



# IT STRATEGY AND STRATEGIC PLAN 2021 – 2024

## 2022 Q2 UPDATE

A COMPREHENSIVE LOOK AT IT OVER THE NEXT 3.5 YEARS



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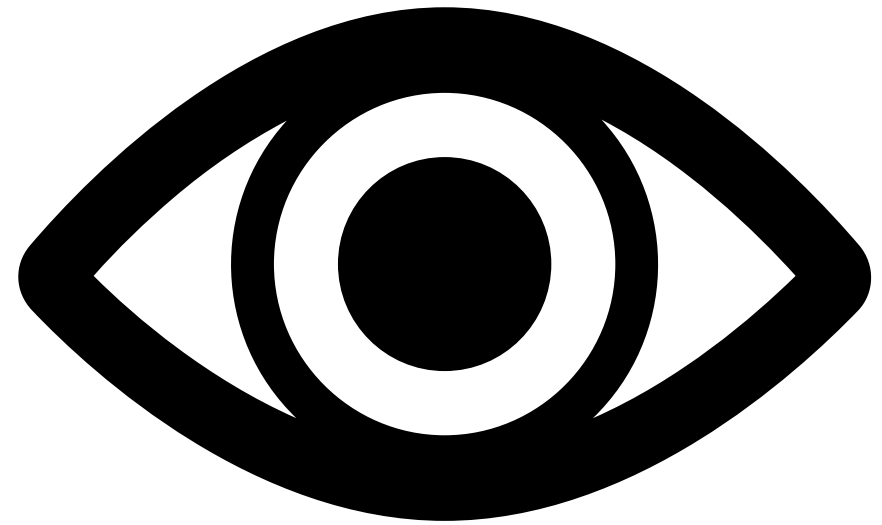
# CORE BELIEFS

THE LENSES THROUGH WHICH THE INFORMATION TECHNOLOGY STAFF SEES THE WORLD



# VISION

- The Information Technology Department will partner with County Departments, agencies and teams, to improve County Services through the use of Information Technologies and innovative thinking around how the services are structured and delivered.



# VISION DEFINED

- The Information Technology Department delivers technology to provide and enable superior Customer Service to both residents and employees of St. Louis County.
- IT staff will bring innovative thinking, business analysis and technologies to the table for our customers.
- It is our role to be a responsible partner with departments, agencies and teams within the County.
- We look deeper than the stated challenge to help our customer not just find a solution, but to find the best solution.
  - The best solution could mean technology enhancements, process enhancements, an entirely new way to look at delivering the services or changing how the underlying processes happen.

## MISSION



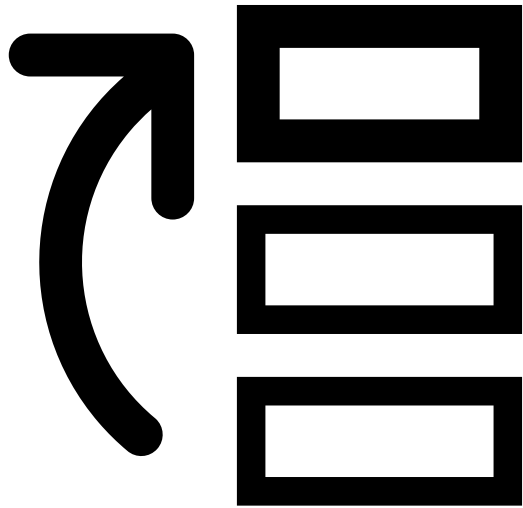
- Partner with County Departments, agencies and teams, to understand their challenges and leverage Information Technology solutions and innovative thinking to overcome those challenges and improve services.
- Understand what is current and available in the IT industry, with a focus on responsibly sourced products, in order to be ready to respond to needs as they appear.
- Develop and maintain service levels and provide transparency into the services being delivered.
- Enhance cybersecurity measures that will enable County to mitigate persistent threats on our Enterprise.

# INFORMATION TECHNOLOGY STRATEGY

- The IT (Information Technology Department) Strategy is built from:
  - The 2021 Goals set by the County Executive.
  - Operational necessities of IT.
  - New capabilities and technology that are required for providing services.
  - Continuing review of services and possible innovations.
  - The reality of the County's financial position and the limited budgets for the foreseeable future.



# FOCUS AREAS



- Enhanced Cybersecurity
- Enable Improved Customer Service
  - Enhance Communications to Residents
  - Service Management
  - Knowledge and Process Automation
- Eliminate TechDebt
- Improve Internal Processes
  - Service Management
  - Knowledge and Process Automation



# FOCUS AREAS TIMELINE

Focus Areas Prioritization	2021 Q 3&4	2022 Q 1&2	2022 Q 3&4	2023 Q 1&2	2023 Q 3&4	2024 Q 1&2	2024 Q 3&4
Enhanced Cybersecurity	Active	Active	Active	Active	Active	Active	Active
Enable Improved Customer Service	Not Active	Not Active	Not Active	Not Active	Not Active	Not Active	Not Active
Enhance Communications to Residents	Active	Active	Active	Active	Active	Active	Active
Service Management	Active	Active	Active	Active	Active	Active	Active
Knowledge Automation	Active	Active	Active	Active	Active	Active	Not Active
Process Automation	Not Active	Active	Active	Active	Active	Active	Active
Eliminate TechDebt	Active	Active	Active	Active	Active	Active	Active
Improve Internal Processes	Not Active	Not Active	Not Active	Not Active	Not Active	Not Active	Not Active
Service Management	Active	Active	Active	Active	Not Active	Not Active	Not Active
Knowledge Automation	Active	Active	Active	Active	Active	Not Active	Not Active
Process Automation	Not Active	Active	Active	Active	Active	Active	Not Active

The colors in these charts are only there to make it easy to distinguish one line from the other.

# TECHDEBT FOCUS AREAS OPERATIONAL DEPARTMENTS

Focus Areas	2021 Q 3&4	2022 Q 1&2	2022 Q 3&4	2023 Q 1&2	2023 Q 3&4	2024 Q 1&2	2024 Q 3&4
IT Legacy Systems	Light Green	Light Green	Light Green	Light Green			
Revenue Legacy Systems	Green	Green	Green				
Administration Legacy Systems		Light Blue	Light Blue	Light Blue	Light Blue		
Public Health Legacy Systems	Blue	Blue	Blue	Blue	Blue	Blue	
Transportation/Public Works Legacy Systems		Dark Blue	Dark Blue	Dark Blue			
Courts	Purple	Purple	Purple				
Justice Services		Yellow	Yellow	Yellow	Yellow		
Spirit Airport	Red						
Human Services	Red	Red					
Parks		Yellow	Yellow	Yellow	Yellow		
Planning			Light Green	Light Green	Light Green	Light Green	

# IT STRATEGY

## Goals

- **Rebuild Trust in Government**
  - Accountability
  - Ethical Standards
  - **Transparency**
- **Making Government work for Everyone**
  - **Customer Friendly Government**
  - **Operational Effectiveness**
  - **New Efficiencies**
  - Collaboration with the County Council
  - Regional Collaboration
  - Being a Responsible Employer

## Customer Centric Approach

- **Web Based Communication**
  - The Internet Web Site is the central communication and service delivery vehicle. It is augmented using other solutions such Data Visualization, Chatbots, YouTube videos, etc. This allows residents and employees a single place to find information or services no matter the platform they are using.
  - Inclusive Communications
    - Goal of 80% ADA Compliance on all public platforms
    - Multiple human interfaces including Web, Chat, Voice and Text
- **Automation**
  - Leverage Knowledge Automation in conjunction with a service management application and the new directed search engine to give our customers information on specifically the topic that they wish to understand.
  - Implement process automation in conjunction with the service management application to simplify and accelerate the delivery of services to our customers.

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## Workplace Experience

- **Customer Centric**
  - Support needs to be optimized to put the customer first based on the criticality of the issue.
  - The most critical issues that impact the most critical people should be serviced first.
  - Projects will be customer focused with those that gain the most benefit being placed ahead of other projects.
  - Solutions generated by IT, either custom or shrink wrapped, need to fit the need of the customer.
  - Every challenge will be viewed through the prism of innovation.
  - The customer needs to be trained on how to use the solution.
  - User oriented training will be developed and maintained for each solution to allow staff to self-learn.
- **Work from Anywhere**
  - Employees whose role can be performed remotely will be enabled to work from anywhere
  - Easier access to email and shared documents.
- **Service Management**
  - Implement Service management tools and processes to improve customer and employee experience
- **Automation**
  - Automate processes and knowledge to improve resident experience and improve employee productivity.

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## Open Government

- **Web Based Communication**
  - Utilize the existing Website software, including search engine, as a single location where residents can find any information that the County Government is making available. This will simplify the ability for residents to find information they desire and enable County Government to be more transparent.
- **Customer Service Portal**
  - Enable residents to easily find and request desired services from County Government.
- **Data Visualization**
  - Leverage the existing Data Visualization platforms to enable the creation of reporting applications and dashboards that can make data currently contained in internal applications available over the internet.
- **Sunshine Portal**
  - Utilize the existing sunshine portal to support residents in submitting Sunshine requests and to assist employees in the servicing of those requests.

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## Budget and Operations

- **Operational Budget Management**
  - Budgets, along with operations and projects, need to be designed to optimize the operational budget.
  - The operational budget is for operations. Financial savings verses projected spend can be used for projects, but only when funding for operations is not compromised.
  - New solutions should be analyzed against this budget reality.
  - Expensive projects should be funded through supplemental requests or through bond funding.
- **Gain Value from existing investments**
  - Solutions that have already been paid for, should be leveraged to their fullest extent prior to sourcing new solutions to existing challenges. Only when existing solutions are not suitable to fit the business need, present a security threat, or are not longer supportable, will new or replacement solutions be sourced.
  - IT will focus on educating our workforce on existing solutions and how they can be used to solve existing challenges.
- **Centralized Management**
  - IT will manage the acquisition, lifecycle and budgeting for all Enterprise Solutions. That may include locking portions of other department's budgets to fund their portion of the Enterprise solutions.

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## Solution Management

- **Definition of a Solution**
  - A solution is defined as a collection of hardware, software, connectivity, configuration, knowledge and labor that is directed to produce a service or a result.
  - The number of Information Technology solutions in use is greater than 300. Many of these are Enterprise-wide solutions that lend themselves well to centralized management. Some are specific to a single department and lend themselves well to a partnership management.
- **Enterprise Solutions**
  - An enterprise solution is defined as a collection of hardware, software and configuration that is used by multiple departments and is managed 100% by IT.
- **Departmental Solutions**
  - Departmental solutions are defined as a collection of hardware, software and configuration that is used, or primarily used, by a single department. These solutions are dependent on one or more Enterprise Solutions. Management of this application is shared between IT and Department Resources.
- **Committee Solutions**
  - Committee solutions are solutions are used by multiple departments, agencies or teams and where there is a committee that manages the direction and expenses of the solution.

# IT STRATEGY

## EXAMPLE SOLUTIONS

<b>Enterprise Solutions</b>	<b>Departmental Solutions</b>	<b>Committee Solutions</b>
Network	Cellular Telephone	GIS
Email	Accela	Tableau
SharePoint	AllScripts	Data Warehouse
Server/Storage		
Telecommunications		
Desktop Support		



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## Product and Service Selection

### ▪ **Evaluation**

- Each need will be analyzed based on a series of criteria that IT uses to evaluate solutions prior to selection. This process is in addition to, and does not replace, the use of approved procurement processes such as Request for Proposals.
- **Feature/Function**
  - Features and Functions required to fulfill this need will be identified and prioritized. This includes an evaluation against enterprise solutions to verify that the solutions will operate properly in our environment.
- **5 Year Total Cost of Ownership**
  - Each solution will be evaluated on a 5-year projected spend that includes direct spend on software and hardware, and indirect spend on staff, network, support and other items that contribute to the total cost of a solution.
- **Cloud vs On-Prem**
  - All solutions should be evaluated to determine if a cloud-based solution is a better fit than on-prem. There could be reasons such as anticipated load or the need for variable resources that can make a solution in the cloud.
- **Service vs Persistent**
  - Each need that is identified should be evaluated against delivery purchased as a service, which generates an annual cost, vs. a persistent solution which generates a one-time cost that will repeat itself at the end of the solution lifecycle.
- **Build vs. Buy**
  - Identified needs will be evaluated against purchasable options compared to custom developed options. Needs that are better suited for build vs. buy will be developed and supported by in-house staff. Needs that are better suited for buy will be sourced and purchased using the approved procurement methods.

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## How IT will Operate

- **ITIL**
  - Expansion and implementation of ITIL processes that make sense for County IT. These include Incident Management, Change Management, Release Management, Asset Management and License Management.
- **Meaningful Policies**
  - Policies will be written for an about people. Technical requirements and standard will be regulated to standards documents. This will make it easier for people to find and understand what requirements IT has of them.
- **Operations vs. Projects**
  - Operations is defined as the support and maintenance activities required to make existing solutions function.
    - Keeping existing solutions operating is more important than implementing new systems unless the old systems are failing to perform the needed business function.
    - Support is our number one job and should be the first priority of all of IT. Support is defined as something worked before and now it doesn't.
  - Projects are prioritized by the business priority.
    - County Executive's office dictates the priority based on their annual guidance
    - Only projects that are required for operations or that align with the priorities of the County Executive will be performed.

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## Cybersecurity

- **Approach**
  - First, security needs to be targeted to identifying what data and systems needs to be protected from access or corruption and placing the most stringent controls there.
  - Second, security needs to be focused on maintaining the integrity of our systems and preventing a cyberattack from being able to bring County Services to a halt.
  - Make reasonable efforts to protect against data leakage without compromising usability of our applications.
  - Ensure a rapid recovery from successful attacks is available.
- **Data Security**
  - Data Security should be focused on the prevention of data corruption.
  - There should be controls in place to protect data that requires protection such as PII, HIPPA and CJIS.
  - Non-Regulated Data leakage should not be a priority concern and should be handled by policy instead of additional technology.
- **Access Control**
  - Systems need to be protected from unauthorized access. Only accounts and systems that need to access systems should have access to a system.
  - Data shall be encrypted in transit when traversing public networks.
  - Implement network access controls based on organizational and application roles.

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## Device Management

- **Compute Device Management**
  - A device is defined as a computing device that a person uses to access applications and perform work.
  - All County owned devices will be managed through a platform that allows at minimum
    - The ability to deliver and verify updates to the device
    - The ability to deliver and verify applications to the device
  - Devices should never be a permanent data store and therefore are not backed up and not recoverable
- **IOT Device Management**
  - An IOT device is defined as an internet connected device designed for a limited number of functions with a limited user interface that either gathers data or delivers data. Examples of these devices are printers, scanners, badge readers and security cameras.
  - These devices need to be secured in such a way as to prevent a compromise of the IOT device from endangering other network connected devices or the network itself.
  - These devices need to be managed with a minimum of delivering updates and upgrades required to maintain security.

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## Business Continuity

- **Departmental Continuity**
  - Departments should consider and plan on a variety of use cases to be able to continue government operations in the event of a disaster. The department should form a team that will engage with IT to determine what technology is needed to enable their department to operate in a variety of disasters.
- **Business Critical Systems**
  - Critical enterprise solutions should be designed with either a high availability adaption or a manual failover solution that can be implemented within 24 hours of the solution failure.
  - Critical departmental solutions should be designed based on the funding available by the department funding the solution.
- **Catastrophic Disaster Response**
  - In the event of catastrophic failure in the data center, recovery to a cloud-based solution is critical.
    - Systems deemed critical to public safety should be designed with off-site failover
    - Critical Enterprise solutions should be recovered within 24 hours of a disaster declaration
    - Critical Department solutions should be recovered within 48 hours of a disaster declaration
    - Non-Critical solutions should be fully recovered 240 hours after a disaster declaration.

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## Data

- **Open Government Enablement**
  - Data Warehouses managed by Performance Management and Budget, along with IT exist to aggregate data. Only data in the data warehouses will be used for data visualizations.
  - ESRI is the standard for all spatial data visualization
  - Tableau is the standard for all non-special data visualization
  - A non-structured data sharing solution will need to be sourced
- **Data Storage**
  - County data should be consolidated into the minimum number of platforms as possible.
    - Structured data (DB) environment
      - Should be accessible over the Internet by qualified devices or users
      - These are “Standard Operational Databases”
    - Web Based for unstructured (SharePoint or similar)
      - Should be accessible over the Internet by qualified devices or users
    - File Share Based (for what won't fit into the previous two options)



# STRATEGIC PLAN

2021 Q3 & Q4 THROUGH 2024



# PROJECT CATEGORIES

- **Communication and Collaboration** = Tools to improve communications internally, with our partners and customers.
- **Customer Service** = Tools selected and designed to improve service to our customers
- **Ease of Use** = Making our systems easier for our employees to use
- **New Capabilities** = New tools and capabilities for our users
- **Non-IT Projects** = New Department applications and upgrades
- **Processes and Workflows** = Tools to improve IT and County workflows and processes
- **Resilience** = Improving our ability to keep our systems up and recover from catastrophic failures
- **Tech Debt** = Eliminating old, unneeded and expensive technology



# COMMUNICATION AND COLLABORATION

Projects	2021	2022	2023	2024
Collaboration/Virtual Meeting Replacement	✓			
Conference Rooms Hybrid Implementation				
Council Chambers and Conference Room Hybrid upgrade				
eFax implementation		✓		
Skype Replacement with Avaya Solution				

# CUSTOMER SERVICE

Projects	2021	2022	2023	2024
Liquor License Automation				
Revenue Website reskin	✓			
Revenue Website rewrite				
RITE Customer Service – Service Management				
RITE Customer Service - Process Automation				
SMS/Email/Voice Campaign Communication System				
Website Mobile Wrapper		✗		

# EASE OF USE

Projects	2021	2022	2023	2024
Email Access on Mobile using Exchange for MDM functionality	✓			
Email Access on County PCs without VPN	✗			
Intranet		✓		
Collaboration System Access on County PCs without VPN				
SMS validated Self-Service Password Resets				
Easier to use 2-Factor Authentication				

# NEW CAPABILITIES

Projects	2021	2022	2023	2024
Document Management and Retention				
DocuSign Retrieval App				
Softphone on Devices and PCs		✓		
GIS Enterprise and ESRI-Online Implementation				
Workflow Solution	✓			

# NON-IT PROJECTS

Projects	2021	2022	2023	2024
Animal Control Management Software				
Deeds and Vital Records Upgrade		✓		
Electronic Plan Review				
EMR and Prescription System Replacement				
ERP Upgrade	✗			
Permitting System Enhancements		✓		
Public Health License and Inspection Automation				

# PROCESSES AND WORKFLOWS

Projects	2021	2022	2023	2024
IMAC Application		✓		
PC Lifecycle Management				
RITE Administration – Service Management				
RITE ITSM Change/Release Management				
RITE ITSM CMDB				
RITE ITSM Inventory Management				
RITE Personnel – Service Management				
RITE Personnel – Process Automation				
RITE Procurement – Service Management				
RITE Procurement – Process Automation				

# PROCESSES AND WORKFLOWS

Projects	2021	2022	2023	2024
RITE-CS – Revenue	✓			
RITE-CS – Assessor				
RITE-CS – Planning				
RITE-CS – Spirit				
RITE-CS – Parks				
RITE-CS – Transportation				
RITE-CS – Public Works				
RITE-CS – Municipal Court				
RITE-CS – Justice Services				
RITE-CS - DPH				

# RESILIENCE

Projects	2021	2022	2023	2024
Data Center Recovery to Cloud				
Data Center Security Hardening				
Index Search of Backups				
Information Technology Consolidation				
Spatial Data Visualization Test and Staging Environments				
Universal Software Updates				
User Account Management				
Windows 10 Upgrades				



# TECH DEBT PART I

Projects	2021	2022	2023	2024
Active Directory Upgrade				
Collaboration Solution Data Migration				
Collaboration Solution Upgrade				
CountyNet Decommission				
Eliminate Non Dedicated Desktops				
Email Upgrade				
Employee Alert System Replacement				
Firewall Replacement				
Legacy Firewall Decommission				
Legacy Messaging Decommission				

# TECH DEBT PART 2

Projects	2021	2022	2023	2024
Legacy VDI Decommission	✓			
Legacy Virtual Meeting Decommission	✓			
Legacy VPN Decommission				
Sales Tax Application Rewrite				
Termination of WIX Sites				
Voice Services Replacement		✓		
Wide Area Network Replacement				
Windows 7 Decommission	✓			