

2018 ISS Annual Report



and 2019 Technology Plan
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2018 Annual Report

Executive Summary

Note from the Director of Information Technology

2018 was a productive year in ISS and one that saw many accomplishments after a difficult 2017. We solidified the GIS area with two great individuals and have made significant progress in an area that had struggled over the last few years. Hamilton County ISS continued to be a leader throughout the State of Indiana as well as the Country. We once again participated in the Digital Counties Survey and were recognized as 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 2018, Hamilton County ISS worked hard to implement projects and systems that improved productivity but also were secure and manageable.

In 2018, we completed several large projects, including a large upgrade to the County's workflow and permitting system, a completely new GIS Portal, the successful rollout of Windows 10 across the County, major enhancements to our web applications used to present tax and assessment data to citizens, and the replacement of a legacy video teleconferencing system in the magistrate, jail, and juvenile center. At the end of the year we also transitioned from a backup system that we have used for over 9 years to a new, simplified backup system that will increase security and provide the county with a better disaster recovery solution than we have had in the past. Just as in the past couple of years, cyber security has also been at the forefront of all our conversations. We have implemented several things to help improve the county's security stance and completed an external penetration test of our public facing environment and started to do regular phishing exercises targeted to employees. Even with these improvements, Cyber Security is the most pressing issue facing us in 2019 and we will continue to look for solutions to help protect our employees and the data citizens entrust us with.

2019 will bring several projects for ISS including some additions to improve our Cyber Security posture, a refresh of a significant number of servers and storage, the implementation of a new Personal Property Assessment system, the go-live of a Grants Management System, the issuance of an RFP for Orthophotography, and the refresh and redesign of the County home page. In addition to all these items the new Personal Property Tax application as well as ProperTax will need Phase 1, 2, 3 certifications from the State.

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.

2018 Annual Report

2018 was another great year for ISS. The projects completed this past year are described in the 2018 Accomplishments section.

In 2018, ISS continued to build upon the success of the past with the same principles of streamlining and simplifying processes where possible. Examples of some of the improvements we've made include a major upgrade to Kronos for efficient employee time recording and the continued expansion of Teller, allowing for more convenient ways for constituents to do business with the County. We've streamlined remote deposit processes to the Treasurer's Office by adding the Auditor, Highway and Community Corrections departments. ISS also worked with the cities throughout the county along with Communications to streamline the E911 address submissions. Finally, the county began taking advantage of Pictometry in 2018, allowing for oblique images of property in Hamilton County. This makes the work of the Assessor's Office much easier as they can view a property from various angles.

2019 was also a great year for me professionally; I began the year as President of the Indiana Government Technology Leaders Association and graciously moved into the role of Immediate Past President at our Spring meeting. I was a member of the Governor's Council on Cyber Security and contributed to the Local Government Working Group. I spoke for the Association of Indiana Counties as well as the Indiana Association of County Commissioners on the work we have done around Cyber Security in Hamilton County. I also continued to participate in the Metropolitan Information eXchange (MIX) as an active member with other large municipalities from around the country. Finally, Hamilton County ISS and the Auditor's Office won a "Best of Indiana" award from the Indiana Office of Technology for the Deduction Forms Application that is available on our website. Once again both the ISS Staff and I are looking forward to 2019 and the exciting things happening here in Hamilton County.

2019 Technology Plan

As I mentioned, 2019 will 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 2019 to look for efficiencies for offices throughout the County.

As I mentioned, ISS will undertake a significant refresh of storage and servers. The existing servers and storage that need refreshed are entering their fifth and sixth year of use and dictate that we replace them to maintain our track record of reliable operations. The county's website will also undergo a redesign and refresh in 2019. This will take cooperation from all departments as we look to make our website even more of a welcome portal to Hamilton County Government. We will also implement the Personal Property Assessment system in conjunction with the Assessor's Office. This system will require state certification along with the counties tax and billing system. We will also be implementing a Grants Management system that we built in cooperation with the Auditor's Office. Some other offices and project ISS will be undertaking in 2019 include:

- Human Resources
 - Applicant Tracking and Onboarding software
- Parks Department
 - Online registration software to manage camps, activities, events, campground, rental facilities
- Clerk's Office
 - Poll worker Claim software

ISS will also continue the work that was started with EMA around COOP/COG. I want to build to a point where we can successfully work with offices to fully test their applications from a remote location. There is still some work to do in this area, but we are closer now to successfully handling a disaster that might happen here in the County.

ISS is looking forward to another challenging and fulfilling year, and the business successes that will result from the cooperative work with departments and elected officials across the county.

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 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

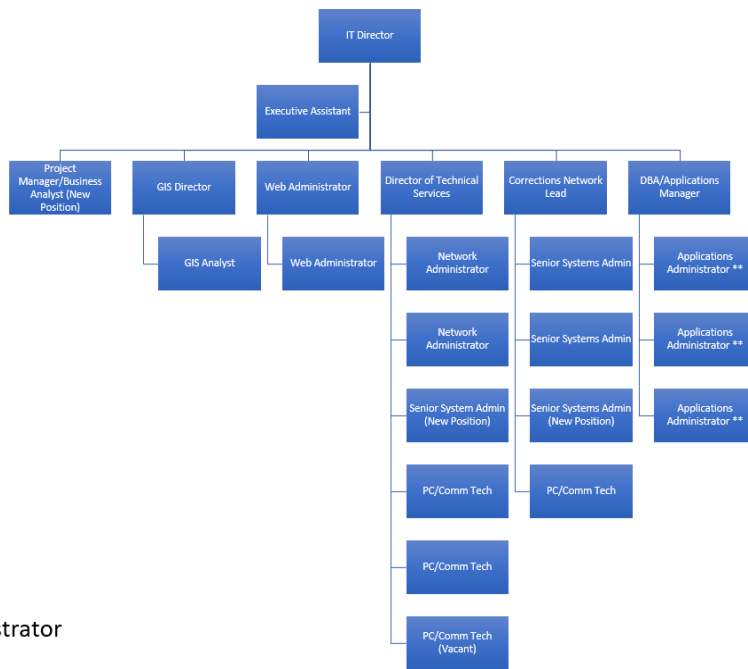
- Determine life expectancy of Hamilton County technology assets
- Project replacement schedule of technology assets, in alignment with functional purposes and budgetary constraints
- Evaluate refresh assignment, determine replacement specifications, quote replacement equipment and services

- Procure and install replacement technology equipment

IT Staffing

2018 was a stable year for ISS from a staffing standpoint in comparison to 2017. We solidified the GIS area as was mentioned earlier and the new positions approved by Council for 2018 were all filled by mid-2018. The changes to the organization that were implemented in 2017 have now been in place for all of 2018 and I think the reorganization has streamlined support and more clearly outlines a model for supporting all county employees. Looking forward, I believe the county should consider adding a dedicated Cyber Security professional. This person would focus on security related policies and procedures as well as focus on day to day cyber security efforts.

Hamilton County ISS – Organization Chart (January, 2019)



** Formerly Systems Administrator

2018 Accomplishments

POSSE/Winchester – ISS completed the transition from POSSE to the new Winchester software. This was a significant upgrade to the primary workflow software used throughout the county. This upgrade involved multiple departments and collaboration from all parts of the ISS Team.

Rubrik Backup System – ISS evaluated backup solutions for nearly a year before settling on Rubrik. Rubrik provides a streamlined and simplified backup environment. Moving to this backup system automatically moves data that has long retention requirements to Microsoft’s Azure cloud. This provides a low-cost area for storing long term data without the need for ISS staff to maintain infrastructure.

Parks Wi-Fi Upgrade – The various parks throughout the county had different wi-fi capabilities but each was managed separately and not monitored by ISS. During 2018, ISS staff worked with Parks to upgrade the Wi-Fi capabilities in each of the parks and connect those back centrally to a single management environment.

Windows 10/Office 2016 Upgrades – ISS completed the rollout of Windows 10 and Office 2016 in 2018. This also included the purchase and rollout of 200 desktop workstations.

GIS Portal/General Viewer – 2018 continued the transformation of our GIS environment which saw the retirement of the Flexviewer technology and the rollout of the new General Viewer on our public website. This new viewer can be used on any device from phone to desktop computer.

Kronos 8 Upgrade – The applications group worked with the Auditor’s Office to upgrade our Kronos environment to version 8 of the software. This upgrade provides new capabilities to managers throughout the County.

Teller – In 2018 ISS continued to expand expanded the use of Teller in the County. This year, the Auditor’s Real Property division was added to the growing list of Teller users. This provides more convenient options for the citizens to interact with the County.

Teleconferencing & Audio – ISS took over the court’s audio and video maintenance in 2018. The first project ISS completed was the replacement of a legacy Video Teleconference System in the Magistrate court as well as at the Jail and Juvenile center. This new video system streamlines the video hearing process and reduces transportation of inmates. At the same time, the audio capabilities within the court were enhanced to make court proceedings and recordings clearer and more accessible.

Census Information – GIS staff worked closely to ensure Hamilton County residential addresses were verified and submitted to the Census Bureau. This effort is vital to correct census counts and extremely important for a growing area like Hamilton County.

COOP/COG – In conjunction with the EMA and other county departments, ISS participated in the COOP/COG exercises. Because of these exercises, major networking and internet upgrades were completed to the 4H Fairgrounds buildings. These upgrades were necessary to accommodate the potential of employees working from those buildings.

Fax Server Upgrade – Faxing is still an important part of operations in Hamilton County. For several years, we have had a Fax Server that allowed for integration with email. In 2018 we replaced and upgraded the existing Fax Server. In doing the upgrade, we made it highly available by having one server located at the public safety complex and one at the judicial center.

Backup PSAP – ISS continued to work with Communications to enhance the newly operational Backup 911 Center.

SHSP Grant Award – In 2017, Scott Ligler received a \$150,000 grant for multi-agency video conferencing and collaboration. This project was implemented in 2018 for Noblesville, Fishers, Carmel, and Cicero Police and Fire.

Website – In 2018, ISS web staff made major updates to information that for the public including: New Tax Statements, Comparison reports, Special Assessments, Reconstruction Drains, Elections Data, new Property Record Cards, and Tax Sale Data.

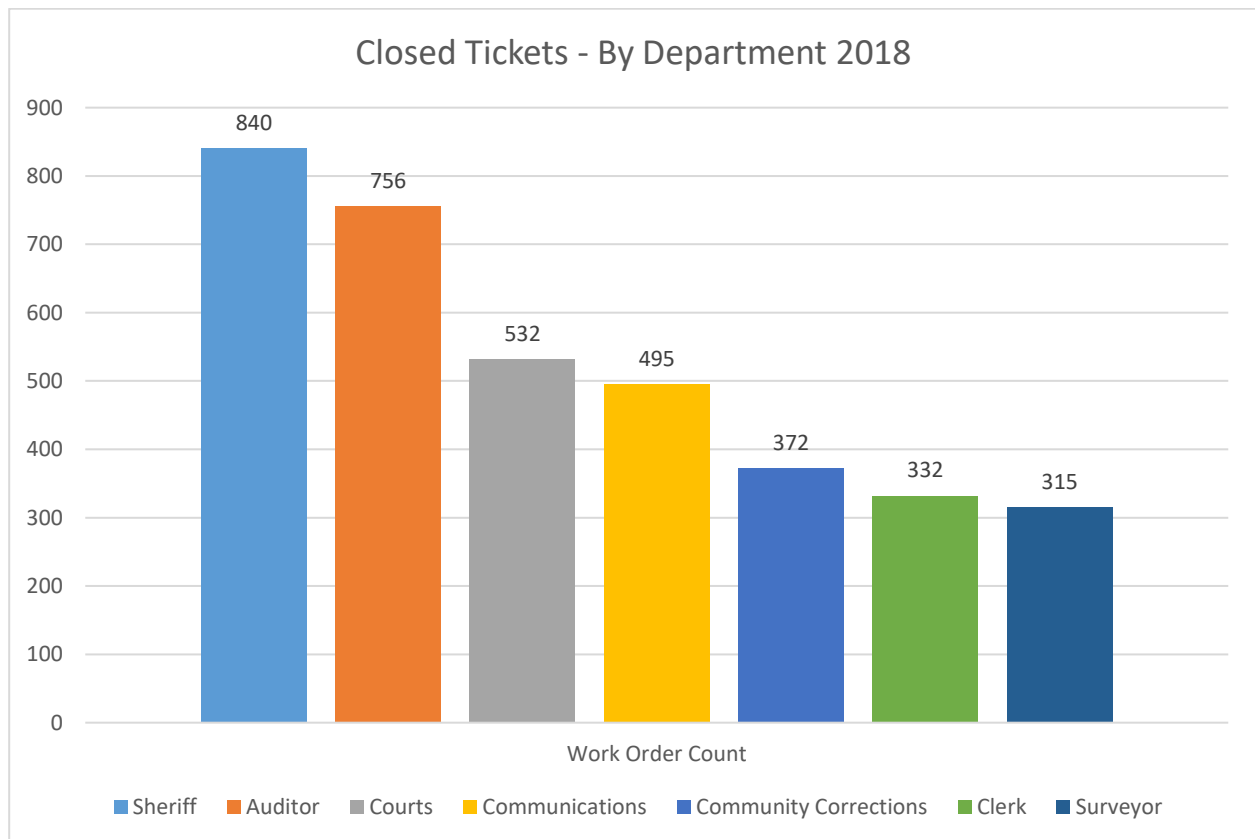
Online forms and Submissions – ISS continued to expand the use of online forms to make it easier for citizens to interact with our Government. In 2018, 4 new online forms were added and nearly 13,000 online submissions were completed.

SharePoint/OneDrive – The use of SharePoint continues to expand in the County. We currently have over 800 active SharePoint users. We are also transitioning more users to OneDrive for file storage and have seen over a 20% increase in usage in the 2nd half of 2018. As of this report, over 2 TB of data is stored in OneDrive.

Performance Measures

As mentioned in past reports, the helpdesk software utilized by ISS helps us direct our work and gives us a look at what issues may be a trend throughout the County. In 2018, ISS Staff closed nearly 7000 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. In 2018 we evaluated a SharePoint based Helpdesk to replace our current solution. During the evaluation period, it was determined that it did not fit our needs. At the end of 2018, we evaluated our current Helpdesk solution and are completely resetting our it with streamlined categories and all new information. We will begin using the updated solution January 1, 2019.

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. With the reset of Track-IT, these custom reports and specific data points will be more useful to us moving forward.

ISS also tracked “Un-scheduled Downtime” in 2018. 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 4 months of 2018
- The total amount of downtime recorded in 2018 amounted to less than 4 hours for the entire year.

2019 Technology Plan

IT Staffing

In 2018, ISS was able to fill the new positions Council approved during the budget process. As I mentioned earlier, we solidified the GIS area in 2018 even though we lost the Director during the year. Joan Keene who was hired as a GIS Analyst, was promoted to Director and subsequently we hired Steve Sanford. The two of them together have been excellent and created an excellent GIS environment for the County. As we end 2018, there is one position vacant, an Applications Administrator. This vacancy is due to Tony Baccam being promoted to the position of DBA/Applications Manager.

In 2019, Julie Crask will no longer be with us as she retires on December 31, 2018. This will be a big adjustment for all staff not only here in ISS but also in the other departments she works with on a regular basis. To ease the transition, Julie will be assisting ISS through June 2019 on a contract basis. It will be important for the Applications group to continue to provide the support levels they have in the past and work to build upon the work Julie has done.

As I look forward, I believe the staffing levels overall are in a good position. With that said, I do believe the conversation about a dedicated Cyber Security professional needs to take place.

2019 Goals, Objectives

The items ISS will look to complete in 2019 are:

- Website redesign
- Upgrade of New World 911 System
- All user network drives migrated to OneDrive
- Continued Expansion of SharePoint
- Full Disaster Recovery exercise
- Increased Cyber Security protections
- Fiber Connectivity to backup 911 site.
- Applicant tracking and Employee Onboarding system with HR
- Parks Online registration software
- Complete the migration from VMware to Hyper-V
- Significant refresh of storage and servers
- New Firewall and Intrusion detection systems
- Implement the new Personal Property Assessment system for Assessor
- Phase 1, 2, 3 certifications for Tax Systems

- POSSE/Winchester enhancements for Community Corrections, Parks, and the Health Department.
- Implement new Kronos capabilities for time off requests and user attestation.
- Implement Advanced Virus and Malware detection at the desktop level
- Continue Regular Phishing exercises
- Improved User Training
- Evaluate Orthophotography bids and receive and process all new imagery for the Hamilton County

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 2018, Hamilton County moved long term backup data to the Cloud and in 2019 we’ll continue to evaluate how we can use the Cloud effectively and efficiently here in the County. I continue to 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 2018 we continued to improve our security posture by renewing our monthly training as well having regular phishing campaigns directed at county employees. In 2018 we also had an external penetration test done to evaluate our external facing systems. In 2019 ISS will continue to make changes that improve our visibility and how quickly we can react should an incident occur. We will be evaluating and implementing a next generation virus and malware solution at the PC/laptop level within the county. These new tools utilize real-time analytics and data to quickly alert and protect an organization from a day-zero attack.

Security threats are constantly changing so it will continue to be important for ISS to continue to investigate products and solutions that will protect us from the growing attacks we see on a daily basis. As I mentioned in other areas, I believe it will be important to start evaluating the need for a full-time security professional for the county.

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.

Hamilton County ISS Strategic Plans

2018 was a successful year and ISS accomplished several important things. Many of these things are a direct result of efforts we have made in the past to ensure our infrastructure is stable and robust. This standardized, streamlined infrastructure allows us to support all the initiatives we cooperated with departments on in 2018.

As I mentioned earlier in the report and just as I said in past years, Cyber Security will be a focus in 2019. 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 advanced virus and malware software along with 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 2019 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, 2018 was a year of stabilization. Nearly all the positions were filled throughout the year and the GIS area has finally settled to provide the continuity that has been lacking over the past few years. I believe ISS made great progress and accomplished many of the goals set for the department and ISS is looking forward to great 2019! When you look at the goals we have for 2019, 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 2019, 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 2020. The foundation we have put in place with the support of the Commissioners, Council, and ISS Board will continue to allow the ISS Department to keep Hamilton County a leader throughout the state and nation.

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 2019.