TIOGA COUNTY, NEW YORK
Information Technology and Communication Services
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ITCS Annual Report – 2023

In 2023, the County's Information Technology and Communications Services Department completed several projects as it continued to assist the County through a significant period of transition. Key milestones achieved this past year include:

- In 2022, the Storage Area Network (SAN) appliances were upgraded to NetApp appliances providing improved security and increased performance. In 2023, phase 2 of this project was completed, by upgrading all server host hardware to current and supported hardware. This project also included the replacement the of end-of-life Brocade FibreChannel switches used to communicate between the SAN and the Server hosts. These switches were replaced with new 10Gbps Top of Rack switches. All data stores were converted, and all server virtual machines were migrated to the new server hosts.

- In another multi-year project, which was started in 2022 which included the installation of new security cameras at 56 Main Street, in 2023 building access control was implemented at 56 Main Street. Using the same vendor as the security cameras, Verkada, four external, and two internal doors were outfitted with electric door strikes and card readers. All external doors are scheduled to lock and unlock according to the building access policies. Staff members were provided with new fobs, which allow them to access the doors during periods when they are locked.

- As the geospatial Subject Matter Expert (SME) in the Land Records team, the ITCS Geographic Information systems (GIS) Team assisted with the processing of 1,901 land transactions within the County. Their efforts continue to improve accurate land record inventories across our Towns and Villages.

- The ITCS Department coordinated with the Social Services Department and New York State ITS to migrate all (80+) NYS computers and users to the County network. This migrated the support responsibilities from NYS to the County ITCS Department. In preparation for this migration all NYS applications were tested on the County network and best practices were identified and documented.

- In 2023, the ITCS Department celebrated the retirement of Bill Ostrander, GIS Manager. His retirement was well deserved, and we wish Bill the best in his retirement! With Bill's retirement, the Department also welcomed Bryan Goodrich as Bill's successor as GIS Manager. During 2022, Bill and Bryan participated in a detailed succession plan, which allowed Bryan to hit the ground running. Nicholas Jilson was also welcomed to the GIS team as a GIS Technician.

- Tioga county has signed with the NYSTATE JSOC to implement CrowdStrike on its infrastructure. CrowdStrike is a cloud-based endpoint security, threat intelligence, and cyber-attack response service. Tioga county runs this in conjunction to its already implemented Endpoint security Sophos. Both systems work independently to protect all Computers and Servers. Implementing CrowdStrike's Falcon in anticipated to be complete in the year 2024. Falcon Complete is a 24/7 monitoring and prevention service.

- The Tioga County ITCS requirements for MFA have been implemented on public health's Electronic Medical Records (EMR) system AccuMed. Accumed uses a form of two-factor authentication (2FA) that has each user not only fill out their password, but they must implement a one-time password for each login. HIPAA Compliance doesn't require multi-factor authentication (MFA), but the implantation of MFA is the first step towards creating a zero-trust network and aligning with Nation Institute for Technology Standards (NIST). Having MFA implemented not only puts the County ahead of the game once HIPAA requires MFA, but it also fulfills the Cyber security requirements for all Cyber security insurance.

- The ITCS GIS Team managed the Federal Communications Commission (FCC)-Broadband Data Collection Challenges for the County. Their analysis identified 654 additional locations in the County that are not broadband accessible. This information will be used to seek funding and make future broadband infrastructure planning more effective.

- The Tioga County Dental Van requires a server to live on the Van year-round to complete X-Rays and run their dental software. This server is exposed to all weather conditions year-round as well as multiple power outages. The server itself was originally set up to backup itself. In the event of hardware failure, the server backups would not be recoverable. ITCS has implemented a traditional backup solution to the Server that uses Synology Active backup for business to back up the server to prevent total failure. In 2024 Public health is working towards removing the server all together to remove this risk.

- The ITCS Department spent 2023 investigating and identifying applicable security compliance standards which would assist and guide the County to improving their Information Security stance. It was determined that aligning with the National Institute of Standards and Techology (NIST) would be the standard for Tioga County. All applicable security control families, security control numbers, and assessment procedures were identified and documented.

- Another Information Security project included the implementation of User Verification Pins. In the event where a user needs assistance with their account (unlock or password reset) the user is required to provide the PIN they previously submitted. This verifies their identity. If they're not able to provide their PIN, they are required to come in person to the ITCS Office.

- In 2023 Tioga County ITCS worked with an external vendor, FRSecure, Inc. to complete annual, independent internal and external penetration testing. Both tests were completed with executive summary and detailed reports being provided to the County. Findings of these tests have driven the implementation of several security controls immediately following receiving those reports. The results of these test will continue to be used to drive positive change in the Information Security stance at Tioga County.

- A training campaign targeted at increasing the risks of using removable media, such as USB flash drives was completed. After the training was provided, a practical exercise was completed, where several USB drives were placed throughout the County. If users connected them to their computers, ITCS was notified. Most of the USB drives were returned to the ITCS Department without ever being connected to a computer.

- A major finding in the CIO Entry Plan was the status of the Disaster Recovery capabilities within the County. A backup solution that was in place was retired, with a new on-site Synology NAS appliance put in place to replace that system. An additional Synology NAS appliance was also put in place at an offsite location. Data is replicated to this appliance at a set interval and is then isolated from the County network. This provides the ability to recover County operations quickly in the event of a security breach.

- As new technology and software has been implemented, it is critical to provide supporting professional development opportunities to the staff using that technology. Several courses, both in-person and virtually, were provided to the users of Tioga County and the Shared Services Agencies. These courses targeted the new software and tools provided in the Office 365 platform.

- Two municipalities were added to the ITCS Shared Services program. The Town of Nichols added three locations which include computers, phones, printers, and cameras. The Town of Candor added two locations, which include computers, phones and printers. The Village of Owego Emergency Management Services Department was also added to the ITCS Shared Services program, which included computers, phones and printers.

- As a part of the County's Remote Work Pilot Program, the ITCS Department researched and provided recommended best practices to the County Legislature. These best practices were adopted throughout the County.

- A new Remote Management and Monitoring (RMM) capability was implemented in 2023. NinjaOne RMM was implemented throughout the County network. This RMM provides a robust toolset for the ITCS staff to provide improved support and management of all County devices and users. This also replaced the service previously used by our users to access their desktop computers remotely. NinjaOne requires Multi-Factor Authentication (MFA) which improves the security stance for the County.

- The ITCS Department worked with the Public Safety Department to improve the performance and security of their investigations and evidence data storage. This data is now isolated with disaster recovery capabilities implemented.

- Also, in working with the Sheriff's Department, all Road Patrol vehicle technology was migrated to Microsoft Azure. Among other reasons for this migration, this provided the ability for improved and simplified data sharing capabilities utilizing Microsoft OneDrive. The ITCS Department also assisted in the retrofitting of improved technology hardware for the patrol vehicles consisting of new tablet computers and Cradlepoint broadband network devices.

- The ITCS Department designed and implemented an evidence management system for the District Attorney's office. This new system allows for a secure and managed capability of sharing evidence between the various authorized stakeholders of the cases the District Attorney's office is working on.

- Windows Server 2012 reached End-of-Life with Microsoft in 2023. The County had several servers running Windows Server 2012. All Windows Server 2012 servers were migrated to Windows Server 2019 servers, requiring significant coordination with Shared Service agencies and their various vendors.

- Significant maintenance was performed on the Uninterruptible Power Supply (UPS) system at 56 Main Street by the County's contracted maintenance agency, Vertiv, Inc. Also, the County had two separate agreements with Vertiv, Inc. to provide support to the UPS systems at 56 Main Street and at Public Safety. We coordinated with Vertiv, Inc. to merge and align those agreements and service renewals to align with the fiscal calendar of the County.

- The ITCS GIS Team's contributions to municipal shared services has matured. In 2023, we created and released our first series of project management web applications that have modernized local government's ability to harness their geospatial data and manage large projects.

- The ITCS GIS Team provided various personalized training and group presentation sessions to further the understanding of GIS and to reinforce the importance of data stewardship among County Departments.

- The ITCS Department worked with the Public Safety and Emergency Management Departments along with the NYS ITS Department to troubleshoot the implementation of the County Computer Aided Dispatch (CAD) system, Motorola FLEX, in the Owego New York State Police vehicles. This required significant time and troubleshooting. It was resolved by NYS ITS Department reconfiguring firewall policies.

- Several additional building access control projects were completed in 2023. The largest of those projects included the Health and Human Services (HHS) building. The existing access control system was replaced with the new Verkada access control system, aligning with the County's vision of having a single management interface for all County buildings. This system included 24 internal and external doors. Also, as a part of this project, all existing security cameras were replaced with Verkada cameras. Additional internal and external cameras were installed to provide improved coverage inside and outside of the building. A new Pan-Tilt-Zoom (PTZ) camera was installed providing robust and improved features to HHS security and safety staff. The same access control system was also installed at the Village of Owego Police Department and Tioga County Court Annex.

- Several Security camera projects were completed in 2023. Cameras were replaced at the Tioga County Court Annex. Cameras were installed inside and outside of the Public Works complex, including the new Truck Wash facility. Cameras were installed at all Village of Waverly Water Well sites. Additional cameras were installed at East Waverly and Waverly Glen parks.

- The ITCS Department coordinated with our Mitel System Support Provider, All-Mode Communications, Inc. to complete a software update on the phone system. This hadn't been completed for several years and were several versions behind. A plan to complete this software update annually was established and communicated with the provider.

- The ITCS Department facilitated the relocation of all IT equipment from the Waverly Mental Health facility to its temporary location in the Tioga County Health and Human Services Department. The Department continues to work with the Project Management Team to facilitate the design and identify IT requirements for a proposed permanent location in Waverly.

- Network services for the Child Advocacy Center was completely redesigned and rebuilt. While improving the stability of network services to the location, this network redesign also provided additional functionality such as isolated guest Wi-Fi services.

- The ITCS Department was able to negotiate an internet bandwidth increase from 500 Mbps to 1Gbps at no additional cost to the County.

- A new lease with Empire Access was negotiated and adopted reflecting updated pricing for server rack space at 56 Main Street, utilized by Empire Access. The lease cost is reduced in the County's monthly Business Internet fees.

- The Tioga County ITCS Department spearheaded the upgrade of MUNIS, the County's Enterprise Resource Planning (ERP) system. It had been several years since a significant version upgrade had been completed. This required significant coordination and diligence by the County's MUNIS Administrator. The update was completed successfully with minimal downtime.

- The ITCS GIS Team provided technical guidance on 30+ Departmental projects throughout Tioga County. Their guidance reinforces their committed working relationship with all Tioga County Departments as they seek to reduce subcontractor costs, ensure deadlines are upheld, and enrich Community deliverables with augmented data.

Looking Ahead:

- The Information Technology and Communication Services Department will continue to spearhead the development and implementation of Information Technology Professional Development Strategies throughout the County and Shared Services entities.

- In an effort to increase communication and efficiency, the ITCS Department investigated and defined a new ticket management system (TMS) built within the NinjaOne RMM system. Design and roll-out of the new TMS will be completed in 2024. With the implementation of the new TMS, all staff will be required to submit tickets via a web portal rather than send an email or calling the helpdesk directly. ITCS Staff will be available to accept calls in an emergency basis.

- The ITCS Department has worked with the County Legislature and Budget Officer to budget funds to replace aged network equipment. Core network switches will be replaced with new, supported, Cisco 9500 10G switches. This project will provide the ability to establish a 10G backbone throughout the County, which is currently limited to 1G. Also built-in to the project is a network topology redesign which will improve redundancy and increase the disaster recovery capabilities within the County.

- Also budgeted for 2024 is the replacement of the existing Wireless network infrastructure throughout the County and several Shared Service agencies. The current system uses end-of-life Cisco wireless access points. The new system will utilize current cloud-based wireless access points through UniFi networks.

- In 2024, the ITCS Department will develop a plan to implement the NIST compliance standards identified and documented in 2023. This will be a multi-year project due to the significant policy and process updates and funding required to implement some of the necessary controls. The controls will be categorized based on impact and criticality of risk. The most critical controls will be implemented first.

- The ITCS Department will work with the Departments in Tioga County to implement OneDrive with the users of the Department. All locally stored personal data located on the U:\ drive will be migrated to the user's OneDrive. KFM (Known Folder Move) will also be implemented, which will synchronize the user's Desktop, Documents, and Pictures folders automatically to OneDrive.

- The ITCS Department will be implementing a Change Management program in 2024. All IT related changes will be submitted ahead of time, reviewed, tested if possible, and vetted by the ITCS Tier 3 committee before being implemented. As a part of the Request for Change (RFC) application, contingency plans will be identified in the event the anticipated outcome of the change is not achieved.

- The ITCS Department has investigated and designed a proposed Managed Print Services (MPS) agreement to simplify the management and support of all Tioga County and Shared Service printing devices. This MPS agreement is anticipated to facilitate a more efficient management platform but also reduce the County and Shared Service agencies funding requirements associated with printing services. Anticipated implementation within 2024.