



SHEBOYGAN COUNTY

Christopher S. Lewinski
Information Technology Director

February 1, 2018

Honorable Members of the Sheboygan County Board and
Adam Payne, County Administrator

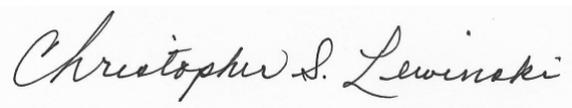
I am pleased to submit the 2017 Annual Report for the Sheboygan County Information Technology (IT) Department.

In 2017, the IT Department completed a number of projects and initiatives that enhance information security and improve workflow efficiency of key enterprise systems. At the same time, Sheboygan County IT supported nearly all County departments by providing technical expertise and project management oversight for dozens of system upgrades and implementations. Lastly, and perhaps most importantly, Information Technology continued to provide a 24-by-7 Service Desk, ensuring critical County operations and systems function around the clock.

Noteworthy projects in 2017 include the completion of an offsite Disaster Recovery (DR) center at the Adult Detention Center and migration of Sheboygan County's email to the cloud.

I am very proud of the services the Information Technology team has delivered in the last year, good work that could not be done without the continued guidance and support of the County Administrator, Finance Committee and County Board.

Regards,

A handwritten signature in black ink that reads "Christopher S. Lewinski". The signature is written in a cursive, flowing style.

Christopher S. Lewinski
Information Technology Director

Mission Statement and Summary of Responsibilities

The mission of the Information Technology Department is to effectively and efficiently safeguard and account for the County's technological resources and to provide information technology service in support of all County departments.

The Information Technology (IT) Department provides assistance to County departments with a 24-hour help desk, and provides planning, management, and implementation services for the County's IT projects, systems, networks, and devices.

Goals and Objectives Achieved in 2017

1. Provided technical leadership and oversight for the design of the surveillance camera system for the Courthouse security project.
2. Completed the deployment of a disaster recovery site at the Detention Center, greatly enhancing the time to recovery (TTR) in the event of a data center incident at the Courthouse.
3. Finalized the Voice over Internet Protocol (VoIP) telephone system design and deployed the first pilot group of phones for user testing.
4. Led and documented a review of the Sheboygan County website content to ensure accuracy of information being provided to the public.
5. Converted Sheboygan County's outdated and unsupported email system to Google's cloud hosted G Suite system.
6. Provided a written report summarizing opportunities for and challenges of expanding the Sheboygan Ring of Fiber network westward in the County.
7. Provided technical leadership and oversight for the design and deployment of the wireless voting and audio systems in the County Board Chambers.
8. Maintained an annual network uptime of 99.966%.
9. Led the development and implementation of a new Meetings and Agendas website which eliminated the IQM2 system, saving the County approximately \$13,000 annually.

Budget

	2017 Budget	2017 Results	Variance
Revenues	\$2,184,879	\$2,156,382	-\$28,497
Expenses	\$2,229,828	\$2,143,098	\$86,730

Overall, the IT Department had a positive variance of \$58,233 for 2017, not including depreciation that is not budgeted. This was primarily due to lower than anticipated costs for maintenance and repairs to IT systems and equipment. Of note is a negative variance in revenues, driven by less internal demand for printing and duplicating services.

\$59,120 of retained earnings was transferred to the IT capital outlay budget for the purchase of the new wireless voting and microphone systems for the County Board Chambers.

The IT Department was successful in achieving the 2018 budget target. Overall, the department had a 4.2% decrease in budgeted expenditures from 2017 to 2018, achieved primarily through the consolidation and elimination of certain support contracts.

Issues and Challenges Ahead

The two most challenging issues facing the County's Information Technology Department for the foreseeable future are cyber security and data storage.

Protecting Sheboygan County's sensitive data and network resources from malicious attack and/or exposure continues to be a challenging endeavor, exacerbated by an increasingly sophisticated threat environment and the difficulties of providing security awareness training to 600+ end users. Educating end users on threat detection and avoidance is the single greatest cyber security strategy but also the most difficult to achieve. At the same time, we often must balance strong security practices and policies with end user experience and convenience, as the two (security and convenience) are typically inversely proportionate to each other. As such, our approach will need to be multi-layered or "defense-in-depth", combining end user training, intrusion detection/prevention and incident response to minimize the risk of a cyber security incident at Sheboygan County.

As challenging as cyber security proves to be, it will take a backseat to what the County will face in the next five to ten years as the need for massive data storage increases exponentially. The reason for this unprecedented growth in data is the proliferation of video, primarily originating from law enforcement operations (dash cams, interview rooms, future body cams, etc.) and building security (i.e. video surveillance). While data compression technology continues to improve, it does not keep pace with increases in video resolution, nor does it offset records retention laws which govern all County-generated videos. The challenge facing Sheboygan County will be balancing cost of storage (and backup of that storage for disaster recovery purposes) with scalability; when additional storage is needed, it is typically needed "now" and planning and budgeting for the future purchase of additional storage media will not be timely enough. At the same time, it is cost prohibitive to "future proof" when buying storage, since no storage is cheap as petabytes become the standard measurement of storage capacity (1 petabyte = 1,000,000 gigabytes). Sheboygan County's need will be a "just in time" storage and backup solution in which the County pays only for what it uses, and adds "on the fly" according to demand. At this time, Cloud storage services are the closest approximation of this model and, accordingly, will be the focus of significant research in the next twelve months, given the storage project that is currently slated in the 2019-2020 in the Five Year Capital Plan.

Goals and Objectives for 2018

1. Complete the implementation of the County's new Voice over Internet Protocol (VoIP) phone system, as well as develop a plan, timeline and budget for replacing the current phone system at Rocky Knoll Health Care Center.
2. Develop specifications and project timeline for the redesign of the Sheboygan County website.
3. Provide technical support and oversight to the construction and implementation phases of the Courthouse Security Project.
4. Complete an IT Risk Assessment to be used to drive the development of the 2020 – 2025 IT Master Plan.
5. Maintain an annual network uptime of 99.75%.