

# 2017 ISS Annual Report



and 2018 Technology Plan  
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# 2017 Annual Report

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## Executive Summary

### Note from the Director of Information Technology

2017 was a year that has proven to be one of the most difficult of my career. The difficulty started with the sudden passing of our GIS Director Joe Seig on New Year's Day. Joe had been with the County for 15 years and this had a significant impact on the entire staff personally. This caused even more disruption in the very important GIS section that was finding its footing after the retirement of Larry Stout.

Despite this difficult start to 2017, Hamilton County ISS continued to be a leader throughout the State of Indiana as well as the Country. After not participating in the Digital Counties Survey in 2016, we once again were named a top 10 digital county in the US. As we have since I've been here, the focus is on ensuring that the things we do make county operations efficient and effective. I have stressed to staff that we need to standardize and simplify everywhere we can so that in the long run it is easy for us to maintain and support. In 2017, Hamilton County ISS worked hard to implement projects and systems that improved productivity but also were secure and manageable.

In 2017, we continued the counties exploration into the Cloud by looking at the potential for using it for long term retention. At this time, it was determined that this is not an economically feasible option but one that will stay at the front of our minds moving forward. Cyber security has also been at the forefront of all our conversations this year. We have implemented several things to help improve the counties security stance. Even with these improvements, Cyber Security is the most pressing issue facing us in 2018 and we will continue to look for solutions to help protect our employees and the data citizens entrust us with.

In 2017, Hamilton County ISS continued to maintain and make the necessary changes to the infrastructure that supports the county operations. The biggest change was a complete refresh of our backup system, Commvault. This change was not without its issues, but we are now at a place where backups are being done the same way across our entire environment. This includes backups of the public safety campus servers as well. Another major change included the Counties GIS system which underwent a major overhaul and now positions us for more flexibility moving forward.

2017 will bring a number of projects for ISS including some major changes around Cyber Security and a multiple year project to upgrade and replace the POSSE workflow and permitting system. We are also looking at finishing the rollout of Windows 10 and Office 2016 to the entire user base of Hamilton County within the first quarter of 2018. Windows 10 is a more secure operating system and I feel like it is very important to complete this project and do what we can to protect us from viruses/malware and hacking. Upon the completion of the Windows 10, Office 2016 rollout, we'll be moving all the user network shares from our storage on premise to OneDrive within Office 365. This will provide more flexibility for users and reduce the storage we need to provide, and space taken up during backups.

There will also be many software projects and upgrades that will improve the efficiency of our business users.

As in the past, it is my goal that Hamilton County ISS will be an example not only in Indiana but throughout the Country for its effective, efficient and innovative use of technology in local government.

## **2017 Annual Report**

2017 was another great year for ISS. The projects completed this past year are described in the 2017 Accomplishments section.

In 2017, ISS built upon the foundation set in the two prior years and looked to upgrade or improve existing solutions. Examples of this included the Commvault backup system refresh, the Cisco phone upgrade and the continued expansion of things like Teller for receiving payments and the numerous online forms and applications that make it easier for citizens to interact with our Government.

2017 was also a great year for me professionally; I was recognized by the Indiana Business Journal as a CTO of the Year Honoree and I again served as President of the Indiana Government Technology Leaders Association. In September, I was a host for the annual MIX conference which was a great opportunity to showcase our County to CIOs from around the country. I also spoke at several state and local events discussing what we have done here in Hamilton County. Both the ISS Staff and I are looking forward to 2018 and the exciting things happening here in Hamilton County.

## **2018 Technology Plan**

2018 will once again be a year where the focus will be on cyber security. This is the one area that has gotten progressively more difficult and requires our constant attention. We will also continue to build and improve upon existing applications and systems and upgrade where necessary. As always, I will use 2018 to look for efficiencies for offices throughout the County.

As I mentioned, ISS will work to finish the rollout of Windows 10 and Office 2016 in the first quarter of 2018. Another major project is the upgrade and replacement of POSSE. This is an extremely large project that will cover multiple years. We will also be putting additional tools in place to enhance our Cyber Security posture.

I also will be looking at better training options for County employees. I feel like we need to do a better job taking advantage of the tools we have at our disposal and that starts with the users having a better understanding of them, even if at a basic level.

ISS is looking forward to another challenging and fulfilling year, and the business successes that will result from the planned technology initiatives.

## **Motto, Mission, Vision**

**Motto:** Working toward the betterment of Hamilton County through the use of technology.

**Mission:** To ensure that County data and voice services are secure, accurate, available and recoverable in order to enable County departments to better serve the County's citizens in the most cost effective and efficient manner possible.

**Vision:** Hamilton County ISS is striving to become a model for local government technology implementation; both in how technology is used, and in how technology service is delivered.

## Scope of ISS Support

Hamilton County ISS provides technology support for all county departments

### Applications

- Provide application support and maintenance for application systems and several mission critical applications: Budget, Finance, Payroll, Tax Assessment/Collections, Permitting and Inspections, etc.
- Propose new software and technology solutions based on departmental requests or County needs to promote efficiency and productivity
- Evaluate each Department's technology service requests for technical feasibility and impact on County resources
- Evaluate system benefits to be gained such as staff productivity and efficiency, lower operating costs, and/or anticipated increases in services to the public
- Facilitate software procurement from determining feasibility, evaluation for business and technical fit, security assessment, training, through implementation
- Design, develop, and implement application systems, queries, and reports
- Evaluate and implement E-Gov applications
- End to end database administration, including security management, configuration management, performance tuning, and future planning
- Provide technical approval for acquisition of third party applications software

### GIS

- Administer core GIS systems including installation and configuration, all data, software and architecture
- Provide departmental GIS development and support
- Design, develop and support GIS PC and web-based applications
- Develop more advanced methods of dispensing GIS data to the public and other local, state and federal agencies
- Provide GIS application training to end users and the general public
- Facilitate future GIS planning and establishment of procedures

### Telecommunications

- Ensure the County's voice and telecommunications needs are effectively met
- Provide support and maintenance for all the County's phones; includes support for the Cisco Call Manager/Unity phone system and our fax from desktop capabilities
- Provide management oversight of telephone/cell phone company vendors
- Manage the design and support of call menu systems and distribution groups
- Cell phone and air card procurement and management

## Operations

- Act as custodian of all data residing in the County's server systems; ensure timely backup (on and off-site) and real-time replication to the Disaster Recovery site
- Provide technical approval for the acquisition of all IT related hardware, desktop, and operating system software and contractual services
- Maintain the central data processing facility and all operational computerized systems
- Ensure that County computer resources are effectively managed
- Provide helpdesk staff to initiate and track services calls for new requests and trouble reports
- Maintain inventory of all the County technology assets
- Ensure technology users are in compliance with all standards, security policies and procedures
- Disposal of surplus equipment

## PC & Peripherals

- Provide technical support, including installation, troubleshooting, repair, and replacement, for desktop PC's, laptops, and printers
- Evaluate hardware/software, product lines, and alternate solutions to meet Hamilton County's ever increasing technological requirements

## Data Networks and Storage

- Enable and administer network connectivity to support multiple user access to network-based applications and systems
- Enable and administer Internet access, with security safeguards, for all County users
- Implement necessary departmental security procedures consistent with the security policies established by the County
- Provide security measures to maintain data integrity, and protect data from loss, misuse, and unauthorized access
- Optimize storage of data through efficient implementation of both centralized SAN and server systems
- Support of the Windows servers throughout the County's data network
- Optimize the use of the Clouds for both Systems and Storage

## Technology Refresh

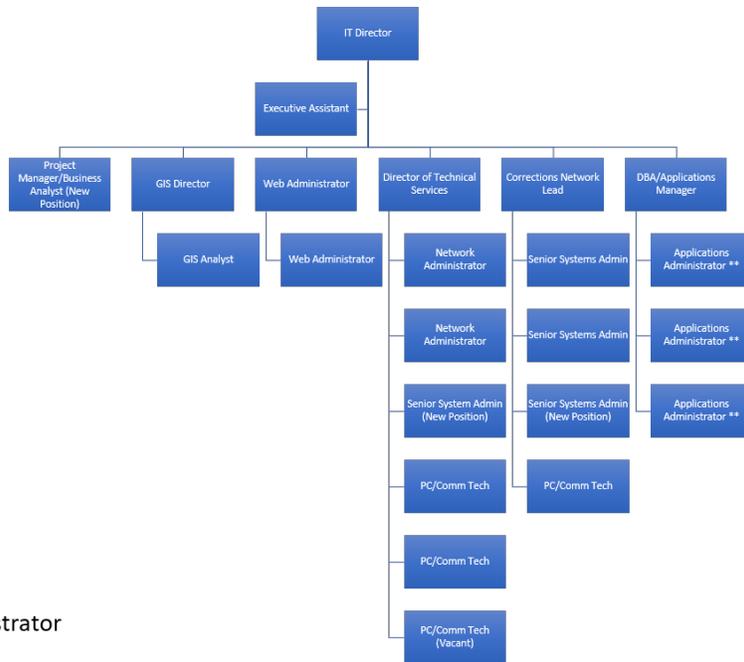
- Determine life expectancy of Hamilton County technology assets
- Project replacement schedule of technology assets, in alignment with functional purposes and budgetary constraints
- Evaluate refresh assignment, determine replacement specifications, quote replacement equipment and services

- Procure and install replacement technology equipment

## IT Staffing

2017 was an interesting year for ISS from a staffing standpoint. As I pointed out, we experienced the sudden passing of the GIS Director on January 1<sup>st</sup>. We also had a couple of other vacancies that we have had to deal with including one opening as we end the year. During 2017, I also reviewed the organization of ISS and made some changes that I think will really help us moving forward. In addition to the change in organization, I also requested 3 additional positions during budget and ISS was granted all three of those.

## Hamilton County ISS – Organization Chart (January, 2018)



\*\* Formerly Systems Administrator

## 2017 Accomplishments

**Cisco Call Manager Upgrade** – ISS upgraded our internal Cisco phone system including the hardware the phone system runs on. This provides enhanced capabilities as well as redundancy for voice service across all of our buildings.

**CommVault backup system** – ISS cleaned up the existing CommVault environment and upgraded to the latest version of the software. During this upgrade, we also expanded CommVault’s use to the public safety campus, giving us a standard backup system across the county.

**Multi-Factor Authentication** – Multi-factor authentication was required for any computer accessing public safety related data. ISS implemented this across all computers that touch public safety data using a combination of RSA tokens and our existing NetMotion environment.

**Windows 10/Office 2016 Upgrades** – ISS made good progress on rolling out Windows 10 and Office 2016 across our environment. This charge was led by the public safety area where all new patrol car laptops were rolled out with Windows 10. In December, ISS continued that rollout in the Judicial Center and these upgrades should finish in the first quarter of 2018.

**Windows Automatic Updates** – Due to the continued importance around Cyber Security, it became necessary in 2017 to establish a strict schedule for a regular rollout of Windows critical and security updates. In 2017 ISS started updating desktops monthly and servers on a quarterly basis with no exceptions.

**GIS Portal** – ISS rolled out a new Hamilton County GIS Portal in 2017. This was necessary due to outdated technology and will provide a more flexible platform to build upon in 2018 and going forward.

**Pictometry oblique imagery** – For the first time in a number of years, the ISS GIS group worked with the communities in Hamilton County and the Assessors Office to obtain oblique overhead imagery. This allows for entities to view properties at different angles to see all sides of a home or other structures.

**Teller** – In 2017 ISS expanded the use of Teller in the County. This was implemented in Community Corrections and the Health Department was added to the Treasurer’s remote deposit process. This really improves efficiency and handling of funds taken by these departments.

**Posse** – ISS enhanced Posse with additional configurations in the following departments: Parks, Auditor, Health, and Community Corrections. Posse continues to be an important piece of software that is used throughout the county.

**Kronos Telestaff** – ISS worked with the public safety groups and in 2017 the Telestaff software went live. This software helps manage the time for shift workers in all of the public safety areas.

**Employee Self Service in Eden** – ISS worked with the Auditor’s office to enable the Employee Self Service capabilities within Eden. This allows employees to update general information without requiring assistance from Auditor’s Staff.

**New World** – ISS staff worked closely with Communications to implement a major release upgrade of New World. This included new Virtual Servers, new software, and new interfaces.

**Juvenile Center Remodel** – ISS worked closely with Jail staff during the remodel of the Juvenile Center. This remodel included a completely new Network Infrastructure. Also included in this remodel was a new video system for the classroom.

**Backup PSAP** – ISS has worked hand in hand with Communications to bring online the backup PSAP in Fishers. This includes a new server room, and new infrastructure in dispatch.

**SHSP Grant Award** – Headed by Scott Ligler, ISS received a \$150,000 grant for multi-agency video conferencing and collaboration. This project will be implemented in the 1<sup>st</sup> quarter of 2018 and will include Noblesville, Fishers, Carmel, and Cicero Police and Fire.

**Website** – In 2017, ISS web staff moved the county websites and web applications to all use https encryption. This is quickly becoming a standard and provides a more secure web environment for our County.

**Social Media Archiving** – In 2017, the ISS Web staff implemented the archiving of the county's social media sites. In addition to this, Web staff also posted a social media comments policy to all of the county sites.

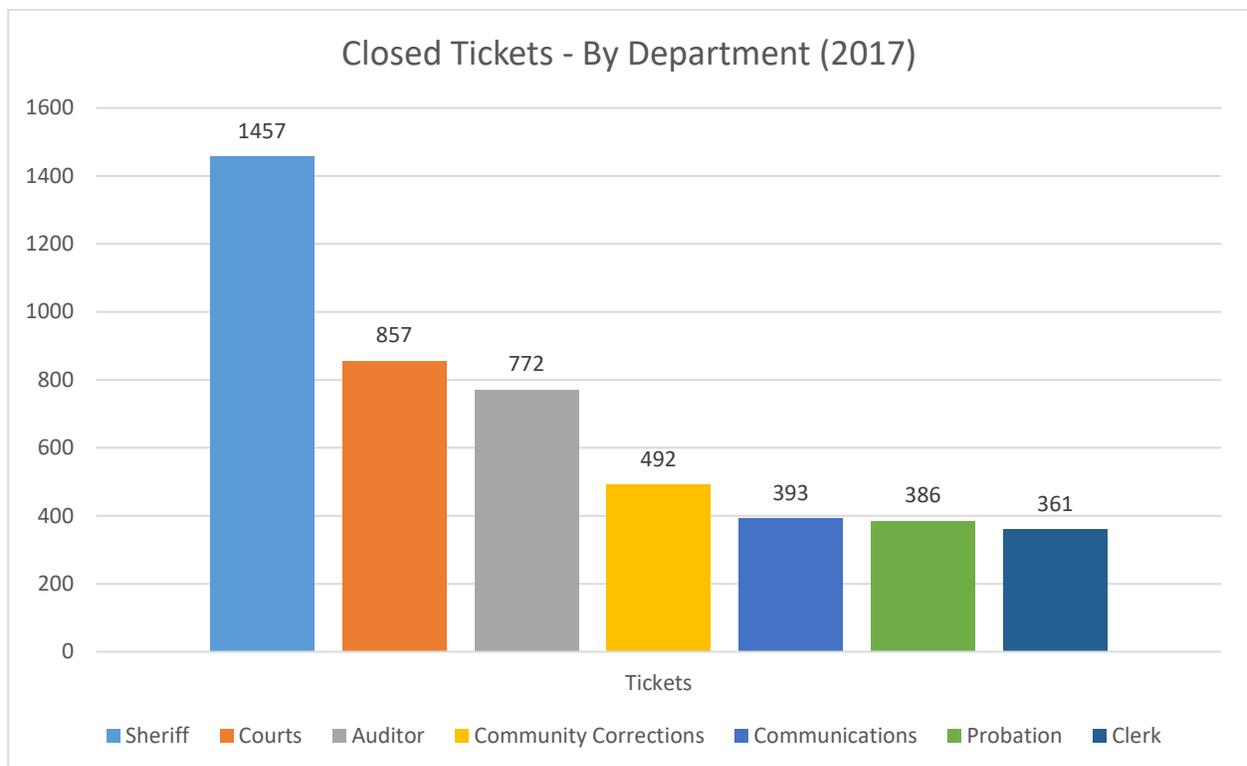
**Online forms and Submissions** – ISS continued to expand the use of online forms to make it easier for citizens to interact with our Government. In 2017, 5 new online forms were added and nearly 9000 online submissions were completed.

**SharePoint** – The use of SharePoint continues to expand in the County as we've seen usage increase by over 300% in 2017!

## Performance Measures

As mentioned in past reports, the helpdesk software utilized by ISS helps us direct our work and give us a look at what issues may be a trend throughout the County. In 2017, ISS Staff closed between 7000-8000 tickets that were sent to our helpdesk. Each ticket is documented with a solution so solving similar problems moving into the future becomes quicker and more efficient. Towards the end of 2017 ISS looked at a SharePoint based helpdesk and will look at having it in production in early 2018.

One of the reports we find useful and shows where our work is coming from is one that shows Work Orders by Department. Below is a sample of the top 7 departments in terms of work orders for 2017:



Other examples of reports available include:

- Work Orders by Technician
- Work Orders Logged to Particular Computers
- Work Orders Logged to Particular Users
- Overdue Work Orders

ISS can also connect to the data in Track-IT to generate custom reports, looking for specific information or trends within the data.

ISS also tracked “Un-scheduled Downtime” in 2017. This was reported to the ISS Board at each meeting and is an attempt to make sure the ISS Board holds me accountable and that staff feel accountable as well. A summary of that report is:

- Un-scheduled downtime occurred in only 3 months of 2017
- In October we had 3 hours of downtime that affected all Internet and DNS for the county. This happened late in the day so the impact was minimal.

## 2018 Technology Plan

### IT Staffing

In 2017, for the most part, ISS was able to fill the vacant positions we had. As I mentioned earlier, we unexpectedly needed to fill the GIS Director position and we did that with Matt Baller. We also had an opening for a GIS Analyst and that was filled in October with Joan Keene. After a couple of years of instability in the GIS area, I feel like we now have a solid foundation with Matt and Joan that will really move the county forward. As we end 2017, there are two positions vacant, a PC/Comm Tech and a Systems Administrator. We interviewed for the Systems Administrator and offered this position to two different individuals and both turned us down. After looking more closely at the position, Julie and I believe that a reclassification is necessary. I have worked with HR and WIS to move that process forward.

For the 2018 budget, Council provided ISS with three new positions. Two Senior System Administrators and a Project Manager. I will work to fill these rolls in early 2018. As I look forward into 2018, the retirement of Julie Crask looms as well. Toward the middle of the year, we will interview candidates and bring on board her replacement while she is still here to do knowledge transfer. Her position is a very important one as the group she manages administers the critical enterprise systems throughout the county.

With the addition of three positions to my staff, I am very comfortable with the size of the ISS group. I think we can effectively provide the services needed and continue to look for ways to save the county money and provide services more efficiently.

### 2018 Goals, Objectives

The items ISS will look to complete in 2018 are:

- Windows 10 Roll-Out
- Office 2016 Roll-Out
- Expansion of SharePoint
- Full Disaster Recovery exercise
- Increased Cyber Security protections
- Completion and bringing online of backup 911 center
- Continue to enhance website and web applications for better ADA compliancy
- Bulk of Posse upgrade done by end of 2018
- Complete the migration from VMware to Hyper-V
- Remove all legacy storage from the environment

- Start the new Personal Property Assessment system for Assessor
- Upgrade Active Directory Domain to latest version
- Implement new Group Policies
- Implement Advanced Threat Analytics for increase Cyber Security
- Regular Phishing exercises
- Improved User Training

In addition to these stated objectives, ISS will continue to look for ways to be more effective and efficient and to make the systems supporting Hamilton County more reliable and cost effective.

## Technology Trends and Impacts

**Cloud Computing** – Cloud Computing remains one of the biggest trends in the field of Information Technology. Many are saying any new project should be evaluated with a “Cloud First” mentality. This simply means that instead of building onsite infrastructure, should or could this be done in the cloud first? I think that Cloud Computing isn’t something we can ignore and moving forward this will be integral to the success of Hamilton County. I will continue to evaluate all new projects that come along with an eye toward the cloud.

In 2017, Hamilton County made small moves to the Cloud and in 2018 we’ll continue to evaluate how we can use the Cloud effectively and efficiently here in the County. I believe that as the County moves to replace legacy business software like financial systems, many of the alternatives will be cloud hosted and that is something we need to be ready for and understand.

**Cyber Security** – Cyber Security continues to be top of mind for ISS here in Hamilton County as it should be for every organization. The risks continue to grow, and the number of attacks simply continue to increase. In 2017 we made many changes to enhance our security posture, including how we apply security updates and our move toward Windows 10. In 2018 ISS will continue to make changes that improve our visibility and how quickly we can react should an incident occur. I believe that the use of Artificial Intelligence will play an important role in doing this and we are in a position to take advantage of these types of new tools as they become available.

Security threats are constantly changing so it will continue to be important for ISS to continue to investigate products that will protect us from the growing attacks we see on a daily basis.

**Artificial Intelligence (AI)** – Behind Cyber Security, this topic is more prevalent today than any other. When people hear Artificial Intelligence, many think science fiction stuff but that is not the case. AI is now found in things like Microsoft Word, Excel and PowerPoint. It is also evaluating all the email we send and receive, checking for personal information or viruses. AI is extremely powerful and I think it will be important for ISS to understand how to take advantage of the simple AI things available today and leverage the benefits it can provide. As 2018 moves forward, I think AI can provide huge benefits to the County in the areas of Cyber Security and productivity.

AI will be an important trend to watch and understand.

### **Hamilton County ISS Strategic Plans**

The ISS Department was busy in 2017 and accomplished a number of things that I believe really demonstrate that the work we have done in the past to ensure a strong infrastructure have succeeded. This standardized, streamlined infrastructure allowed us to support many of the initiatives we completed in 2017 and will do the same moving into 2018.

As I mentioned earlier in the report and just as I said in 2017, Cyber Security will be a focus in 2018. This is vital and will require us to make investments and remain diligent in how we move forward with new and current technology. I think Artificial Intelligence and some new tools we will be putting in place will really give us new insight on how to protect our users and the data citizens entrust us with.

As in the past, Hamilton County will remain in the spotlight in 2018 as we continue to build on what is already recognized as one of the top technology counties in the US. ISS will remain active both locally, state wide, and nationally by engaging with peers, attending events, and speaking at conferences and other engagements. It is important for ISS management and staff to continue to grow and introduce best practices into our organization.

## Closing

While 2017 was a difficult year, I believe ISS made great progress and accomplished many of the goals set for the department at the end of 2016 and the department is looking forward to great 2018! When you look at the goals we have for 2018, they focus on improving security, enhancing and upgrading existing systems, and providing staff with the tools necessary to be even more efficient and effective. If the ISS department can successfully do these things in 2018, Hamilton County will remain a recognized leader as we have been for many years. Accomplishing these things will also continue the momentum of the ISS department and provide a continued path forward into 2019. The foundation we have put in place with the support of the Commissioners, Council, and ISS Board provides a robust, secure platform that the County can utilize to check off all the things we have set as goals for 2018.

I look forward to the coming year and working with officials across the county to determine how technology can be used to best accomplish the goals their departments have set in 2018.