September 9, 2022

**INFORMATION
TECHNOLOGY**

2023 Pro

solutions

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Contents

Executive Summary

Genesee County's Information Technology Department is responsible for providing County government and public safety departments with the tools that enable them to be effective and efficient as they provide a variety of services to County residents, business owners and visitors. As such, Information Technology is chartered to provide a reliable data and voice network, an application framework that meets the business and public safety requirements of the County, a well-maintained and stable infrastructure, a security program that protects the County's assets, and a business continuity plan that provides for the timely recovery of critical applications.

The 2023 Budget totals $2,406,239. This is a $73,417 / 3.9% increase from the 2022 Adopted Budget $2,332,822. Salary and Benefits account for a $3,250 / 0.3% increase and Contractual Services are a $90,369 / 6.2% increase. Information Technology continues to reimagine how we deliver services and we are moving towards a more traditional customer service focused model while maintaining a team approach to managing Help Desk tickets. We continue to explore utilizing outsourced Managed Services where this is cost effective. Details of the budget are under the section titled '2023 Proposed Budget'.

As in previous years, Information Technology does not provide website development (this is outsourced), content review of the County website (this is each department's responsibility), or social media development. Shared Services with the City of Batavia, Towns and Villages have been discussed, but as in the past, these agencies prefer to be independent and not collaborate with the County for technology-related services.

The 2023 Budget does not provide funding for emergency break / fix to the County Fiber Plant, Computer Room UPS / HVAC equipment, or damage to equipment from natural causes.

Cost Drivers Budget Implications

Many things factor into the budget development process, but five items are key cost drivers in 2023: Cybersecurity, County storage needs, multi factor authentication, responding to multiple audit recommendations, business continuity and disaster recovery planning. Each of these cost drivers have changed the way Information Technology delivers services to County Departments and changed the focus of the technical staff to be more proactive and think strategic and long-term. Information Technology cannot be effective and provide the services departments require if we are not in a proactive mode.

Lessons Adopted from Remote Access and Video Conferencing

Many lessons learned from the adjustments that the County made to lessen the impact of COVID-19 have been adopted into the County business model. These new strategies will continue to be part of how we operate for years to come.

One specific area in which an equipment adjustment was needed was related to Virtual Desktop (VDI) workstations. While this technology has proven its worth in maximizing access flexibility, the true "zero workstation" did not function well. A true "zero client" requires all processing to be completed through the network and at the server level. County employees using zero clients had negative performance experiences. County IT determined that running virtual desktops on computer workstations with local processing power fared better. County owned zero clients are reaching the end of their manufacturer's support and is no longer being offered. County IT is replacing "zero client" computers with full computers to give end users processing power. Replacing the zero clients, along with the 12-server upgrade that the County implemented via the ARPA grant, has improved VDI performance.

The County deployed equipment to support the COVID-19 response, including laptops, Mi-Fi devices, and cell phones to support a remote workforce. We are in the process of "right sizing" the equipment that is still in place.

Cybersecurity

The 2023 Budget continues to place a focus on Cybersecurity and protecting County assets from both internal and external threats. This includes mandated segmentation of the Board of Elections network and data, data classification that identifies, classifies, audits access and protects sensitive data, continued support for Electronic Discovery Laws mandated by the NYS Courts System, and a more detailed review and remediation of desktop, server and switch patch management.

The 2023 Budget Proposal includes $574,272 in Security and Compliance related expenses. This is a decrease from the 2022 Adopted Budget ($589,122) and does not include the cost of Cybersecurity Insurance that is in the County Manager's budget. Cost drivers include outsourcing network and server patch maintenance to ensure security and other updates are current, data classification software licensing, adding multifactor authentication, air-gapped / offsite data backup, and outsourcing 24x7x365 monitoring of the data network for external threats such as ransomware, denial of service attacks or other disruptive malware.

Audit Recommendations

Freed Maxick audited Information Technology processes. As expected, the audit returned findings that pointed out deficiencies in process documentation, employment controls, risk assessment and disaster recovery planning that require process changes by IT and County departments. County IT will create, test and be ready to implement recovery and incident response plans.

Projects such as two-factor authentication, data classification, patch management reporting, CBOE network segmentation, documented recovery and incident response plans, annual Cybersecurity training, and equipment and software inventory management are noted as 'Best Practices' in the audits with an expectation that Information Technology puts processes in place to address these issues. The 2023 proposed budget includes an estimated cost for each of these initiatives, but there is a good chance

that projects can be funded by the Homeland Security grant, lessening the long-term financial impact on the County. County funds must be available for the initial purchase and the granting agencies then reimburse the County based on actual costs.

NYS Board of Elections

The NYS Board of Elections technical requirements were modified in 2022 to better secure the local County Board of Elections (CBOE) network, equipment and data to governance. These were not without costs from both the Information Technology and CBOE Departments. With the expanded use of technology by the CBOE and additional NYSBOE requirements, Information Technology is spending less resources supporting and maintaining the segmented network.

NYS eDiscovery

The impact of the NYS eDiscovery laws are significant for the Sheriff's Office, District Attorney and, therefore, Information Technology. Additional staff is required to collect and process the information at all levels, and Information Technology is tasked with ensuring the collected information is secure as well as retained for the appropriate length of time. This requires additional disk storage and staff time to define the security parameters associated with the information and audit / review access to the information to ensure compliance with CJIS, HIPAA and other requirements. This process also requires the continual update of audio and video drivers for desktops at the District Attorney's and Public Defender's offices.

Like other municipalities, Genesee County is struggling to understand the long-term impact and assessing the cost of compliance with the eDiscovery laws. We are positive that the impact, not just to Information Technology, is significant and over time will add to everyone's budget, requiring more staff and technology to collect, process and retain the electronically stored information.

New or Expanded Services to Departments

Information Technology provides services to every County Department. Expanded or additional services provided in 2022 are below.

- **Board of Elections**
    - Network segmentation
    - Data classification and continuous monitoring
    - Governance policies, recovery and incident response plan documentation
    - Support for electronic poll books
- **District Attorney's Office**
    - eDiscovery / multiple audio and video drivers
    - Support for encrypted file sharing among multiple police agencies and the DA's Office
    - Video arraignments
- **Public Defender's Office**
    - eDiscovery / multiple audio and video drivers

- o Video arraignments
- **Mental Health**
  - o TenEleven Cloud Based Patient Management Application
  - o Support remote tele-psychiatry workforce. Coordinate the purchase of laptops and peripheral equipment for the tele-psychiatry staff.
- **Highway / Facilities Management / Central Services**
  - o Empire Access leased fiber to Cedar St installation
  - o Develop a document management solution for the mechanics and contract with Toshiba to design a paperless office environment
- **Sheriff's Office and Jail**
  - o Car modems
  - o Redesigned the Network infrastructure at Park Rd to provide better security and performance
  - o eDiscovery / staffing and technology changes
  - o Video arraignments
  - o Phone system integration
- **Human Resources**
  - o Contract with Toshiba to design a paperless office environment
- **Legislature / County Managers Office**
  - o Video conferencing / remote attendance of Legislature, Committee and Management meetings
- **County Wide**
  - o Data encryption for laptops
  - o Multi-factor authentication for access to County resources, BOE and financial systems
  - o Enhanced auditing to support best practices
  - o Data classification to support audit recommendations
  - o Windows patch management to support audit recommendations
  - o A true air gapped data backup

Five Year Budget Projection

The chart below is a 5-year Budget projection based on information provided by the County Manager's office for salary and benefits. Equipment and software changes, upgrades that are planned and estimated for vendor maintenance increases that affect telephony charges and hardware and software contracts, are included in the 5-year projection.

The expense spike in 2024 is directly associated with the estimated $100,000 lease payment to National Grid and Verizon for Fiber Pole Rental. This is an every 10-year expense item.

5-Year Budget P

$2,500,000	
	$2,444,475
$2,450,000	
	$2,382,331
$2,400,000	
$2,350,000	
$2,312,620	
$2,300,000	
$2,250,000	
$2,200,000	
	2022 2023 2024
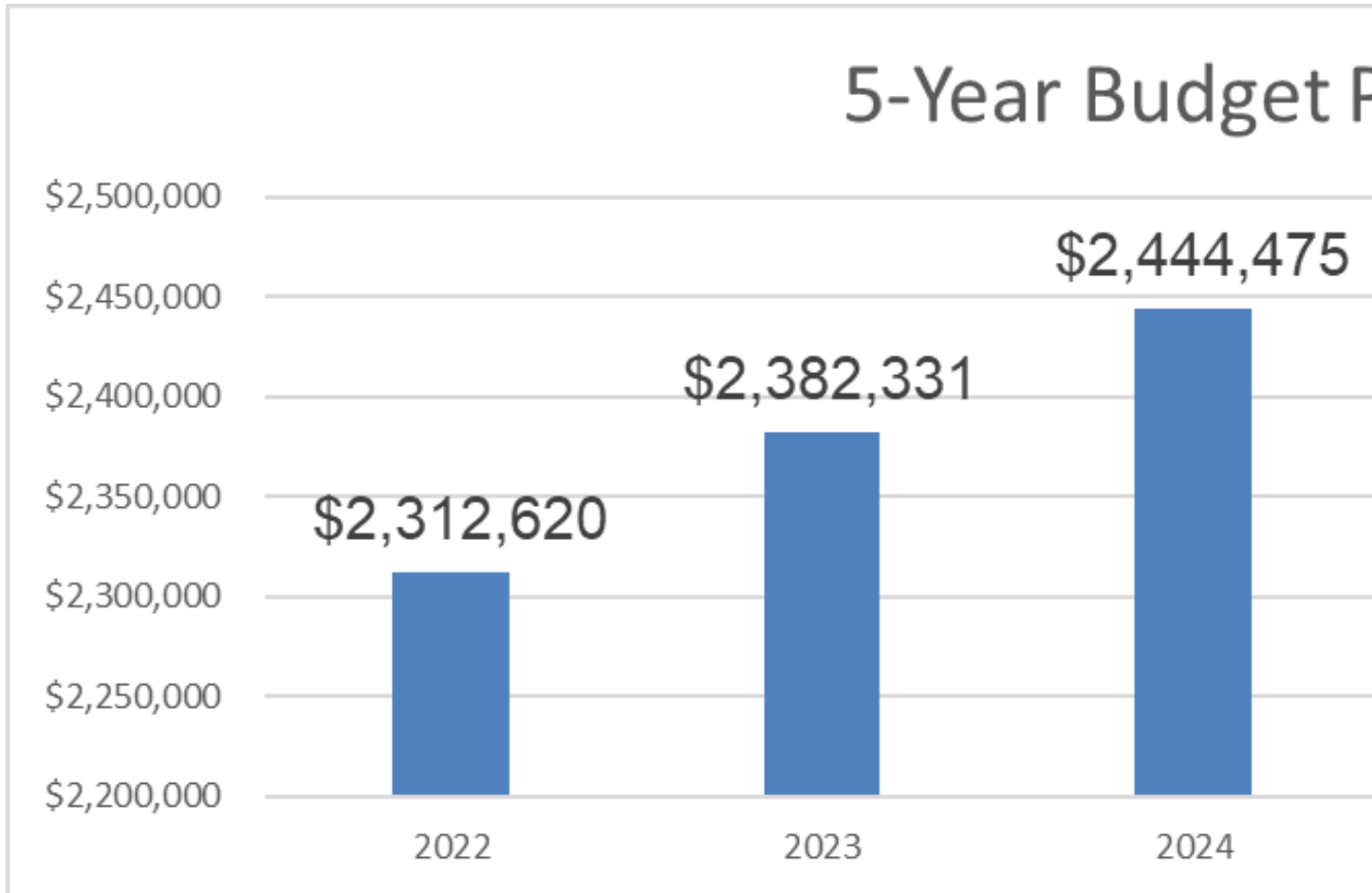
2022 Year-End Budget Projection

Overall, the 2023 IT Contractual Services should come in under budget but it is not possible to estimate an amount at this time, as there are many unfinished projects that will be completed before the end of this calendar year. The 2022 year was also impacted by unanticipated price increases.

The 2022 salary and benefits lines should come in $68,250 under budget due to three vacant positions not being filled for a full year and overtime should come in $9,000 under budget.

The estimated 2022 year-end Operating expense should also come in under budget by approximately $70,000.

2023 Proposed Budget

The 2023 Budget totals $2,406,239. This is a $73,417 / 3.9% increase from the 2022 Adopted Budget $2,332,822. The 2023 Budget increase is driven by several factors:

- **$(5,250) – Annual merit and benefits program**. **This is a -0.6% decrease.**
    - $4,538 – <u>Salary</u>. Increase due to the addition of positions, salary adjustment program for Management staff, 2.25% CSEA staff.
    - $(1,288) – <u>Benefits</u>. Decrease.
- **$75,011 – Contractual Services. This is a 5.2% increase.**
    - $51,196 – <u>Hardware Support</u>. The increase is related to Pure Storage support contract for storage and physical security equipment, switch stack redundancy.
    - $(4,776) – <u>Hardware Repair</u>. Increase based on aging equipment and security camera repairs / replacements.
    - $40,627 – <u>Software Support</u>. The increase is related to anticipated Software Maintenance increases.
    - $10,755 – <u>PBX Maintenance</u>. Increase is associated with anticipated changes to the phone system.
    - $3,190 – <u>Telephony Services</u>. Cell phones, MiFi hot spots, BOE eBooks support.
    - $14,129 – <u>Internet and Bandwidth</u>. Estimated rate Increases - added fiber to CAC, Airport, EMS
    - $(24,840) – <u>Contracted and Cloud Services</u>. Use of Managed Services; Cybersecurity initiatives; DEMS Cloud Storage, Off-site / Cloud Storage.
    - $(0) – <u>Lease / Finance Agreements</u>. Elimination of storage lease.
    - $(19,446) – <u>Training and Travel</u>. Expected staff training and associated travel.

Line item detail is under the section 'Program Budget Operating Expenses and Revenue by Account Code'.

Program Budget Operating Expenses Summary

	2022	2023	2024	2025	2026	2027
Salary / Benefits	$ 917,733	$ 920,983	$ 937,322	$ 954,068	$ 971,050	$ 988,454
Overtime	$ 17,500	$ 9,000	$ 9,000	$ 9,000	$ 9,000	$ 9,000
Contractual	$ 1,377,387	$ 1,452,348	$ 1,498,153	$ 1,433,667	$ 1,468,692	$ 1,477,189
Total Appropriation	$ 2,312,620	$ 2,382,331	$ 2,444,475	$ 2,396,735	$ 2,448,743	$ 2,474,643
County Wide Shared Services	$ 292,671	$ 320,745	$ 318,286	$ 339,504	$ 339,241	$ 360,638
Total Appropriation minus County Wide Shared	$ 2,019,949	$ 2,061,586	$ 2,126,189	$ 2,057,231	$ 2,057,231	$ 2,057,231
$ increase (decrease)	$ 300,794	$ 69,711	$ 62,144	$ (47,740)	$ 52,008	$ 25,901
% increase (decrease)	15.0%	3.0%	2.6%	-2.0%	-2.0%	-1.9%
Revenue	$ 170,225	$ 172,629	$ 175,082	$ 177,583	$ 180,135	$ 182,738
Net County Support	$ (1,849,724)	$ (1,888,957)	$ (1,951,107)	$ (1,879,647)	$ (1,877,096)	$ (1,874,493)
Asset Acquisitions	$ 415,683	$ 660,762				
FTE's	11.0	11.0	11.0	11.0	11.0	11.0
Cost per FTE	$ 85,021	$ 84,544	$ 86,029	$ 87,552	$ 87,552	$ 87,552

Salary & Benefits	Variance	
Salary	$ 4,538	New position, management salary adjustments, 2.25% CSEA Union Contract
OT and On-call	$ (8,500)	Projected overtime
Benefits	$ (1,288)	Medical and retirement benefits
	$ (5,250)	
Contractual Services		
Internet & Bandwidth	$ 14,129	Estimated rate Increases - added CAC, Airport, EMS
Training & Travel	$ (19,446)	Staff training and associated travel
Hardware Repair	$ (4,776)	Increase based on aging equipment and security camera repairs / replacements
Other	$ 4,175	Specialized supplies for departments, office supplies
PBX Maintenance	$ 10,755	Limited anticipated changes to the phone system
Lease Agreements	$ -	Storage lease
Telephony	$ 3,190	Cell phones (limited work from home support), MiFi hot spots, BOE eBooks Support; DSS adding smart phones for caseworkers
Software Support	$ 40,627	Anticipated Software Maintenance increases
Hardware Support	$ 51,196	Pure Storage $39,000 Supports the maintenance contracts for storage and physical security equipment, switch stack redundancy
Contracted & Cloud Services	$ (24,840)	Increased use of Managed Services; Cybersecurity initiatives; DEMS Cloud Storage, Off-site / Cloud Storage
	$ 75,011	

Salary & Benefits	$ (5,250)	-0.6%
Contractual Changes	$ 75,011	5.2%
increase / (decrease)	$ 69,761	2.9%
Proposed Budget	$ 2,382,331	
Asset Acquisition Request	$ 660,762	

Program Budget Operating Expenses and Revenue by Account Code

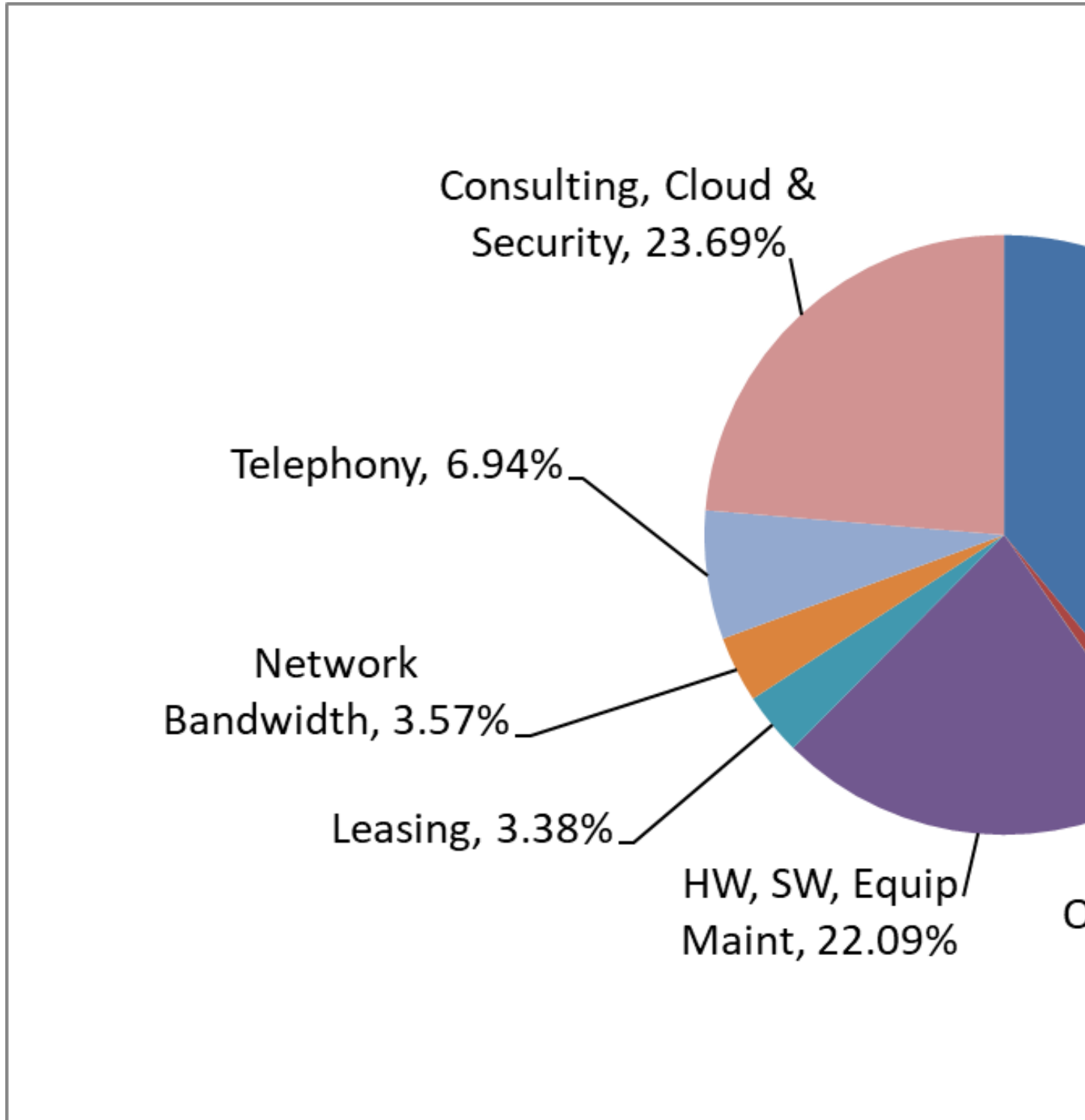| Genesee County - Information Technology							
Salary / Benefits		**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
A.1680 1010.0000	Personnel Services	$ 638,026	$ 642,564	$ 655,415	$ 668,524	$ 681,894	$ 695,532
A.1680 1020.0000	Overtime salaries	$ 17,500	$ 9,000	$ 9,000	$ 9,000	$ 9,000	$ 9,000
A.1680 1040.0200	On-Call Pay	$ -	$ -	$ -	$ -	$ -	$ -
Sub Total		**$ 655,526**	**$ 651,564**	**$ 664,415**	**$ 677,524**	**$ 690,894**	**$ 704,532**
A.1680 8010.0000	FICA / Social Security Tax	$ 37,613	$ 40,924	$ 41,129	$ 41,334	$ 41,541	$ 41,749
A.1680 8011.0000	Medicare Tax	$ 8,797	$ 8,885	$ 8,885	$ 8,974	$ 8,974	$ 9,064
A.1680 8020.0000	Retirement	$ 92,631	$ 73,366	$ 75,200	$ 77,080	$ 79,007	$ 80,982
A.1680 8030.0000	Medical	$ 135,316	$ 144,894	$ 146,343	$ 147,806	$ 149,284	$ 150,777
A.1680 8030.0001	Medical Buyback	$ 2,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500
A.1680 8040.0000	Dental	$ 2,046	$ 2,046	$ 2,046	$ 2,046	$ 2,046	$ 2,046
A.1680 8040.0001	Dental Buyback	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300
A.1680 8070.0000	Vision	$ 504	$ 504	$ 504	$ 504	$ 504	$ 504
Sub Total		**$ 279,707**	**$ 278,419**	**$ 281,906**	**$ 285,544**	**$ 289,156**	**$ 292,922**
Total Salary & Benefits		**$ 935,233**	**$ 929,983**	**$ 946,322**	**$ 963,068**	**$ 980,050**	**$ 997,454**
Contractual							
A.1680 4110.0000	General Office Supplies	$ 400	$ 400	$ 400	$ 400	$ 400	$ 400
A.1680 4110.0011	Copier Cost/Copy	$ 100	$ 5	$ 5	$ 5	$ 5	$ 5
A.1680 4130.0000	Paper	$ 75	$ 75	$ 75	$ 75	$ 75	$ 75
A.1680 4140.0000	Postage	$ 300	$ 150	$ 150	$ 150	$ 150	$ 150
A.1680 4150.0000	Printing	$ 100	$ 50	$ 50	$ 50	$ 50	$ 50
A.1680 4160.0000	Publications						
A.1680 4170.0000	Advertising	$ 650	$ 200	$ 200	$ 200	$ 200	$ 200
A.1680 4290.0035	Cellular Phones	$ 99,280	$ 101,266	$ 103,291	$ 105,357	$ 107,464	$ 109,613
A.1680 4290.0100	PBX Maintenance	$ 59,662	$ 70,417	$ 63,224	$ 77,423	$ 71,068	$ 86,225
A.1680 4290.0300	Long Distance	$ 10,143	$ 10,295	$ 10,450	$ 10,606	$ 10,765	$ 10,927
A.1680 4290.0400	NY Phone - Basic Service	$ 52,605	$ 53,657	$ 53,657	$ 55,825	$ 56,941	$ 58,080
A.1680 4290.0600	Internet, T1's & Bandwidth	$ 70,981	$ 85,110	$ 87,664	$ 90,294	$ 93,002	$ 95,793
A.1680 4440.0000	Lease Agreements	$ 80,433	$ 80,433	$ -	$ -	$ -	$ -
A.1680 4410.0000	Equipment Maintenance / Repair	$ 24,776	$ 20,000	$ 20,252	$ 20,509	$ 20,772	$ 21,039
A.1680 4410.0090	Maint - Hardware Support	$ 63,156	$ 114,352	$ 125,957	$ 129,539	$ 129,020	$ 132,782
A.1680 4410.0095	Maint - Software Support	$ 255,864	$ 296,491	$ 304,827	$ 313,688	$ 318,417	$ 325,471
A.1680 4530.0000	Personnel Physicals	$ 130	$ -	$ -	$ -	$ -	$ -
A.1680 4540.0000	Personnel Mileage	$ 3,000	$ 3,500	$ 3,500	$ 3,500	$ 3,500	$ 3,500
A.1680 4550.0000	Personnel Training	$ 30,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000
A.1680 4560.0000	Personnel Travel	$ 16,270	$ 6,325	$ 16,489	$ 6,566	$ 16,755	$ 6,858
A.1680 4590.0000	Membership Dues	$ 350	$ 350	$ 350	$ 350	$ 350	$ 350
A.1680 4600.0000	Contracted Services	$ 589,112	$ 564,272	$ 564,287	$ 574,131	$ 594,757	$ 580,671
A.1680 4600.1000	Contracted Services Fiber Pole Rental			$ 98,325			
A.1680 4700.0000	Specialized Supplies	$ 20,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000
Total Contractual		**$ 1,377,387**	**$ 1,452,348**	**$ 1,498,153**	**$ 1,433,667**	**$ 1,468,692**	**$ 1,477,189**
Budget Total		**$ 2,312,620**	**$ 2,382,331**	**$ 2,444,475**	**$ 2,396,735**	**$ 2,448,743**	**$ 2,474,643**
Revenue							
A.1680 2801	Department Phone and Network Services	$ 47,992	$ 48,952	$ 49,931	$ 50,930	$ 51,949	$ 52,988
A.1680 2801.2	Department Cell Phone	$ 36,300	$ 37,026	$ 37,766	$ 38,522	$ 39,292	$ 40,078
A.1680.2803	Other Revenue	$ 35,932	$ 36,651	$ 37,384	$ 38,132	$ 38,894	$ 39,672
A.1680 4305.2	Federal Aid - Homeland Security - Cybersed	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
Total Revenue		**$ 170,225**	**$ 172,629**	**$ 175,082**	**$ 177,583**	**$ 180,135**	**$ 182,738**

Operating Accounts - % of Total Budget

Chart indicates the percentage of each major expense in the Operating Budget.

## *County-Wide Shared Services / IT Controlled Costs Comparison*

Chart indicates the portion of the budget that Information Technology has little control over. The $292,671 for County Wide Shared Services provides the infrastructure for the Cell Phones, Office Phones, Voice and Data Bandwidth for all County departments. These costs cannot be reduced without eliminating or decreasing the service at the department level.
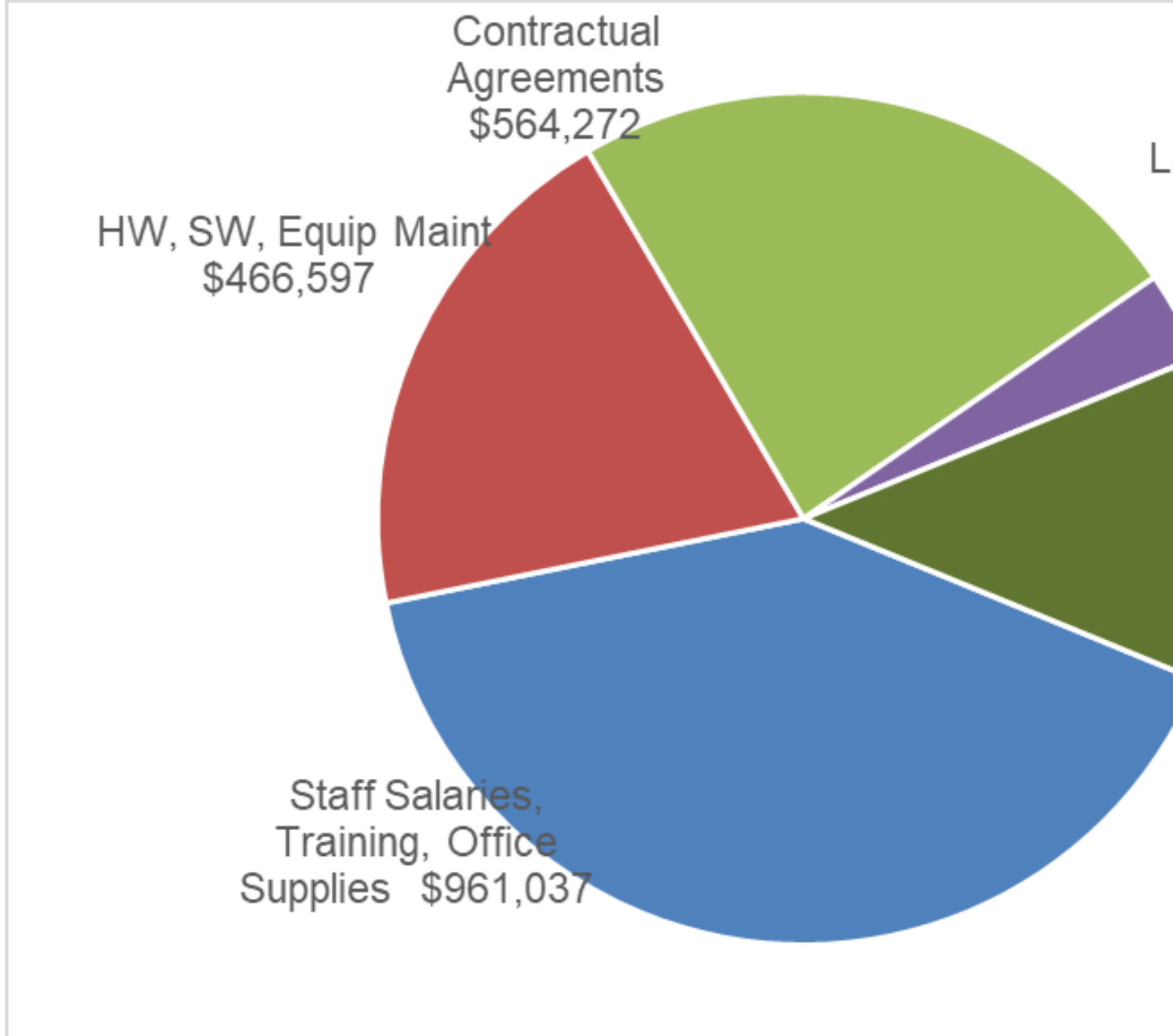
Lines of Service Program Budget Model

The Information Technology budget is developed based on Lines of Service. The cost for each line of service is a fully loaded rate that includes staff salary and benefits and any hardware, software or consulting service that is unique to that line of service.

County Wide Shared Services			Infrastructure Services				
Office Phone	Cell Phone / Air Card	Bandwidth & Internet	Email, AV, SPAM Mgt	Infrastructure, General Operations	Customer Service / Department Support	Security	GIS
$175,433	$ 152,303	$ 149,179	$74,157	$ 693,287	$ 623,853	$350,477	$ 93,928

■ Office Ph
7.59%

■ GIS
4.06%

■ Security
15.15%

■ Customer
Service
Department
Support
26.98%
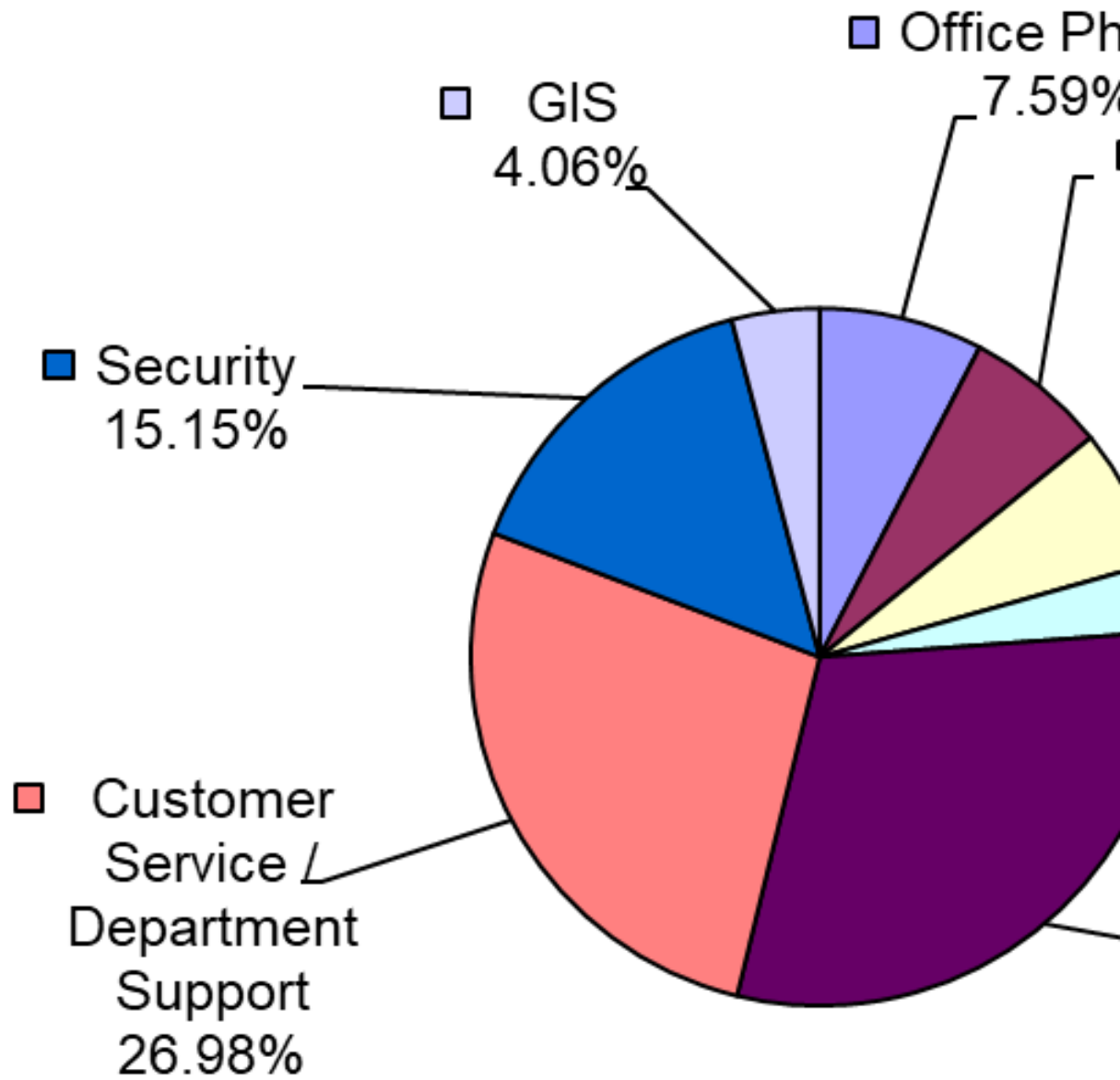
2023 Asset Acquisition Requests

Total Request for 2023 is $660,762

A.1989.2008.0006 - $381,118 Equipment Renewal & Replacement

Estimates based on department requests for equipment replacements or upgrades and baseline infrastructure improvement. This includes desktop PCs, laptops and iPADs that cannot be upgraded to run current operating system releases or anticipated staff increases in departments, server upgrades to support the increased deployment of physical security cameras and storage to support normal growth and document management.

- $135,755 – County desktops, laptops and printers
- $ 59,807 – Uninterruptible Power Supply replacement
- $ 1,250 – Scanners to support document management
- $ 11,068 – Mental Health laptops and desktops
- $ 21,921 – Public Safety eighty 27" monitors, two NICE servers
- $ 13,000 – Replacement Plotter Treasury / Real Property
- $ 49,711 – 15% Contingency for potential equipment purchases / upgrades that are not anticipated.

A.1989.2024.0120 - $73,853 Software Upgrades

- $ 3,500 – Software that provides the ability to electronically sign documents.
- $ 60,720 – Microsoft Office products for compliance, MS Exchange (email) server upgrade and MS SQL upgrades
- $ 9,633 – 15% Contingency

A.1989.2080.0020 - $55,000 Pictometry Flyovers

- $ 55,000 Pictometry Flyover. First of six to eight payments agreed to in 2023 by the County Legislature, Resolution # TBD

A.1928.2025.0010 - $279,643 Network & Security Projects

- $ 25,246 – Extreme replacement network switches
- $ 50,000 – Network and Security Improvements. Grant Funded
- $ 7,362 – SHSP - Detection and remediation of cyber vulnerabilities
- $ 18,000 – DSS Security Camera quantity 3
- $124,035 – Software Upgrades / Compliance

Information Technology Strategic Direction

The County's use of technology continues to grow. The lessons learned from COVID-19, the potential need to support remote workforce, use of video conferencing by departments, and continued emphasis on Cybersecurity reinforces the need to keep technology current and maintaining hardware and software at vendor recommended release levels.

Application vendors like Tyler / NWS, Automon, Alpine, PureStorage, Dell, EMC, Avaya / Extreme Networks, Cybernetics, also dictate the software versions that are compatible with the systems they market. For example, in 2020 we completed the migration to MS Office 2016 and Windows-10 to stay compliant with release levels and vendor requirements.

The 5-year Budget proposal includes the funding required to support Information Technology's strategic direction and maintain equipment at supported release levels.
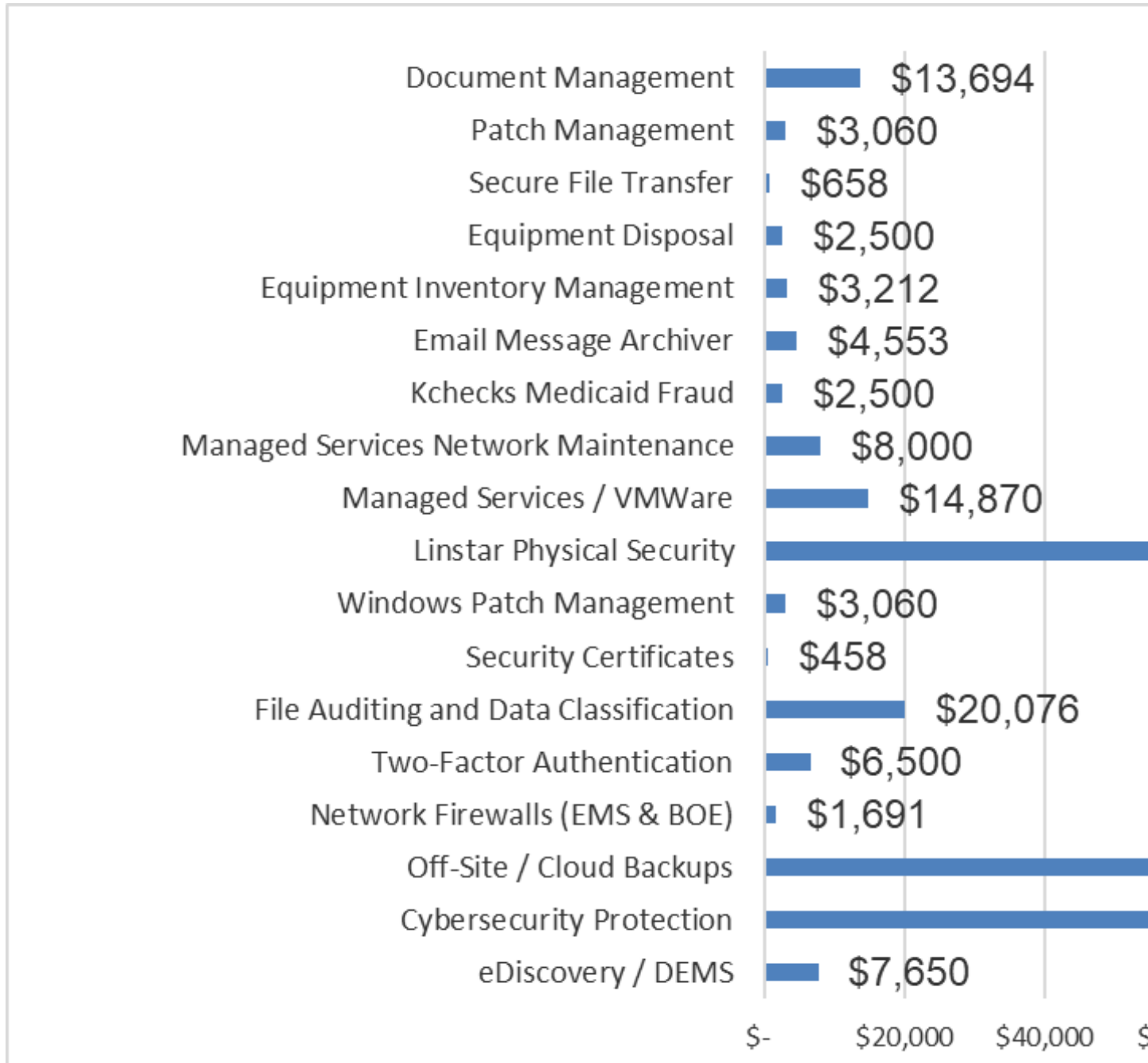
2023 Planned Initiatives

Cybersecurity

Cybersecurity and the County Wide security applications have significantly impacted the Information Technology budget and technical resources. Staff are spending time reviewing logs, firewall settings and implementing additional or new security measures to protect County assets from malware / ransomware attacks. In addition, the County's technical team is responsible for maintaining approximately 125 surveillance cameras throughout the County and supporting the Ocularis software that provides viewing capability to the cameras. The technical team also supports the servers that collect / store the video from the cameras and the electronic swipe card system that is now installed Countywide.

To further enhance the County's security posture, IT implemented two-factor authentication in early 2022 and continues to roll this out to all County staff and outside organizations who need to access County computer resources. Two-factor authentication is designed to protect County devices from being taken over by an internal or external threat. Anyone looking to log onto County owned devices are required to authenticate through a phone application to approve access, receive a text, or carry a number-generating fob for authenticating access. This additional authentication will be required before granting anyone access to the County network through a County device, home computer and even remote access.

Information Technology also implemented an immutable cloud-based data backup solution. The Rochester created company Datto provides a solution that protects County data from ransomware and provides us the ability to spin up servers in "the cloud" as part of disaster recovery planning. The IT department will implement scheduled data verification of backups and server recovery drills.

Cybersecurity and physical security initiatives are estimated at $440,424 annually.

Document Management	$13,694
Patch Management	$3,060
Secure File Transfer	$658
Equipment Disposal	$2,500
Equipment Inventory Management	$3,212
Email Message Archiver	$4,553
Kchecks Medicaid Fraud	$2,500
Managed Services Network Maintenance	$8,000
Managed Services / VMWare	$14,870
Linstar Physical Security	
Windows Patch Management	$3,060
Security Certificates	$458
File Auditing and Data Classification	$20,076
Two-Factor Authentication	$6,500
Network Firewalls (EMS & BOE)	$1,691
Off-Site / Cloud Backups	
Cybersecurity Protection	
eDiscovery / DEMS	$7,650

$- $20,000 $40,000 $

Board of Elections Security & Network Isolation

The NYS Board of Elections released a 'Best Practices' document in 2019 that outlined several security measures that are strongly recommended for local BOEs to have in place. In 2021, the NYS Board of Elections released a more detailed document of security measures that are required from both IT and the CBOE departments. Combined, these documents require Information Technology to design a solution that isolates the local BOE data and network traffic from the County. The Genesee County design pro-

poses that no physical or logical resources are shared between the County and the local BOE. Application servers, Active Directory and file sharing servers, the firewall, internet connection and physical cabling will be independent from the County.

The required Electronic Poll Books is another NYS Board of Elections mandated requirement starting in 2020. This project replaced the use of paper poll books at all 23 voting locations with iPads that must be connected to the NYS application. The cost to implement this solution was estimated at $76,230 for iPads and $13,007 for Poll Book printers.
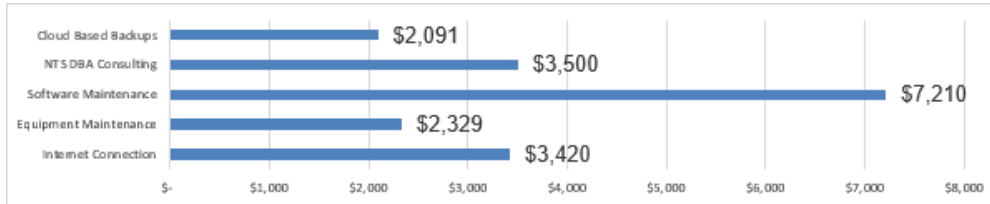
Document Management Project
Replacing paper with electronic documents is a key initiative for the County. This is a long-term project that started in late 2016 and will continue through 2026. The process of eliminating the dependence on paper in departments is difficult given the decentralized nature of the County, reluctance to change business processes, and staff availability. The Department of Social Services, Highway and Facilities Management, and Human Resources are actively pursuing the use of Document Management within their departments.

Infrastructure and Cybersecurity Initiatives
- New County jail build and relocation
- Continue rollout of Electronic Document Management to County Departments
- Support the e-Discovery compliance requirements for the County
- Continue initiatives to provide County IT services to DSS:
    - Provide all DSS staff with access to the County Intranet
    - Work with the DSS IT team, supporting desktop upgrades
    - Pilot a cloud-based eFax solution that will work on the NYS network
    - Support the DSS IT team as the NYeNet connections at 5130 East Main and County Bldg.-II are upgraded
- Continue the rollout of Virtual Desktops as needed for departmental program access
- Continue the replacement of outdated modems in all Sheriff Patrol cars
- Restrict what mobile devices (laptops / iPads / phones) can access and what applications can run on them
- Ensure remote connections are restricted and function just like a County desktop
- Rollout device encryption on mobile devices
- Develop and implement a plan for backing up physical desktops
- Continue supporting the County Physical Security Project
    - Coordinate the Phase 3 Security and Video Surveillance initiatives with the County Manager's Office, Facilities and Linstar
    - Research the security and reporting features provided by the application and rollout features that provide value for the County
    - Provide monthly access reports for review to meet NYSBOE audit requirements
- Review the fiber connections between Park Rd and Bldg.-II and ensure all 6 strands are connected and usable
- Add two-factor authentication for all users accessing BOE and financial data
- Create physical access reports for Department Head reviews
- County computer required program compliance verification and strategy for continued maintenance
- County computer office program standardization
- Conduct a technical disaster recovery drill and moving all services from Park Rd to the Bldg.-II Data Center
- Add reporting structure for DSS technicians

Application Initiatives

- Remain current with all applications based on new software releases from the vendors (New World Systems, NetMotion, Caseload Explorer, and ESRI GIS).
- Provide a method for auditing application release levels
- Upgrade in-house department MS Access databases to current release levels
- Replace the aging ESRI v9 ORPS applications with new ESRI v10 Government Model plug-ins
- Continue working with County Departments to install the DocuWare Electronic Document application to streamline document workflow, improve internal processes and reduce the dependency on paper
- Support the DA's Office, Sheriff's Office, Batavia PD, and LeRoy PD working through the e-Discovery laws requirements and video arraignments
- Separate CAD related programs for e911 Dispatch and create an isolated CAD PC.

Administration / Compliance / Customer Service Initiatives

- Create a technical disaster recovery guide that documents the 'fail-over' procedures for critical applications and execute a fail-over test
- Update the County Employee Handbook for Information Security (Annual Process)
- Review the County Internet and Intranet sites for potential improvements and updates
- True-up all software licenses – annual process
- Update all network documentation to conform to CJIS standards

2024 Planned Initiatives

- Develop a strategy for replacing MS SharePoint with a licensed, supported product
- Continue rollout of Electronic Document Management to County Departments
- Review the Extreme switch network and determine the timeline for replacements
- Review the options and costs for outsourcing the Tyler Financial and HR applications
- Develop the cost comparison and technical considerations for moving the County to Office365 for email and office products. Upgrade the MS-Exchange server if Office365 is cost prohibitive
- Replacement of video wall in 911 Call Center.
- Computer Aided Dispatch workstation redesign
  - Investigate CAD to CAD solution
- Update and document all County IT policies and procedures
  - Review, update and document security policies
  - Establish employee / end user testing and training
  - Document Disaster Recovery Plan
- Develop an annual IT Risk Assessment
  - Employee access review schedule
- Add a systems testing schedule for County backup.

- Review previous penetration test and address any potential issues found
    - Schedule next test
- Work with Strategic Planning Consultant to improve County IT's path forward

2025 Planned Initiatives

- Research the upgrade or sale of County fiber with a lease back option. Fiber Plant is 20-plus years old.
- Sheriff's Office – Replace of 911 system

2026 Planned Initiatives

- If the County is not a Microsoft Office365 shop, schedule an upgrade to all MS-Office software
- 2024 – 2026 – Cedar Street Tower replacement

2022 Accomplishments

Infrastructure
- Continued to refine the Sophos Central product to reduce risk to County assets from both internal and external threats.
- Adopted strategies from the COVID-19 work-from-home plan and recalled equipment no longer needed.
- Old Court House Audio Visual Improvements
    - Legislative Chambers
    - Legislative Conference Room
- Fiber to CAC
- Verizon Cell booster Building 2
- Replaced 12 servers, which upgraded the County VMware infrastructure that supports all applications and virtual desktops
- Implementation of Datto offsite immutable backup
- Updated Sheriff document server to new equipment and operating system
- County network remediation
- Updated Linstar camera server and storage
- Completed the switch-stack redundancy for Park Rd and Bldg.-II

Applications
- Reduced to weekly computer server reboot notices from every Thursday to "if needed" through reorganizing the server reboot structure
- New World Systems Finance and Human Resources application annual up-grades. Provided new functionality and compliance.
- Completed the Tyler / New World Systems Public Safety upgrade – October 2021 – Scheduled November 2022.
- Genesee Justice Databases
    - New Victims database - go-live of October 2022
    - Offender database

- DocuWare / Document Management
  - District Attorney
  - New initiatives – Sheriff's Office
- New World ERP – apply, test, implement release updates
- Move County off of "Silent Fax" – December 2022

Administration / Compliance / Customer Service
- Reorganization of Information Technology Department
  - Implementation of ITIL Help Desk Best Practices
  - Project Management Principles
  - Addition of DSS – Still a work in progress
- Formalized / Scheduled Cyber Security Training
  - Scheduled email phishing tests for County employees
  - Annual training (October)
- True-up all software licenses – annual process
- DHSES Cybersecurity funds to implement for DUO two-factor authentication software Countywide
- Implementation of a Termination Checklist for County HR

Information Technology Organization Structure and Charter

Organization Chart & Department Charter
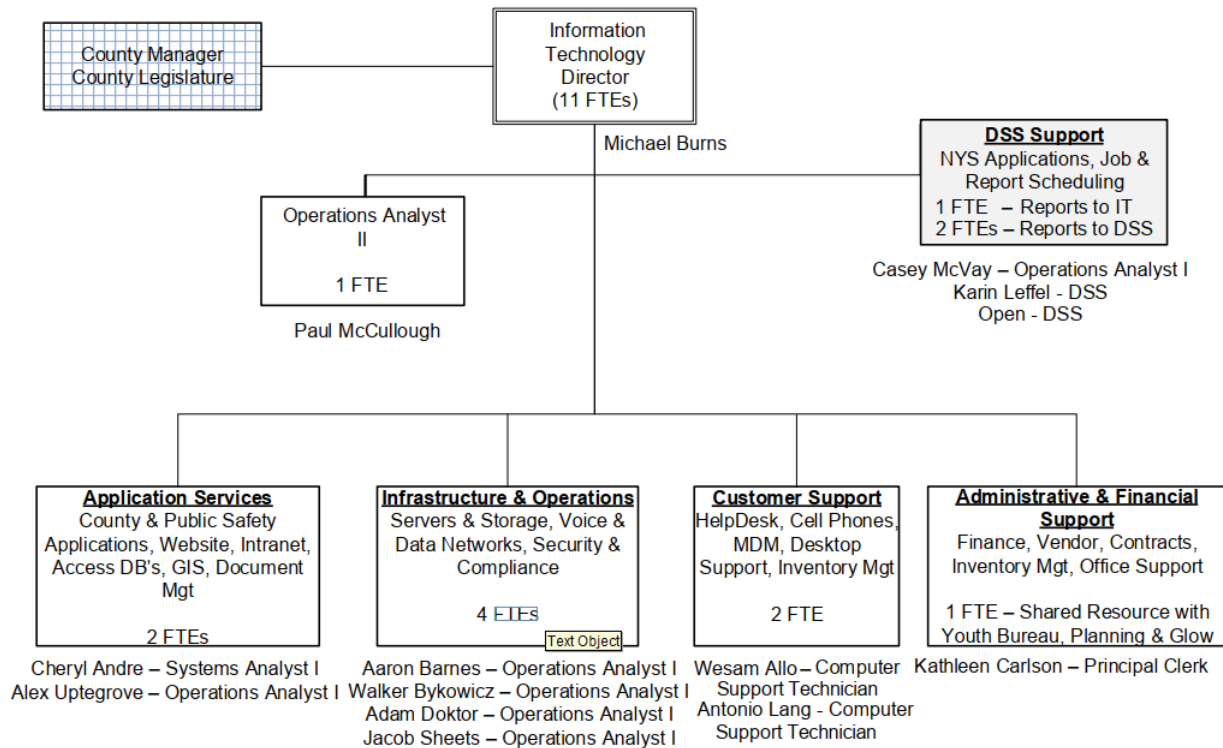
Genesee County's Information Technology Department is responsible for developing and executing strategies that align with and support the Genesee County mission, and providing an integrated and collaborative information technology environment for County residents, business owners, visitors, and County government departments.

Information Technology supports central and distributed systems and the team is responsible for Applications Development, Systems Analysis, Data Base Administration, Server and Network Administration, Business Continuity Planning, Email, Anti-Virus, Firewall and Spam Management, Web Design and Content Management, Help Desk, Security, Cell Phones, Voice, Data, Wireless and WI-MAX Networks. These include providing project management, customer support and training, vendor coordination, contract management, product installation and break / fix support for county computers, servers, network components, phones and business applications.

Genesee County Information Technology is committed to:
- Delivering secure, accurate and timely information and services to County departments, offices, municipalities, residents, visitors and businesses at work, at home and in the community.
- Reducing costs by providing quality solutions that streamline operations and enable County employees to conduct business effectively and efficiently.
- Providing technical guidance, training, expertise and support in the stewardship of the County's information technology environment.
- Developing and executing long- and short-term strategic plans that support the Genesee County mission.

Services Provided by Information Technology

Information Technology supports 23 physical locations and 49 organizations with 11 technical staff members. Two Tier 1 Computer Support Technicians, five Tier 2 Operations Analyst I, one Operations Analyst II, and one Systems Analyst 1 now handle Help Desk tickets collectively. One Principal Clerk that IT shares with the Youth Bureau, Planning and Glow is responsible for all administrative support and managing all County cell phones and one Director.

Listed below is a summary of the services and equipment provided to County departments to serve and protect the residents of Genesee County.

Government, Shared Applications and Department Specific Applications
- TYLER / New World Systems Finance and Human Resources.
- ESRI GIS applications for Real Property, Public Health, Planning and public access to tax maps and parcel information
- Pictometry Aerial Flyovers
- Real Property (ORPS) hosting
- DocuWare Document Management
- DSS NYS provided OTDA, OCFS applications
- Biels Document Scanning and Microfiche Management

- Dominion Elections Management and Reporting and NTS Ballot Management and Voter Registration
- Quic-Docs, Accumed Mental Health Patient Management
- PDCMS Public Defender application
- PnP Nursing Home Historical Data – required to keep until TBD date
- IT services chargeback
- Building Security and Video Surveillance Systems
- PC based eFax
- On-Prem Secure File Sharing Application
- ASP / SaaS (Application Service Provider, Software as a Service) relationships or Cloud Based Applications.
    - Hamer EZACCESS Property Tax Management
    - Pictometry Online GIS Services
    - Medicaid Fraud Monitoring (Kchecks)
    - REVIZE – County Internet and Intranet sites and ReadyGenesee website CMS
    - DocuWare Cloud Services
    - Discover eGOV HR Personnel Civil Service Maintenance
    - Public Health HCMS
    - Dude Solutions Work Order and Facilities Inventory
    - TenEleven and Telepsychiatry Mental Health Patient
    - e-Discovery Public Defender application DEMS
    - BOE specific Cloud-based data backups
    - ZOOM Video Conferencing

Public Safety includes access to County provided systems by Batavia PD, LeRoy PD, Corfu PD, NY State Police, Mercy Flight, Batavia FD and all volunteer FDs
- TYLER / New World Systems Public Safety, e911Dispatch Center
- License Plate Reader Application
- NetMotion Patrol Car connectivity
- Public Safety Decision Support
- Public Safety TRACs / Civil Management
- Body cameras
- ESRI GIS applications for EMS, Sheriff's Office, e911 Center and Probation
- RedNMX Fire Safety Records Management
- Automon Caseload Explorer / Probation Management
- Evidence tracking
- Jail / Sheriff's Office Tyler Records Mgmt. interface
- ASP / SaaS (Application Service Provider, Software as a Service) relationships
    - CJIS / NCIC
    - E-Justice Gateway
    - NYeNet
    - AirVantage Management Service (AVMS)

Voice and Data Networks
- 679 office phones and 31 POTS lines
- 226 cellular devices (phones, air cards / car modems, iPads)
- 124 video surveillance cameras
- 47 web cameras
- 1,139 PCs, laptops or iPads
- 273 network and standalone printers, scanners and MDFs
- 2,000 plus voice and data network connections
- Remote connectivity for County staff, Legislators, town and village staff, assessors, fire departments, vendors, police agencies, Mercy Flight
- 7 miles of County owned fiber that supports the voice and data networks connecting County Bldg-I, County Bldg-II, Office for the Aging, 14 West Main, and Park Road
- Leased fiber from County Bldg-II to DSS/MH, County Bldg-II to Cedar Street Tower and Highway Garage, County Bldg-II to Job Development – all through Empire Access
- 24 Micro-Wave Radio connections to DSS/MH, EMS, Park Road, Highway, LeRoy Police Dept, Job Development, 14 West Main St, and Town of Batavia Highway Fuel Pump Station
- 2 remote offices for the Children's Advocacy Center in Orleans and Wyoming Counties
- 2 remote offices for the Sheriff at Darien and Corfu
- 1 HughesNet Satellite connection for the County Parks location

Technical Services / Infrastructure
- Application, network, storage and server deployment.
- Systems, storage and network monitoring.
- Antivirus, malware and SPAM management.
- Email, calendaring, document management.
- Environmental monitoring.
- Internet services, web content filtering.
- BYOD (Bring Your Own Device) support.
- Wireless infrastructure for all County buildings.
- Video surveillance and building security systems.
- Device encryption.
- Web content filtering and web browser site restrictions
- ASP / SaaS (Application Service Provider, Software as a Service) relationships or Cloud Based Applications.
    - Systems performance and availability monitoring
    - Website deadlink check and ADA compliance
    - County and EMS website
    - Audio and video conferencing through ZOOM
    - Security monitoring and mobile device management
    - Security operations center / threat management

Business Continuity and Compliance
- High availability and site failover Disaster Recovery
- Redundant Internet connectivity (County Bldg.-II and Park Rd), Empire Access backup Internet connection
- Data backup and recovery services
- Laptop tracking services
- Email archiving
- Email encryption for HIPAA, PCI, PPSI and PHI data
- Software license purchasing and monitoring
- User-ID and file access auditing for compliance
- Medicaid fraud monitoring application management
- Two-factor authentication

Customer Service
- IT billing
- Equipment inventory and surplus equipment disposal
- Information Security Policy and Procedures Manual
- Customer service Help Desk. Customer training
- Coordinate County office and cell phones / plans
- Video conferencing using ZOOM

Administrative Support
- Provide general clerical and financial support, including payroll and accounts payable for IT, Planning, GLOW and Youth Bureau.
- Manage software and hardware contracts and maintenance renewals.
- Support the annual budget process and run-rate tracking of expenses.
- Coordinate training for IT staff.
- Provide County Attorney's Office with asset inventory reports for insurance reporting.
- Order and track technology equipment for all County departments.

Value of Information Technology

Information Technology provides the basic services each County department requires to conduct business internally and with the public. Phones, computers, voice and data networks, business, finance, GIS and public safety applications, internet connectivity, email, document management, compliance, asset protection and business continuity services are centrally managed and budgeted by the Information Technology Department.

To ensure these services are available and reliable, software and hardware maintenance are kept current on all critical equipment and networks, accounting for 20.4% of the annual budget. Without current maintenance contracts, the County infrastructure is vulnerable to a security breach, loss of data, availability of services, application instability, non-compliance with state or federal tax / payroll rules or the ability to recover from an equipment or computer center failure. Considering the potential impact on Public

Safety if the services supporting the e911 Center, Emergency Management Services, Mental Health, Public Health or the central switchboard were disrupted, not maintaining the equipment or providing a high-availability architecture for the voice and data networks could be considered negligent.

In 2022, Information Technology became fully staffed. Through our restructuring, we are now able to provide to the County a help desk that is always available throughout the business day to those who we support. We are implementing ITIL and project management best practices to help with our production and project completion rate. Two Tier 1 Computer Support Technicians, five Tier 2 Operations Analyst I, one Operations Analyst II, and one Systems Analyst 1 now handle Help Desk tickets collectively. One Principal Clerk that IT shares with the Youth Bureau, Planning and Glow is responsible for all administrative support and managing all County cell phones; a Director. The County team is augmented with subject-matter-experts such as Network Engineers, Security Administrators and Telephony Specialists and, where appropriate, use Managed Services to support the County infrastructure. Given the tech to client ratio and the diverse support responsibilities, we rely heavily on support from outside contract agencies to provide high-end technical and application assistance. The expertise provided by consultants supports the high-availability infrastructure for applications, a stable voice and data network, and protects the information assets of the County.