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December 14, 2023

To: Mahesh Sharma, County Administrator
From: Matt Hirst, Information Technology Director
Subject: Technology Assessment and Strategic Plan

The Board of Supervisors approved an RFP late last year to conduct a technology assessment and develop a five-year technology strategic plan with Crowe Consulting.

The Scott County Board of Supervisors has a long history of embracing technology to facilitate the objectives of the organization and has directed and approved technology assessments facilitated with professional services approximately once a decade.

In my tenure at Scott County, this marks the third such assessment.

- In 2000, RSM McGladrey facilitated a technology assessment with major recommendations including:
  - Establishing an Information Technology Department with a director and help desk.
  - Creating a Geographic Information System (GIS) and coordinator.
  - Updating the website and a webmaster.
  - Replacing the custom tax system with a Commercial off the Self System (CotSS).
- In2010, Berry Dunn facilitated the technology assessment with major recommendations including:
  - Upgrading financial management software with an Enterprise Resource Planning (ERP).
  - Implementing an Enterprise Content Management (ECM) solution for document retention.
  - Improving technology security and adding a full time dedicated security professional.
- In2023, Crowe Consulting has facilitated a technology assessment and technology strategic plan. Major recommendations include:
  - IT engaging with supported offices/departments/organizations proactively to address process modernization through technology improvements related to business needs.
  - Implementation of an Information Technology Service Management (ITSM) solution for better management of end-to-end services.
  - IT Department organizational evolution adding roles to better meet the needs and expectations of customers.

The Board has identified “Organizational Efficiency” as a top organization-wide strategic priority in the 2024-26 Strategic Plan. Top Strategies of this priority include:

1. Integrate technology and web-based services to enhance interactions with our customers by June 2026.
2. Explore adding specialized skill positions to the organization (example: business analyst, public relations, grant writer).
3. Develop processes and procedures for departments to internally evaluate their efficiencies for process improvements.

The Technology Assessment and Strategic Plan developed by Crowe with the assistance of Scott County IT are attached. It is recommended that the Board accept and adopt the Technology Assessment and Strategic Plan as presented.

Encl(S): 2

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December 5, 2023

To: Scott County, Iowa

Subject: 2023 Cybersecurity Assessment and Penetration Testing

Crowe LLP (Crowe) was engaged by Scott County to perform a Cybersecurity Assessment and Penetration Testing, including both Internal and External Penetration Testing, as part of a broader IT Assessment. The testing was conducted from January through March 2023.

Crowe's External Penetration Testing emulated the tools and techniques used by "hackers" to assess the County's Internet facing systems. Crowe leveraged a variety of automated and manual techniques to perform an assessment of the potential vulnerabilities of the external systems, including:

Assessment Activity	Sample Review Areas
Information Gathering and Footprinting	• Internet Footprint Analysis • System and Service Identification and Confirmation with Owensboro personnel
Access Management	• Web Server Security (IIS, Apache) • DNS Security • Email Server Configuration • Traffic Encryption • Anonymous Access to Sensitive Data (FTP, Citrix, Database Services) • Denial of Service Testing (upon request)
Password Management	• Password Analysis for External Applications (Web, Telnet, SSH, VPN, etc.) • Brute Force Attacks (upon request)
Patch Management	• Vulnerability Scanning (leveraging Multiple Tools) • Vulnerability Confirmation/False Positive Removal
Secure Application Development (Unauthenticated)	• Web Application/Server Traversal • Web Application Input Validation (SQL Injection, Cross-Site Scripting, etc.) • Authentication Controls • Information Leaks • Client-Side Controls

Crowe's Internal Penetration Assessment used a structured and iterative process of testing the network architecture, system configurations, processes, and procedures that affect the ability to protect County assets from unauthorized access. Our testing includes:

Assessment Activity	Sample Review Areas
Physical Network Management	• Network Traffic Analysis • Man-in-the-Middle Prevention • Voice-Data Network Segmentation
Access Management	• User and Service Account Permissions • Anonymous Access to Sensitive Data (FTP, Citrix, Database Services) • Information Leaks including Account Enumeration • Network Share Permissions • DNS and Email Server Security
Password Management	• Active Directory Password Security • Password Encryption and Storage • Brute Force Password Attacks • Database Password Security • Remote Desktop Management Configuration
Patch Management	• Vulnerability Scanning and Confirmation on all In-Scope Systems • False Positive Removal • Denial of Service Testing (upon request)

Crowe's Cybersecurity Assessment reviewed information security governance practices and technical device and system configurations. The assessment evaluated the capabilities of the people, processes, and technologies supporting the County's cybersecurity program. The review included an assessment of the following components:

- Information Security Governance
- Threat & Vulnerability Management
- IT Operations
- Third Party Management
- Secure Configuration Management
- Secure Development
- Data Protection
- Physical Security
- Employee Management
- Logical Security
- Secure Change Management
- Business Continuity Management
- Logging and Monitoring
- Compliance

Upon completion of the testing, Crowe provided a report detailing the results and recommendations for mitigating identified risks. Scott County reviewed the results and developed action plans to address the risks.

Crowe LLP

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Smart decisions. Lasting value.™

Scott County, Iowa:
Department of Information Technology – High-Level Organizational Assessment

July 2023

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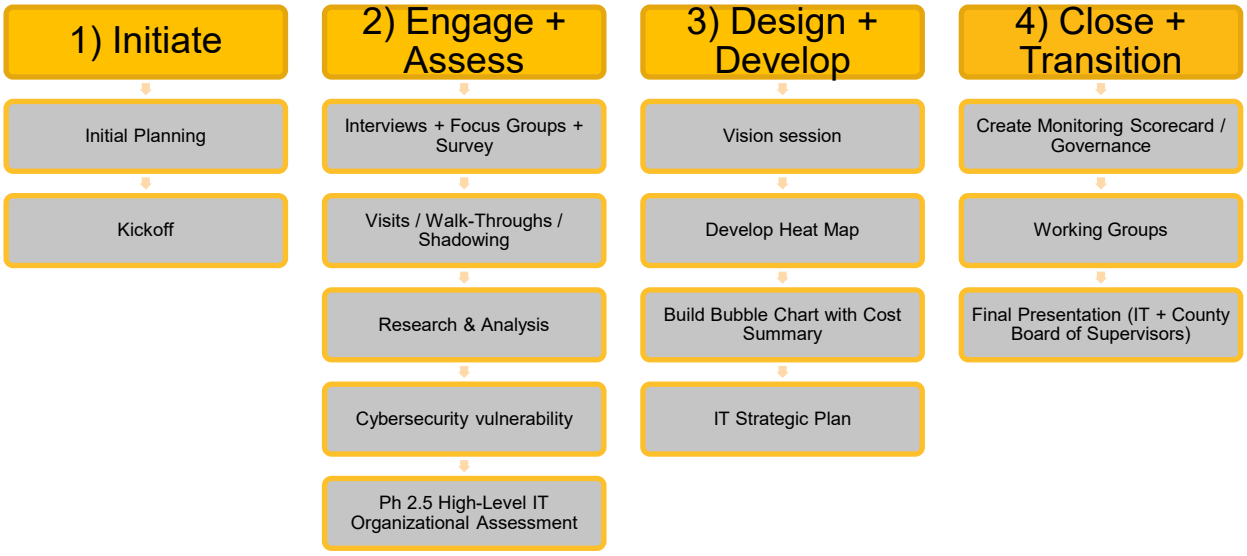
Introduction

In January 2023, Scott County, Iowa (the County) engaged Crowe LLP (Crowe) to partner with the Information Technology (IT) Department and other County stakeholders to develop a refreshed 5-Year Technology Strategic Plan. Crowe's scope of work is divided into the following four (4) phases:



This assessment report serves as the Phase 2.5 deliverable. At the time of this report, the County and Crowe are actively involved in Phases 2 and 3 activities. Information collected during Phase 2 and Phase 3 will be one of the inputs used to later identify key initiatives and priorities for the Scott County Technology Strategic Plan.

Methodology

Crowe and the County followed a multi-step approach to support the assessment. Please see below for a summary of assessment inputs.

Documentation Review

Crowe reviewed documentation provided by Scott County including but not limited to:

- County and peer community budgets
- Past County and peer community strategic plans
- Current County project listing
- Organizational charts
- Job descriptions
- Listing of IT services provided by the County
- External customer list
- Vendor list
- Help Desk and County website statistics

Peer Research

Crowe conducted high-level research on other peer Midwest counties to glean any observations that may serve as both assessment and strategic plan inputs. The following table provides a high-level overview of

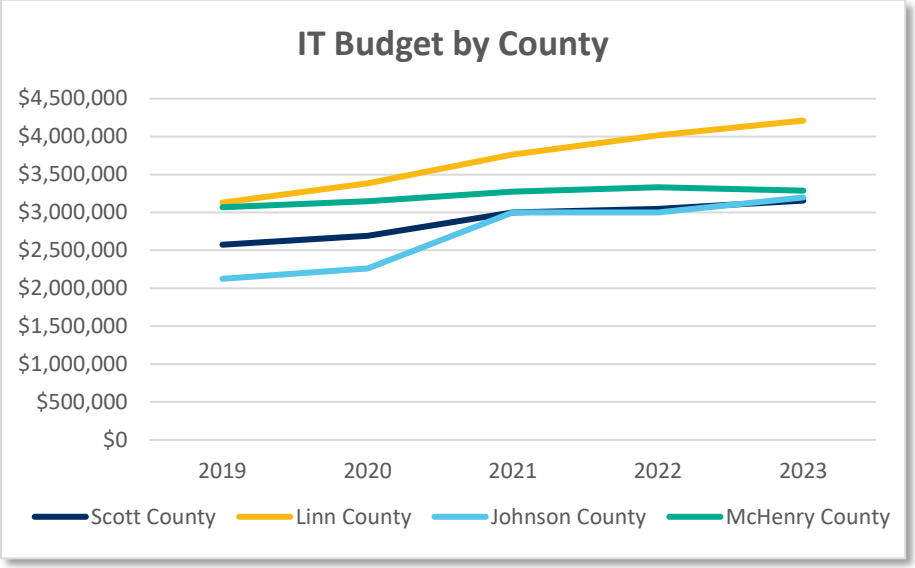
key county peer statistics.

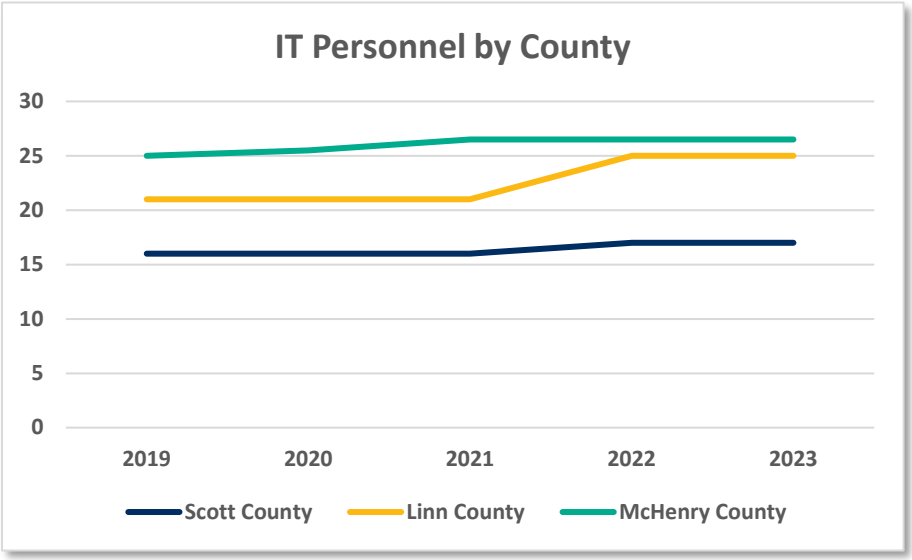
Peer County Profile

Community	Location	Population	2023 IT Budget	2023 Capital Budget	2023 IT FTE
Johnson County	Iowa	154,748	$3,197,817	$2,005,133	15
Scott County	Iowa	174,170	$3,156,529	$2,030,000	17
Linn County	Iowa	228,939	$4,211,170	$4,793,494	25
McHenry County	Illinois	311,122	$3,286,365	$4,579,100	26.5

Research Observations

When comparing the IT budgets over a time, Scott County receives roughly the same level of funding as McHenry and Johnson County. Despite having a comparable IT budget, peer communities have at least 5 more IT FTE as compared to Scott County. Both budget and FTE comparisons are noted within the charts below:





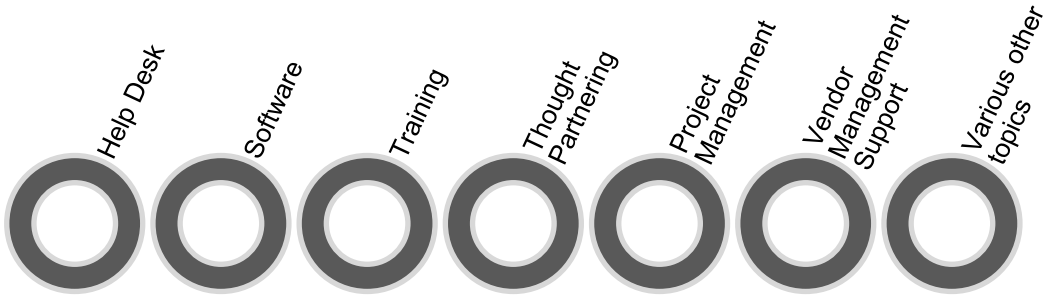
A functional comparison of IT departments highlights the following differences and similarities across peer communities:

1. None of the peer communities have a dedicated cyber staff position.
2. Peer communities have a defined listing of services.
3. Peer communities have a defined listing of customers.
4. Peer communities do not explicitly serve external agencies.
5. Peer communities utilize a 2-tiered Help Desk support approach.

Stakeholder Engagement

As part of Phase 2 activities, Crowe facilitated a series of 20 onsite focus groups with County staff and other relevant external County partners on February 21–24, 2023. Over this four-day period, Crowe met with 26 Departments and more than 150 stakeholders to better understand unique Department or office-level technology needs, future technology goals, experience with IT service provision, and other County-related technology strengths and challenges. Crowe worked with the County in Phase 1 to establish focus group participants – please see Appendix A for the list of invited participants.

In addition to understanding current Departmental needs, Crowe discussed future technological priorities and Departmental goals. Sessions also included discussion on strengths and weaknesses of key technology support areas including:



As part of Phase 3 activities, Crowe also facilitated a half-day visioning session with IT Department leadership and other key stakeholders to deep dive into current technology initiatives and discuss current strengths and areas for improvement. Throughout April-May, the IT Department has continued to work with Crowe to identify strategic technology priorities for the Department.

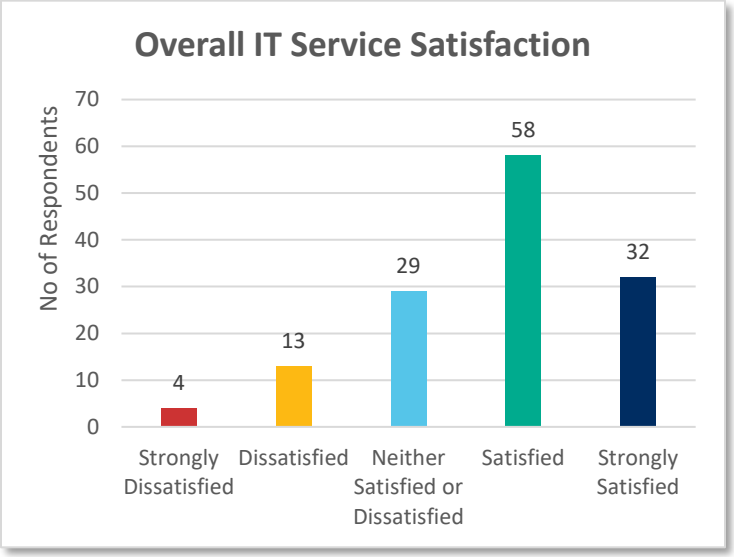
After the completion of Phase 2 and 3 engagement activities, the team identified a need to temporarily pause strategic planning activities and incorporate a high-level organizational assessment. This included the addition of a working session on June 16th with the IT leadership team, to review and discuss current state environmental issues.

Feedback Surveys

In addition to conducting focus groups, stakeholder engagement activities included administering two feedback surveys – 1) for internal, County staff and external agencies services by County IT, and 2) for external constituents.

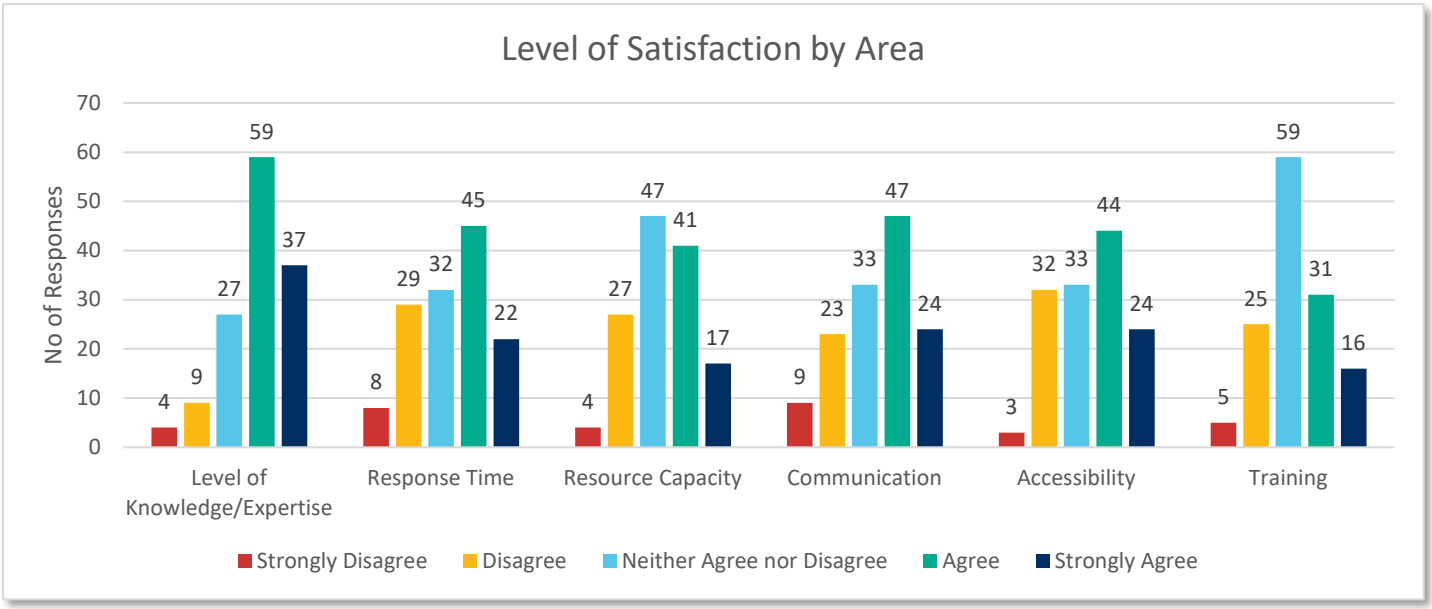
Internal Survey

As part of the County's commitment to excellence in customer service, the County distributed an online survey to benchmark current satisfaction with the IT service provision to County Staff and identify any potential areas for improvement. The survey did not target a select group of County Staff, allowing all levels and departments to provide feedback on areas of strength with the IT Department while also highlighting future room for growth.



In total, 175 survey responses were received. Of the respondents, roughly 60% were County staff and 20% were part of an external agency supported by Scott County IT. Respondents were asked to report their overall level of satisfaction with IT service provision. In addition to overall IT service satisfaction, respondents were asked to report their level of satisfaction with IT service area.

Areas with the lowest positive satisfaction (Agree and Strongly Agree) were resource capacity and training, followed by accessibility. Respondents were asked to report their interaction frequency for types of IT service and support. Formal or ad hoc training was the least frequented interaction, followed closely by project management and thought partnership.



Highlights of respondent's free form feedback is noted below.

Question Prompt: Please provide an example of when the IT team provided successful support or services for you.

- I can always count on the IT team to assess and quickly diagnosis the problem I am dealing with. I am extremely happy with the services they supply.
- Very quick to respond and accessible. Knowledgeable and if they don't know the answer, they are quick to find the answer. Open to ideas and suggestions.
- Setting us up to scan various documents into OnBase has been incredibly helpful. Also allowing us to move to the Cloud version of our payee software has made this run system run much faster and fewer problems.
- GIS dept provides excellent service and support, but connection speeds relating to infrastructure and access are severely underperforming.
- We have a very good support when planning out large items such as a database upgrade or migration that impacts multiple departments or people.
- Scott County IT successfully integrated our users and applications into their network providing us with superior connectivity speeds and redundancy along with significant cost savings. The IT department has always worked to find us timely and satisfactory solutions for all operationally critical IT needs.

Question prompt: Please provide an example of how the IT team may improve its services or support you and free response.

- Vacancies need to be filled. The existing staff are amazing, but the best of employees cannot handle the sheer volume.
- More helpdesk support personnel.
- In recent years, the IT staff does seem stretched very thin. Response times for less critical issues can be quite long at times.
- I'm thankful for the IT team but it seems like they are just keeping their heads above water which doesn't allow time to strengthen areas (department/program wish list) that could use a little more attention.
- We have issues with the telephone system: unable to return calls to some numbers, and client's leaving voicemail are cut off.
- Since we are a 24-hour operation often times we have to call the Help Desk. Things designated vital to our operations are sometimes met with frustration by the on-call IT team member. A little more understanding that employees who work off hours have needs just like the employees who work 8-4:30 would be greatly appreciated.
- Increased communication of issues and when they are resolved. An opportunity for staff training.
- Increased communication and discussion with top management about county-wide projects. i.e. changing the process of printer and toner changes.
- Communication well ahead of changes being implemented. Provide hands on training vs links to websites, cross training for resource support
- Would appreciate IT staff to support project management, to really understand a department and identify ways technology could support work.
- Dedicated assistance with project management (we might know what we need and have funds to pay for it but need support getting it done); staffing levels; communication (when things change, who does what, etc.).

- It's hard to know what to recommend when so much seems to hinge on staffing shortages, but it seems like is compounded by the fact that everyone is so specialized in their job duties, that it is difficult for just one person to be responsible for any one issue. There either needs to be more cross-training, or possibly the ability to contract with outside services.
- I appreciate all the hard work. I believe more staff can only make this department even better.

External Survey

As part of the County's commitment to excellence in serving its constituents, the County distributed an online survey to members of the public to benchmark current satisfaction with the Scott County website (**https://www.scottcountyiowa.gov/**) and identify technology preferences for County interaction.

The survey targeted members of the public and results pinpoint the key areas of strength and need for constituent service provision and the website, receiving 18 responses.

Respondents indicated a need for the "ability to interact/do business online", with 72% choosing the "Very Important" option. Roughly 65% of participants selected "Desktop PC / Laptop" when asked to identify their device they primarily use to access the site, followed by "Mobile Device" at 35%.

Highlights of respondent's free form feedback is noted below.

Question Prompts: If you could change one thing about our website, what would it be? Are there other features you wish were on the website? Other feedback.

- Election information not always up to date online, especially calendars.
- (Change) home page format.
- (Change) drop downs, there are too many of them. List on main department webpage and be able to click to get to page i need.
- Beacon parcel searching is very well done compared to other counties.
- Have a strong stance with cybersecurity/information security.

Key Observations

The following section summarizes the key assessment observations and organizes by three core theme areas: ***People, Process*** and ***Technology***. Observations represent a mix of strength areas of the Scott County IT Department, and areas for improvement.

People

1. IT Staff Accolades

Scott County IT received consistent praise from stakeholders for their capabilities. When asked to rate the overall IT service provision in the internal feedback survey, approximately 66% of County staff reported a rating of satisfied or strongly satisfied. Many respondents offered comments praising the IT department and GIS team for both general and ad hoc support. Some comments specifically called out individuals for their thought partnership and project management abilities. Overall, the feedback survey results skew positive and County staff indicate that the IT staff are knowledgeable, highly competent and recognize the capacity strain on IT resources.

2. Desire for IT Thought Partnership

Multiple stakeholders reported that they have greatly appreciated IT's ability to partner with them to brainstorm new ideas or future technology goals in the past and would welcome more support in this area. Currently, IT leadership and staff are tasked with this role on top of their daily work responsibilities. Due to the workload capacity issues discussed further below, the team may benefit from relieving the leadership team of daily, operational, and transactional-based tasks, and devoting more attention to fostering customer relationships at a more strategic and tactical level.

3. IT Capacity Challenges

The IT Department is currently below staff capacity to effectively manage and provide comprehensive services to its customer base – both County Departmental staff and various external agencies. This is evident in both discussions with stakeholders and with the IT staff.

The last major organizational change was the addition of the GIS team – a direct result of the 2005 Strategic Plan. Since this organizational change, the County has also defined new positions to provide technical support to public safety and cyber security. The overall demand for IT support has grown over the years, heightened during the pandemic and will likely continue to increase as technology needs grow. It is apparent that the team have the technical knowledge, ability, and motivation to provide excellent customer service, but are hindered by their workload to effectively move the organization forward.

Crowe's review of the County's current IT organizational structure and staffing as compared to select peers also underscored potential IT capacity challenges at the County. When compared to counties with similar population and IT budgets, Scott County has fewer full-time IT Department employees (FTEs). McHenry County, Illinois and Linn County, Iowa have populations of comparable size to that of Scott County. Similarly, all three (3) counties have IT Department budgets of mostly comparable size and similar budgetary growth between 2019 and 2023. However, in 2023 McHenry and Linn counties employ 26.5 and 25 FTEs respectively, as compared to the current 17 FTEs in the Scott County IT Department. Since 2019, Scott County has employed at least five (5) fewer FTE IT personnel than these peer counties. Simply put, the team needs more staff.

There are several gap areas that if covered through new positions and/or changes to existing positions, will help to alleviate capacity challenges. Gap areas include:

- Lack of IT governance (both organizational and specific to cybersecurity)
- Lack of customer service focus – knowing the extent of their customers, their needs, service

management demand, etc.

- Lack of dedicated project management roles to oversee technology projects alongside the IT customer base
- Lack of administrative position to support clerical duties relating to accounts receivable, accounts payable, and other general office duties
- Limited Help Desk positions to effectively manage customer demand and a lack Help Desk oversight, i.e., missing managerial function to supervise this services area
- Limited opportunities for cross training and/or staff coverage plans

4. Help Desk Challenges

Currently, there are two Help Desk positions within the IT team and only one position is filled. This staff member is responsible for managing the intake of all Help Desk requests (via phone and formal ticketing system) from all customers (County and external agencies), including responding to and routing requests as needed. Stakeholder feedback acknowledged that the Help Desk is doing their best but due to demand, that support is inconsistent. While urgent support needs are fulfilled in a timely manner and seen as a strength area for IT, additional feedback reported delays in support, lack of follow up communication, limited availability of support outside of typical business hours, and an inability to receive the appropriate technology support if the IT subject matter expert for their application was not available.

As a result, customers may circumvent the help desk and contact another member of the IT team to seek assistance and thereby disrupting their workflow to help mitigate an issue.

The County's system for tracking key performance metrics or indicators (KPIs) is in its infancy, including only the number of open tickets, closed tickets, and length of time to close tickets; and requires more robust metrics to help track its service provision and inform management decisions.

Research indicates that Scott County's peers are utilizing (KPIs) to track activity and manage their help desk functions. These include metrics that track system uptime, system downtime (maintenance and outages), length of time to onboard new users, Help Desk satisfaction surveys, and more. Each KPI has a definition, rationale for monitoring, and unit of measurement for which the KPI is tracking.

5. Unclear Roles and Responsibilities

There may be a lack of transparency or confusion on the roles and responsibilities between IT and the Facility Support Services (FSS) when it comes to tech-related facility needs. One prominent example is ownership over both virtual and physical space preparations for public meetings such as for the Board of Supervisor meetings. Without a dedicated point of contact and/or team to manage this process, set up and troubleshooting may fall on the staff present for the meetings and who may not be equipped for self-sufficiency.

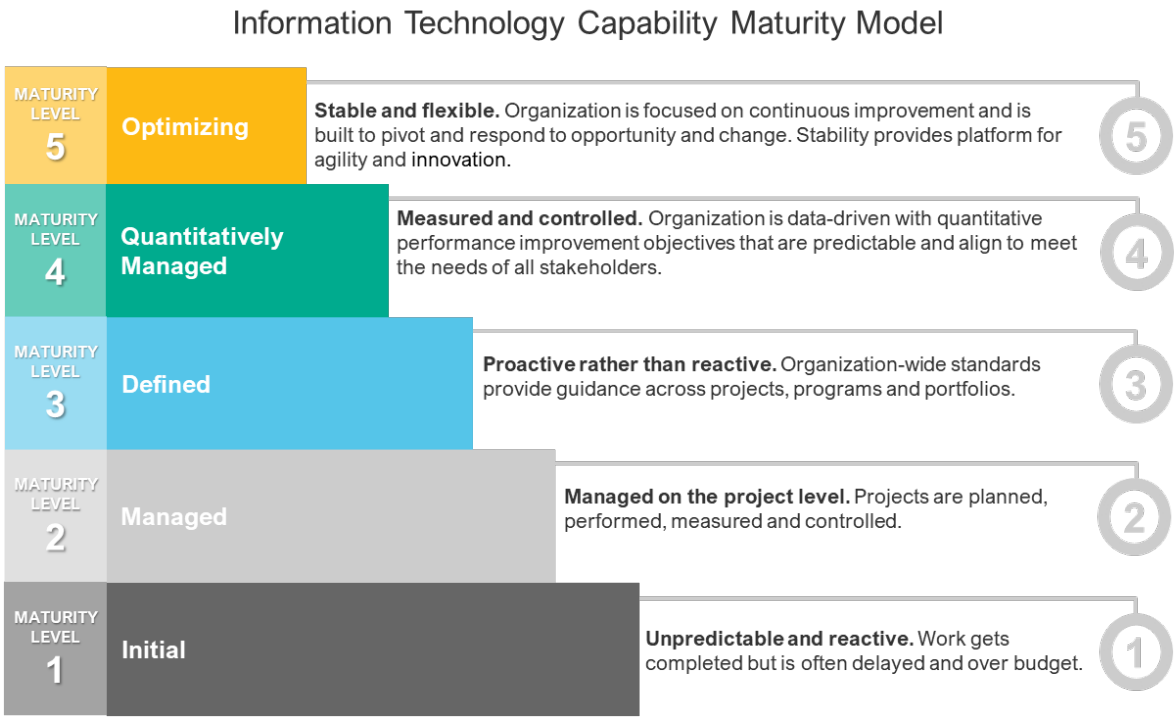
Additionally, there is confusion surrounding who the IT subject matter experts are for Department specific systems, causing differing levels of support.

6. Maturity Level Improvement

The IT team recognizes that to increase its level of service provision, it needs to not only address gap areas, but needs to establish an improved service model. This may require utilizing a performance management tool to assess an organization's maturity level or its effectiveness at performing tasks. Commonly referred to as a capability maturity model (CMM), the tool supports a change model designed to continuously improve workforce practices. Additional benefits include positive return on performance improvement investments, more timely delivery and an increased quality of solutions, more rapid response to issues and risks, exceeding customer expectations, and lower employee turnover.

The following diagram illustrates a typical CMM (there are several industry examples). Based on this assessment, the Scott County IT currently sits between Level 1 and Level 2. To achieve a higher level of maturity, the County will need to establish a series of strategic goals aimed at driving transformational

change.



Process

7. Lack of IT Governance

At present, there is limited to no IT governance established for the County. While the IT team provides a centralized service model, the leadership team has little authority to drive countywide technology decisions. Instead of providing proactive service provision, the IT team is challenged daily, with reacting to the areas of greatest need.

Without a structure in place, the IT team is at risk of not achieving goals set forth in the upcoming IT Strategic Plan. The County has made attempts to implement an IT Governance Board in the past, but with limited success. County participants were generally unengaged and/or unmotivated to participate and the board dissolved. This is likely due to the fact the Board did not have any level of authority over a defined framework or process to plan and implement IT initiatives.

To be successful, a board such as this requires stakeholder buy in, leadership sponsorship, and a governance framework that grants the board mutually beneficial authority for implementing the framework across the County.

8. Opportunities to Improve Communication and Change Management

Departments indicated a need for inter- and intradepartmental communication tools as well as improved communication from the IT Department. Communication tools are currently available (e.g., Teams, Jabber) but are not used consistently across the County or in some cases not known to users. Additionally, multiple stakeholders reported challenges related to system updates and rollouts; a lack of communication about upcoming or recent changes has sometimes caused confusion and/ or service interruption.

This is directly linked to the department's project management gap area. A key element of effective project management is establishing and managing a communications plan. There is evidence of IT employing good communication during some project implementations, but communication is not consistent across all IT-related work.

Communication is also vital for rolling out changes across the organization. The IT team is cognizant that the effective communication is an area of improvement and therefore, is likely a focus area for their strategic planning activities.

9. Challenges Supporting External Customer Base

The County currently supports over a dozen external agencies, providing a wide range of services to customers outside of Scott County departments. While some inter-agency agreements have been formalized, there appears to be a lack of a formal process for providing IT service and support to external agencies through both an executed intergovernmental agreement, and an enforced chargeback structure.

Without a formalized and robust contractual agreement, the County is at risk from a operational, legal and a security perspective. The lack of a system in place to manage external customers, combined with existing staffing capacity issues, is adversely impacting IT's ability to provide a high degree of service provision across its entire customer service base. Every hour spent servicing an external entity is one less to support County departments, placing undo strain on both the staff and customers. In addition, IT lacks detailed KPIs to inform leadership on the level of support demand that exists across its customer base. Without support data, it's difficult for IT to determine the appropriate number of support staff to meet the demand.

10. Limited Awareness of Processes and Procedures

Some Departments indicated a lack of awareness of certain procedures at the County, either due to the

lack of procedure or limited awareness. For example, stakeholders expressed that there is not a formal process to engage with IT to start new initiatives or discuss a new system need. Similarly, stakeholders reported mixed compliance with the service ticking system – some stakeholders use this system while others do not and opt to phone someone in IT.

IT would benefit from developing standard operating procedures for commonly used services such as the Help Desk and creating easy to use tools for disseminating this information. The County has opportunities to leverage existing communication tools to help build awareness for IT-related services and create a central repository for self-service aids.

11. Opportunities to Improve Training and Onboarding

Departments indicated a need for training and onboarding sessions and/or documentation around Department specific systems and tools. In addition, some stakeholders noted that training and onboarding appears limited for some staff including seasonal workers, particularly in key areas of cybersecurity. Multiple stakeholders reported interest in additional training opportunities to learn ways to better use their systems.

This issue is not unique to IT alone, as the County lacks a coordinated process for onboarding across all departments. The issue is similar to observation #5 above, where there is a lack of clarity in ownership, roles and responsibilities between IT and the Human Resources department. There's an opportunity for IT and HR to coordinate on a new onboarding initiative that covers both new full time, part time, seasonal and existing staff to better meet their training needs.

Technology

12. Commitment to Technology Investment

Overall, Scott County demonstrates an ability to appreciate and invest in technology to support its employees and its constituents. Oftentimes, public sector agencies struggle to prioritize technology spending either due to a lack of knowledge or awareness, limited funding, competing priorities on finite resources, or a combination of variables. County leadership and staff alike, understand that harnessing technology enhances their job performance and should be a strength area highlighted in the upcoming strategic plan.

13. Core Technology Challenges

Departments have indicated that technology challenges have impacted their ability to provide service to the public. Challenges include instances of not having enough software licenses for staff, lack of processing power and memory for necessary equipment, and slow system response time. Departments also noted various other core issues including difficulty opening encrypted emails and Outlook calendar functionality limits that result in calendar not updating in a timely manner.

14. Shadow IT

Stakeholder sessions highlighted that some departments have acquired software without consulting with IT in advance, or commonly referred to as shadow IT. The lack of IT governance places IT in a difficult position to implement controls across the County and prevent shadow IT from occurring. The adverse impacts of shadow IT puts the County at risk for several challenges including – adding additional drain on existing staff to support new and unvetted software, software that may not comply with IT's security requirements, duplicative software purchases or software that does not integrate with existing systems, overall inefficient procurement of technology.

Recommendations

Based on the assessment observations noted above, the Crowe team provides recommendations for the County's consideration as summarized below.

1. Process Modernization Efforts to Support Core County Functions

To enhance efficiency and embrace digital transformation, Crowe recommends the County continue their focus on reducing dependencies on legacy and paper processes and transitioning towards process modernization including supporting more online solutions. There are key, in-progress initiatives that support these efforts in progress today, and other priorities that were identified by stakeholders and the IT Department throughout engagement and input opportunities.

Examples include the following:

- Online bill payment: Stakeholders have expressed interest in implementing County-wide online bill payment to streamline transactions and provide convenience to County customers.
- Cloud-based electronic file storage: The County may consider continued prioritization of the OnBase project to improve the availability and online accessibility of documentation, enabling swift and reliable access to essential information.
- Phone enhancements: Improvements to the County's phone capabilities will be made to enhance communication channels and provide exceptional customer service.
- Website enhancements: Address accessibility and overall process for departmental updates to manage content expiration and enhance the user experience. A growing trend for public sector agencies is to create a digital citizen experience via interactive websites and mobile apps.

These strategic initiatives are examples of projects that will drive progress, modernize County operations, and foster an environment of technological advancement to deliver services 24/7, as constituents expect. They also drive down service delivery costs over time. Key variables that will drive successful process modernization, includes facilitating a thorough implementation plan including a communications plan.

2. Re-evaluate and Re-assess IT Department Structure and Staffing Levels

Due to the capacity challenges, the IT team is experiencing a workload imbalance across roles. Staff focus much of their time on day-to-day transactional workload and/or managing daily urgent needs, leaving limited time on strategic and tactical bodies of work. The following diagram summarizes the ideal delineation of business responsibilities in a functional (or hierarchical) organizational structure similar to IT:

Functional (Hierarchical) Model of Business Responsibilities:

Lead: Executive and senior leaders, focus on overall organizational health – people, process, and technology through plan implementation (e.g., strategy, growth, transformation, etc.)

Manage: Functional managers, business/work product owners. Focus on managing the people, process, and technology responsible for operationalizing organizational plans.

Do: Team members, subject matter experts, and process owners. Focus on executing organizational plans (i.e., daily work product).

IT may want to conduct a deeper dive assessment to re-evaluate the current IT department structure to determine the best future state model. This entails reviewing all current positions, roles and responsibilities and assess if changes are necessary to better meet business needs. The business need is primarily driven by the IT customer base. Addressing the evolution of the IT team is a viable strategic initiative to build out in the strategic plan.

This process may begin with initially building roles dedicated to key functional gap areas. This may result in changes in existing roles or the creation of new roles (and potentially additional full-time positions), including the following:

- Prioritize filling vacant positions
- Establish a project management office (PMO), with dedicated project management roles and a business analysis role
- Establish an Office Administration position to support typical administrative and clerical duties.
- Re-allocate network security administration duties, potentially through creating an additional position, to rebalance workload and elevate the dedicated security role
- Expand Help Desk capacity (see #6 below for further details)
- Create an oversight role to manage the Help Desk process (e.g., supervisor or managerial level)
- To support the change process, conduct a compensation analysis that aligns to roles and any proposed changes to positions. This will also support staff recruitment, staff retention, and alleviate salary compression

3. Formalize IT Support for External Agencies

The County currently does not have a definitive listing of external IT customers or IT services being provided. Some external agencies have formalized contractual fees and services with the County, whereas other agencies do not. The demand for external IT customer support is expected to increase with the merger of EMS with the County, as well as other smaller municipalities and city's looking to contract parts of their IT functions.

Based on increased demand and strategic planning implications, it is recommended that the County do a full review of all external agencies relationships and execute IGAs or contracts that formally establish the working relationship moving forward. IGAs or contracts will allow the County to execute the following:

- Set and manage expectations with its external client base,
- Develop an appropriate chargeback structure per client agency based on the service level, and
- Establish governance to help manage the demand on the IT staff.

From a relationship management perspective, the County may also want to consider identifying a dedicated point of contact(s) with external customer agencies. Identifying and determining a definitive list of all IT customers, internal to the County and external, as well as the services provided will be a key input for identifying strategic initiatives that support service management.

4. Improve Communication Processes and Tools

Successful execution of IT initiatives requires strong collaboration and open communication across departments and teams. Regular and predictable process updates, feedback sessions, and well-established mechanisms for sharing information, will support the County's goals to ensure transparency, support successful service provisions, and ensure alignment of priorities.

Specifically, the County may consider assessing all in-use tools to determine whether there is overlap or redundancy in capabilities. For example, stakeholder sessions uncovered that some County staff may use Microsoft Teams or Jabber, may have access to both programs, or were not aware if they had access to

either.

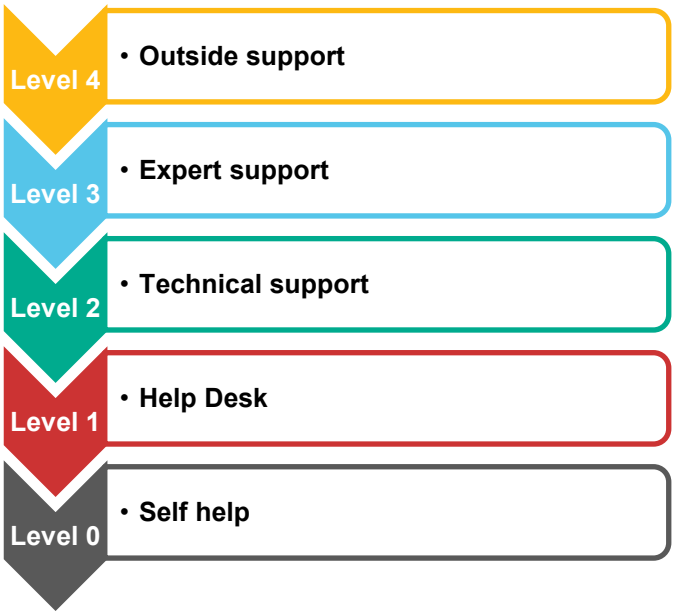
Separately, we recommend that the County establish a communications plan and update clear protocols for communication around technology rollouts or other updates that will impact County users. For example, the County may consider implementation any or all the following best practice communication elements:

- Initial Announcement: The County can send an initial announcement email to the entire team, detailing the purpose and objectives of the system update. This email will provide a broad overview of the changes and their anticipated benefits. This announcement should be sent with advance notice.
- Weekly Updates: Following the initial announcement, the County will provide weekly updates to keep everyone informed about the progress of the system update. These updates could be shared via email or on the intranet site, and will highlight any significant developments, milestones, or adjustments made during the implementation process.
- Q&A Sessions: To address any questions or concerns that may arise, the County will schedule interactive Q&A sessions. These sessions will allow team members to seek clarification or request additional information about the system update. We encourage everyone to actively participate and engage in these sessions, as they will contribute to a smoother transition.
- Final Communication: Once the system update is successfully implemented, the County can send a final communication to inform users of the completion and any outstanding tasks or actions required on their part. This message can also reiterate the benefits of the new system and express the County's appreciation for everyone's cooperation throughout the process.

5. Establish Help Desk Structure & Build Capacity

To mitigate issues impacting the current Help Desk, the County may look to implement a tiered Help Desk model to provide more comprehensive IT support. A tiered approach provides a standard and formalized process for addressing support requests.

The following diagram outlines a typical tiered support structure:



As part of a tiered Help Desk structure, the County should expand and enhance its current Level 0 or self-service options to achieve quick results for alleviating Help Desk capacity issues by reducing support demand. Level 0 tier options may include support through implementing a chatbot, self-service portal, self-help knowledge repository, and user discussion boards or forums through an existing communications platform such as Teams.

Establishing effective Level 0 support is a journey as customers have varying levels of technical proficiency. One way to support end users is to develop easy-to-follow training manuals or how-to guides, especially for how to navigate Help Desk support and for the top trends in troubleshooting that may be universal with customers or targeted to specific departments.

Another option to immediately address support demand and augment staff capacity is to temporarily outsource a portion of support through contractors (e.g., independent, on-demand, or through vendor service agreements). An example might be to provide coverage for outside of normal business hours or out of office coverage.

6. Advance Maturity Level via IT Service Management Model

Building off all recommendations highlighted above, the Scott County IT team should consider adopting an IT Service Management Model (ITSM) to advance its level of maturity. The ITSM model is a system for delivering end-to-end service management with a customer-centric focus. There are various popular approaches to ITSM, including ITIL and DevOps. ITIL focuses on aligning service practices with business needs and establishes practice standards, while DevOps focuses on delivering service through agile and lean practices such as continuous improvement. Both approaches are not mutually exclusive and implementing an ITSM model boasts several benefits including enhanced collaboration, business process improvements, and an overall increase in the quality-of-service provision.

Next Steps

The following section details proposed next steps based on the key observations and recommendations of the assessment.

Establish Priorities

- As part of upcoming strategic plan activities, Crowe and Scott County will continue to prioritize areas of improvement based on their impact to strategic objectives, risk levels, and urgency.
- This assessment lists observations and associated recommendations in prior sections; however, like all organizations Scott County has limited resources and will need to determine which assessment areas are most important to the County.

Finalize Strategic Plan

- Observations from this assessment will directly tie to proposed initiatives in the Strategic Plan. The goal of the assessment was in part to uncover areas of focus for the strategic plan.
- Crowe will work with the County to understand priority areas of improvement from the current stat assessment.
- As of the time of this report, the County and Crowe are on track to complete a first draft of the Strategic Plan by end of July 2023, with a goal of finalizing the plan document by the end of August 2023.

Develop Supporting Implementation Plan(s)

- Should Scott County choose to act on any recommendations listed above, the County should develop a detailed action plan for each identified area of improvement.
- Plans can continue specific goals, strategic initiatives, timelines, and other implementation level concerns. The objective is to provide a clear roadmap for implementation of strategic plan items.
- Typically, implementation considerations are not fully addressed in a strategic plan and would live outside of the County's publicly facing Strategic Plan documentation.

Appendix A: Stakeholder Meeting Schedule Log

Please see below for the listing of Departments and individuals who were invited to participate in the Scott County stakeholder focus group sessions.

Focus Group #	Date	Department	Attendee Name	Job Title
1	Tuesday, February 21, 2023	Planning and Development	Chris Mathias	Planning & Development Director
		Planning and Development	Alan Silas	Planning & Development Specialist
		County Assessor	Tom McManus	Assessor
		County Assessor	John Kelly	Deputy Assessor
		County Assessor	Beth Haney	Office Manager
2	Tuesday, February 21, 2023	Conservation	Roger Kean	Conservation Director
		Conservation	Nathan Unsworth	Deputy Director
		Conservation	Amber Sullivan	Senior Administrative Assistant
		Conservation	Josh Bowlin	Golf Pro Manager
		Conservation	JB Graham	Park Manger
		Conservation	Dave Ong	Park Manager
		Conservation	Dave Murcia	Naturalist Program Manager
		Conservation	Ben Leture	Golf Maintenance Technician
		Conservation	Susan Laures	Pioneer Village Site Coordinator
3	Tuesday, February 21, 2023	Secondary Roads	Angie Kersten	County Engineer
		Secondary Roads	Elliot Pennock	Assistant County Engineer
		Secondary Roads	Tara Youngers	Senior Administrative Assistant
		Secondary Roads	Lisa Mullen	Senior Office Assistant
		Secondary Roads	Lance Bell	Secondary Roads Superintendent
		Secondary Roads	Wayne Ryckaert	Mechanic Supervisor
4	Tuesday, February 21, 2023	Treasurer's Office	Tony Knobbe	Treasurer
		Treasurer's Office	Barb Vance	Operations Manager - Treasurer
		Treasurer's Office	Tracy Carson	Motor Vehicle Supervisor

Focus Group #	Date	Department	Attendee Name	Job Title
		Treasurer's Office	Mary Jane Holmlund	County General Store Manager
		Treasurer's Office	Ann Wegner	Tax Accounting Specialist
		Treasurer's Office	Megan Petersen	Finance Manager
5	Tuesday, February 21, 2023	EMA (Emergency Management Agency)	Brian Payne	Emergency Management Deputy Coordinator
		EMA (Emergency Management Agency)	Jim Hawkes	Emergency Management Planning Specialist
		EMA (Emergency Management Agency)	Molly McKee	Emergency Management Support Specialist
		SECC / EMA	Dave Donovan	SECC/EMA Director
		SECC (Scott Emergency Communications Center)	Tracey Sanders	Deputy SECC Director
		SECC (Scott Emergency Communications Center)	Todd Malone	Quality Assurance Specialist
		SECC (Scott Emergency Communications Center)	Michelle Campbell	Technology Systems Specialist - SECC
		SECC (Scott Emergency Communications Center)	Stacey Bollinger	Technology Systems Specialist - SECC
		SECC (Scott Emergency Communications Center)	Courtney Pershall	Training Specialist
6	Wednesday, February 22, 2023	Auditor's Office	Kerri Tompkins	Auditor
		Auditor's Office	Wes Rostenbach	Accounting & Business Manager
		Auditor's Office	Pete Kurylo	Tax Manager
		Auditor's Office	James Martin	Elections Manager
		Auditor's Office	Angie Calvert	Finance Generalist
		Auditor's Office	Bryan Nash	Elections Specialist
		Recorder's Office	Rita Vargas	Recorder
		Recorder's Office	Katie Glenn	Deputy Recorder
		Recorder's Office	Sara Skelton	Office Administrator
7	Wednesday, February 22, 2023	Community Services	Lori Elam	Mental Health Region CEO
		Community Services	Cheri Sexton	Senior Administrative Assistant
		Community Services	Wade Stierwalt	Case Aide Supervisor/Coord Disability Services

Focus Group #	Date	Department	Attendee Name	Job Title
		Community Services	John Rushton	Coordinator of Disability Srvs
		Community Services	Ben Enlow	VA Director/Case Aide
		YJRC (Youth Justice and Rehabilitation Center)	Jeremy Kaiser	Director
		YJRC (Youth Justice and Rehabilitation Center)	Keith Sutton	Shift Supervisor
		YJRC (Youth Justice and Rehabilitation Center)	Neika Harms	Shift Supervisor
		YJRC (Youth Justice and Rehabilitation Center)	Pat Jones	Shift Supervisor
8	Wednesday, February 22, 2023	Health Department	Amy Thoreson	Health Director
		Health Department	Brooke Barnes	Deputy Health Director
		Health Department	Lori Steiner	Clinical Services Manager
		Health Department	Tiffany Peterson	Community Health Manager
		Health Department	Briana Boswell	Family Health Manager
		Health Department	Lashon Moore	Clinical Services Specialist
		Health Department	Andy Swartz	Environmental Health Manager
		Health Department	Leslie Ronnebeck	Correctional Health Manager
9	Wednesday, February 22, 2023	Board of Supervisors	Mahesh Sharma	County Administrator
		Board of Supervisors	Ken Beck	Supervisor, Chair
		Board of Supervisors	John Maxwell	Supervisor, Vice Chair
		Board of Supervisors	Jean Dickson	Supervisor
		Board of Supervisors	Ross Paustian	Supervisor
		Board of Supervisors	Rita Rawson	Supervisor
10	Wednesday, February 22, 2023	HR	Vanessa Wierman	HR Director
		HR	Andrea Ahmann	HR Generalist
		Administration	Mahesh Sharma	County Administrator
		Administration	David Farmer	Budget & Admin Services Director

Focus Group #	Date	Department	Attendee Name	Job Title
		Administration	Amanda Orr	ERP & Budget Analyst
		FSS (Facility and Support Services)	Tammy Speidel	Facility & Support Services Director
		FSS (Facility and Support Services)	Chris Still	Facility Maintenance Manager
		FSS (Facility and Support Services)	Daniel Mora	Custodial Supervisor
11	Wednesday, February 22, 2023	Health Department	Anna Copp	Community Tobacco Consultant
		Health Department	Katie DeLaRosa	Disease Intervention Specialist
		Health Department	Jack Hoskins	Environmental Health Specialist
		Health Department	Brenda Schwarz	Senior Administrative Assistant
		Community Services	Dan Kogut	Senior Office Assistant
		Community Services	Beth Stoffers	Senior Office Assistant
		Community Services	Jennifer Ybarra	Office Assistant
		YJRC (Youth Justice and Rehabilitation Center)	Steve Harris	Youth Counselor
		YJRC (Youth Justice and Rehabilitation Center)	Sabri Goxhufi	Youth Counselor
12	Thursday, February 23, 2023	Secondary Roads	Heather Whittaker	Parts and Inventory Clerk
		Secondary Roads	Brian Burkholder	Roadside Vegetation Specialist
		Secondary Roads	Keaton Hollenback	Engineering Technician
		Conservation	Mary Wells	Administrative Assistant
		Conservation	Josh Sabin	Park Ranger
		Conservation	Tim Hobkirk	Park Maintenance Crew Leader
		FSS (Facility and Support Services)	Samantha Norris	Office Assistant
		FSS (Facility and Support Services)	Darcy Bohling	Office Assistant
		FSS (Facility and Support Services)	Daniel Reed	Electronic Systems Technician
		FSS (Facility and Support Services)	Brandon Kelsey	Facility Maintenance Worker
13	Thursday, February 23,	County Assessor	Beth Elmore	Clerk
		County Assessor	Nekoda Rowell	Appraiser

Focus Group #	Date	Department	Attendee Name	Job Title
	2023	County Assessor	Amber Bentley	Clerk
		County Assessor	Josie Havercamp	Appraiser
		Auditor's Office	Kelly Lutz	Platroom Specialist
		Auditor's Office	Anna Speidel	Senior Elections Clerk
		Recorder's Office	Patricia Hinners	Multi Services Clerk
		Recorder's Office	Leslie Lopez	Vitals Records Specialist
		Planning and Development	Ann Martin	Building Inspector
		Planning and Development	Caitie Leighton	Senior Office Assistant
		Administration	Renee Luze-Johnson	Purchasing Specialist
		Administration	Debbie Dierkes	Executive Assistant
14	Thursday, February 23, 2023	DHS (State of Iowa Department of Human Services)	Nicole Uthoff	Income Maintenance Administrator
		DHS (State of Iowa Department of Human Services)	Tiffany Chapman	HHS IT
		City of Davenport Assessor	Nick VanCamp	Assessor
		City of Davenport Assessor	Katrina Loving	Chief Deputy Assessor
		City of Davenport Assessor	Marti Bugh	Office Manager
		Waste Commission of Scott County	Kathy Morris	Director
		Waste Commission of Scott County	Bobbi Draheim	Administrative Services Coordinator
		Bi-State Regional Commission	Denise Bulat	Executive Director
		State of Iowa 7th Judicial Branch (Courts)	Dave Tristan	Assistant District Court Administrator
		State of Iowa 7th Judicial Branch (Courts)	Denny McCallum	Judicial Specialist IV | Courtroom Technology Specialist
		State of Iowa 7th Judicial Branch (Courts)	Andrea Bernard	Scott County Clerk of Court
15	Thursday, February 23, 2023	IT	Jake Altenhofen	Network Systems Administrator
		IT	Steve Jones	Network Systems Administrator
		IT	Jeff Ward	Network Systems Administrator

Focus Group #	Date	Department	Attendee Name	Job Title
		IT	Darrell Inskeep	GIS Analyst
		IT	Mitch Tollerud	Webmaster
		IT	Justin Reaves	Desktop Support Technician
		IT	Matt Wrage	Information Security Analyst
		IT	Carolyn Smith	Programmer/Analyst
		IT	Jeremy King	Network Systems Administrator - Public Safety
		IT	Stephanie Macuga	Senior Programmer/Analyst
16	Thursday, February 23, 2023	County Attorney's Office	Kelly Cunningham	County Attorney
		County Attorney's Office	Steve Berger	First Assistant Attorney
		County Attorney's Office	Kathy Walsh	Office Administrator
		County Attorney's Office	Nick Claussen	Digital Evidence Specialist
17	Thursday, February 23, 2023	Sheriff's Office	Tim Lane	Sheriff
		Sheriff's Office	Shawn Roth	Chief Deputy
		Sheriff's Office	Bryce Schmidt	Chief Deputy
		Sheriff's Office	Pam Brown	Office Administrator
		Sheriff's Office	Amy Ong	Administrative Assistant
		Sheriff's Office	Stefanie Bush	Asst Jail Administrator
		Sheriff's Office	Jon Ronnebeck	Corrections Lieutenant
		Sheriff's Office	Joe Caffery	Captain
		Sheriff's Office	Tom Leonard	Lieutenant - Sheriff
		Sheriff's Office	Tom Gibbs	Lieutenant - Sheriff
		Sheriff's Office	Dan Furlong	Lieutenant - Sheriff
		Sheriff's Office	Sean Thompson	Lieutenant - Sheriff
18	Friday, February 24, 2023	Medic EMS	Linda Frederiksen	Director
		Medic EMS	Paul Andorf	unofficial title - Paramedic / lead IT liaison
	Friday, February	Sheriff's Office	Ethan Roling	Detective

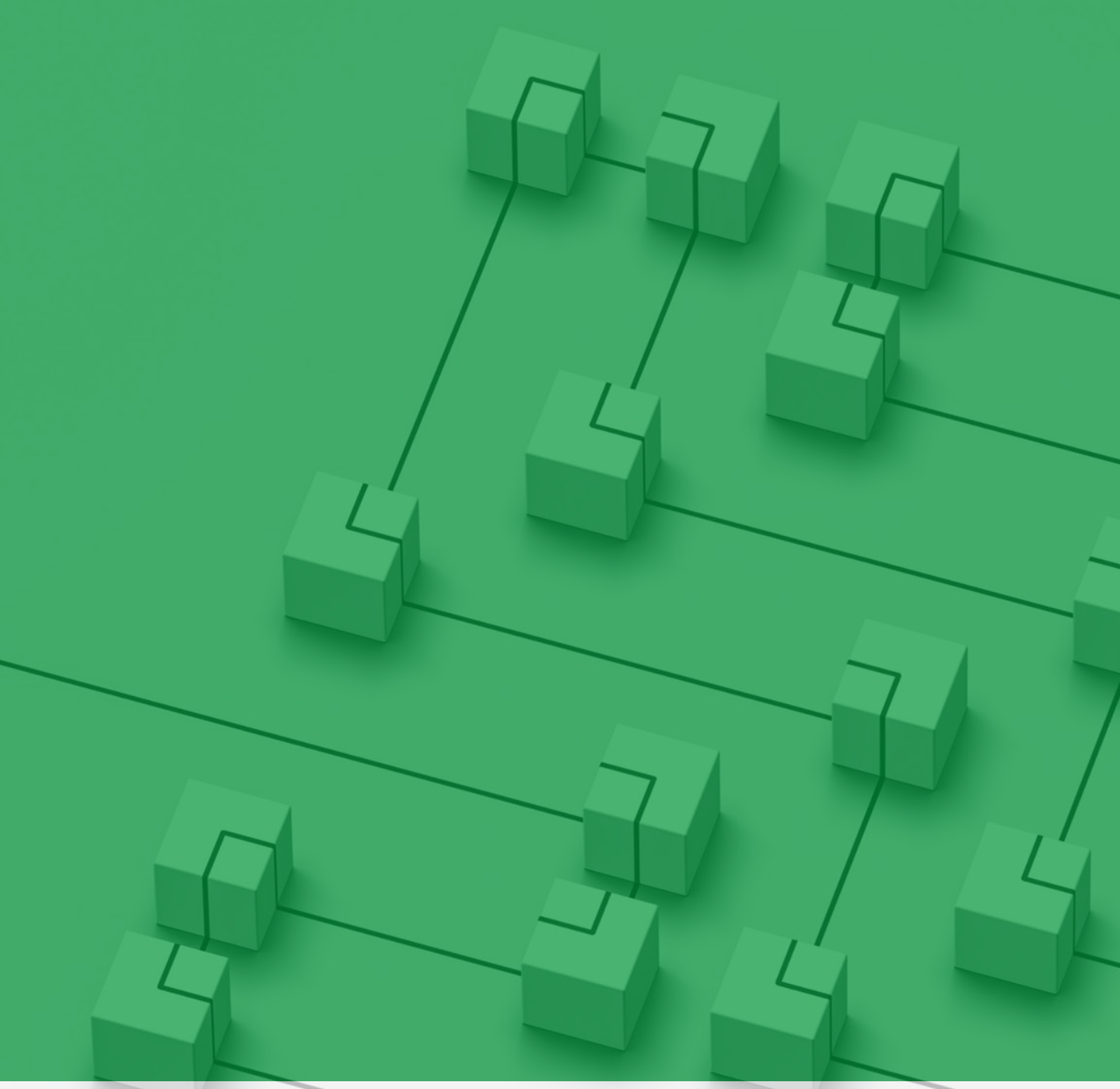
Focus Group #	Date	Department	Attendee Name	Job Title
19	24, 2023	Sheriff's Office	Dan Grafton	Deputy Sheriff
		County Attorney's Office	Caleb Copley	Senior Assistant Attorney
		County Attorney's Office	Nathan Repp	Senior Assistant Attorney
		County Attorney's Office	Ashley Jahns	Paralegal
		County Attorney's Office	Lori Thompson	Paralegal
20	Friday, February 24, 2023	IT	Matt Hirst	Information Technology Director
		IT	John Heim	Programmer/Analyst Manager
		IT	Sam Samara	Network Infrastructure Manager
		IT	Ray Weiser	GIS Manager

Scott County, Iowa

Technology Strategic Plan

2023 – 2028 | December 2023

Contents



01 Introduction

01 Introduction

In 2023, the Scott County of Iowa, ('the County' or 'IT') embarked on an important mission: to outline the future of technology investment and service provision in our community. This collaborative strategic planning effort involved over 150 County stakeholders and included participation from all County departments, information technology personnel, members of the Crowe LLP Public Sector Consulting team ('Crowe'), and the public.

This effort resulted in this **Technology Strategic Plan.** The Plan outlines the County's in-progress and future technology priorities over the next five years, in addition to outlining the County's planned actions to advance its strategy leveraging technology and advancing its capability maturity through an IT Service Management Model. This Technology Strategic Plan also provides a snapshot of the County's recent accomplishments and demonstrates where the County will continue to build on past success.

Like all strategic planning efforts at the County, this Technology Strategic Plan is aligned with Scott County's philosophy and core value for government service: P.R.I.D.E as illustrated below. We believe this planning effort and resulting Technology Strategic Plan advances these values and will continue to drive innovation in our community.

Thank you for your support as we work together to advance the initiatives and strategic vision outlined in the subsequent pages and continue to invest in the future of Scott County.

Scott County Government
Core Values – We serve Citizens with:

P Professionalism – Doing it Right

R Responsiveness – Doing it Now

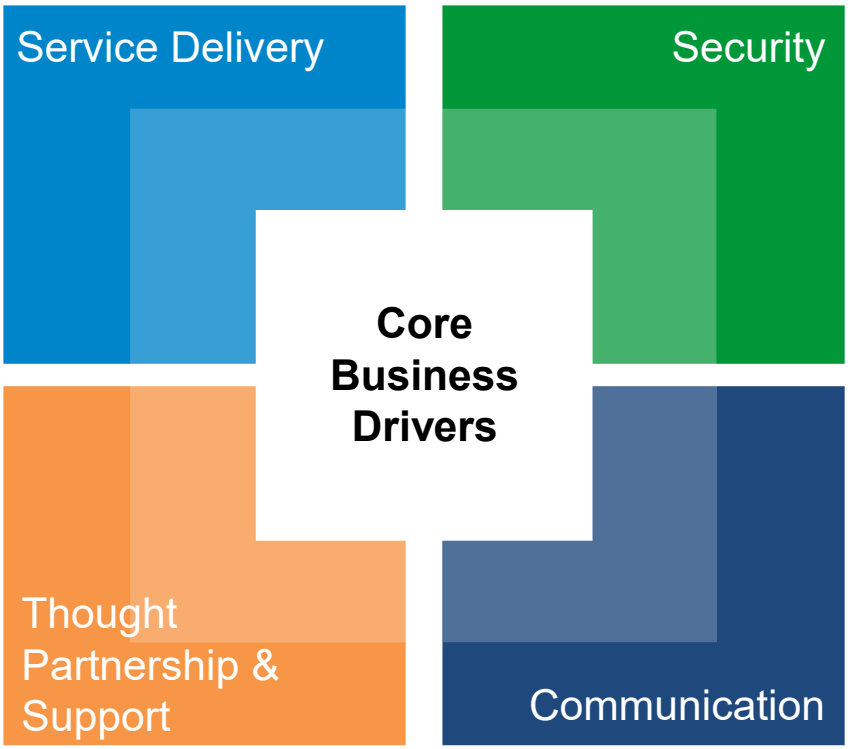
I Involvement – Doing it Together

D Dedication – Doing it with Commitment

E Excellence – Doing it Well

01 Mission & Business Drivers

Mission: *To provide dependable, effective, efficient, and secure technology to Countywide partners. Our team will establish valuable relationships with stakeholders to identify, implement, and maintain innovative technology solutions to address business process needs.*



- **Service Delivery**: Support and sustain a high-level of service delivery, including continuous improvements to systems and software for County partners.
- **Security:** Maintain a highly secure County technology environment.
- **Communication:** Provide effective, clear communication to County partners throughout the lifecycle of service delivery.
- **Thought Partnership and Support:** Foster cooperation and collaboration with County partners to understand and support current and future technology needs.

01 Methodology

The County's strategic planning journey followed a multi-step approach as outlined below.

ENGAGE

Engage stakeholders through focus groups, feedback surveys, and visioning sessions.

ASSESS

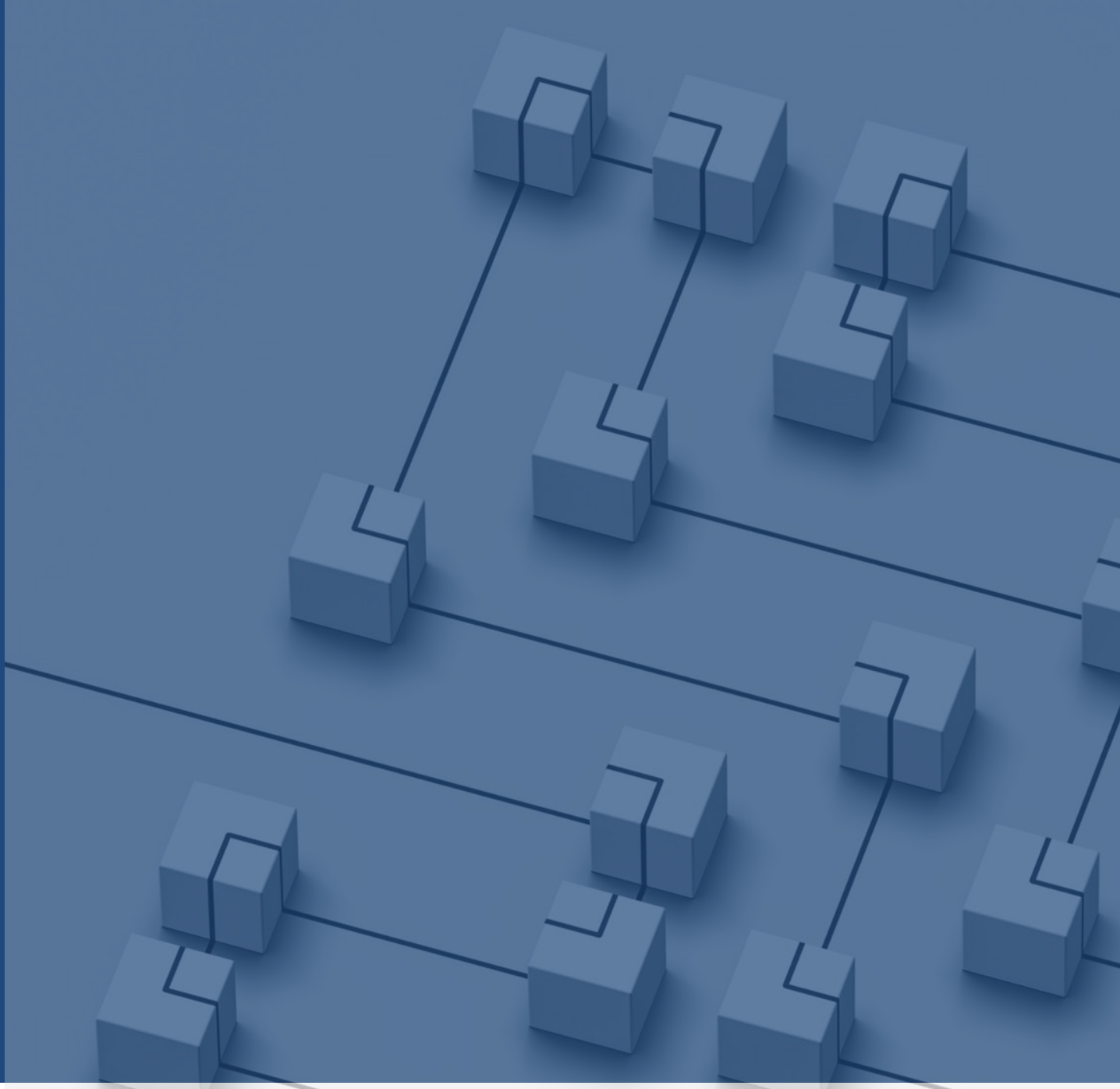
Assess current state to understand both strength areas and areas for improvement; obtain peer and industry insights.

IDEATE

Identify key themes for exploration, key initiatives, and establish strategic priorities.

DEVELOP

The culmination of planning activities – create the final strategic plan document.

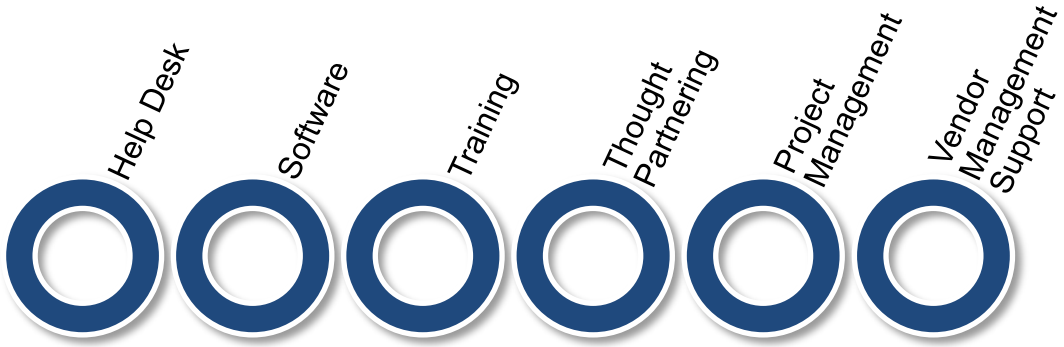


02 Engagement & Assessment

02 Stakeholder Engagement

Intentional, collaborative stakeholder involvement was a critical component of developing this Technology Strategic Plan. Over the course of this planning effort, there were more than 20 focus group sessions with County staff and other relevant external County partners across 26 Departments and Offices. These sessions included more than 150 stakeholders to better understand unique Department or Office-level technology needs, future technology goals, experience with IT service provision, and other County-related technology strengths and challenges.

In addition to understanding current needs for both Departments and Offices, participants were encouraged to share future technological priorities and goals. Sessions also included discussion on strengths and weaknesses of key technology support areas including:



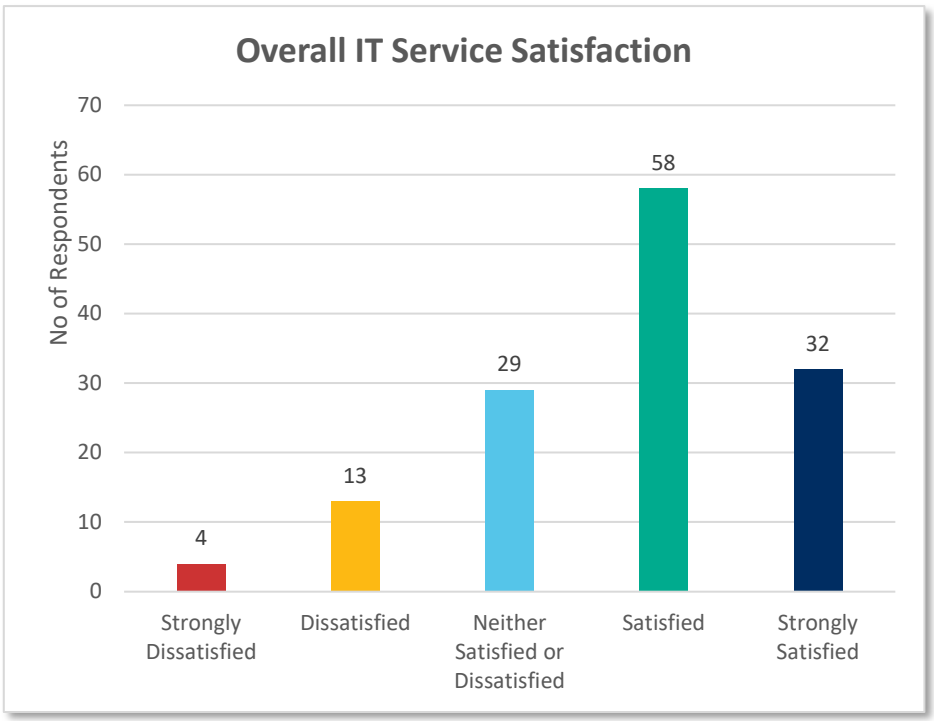
IT Department leadership also participated in subsequent deep-dive, focus group sessions to discuss current technology initiatives and future strategic technology priorities for the Department.

02 Stakeholder Engagement

As part of the County's commitment to excellence in customer service and this strategic planning effort, the County distributed an online survey to benchmark current satisfaction with the IT service provision to County Staff and identify any potential areas for improvement. The survey did not target a select group of County Staff, allowing all levels and departments to provide feedback on areas of strength with the IT Department while also highlighting future room for growth. The County received 175 survey responses.

In the survey, respondents were asked to report their overall level of satisfaction with IT service provision and their level of satisfaction with specific IT service areas. Approximately 66% of County staff reported a rating of Satisfied or Strongly Satisfied with the County's IT service provisions.

Specific areas with the highest satisfaction level were knowledge / expertise and communication (i.e., strengths), while specific areas with the lowest satisfaction level (i.e., areas for improvement) were resource capacity, training, and staff accessibility.



02 Current State Assessment

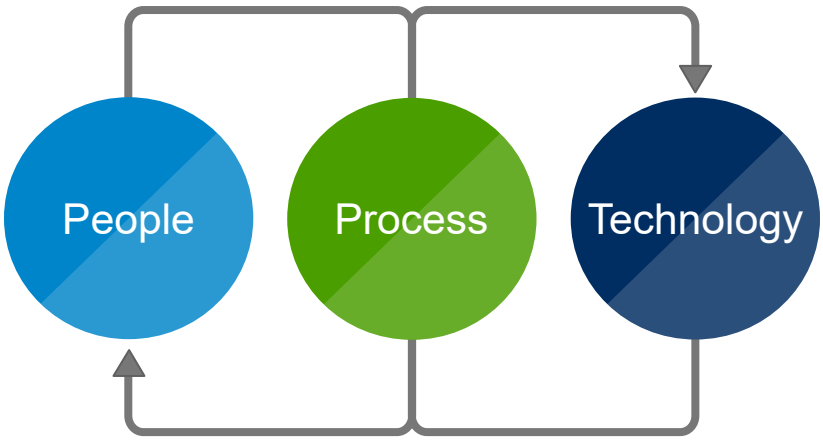
As part of this strategic planning effort, and to build upon stakeholder engagement feedback, the Crowe team conducted a technology assessment, including a cybersecurity assessment and an assessment of the County's current state of the IT Department function as a mechanism to benchmark present-day technology operations and strategy at the County.

Assessment activities included extensive review of existing County documentation, peer research and comparative analysis, and interviews with key County stakeholders.

The cybersecurity domains assessed include the following:

- Information Security Governance
- Third Party Management
- Data Protection
- Employee Management
- Logical Security
- Physical Security
- Threat and Vulnerability Management
- Secure Change Management
- Secure Configuration Management
- IT Operations
- Business Continuity Management
- Secure Development
- Logging and Monitoring
- Compliance

The assessment resulted in a series of observations and recommendations that are categorized in three core theme areas: ***People, Process*** and ***Technology***.



Select assessment observations are included within this plan and represent a mix of strength areas and focus areas for improvement. This plan seeks to address and build upon the current state observations through its strategic initiatives.

02 Current State Assessment

People

Key assessment observation areas relating to People include:

- Knowledgeable and competent IT resources
- Desire for increased thought partnership
- Capacity challenges
- Help desk challenges
- Unclear roles and responsibilities, lack of appropriate security authority
- Service level maturity level improvement needs

County stakeholders are generally satisfied with the overall IT service provision and appreciate the IT team's ability to be a valued thought partner. However, the IT team is below staff capacity to effectively manage and provide comprehensive services to its customer base. This is compounded by a continued increase in demand for IT support.

The IT Department recognizes that to increase its level of service provision, the County will seek to increase staffing, address gap areas, and establish an improved service model. This may require utilizing a performance management tool to assess an organization's maturity level or its effectiveness at performing tasks.

Process

Key assessment observation areas relating to Process include:

- Lack of governance
- Opportunities to improve communication and change management
- External customer support challenges
- Limited awareness of processes and procedures, and process circumvention
- Limited policies to define standards and enforce controls
- Training and onboarding needs

The current state assessment highlighted certain opportunities for improvement, including improved IT governance, proactive planning and communication related to system updates and rollouts, and opportunities for additional training, onboarding sessions, and/or documentation around Department or Office-specific systems and tools.

02 Current State Assessment

(Process, continued from previous page)

To enhance efficiency and embrace digital transformation, the County looks forward to continued reductions of dependencies on legacy and paper processes and transitioning towards process modernization including supporting more online solutions.

Technology

Key assessment observation areas relating to Technology include:

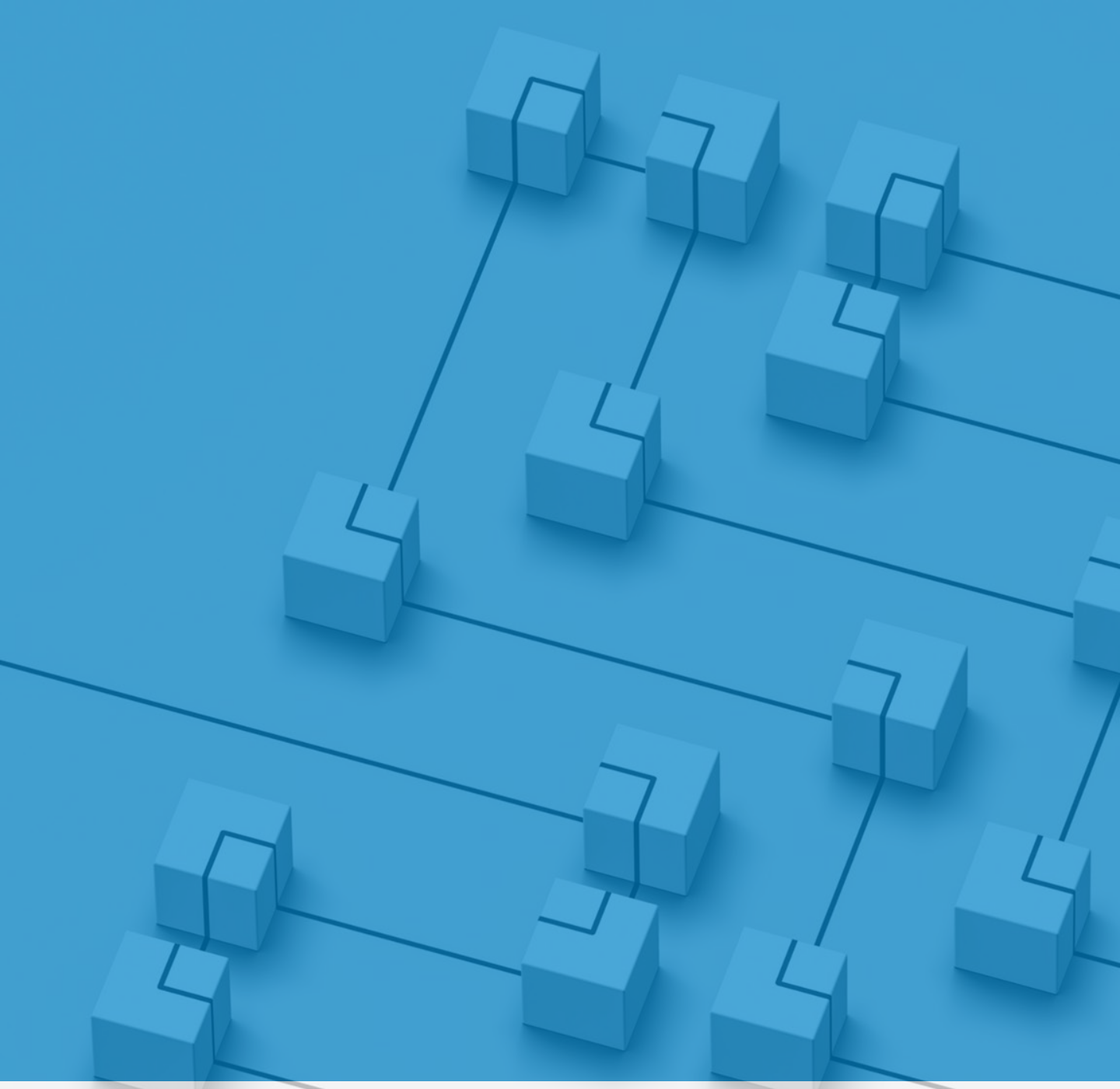
- A commitment to investing in technology
- Challenges with core technology
- Underutilized technology solutions
- Presence of shadow IT or the independent acquisition of technology without a coordinated approach with the IT team

Stakeholder feedback highlights Scott County's ability to appreciate and invest in technology to support its employees and its constituents. County leadership and staff understand that harnessing technology enhances their job performance. Yet technology challenges add strain on both people and processes and put the County at risk of non-compliance and lower return on investment due to inefficient procurement of technology.

Recommendations

Crowe developed the following assessment recommendations for the County's considerations:

- Process modernization efforts to support core county functions
- Re-evaluate and re-assess IT Department structure and staffing levels
- Formalize IT support for external agencies
- Improve communications processes and tools
- Establish help desk structure and build capacity
- Advance maturity level via IT Service Management model
- Enhance information security program
- Develop and refine IT governance structure
- Develop and refine incident response and disaster recovery plans



03 Accomplishments

03 Accomplishments Applications

The following pages highlights the County's ***recent technology accomplishments*** across the core IT functional areas.

Upgrades to Enterprise and Custom Developed Applications

In addition to supporting offices and departments in their software needs, the Applications team ensures all systems are up-to-date, not only in software versions but back-end systems. Working closely with the Infrastructure team, the Applications team has worked to upgrade enterprise and custom-developed systems and migrate these applications to newer database and operating systems environments. These upgrades involve multiple teams and stakeholder testing to ensure seamless delivery of services to Scott County residents.

Custom Application Development for Environmental Health Inspections

Expanding on a current custom application that has been in use for nearly 20 years, the Applications team worked to bring in additional functionality to support the state inspection processes for pools, tattoo, and tanning establishments within Scott, Clinton, and Muscatine Counties.

These new additions to the custom application also leverage the County's OnBase solution and enable inspectors to create the required inspection forms on-site with the customer and then email those documents directly to the owner. Documents are simultaneously saved to the County's OnBase Electronic Content Management system for archival purposes.

Paperless Accounts Payable Workflows within OnBase

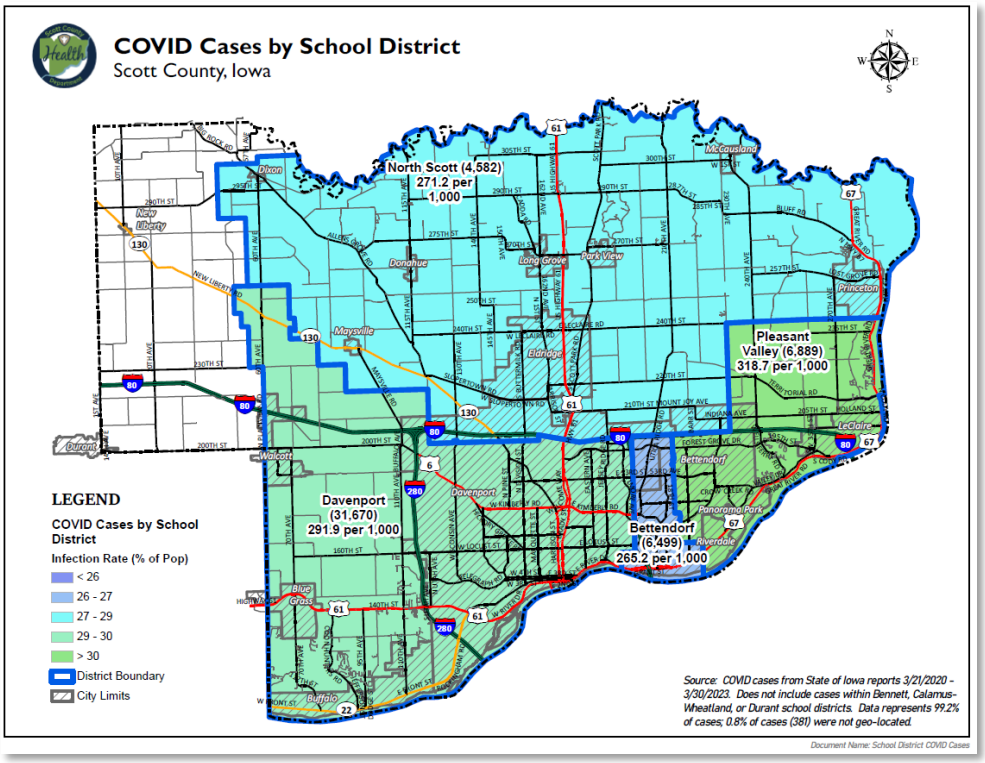
Working with the Auditor's Office and the Administration teams, the Applications team developed workflows to support a paperless Accounts Payable invoice solution. By leveraging the OnBase Electronic Content Management solution and integration to the county's ERP (Enterprise Resource Planning) software, Tyler Technologies New World ERP, departments can now scan their invoice documents to OnBase and add approvals to those documents to verify their accuracy.

Integrating ERP and OnBase enables keyword (index value) verification and update to ensure that documents can be found when searching ERP. Workflows at the Accounts Payable Specialist level in the Auditor's Office allow teams to reject or approve images based on quality and accuracy. In the long term, this project will reduce the file cabinet footprint within the Auditor's Office and prevent teams from having to save seven (7) years of paper invoices for audit purposes.

03 Accomplishments Web / GIS

COVID Case Tracking and Reporting

Throughout the COVID-19 pandemic, local governments including Scott County responded to a myriad of case tracking and reporting challenges. Scott County GIS supported the Health Department by processing and automating federal and state data and analysis. In addition to countywide counts used for general epidemiology, a web application with derivative maps were produced and updated weekly for the local school districts. These maps (sample below) helped inform school response and policy decisions.



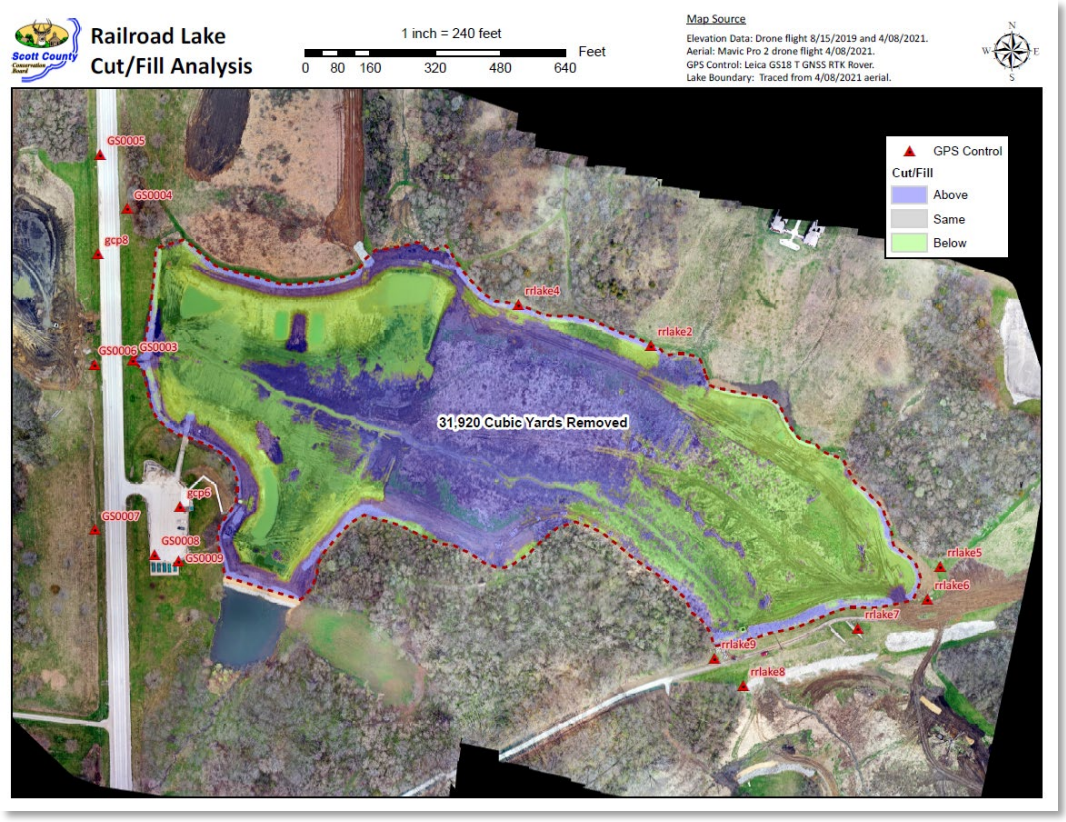
Inmates & Warrants

Inmate and warrant lists are a popular feature on the County's website. Inmate information is updated every 10 minutes and warrants daily. The County webmaster developed a custom script to monitor the uptime and trigger notifications for any outages. A user can sign up for VINE notification, learn about pre-trial court information, post bonds, and contribute to an inmate commissary account all online via the website.

03 Accomplishments Web / GIS

West Lake Park Lake Restoration

Scott County GIS provided survey and modeling services to the Scott County Conservation Department during the West Lake Park restoration project from 2019 to 2023. As the lakes were drained and refilled with water, drones were used to acquire imagery data showing the excavation activity and varying water levels. Surface analysis and 3D modeling provided cut and fill estimates that Conservation staff used to verify earthwork volumes and associated billing. Imagery and GPS data collected during field surveys supported the location and mapping of new fish structures placed throughout the lakes. County GIS then created a web app displaying these habitats for conservation staff and fishing enthusiasts alike to locate and/or monitor fish populations.



03 Accomplishments Infrastructure

Data Center and Campus Network Equipment Refresh

The refresh was a multi-year project that saw the replacement of all network routing/switching, data center/campus core, managed wireless, and security systems across the enterprise. This project increased data center connectivity by 5x and core-to-edge connectivity 2.5x. Additional advanced management, network identity and security systems were also deployed as part of the refresh.

Video Surveillance Replacement and Event Support

Nearly 300 cameras were upgraded across the enterprise to a new distributed storage camera solution. These distributed storage cameras reduce risk associated with a single point of failure situation on an existing monolithic video storage system. During the deployment, the network infrastructure team has coordinated with local law enforcement and the Sheriff's office to supply cameras to support activities related to a building collapse and three high volume community events.

Storage Expansion to Support Enterprise Applications

This project expanded capacity in both enterprise storage arrays by about 30% and provided capacity for two critical multi-server enterprise system deployments. The first supported enterprise deployment was a full-system upgrade of the enterprise resources planning system. The second supported enterprise deployment was also a full system upgrade of the computer aided dispatch and records management systems.

03 Accomplishments Security

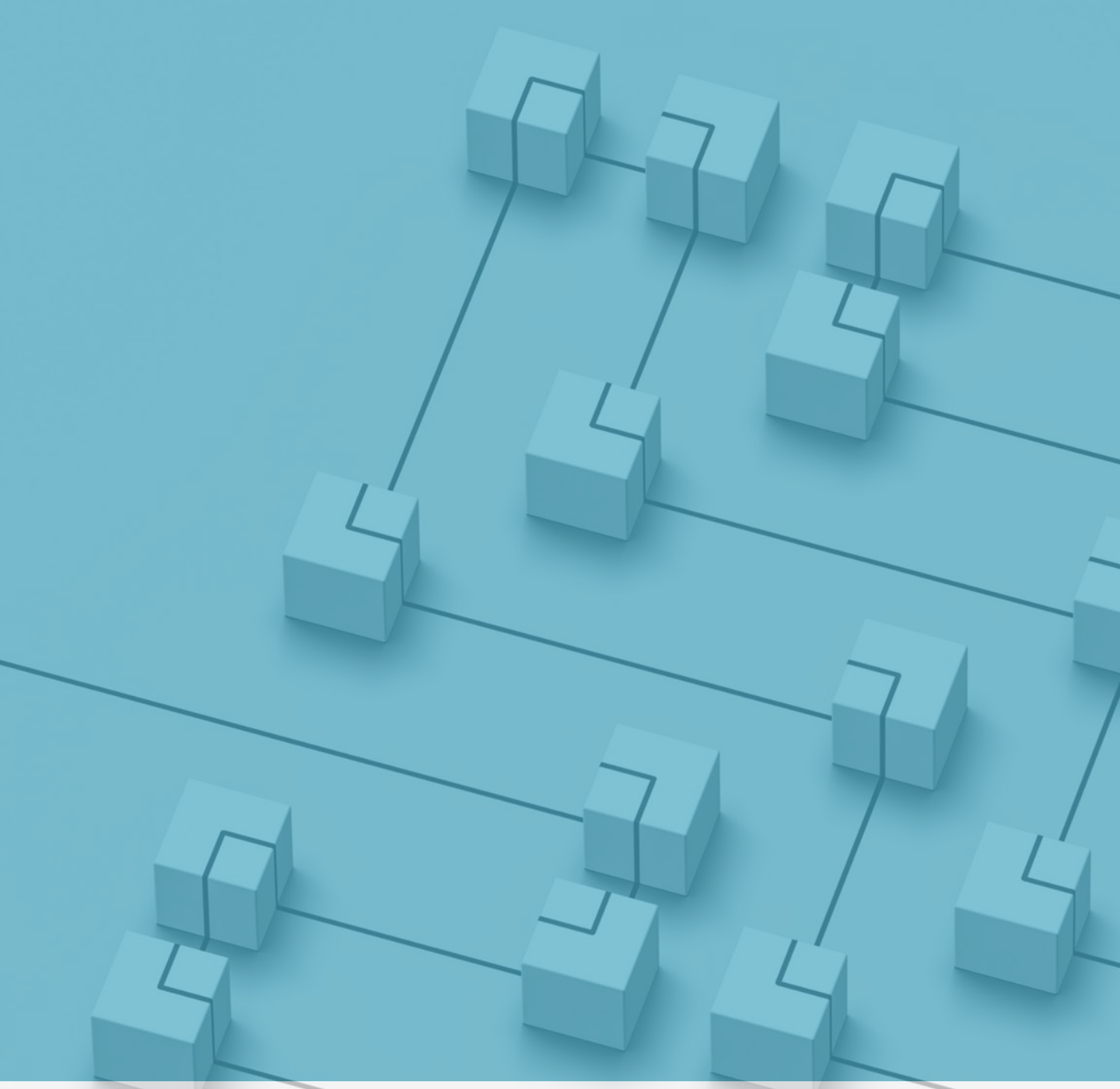
Implement Safe Link / Safe Attachment Scanning for Email

Safe Links scanning protects Scott County from malicious links used in phishing and other attacks. Specifically, Safe Links provides URL scanning and rewriting of inbound email messages during mail flow and time-of-click verification of URLs and links in email messages, Teams, and supported Office 365 apps. Safe Attachments in Microsoft Defender for Office 365 provide an additional layer of protection for email attachments that have already been scanned by anti-malware protection. Safe Attachments uses a virtual environment to check attachments in email messages before they're delivered to recipients (a process known as detonation).

KnowBe4 Security Program & Training

The County now uses KnowBe4 to send employees fraudulent, malicious emails and assess their response behavior. It helps evaluate the likelihood of each end user falling a phishing attack. The Phish Alert Button (PAB) installs a button in Outlook to allow a user to report a suspected phishing email quickly and efficiently to IT. IT implemented a quick, basic training module to ensure employees understand the mechanisms of spam, phishing, spear-phishing, malware, and social engineering and can apply this knowledge in their daily jobs.

Please refer to the Appendix for additional information on recent technology accomplishments.



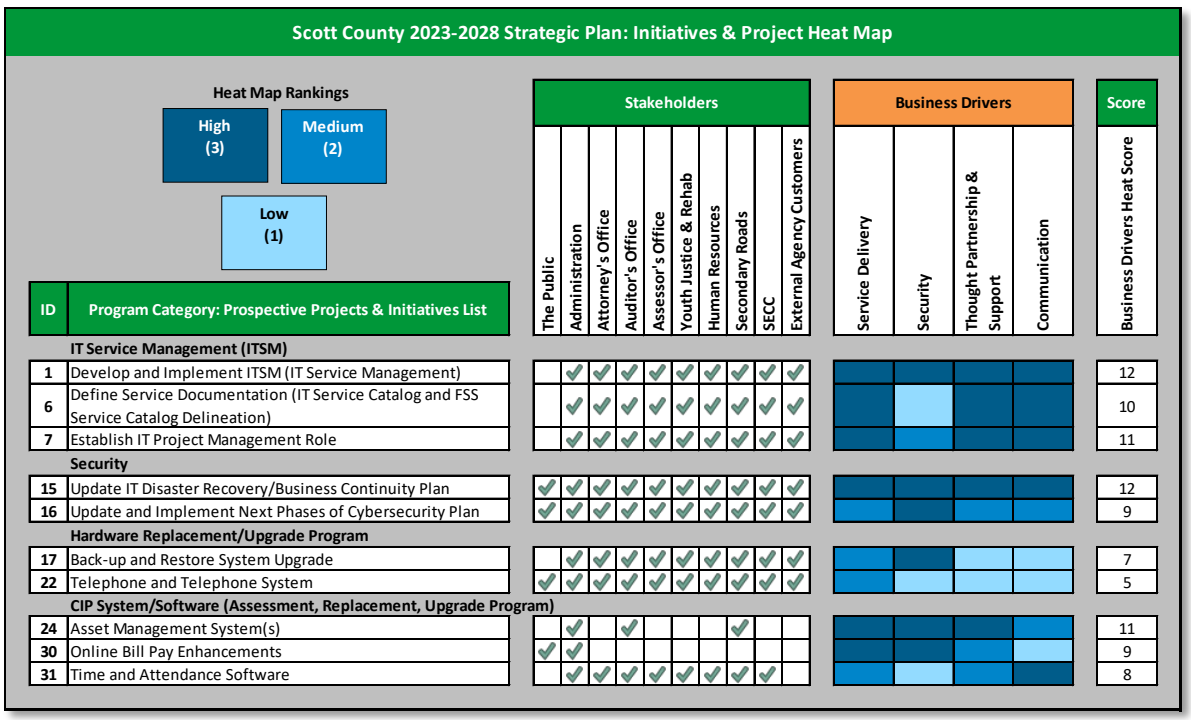
04 Strategic Initiatives

04 Strategic Initiatives

This section highlights the technology strategic initiatives both currently in progress or that the County plans to implement. These initiatives include new projects the County will explore further over the next five years. The team developed a heat map – an analytical tool used to illustrate the potential impact an initiative may have on the County's key stakeholders (e.g., County departments/offices, and the public) and on IT's core business drivers – ***Service Delivery***, ***Security***, ***Communication***, and ***Thought Partnership & Support***.

A score is generated based on an initiative's potential impact to both stakeholders and business drivers. Higher scores are distinguished by a darker color. The goal of the heat map is to help the County prioritize which initiatives should move forward and will serve as an input of further prioritization at a Countywide level. A snapshot of the County's heat map is illustrated below. Cost estimate ranges were also assigned to each initiative based on the following tiers: ***Very Low*** (up to $15k), ***Low*** ($16-99k), ***Medium*** ($100-500k), ***High*** ($501k-1M) and ***Very High*** ($1M+). The estimates serve as an input for the Implementation Roadmap discussed in Section 5.

To view the full heat map analysis and additional initiative information, refer to the Appendix.



04 Strategic Initiatives Applications

Cloud Storage Solution for Body-Worn and In Car Cameras *(Cost Estimate: Medium, $100-500k):* With the move of many applications to cloud-based storage, the Sheriff's Office and Conservation teams are also adopting this change. With an upcoming hardware upgrade, the Applications team is upgrading current body-worn and in-car cameras from on-premise storage to cloud storage. This hardware upgrade will improve the overall camera image quality and help return nearly 22 TB (terabytes) of storage to the Scott County Infrastructure team.

Community Development Permitting and Inspections Enterprise Software Implementation *(Cost Estimate: Medium, $100-500k):* County teams across three different departments – Planning and Development, Health, and Secondary Roads, currently use a blend of custom-developed applications, Excel spreadsheets, and index cards to manage their permitting and inspection processes. The new system, once identified, will be a web-based Software as a Service (SaaS) solution that enables teams to complete inspections in the field, back-office personnel to manage inspection and permitting cases, and provide citizens a web portal to submit, manage, and pay for their inspection and permitting needs.

Digital Evidence Management *(Cost Estimate: Medium, $100-500k):* Digital evidence is increasing in its importance in court case prosecution and its sheer volume. Today, the county stores nearly 2 TB (terabytes) of digital evidence for current and historic court proceedings. As many of these pieces of evidence need to be kept for several years, the County knew it needed to begin evaluating cloud-based systems to help store, manage, and share this digital evidence. The County Attorney's Office and IT are working to implement a SaaS (software as a service) evidence management solution. Once complete, the software will enable local law enforcement to quickly and easily share data with Scott County and aid in the discovery process along with tracking and managing these critical pieces of evidence.

04 Strategic Initiatives Applications

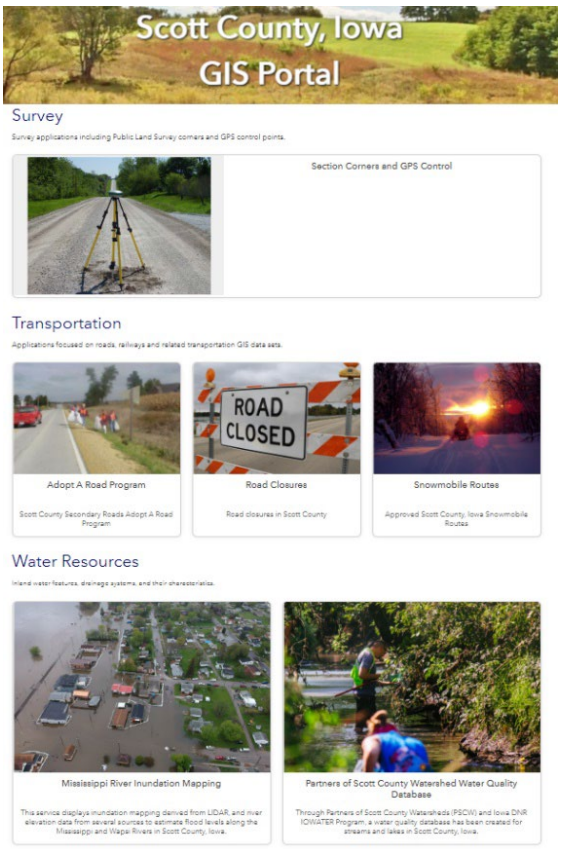
Jail Management System *(Cost Estimate: Very High, $1M+):* The Sheriff's Office has embarked on a project to modernize processes by replacing its current jail management system (JMS). The Sheriff's Office is partnering with the Information Technology Applications team and looking to streamline current jail processes, work to integrate several systems under one enterprise system, and better communicate information relating to inmate safety, security, and movement.

Time and Attendance System *(Cost Estimate: High, $501k-1M):* The County's current time and attendance system has been a valuable asset to all employees and the Auditor's Office for properly capturing and reporting employee time and attendance to support payroll processing. With the addition of another 24-hour department and an upcoming end of life for the current system, the Auditor's Office, Human Resources Department, and Information Technology are partnering to identify requirements for a new time and attendance solution. Collaboratively, teams will work to identify, select, and implement a new system to help Scott County and its employees fully manage their time and attendance.

04 Strategic Initiatives Web / GIS

User Migration from ArcGIS Desktop to ArcPro *(Cost Estimate: Very Low, up to $15k):* The dominant ESRI client application for the past 20 years has been ArcGIS Desktop. ESRI released a new client version of their client app called, ArcPro, and are in the process of sunsetting ArcGIS Desktop. In the larger ESRI customer base, transition to ArcPro has lurched along slowly as parity between the new and old applications was slow to materialize and adoption lagged. However, the tipping point between the two versions has been reached and the benefits of migrating to ArcPro now outweigh the advantages of ArcGIS Desktop. Although GIS currently works in both versions, over the next year, GIS will begin to offer training and migration support to internal users so that ArcPro becomes the primary client and GIS standard.

Website Upgrade *(Cost Estimate: Medium, $100-500k):* In 2015, the Scott County website was updated from a manual architecture to a more open-source community supported Content Management System called Drupal. At deployment, the platform was based on Drupal 7 (a sunset solution) and an upgrade is required. The County has launched an RFP process to procure professional services that will enable us to upgrade to the latest version 10 of the Drupal platform. The new site will improve accessibility, navigation, search, content creation, and more. The County anticipates the new site will be released by the end of 2024.



ArcGIS Hub Release *(Cost Estimate: Very Low, up to $15k):* ArcHub is a data and application portal or clearinghouse for GIS. Scott County GIS has developed a drafted yet unreleased ArcHub site. Once published, the site will provide enhanced public access to GIS maps, applications, and data.

04 Strategic Initiatives Infrastructure

Enterprise Infrastructure

Unified Communications System Infrastructure and Client Device Upgrade *(Cost Estimate: Medium, $100-500k)*: Project intends to replace out-of-warranty server systems and telephony devices. This project will involve the replacement of over 600 VoIP phone devices with modern equipment across the entire enterprise. The dual server virtualization platforms that host the 13 virtual telephone system management servers will also be completely replaced and upgraded to current hardware and software standards.

Data Center Storage and Server Replacement *(Cost Estimate: High, $501k-1M):* Project will consolidate and replace multiple outdated data center server and storage systems with a mix of new, higher speed and capacity hardware systems along with hosted Infrastructure as a Service (IaaS) options. During this project, the County will analyze our hypervisor choice and will also combine Scott County and Medic EMS systems. This project is budgeted to start in July of 2024.

Department-Specific Infrastructure

Medic EMS Infrastructure Systems Integration *(Cost Estimate: Very Low, up to $15k)*: Project will analyze Medic EMS's existing infrastructure systems to identify areas of cooperation or consolidation. Through this process, many different systems will be reviewed on both the Scott County and Medic EMS sides to establish plans of action to reduce redundancies and complexity where possible.

Youth Justice Resource Center Facility Launch *(Cost Estimate: Medium, $100-500k)*: Project will deploy the required network infrastructure for this new facility, which includes new fiber optic lead-in, core switching, wireless access, telephones, conferencing, surveillance cameras, workstation computers and laptops. An additional phase will integrate the Mississippi Bend Area Education Association network into our infrastructure in support of educational programming needs.

North-Side Network Ring *(Cost Estimate: High, $501k-1M)*: Project will establish a fiberoptic ring network that will connect two standalone County locations that are near to fiber optic connectivity options with our service provider. This project will not only bring higher capacity connectivity to the new Scott County Warehouse facility and the Scott County Library Headquarters but may also allow for connectivity to a Medic EMS facility that is also on the proposed route. This will also supply backup pathing to Sheriff Patrol, Secondary Roads, and Scott County Park.

04 Strategic Initiatives Security

CrowdStrike Deployment *(Cost Estimate: Low, $16-99k)*: Scott County IT participates in the State's Office of the Chief Information Officer cyber security programs and are currently deploying a new CrowdStrike client to workstations and servers. CrowdStrike is a cloud-based endpoint protection solution that uses artificial intelligence (AI) technology to detect intrusions across networks and endpoints. The company claims its technology can detect 99% of all malware threats before they impact your organization or personal device.

Microsoft Application Proxy for Secure / MFA Access to Internal Resources *(Cost Estimate: Very Low, up to $15k)*: IT is working to improve remote access to county applications. Process is underway to migrate applications from legacy technology to Microsoft Application proxy. This solution enhances application publishing, performance, and security with MFA.

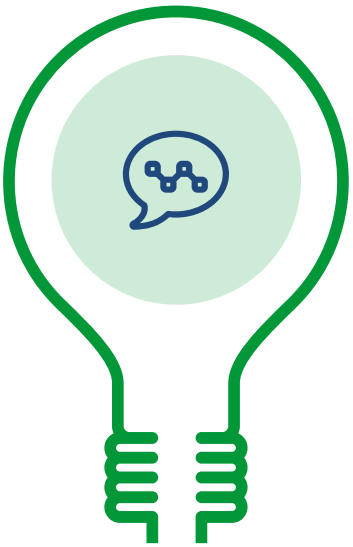
Security Information and Event Management system *(Cost Estimate: Medium, $100-500k)*: IT is evaluating a cloud-based solution combining security information and event management (SIEM) into one security management system. SIEM technology collects event log data from various sources, identifies activity that deviates from the norm with real-time analysis and takes appropriate action.

04 Strategic Initiatives Exploratory

Throughout current state assessment and strategic planning activities, the County leveraged its partnership with Crowe to identify areas of strength, improvements, and growth. Several key themes emerged as a result and will serve as focus areas for the County to explore further.

The themes include – ***Process Modernization, Structural Evolution,*** and ***Capability Maturity*** as summarized below and detailed further in the following pages. Each section incorporates Crowe's recommendations outlined within Section 2 of this plan.

Process Modernization



Continuous improvement to enhance efficiency, increase effectiveness, reduce dependencies on legacy processes, drive progress, and embrace digital transformation.

Structural Evolution

Adopt and adapt to a future state IT organizational structure to support business drivers and designed with customers in mind

Capability Maturity

A framework to drive transformational change, including implementing a service-centric culture and performance management tools.

04 Strategic Initiatives Exploratory

Process Modernization

The County has made strides to improve processes and will continue explore ways to modernize County operations and foster an environment of technological advancement to deliver services. More specifically, the IT team aims to employ continuous improvements in existing processes and as it implements new endeavors. Examples include reducing legacy, paper-based processes and leveraging digital solutions (e.g., OnBase).

IT plans for a collaborative approach, seeking insight and incorporating feedback from County departments and offices to maximize project success. A key component to process modernization and overall implementation success requires improvements in communication processes.

Structural Evolution

IT recognizes that improvements to its current organizational structure are necessary to rebalance work and establish a model that prioritizes customer service.

This includes incorporating project management and business analysis roles, technical resources to support the Medic EMS team, and formalizing its support relationship with external, sister agencies by establishing service-level agreements that include clearly defined roles, responsibilities and performance expectations.

There are five key positions that will support this initiative and include:

- Senior Office Assistant
- Technology Business Analyst
- Desktop Support Manager
- Technology Project Manager
- Technical Writer & Trainer

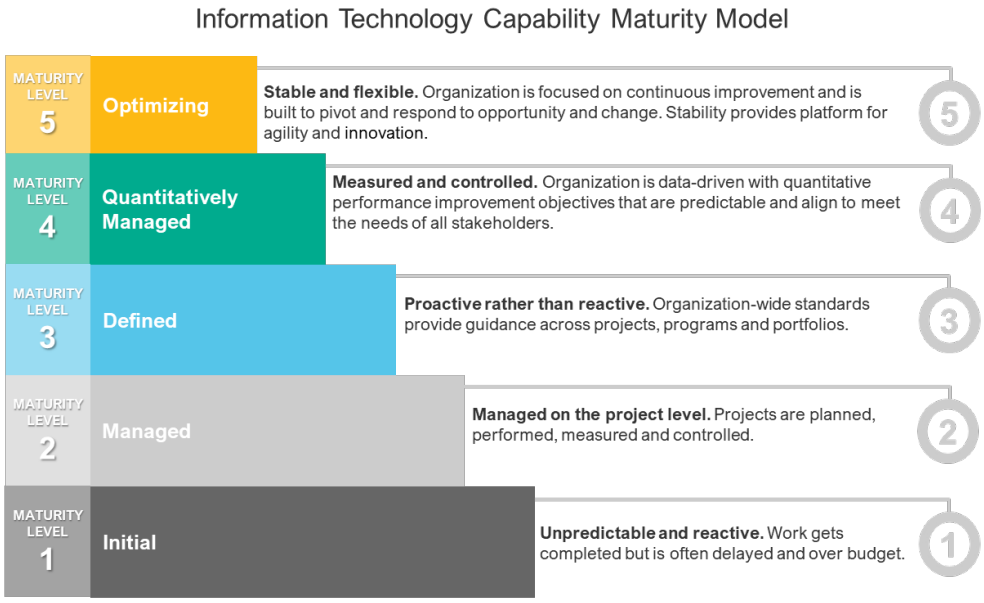
Effective January 1, 2024, Medic EMS will become Scott County's second-largest department, increasing Information Technology's customer base by approximately 20%. The vision is that the technology needs of Medic EMS of Scott County will model those of SECC (Scott Emergency Communications Center) with Scott County IT to support similar to the Sherriff's Office. While it is likely additional IT resource(s) will be needed, Crowe recommends an evaluation period to understand the resource(s) required to make this a successful integration.

04 Strategic Initiatives Exploratory

Capability Maturity

To support process modernization and a structural evolution to prioritize customer service, IT is looking to establish an improved service framework. The framework will equip the team with the tools and techniques to support continuous improvement of workforce practices. Additional benefits include positive return on performance improvement investments, more timely delivery and an increased quality of solutions, more rapid response to issues and risks, exceeding customer expectations, and lower employee turnover.

IT aims to adopt an IT Service Management Model (or ITSM) to advance its current level of capability maturity from Level 1 to Level 3 as illustrated below, or to shift from a reactive to proactive approach to work.

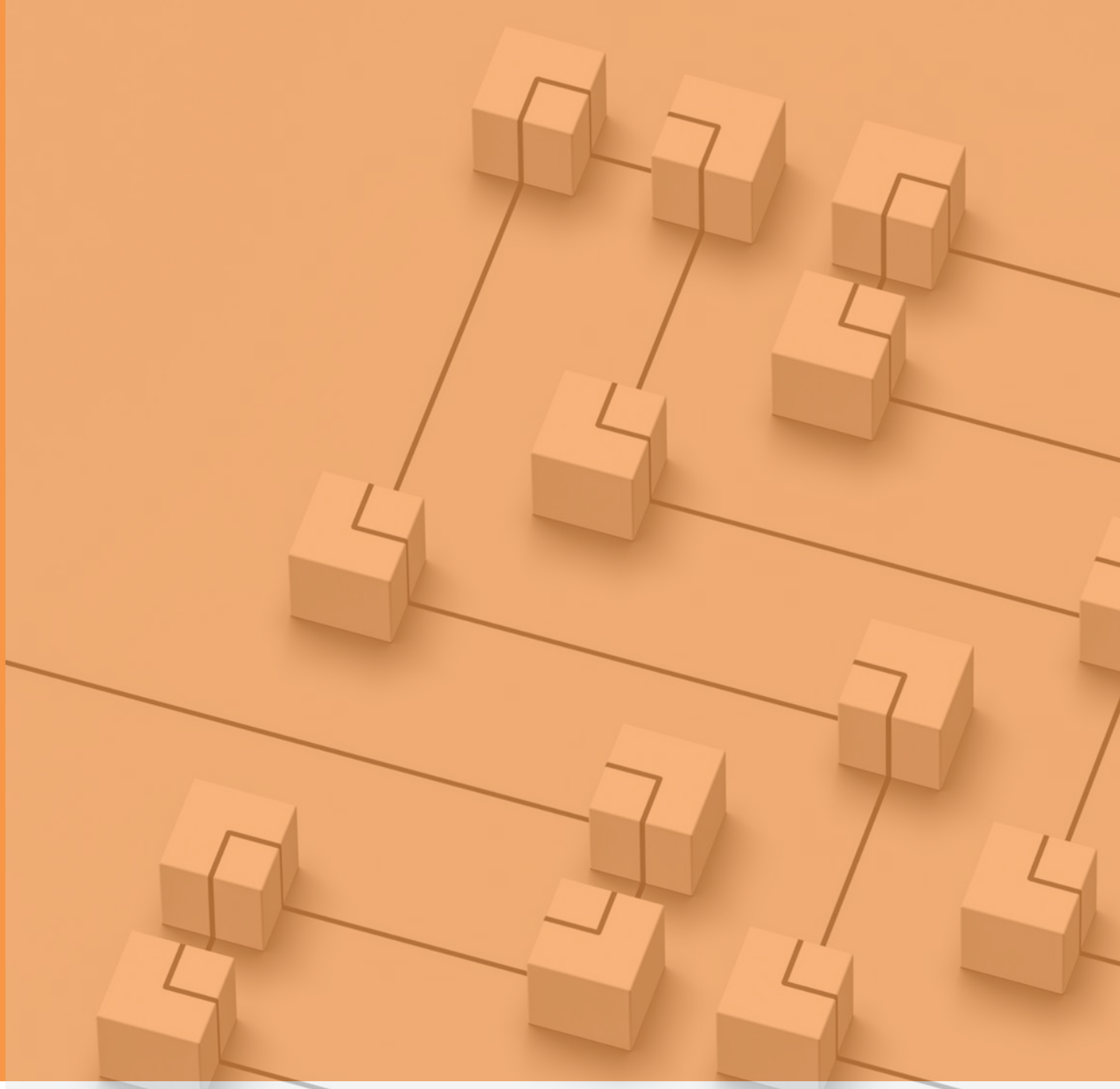


04 Strategic Initiatives Exploratory

ITSM is a system for delivering end-to-end service management with a customer-centric focus. There are various popular approaches to ITSM, including ITIL and DevOps. ITIL focuses on aligning service practices with business needs and establishes practice standards, while DevOps focuses on delivering service through agile and lean practices such as continuous improvement.

Both approaches are not mutually exclusive and implementing an ITSM model boasts several benefits including increased collaboration, business process improvements, enhanced vendor management, more strategic training efforts, and an overall increase in the quality-of-service provision.

Additional initiatives that will help the County's IT capabilities mature include 1) enhancing the information security program, 2) developing an IT governance structure, and 3) developing incident response and disaster recovery plans as recommended within the cybersecurity assessment.



05 Implementation Roadmap

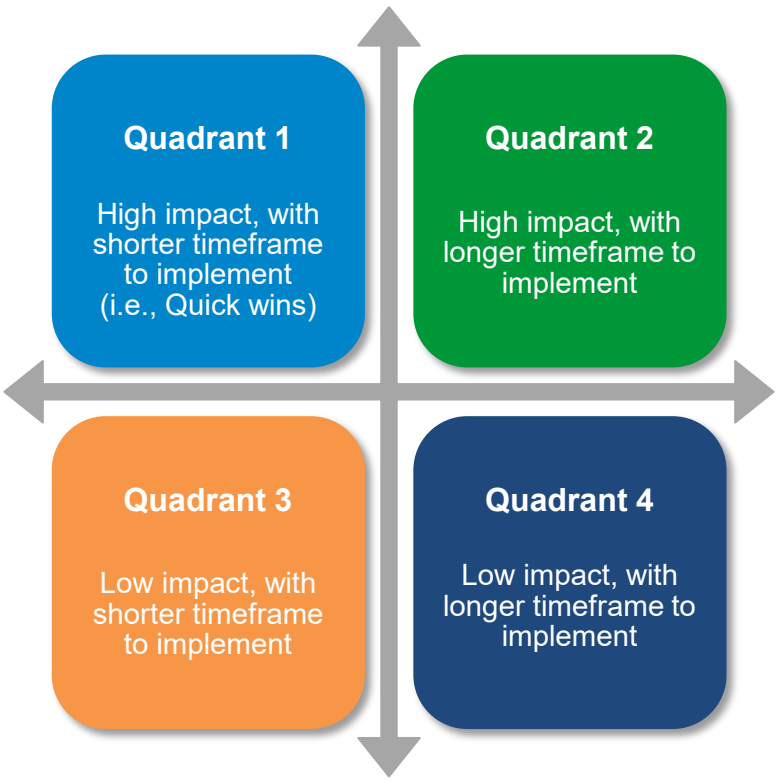
05 Implementation Roadmap

Bubble Chart & Prioritization Timeline

The County developed a bubble chart and prioritization timeline to assist in planning an implementation roadmap for its strategic technology initiatives. When used in conjunction with the heat map analysis, a bubble chart serves as a dynamic, analytical tool to visually highlight multiple layers of information.

For the County, the chart includes 1) the level of impact (based on heat map score), 2) an estimated implementation timeline, 3) an estimated cost implication, and 4) indicates the initiatives budget approval status.

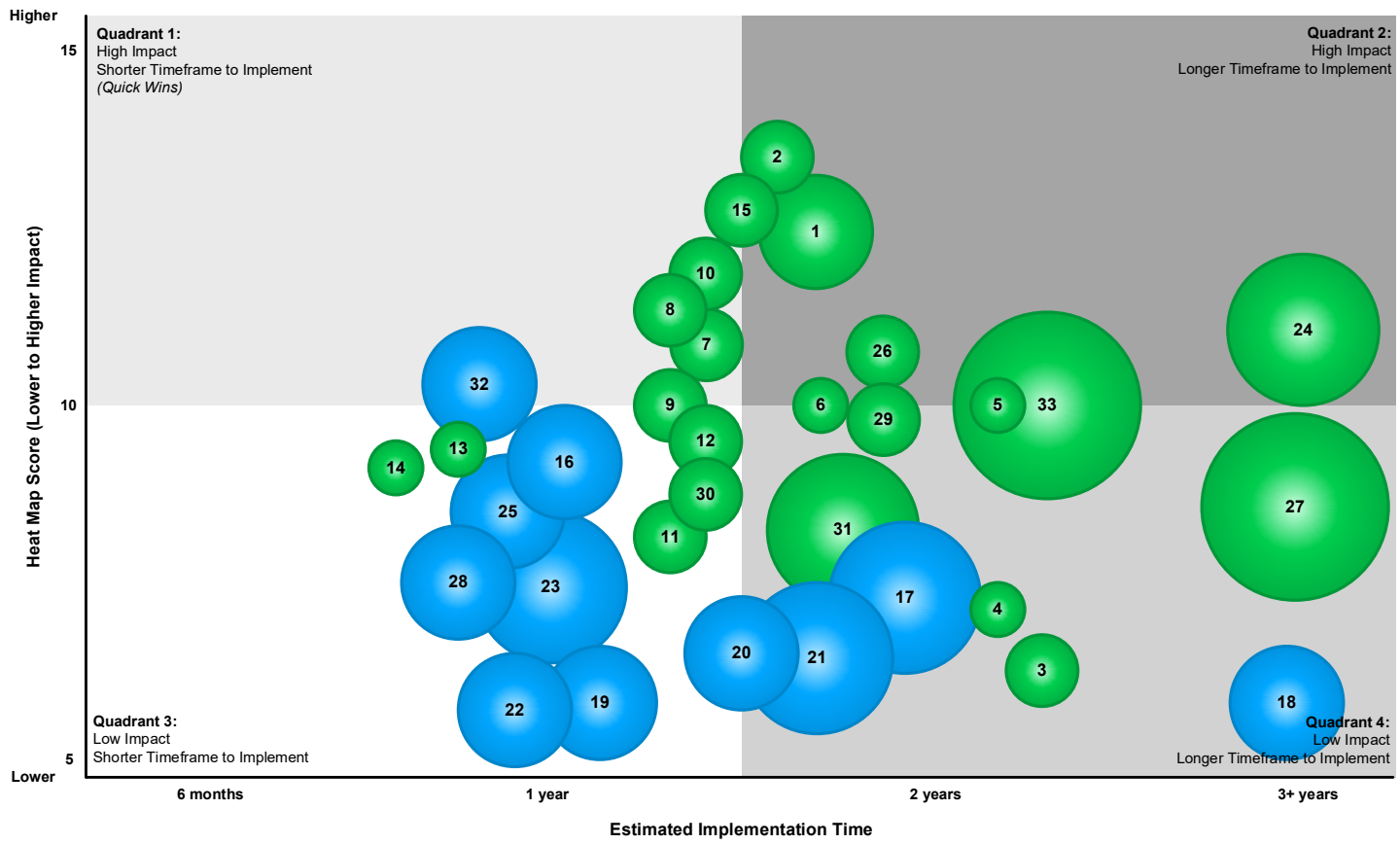
The implementation roadmap results in a visualization that will aid in further strategic and prioritization with the County leadership teams. The roadmap displays initiatives within four quadrants (as illustrated below) based on their overall rating. The Scott County Technology Initiatives bubble chart and prioritization timeline is highlighted on the next page.



05 Implementation Roadmap

Scott County Technology Initiatives: Bubble Chart & Prioritization Timeline

Comparing Initiatives by Impact (Vertical Axis), Timeline to Implement (Horizontal Axis), and Cost Implications Magnitude (Bubble Size)



KEY:

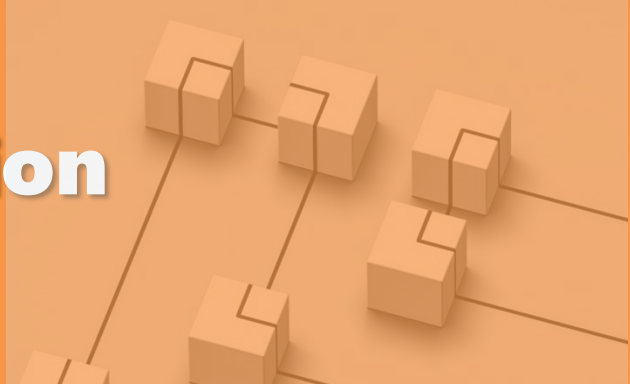
Cost Estimate Range: Very Low (under $15k, Low ($16-99k), Medium ($100-7500k), High ($501k-1M), and Very High ($1M+)

Currently Budgeted

Not Currently Budgeted

For a full list of projects associated to each bubble's numerical ID (#), see page 36.

05 Implementation Roadmap

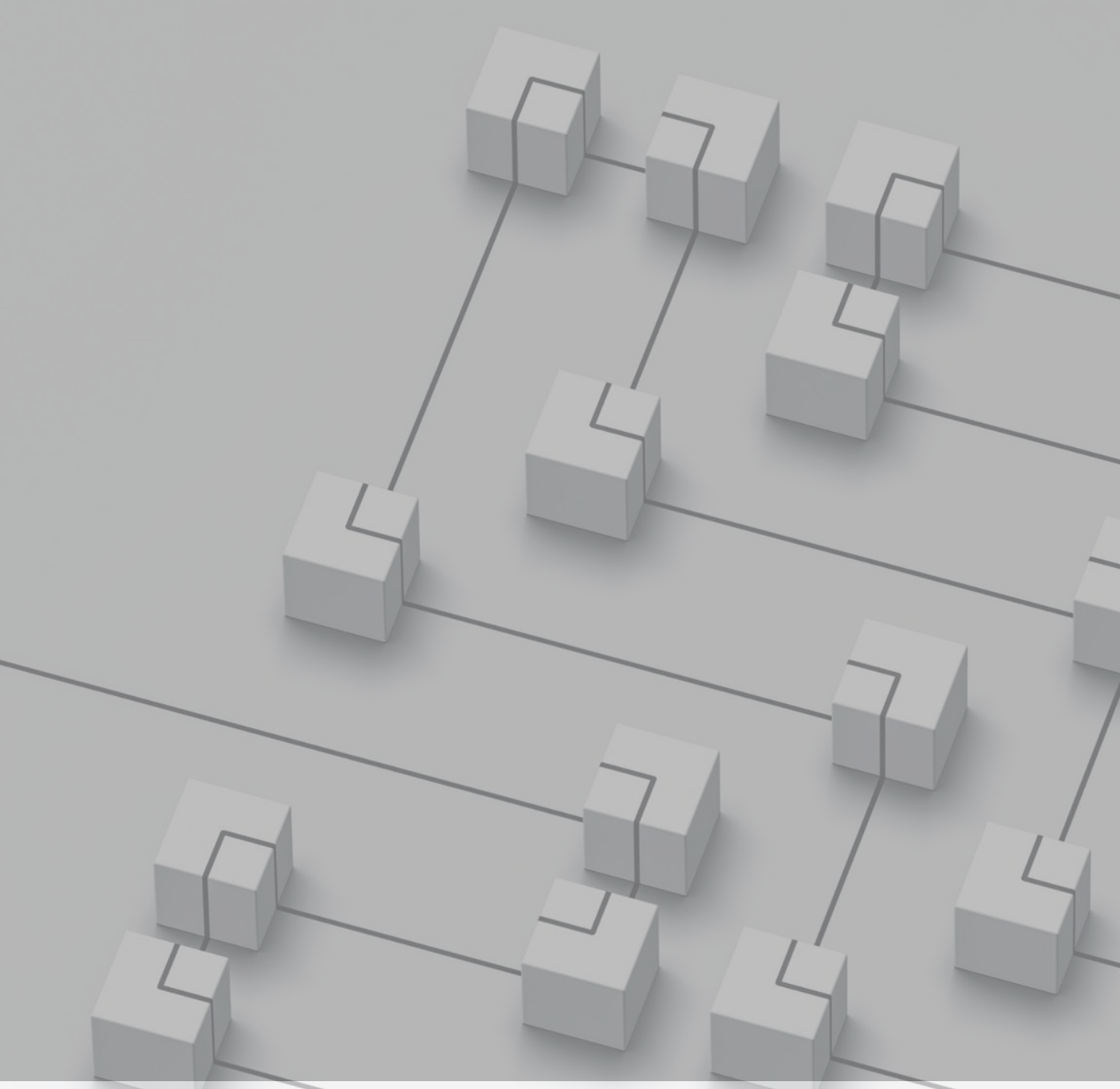


Implementation Considerations

In developing this technology strategic plan, the Scott County team has crafted a robust vision for the next five years. They recognize that to be successful, two key implementation considerations must be established – 1) governance and 2) performance metrics.

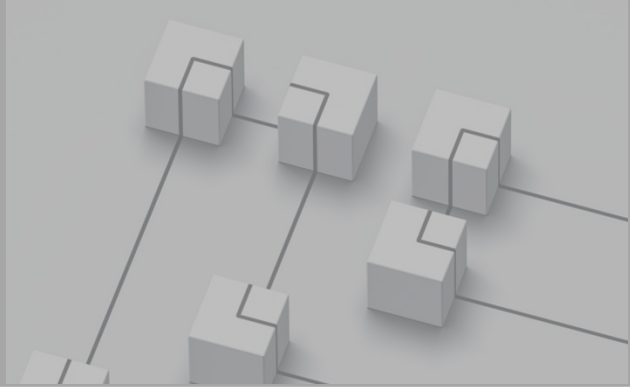
Establishing a governance structure and supporting activities such as oversight and communication, will help mitigate implementation failure. Governance will also ensure that plan implementation remains aligned to the County's core values, as well as with any changes in County wide objectives.

In addition, the County will work to identify metrics within each core initiative area, that the team will actively measure and report on progress across their key stakeholders. Reporting techniques may include a performance dashboard, stakeholder updates, and a strategic plan update that will also serve as a method to showcase further technology accomplishments.



06 Appendix

05 Contributors



The Scott County team is optimistic about the future of technology and thanks the many contributors who provided input and feedback into our strategic planning process.

Scott County Departments & Offices

- Administration Office
- Attorney's Office
- Auditor's Office
- Board of Supervisors
- Community Service
- Conservation
- Facility & Support Services
- Health Department
- Human Resources
- Information Technology & GIS
- Planning & Development
- Recorder's Office
- Secondary Roads
- Sherriff's Office & Jail
- Treasurer's Office
- Youth Justice & Rehabilitation Center

Scott County Related Agencies

- Assessor's Office
- Bi-State Regional Commission
- City of Davenport Assessor's Office
- Clerk of Courts
- Emergency Management
- Iowa Department of Human Services
- Medic EMS
- Scott Emergency Communications Center
- Waste Commission of Scott County

External Stakeholders

- Members of the Scott County Community (survey participants)
- Crowe LLP

05 Heat Map Analysis

Scott County 2023-2028 Strategic Plan: Initiatives & Project Heat Map

Heat Map Rankings

- High (3)
- Medium (2)
- Low (1)

ID	Program Category: Prospective Projects & Initiatives List	Stakeholders: The Public	Administration	Attorney's Office	Auditor's Office	Assessor's Office	Recorder's Office	Board of Supervisors	Sheriff's Office	Treasurer's Office	Health Department	Conservation	Planning & Development	Community Services	Information Technology	Facility Support Services	Youth Justice & Rehab	Human Resources	Secondary Roads	SECC	Emergency Management	Medic EMS of Scott County	External Agency Customers	Business Drivers: Service Delivery	Security	Thought Partnership & Support	Communication	Score: Business Drivers Heat Score
	IT Service Management (ITSM)																											
1	Develop and Implement ITSM (IT Service Management)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	3	3	3	12
2	Develop and Implement IT Governance Framework		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	3	3	3	12
3	Develop and Implement Function to evaluate and modernize Customer Line of Business Processes		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1	1	1	3	6
4	Formalize Business Relationship with Technology Vendors (Assess, Revise, and Execute Business Associate Agreements)		✓												✓									1	1	2	3	7
5	Formalize Support Relationship for External Agencies (Assess, Revise, and Execute MOU Agreements)		✓												✓								✓	1	3	3	3	10
6	Define Service Documentation (IT Service Catalog and FSS Service Catalog Delineation)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	2	3	3	10
7	Establish IT Project Management Role		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	2	3	3	11
8	Establish IT Desktop Support Manager Role		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	2	3	3	11
9	Establish IT Business Analyst Role		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		3	1	3	3	10
10	Establish IT Technical Trainer/Writer Role (Procedural Guides and Documenation)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	2	3	3	11
11	Establish IT Administrative Support Role		✓			✓									✓					✓	✓	✓	✓	3	1	2	2	8
12	Conduct Updated Compensation Analysis to Support Organizational Structure Changes														✓			✓						3	2	3	3	9
	Medic																											
13	Assess Medic EMS's Technology Contracts Transition	✓	✓					✓			✓				✓	✓		✓		✓	✓	✓		3	2	3	3	9
14	Assess Medic EMS's Technology Support Needs	✓	✓					✓			✓				✓	✓		✓		✓	✓	✓		3	2	3	3	9
	Security																											
15	Update IT Disaster Recovery/Business Continuity Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	3	3	3	12
16	Update and Implement Next Phases of Cybersecurity Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	2	3	3	9
	Hardware Replacement/Upgrade Program																											
17	Back-up and Restore System Upgrade		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	3	1	1	7
18	Desktops		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	1	1	1	5
19	Laptops		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	1	1	1	5
20	Servers		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	2	1	1	6
21	Storage - Enterprise		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	2	1	1	6
22	Telephone and Telephone System	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	1	1	1	5
23	Jail Video							✓							✓									3	2	1	1	7
	CIP System/Software (Assessment, Replacement, Upgrade Program)																											
24	Asset Management System(s)		✓		✓				✓			✓			✓	✓			✓		✓			3	2	3	3	11
25	Community Development Software - Permitting and Inspections	✓	✓			✓				✓			✓		✓				✓					3	2	3	3	8
26	Development of Countywide Software Life Cycle Management Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	2	3	3	11
27	ERP/Finance System		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		3	2	2	1	8
28	GIS (Aerial Photos)	✓			✓	✓	✓		✓		✓	✓	✓		✓				✓	✓	✓		✓	3	2	1	1	7
29	GIS Needs Assessment (Updated)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	2	2	3	10
30	Online Bill Pay Enhancements	✓	✓			✓	✓	✓	✓			✓												3	2	1	3	9
31	Time and Attendance Software		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	2	1	2	8
32	Website/Intranet Upgrade to Drupal 10 (Accessibility and User Experience)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		3	3	3	1	10
33	Jail Management System		✓	✓				✓		✓					✓	✓	✓			✓			✓	3	3	1	3	10

05 Additional Accomplishments

Absentee Ballot Web Application: Managing elections is the responsibility of the Scott County Auditor's office. GIS assisted the Auditor by creating election maps and absentee ballot web applications, which provided an easy-to-understand visual representation of ballot requests, returns, and counts by party affiliation.

Desktop Operating System Deployment Solution: This project created a streamlined process for loading Windows operating system software to new and existing computers. This process allows for a remotely initiated install to automatically reload Windows Devices with the most recently established "golden" image. This solution can be leveraged for both new installs and as a repair mechanism in cases of operating system corruption.

eGov: eGov is a public input solution deployed within the Scott County website. All County departments have contact forms on their respective pages to receive questions and messages from the public. Messages are routed to appropriate staff or teams within each department for review and response. Submissions are tracked and accountability measures can be used to ensure that residents receive a prompt reply. There were 2,813 eGov submissions in FY23.

Elections App: This website is an important tool used to inform county voters about elections. This includes information about elected officials, candidate information, voter registration, where to vote, absentee voting, ballot tracking, and more.

Emergency Management Conferencing Refresh and Expansion: Replacement of the audio and video components associated with the Emergency Operations Center. The County supplied networking infrastructure and engineering guidance for the new system components and assisted with the setup of four additional streaming solutions to aid in the presentation of video content on new screens.

Facilities and Support Services Warehouse Activities: This project required the careful planning for removal of network resources from the existing Tremont warehouse facility to the new YJRC facility. A new fiber optic switching network was also implemented to support computers, phones, door access, and cameras at the Eldridge Warehouse.

05 Additional Accomplishments

GovDelivery: GovDelivery is an email subscription service which allows the public to subscribe to certain webpages and stay informed on “topics” of their choosing. When pages are changed, email notifications are sent out to the individuals subscribed to those updated pages. Currently, Scott County has 38,713 individual subscribers that have registered to receive updates on any of the 81 available County topics. Users may subscribe to multiple topics, as evidenced by the current total topic subscription count of 79,862. In fiscal year 2023, county staff sent 1,404 bulletin notifications representing 367,048 emails. The system also tracks the “open rate” which indicates how many of the county notices sent were opened by the recipients.

Health Department / Iowa Department of Public Health Grant Activities: A comprehensive upgrade for most of the Health Department's technology systems. Outdated telephones and wireless access points were replaced with modern equipment. This included deployment of 50 new laptops with docks and dual monitors. Additionally, the process to add new spaces for huddle rooms and conferences was initiated.

Implement Remote Access Procedures for Vendors Enforcing MFA: Scott County IT works with multiple software vendors that need remote access to county servers and equipment, therefore recently implemented Multifactor Authentication to prevent vendors from sharing and exposing passwords.

Integrated Roadside Vegetation Management (IRVM) Field Data Collection and Support: The Scott County Integrated Roadside Vegetation Management (IRVM) utilizes GIS tools such as Survey123 and ArcGIS Field Maps to collect and maintain various roadside vegetation data. Collected data includes herbicide application areas, vegetation planting, and future planning areas for large plantings. During herbicide treatment months, an automated process transfers daily treatment data to GIS. Collected data is published to an online repository for viewing in various web applications and dashboards.

IRVM – Saint Ambrose University Roadside Vegetation Survey: In addition to the standard IRVM support Scott County GIS provides to Secondary Roads, the County also collaborates with St. Ambrose University on a five-year project. Each year, university students perform vegetation surveys at 480 locations and utilize Survey123 to record the vegetation data. The County publishes maps and web applications to display survey site locations and vegetation data, all of which is incorporated into Scott County Secondary Road’s larger IRVM project.

05 Additional Accomplishments

Legacy Protocols – LLMNR and NetBIOS Disabled by Policy: Scott County has recently worked with a vendor to perform an Internal Penetration Assessment. That assessment found that Scott County used two legacy protocols (LLMNR and NetBIOS), which are unnecessary and insecure. IT worked to identify and remediate any devices still using these legacy protocols.

Livestream: Scott County continues to use the WebEx application to support livestream options for Board meetings. The County has also set up and extended livestreams to the YouTube platform, which provides additional capabilities such as playback pause, rewind, delayed watch, live captioning, and immediate playback after the meeting is ended. YouTube is widely used on both desktop and mobile devices, and subscribers to our YouTube channel can be notified when meetings go live. Presently, YouTube has been demonstrated as a proof of concept but has yet to be approved for the public and fully integrated into the website. The expectation is that it will be addressed and incorporated soon.

Migrate to Sophos Central (SaaS Endpoint Protection): Migrated from Sophos Enterprise Console to cloud-based Sophos Central Endpoint protection. The SaaS solution eliminates the need for the County to install any server-side products, maintain backups, or monitor performance. A web console also allows IT to manage endpoint protection from any supported web browser.

Migrate to Windows Update for Business: Transitioned from on-premises to a cloud-based update process, therefore Windows clients no longer need to be on-site or connected to a VPN to receive updates. IT also implemented Windows Feature and driver updates to replace the need to push security patches.

Onboarding / Offboarding: IT is working to transition from an ad hoc, manual, and labor-intensive user creation and termination process. IT created a policy to define the process for creating and terminating user accounts quickly and efficiently.

Public Meeting System Upgrades for Administration in the Boardroom: Upgrades enhanced and expanded capabilities of the meeting system in the County Boardroom. Two additional cameras and five microphones were added to support the requested use cases in the space. Streaming and recording capabilities were also published to the public during this project.

05 Additional Accomplishments

Scott County Emergency Management Agency Support: Scott County GIS has created various GIS tools to support the Scott County Emergency Management Agency during disasters or other times in need (i.e., Bix/Ragbrai, train derailments, severe weather, riots). ESRI products used include Survey123, Workforce, Web Apps and Dashboards. The unique ability of GIS to collect, analyze, display, and share data has become a reliable fixture of Scott County's emergency response.

Scott Emergency Communications Center Station Alerting System Network Integration: Project established a dedicated, secure network that provides an automated public safety station alerting system for the metro fire and medical locations. This solution also involved the networking of four new system servers. The County also established a fiberoptic networking path via the River Drive fiber to Bettendorf City Hall to support the necessary radio system interfaces over the internal network infrastructure.

Scott Emergency Communications Radio System Network Integration: Project established network connectivity for the new Public Safety Radio System, including badge access and video surveillance cameras at all 11 new radio tower sites. Additional network devices were deployed for monitoring purposes at the six Scott County tower sites.

Server Virtualization Hardware and Software Upgrades: Upgrades doubled the RAM in the server virtualization hardware. Two additional hardware blades were purchased, licensed, and added to the environment. Software and firmware aspects were upgraded on all twelve hardware blades. The version of hypervisor software was also upgraded on all twelve blades to a more recent security hardened version.

Standardize SPF / DKIM / DMARC Records for All Domains: SPF, DKIM, and DMARC records define rule sets for email spam filtering. Scott County IT manages multiple internet domain names, each with its own set of records. The IT team consolidated and standardized all these records.

Telephone System Software and Security Update: This project upgraded a 13 virtual server phone management environment to newer software versions that included security enhancement and hardening elements. During this process, new security certs were deployed for all the appropriate server-to-server and server-to-client communication channels.

05 Additional Accomplishments

Virtual Private Networking Solution Upgrade: Upgraded the primary virtual private networking solution to the most recent secure version with little impact to the end users of the system.

Waste Commission Fire Rover Fiber Connectivity: Established a new fire suppression system deployed to handle spot fires on the recycling floor at the Waste Commission Cary Ave. location. This project did involve significant research time with a service provider to locate and establish two new underground splices.

Website: The County maintains sand support of the website for all 17 Scott County departments and offices, which includes over 10,000 pages worth of content on pages, posts, meetings, and other content types. Scott County tracks numerous metrics and consistently demonstrates high website traffic and use; on average, the website has 126,450 pageviews delivered to 29,104 daily users over 49,142 daily sessions. In addition to supporting the County web presence for primary departments, the webmaster also supports several related agencies, including the Scott County Assessor, Library, EMA, SECC, Scott County Kids, Soil and Water Conservation District, Tobacco Free, Live Lead Free, and Partners of Scott County Watersheds.

Windows Hello for Business (Desktop MFA): Windows Hello for Business replaces passwords with strong two-factor authentication on devices and helps protect user identities and user credentials. It helps circumvent phishing and brute force attacks as a user no longer needs to enter a password after initial set up. It also helps to prevent server breaches.

Verkada: The Verkada camera security system is used to identify individuals with outstanding warrants as well as for other safety/law enforcement concerns. The system offers an API to maintain and track images for facial recognition. The number of profiles stored in the facial recognition system ranges on average between 125 –150. Previously, administering this library of images was a daily and time-consuming manual process. The Scott County webmaster automated the process using scripts to sync images from the warrant system and populate the image library directly.

05 Additional Strategic Initiatives

2024 Orthophotography (*Cost Estimate: Low):* Local, detailed aerial imagery and related products are foundational elements of Scott County GIS. Scott County GIS was instrumental in forming a local consortium of county and city governments who have come together every five years to jointly fund and acquire regional aerial imagery and other products such as LIDAR, and vector data layers. This partnership has saved local governments hundreds of thousands of dollars in bulk rate discounts and procurement costs. GIS is actively working with our partner agencies to acquire imagery and related products once again for a spring 2024 flight.

Accessibility *(Cost Estimate: Medium)***:** The Department of Justice is proposing regulations that will set standards for local government for website accessibility. These technical requirements ensure that public web content made available by state and local government or content that is used for offering services, programs, and activities is accessible to individuals with disabilities. This includes text, images, sounds, videos, animations, and more. The proposal also covers accessibility requirements for mobile apps offered by public entities. To achieve web accessibility, the DOJ plans to adopt an internationally recognized standard, the Web Content Accessibility Guidelines (WCAG) 2.1 Level AA. Public entities with a total population of 50,000 or more would need to comply within two years of the final rule's publication.

Scott County has researched ADA compliance and used web compliance services in the past. The County currently uses ADA reporting tools as necessary to evaluate web content compliance. The County will continue to monitor and address compliance shortfalls or needs as DOJ accessibility regulations progress and/or are formalized.

Auditor Website *(Cost Estimate: Medium)***:** The County is working closely with the Auditor to redesign the look and functionality of the Scott County election pages in preparation for the fall election season. These changes will improve public useability and navigation in searching for election data relevant to them.

Convertible Laptop and Desktop Computer Replacements *(Cost Estimate: High):* Project will replace the majority of laptop and desktop computers as part of a normal refresh cycle. Scott County is in the process of ordering 200 convertible laptops and will begin a replacement process late this year. The process of establishing the next standard desktop model for purchase has just been initiated. The desktop portion of this project will replace over 500 devices and likely kick off at the beginning of 2025.

05 Additional Strategic Initiatives

Conservation Wapsi Educational Center Launch *(Cost Estimate: Low)***:** Project will complete systems deployment activities for the Conservation Department's new Wapsi Educational Center. The interior construction activities are currently in progress at the facility, which include the access points, cameras, and switching. Full connectivity by way of a "to be" constructed microware tower is budgeted and is in the engineering phase. AV system integrations are also needed.

Desktop and Application Virtualization Platform Analysis and Consolidation *(Cost Estimate: Medium)***:** Project will analyze and select the best desktop and application virtualization platform, then consolidate Scott County and Medic EMS virtualization needs under that common selection. The current Scott County platform is up for possible replacement, and the platform that Medic EMS is bringing to the table is used to a much greater extent by their users. Analysis of the Medic EMS system for application virtualization capabilities will be required before a final choice can be determined.

Display Card Oath Tokens *(Cost Estimate: Low)***:** IT is evaluating a credit card-sized hardware token with a rolling code as an option for employees who cannot use a cell phone or do not have a dedicated extension.

Infrastructure Monitoring and Management System Refresh *(Cost Estimate: Medium)***:** Project will refresh our infrastructure monitoring and management systems to support newly deployed network and server systems. This management system will collect health and performance details into a new, common dashboard for the use of the Information Technology team as well as for others at Scott County.

Microsoft Teams Meeting System Deploy and User Training *(Cost Estimate: Low)***:** Project will replace the County's current enterprise conferencing solution with an existing solution from Microsoft that is now included in the County's Office 365 tenant licensing. This will require a user awareness and training program to educate end users on differences between the current and replacement platforms.

Mobile Device Management Solution *(Cost Estimate: Very Low)***:** Project will establish a more advanced mobile device management solution that will allow County IT staff to protect county owned mobile devices. This solution should also allow for better upgrade control, application authorization, and asset management of the mobile devices.

05 Additional Strategic Initiatives

Parcel Fabric *(Cost Estimate: Very Low)***:** The ESRI parcel data model is a data management concept complete with tools and practices built specifically to support the maintenance of ownership data layers like parcels, lots, public land surveys, and other relevant data. Advantages of the parcel fabric model include enhanced quality control, historical tracking, and improved positional accuracy per the ability to incorporate survey grade data from developers. GIS is supporting the transition from the current polygon-based parcel model to the parcel fabric. This transition relies on participation and adoption by the Auditor's Office, a component of the project which GIS has steadily supported through staff turnover in key positions.

PHP upgrade *(Cost Estimate: Low)***:** Administration and support of the Scott County website requires the use of the scripting language PHP. In tandem with the larger county web update project, the County will be transitioning the PHP version from 7 to 8. This upgrade will yield benefits in performance, functionality, and security. The upgrade itself can be deployed to a sandbox environment for testing. Several tools and scripts written in PHP 7 will be reviewed and rewritten as needed prior to or during the web upgrade project.

Scott County Private Roads *(Cost Estimate: Very Low):* Private roads in Scott County differ from public roads in important ways. The Scott County Secondary Roads department does not maintain private roads. Surface repairs, snow removal, blading, etc. for private roads are handled by private owners or Homeowner Associations (HOAs). Certain laws are also enforced differently depending on whether a road is public or private. Scott County GIS is in the process of identifying all private roads in Scott County and will publish this information via web applications with Secondary Roads, the Sheriff's Office, and Scott Emergency Communications Center (including it in the computer aided dispatch system). This initiative will assist Secondary Roads in planning and aid the Sheriff's Office in determining appropriate enforcement options.

Scott Emergency Communications Center Secured Partner Connectivity *(Cost Estimate: Low)***:** Project will establish firewall-controlled access to the internal Scott Emergency Communications Center records and dispatching systems. This will require new equipment and appropriate analysis of system allowances. Security monitoring will be established to supply threat intelligence on these connections.

05 Additional Strategic Initiatives

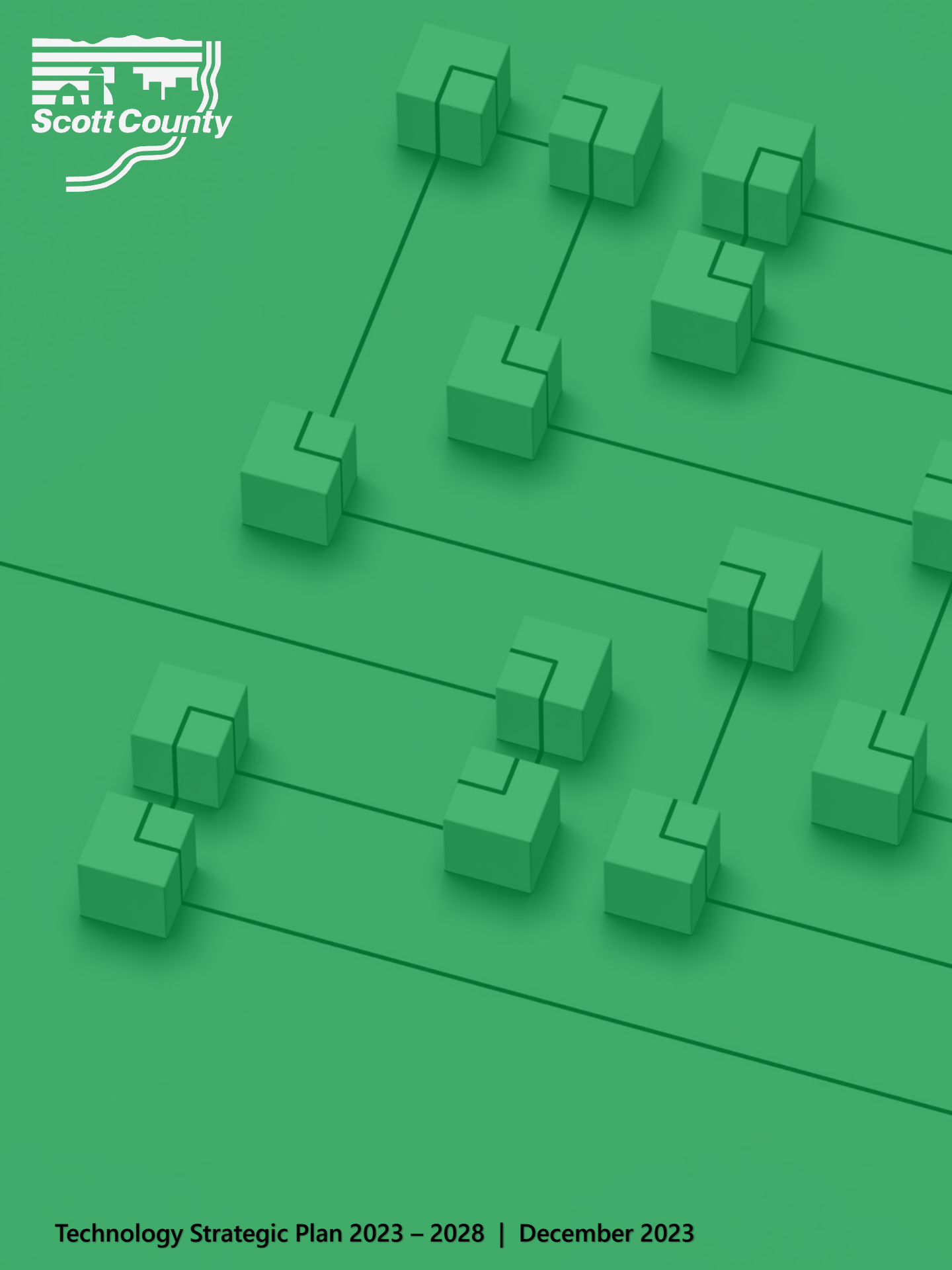
SECC Website *(Cost Estimate: Medium)***:** The existing SECC website is separate from Scott County and was developed using a web software platform that is end-of-life. The SECC website will be integrated with the Scott County website to provide long term support and comparable design and capabilities. This move will have many additional benefits including enhanced performance, security, accessibility, and the broad capabilities that an enterprise content management system like Drupal provides.

Self Service Password Reset (SSPR) *(Cost Estimate: Very Low)***:** Process underway to roll out Self-Service Password Reset for our users. This will reduce help desk traffic for end users seeking assistance for password resets.

Sheriff Jail Surveillance System Replacement *(Cost Estimate: Medium):* Project will replace existing surveillance camera systems in the Sheriff's Jail facilities with a newer distributed storage camera solution. The existing monolithic storage array is reaching the end of its service life and system support will be ending soon with the manufacturer. This deployment will require close cooperation with the security systems integrator to tie cameras into the jail electronics controls.

West-Side Network Ring *(Cost Estimate: High)***:** Project will establish a microware backhaul path to supply redundant connectivity to locations on the west side of Scott County. This will require the associated microwave hardware for two new microware paths and a tower lease agreement to be expanded to include the new equipment. Once completed, this ring will provide a backup path for the Waste Commission Landfill and West Lake Park locations.

Scott County



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