

Analysis of Results

Chart 1, Comparative Conformance by Dimension, provides an additional perspective of the City’s conformance to the IT best practices. For each item in the IT best practices checklist ITD was asked to
indicate whether the City was fully in conformance with the best practice (shown in green in Chart 1), substantially in conformance with the best practice (shown in light tan), minimally in conformance with the best practice (shown in orange), or not conformant with it (shown in red). Full conformance generally requires the existence of formal policies and procedures, supporting documentation, and the implementation of controls to ensure that the procedures are being followed and to identify opportunities to improve them.

Although NexLevel’s methodology provides some credit for organizations that have less than full conformance (i.e., substantial or minimal conformance) to an IT best practice assessment factor, less than full conformance is generally not as sustainable since it is typically based on ad-hoc processes and the capabilities and experience of staff members which can change over time. Examining the results for the City of Gilroy in this context:

- Looking across all the dimensions of the IT best practices model, the City is only fully conformant with 24% of the IT best practice assessment factors, substantially or minimally conformant with more than twice as many (49%), and non-conformant to 24%. This indicates that the City could experience problems in maintaining its current level of conformance in the future and might be challenged to foster continuous improvement in the delivery of IT services.
- Even in the dimensions where the City is fully conformant to 30% of more of the IT best practices (Service Delivery, Security / Information Protection, and IT Administration) there are nonetheless high proportions of assessment factors to which the City is either less than fully conformant or non-conformant. For example, the percentage of factors for which the City is less than fully conformant is 40% in Service Delivery and Security / Information Protection, and 42% in IT Administration.
- The City is fully conformant to less than 10% of the IT best practices in IT Governance (8%) and Business Applications (7%), and these are critical since the City plans to undertake major initiatives to refresh its business applications environment including ERP and land management. Low conformance in these areas could present a challenge for the City in the successful and timely completion of these initiatives.

3.6 - Gap Analysis

Figure 8, Gap Analysis, uses the stages of the IT best practices maturity model and the results of the IT best practices conformance assessment as the framework for depicting where the City of Gilroy is today compared to NexLevel’s recommended goals for the City. In this figure:

- Point (A), IT Best Practices Assessment, is at 43% which is in the upper tier of the Reactive Level of the maturity model.
- Point (B), Short-Term Conformance Goal, is at 50% which would bring the City over the average of 45% and should be achievable with existing resources.
- Point (C), Target Conformance Goal, is at 65%, which is the mid-point of the Proactive Level of the maturity model and would enable the City to improve the return (i.e., improved productivity, service quality, and agility) for its investments in information technology and would ensure the ability of ITD to consistently deliver IT services to the City’s user communities.
- Point (D), Gap Between Current State and Target Goal, illustrates the difference in IT best practice conformance between the City’s current state and the target state.
Although the gap between the City’s current level of conformance to the IT Best Practices and the short-term conformance goal appears to be relatively small, even a small improvement in conformance will have a beneficial impact on the City’s ability to sustainably deliver information technology services, particularly while undertaking major business application initiatives.
3.7 - SWOT Analysis

Figure 9, SWOT Analysis, provides a summary view of the findings of the IT Assessment including the strengths, weaknesses, opportunities, and threats related to the City’s information technology environment and the processes and procedures supporting it. There is a close relationship between these items since the City’s ability to realize the potential opportunities and mitigate the potential threats is dependent on its ability to leverage its strengths while addressing the weaknesses.

The City is facing a particularly difficult situation. Key components of its information technology infrastructure (including business applications, the network, servers, and desktops) could not be replaced as needed due to limited funding during the recession and many are now over-aged even as public expectations for access to City information and services have changed dramatically. A repeated theme in the user interviews that were conducted as part of the Information Technology Assessment emphasized the impact that this has had on the ability of City staff members and decision-makers to meet community needs. One interviewee summed it by stating that “at times it seems as if we work for the business application (name omitted) rather than the business application working for us.”

Strengths

The City’s strengths include executive support for the strategic use of information technology to deliver services to the community, an IT organization that is capable and engaged (but under-staffed), and departments that are more than ready to take on the challenges related to the replacement of key business applications. The City’s technology infrastructure appears to be reasonably secure and reliable. The City is also fortunate in having the financial resources available for the replacement of key business applications that including the City’s Finance / HR, Land Management, Asset Management, and Records Management systems.

Weaknesses

At a strategic level, the City of Gilroy does not have a formal process for the governance of information technology, while from a foundational standpoint, the City’s GIS system (which is critical to the successful implementation of new land management and asset management systems), has no sponsor or owner in the City and has languished. From an operational standpoint, the City’s planning for business resilience is incomplete, while ITD staffing is inadequate and conformance to IT best practices (which would enable ITD to quickly scale up staffing) is not as good as it could be. Due to limited staffing...
and budget, ITD has had to place an emphasis on “firefighting” rather than on progressively mitigating the root causes of user problems and implementing many of the information technology best practices that will help sustain the organization in years to come nor does the City have comprehensive approach to user training to ensure that it can obtain the highest possible return for its investment in new business applications.

**Opportunities**

Through the implementation of a formal approach to enterprise IT governance the City will be able to better allocate user and IT resources to ensure that critical business objectives and priorities are addressed and that the operational impact of replacing key business applications can be managed and minimized. Through the further adoption of IT best practices, ITD should be able to adopt a program for continuous improvement and that will enable it to meet increased user and public expectations. The City should also consider the migration of some IT services that are presently hosted on-premises to cloud environments with the objectives of simplifying business resilience strategies and allowing ITD to focus on the City’s highest priorities.

**Threats**

The single largest threat facing the City is that without the timely and successful replacement of many of the City’s key business applications it could face a scenario where the costs to maintain the current application environment increase while the City’s return for those costs continues to decrease. Although the users are committed to change, without enterprise IT governance the City’s legacy of siloed organizations, separate information systems, and separate repositories of information will limit its ability to fully realize the benefits that can be provided by new business applications. Taking on too many concurrent projects will greatly increase the risk of operational disruption and potential project failure. Finally, without a more thorough approach to cyber-security planning, monitoring, and education, the City’s information technology assets will be at risk.
Section 4 – Findings and Recommendations

Table 3, Summary of Findings and Recommendations, provides information regarding the findings and recommendations that were identified in the course of the Information Technology Assessment. NexLevel has provided a description for each finding and the associated recommendation(s) to remediate the finding. NexLevel has provided an estimated priority for each finding including an assessment of the potential business value to the City and the level of difficulty (considering the estimated effort, risk, and cost involved).

Figure 10, Framework for Prioritization of Findings, depicts the process used to establish the priorities. This model balances the estimated business impact of a recommendation against the potential difficulty of implementing it. From an opportunistic standpoint, the highest priority results from a recommendation having a high business impact and low difficulty, but sometimes there are also findings that have a high business impact but that are difficult to implement. Typically, organizations look to “package” findings so that some results can be achieved in the short term while solutions for the more difficult findings are implemented over time.

Generally, NexLevel avoids providing findings that have low business impact, but organizations will sometimes consider them if they are relatively easy to do in order to establish some momentum and credibility. For the most part, a finding that has low business value and that is difficult to implement would only be considered under special circumstances such as statutory conformance.
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<th>Number / IT Best Practice Dimension</th>
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<td><strong>(1) IT Governance (Oversight)</strong></td>
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| a)                                 | The City does not have a formal process to ensure the continuing alignment of information technology resources with the City’s objectives. As a result, individual departments are pursuing information technology initiatives without full consideration of the possibilities for the enterprise use of applications and the City-wide sharing of data. This has resulted in:  
  • Lack of enterprise ownership for GIS which is critical to nearly every department including PD, Community Development, Public Works, and Fire  
  • Community Development has issued an RFP for the replacement of the LMS application  
  • Public Works evaluating the potential implementation of Cityworks as a replacement for Mainsaver  
  • Finance and HR working on the development of an RFP for the replacement of SunGard  
  • The City Clerk working on a project to digitize all City records  
  • PD seeking to replace its RMS | The City should establish a formal IT advisory committee composed of department heads under the direction of the City Administrator for the purpose of ensuring the continuing alignment of business and IT priorities, vetting proposed initiatives, and assigning user ownership to business-related projects. The implementation of the IT Advisory Committee should include the development of a Charter for the Committee. A consistent approach to information technology governance helps ensure that:  
  ▪ IT priorities and funding are aligned with the business goals and objectives (strategic alignment).  
  ▪ IT is a business enabler and maximizes benefits (performance measurement).  
  ▪ IT resources are used responsibly (resource management).  
  ▪ IT risks are managed appropriately (risk management).  
  ▪ IT delivers value to the organization (value delivery).  
  ▪ The City leverages both cloud-based and on-premise services. |
| b)                                 | The City does have enterprise standards for the use of cloud-based services which could result in the City incurring higher annualized operational costs and duplication of services. | Priority:  
  Business Impact: High  
  Difficulty: Low  
  Priority: High |

Priority:  
Business Impact: High  
Difficulty: Low  
Priority: High
### Number / IT Best Practice Dimension

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| a) Prior to the recent recession, ITD was staffed with 6.5 – 7.5 FTE. Cut-backs in the City budget have reduced that number to 4 (one position is currently vacant). | The City should take the following steps to bring the level of support within ITD to an appropriate level.  
- Recruit and fill the vacant IT Application Analyst position which will provide project management support during the implementation of new business applications.  
- Create a new position of IT Business Analyst which will provide on-going application support to City departments, co-ordinate training, provide technology consulting, and assist in defining improved workflows.  
- Create a new position of Network Administrator to additional on-going technical support and backup to current IT Technicians. |
| b) The ITD workload and amount of support required by City departments has increased over the same period of time (for example, accounting for smart phones and tablets has increased the number of ITD supported devices by 30% over the last 5 years). | It should be noted that the City has had difficulty filling open technical positions in the past. This may be due, in part, to the proximity of Silicon Valley which makes recruiting more competitive and challenging. It may be beneficial for the City to conduct a position classification and compensation study to ensure City technical positions are in line with surrounding employers. However, the best short-term option may be to utilize additional managed services (contractors) for commodity IT services such as network monitoring/maintenance, equipment refreshment, and short-term projects. |
| c) City departments are rapidly moving forward with the selection and implementation of new software applications that will require additional ITD support (ERP, LMS, etc.). | NexLevel recommends, over time, the City formally create department-based Business Application Specialists for major business applications (ERP, CAD/RMS, LMS, etc.) thereby reducing the reliance on ITD for application assistance and to increase department buy-in for application deployment and use. The introduction of new technology should be sponsored and driven by department staff with ITD providing necessary technical consultation and infrastructure configurations. City departments should have staff that are the focal point for how it uses the software applications, determining the best method of applying the application to meet departmental business needs, and overseeing |
### Finding

The departmental use of enterprise-wide technology (document management, GIS, etc.). These Business Application Specialists should help department users find technical solutions, research software and technology applications, and interface with ITD for the implementation of technology tools as appropriate.

ITD should work with City management to obtain the resources and funding to support the development of staff training and succession planning (particularly critical given the limited number of staff in ITD and reliance on ad-hoc procedures). ITD should consider the implementation of short-term measures including:

- Allocating time to the development of a knowledge base
- Developing a plan for cross-training ITD staff
- Adopting highly-standardized procedures so that ITD staff can readily move from one assignment to another.

With regard to ITD reporting, NexLevel has observed a number of different reporting relationships, including reporting to the City Administrator and/or reporting through various city operating departments (Finance, Human Resources, Police). The current reporting relationship at the City (through the Finance Director) appears to be working well, providing stability in the management and oversight of ITD and advancing technology needs for the organization. That being said, as organizational changes occur (i.e. changes in staff or management; new or changed responsibilities of Department Directors), the City may wish to explore moving the oversight of ITD to the City Administrator’s office.

### Priority:

- **Business Impact:** High
- **Difficulty:** High
- **Priority:** High
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| **(3) IT Governance (Project Management)** | a) The City and ITD do not have a formal process for defining and managing major technology projects including the acquisition and implementation of City-wide application software (ERP and LMS).  
b) Attempts at developing project charters have occurred in the past but appear to be incomplete, inconsistent, and not used to manage the delivery of the new technology; consequently, the success of previous technology projects is difficult to ascertain.  
c) The City cannot effectively apply “lessons learned” from previous projects to future endeavors without appropriate project artifacts. | ITD should develop and implement a thorough process for the development of project charters that includes review of draft charters by ITD (possibly in a peer review format) and then by the sponsoring department. Project charters should also be used to document the scope, objectives, risk, and resource requirements of a proposed project for review by the City’s IT governance committee and should be as complete as possible to clearly identify desired business outcomes. Key project sponsors should become “application owners” thereby fostering a sense of ownership in City departments and become responsible for vendor support coordination, training, workflow, high-level system administration, and application usage.  

**Priority:**  
Business Impact: High  
Difficulty: Low  
Priority: High |
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| (4) Business Applications (GIS Roadmap) | a) The City does not have a strategic roadmap for the City-wide use of GIS or for collaboration with regional partners (such as the County) who also have extensive GIS applications.  
   b) The long-term requirements for asset management and data integration with GIS are not defined.  
   c) The City has not defined enterprise ownership of GIS which has resulted in continual degradation of the data layers in GIS thereby reducing the usefulness of the application and adversely impacting the City’s ability to deliver services to the community. | Although most City departments view GIS as a potential enterprise system, the City will not be able to realize this vision without the eventual allocation of additional resources and a tactical roadmap for GIS. Today the City’s GIS platform is supported by an outside contractor (LynxGIS) under the direction of the Public Works Department. Most departments view GIS support as inadequate and like to have assistance and/or training on how to utilize GIS data and maps.  
   The City should establish a GIS roadmap (a series of GIS recommendations) for the on-going use and eventual expansion of the ERSI GIS application so that all current and future users of GIS understand the long-term goals of GIS and the City’s strategy for its use of GIS. GIS, as an enterprise application, can provide a single access to selected documents and records and share data between departments (i.e. scanned permits and plans could be accessed by viewing a map of the City, GIS access from patrol vehicles).  
   Cataloging existing geospatial functions and identifying the strengths that should be leveraged, as well as major weaknesses that should be addressed would be key components of the GIS roadmap. The eventual migration to a single GIS database for all departments, would reduce redundancies, allow for information sharing between departments through address links to data, and provide increased information to the public through the City’s website.  
   As the City defines its use of GIS, the on-going support for the application will need to be clearly defined. Potential staffing options include:  
   1. The City could negotiate a new contract with the same, or new, GIS vendor to expand support services and specifically define the role and responsibilities of both the City and the vendor for future use and integration of GIS with other enterprise business applications.  
   -OR-  
   2. The City could recruit one and a half GIS technicians whose |
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<td>responsibility would be the planning, managing, and updating of GIS data layers and database integrations. The full-time position would provide overall GIS guidance, planning, and integration support. The half-time position would provide data layer maintenance, map development, and backup to the full-time person.</td>
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**Priority:**
Business Impact: High
Difficulty: Medium
Priority: High
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| (5) Business Applications (ECM Strategy) | a) The City does not have a content/document management strategy, and this limits the City’s ability to maximize the benefits received from the implementation of Laserfiche including workflow.  
   b) The City’s file network storage structure is extremely unorganized which inhibits the sharing of documents and reduces staff productivity.  
   c) The City must consider the integration of Laserfiche with the new ERP and LMS applications in order to avoid duplication of workflows and document repositories.  
   d) The City does not have an enterprise plan for the storage of video content being generated by nearly all departments including Clerk, PD, Community Development, and Public Works potentially incurring increased costs for video storage and retrieval. | An Electronic Content Management (ECM) strategy and system is highly dependent on project planning and a concerted effort to keep stakeholders informed. Best practices for ECM include the development of an “enterprise content management implementation plan” that identifies how the City is going to implement and use ECM capabilities (including the use of organizational change management to help manage the transition from paper-based manual processes to digital-based automated processes), the workflows (both intra-department and enterprise-wide) that will be automated, and the staff resources that will be needed for the effort.  
NexLevel recommends the City develop and implement an ECM Plan that identifies:  
- The City’s objectives and priorities for content management  
- The risk factors related to the successful implementation of the content management strategy and system and the steps the City will take to manage/mitigate these risks  
- The content management stakeholders and their respective responsibilities as well as an inventory of the various document repositories in use  
- Document retention and disposal standards  
- The documents and workflows (including both data driven and document driven actions) that will be supported  
- The City’s existing policies for record retention  
- Definition, restructuring, and management of the City’s network file storage. |

**Priority:**  
Business Impact: High  
Difficulty: Medium  
Priority: High
### Business Applications (Public Safety Roadmap)

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<tr>
<td>(6) Business Applications (Public Safety Roadmap)</td>
<td>The Police Department operates a number of software applications that may, or may not, be supported by ITD. Many of these applications are operated in a stand-alone environment and are not consolidated or share data with other Public Safety software.</td>
<td>The City should develop a tactical plan for implementing, updating, supporting, and replacing specific Police Department technologies/software including, but not limited to applications such as: Automated License Plate Readers, e-Citation, Timekeeping/Scheduling, field reporting, crime analytics, digital evidence, body/car cameras, GIS, jail management, crime photos/video, traffic cameras, voice recognition, interview room recording, fingerprinting (LiveScan and remote), DNA tracking, court appearance video, etc. This project would include identifying the level of support required for the various PD-based technologies, on-going staffing, and other specific software application requirements.</td>
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**Priority:**
- Business Impact: High
- Difficulty: Medium
- Priority: Medium
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| (7) Information Protection (Business Resilience) | a) The City has a robust and fully-functioning Emergency Operations Center; however, the City’s plans for information technology disaster recovery and business continuity are incomplete and have not been tested.  

b) ITD has not worked with the user community to prepare a Business Impact Analysis that identifies critical information systems and the time in which they must be restored to minimize the impact on departmental operations and to the public.  

c) ITD has not conducted an analysis to identify and remediate potential single points of failure within the City’s information technology infrastructure (for example, the City has a single connection to the Internet).  

d) IT was noted that while splitting the City’s IT infrastructure between the PD and the Annex will provide a degree of resilience, the proximity of these facilities is problematic. | The City does not have a comprehensive, well-tested, disaster recovery plan to cover emergency operational scenarios; accordingly, NexLevel recommends the City develop a comprehensive Disaster Recovery Plan that establishes the priorities for restoring technology services and ensures adequate processes, procedures, and resources are available to support an orderly recovery of the City’s applications within the defined timeframe and in priority as deemed by the City departments.  

Once the Disaster Recovery plan has been completed, ITD should exercise the plan to validate that the servers, operating systems, application software, databases, and documentation can be brought into service from the recovery site within the specified timelines, that the applications will function as expected, that network connectivity can be successfully established, and that system performance is acceptable.  

ITD should work to identify all single-point-of-failure(s) and request budget to begin the remediation of these critical infrastructure components (Single Internet connection, core switch, redundant backups, etc.). |  

**Priority:**  
Business Impact: High  
Difficulty: Medium  
Priority: High |
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| (8) Security / Information Protection (Cyber-security Plan) | The City does not have a formal cyber-security plan nor has ITD performed network and general security vulnerability scans or penetration testing. | The City should embark on a program to develop a formal, NIST-conformant, cybersecurity plan that addresses all phases of cybersecurity including planning and implementing preventative measures, monitoring network activity to detect intrusion attempts and suspicious network activity, the implementation of procedures to mitigate cyberthreats and to recover from them, as well as processes to review the cyberattack and continually adapt the City processes to better meet similar threats in the future. It would be prudent for the City to take a comprehensive and proactive approach to cybersecurity. Security programs typically involve a multi-step process including:  
- Involving the City’s management team in formulating information security policies to ensure that they are aligned with the City’s business objectives and priorities.  
- Contracting with an independent, certified, firm to conduct a threat assessment (network vulnerability and penetration testing) to identify security gaps and identify areas for improvement and developing a security plan to remediate the identified vulnerabilities.  
- Provide a continual approach to security management including periodic threat assessments and the development of plans to detect and respond to security breaches.  
- Educating users, especially those using mobile devices, regarding security risks, safe networking practices, and their responsibility to protect City information and assets. |

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| (9) Business Applications (Application Portfolio) | a) ITD maintains an SB-272 Enterprise System Catalog that provides information related to each of the City’s business applications including the name of the product, the vendor, purpose, data category, custodian (user), data collection frequency, and update frequency; however, ITD does not have a formal approach to business applications management including an application portfolio. | ITD should adopt a formal approach to application portfolio management by developing an application portfolio. The key to successful portfolio management is not creating a database or list, but rather what ITD does with the list. The City needs to make admittedly difficult decisions regarding:  
- The business applications that should be retired or replaced (with what new or existing business application)  
- Business applications that provide similar functionality and that could be consolidated  
- The plan for the remediation of other, dated business applications.  
The development of an Applications Portfolio is a key governance tool that will enable ITD to:  
- Develop and defend informed decisions as to the ultimate disposition of an application (retirement, replacement, technical renovation, functional enhancement).  
- Develop disaster recovery and business continuity plans based on business needs.  
- Define service levels based on the impact of the application on the City’s operations and its alignment with the City’s overall business objectives.  
- Optimize resource allocation and use.  
- Evaluate and prioritize decisions to outsource application support (such as to “cloud” or software-as-a-service (SAAS) solutions).  

**Priority:**  
Business Impact: High  
Difficulty: Low  
Priority: High |
The City does not have a formal program to ensure that users maintain sufficient competency levels in the use of business applications. This is critical since although training is generally provided in the course of application implementation, refresher training is generally not provided, so that even with a stable workforce, user competency will decline over time. Factors such as turnover and changes in assignments can also decrease staff competency. As users lose competency in the use of a business application they often resort to ad-hoc “work arounds” which can diminish the benefits that the City realizes for the investment made in these applications.

ITD should work with the City’s departments to develop and implement a regularly-scheduled application training program conducted by users who are subject-matter and application experts or by professional trainers. This will be vitally important as the City embarks on the implementation of key business applications over the next 2-3 years (finance, land management, etc.). As part of this process the City should identify key performance indicators (KPIs) within each business unit to enable assessment of the effectiveness of the training provided. These KPIs can also be used to evaluate the effectiveness of business applications.

The implementation of this recommendation should include:

- ITD meeting with departments to assess the need and priority for providing continuing application training for users and the development of a budget request.
- The development and implementation of a plan for providing the training including on-going use of the well-equipped training room in the City.
- The development of KPIs to continually assess the effectiveness of the training provided.

<table>
<thead>
<tr>
<th>Number / IT Best Practice Dimension</th>
<th>Findings</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(10) Business Applications</strong></td>
<td>The City does not have a formal program to ensure that users maintain sufficient competency levels in the use of business applications. This is critical since although training is generally provided in the course of application implementation, refresher training is generally not provided, so that even with a stable workforce, user competency will decline over time. Factors such as turnover and changes in assignments can also decrease staff competency. As users lose competency in the use of a business application they often resort to ad-hoc “work arounds” which can diminish the benefits that the City realizes for the investment made in these applications.</td>
<td>ITD should work with the City’s departments to develop and implement a regularly-scheduled application training program conducted by users who are subject-matter and application experts or by professional trainers. This will be vitally important as the City embarks on the implementation of key business applications over the next 2-3 years (finance, land management, etc.). As part of this process the City should identify key performance indicators (KPIs) within each business unit to enable assessment of the effectiveness of the training provided. These KPIs can also be used to evaluate the effectiveness of business applications.</td>
</tr>
</tbody>
</table>

**Priority:**
- Business Impact: Medium
- Difficulty: Medium
- Priority: Medium
<table>
<thead>
<tr>
<th>Number / IT Best Practice Dimension</th>
<th>Findings</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| (11) IT Administration (IT Policies and Procedures) | The City does not have a current, comprehensive set of technology policies and procedures. Department users are not always familiar with, or in conformance with, any current technology related guidelines nor are users required to renew agreements concerning computer network access or appropriate use. The City has not developed a social media policy to guide the growing use of Facebook, Twitter, etc. which can be problematic for the PIO to oversee consistent, well-published responses to the community. | A core component of technology best practices is the development, documentation, maintenance, and publishing of policies and procedures. Policies and procedures need to provide guidelines to enable ITD and City departments to make informed decisions that are consistent with the City’s objectives and priorities. It is important that the City adopt and routinely maintain technology policies and ensure that all staff members are familiar with the policies and procedures and generally conform to them. ITD has developed some technology policies and procedures but they should be updated and expanded to reflect the current operational environment and technology standards. In general core technology policies should include:  
- Acceptable Use of Information Technology, remote access, mobile devices and social media guidelines  
- Guidelines for passwords, levels of access to the network, virus/spyware protection, confidentiality, usage of data and data encryption  
- Network Set up: Guidelines regarding how the network is configured, how to on-board/off-board employees to the network, and permission levels for employees  
- Additional policies that should be considered and developed as appropriate include, use of Cloud Services, Equipment Recycling / Disposal, Software Licensing, etc.  
ITD should also perform a periodic review of policies to ensure that they are current and reflect ever-changing best practices. |

**Priority:**

**Business Impact:** Medium  
**Difficulty:** Medium  
**Priority:** Medium
<table>
<thead>
<tr>
<th>Number / IT Best Practice Dimension</th>
<th>Findings</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(12) Service Delivery (Help Desk)</td>
<td>ITD has a very energetic and successful approach to user support and presently uses Track-It! for the managing Help Desk tickets. It was noted that the City’s approach to service desk management is not as formal as it should be and if the City can add additional personnel resources to ITD, on-going support, and the sustainability level of that support, should increase.</td>
<td>As resources become available, ITD should standardize and expand its Help Desk environment by:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Creating a service catalog that defines the services provided by the Help Desk, the respective responsibilities of the users and ITD, and the service levels associated with each service.</td>
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<tr>
<td></td>
<td></td>
<td>▪ Publishing statistics regarding ITD’s conformance to service levels.</td>
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<tr>
<td></td>
<td></td>
<td>▪ Capturing time worked against tickets.</td>
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<tr>
<td></td>
<td></td>
<td>▪ Establishing a self-help knowledge base that is readily available to users.</td>
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<td></td>
<td></td>
<td>▪ Providing the ability for users and ITD staff members to collaborate on the resolution of tickets or for users to monitor the status of their requests.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Developing a formal process for the review of Help Desk tickets and for the identification and remediation of root-causes.</td>
</tr>
</tbody>
</table>
| | | **Priority:**
| | | Business Impact: Medium |
| | | Difficulty: Medium |
| | | Priority: Medium |
Section 5 – Conclusion

In many respects, an Information technology assessment can have a short shelf-life, as new and/or changed requirements, staffing changes, and developments in information technology alter an organization’s vision for the use of information technology as well as its plans, priorities, and assessment of the ability of the IT organization and infrastructure to support the realization of the vision.

Although expectations, plans, and priorities are subject to change; some factors regarding the governance of information technology and the management of the delivery of IT services have remained relatively constant over time. Focusing on these factors will enable the City to continue to derive value from this IT Assessment even in the midst of change. They include:

- **Taking a proactive approach:** Deriving increased value for an organization’s investments in information technology requires a more proactive approach. While a focus on fixing information technology problems can reduce productivity losses, it cannot make business processes more effective. The latter requires a partnership between IT and the user departments that enables the implementation of changes in organization, culture, and work processes that drive both productivity and value.

- **Considering long-term costs:** Organizations continually grapple with information technology decisions that impact both their total cost of ownership (TCO) and their return on investment (ROI) since TCO tends to be more readily measured and evident than ROI. For example, organizations looking for budgetary savings do not always consider that a potential reduction in the cost for information technology (such as by deferring refreshment of items such as desktop PCs) might actually cost more in the long-run than it seemingly saves as a result of reduced staff productivity.

- **Committing to continuous improvement:** Continuous improvement in the delivery of IT services is highly dependent on the availability and review of metrics including what tasks IT staff members are working on, how long it is taking them to complete the tasks, and what obstacles and issues are slowing them down. The availability of metrics also enables organizations to evaluate whether changes in organization, staffing, and procedures, are improving performance.

- **Collaboration with the user community:** An IT organization cannot effectively support its users unless it is committed to communicating and collaborating with them. Irrespective of the technical issues involved, a user’s problem is not really resolved until the user believes that it is.

- **Embracing innovation:** The IT support organization is not necessarily the only (or even the best) place for innovation in the use of information technology. Innovations or suggestions for new uses of information technology that originate from the user community may be frustrating at times, even impractical, but are almost always tightly tied to business requirements.

Finally, although IT best practices continue to change as new information technology trends, products, and services emerge and mature (and are then replaced by other developments), IT organizations that are already reasonably conformant to IT best practices are generally more agile and better able to adapt to new circumstances than those that are not. For this reason, the Information Technology Best Practices Checklist (provided in the appendix) as well as the SWOT analysis should be continually used, adapted, and refined by the City as existing expectations and requirements change and new ones are identified.
Appendices

Appendix A – IT Best Practices Checklist
Appendix A – IT Best Practices Checklist

Please note that the IT Best Practices Checklist was completed by the City and NexLevel and then reviewed by NexLevel. Comments, where appropriate, have been provided.

<table>
<thead>
<tr>
<th>Nbr</th>
<th>Dimension / Category</th>
<th>Best Practice Factor</th>
<th>Best Practice Conformance</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes, No, Other, N/A</td>
<td>Score (5,3,1)</td>
<td>NexLevel Review</td>
</tr>
<tr>
<td>1</td>
<td>Strategic Business Plan</td>
<td>Does the City have a strategic business plan?</td>
<td>O 3 3</td>
<td>Addressed within the context of the budget.</td>
</tr>
<tr>
<td>2</td>
<td>Strategic Business Plan</td>
<td>Is the strategic business plan updated on a regular basis? If so, please indicate how often.</td>
<td>Y 5 5</td>
<td>Reviewed within each budget cycle.</td>
</tr>
<tr>
<td>3</td>
<td>IT Oversight</td>
<td>Does the City have a defined IT Governance process?</td>
<td>O 1 1</td>
<td>No formal process; however, for the most part, Departments work with ITD and decision packets are prepared. Addresses funding but not priorities.</td>
</tr>
<tr>
<td>4</td>
<td>IT Oversight</td>
<td>Does the IT governance process provide oversight for all City applications and services?</td>
<td>O 1 1</td>
<td>Please see above.</td>
</tr>
<tr>
<td>5</td>
<td>IT Oversight</td>
<td>Are the City’s policy makers and senior executives involved in the IT Governance Committee?</td>
<td>O 1 1</td>
<td>Please see above.</td>
</tr>
<tr>
<td>6</td>
<td>IT Oversight</td>
<td>Does the IT Governance Committee have a formal Charter?</td>
<td>N 0 0</td>
<td>The City does not have an IT Governance Committee.</td>
</tr>
<tr>
<td>7</td>
<td>IT Oversight</td>
<td>Does the IT Governance Committee ensure that IT and user resources are allocated in accordance with the City’s business objectives and priorities?</td>
<td>N 0 0</td>
<td>Please see above.</td>
</tr>
<tr>
<td>8</td>
<td>Digital Government Strategy</td>
<td>Does the City have a formal strategy for digital government and community engagement (i.e., social media)?</td>
<td>O 1 1</td>
<td>This is coordinated by the PIO - process is informal.</td>
</tr>
<tr>
<td>9</td>
<td>Digital Government Strategy</td>
<td>Does the City’s web site provide citizen-facing functions?</td>
<td>O 1 1</td>
<td>The only citizen-facing function on the web-site is an online utility bill payment function - the site is otherwise comprised of information about City services</td>
</tr>
<tr>
<td>Nbr</td>
<td>Dimension / Category</td>
<td>Best Practice Factor</td>
<td>Yes, No, Other, N/A</td>
<td>Best Practice Conformance</td>
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</tr>
<tr>
<td>10</td>
<td>Enterprise Project Management</td>
<td>Does the City have a separate Project Management Office (PMO) function to ensure project quality and conformance with standards?</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>IT Strategic Plan</td>
<td>Does the City have an IT Strategic Plan (ITSP)?</td>
<td>N</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>IT Strategic Plan</td>
<td>Does the ITSP align with, and support, support the City’s strategic business plan?</td>
<td>N</td>
<td>0</td>
</tr>
<tr>
<td>Nbr</td>
<td>Dimension / Category</td>
<td>Best Practice Factor</td>
<td>Yes, No, Other, N/A</td>
<td>Score (5,3,1)</td>
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<tr>
<td></td>
<td>Service Delivery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Help Desk</td>
<td>Does the IT organization have a dedicated Help Desk?</td>
<td>Y</td>
<td>5</td>
</tr>
<tr>
<td>14</td>
<td>Help Desk</td>
<td>Does Help Desk staffing include subject matter experts who can assist users with both application usage and technology issues?</td>
<td>O</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>Help Desk</td>
<td>Does the Help Desk use an issue tracking system? If so, please identify the tracking system that is being used.</td>
<td>Y</td>
<td>5</td>
</tr>
<tr>
<td>16</td>
<td>Help Desk</td>
<td>Do departmental users have access to the Help Desk tracking system?</td>
<td>O</td>
<td>1</td>
</tr>
<tr>
<td>17</td>
<td>Help Desk</td>
<td>Does the IT organization routinely analyze call data for trends, volume and escalation?</td>
<td>O</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>Help Desk</td>
<td>Do IT staff members routinely record the time worked on tickets in the Help Desk tracking system?</td>
<td>N</td>
<td>0</td>
</tr>
<tr>
<td>19</td>
<td>Help Desk</td>
<td>Are Help Desk service levels formally defined in Service Level Agreements with the user community?</td>
<td>N</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td>Help Desk</td>
<td>Does the IT organization report performance against SLAs, to whom, and with what frequency?</td>
<td>O</td>
<td>1</td>
</tr>
<tr>
<td>21</td>
<td>Help Desk</td>
<td>Does the IT organization provide and support remote access tools to take over user desktops to diagnose and correct problems? If so, what tools are used?</td>
<td>Y</td>
<td>5</td>
</tr>
<tr>
<td>Nbr</td>
<td>Dimension / Category</td>
<td>Best Practice Factor</td>
<td>Yes, No, Other, N/A</td>
<td>Best Practice Conformance Score (5,3,1)</td>
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</tr>
<tr>
<td>22</td>
<td>Help Desk</td>
<td>Does the IT organization maintain a centralized knowledge base (wiki or other repository)?</td>
<td>O</td>
<td>1</td>
</tr>
<tr>
<td>23</td>
<td>Hours of Service</td>
<td>Does the IT organization provide Help Desk services on a regularly scheduled basis and, minimally, during prime shift / normal business hours?</td>
<td>Y</td>
<td>5</td>
</tr>
<tr>
<td>24</td>
<td>Hours of Service</td>
<td>Does the Help Desk provide support for users who may need extended support (such as public safety)?</td>
<td>Y</td>
<td>5</td>
</tr>
<tr>
<td>25</td>
<td>Service Delivery Management - Change Management</td>
<td>Does the IT organization have well-defined change management procedures?</td>
<td>N</td>
<td>0</td>
</tr>
<tr>
<td>26</td>
<td>Service Delivery Management - Change Management</td>
<td>Does the IT organization have procedures in place to ensure conformance with the change management procedures?</td>
<td>N</td>
<td>0</td>
</tr>
<tr>
<td>27</td>
<td>Service Delivery Management - Root Cause Analysis</td>
<td>Does the IT organization have a formal process for identifying, analyzing, and correcting the root cause of incidents?</td>
<td>O</td>
<td>1</td>
</tr>
</tbody>
</table>
## Business Applications

<table>
<thead>
<tr>
<th>Nbr</th>
<th>Dimension / Category</th>
<th>Best Practice Factor</th>
<th>Yes, No, Other, N/A</th>
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<th>NexLevel Review</th>
<th>Doc Available?</th>
<th>Comments</th>
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<td>Score (5,3,1)</td>
<td></td>
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</tr>
<tr>
<td>28</td>
<td>Application Support</td>
<td>Does the IT organization maintain a formal application portfolio?</td>
<td>O 1 1</td>
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<td></td>
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<td></td>
<td>The City has published an SB272 Enterprise Application Catalog.</td>
</tr>
<tr>
<td>29</td>
<td>Application Support</td>
<td>Does the City have an enterprise IT architecture and supporting standards?</td>
<td>N 0 0</td>
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<td></td>
<td></td>
<td>These are de-facto and not documented</td>
</tr>
<tr>
<td>30</td>
<td>Application Support</td>
<td>Does the City have procedures to control the user development of ad-hoc applications and spreadsheets?</td>
<td>N 0 0</td>
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<td>NL: Several user departments including Community Development, Police, Fire, have developed ad-hoc applications / spreadsheets as workarounds for limited functionality in older business applications but there are no standards for their use, back-up, etc.</td>
</tr>
<tr>
<td>31</td>
<td>Application Support</td>
<td>Do application staff members and key users attend and participate in vendor user groups and conferences?</td>
<td>O 1 1</td>
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<td></td>
<td></td>
<td>Not recently – go to MISAC</td>
</tr>
<tr>
<td>32</td>
<td>Cloud Solutions</td>
<td>Does the City have standards for the use of web-based (&quot;cloud&quot;) services such as software as a service (SaaS), cloud-based IT infrastructure (IaaS), etc.?</td>
<td>O 1 1</td>
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<td></td>
<td>Nothing documented – prepared draft policy document for prior City Manager.</td>
</tr>
<tr>
<td>33</td>
<td>Cloud Solutions</td>
<td>Does the City or the IT organization have a formal process for evaluating and approving the use of cloud-based services?</td>
<td>N 0 0</td>
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<td></td>
<td>NL: The City has not yet adopted formal standards for the evaluation and purchase of cloud-based solutions but it is likely that these will result from projected initiatives for ERP and LMS.</td>
</tr>
<tr>
<td>34</td>
<td>Standards</td>
<td>Does the IT organization regularly apply new vendor releases and upgrades (production vs. current release)?</td>
<td>O 1 1</td>
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<td></td>
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<td></td>
<td>Universally, no, apply upgrades as have resources available.</td>
</tr>
<tr>
<td>35</td>
<td>Standards</td>
<td>Are test environments provided for each application?</td>
<td>Y 3 3</td>
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<td></td>
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<td></td>
<td>Create as needed.</td>
</tr>
<tr>
<td>36</td>
<td>Application Effectiveness</td>
<td>Does the IT organization work with the user community to measure and track their satisfaction with the business application(s) they use?</td>
<td>O 1 1</td>
<td></td>
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<td></td>
<td>Not in a formal or routine way. Do not have steering committees. NL: Track-It! Provides a module for user surveys.</td>
</tr>
<tr>
<td>Nbr</td>
<td>Dimension / Category</td>
<td>Best Practice Factor</td>
<td>Yes, No, Other, N/A</td>
<td>Best Practice Conformance</td>
<td>Doc Available?</td>
<td>Comments (NL = Comment from NexLevel)</td>
<td></td>
</tr>
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</tr>
<tr>
<td>37</td>
<td>Application Effectiveness</td>
<td>Does the IT organization routinely plan for the functional enhancement, technical renovation or replacement of applications?</td>
<td>Y 5 5</td>
<td></td>
<td></td>
<td>Through budget process and continuing evaluation of new technologies.</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>Application Testing</td>
<td>Does the IT organization have formal procedures for the testing and acceptance (by the user community) of changes to the City’s business applications?</td>
<td>O 3 3</td>
<td></td>
<td></td>
<td>Varies by application, more for SunGard</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>Project Management</td>
<td>Are project charters developed for each major IT project?</td>
<td>O 1 1 Y</td>
<td></td>
<td></td>
<td>Not routinely, but project charters are prepared for key application initiatives.</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Project Management</td>
<td>Does the IT organization have formal procedures for reporting project status to users?</td>
<td>O 3 3</td>
<td></td>
<td></td>
<td>As needed for specific applications.</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>Project Management</td>
<td>Does the IT organization maintain a list of enterprise IT projects in progress and planned?</td>
<td>O 3 3</td>
<td></td>
<td></td>
<td>Have overall project list with Gantt charts for each project.</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>Project Management</td>
<td>Does the IT organization have adequate funding and staffing to handle current and future application projects?</td>
<td>O 1 1</td>
<td></td>
<td></td>
<td>Funding yes, staffing no.</td>
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<td>Nbr</td>
<td>Dimension / Category</td>
<td>Best Practice Factor</td>
<td>Best Practice Conformance</td>
<td>Comments (NL = Comment from NexLevel)</td>
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<td></td>
<td>Yes, No, Other, N/A</td>
<td>Score (5,3,1)</td>
<td>NexLevel Review</td>
<td>Doc Available?</td>
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<tr>
<td>43</td>
<td>Network</td>
<td>Does the IT organization have network management tools (CiscoWorks, Opencv, etc.) and use them to routinely assess network usage, performance, and track trends?</td>
<td>O 3 3</td>
<td>NL: Using &quot;WhatsUp Gold&quot; to monitor the network but is not fully implemented at this time.</td>
<td></td>
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<tr>
<td>44</td>
<td>Remote Access</td>
<td>Does the City provide remote access for employees? If so, is remote access provided using a structured and secured method (i.e., VPN)?</td>
<td>Y 5 5</td>
<td>VPN – requires Dep’t head approval. Palo Alto Firewall – add users to VPN access group.</td>
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<tr>
<td>45</td>
<td>Remote Access</td>
<td>Does the City have a formal policy governing which users are eligible for remote access and that defines the procedures for granting and revoking remote access?</td>
<td>O 1 1</td>
<td>Not highly formal, but permission from Department is required.</td>
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<tr>
<td>46</td>
<td>Servers / Data Storage</td>
<td>Does the IT organization have well-defined hardware and software standards?</td>
<td>O 3 3</td>
<td>Not published to users.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>47</td>
<td>Servers / Data Storage</td>
<td>Does the IT organization have formal policies for the granting of administrative rights for physical and virtual servers?</td>
<td>O 3 3</td>
<td>Do not have formal policy, but administrative access is tightly controlled.</td>
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<tr>
<td>48</td>
<td>Servers / Data Storage</td>
<td>Does the IT organization perform routine performance monitoring to ensure that servers can support business applications?</td>
<td>O 3 3</td>
<td>TotalView – look to automate this process. VMWare is very useful in this process. Keep bank of hours with EPCIT to assist in this process.</td>
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</tr>
<tr>
<td>49</td>
<td>Servers / Data Storage</td>
<td>Does the IT organization perform routine performance monitoring to ensure that all servers (virtualized or not) are being used effectively and that sufficient capacity is on-hand to meet current and future requirements?</td>
<td>N 0 0</td>
<td>Not yet.</td>
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<td>Nbr</td>
<td>Dimension / Category</td>
<td>Best Practice Factor</td>
<td>Best Practice Conformance</td>
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<tr>
<td>50</td>
<td>Servers / Data Storage</td>
<td>Does the IT organization perform routine performance monitoring to ensure that that centralized storage (NAS, SAN) is being used effectively and that sufficient capacity is on-hand to meet current and future requirements?</td>
<td>N 0 0</td>
<td>Please see above.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>51</td>
<td>Desktops, Laptops and Printers</td>
<td>Does the IT organization control the granting of Administrator rights on desktops?</td>
<td>O 3 3</td>
<td>Could be made tighter through group policies. Have AD domain. Isolated exceptions.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>52</td>
<td>Data Center Environment</td>
<td>Is the general layout of the main server room acceptable (i.e., does the layout provide access to both the front and rear of racks?) and is the room well organized?</td>
<td>O 2 2</td>
<td>Racks in the City Hall Annex do not have front and back doors, but access to room is tightly controlled.</td>
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<tr>
<td>53</td>
<td>Data Center Environment</td>
<td>Does the IT organization have automated environmental controls to alert appropriate personnel to HVAC issues and other facility problems?</td>
<td>Y 5 5</td>
<td></td>
<td></td>
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<tr>
<td>54</td>
<td>Data Center Environment</td>
<td>Does the IT organization control and monitor access to facilities such as server rooms and wiring closets?</td>
<td>Y 5 5</td>
<td>Some exceptions, but access is tightly controlled.</td>
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<tr>
<td>55</td>
<td>Data Center Environment</td>
<td>Does the data center have sufficient electrical capacity and reliability / business continuity features such as a UPS, stand-by generators, and redundant power sources?</td>
<td>Y 5 5</td>
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<td></td>
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<tr>
<td>56</td>
<td>Mobility</td>
<td>Does the IT organization have procedures and software (Mobile Device Management) to manage mobile devices (tablets, smart phones, etc.)</td>
<td>O 3 3</td>
<td></td>
<td></td>
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<tr>
<td>57</td>
<td>Mobile Devices</td>
<td>Does the IT organization have formal standards for the use of mobile devices?</td>
<td>O 1 1</td>
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<td>Nbr</td>
<td>Dimension / Category</td>
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<td>Yes, No, Other, N/A</td>
<td>Score (5,3,1)</td>
<td>NexLevel Review</td>
<td>Doc Available?</td>
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<tr>
<td>58</td>
<td>Security / Data Protection</td>
<td>Does the IT organization have a cybersecurity plan in place for the detection, reporting, management, and response to intrusions that is conformant to National standards such as NIST?</td>
<td>N 0 0</td>
<td></td>
<td></td>
<td>Have funding for an IT security design and implementation</td>
<td></td>
</tr>
<tr>
<td>59</td>
<td>Network Security</td>
<td>Does the IT organization routinely perform perimeter of other testing to ensure that intrusions are blocked and reported? If so, when was the last time that this testing was performed?</td>
<td>N 0 0</td>
<td></td>
<td></td>
<td>Planned.</td>
<td></td>
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<tr>
<td>60</td>
<td>Data Protection</td>
<td>Does the IT organization have procedures in place to manage user passwords (such as requiring strong passwords and periodic changing of passwords)?</td>
<td>N 0 0</td>
<td></td>
<td></td>
<td>Current standards are weak - please see above.</td>
<td></td>
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<tr>
<td>61</td>
<td>Data Protection</td>
<td>Does the City have a formal process to notify IT when employees are terminated or out on extended leave?</td>
<td>O 3 3</td>
<td></td>
<td></td>
<td>Are supposed to – no formal process. Checkbox on form.</td>
<td></td>
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<tr>
<td>62</td>
<td>Data Protection</td>
<td>Does the City have a formal process for requesting network and application access for new users?</td>
<td>O 3 3</td>
<td></td>
<td></td>
<td>NL: Process is not documented.</td>
<td></td>
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<tr>
<td>63</td>
<td>Desktop Security</td>
<td>Does the City have formal procedures in place to ensure that all users are familiar with, and conform to, City security policies?</td>
<td>O 3 3</td>
<td></td>
<td></td>
<td>Yes, but policies are dated.</td>
<td></td>
</tr>
<tr>
<td>64</td>
<td>Desktop Security</td>
<td>Does the City have formal procedures to ensure the security of information on mobile and portable systems (such as the encryption)?</td>
<td>N 0 0</td>
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<td>Nbr</td>
<td>Dimension / Category</td>
<td>Best Practice Factor</td>
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<td>Best Practice Conformance</td>
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<td>65</td>
<td>Virus/Spam Protection</td>
<td>Does the IT organization deploy software to control viruses, spyware, other malware, and e-mail spam on user desktops? If so, please identify the software products that have been deployed.</td>
<td>Y</td>
<td>5</td>
<td>Symantec.</td>
<td></td>
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</tr>
<tr>
<td>66</td>
<td>Virus/Spam Protection</td>
<td>Does the IT organization apply updates to the virus / spam / malware software in an automated and timely manner?</td>
<td>Y</td>
<td>5</td>
<td>Symantec.</td>
<td></td>
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</tr>
<tr>
<td>67</td>
<td>Cloud Solutions</td>
<td>Does the City have standards in place to ensure the security and availability of the information stored off-site?</td>
<td>O</td>
<td>1</td>
<td>The City does not yet have formal standards for Cloud-based applications, informal controls are in place.</td>
<td></td>
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</tr>
<tr>
<td>68</td>
<td>Internet Access</td>
<td>Does the City have an acceptable use policy that is signed by all employees with Internet access?</td>
<td>O</td>
<td>3</td>
<td>NL: Policy is dated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>69</td>
<td>Internet Access</td>
<td>Does the IT organization actively monitor and manage Internet access including intrusion attempts?</td>
<td>O</td>
<td>1</td>
<td>NL: The City has network monitoring software and security software in place; however, these are not routinely monitored.</td>
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<tr>
<td>70</td>
<td>Network</td>
<td>Does the IT organization ensure that the network is protected from intrusions by firewalls, DMZ, et al?</td>
<td>Y</td>
<td>5</td>
<td></td>
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<tr>
<td>71</td>
<td>Network</td>
<td>If the City has a wireless network, is access to the network restricted?</td>
<td>Y</td>
<td>5</td>
<td></td>
<td></td>
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<tr>
<td>72</td>
<td>Network</td>
<td>If the City provides wireless access for &quot;guests&quot; is this provided on a separate wireless network or are there processes in place to segregate &quot;guest&quot; traffic?</td>
<td>Y</td>
<td>5</td>
<td></td>
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<tr>
<td>73</td>
<td>Business Continuity and Disaster Recovery</td>
<td>Does the City have a formal IT business continuity plan that identifies mission critical applications, their availability requirements, and the maximum duration that the application can be down?</td>
<td>N</td>
<td>0</td>
<td>NL: The City does not have a formal plan for business continuity including a business impact analysis to identify critical business applications.</td>
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<td>Nbr</td>
<td>Dimension / Category</td>
<td>Best Practice Factor</td>
<td>Yes, No, Other, N/A</td>
<td>Best Practice Conformance</td>
<td>Doc Available?</td>
<td>Comments (NL = Comment from NexLevel)</td>
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<td>74</td>
<td>Business Continuity and Disaster Recovery</td>
<td>Has the IT organization systematically identified all single points of failure and the actions required to remediate them?</td>
<td>O</td>
<td>3</td>
<td>3</td>
<td>NL: This has been done in a systematic manner but without formal standards and processes.</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>Business Continuity and Disaster Recovery</td>
<td>Does the IT organization have a disaster recovery plan? When was the plan last updated?</td>
<td>N</td>
<td>0</td>
<td>0</td>
<td></td>
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<tr>
<td>76</td>
<td>Data Backups</td>
<td>Does the IT organization perform backups on a regularly scheduled basis?</td>
<td>Y</td>
<td>5</td>
<td>5</td>
<td></td>
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<tr>
<td>77</td>
<td>Data Backups</td>
<td>Does the IT organization routinely verify and test backups?</td>
<td>O</td>
<td>1</td>
<td>1</td>
<td>NL: Backups are tested only when a user requests that a file be restored.</td>
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<td>Nbr</td>
<td>Dimension / Category</td>
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<td>78</td>
<td>IT Administration</td>
<td>Does the IT organization have a formal service catalog that is available to the user community?</td>
<td>N 0 0</td>
<td>NL: Have implemented BMC’s Track-it! for Help Desk Processing. Track-it! provides functionality for Help Desk processing including a Self-Service Portal, Change Management, Software License Management, Asset Management, and a User Satisfaction Survey, but not all functionality is deployed at this point. IT has not developed a service catalog that could be published in Track-it!.</td>
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<td>79</td>
<td>IT Organization</td>
<td>Does the IT organization have a resource management plan to ensure that it can continue to meet user requirements in the future?</td>
<td>N 0 0</td>
<td>NL: IT does not have a formal resource management plan. Staff members have nominal assignments with one staff member having primary responsibility for Public Safety and the other staff member covering other areas of the City. The staff members provide limited back-up for each other.</td>
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<tr>
<td>80</td>
<td>IT Organization</td>
<td>Does the IT organization have a succession plan for each position?</td>
<td>N O 0</td>
<td>NL: Please see above. This is critical for the staff member assigned to support Public Safety who has unique knowledge of Public Safety applications and field experience as a sworn officer.</td>
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<tr>
<td>81</td>
<td>IT Organization</td>
<td>Does the IT Organization have a training / development plan for each position?</td>
<td>Y 5 5</td>
<td>As part of performance HGSII evaluation.</td>
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<tr>
<td>82</td>
<td>Procurement, Contracts and Vendor Management</td>
<td>Does the IT organization review all procurements of IT goods and services?</td>
<td>Y 5 5</td>
<td>In general, yes, but some exceptions.</td>
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</tr>
<tr>
<td>83</td>
<td>Procurement, Contracts and Vendor Management</td>
<td>Are Service Level Agreements (SLAs) specified in vendor contracts?</td>
<td>O 3 3</td>
<td>Typically, yes, but have not audited all software contracts and do not have standard requirements for vendor SLAs. Have it in SunGard.</td>
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</tr>
<tr>
<td>84</td>
<td>Software License Management</td>
<td>Does the IT organization have a central repository for all software licenses?</td>
<td>Y 5 5</td>
<td>Do have specific files, license keys, etc. CAD, Laserfiche have limited seats.</td>
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<tr>
<td>85</td>
<td>Inventory Management</td>
<td>Does the IT organization have a current IT asset inventory?</td>
<td>O 3 3</td>
<td>Have in Track-It! not 100% complete.</td>
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<tr>
<td>86</td>
<td>Policies and Procedures</td>
<td>Does the IT organization have a process for the periodic review and update of IT policies and procedures?</td>
<td>O 1 1</td>
<td>No formal process, IT procedures are reviewed as time is available.</td>
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<td>Best Practice Conformance</td>
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<td>87</td>
<td>IT Documentation</td>
<td>Does the IT organization maintain detailed and current technical documentation for the City’s IT infrastructure?</td>
<td>Y</td>
<td>5</td>
<td>5</td>
<td>Have technical documentation and continue to keep the documentation current and to improve it based on experience.</td>
<td></td>
</tr>
<tr>
<td>88</td>
<td>Internal and External Communication</td>
<td>Does the IT organization have formal processes for communicating with the user community?</td>
<td>O</td>
<td>1</td>
<td>1</td>
<td>Informal and ad-hoc at this point.</td>
<td></td>
</tr>
<tr>
<td>89</td>
<td>Service Delivery Management - Service Levels</td>
<td>Does the IT organization have formal service level agreements (SLAs) with the user community?</td>
<td>O</td>
<td>1</td>
<td>1</td>
<td>Work to resolve all Help Desk calls within one-hour.</td>
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<tr>
<td>90</td>
<td>Hardware Refreshment</td>
<td>Does the City have a dedicated fund for the refreshment of business applications?</td>
<td>Y</td>
<td>5</td>
<td>5</td>
<td></td>
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</tr>
<tr>
<td>91</td>
<td>Hardware Refreshment</td>
<td>Does the IT budget provide dedicated funds for the refreshment / renovation of IT assets per year?</td>
<td>O</td>
<td>3</td>
<td>3</td>
<td>NL: Funds are budgeted but do not seem sufficient for the number of devices deployed.</td>
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