



**Grand Traverse County  
Board of Commissioners  
Special Meeting – Joint with the City of Traverse City**

Wednesday, August 2, 2017 @ 4:30 p.m.  
Commission Chambers  
Governmental Center, 400 Boardman,  
Traverse City, MI 49684

The Board of the Commissioners will be holding a Special Meeting which has been set for the date, time and location noted above. The purpose of the meeting is identified in the Agenda below.

If you are planning to attend and you have a disability requiring any special assistance at the meeting, please notify the County Clerk immediately at 922-4760.

**AGENDA**

I. Call to Order (Pledge, Roll Call)

II. First Public Comment

Any person shall be permitted to address a meeting of the Board of Commissioners which is required to be open to the public under the provision of the Michigan Open Meetings Act, as amended. (MCLA 15.261, et.seq.) Public Comment shall be carried out in accordance with the following Board Rules and Procedures:

A) Any person wishing to address the Board shall state his or her name and address.

B) No person shall be allowed to speak more than once on the same matter, excluding time needed to answer Commissioners' questions. The Chairperson shall control the amount of time each person shall be allowed to speak, which shall not exceed three (3) minutes. Chairperson may, at his or her discretion, extend the amount of time any person is allowed to speak.

III. IT:

A) Strategic Technology Plan – Presented by Paul Knific and Ming Mays

IV. Second Public Comment

V. Adjournment



# GRAND TRAVERSE COUNTY

Strategic Technology Plan

July 28<sup>th</sup>, 2017

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# 1. Overview

This Strategic Technology Plan provides insight into the agency’s technology needs. This document builds upon the issues identified in the Trivalent Group’s Assessment (2016), ISC’s HIPAA Security Risk Assessment (2017) and the individual goals of County and City departments. This document serves to provide the strategic direction for IT activities over the next five years.

This technology plan includes IT activities identified from department interviews and daily operational needs. Activities identified are correlated to a strategic objective for Information Technology decision-making.

### This plan includes the following:

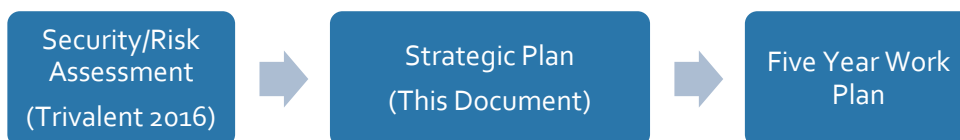
- **An organized list of activities with priority and budget estimates.** This list outlines the needed activities as well as the cost associated with these activities.
- **A defined strategic mission, vision, goals, and objective list.** A strategic vision creates a framework for future decision making of IT activities.
- **Overview of IT systems.** This document provides a reference to the various enterprise systems including the IBM “AS400” platform.

An innovative framework was used to develop the strategic assessment. This means that in many cases the decision to upgrade or replace systems was chosen as a better solution than patching together, end of life, legacy systems with in-house support. In most cases this framework aligns with current industry best practices for managing IT systems. An example of this, is the recommendation to replace applications running on the legacy IBM iSeries/AS400 platform with new applications supported by a Microsoft Windows based virtual platform.

During the creation of this plan certain organizational and operational issues made it difficult to extract the exact cost of IT activities. The way costs are allocated between County and City agencies should be reviewed and revised to provide better transparency and support strong technology decision making. Furthermore, the IT department should be organized to align with supporting the modern systems proposed in this plan.

The magnitude of necessary activities outlined in this plan is challenging. In order to complete projects in time, goods and services will have to be procured in a timely manner. Currently IT purchasing for the county is handled by the IT director with no central purchasing agent. The workload on the IT Director to manage these upgrades and day to day operations is significant. Procurement Process solutions to provide external assistance, additional staff, or automated resources is recommended.

### The Strategic Plan Process:



**At a minimum, it is estimated that \$6,401,600 is needed to improve IT operations for the County and City.** There are many urgent security, operational, and functional vulnerabilities or deficiencies that need to be corrected. IT provides many critical services to County operations as it is a key component to collaborate on issues and resolve roadblocks. This plan provides a realistic look at how to implement technology that is both necessary and innovative.

## 2. Summary of Findings

### 2.1. Approach

The data collected for this plan came from a variety of sources, including the following:

- Interviews conducted with each of the county and city departments. These department interviews discussed problems with IT operations, projects and plans of each department.
- Interviews conducted with the IT department staff outlined the vision on what IT projects and plans were most feasible and important.
- Strategic planning sessions focused on creating an IT vision were conducted.
- Evaluations of current strategic initiatives, planned expenses, and IT department strategic operation documentation was reviewed

### 2.2. Findings

The County's Information Technology systems need significant financial investment. Outlined below some of the more pressing concerns. By completing important activities that are described in this plan; the County can work towards resolving these concerns.

One concern is that many of the core systems are at or near end of life for manufacturer support. Subsequently, the IT department staff is burdened with supporting these legacy systems. Because of attrition, there is little knowledge to provide in-house support. The IT department will need to be organized to better support newer systems. As such, the role of IT support transitions from programming to more of a system administration role.

Before this report, upgrade priorities were focused on less critical user facing technology. This made the IT department appear to be functioning by providing new mobile devices, laptops, and wireless access, but these activities undermined investing in expensive core infrastructure upgrades. Ultimately, appropriations were not set aside for core system upgrades.

**The County will need to address, in addition to smaller projects, these major investments:**

- New enterprise virtual server cluster to support current and future x86 windows based applications.
- An Enterprise Resource Planning (ERP) system to replace AS400 applications.
- New network switches, routers, and firewalls to replace end of life hardware.
- Migrate court systems off the IBM Power 7 server to a new system (without impacting operations of the countys systems).

These projects will span multiple years and have a significant cost.



In addition to correcting deficiencies in software systems, security issues must also be addressed. Multiple assessments and audits have uncovered foundational security concerns. These issues impact HIPAA Compliance, FBI CJIS Audits, and Financial system audits. During the creation of this document multiple security concerns were discovered. Concerns including vulnerabilities identified with the IBM AS400/iSeries system, networking configuration, HIPAA compliance and even backups. Also, ransomware is an important concern for government IT operations that the County is not adequately protected against. The County will need to make combatting ransomware a priority. The security issues identified are complex and will take time to correct. Some efforts towards immediate security concerns have been addressed prior to the publication of this report.

Furthermore, contributing to the problem is the cost allocation model for IT expenses. The cost allocation model for Information Technology is burdensome and provides little value to the organization. The current process of real time inventory and billing for each IT service hinders advancement of collaborative systems. Additionally, IT's true cost is not reflected in its budget as many departments including the City directly pay for goods and services, at times with little insight from IT.

Purchasing and implementation of IT projects is another concern. The county lacks a purchasing director and department heads are responsible for managing the procurement process. Due to the timing of this system, IT will have a difficult time properly budgeting, allocating, and procuring goods in a timely manner.

One advantage to technology is community support. Community for Technology in Grand Traverse County is impressive. Partners such as Traverse City Light and Power (TCLP) and Traverse City are pioneering fiber optic projects that will build a foundation for better IT services. The County currently utilizes these projects such as a Metro Area Network (MAN) to connect our sites. The County should continue to collaborate and support community fiber optic projects.



### 3. City and County Consolidated Information Technology Services

Traverse City and Grand Traverse County are in the same complex. The county's Information Technology department has been providing services to the city under a support contract. These services include hosting applications, developing software, and providing day to day end user support. This relationship makes sense for a variety of reasons. First, because both entities have the same physical space, they share IT infrastructure including networks, enterprise servers, and support staff. Second, a consolidated IT resources creates a services platform for economic development and community projects. City and county collaborative projects can utilize the shared IT systems to leverage software based services to further these goals.

The current relationship between the City and County for IT services can be improved for better service and cost saving. Consolidating software applications such as Microsoft Windows and purchasing desktop computers in bulk for both agencies can lower cost and improve offerings. Additionally, implementing better City and County policies for IT can support strong IT decision making and governance.

### 4. The IBM Dilemma

Decades ago the county and city invested in the IBM RISC Platform commonly referenced as the AS400 system. Over the last three decades, IT Administrators and programmer analysts created home-grown custom and modified applications to fit County operations. These IBM applications include Financials, Budgeting, Human Resources, Utility Billing, Court Records and more. Almost every department in the county and city rely on the IBM system for day to day activities. IBM has provided a hardware path for operating this legacy software on newer iSeries/Power series RISC hardware. In some cases, this approach provided a less expensive way to keep legacy applications running. However, choosing not to convert to newer Windows/86x or cloud hosted applications and instead continue the legacy applications has significant pitfalls.

Because of these pitfalls, the choice to continue to operate the IBM Platform has created a deficit for enterprise application investment. Significant improvements from GUI based windows ERP applications can provide many usability, security, support improvements. These systems support collaboration and streamlining, cross application reporting, sharing of data, and intuitive usability thereby providing a better solution than the AS400 applications.

**Considering all factors, it is recommended the county migrate away from the IBM Platform based on these following reasons:**

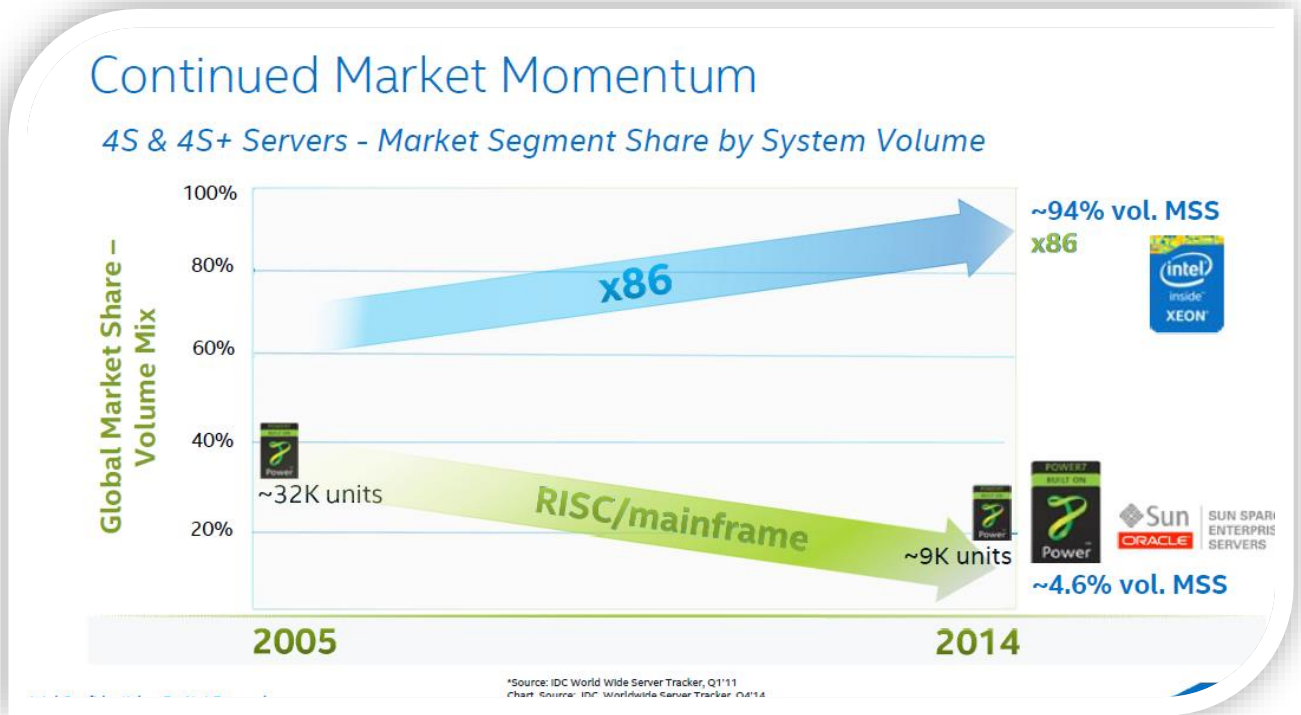
- **Cost to Maintain** – The skills required to support and maintain AS400 applications on the iSeries platform are becoming harder to acquire due to declining demand and fewer competing companies. Thus, support rates to maintain this system from an outside contractor are around \$180-250/hour and there are few vendors offering this service in Michigan.
- **Industry Best Practice** - Per the IDC World Wide Server Tracker report in Q1 2014, the IBM RISC Platform has lost most of its market share. As a result, IBM only commands



roughly 4.6% of market and therefore investment is likely minimal to improve performance. The x86 platform has controlled 94% of the market due to organizations standardizing on x86 virtualization and windows applications.

- **Significant Security Concerns** - The AS400 based applications that are running on the IBM Platform are in-house programmed over decades. This results in many application revisions by multiple programmers with little or no oversight into best practices for security and usability. This lack of oversight creates what is referred to as spaghetti code, or code that is difficult to untangle and secure.
- **Old Hardware** - The current Power 7 server is reaching end of manufacturer support and will need to be replaced or discontinued over the next two years.

The best approach for the IBM/AS400 systems is to migrate or discontinue their use in favor of new systems. Implementation of a Windows based ERP System and migration to a hosted Court system would eliminate most of the dependence on this platform.



**Figure 1** - RISC/Power Series vs x86 based Server market share. Source IDC World Wide Sever Tracker Q4, 2014.





**Figure 2 – List of the current AS400 applications.**

Application	Description	Risk	Business Need	Upgrade Path
HTE	CITY POWER AND LIGHT	M	Main database for customer Utility billing	Windows Based ERP with Integrated UB
OSM	JIS JURY SYSTEM	M	Main database for State courts	State Courts Hosted iSeries Platform
NWS	PUBLIC SAFETY RECORDS	M	Legacy police records for reference	Not Used Legacy Lookup, Most data already migrated to windows based system
JMS	JMS DISTRICT COURT	H	Main database for district courts	Cloud based JMS SAAS Platform or Merge with JIS
GTC	COUNTY APPLICATIONS	H	Commonly used county applications	Migrate to Windows based ERP Module
COURT	COURTS SYSTEMS	H	Database for circuit courts scheduling	Cloud Based JMS SAAS Platform or Merge with JIS
PAY	PAYROLL SYSTEMS	H	Payroll database	Migrate to Windows based ERP Module
POL	NWS POLICE SYSTEM	M	Old New World Police Database	Not Used Legacy Lookup, Most data already migrated to windows based system
CONS	CONSTRUCTION CODE SYSTEMS	H	Construction code database	Migrate to Windows based ERP Module
BUDGET	BUDGET SUPPORT	H	Budget program	Migrate to Windows based ERP Module
VS	VITAL STATISTICS	H	Vital Statistics Database	Archive or Migrate to Cloudbased SAAS
FLIGHT	FLIGHT RESERVATION SYSTEM	H	Old Flight database not in use	Discontinue
PW	DPW ACH	H	DPW payment database	Migrate to Windows Based ERP module
JURY	JURY SYSTEM	H	Circuit Court Jury System	Cloud Based JMS SAAS Platform or Merge with JIS
VOTER	VOTER REGISTRATION	H	May not be in use	Migrate to Google App, Excel, or Cloudbased
FSAF	FIRE SAFETY	H	May not be in use	Migrate to Google App, Excel, or Cloudbased
IT	IT UTILITIES	H	May not be in use	Migrate to Google App, Excel, or Cloudbased
SOIL	SOIL EROSION/DRAIN COMMISSION	H	May not be in use	Migrate to Google App, Excel, or Cloudbased
CGI	IT CGI UTILITY	H	May not be in use	Migrate to Google App, Excel, or Cloudbased
LIB	DISTRICT LIBRARY	H	May not be in use	Discontinue
PTICK	PARKING TICKET SYSTEM	H	May not be in use	Discontinue
DG	DATAGATE SYSTEM	H	May not be in use	Discontinue
BRA	BROWNFIELD REDEVELOPMENT ACCT	H	May not be in use	Discontinue
PROBATE	OLD PROBATE COURT INDEX	H	May not be in use	Discontinue
BA	BUILDING AUTHORITY	H	May not be in use	Discontinue
EDC	ECONOMIC DEVELOPMENT	H	May not be in use	Migrate to Google App, Excel, or Cloudbased
COA	COMMISSION ON AGING	H	May not be in use	Upgrade to COA Cloudbased SAAS software
HSB	HEALTH DEPT.	H	May not be in use	Migrate to M&M
ROAD	ROAD COMMISSION	H	May not be in use	Discontinue



## 5. Agency Information

### 5.1. Organization Overview

The Information Technology (IT) Department delivers information technology services to departments within the County and City. IT provides support in the areas of business analysis, project development, systems implementation, network administration, operations, telecommunications, and education. There is about \$2,230,000 of direct budgeted funding for IT and telecommunications departments.

### 5.2. Scope of Support

The IT department provides support for every county department including 911, Sheriff, Courts, and Administration. In addition to the support for the county, the IT department also provides services to the city including system administration, programming, and helpdesk services.

These services include support for:

- Over 800 Personal Computers and Laptops
- Over 70 Servers
- Printers and Peripherals
- A multisite fiber metro area network

### 5.3. Services Provided

The IT department provides many services to cover the wide breadth of needs over the various County and City departments. Some of these services include:

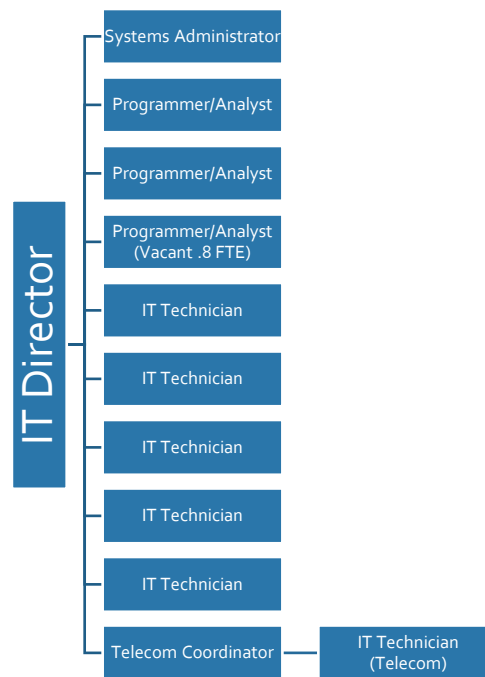
- **Business Analysis.** Assist departments with analysis of business functions for integration with information systems
- **Project Development.** Develop and implement new systems to support efficient and effective management processes
- **Systems Maintenance.** Provide enhancements and expanded services for existing programs
- **Education.** Educate departmental users on both hardware and software throughout the City and County
- **Operations.** Maintain effective and efficient operations services to support daily functions of the City and County
- **Technical Support.** Liaison for vendor purchased software
- **Technical Consultation.** Provides consultation technology needs and purchases.
- **Computer Setup and Diagnosis.** Provides setup and diagnosis of both hardware and software problems.
- **Cost Allocation.** Maintain an accurate and fair system for allocation of IT costs to user departments.



- **Administration.** Perform the general administrative responsibilities necessary for effective management of IT functions.
- **Software Development.** Provide custom application development and support to meet the needs of departments where off the shelf software is not available.

## 6. IT Organizational Chart

Below is a chart of the current organization of the department. The organizational structure will need to be changed to better align with supporting modern systems. Recommended changes include organizing the department with a Network Administrator and System Administrator hierarchy.



**Figure 3 – IT department organizational chart for FY2017.**

## 7. Systems List

Agency	Department	Application	Module	Platform
County	MIS	Google Apps - Email, Calendar, Drive		Cloud
County	MIS	Intrusion Prevention Service (IPS)		Firewall
City	City Treasurer	Accounts Payable/Claims		iSeries
County	DPW	Accounts Payable/Claims		iSeries
County	Finance	Accounts Payable/Claims		iSeries
County	Health Dept AD	Accounts Payable/Claims		iSeries
City	City Treasurer	Accounts Receivable/Invoicing		iSeries
County	Finance	Accounts Receivable/Invoicing		iSeries
County	County Clerk	Birth Certificates		iSeries
County	Treasurer	Brownfield Financials		iSeries
County	All	Budget		iSeries
County	Construction CD	Building/Mechanical/Plumbing/Electrical Permitting		iSeries
County	Administrator	Copier/Postage Billing		iSeries
County	Circuit Court A	Court Administrative Functions	Ct Calendar, Collections, etc	iSeries
County	County Clerk	Court Records	Civil Case processing	iSeries
County	County Clerk	Court Records	Criminal Case processing	iSeries
County	County Clerk	DBA		iSeries
County	County Clerk	DBA - Public Web Access		iSeries
County	County Clerk	Death Certificates		iSeries
County	County Clerk	Death Certificates - Public Web access		iSeries
County	MIS	Departmental billing		iSeries
County	Treasurer	Dog Licensing		iSeries
County	Treasurer	Dog Licensing - Public Web access		iSeries
County	Treasurer	Economic Development Financials		iSeries
City	City Treasurer	General Ledger		iSeries
County	Finance	General Ledger		iSeries
County	MIS	Inventory - Hardware/Software		iSeries
County	Probate Court	JIS - Judicial Info Systems - State of MI	Estates, Adoptions, etc	iSeries
County	Probate Court J	JIS - Judicial Info Systems - State of MI	Juvenile	iSeries
City	City Treasurer	Journal Entries		iSeries
County	Finance	Journal Entries		iSeries
County	County Clerk	Jury		iSeries



County	County Clerk	Marriage Licensing		iSeries
County	County Clerk	Marriage Licensing - Public Web access		iSeries
County	Comm on Aging	Miscellaneous Receipting		iSeries
County	GT Central	Miscellaneous Receipting		iSeries
City	City Personnel	Payroll	Administration/Tax	iSeries
City	City Personnel	Payroll	Affordable Care Act	iSeries
City	City Personnel	Payroll	Intranet Time Entry	iSeries
City	City Treasurer	Payroll	Payroll Processing/Tax	iSeries
City	City Treasurer	Payroll	State Labor/Equip Tracking	iSeries
County	Finance	Payroll	Payroll Processing	iSeries
County	Human Resources	Payroll	Administration	iSeries
County	Human Resources	Payroll	Budget	iSeries
County	Human Resources	Payroll	Affordable Care Act	iSeries
County	Human Resources	Payroll	Intranet Time Entry	iSeries
County	Treasurer	Payroll	Tax/Direct Deposit	iSeries
City	City Treasurer	Payroll - ACT345 Retirement	Admin/Processing/Tax	iSeries
County	Construction CD	Permitting Public Web access		iSeries
County	All	Purchase Order Entry		iSeries
City	City Manager	Purchase Orders		iSeries
County	Administrator	Purchase Orders Administration		iSeries
County	County Clerk	Receipting		iSeries
County	Treasurer	Receipting		iSeries
County	MIS	Spoolmail/Email generation		iSeries
City	City Utility	Utility Billing		iSeries
County	Construction CD	Soil Erosion Permitting		iSeries
City	City Treasurer	Positive Pay	Payroll/Common	iSeries/PC
County	Treasurer	Positive Pay	Payroll/Common	iSeries/PC
County	Parks and Rec	ActiveNet equipment - scanners, card printer		Misc
County	GIS	Large format scanner		Misc
County	Construction CD	Standard size and large format scanners		Misc
County	MIS	Telephone Systems/Telephones/Voicemail		Misc
County	Health Dept PH	Video conferencing equipment support		Misc
County	DPW	Handheld meter readers and software		Misc
City	City Utility	Itron Handhelds and software		Misc
County	DPW	Miss Dig		Misc



County	MIS	Internet Access	Network
County	MIS	Network Firewall/Switches/Routers	Network
County	Facilities Mgmt	AutoCAD Lite	PC
County	District Court	BIS - Court video software	PC
City	City Cemetery	Cemetery software	PC
County	Facilities Mgmt	Corel Draw	PC
County	District Court	Court Records	Traffic Ticket Processing PC
County	District Court	Court Records	Civil Case Processing PC
County	District Court	Court Records	Criminal Case Processing PC
City	City Parks	DataEase - Time Entry Application	PC
City	City Treasurer	Electronic Deposits	PC
County	Treasurer	Electronic Deposits	PC
County	Human Resources	Employee Training Videos	PC
County	GT Central	Evidence application	PC
County	Equalization	Fidlar - iDoc	PC
County	Register Deeds	Fidlar - iDoc	PC
County	Register Deeds	Fidlar - Laredo	PC
County	GT Jail	Fingerprints	PC
County	GT Jail	Keefe - commissary	PC
City	City All	MS Office	PC
County	GT Jail	Mugshots	PC
County	Prosecutor	New World Police Narratives	PC
State	Circuit Court P	New World Police Narratives	PC
City	City Police	New World Police System	PC
County	GT Central	New World Police System	PC
County	GT Jail	New World Police System	PC
County	GT Jail	NorthPoint classification system	PC
County	Planning	OnBase/ImageSoft software	PC
County	Circuit Court A	OnBase/ImageSoft software/scanners	PC
County	County Clerk	OnBase/ImageSoft software/scanners	PC
County	DPW	OnBase/ImageSoft software/scanners	PC
County	Finance	OnBase/ImageSoft software/scanners	PC
County	FOC	OnBase/ImageSoft software/scanners	PC
County	Health Dept PH	OnBase/ImageSoft software/scanners	PC
County	Human Resources	OnBase/ImageSoft software/scanners	PC



County	Prosecutor	OnBase/ImageSoft software/scanners	PC
State	Circuit Court P	OnBase/ImageSoft software/scanners	PC
County	Human Resources	OPAC Employee Testing	PC
County	Circuit Court A	PolyCom Video	PC
County	District Court	PolyCom Video Arraignments	PC
County	GT Jail	Securus - inmate phone recording	PC
County	DPW	Tokay software - water cross connects	PC
County	GT Investigate	Verisign - Photo server application	PC
County	Administrator	County Meeting Videos - Leightronics, PegVault, LIAA	PC/Web based
County	MIS	AS/400 enrollment/administration	Server
City	City Engineer	Cityworks - work order management	Server
City	City Utility	Click2gov utility web server	Server
County	GT Dispatch	Computer Aided Dispatch (CAD) live	Server
County	GT Dispatch	Computer Aided Dispatch (CAD) training	Server
County	GT Dispatch	Critical testing software	Server
County	Health Dept EH	EH - Sword Solutions Well, Septic, Food Permits	Server
County	Equalization	Equalization - APEX	Server
City	City Garage	FASTER software - vehicle maintenance/inventory	Server
County	Register Deeds	Fidlar Document Imaging	Server
County	GIS	GIS-ESRI	Server
County	MIS	Help Desk Ticketing system	Spiceworks Server
County	GT Dispatch	LEIN software	Server
City	City Garage	Lucity - Work order management	Server
City	City GIS	Mapping Applications	Server
County	GIS	MS SQL	Server
City	City Utility	Naviline Web Server	Server
County	GT Dispatch	NICE recording software	Server
County	Equalization	Pervasive SQL for BS&A	Server
County	GT Dispatch	Pro QA software	Server
County	Prosecutor	Prosecutor-Case Mgmt	Server
City	City GIS	Proxy Server - External access to City GIS apps	Server
County	Equalization	Resource Software	Server
County	Treasurer	Resource Software	Server
County	GT Dispatch	Smart 911 software	Server
County	MIS	Symantec Antivirus	Server



City	City Fire	Terminal Services	Server
County	MIS	Vmware - virtual servers	Server
County	MIS	Web Filter - IronPort/Sawmill Reporting	Server
County	MIS	Windows enrollment/administration	Server
County	Health Dept PH	M&M Health software	Server - Linux
County	MIS	Wireless Access Points/Administration	Server/Misc
County	Finance	BestServ - asset management	Server/PC
City	City Assessor	BS&A Assessing	Server/PC
County	Equalization	BS&A Assessing	Server/PC
City	City Treasurer	BS&A Delinquent Personal Tax	Server/PC
City	City Treasurer	BS&A Special Assessments	Server/PC
County	Equalization	BS&A Tax	Server/PC
County	Treasurer	BS&A Tax	Server/PC
City	City Treasurer	BS&A Tax Collection	Server/PC
City	City Assessor	BS&A Tax Processing	Server/PC
County	DPW	BS&A Utility Billing	Server/PC
County	Parks and Rec	Civic Center Camera Surveillance	Server/PC
County	Comm on Aging	Client Database Software	Server/PC
County	Circuit Court A	Court Notices	Server/PC
County	Veteran	DataSpec - Veterans Information System	Server/PC
City	City Clerk	Document Imaging	Server/PC
City	City Police	Electronic Ticketing	Server/PC
County	GT Patrol	Electronic Ticketing	Server/PC
County	Facilities Mgmt	M2 Job Tracking Software	Server/PC
County	GT Dispatch	Mobile CAD	Server/PC
County	GT Dispatch	NetMotion VPN server	Server/PC
County	Probate Court V	Volunteer/Client Data Management Software	Server/PC
City	City Police	Winscribe Dictation System	Server/PC
County	GT Central	Winscribe Dictation System	Server/PC
City	City Utility	3rd party Credit Card processing	Web based
County	GT Patrol	Accident Reporting	Web based
County	Parks and Rec	ActiveNet membership/facility software	Web based
County	Administrator	Board/Committee assignment management	Web based
County	Administrator	CivicPlus - Website committee, Home Page, support	Web based
County	Health Dept PH	CivicPlus - Website support	Web based





County	MIS	CivicPlus - Website support for departments	Web based
County	FOC	CSES - Child Support Enforcement	Web based
County	Prosecutor	CSES - Child Support Enforcement	Web based
County	Human Resources	Employment/Job Applications	Web based
City	City Fire	Firehouse software	Web based
County	Health Dept PH	State Apps - WIC, Immunizations,	Web based
County	GT Central	State Portal - Guns, LEIN	Web based

**Figure 4 –** The current list of IT support systems.



## 8. Strategic Vision

The Strategic objectives listed below are created to ensure that the Information Technology department is conducting activities that are relevant to the county goals. These objectives provide a comprehensive and aligned list of activities. Once a milestone is complete, we will move the needle one step closer to achieving the objective. Key performance indicators relating to each objective are defined as a mechanism to show just how far the needle was moved. The IT Mission and Vision have been defined to provide the framework for decision-making. Objectives are aligned with the vision to maximize organizational impact.



### **Mission**

The Grand Traverse County Information Technology team serves to empower the County, City, and Community through embracing and enhancing technology.

### **Our Core Values**

- Apply technology to promote collaboration and communication between stakeholders.
- Strengthen and secure IT assets.
- Communicate responsible IT decision making with our constituents.
- Maintain an exceptional level of support.
- Provide reliable and innovative technology solutions.

### **Vision**

The Information Technology Services Department at Grand Traverse County aims to foster a technology enhanced community by providing innovative, secure, and trusted technological solutions and services through providing professional, knowledgeable, and trusted staff.

Furthermore, the department will become a regional leader of innovative technology by enhancing the use, support, and customer service of information systems. By utilizing industry best practices to standardize, secure, and implement technology, the County Information Technology team will be proactive in managing information technology.



## 9. Priorities & Objectives & KPI's

### Overview

Maintaining a secure, reliable, and efficient communication infrastructure is a fundamental function of the IT department. The County's communication infrastructure must be able to support current operations as well as scale to future needs. Significant improvements are needed to better the network and communications infrastructure at the County.

### Summary of Activities:

- Upgrade and right-size the telecommunications system, focusing on a unified communication platform to increase productivity.
- Upgrade network hardware that is end of life to increase network resiliency and reduce risk of lost productivity. This includes upgrading network switches, routers and firewalls.
- Purchase a redundant network uplink for security, performance, and growth. A redundant network connection provides more reliability, faster speeds, and supports telecommunications upgrade projects.
- Implement proactive network management software allowing for repair of network issues prior to user discovery. This system will allow IT staff to visually detect network problems including security incidents and failing equipment.

Measurable Goal	Objective
<b>NETWORK - To maintain and promote a secure, reliable, and efficient communications infrastructure, that by partnering with other organizations will expand the network to accommodate current and scale to future needs.</b>	Upgrade and right-size the telecommunications system.
	Upgrade network hardware that is end of life.
	Purchase a redundant network uplink.
	Implement proactive network management software.
<b>Key Performance Indicators (KPIs)</b>	
Maintain uptime for internet and intranet by 95% of the time, as measured by quarterly reports.	
Maintain 95% uptime on phone system, as measured by quarterly reports.	



**Overview:**

The IT department supports systems used by county employees and residents. The IT team members are focused at maintaining and upgrading these systems. This objective ensures that we continue to enhance the technology with innovative solutions that positively impacts our users and residents.

**Summary of Activities:**

- Select and implement a financial ERP system to upgrade insecure legacy applications and promote better collaboration.
- Standardize IT infrastructure around the x86 architecture with virtualization. Eliminate IBM AS400/iSeries hardware that is end of life to increase system reliability and decrease operational cost.
- Improve the Onbase document management system with more workflows to replace paper based processes.
- Upgrade the facilities and closets and rooms housing IT servers to correspond with best practices for enterprise systems including access security, HVAC, and fire suppression to reduce physical infrastructure based downtime.
- Upgrade the virtual server cluster and storage to support new ERP and New World Enterprise software installations.
- Evaluate replacing printers with Multi-Function Printers (MFP’s) and installing them in each department’s work area to gain efficiency and lower printer repair costs.
- Subscribe to a Microsoft enterprise licensing agreement to streamline IT purchases and standardized application support.

Measurable Goal:	Objectives
<p><b>SYSTEMS - Provide effective IT leadership by defining and supporting enterprise technology services. These services reduce cost and create efficiencies, thereby allowing for the County to better provide services to its constituents.</b></p>	Select and implement a financial ERP system.
	Standardize IT infrastructure around the x86 architecture with virtualization by migrating away from the IBM AS400/iSeries Platform.
	Leverage and build upon Onbase.
	Upgrade the facilities and closets and rooms housing IT servers.
	Upgrade virtual server cluster and storage.
	Evaluate and propose a Multifunction Printer replacement plan.
	Subscribe to Microsoft Enterprise Licensing model.



### Key Performance Indicators (KPIs)

Number of systems upgraded to the latest version, measured in annual reports.

Implement at minimum 60% of the enterprise features requested, tracked in a feature request tracker.

Discontinue or upgrade 50% of legacy systems each year.



**Overview:**

In addition to operating systems, the IT department must provide quality IT decision making and governance. This includes meeting and reviewing IT frameworks, policies, and procedures.

**Summary of Activities:**

- Create policies and procedures to enhance the use of technology. This includes polices around IT purchases, user access, and computer access.
- Enact IT steering committee structure consisting of department heads, administration, and subject matter experts. These key stakeholders will assist the IT department with the transformation processes.
- Create action plan based on strategic objectives and findings. This action plan will outline activities and expenses over the next five years.
- Explore a better cost allocation model for IT expenses. The current model consumes staff time and does not promote collaborative IT purchases.
- Establish a support network of specialized vendors to assist with operations. These vendors will be able to provide expertise on specialized IT issues to help facilitate projects.

Measurable Goal:	Objectives
<p><b>Improve IT operations by utilizing meaningful Information technology management frameworks and governance.</b></p>	Create policies and procedures to enhance the use of technology.
	Enact IT Steering committee consisting of department heads, administration, and subject matter experts.
	Create action plan based on strategic objectives and findings.
	Explore a better cost allocation model that supports IT innovation and provides meaningful allocation with minimal effort.
	Establish a support network of specialized vendors to assist with operations.
<p>Key Performance Indicators (KPIs)</p>	
<p>Attendance from quarterly IT strategic meetings.</p>	
<p>Number of policies and procedures created or revised.</p>	



**Overview:**

Properly securing IT assets is a priority for the County. Maintaining up to date software and properly configured systems is a critical first step to improving security. It is important that the county achieves positive audit results from regular assessments.

**Summary of Activities:**

- Establish secure offsite backups in accordance with a defined backup policy. Offsite backups are important in protecting data in the event of a disaster.
- Establish a Security Officer to oversee security operations and ensure security compliance. The security officer will communicate and prioritize security decisions for the County.
- Protect against ransomware with up to date antivirus software. Ransomware is difficult to protect against however having up to date antivirus software with ransomware detection modules is a best effort to combatting ransomware attacks.
- Eliminate custom built applications that pose a high security risk and upkeep cost. Custom built applications including access database and AS400 applications have many security vulnerabilities that cannot be easily patched. Therefore, it is best to replace these applications with new applications that have vendor support.
- Implement changes to follow the HIPAA, CJIS, and SSAE16 best practices for IT security. These assessment and audit frameworks provide a good first step for securing systems.

Measurable Goal:	Objectives
<b>Effectively secure enterprise systems and digital information assets by utilizing latest software and techniques.</b>	Establish secure offsite backups.
	Establish a Security Officer.
	Update antivirus software.
	Eliminate custom built applications.
	Pass the HIPAA, CJIS, and Financial - IT controls assessments and audits.
<b>Key Performance Indicators (KPIs)</b>	
Pass all HIPAA, CJIS, and Financial audits in 2018 and subsequent years.	
Maintain 99% of user devices with up-to-date Antivirus protection installed.	



**Overview:**

The County is a regional leader for public safety. The IT department must support and assist public safety with stable, secure, and innovative solutions. A healthy public safety and IT relationship is important.

**Summary of Activities:**

- Upgrade the hardware and software supporting the 911 CAD and records to the latest stable version. This will provide much needed performance improvements that are hindering operations.
- Support body cameras and digital evidence collection for TCPD. IT will assist TCPD in implementing this new technology.
- Create a public safety IT workgroup to gain more efficiencies out of our enterprise records software. The law enforcement divisions of the county collaborate with an enterprise system for records and incidents. More value can be derived from this application by regular meetings to review business processes and workflows.
- Upgrade remaining MDT's to Semi-rugged laptops. Complete the project to update Mobile Data Terminals in cruisers with new semi-rugged laptops.

Measurable Goal:	Objectives
<b>Assist public safety operations by providing responsive IT services and supporting innovative technology.</b>	Upgrade the hardware and software supporting the 911 CAD and records to the latest stable version.
	Support body cameras and digital evidence collection for TCPD.
	Create a public safety IT workgroup.
	Upgrade remaining MDT's to Semi-rugged laptops.
Key Performance Indicators (KPIs)	
Assure at least 95% of patrol cars have functional MDT's.	
Percent of public safety applications on the latest version.	





**Overview:**

Good customer service is an important component of providing technology services. To gain efficiency, with technology, staff needs to be up to date with industry trends. It is important to train and engage users so that they can get the most value out of the systems available to them.

**Summary of Activities:**

- Reorganize the IT department to be aligned with new systems operations. The department is currently organized to support legacy systems. Newer systems will require a reorganizing the staffing in the department. It is important to ensure that the IT staff’s knowledge, skills, and abilities align with the organizations need.
- Train IT staff on latest trends and techniques for mobile devices computers and phones. It is important for further the investment in the collective IT human capital by offering training.
- Implement Microsoft System Center and package management software for remote PC redeployment and management tools for the benefit of the helpdesk staff.

Measurable Goal:	Objectives
<p><b>Provide an accessible and professional group of IT leaders that deliver timely, customer focused results. These IT leaders help system users benefit from utilizing technology.</b></p>	<p>Reorganize the department to be aligned with new systems operations.</p>
	<p>Train IT staff on latest trends and techniques for supporting mobile devices, computers, and phones.</p>
	<p>Implement Microsoft System Center and package management software.</p>
<p>Key Performance Indicators (KPIs)</p>	
<p>1 hour response for 90% of tickets entered between service hours measured in monthly reports.</p>	
<p>First issue resolution achieved for 70% of Help Desk tickets, as measured by monthly reports.</p>	



**Overview:**

It is important that users trust and understand technology. By properly communicating and collaborating with IT stakeholders, the County can improve IT services. IT will take proactive steps to involve users input in IT decision making.

**Summary of Activities:**

- Address problems quickly and increase understanding of our vendor’s technology by participating in user group meetings and feature requests. User groups help communicate the needs and concerns of systems.
- Implement Onbase committee for document sharing. Onbase is an important enterprise system for document management. A committee on document sharing will ensure we are getting the most out of this system.
- Provide county wide training and measure effectiveness. Training is important to prevent against security incidents and improve the effectiveness of technology in an organization.
- Collaborate with GIS Enterprise System upgrades and GIS workgroup. There is a need for coordinated GIS activates to further enterprise systems.
- Increase user based problem resolution. By empowering the users to resolve common help tickets, such as password resets, without involving IT staff time.

Measurable Goal:	Objectives
<p><b>Communicate and collaborate with systems users to instill trust and maximize the utilization of systems.</b></p>	<p>Address problems quickly and increase understanding of our vendor’s technology by participating in user group meetings and feature requests.</p>
	<p>Implement Onbase committee for document sharing.</p>
	<p>Provide County wide training and measure effectiveness.</p>
	<p>Collaborate with GIS Enterprise System upgrades and GIS workgroup.</p>
	<p>Increase use of user based problem resolution.</p>
<p>Key Performance Indicators (KPIs)</p>	
<p>Number of training sessions offered, measured annually.</p>	
<p>Number of users Interacting with IT through the help ticketing system, measured annually.</p>	








## 10. IT Activities & Projects

IT activities discovered during this process are listed and organized in the following prioritized list. An importance was developed based on strategic initiatives, security risk, and previous assessments. This list includes the important activities needed to improve services. Estimated costs are provided in the list to assist with budgeting. A few of these activities may be in progress or completed as the organization has already begun work on some of the critical findings while this document was created. Some activities are reoccurring and have been estimated on a five-year basis. Other activities are one-time expenses, but may span multiple budget years. Keep in mind that these activities do not include all proposed IT expenses as there are many reoccurring services managed by the IT Department including telecommunication lines, software licenses, and support agreements

### Referenced Assessments:

This list is aligned with recommendations from previous assessments, audits and best practices. These icons are used through the activity list to show relationship of activities to previous assessment findings.

	Trivalent Group Inc. - Executive and Technical Assessment (2016)
	Integrated Systems Consultants – HIPAA Security Risk Assessment (2017)
	Financial Audit – IT Controls Checklist
	FBI CJIS & LEIN Audit for Public Safety
	PCI Security Council Standards for Credit Card Processing

# 11. Activity & Project List

Project	Description	Type	Priority	Cost	Sponsor Dept.	Other Dept.	Other Dept. 2	Other Dept. 3	References
Upgrade Onbase System	Onbase V13 to V17 script upgrade	Enterprise System Maintenance	H	\$30,000	13th Circuit Court	County Clerk	City Clerk		
Hosted Judicial Information System	Partner with the state for state hosted JIS solutions	Enterprise System Maintenance	H	\$80,000	13th Circuit Court				
Upgrade AV Equipment for Courts	Upgrade and support audio and video equipment for courts	Enterprise System Maintenance	M	\$14,000	13th Circuit Court	86th District Court			
Migrate from AS400 court software	JMS/Circuit Court records run on the IBM iSeries/AS400 platform. Develop a plan and migrate these applications to cloud based, Windows x86 based, or external hosted.	Enterprise System Maintenance	H	\$300,000	86th District Court	13th Circuit Court			t
Network Switches, Routers, Firewall Upgrades	New networking infrastructure to replace end of life equipment and provide better security.	Enterprise System Maintenance	H	\$600,000	911 / Central Dispatch	IT Department			t ↑
Redundant Internet Uplink	Expand the 50mb service by adding a redundant carrier to provide internet. This is important for phones upgrades that use SIP, security from DDOS, and 911 CAD.	Best Practice	H	\$95,000	911 / Central Dispatch	IT Department			t
Tyler/New World Systems Enterprise CAD Upgrades	Upgrade to enterprise version of New World CAD software	Enterprise System Maintenance	H	\$40,000	911 / Central Dispatch	Sheriff's Office			
Text to 911 Project	IT to assist county 911 with upgrading software to accept text messages.	New Projects	M	\$0	911 / Central Dispatch				
ERP Business Process Software	One large project to solve many department needs. Many departments showed need for a collaborative software for document workflow and financial management. These included HR Module, Financial System, Fixed Asset System, Business Licenses Module, Utility Billing Module for City Treasury, Inventory Tracking, Online Payments for Permits, Timesheets, and Employee Self Service. These can be solved with an all inclusive ERP system.	Enterprise System Maintenance	H	\$850,000	Administration	Finance Department	City Treasurer		
Conference Room Upgrades	Upgrade the technology in the conference rooms to support digital presentations.	New Projects	L	\$18,000	Administration	City Manager			
Upgrade AV Equipment for Commission Chambers	Upgrade Audio and video equipment and recording capabilities for commission chambers.	Enterprise System Maintenance	M	\$14,000	Administration	City Administration			
Review and Create IT Policies and Procedures for Purchases and Cost Allocation	Improve technology management by having a refined policy for decision making on technology purchases.	Best Practice	L	\$0	City Administration	IT Department			
Tablets with APEX software for Field Inspections	Enable City inspectors to use tablets for APEX software for Field Inspections.	New Projects	L	\$6,000	City Assessor				
Election System Upgrades	City clerk specific project to upgrade election system.	Enterprise System Maintenance	M	\$46,000	City clerk	County Clerk			
Upgrade Firewall & Switches at City Waste Water	Replace the old ASA5505 gateway with new equipment.	Enterprise System Maintenance	H	\$6,000	City Department of Public Services				
Multifactor Login for remote login at City Waste Water	Discontinue the use of remote desktop and TeamViewer in favor of more secure multifactor VPN.	Compliance	H	\$2,200	City Department of Public Services				
Add Sanitation to Fiber MAN	Connect City Sanitation on the MAN.	Best Practice	L	\$15,000	City Department of Public Services				
Water plant Fiber Reconfiguration	Discontinue use of the Charter internet connection and create a vian network on the TCLP fiber MAN.	Best Practice	L	\$1,200	City Department of Public Services				
Enterprise Backups for Water Plant	Connect the Water Plant system to the County's backup system.	Compliance	M	\$3,000	City Department of Public Services				
Timesheet Tracking for DPS	City DPS needs new time and inventory tracking software. The current system is AS400 based and needs replaced.	Best Practice	L	\$12,000	City Department of Public Services				
New CAD Desktops for Engineering	City Engineers require specially configured computers to properly run the CAD/GIS software.	Enterprise System Maintenance	M	\$22,400	City Planning				
Bodycams for TCPD	Assist TCPD with equipping officers with bodycams.	New Projects	M	\$45,000	City Police				
Network Upgrades at LEC	Network switch replacement and cabling at LEC.	Enterprise System Maintenance	H	\$30,000	City Police	Sheriff's Office			
Virtualize In car video server and add to backup	Migrate in car video server to virtual server.	Enterprise System Maintenance	H	\$10,000	City Police				
COA Operational HIS Database	New database and work order system for COA.	Compliance	H	\$120,000	Commission on Aging				↑
Encryption on Laptops	Encrypt storage on laptops and mobile computers.	Compliance	H	\$20,000	Commission on Aging	Health Department	Sheriff's Office	City Police	t
GMAIL HIPAA	Enact Gmail HIPAA agreement amendment and configure Gmail accounts.	Compliance	H	\$0	Commission on Aging				
Mobile Time tracking for Employees	Flexible time tracking software for hourly employees.	Best Practice	L	\$65,000	Commission on Aging	Facilities Management Department	Human Resources		
HIPAA Compliance activities	Steps necessary to secure IT infrastructure and business processes for HIPAA Compliance.	Compliance	H	\$8,000	Commission on Aging				↑
Add & improve Onbase Workflows	Gain additional efficiencies out of the Onbase enterprise system by developing and refining Workflows for Marriage Licenses, Death Certificates, and Birth Certificates, Commission Packets, FOC, Probate Court, and Paperless Courts, etc.	New Projects	M	\$126,000	County Clerk	Family Division			
Multifunction Printer Upgrades	Project to gain efficiencies with printers and standardize repair and support.	New Projects	L	\$300,000	County Clerk	Family Division			
Microsoft AD: Single Sign-on	Users will have one password for most applications. This will reduce support incidents resetting passwords and enabling user self service.	Best Practice	H	\$14,000	Finance Department	IT Department			
Financial SSAE 16 Compliance activities	Steps necessary to secure IT infrastructure and business processes for SSAE 16 Compliance.	Compliance	H	\$8,000	Finance Department				↑



High Volume Printer for FOC	Locate and install a high volume printer at FOC.	Enterprise System Maintenance	M	\$8,000	Friend of the Court				
After Hours IT Support Pager	Offer after hours IT Support.	Best Practice	H	\$30,000	Health Department				
Tablets for WIC/DHHS	Tablets for WIC/DHHS workers at Health Department.	New Projects	L	\$4,000	Health Department				
Proactive Network Monitoring System	Setup and install a system to proactively monitors the network. System should report on failures, viruses, and cyber attacks.	Best Practice	M	\$16,000	IT Department				
ZFA Secure Remote Logins	Multifactor remote logins for security and compliance.	Compliance	H	\$36,000	IT Department				
PC Workstation Upgrades	Workstation replacements implemented on an incremental replacement. Cost spread out over 5 years.	Enterprise System Maintenance	M	\$600,000	IT Department				
MAN Upgrades	Expand the metro fiber network to connect more city and county buildings and upgrade the speed at existing buildings.	Enterprise System Maintenance	L	\$50,000	IT Department	Traverse City Light & Power			
IT Datacenter and Switch Closet Facility Improvements	Improve the physical area housing the enterprise servers for the County operations.	Enterprise System Maintenance	M	\$40,000	IT Department	Facilities Management Department			t
Printer Server	Setup and configure printer servers with GPO.	Enterprise System Maintenance	H	\$0	IT Department				
Gdrive Integration for Home drives	Integration with google drive for easy saving of cloud files.	Enterprise System Maintenance	L	\$0	IT Department				
VPN Concentrator Upgrades and Configuration	Reconfigure P2P VPN connection tunnels.	Enterprise System Maintenance	M	\$24,000	IT Department				
Wi-Fi Upgrades	Install additional wireless access points.	Enterprise System Maintenance	L	\$35,000	IT Department				
Windows Server upgrades	Upgrade servers to Windows Server 2016.	Enterprise System Maintenance	H	\$14,000	IT Department				t
Windows DFS	Install Windows DFS File Server.	Enterprise System Maintenance	M	\$4,000	IT Department				
PBX & VoIP Upgrades	Upgrade phone system to VOIP based phones.	Enterprise System Maintenance	M	\$340,000	IT Department				
Upgrade AT&T Analog Lines	Upgrade analog Centrix lines and PRI lines to SIP.	Enterprise System Maintenance	M	\$0	IT Department				
IT Helpdesk Software Improvements	Improve the IT helpdesk software & workflows.	Best Practice	M	\$5,000	IT Department				t
Physical Domain Controller	Migrate virtual controller to physical in hybrid environment.	Enterprise System Maintenance	H	\$2,000	IT Department				t
SQL Server Upgrades	Reconfigure SQL server for best practices and correct licensing.	Enterprise System Maintenance	M	\$24,000	IT Department				
iSeries Security improvements	Improve the security of the AS400/iSeries server.	Compliance	H	\$10,000	IT Department				
Package Management	Implement package management and deployment software.	New Projects	M	\$4,600	IT Department				
Training	Training plan for IT staff and users (5 year plan).	Best Practice	M	\$150,000	IT Department				t
Last Pass	Password security vault for IT techs.	Best Practice	L	\$2,000	IT Department				
EFAX	Solution to upgrade analog fax lines to fax over e-mail. Cost savings over time.	New Projects	L	\$6,000	IT Department	County Clerk	13th Circuit Court	Administration	
Upgrade VMWARE Software	Upgrade the VMware software to latest version.	Enterprise System Maintenance	H	\$10,000	IT Department				t
Mobile Device Management	Implement a more robust Mobile Device Management solution.	Best Practice	L	\$20,000	IT Department	Facilities Management Department			
Offsite Backups	Move offsite backups over 50 miles away.	Best Practice	H	\$18,000	IT Department				t
VDI	Deploy Virtual Desktops for specific work areas as needed.	New Projects	L	\$160,000	IT Department				
Virus Scan and Ransomware Protection	Purchase and install antivirus software with ransomware protection.	Compliance	H	\$72,000	IT Department				t
External Penetration Testing	Purchase an external security penetration test.	Best Practice	M	\$8,000	IT Department				t
Microsoft Enterprise Licensing & SCCM Software	Purchase Microsoft Windows, Office, other licenses as an annual enterprise subscription. Implement enterprise windows management using Microsoft Systems Center (SCCM)	Enterprise System Maintenance	M	\$650,000	IT Department				t
True Up SQL License	SQL licensing audit and licensing correction.	Enterprise System Maintenance	M	\$25,000	IT Department				
IT Workroom	Facility improvements to create a more accessible PC Repair area.	Best Practice	L	\$4,000	IT Department	Facilities Management Department			
Microsoft AD OU Cleanup	Clean up the Microsoft Active Directory users and departments.	Best Practice	M	\$8,000	IT Department	Commission on Aging			t
Establish vendor support network	Build a list of vendors who can provide IT support services as needed	Best Practice	H	\$0	IT Department				
Migrate, Reprogram or Discontinue AS400 applications	Migrate AS400 applications off of the IBM iSeries platform.	Enterprise System Maintenance	H	\$50,000	IT Department				t
Improve customer service in the IT department	Activities including new user packets, training programs, and better issue resolution.	Best Practice	M	\$0	IT Department				
Enterprise Server Cluster Upgrades	Includes storage servers and new processing nodes. Needed for 911 CAD upgrades, and ERP Project	Enterprise System Maintenance	H	\$300,000	IT Department	911 / Central Dispatch	Finance Department		
Service Billing Cost Allocation Study	The process for billing departments for IT usage is resource intensive and over complicated. A study can be conducted to figure out the best path to resolve this.	Best Practice	M	\$3,000	IT Department	Finance Department			
Implment IT Governance	Implement model of IT governance that includes participation by IT stakeholders, department heads, and	Best Practice	M	\$0	IT Department				t
Manage update schedule	Put a management system in place to schedule software updates.	Best Practice	L	\$0	IT Department				





## 12. Cost Vs Importance of IT Activities

	High Priority		Medium Priority		Low Priority	
	Project	Cost	Project	Cost	Project	Cost
High Cost	ERP Business Process Software	\$850,000	Microsoft Enterprise Licensing & SCCM Software	\$650,000	Multifunction Printer Upgrades	\$300,000
	Network Switches, Routers, Firewall Upgrades	\$600,000	PC Workstation Upgrades	\$360,000	VDI	\$160,000
	Migrate from AS400 court software	\$300,000	Replacement MDT's for Sheriff	\$340,000		
	Enterprise Server Cluster Upgrades	\$300,000	PBX & VoIP Upgrades	\$340,000		
			Training	\$150,000		
			Community Development Module	\$200,000		
Medium Cost	COA Operational HIS Database	\$120,000	Add & improve Onbase Workflows	\$126,000	Mobile Time tracking for Employees	\$65,000
	Email Encryption	\$100,000	GIS Administration and Enterprise GIS Upgrades	\$52,000	MAN Upgrades	\$50,000
	Redundant Internet Uplink	\$95,000	Election System Upgrades	\$46,000		
	Hosted Judicial Information System	\$80,000	Bodycams for TCPD	\$45,000		
	Virus Scan and Ransomware Protection	\$72,000	IT Datacenter and Switch Closet Facility Improvements	\$40,000		
	Migrate, Reprogram or Discontinue AS400 Applications	\$50,000				
	Tyler/New World Systems Enterprise CAD Upgrades	\$40,000				
2FA Secure Remote Logins	\$36,000					
Low Cost	Upgrade Onbase System	\$30,000	True Up SQL License	\$30,000	Wi-Fi Upgrades	\$35,000
	Network Upgrades at LEC	\$30,000	Upgrade AV Equipment for Courts	\$30,000	Mobile Device Management	\$20,000
	After Hours IT Support Pager	\$30,000	VPN Concentrator Upgrades and Configuration	\$24,000	Conference Room Upgrades	\$18,000
	Encryption on Laptops	\$20,000	SQL Server Upgrades	\$24,000	Add Sanitation to Fiber MAN	\$15,000
	BPR for New World Systems	\$20,000	Package Management	\$23,000	Timesheet Tracking for DPS	\$12,000
	Offsite Backups	\$18,000	New CAD Desktops for Engineering	\$22,400	Tablets with APEX software for Field inspections	\$6,000
	Microsoft AD: Single Sign-on	\$14,000	Facilities work ticket system	\$20,000	WIFI At Twin Lakes	\$6,000
	Windows Server upgrades	\$14,000	Proactive Network Monitoring System	\$16,000	EFAX	\$6,000
	Virtualize In car video server and add to backup	\$10,000	Upgrade AV Equipment for Commission Chambers	\$14,000	IT Documentation	\$5,000
	ISeries Security improvements	\$10,000	Secure Shredding	\$10,000	IT Workroom	\$4,000
	Upgrade VMWARE Software	\$10,000	High Volume Printer for FOC	\$8,000	Tablets for WIC/DHHS	\$4,000
	HIPAA Compliance activities	\$8,000	External Penetration Testing	\$8,000	Last Pass	\$2,000
	CJIS/LEIN Compliance activities	\$8,000	Microsoft AD OU Cleanup	\$8,000	Live Stream Exercise Classes	\$1,200
	Financial SSAE 16 Compliance activities	\$8,000	Fiber MAN Upgrade	\$6,000	Water plant Fiber Reconfiguration	\$1,200
	Upgrade Firewall & Switches for City Waste Water	\$6,000	IT Helpdesk Software Improvements	\$5,000	Review and Create IT Policies and Procedures for	\$0
	Multifactor Login for remote login for City Waste Water	\$2,200	Windows DFS	\$4,000	Virtualize Crime mapping server	\$0
	Physical Domain Controller	\$2,000	Enterprise Backups for Water Plant	\$3,000	Drive Integration for Home drives	\$0
	Printer Server	\$0	Service Billing Cost Allocation Study	\$3,000	Manage update schedule	\$0
	GMAIL HIPAA	\$0	G2G Credit Card Processing	\$0	Policy and Procedures Review	\$0
	Establish vendor support network	\$0	Network Vlan for Tax Parcel Viewer	\$0		
			Upgrade AT&T Analog Lines	\$0		
			Improve customer service in the IT department	\$0		
			Text to 911 Project	\$0		
			Improve IT governance for External City/TCLP relations	\$0		
			Implement an IT Governance/Steering Committee	\$0		
			IT Department Realignment Reorganization	\$0		



### 13. Department Interviews

Participating County Departments	Participating City Departments
Facilities	City Clerk
Equalization	Human Resources
County Clerk / Clerk of the Court	City Manager
Prosecuting Attorney	Assessor
Treasurer	Chief of Police
Finance	Treasurer
Planning	Department of Public Services (Water & Waste Water)
Friend of Court	Graphic Information Systems
911	Planning
Community Development/Soil erosion	Engineering
Law Enforcement Group: Sheriff, Corrections, Road Patrol, Detective Bureau, and others	Traverse City Light and Power
Parks	
Health Department	
MSU Extension	
Circuit and Probate court	
Commission on Aging	
Register of Deeds	
District Court	
Administration	
Human Resources	
Information Technology	

Agency	City
Department	City Clerk
<b>Findings</b>	
Paper Financial Reports in AS400 financial system are a burden and difficult to get information out of.	
Would like more communication from the IT Department.	
Would like to know about training from IT.	
<b>IT Project/Activity</b>	<b>Need</b>
ERP: Business Licensing Module to replace Google Docs	Desired
Election System Upgrades	Necessary
Onbase workflows for commission packets	Desired
Interested in multifunction scanner/printer project	Suggested





Agency		County
Department	Prosecuting Attorney	
<b>Findings</b>		
<p>The Prosecuting Attorney recently purchased a cloud based case management system. This system required a stable internet for it to work properly.</p> <p>Internet was reported as intermittent and slow for cloud based case management system.</p> <p>Remarks in the CJIS/LEIN audit regarding email encryption.</p> <p>Recently migrated to Carpel RMS. Project in final phase (data migration).</p>		
<b>IT Project/Activity</b>		<b>Need</b>
Email Encryption		Necessary
Network Monitoring System		Suggested
Muti Factor Logins		Necessary

Agency		County
Department	Finance	
<b>Findings</b>		
<p>Custom AS400 based financial system is causing problems. Little documentation on how to use it.</p> <p>The system lacks controls on limiting users activities with regards to deletions and modifications.</p> <p>Concerns about the Financial Audit – IT Controls.</p> <p>Need a fixed asset module.</p>		
<b>IT Project/Activity</b>		<b>Need</b>
ERP: Financial System with Fixed Assets		Necessary
Microsoft AD Single Sign on for Applications		Desired
Secure Financial System		Necessary

Agency		County
Department	Planning/GIS	
<b>Findings</b>		
<p>There is no longer a GIS administrator. The County lacks an individual to manage GIS system and point data. This will become critical as an up-to-date GIS database is important for Equalization, Permitting, 911 CAD and Public Safety Records.</p>		
<b>IT Project/Activity</b>		<b>Need</b>
GIS Administrator		Necessary
Enterprise GIS System		Desired



Agency		County
Department	Friend of the Court	
<b>Findings</b>		
FOC uses an AS400 Application for Family/Circuit Court records. Prosecutor sends over casefiles for paternity via paper and then it is scanned in. This could be improved with Onbase workflow.		
<b>IT Project/Activity</b>		<b>Need</b>
Multifunction Workstation Printers		Desired
Upgrade Onbase Software Platform		Necessary
Email Encryption		Necessary
Onbase workflows for paternity		Desired

Agency		County
Department	Commission on Aging	
<b>Findings</b>		
COA database is old and holds medical/health service records for individuals. Security improvements needed on desktops and servers. COA workers want smartphones for better communication.		
<b>IT Project/Activity</b>		<b>Need</b>
New COA Database Software		Necessary
Hard Drive Encryption for Laptops		Necessary
Mobile Employee Time Tracking		Suggested

Agency		County
Department	Central Dispatch	
<b>Findings</b>		
Uses Tyler (New World Systems) Computer Aided Dispatch and Records Management System. Software is on the MSP version. A new enterprise .NET version for New World Systems is available. Software commonly locks up because of slowness on servers.		
<b>IT Project/Activity</b>		<b>Need</b>
Tyler/New World Enterprise CAD /Mobile Upgrades		Necessary
Server Upgrades (SAN and Nodes)		Necessary
Network Switches, Routers, Firewall Upgrades		Necessary
Redundant Internet Uplink		Desired
Text to 911 (IT to assist)		Desired



Agency		City
Department	Human Resources	
<b>Findings</b>		
<p>Would like remote VPN access. Need to improve the HR/IT controls for new user accounts and terminated user accounts.</p>		
<b>IT Project/Activity</b>		<b>Need</b>
ERP: HR Module		Desired
Timesheet Module/Software		Desired
HR Online Self Service		Desired
MFP Workstation Upgrades		Suggested

Agency		City
Department	Administration	
<b>Findings</b>		
<p>County IT Director suggests purchases for technology, the City procures the technology for the departments. HTE/Sunguard UB system is on the iSeries/AS400 and holds the UB for Water, Sewer, and Electric in a combined database.</p>		
<b>IT Project/Activity</b>		<b>Need</b>
Expand the use of Lucity and ESRI GIS		Suggested
Better IT Policies and Procedures for Purchases		Suggested
AV Equipment Upgrades for Commission Chambers		Desired
Conference Room Technology Upgrades		Desired

Agency		County
Department	Community Development	
<b>Findings</b>		
<p>There is a process for manually downloading building permits and sending them equalization. Equalization then must key in the changes. This process is prone to error and not real time. The business unit wants to be more customer focused with online portals and tablets in the field.</p>		
<b>IT Project/Activity</b>		<b>Need</b>
ERP: Community Development Module		Necessary
Online Portal for permits		Necessary



Agency	City
Department	Accessor's Office
<b>Findings</b>	
<p>BS&amp;A software is slow because of slow servers.  Servers are out of space for creating new Databases.  The process of updating permit information is paper based.</p>	
<b>IT Project/Activity</b>	<b>Need</b>
Backups for accessing data	Desired
ERP workflow for building permits	Suggested
Tablets with APEX software for Field inspections	Desired

Agency	City
Department	Treasurer
<b>Findings</b>	
<p>City Treasurer is the customer service department for the IBM iSeries/AS400 HTE SunGard utility billing software.  Utility bills are file exports that are formatted and sent to the printer.  This department could benefit from a GUI Based UB system that enables the users to navigate the system better.</p>	
<b>IT Project/Activity</b>	<b>Need</b>
ERP: Financial System	Necessary
ERP: Integrated UB module	Desired

Agency	City
Department	Department of Public Service
<b>Findings</b>	
<p>Data easy is a AS400 application for tracking fleet repair and employee time.  This department is pioneering City's GIS capability's with the Lucity platform.</p>	
<b>IT Project/Activity</b>	<b>Need</b>
ERP: Inventory	Desired
Timesheet Tracking to replace Data Easy	Necessary



Agency		County/City
Department	Law Enforcement Group	
<b>Findings</b>		
<p>Tyler's New World application is running slow on the old sever hardware.            There are workflow issues that need to be explored with Field Reporting and MIRC Reporting.            There are database quality issues with the legacy data migration.            There are reported concerns about address overrides on records from Dispatch or Mobile.            The WIFI for in car video upload is broken and officers must manually upload.            In car video is not backed up.</p>		
IT Project/Activity	Need	
Upgrade New World System	Necessary	
BPR for NWS Field Reporting, MICR, GIS	Suggested	
Database Quality Improvements	Suggested	
Replace last of the MDT's	Desired	
Bodycams for TCPD	Desired	
PC Workstation Upgrades	Necessary	
Encrypted email	Necessary	
Network Upgrades at LEC	Necessary	
Virtualize Crime mapping server	Suggested	
Virtualize In car video server and add to backup	Suggested	

Agency		County
Department	Health Department	
<b>Findings</b>		
<p>Onsite IT FTE staff member to support area.            Wi-Fi Slowness issues after new equipment installed.            Afterhours IT response is not consistent.            Recently upgraded to M&amp;M software for use of Crystal Reports to gather reports.</p>		
IT Project/Activity	Need	
After Hours IT Support Pager	Desired	
Encryption on Laptop Hard Drives	Necessary	
Email Encryption	Necessary	
Tablets for WIC/DHHS	Desired	



Agency		Courts
Department	86 <sup>th</sup> District, 13 <sup>th</sup> Circuit and Probate Court, County Clerk	
<b>Findings</b>		
<p>There are three court systems. JMS, JIS, and Circuit Courts. All of these applications run on the AS400 system.</p> <p>Difficulties getting ahold of IT for afterhours support.</p> <p>Onbase is slow and freezes because of old server hardware.</p> <p>Probate court needs scanners deployed for Onbase.</p> <p>Courts are dependent on AS400 applications to support Dockets, records, and workflows.</p>		
<b>IT Project/Activity</b>		<b>Need</b>
AV Equipment service contract for SCAO purchased equipment		Desired
Evaluate and Migrate from JMS AS400 Application to a new system		Necessary
Evaluate Hosted JIS with SCAO		Desired
Migrate In house Court systems from AS400		Necessary
Onbase workflows for paperless courts		Desired
Efile for Probate Court Onbase		Suggested
Adobe Acrobat Pro		Suggested
High Volume Printer for FOC		Desired

Agency		County
Department	Parks	
<b>Findings</b>		
<p>Senior centers don't need the same level of IT services.</p> <p>Department relies on MySeinorCenter SSAS Web application.</p> <p>There are projects in process to buy G2G credit card processing.</p> <p>Would like a better communication system for facilities repairs.</p>		
<b>IT Project/Activity</b>		<b>Need</b>
Live Stream Exercise Classes		Suggested
G2G Credit Card Processing		Desired
ERP: Parks Module		Desired
WIFI At Twin Lakes		Desired
Facilities work ticket system		Suggested



Agency		City
Department	Planning & Engineering	
<b>Findings</b>		
<p>Need more storage space on network.            This department uses AutoCAD, Civil3D, ESRI software.            City Engineer went over the limit on Gmail emails and needs a solution to archive emails.            The process between City accessing updating the parcel and equalization updating parcel viewer is manual.</p>		
<b>IT Project/Activity</b>		<b>Need</b>
ERP for Accessing and Permits		Desired
Conference Room upgrades		Suggested
New CAD Desktops for Engineering		Necessary

Agency		City
Department	Traverse City Light and Power	
<b>Findings</b>		
<p>Concerned about IBM iSeries Power 8 server replacement and backups for AS400/iSeires applications.            This department uses City Works for workflow while DPS migrated to Lucity software.            Concerned that County IT does not have 24/7 after hours support.            The County and TCLP have an agreement for fiber MAN services.</p>		
<b>IT Project/Activity</b>		<b>Need</b>
iSeries Backup		Desired
Network VLAN for Tax Parcel Viewer		Necessary
Afterhours Pager for IT		Desired
NERC/FERC Compliance		Suggested
IT Governance on TCLP Relationship		Suggested
MAN Upgrades, Expansion, and Cost		Desired

Agency		City
Department	Waste Water	
<b>Findings</b>		
<p>Operation has older hardware, they use a Cisco ASA5505 for a firewall. This will need to be replaced.            There needs to be a better system to limit remote logins and review firewall rules.            This building is not on fiber MAN, but service is in the next-door building.</p>		
<b>IT Project/Activity</b>		<b>Need</b>
Upgrade WPC Firewall & Switches		Necessary
2FA for remote VPN		Necessary
Add WPC to Fiber MAN		Suggested



Agency		City
Department	Water	
<b>Findings</b>		
<p>There are two internet connections into the building, Charter cable and TCLP fiber optics. This could be converted to one network to save money. Backups are stored locally on a cold spare.</p>		
<b>IT Project/Activity</b>		<b>Need</b>
Add site on Fiber MAN		Suggested
Offsite Backups		Desired







Agency		County
Department	Facilities	
<b>Findings</b>		
<p>Project underway for card readers on doors. This project needs IT Support for network configuration. Facility upgrades are needed in the IT server rooms and closets. Project to equip facilities workers with tablets or smart phone for work ticket tracking. Could benefit from mobile time tracking software.</p>		
<b>IT Project/Activity</b>		<b>Need</b>
EPS Card reader Upgrades for door scanners		Necessary
Facility upgrades for IT server rooms		Necessary
Mobile Time tracking software		Desired





Project	Description	Type	Priority	Cost	Sponsor Dept.	Other Dept.	Other Dept. 2	Other Dept. 3	References
Upgrade Onbase System	Onbase V13 to V17 script upgrade	Enterprise System Maintenance	H	\$30,000	13th Circuit Court	County Clerk	City Clerk		
Hosted Judicial Information System	Partner with the state for state hosted JIS solutions	Enterprise System Maintenance	H	\$80,000	13th Circuit Court				
Upgrade AV Equipment for Courts	Upgrade and support audio and video equipment for courts	Enterprise System Maintenance	M	\$14,000	13th Circuit Court		86th District Court		
Migrate from AS400 court software	JMS/Circuit Court records run on the IBM iSeries/AS400 platform. Develop a plan and migrate these applications to cloud based, Windows x86 based, or external hosted.	Enterprise System Maintenance	H	\$300,000	86th District Court		13th Circuit Court		t
Network Switches, Routers, Firewall Upgrades	New networking infrastructure to replace end of life equipment and provide better security.	Enterprise System Maintenance	H	\$600,000	911 / Central Dispatch	IT Department			t ↑
Redundant Internet Uplink	Expand the 50mb service by adding a redundant carrier to provide internet. This is important for phones upgrades that use SIP, security from DDOS, and 911 CAD.	Best Practice	H	\$95,000	911 / Central Dispatch	IT Department			t
Tyler/New World Systems Enterprise CAD Upgrades	Upgrade to enterprise version of New World CAD software	Enterprise System Maintenance	H	\$40,000	911 / Central Dispatch		Sheriff's Office		
Text to 911 Project	IT to assist county 911 with upgrading software to accept text messages.	New Projects	M	\$0	911 / Central Dispatch				
ERP Business Process Software	One large project to solve many department needs. Many departments showed need for a collaborative software for document workflow and financial management. These included HR Module, Financial System, Fixed Asset System, Business Licenses Module, Utility Billing Module for City Treasury, Inventory Tracking, Online Payments for Permits, Timesheets, and Employee Self Service. These can be solved with an all inclusive ERP system.	Enterprise System Maintenance	H	\$850,000	Administration	Finance Department	City Treasurer		
Conference Room Upgrades	Upgrade the technology in the conference rooms to support digital presentations.	New Projects	L	\$18,000	Administration		City Manager		
Upgrade AV Equipment for Commission Chambers	Upgrade Audio and video equipment and recording capabilities for commission chambers.	Enterprise System Maintenance	M	\$14,000	Administration		City Administration		
Review and Create IT Policies and Procedures for Purchases and Cost Allocation	Improve technology management by having a refined policy for decision making on technology purchases.	Best Practice	L	\$0	City Administration		IT Department		
Tablets with APEX software for Field Inspections	Enable City inspectors to use tablets for APEX software for Field Inspections.	New Projects	L	\$6,000		City Assessor			
Election System Upgrades	City clerk specific project to upgrade election system.	Enterprise System Maintenance	M	\$46,000		City clerk		County Clerk	
Upgrade Firewall & Switches at City Waste Water	Replace the old ASAS505 gateway with new equipment.	Enterprise System Maintenance	H	\$6,000		City Department of Public Services			
Multifactor Login for remote login at City Waste Water	Discontinue the use of remote desktop and TeamViewer in favor of more secure multifactor VPN.	Compliance	H	\$2,200		City Department of Public Services			
Add Sanitation to Fiber MAN	Connect City Sanitation on the MAN.	Best Practice	L	\$15,000		City Department of Public Services			
Water plant Fiber Reconfiguration	Discontinue use of the Charter internet connection and create a vlan network on the TCLP fiber MAN.	Best Practice	L	\$1,200		City Department of Public Services			
Enterprise Backups for Water Plant	Connect the Water Plant system to the County's backup system.	Compliance	M	\$3,000		City Department of Public Services			
Timesheet Tracking for DPS	City DPS needs new time and inventory tracking software. The current system is AS400 based and needs replaced.	Best Practice	L	\$12,000		City Department of Public Services			
New CAD Desktops for Engineering	City Engineers require specially configured computers to properly run the CAD/GIS software.	Enterprise System Maintenance	M	\$22,400		City Planning			
Bodycams for TCPD	Assist TCPD with equipping officers with bodycams.	New Projects	M	\$45,000		City Police			
Network Upgrades at LEC	Network switch replacement and cabling at LEC.	Enterprise System Maintenance	H	\$30,000		City Police		Sheriff's Office	
Virtualize In car video server and add to backup	Migrate in car video server to virtual server.	Enterprise System Maintenance	H	\$10,000		City Police			
COA Operational HIS Database	New database and work order system for COA.	Compliance	H	\$120,000		Commission on Aging			↑
Encryption on Laptops	Encrypt storage on laptops and mobile computers.	Compliance	H	\$20,000		Commission on Aging	Health Department	Sheriff's Office	City Police
EMAIL HIPAA	Enact Gmail HIPAA agreement amendment and configure Gmail accounts.	Compliance	H	\$0		Commission on Aging			
Mobile Time tracking for Employees	Flexible time tracking software for hourly employees.	Best Practice	L	\$65,000		Commission on Aging	Facilities Management Department	Human Resources	↑
HIPAA Compliance activities	Steps necessary to secure IT infrastructure and business processes for HIPAA Compliance.	Compliance	H	\$8,000		Commission on Aging			
Add & improve Onbase Workflows	Gain additional efficiencies out of the Onbase enterprise system by developing and refining Workflows for Marriage Licenses, Death Certificates, and Birth Certificates, Commission Packets, FOC, Probate Court, and Paperless Courts, etc.	New Projects	M	\$126,000		County Clerk		Family Division	
Multifunction Printer Upgrades	Project to gain efficiencies with printers and standardize repair and support.	New Projects	L	\$300,000		County Clerk		Family Division	
Microsoft AD: Single Sign-on	Users will have one password for most applications. This will reduce support incidents resetting passwords and enabling user self service.	Best Practice	H	\$14,000		Finance Department		IT Department	
Financial SSAE 16 Compliance activities	Steps necessary to secure IT infrastructure and business processes for SSAE 16 Compliance.	Compliance	H	\$8,000		Finance Department			↑
High Volume Printer for FOC	Locate and install a high volume printer at FOC.	Enterprise System Maintenance	M	\$8,000		Friend of the Court			
After Hours IT Support Pager	Offer after hours IT Support.	Best Practice	H	\$30,000		Health Department			
Tablets for WIC/DHHS	Tablets for WIC/DHHS workers at Health Department.	New Projects	L	\$4,000		Health Department			

Project	Description	Type	Priority	Cost	Sponsor Dept.	Other Dept.	Other Dept. 2	Other Dept. 3	References
Proactive Network Monitoring System	Setup and install a system to proactively monitors the network. System should report on failures, viruses, and cyber attacks.	Best Practice	M	\$16,000	IT Department				
ZFA Secure Remote Logins	Multifactor remote logins for security and compliance.	Compliance	H	\$36,000	IT Department				
PC Workstation Upgrades	Workstation replacements implemented on an incremental replacement. Cost spread out over 5 years.	Enterprise System Maintenance	M	\$600,000	IT Department				
MAN Upgrades	Expand the metro fiber network to connect more city and county buildings and upgrade the speed at existing buildings.	Enterprise System Maintenance	L	\$50,000	IT Department	Traverse City Light & Power			
IT Datacenter and Switch Closet Facility Improvements	Improve the physical area housing the enterprise servers for the County operations.	Enterprise System Maintenance	M	\$40,000	IT Department	Facilities Management Department			
Printer Server	Setup and configure printer servers with GPO.	Enterprise System Maintenance	H	\$0	IT Department				
Gdrive Integration for Home drives	Integration with google drive for easy saving of cloud files.	Enterprise System Maintenance	L	\$0	IT Department				
VPN Concentrator Upgrades and Configuration	Reconfigure P2P VPN connection tunnels.	Enterprise System Maintenance	M	\$24,000	IT Department				
Wi-Fi Upgrades	Install additional wireless access points.	Enterprise System Maintenance	L	\$35,000	IT Department				
Windows Server upgrades	Upgrade servers to Windows Server 2016.	Enterprise System Maintenance	H	\$14,000	IT Department				
Windows DFS	Install Windows DFS File Server.	Enterprise System Maintenance	M	\$4,000	IT Department				
PBX & VoIP Upgrades	Upgrade phone system to VOIP based phones.	Enterprise System Maintenance	M	\$340,000	IT Department				
Upgrade AT&T Analog Lines	Upgrade analog Centrix lines and PRI lines to SIP.	Enterprise System Maintenance	M	\$0	IT Department				
IT Helpdesk Software Improvements	Improve the IT helpdesk software & workflows.	Best Practice	M	\$5,000	IT Department				
Physical Domain Controller	Migrate virtual controller to physical in hybrid environment.	Enterprise System Maintenance	H	\$2,000	IT Department				
SQL Server Upgrades	Reconfigure SQL server for best practices and correct licensing.	Enterprise System Maintenance	M	\$24,000	IT Department				
ISeries Security improvements	Improve the security of the AS400/Series server.	Compliance	H	\$10,000	IT Department				
Package Management	Implement package management and deployment software.	New Projects	M	\$4,600	IT Department				
Training	Training plan for IT staff and users (5 year plan).	Best Practice	M	\$150,000	IT Department				
Last Pass	Password security vault for IT techs.	Best Practice	L	\$2,000	IT Department				
EFAX	Solution to upgrade analog fax lines to fax over e-mail. Cost savings over time.	New Projects	L	\$6,000	IT Department	County Clerk	13th Circuit Court	Administration	
Upgrade VMWARE Software	Upgrade the VMware software to latest version.	Enterprise System Maintenance	H	\$10,000	IT Department				
Mobile Device Management	Implement a more robust Mobile Device Management solution.	Best Practice	L	\$20,000	IT Department	Facilities Management Department			
Offsite Backups	Move offsite backups over 50 miles away.	Best Practice	H	\$18,000	IT Department				
VDI	Deploy Virtual Desktops for specific work areas as needed.	New Projects	L	\$160,000	IT Department				
Virus Scan and Ransomware Protection	Purchase and install antivirus software with ransomware protection.	Compliance	H	\$72,000	IT Department				
External Penetration Testing	Purchase an external security penetration test.	Best Practice	M	\$8,000	IT Department				
Microsoft Enterprise Licensing & SCCM Software	Purchase Microsoft Windows, Office, other licenses as an annual enterprise subscription. Implement enterprise windows management using Microsoft Systems Center (SCCM)	Enterprise System Maintenance	M	\$650,000	IT Department				
True Up SQL License	SQL licensing audit and licensing correction.	Enterprise System Maintenance	M	\$25,000	IT Department				
IT Workroom	Facility improvements to create a more accessible PC Repair area.	Best Practice	L	\$4,000	IT Department	Facilities Management Department			
Microsoft AD OU Cleanup	Clean up the Microsoft Active Directory users and departments.	Best Practice	M	\$8,000	IT Department	Commission on Aging			
Establish vendor support network	Build a list of vendors who can provide IT support services as needed	Best Practice	H	\$0	IT Department				
Migrate, Reprogram or Discontinue AS400 applications	Migrate AS400 applications off of the IBM ISeries platform.	Enterprise System Maintenance	H	\$50,000	IT Department				
Improve customer service in the IT department	Activities including new user packets, training programs, and better issue resolution.	Best Practice	M	\$0	IT Department				
Enterprise Server Cluster Upgrades	Includes storage servers and new processing nodes. Needed for 911 CAD upgrades, and ERP Project	Enterprise System Maintenance	H	\$300,000	IT Department	911 / Central Dispatch	Finance Department		
Service Billing Cost Allocation Study	The process for billing departments for IT usage is resource intensive and over complicated. A study can be conducted to figure out the best path to resolve this.	Best Practice	M	\$3,000	IT Department	Finance Department			
	Implement model of IT governance that includes participation by IT stakeholders, department heads, and	Best Practice	M	\$0	IT Department				
Manage update schedule	Put a management system in place to schedule software updates.	Best Practice	L	\$0	IT Department				
IT Department Realignment Reorganization	Resolve issues with quality of service and align department to support newer systems.	Best Practice	M	\$0	IT Department				
Fiber MAN Upgrade	Add more locations and increase speed on Metro Area Network.	Enterprise System Maintenance	M	\$6,000	IT Department	Traverse City Light & Power			
IT Documentation	Improve IT systems documentation.	Best Practice	L	\$5,000	IT Department				
Policy and Procedures Review	Review and update policy and procedures for IT.	Best Practice	L	\$0	IT Department				
Live Stream Exercise Classes	Project to improve network access for Parks & Recreation for video streaming.	New Projects	L	\$1,200	Parks & Recreation				
G2G Credit Card Processing	Project to use the G2G Marketplace to provide unified credit card processing.	New Projects	M	\$0	Parks & Recreation				
WiFi At Twin Lakes	Improve wireless access at Twin Lakes.	New Projects	L	\$6,000	Parks & Recreation				

Project	Description	Type	Priority	Cost	Sponsor Dept.	Other Dept.	Other Dept. 2	Other Dept. 3	References
<b>Facilities Work Ticket System</b>	A mobile electronic work ticket system for Facilities.	Best Practice	M	\$20,000	Parks & Recreation				
<b>GIS Administration and Enterprise GIS Upgrades</b>	Appoint a GIS administrator and upgrade ESRI GIS software to enterprise server for 911 CAD and Planning projects.	Best Practice	M	\$52,000	Planning & Development Department				
<b>Email Encryption</b>	Email encryption for HIPAA/CJIS.	Compliance	H	\$100,000	Prosecuting Attorney	Family Division	Health Department	Treasurer's Office	  
<b>Replacement MDT's for Sheriff</b>	MDT replacement for patrol cars. Move from incremental to full replacement with 5 year expected life.	Enterprise System Maintenance	M	\$340,000	Sheriff's Office				
<b>Virtualize Crime mapping server</b>	Migrate Crime mapping to virtual server.	Enterprise System Maintenance	L	\$0	Sheriff's Office				
<b>Secure Shredding</b>	Service to dispose of paper documents in a HIPAA/CJIS compliant manner.	Compliance	M	\$10,000	Sheriff's Office	IT Department	Health Department	Commission on Aging	
<b>BPR for New World Systems</b>	Business process review of New World Systems Records, CAD, and Mobile.	Enterprise System Maintenance	H	\$20,000	Sheriff's Office	911 / Central Dispatch			
<b>CJIS/LEIN Compliance activities</b>	Steps necessary to secure IT infrastructure and business processes for CJIS compliance.	Compliance	H	\$8,000	Sheriff's Office				
<b>Network Vlan for Tax Parcel Viewer</b>	Change the network VLAN's to support Tax Parcel Viewer on the TCLP Domain.	New Projects	M	\$0	Traverse City Light & Power				
<b>Improve IT governance for External City/TCLP relationships</b>	The county purchases fiber optic service from TCLP they also manage the City's IT network.	Best Practice	M	\$0	Traverse City Light & Power				
<b>Community Development Module</b>	Community development and code enforcement software for use with the ERP software for tracking permits, blueprints, and field inspectors.	New Projects	M	\$200,000	Construction Code Division	Planning & Development Department			
<b>Total Cost Estimate: \$6,401,600</b>									