

Memorandum No: 22/23-7

Date: July 5, 2023

To: Honorable Mayor and Commissioners

From: Patrick Reilly, CPA *PR*
City Auditor

Re: Audit of Internal Controls Over Ordering Information Technology Services and/or Equipment

Upon the request of the City Manager, the City Auditor's Office (CAO) conducted an audit of Ordering IT Services and/or Equipment to ensure that internal controls are in place and operating effectively. The audit was prompted by an internal investigation that occurred during fiscal year 2022, within IT Services, which discovered the circumvention of internal controls by a former employee. As of March 2023, the investigation is ongoing and its details remain confidential.

Conclusion

Overall, the CAO found that the internal control environment is in place and working as intended, but it can be strengthened with additional enhancements. We identified an internal control weakness related to the lack of IT service and/or equipment receipt confirmation by the requestor, as described in Finding #1. In addition, we identified three Observations, which are opportunities for internal control improvements. We consider Finding #1 an internal control "deficiency," as outlined in the Methodology section.

Background

The IT Services department is responsible for ordering IT-related equipment and services for all City departments. City employees can order IT services via e-mail, phone call, or via the Help Desk. For each order, a ticket is created in the TrackIT ticketing system. If the order comes through the Help Desk, then a Tech Support Coordinator or the Supervisor will create the ticket. If it is a call, then one of the five IT Administrators creates the ticket. The ticket is created in the purchasing module of the TrackIT system that was developed in-house for IT purchases only. SharePoint is a document-sharing platform within the City, which is used to disseminate information regarding IT service ordering and support.

IT service requests are handled on a "first come, first serve" basis. Sometimes a judgment call is made by the IT Business Operations Manager to reprioritize order requests, for example, in the case of an emergency.

The IT Senior Administrative Assistant is notified via an autogenerated e-mail when an IT order request is placed from outside of the IT Services department. All requests are verified by the Budget

Coordinator of the appropriate department to ensure that the orders have budgeted funds and approvals. Approval levels are based on the Procurement Manual issued on 7/26/2021. If a request is initiated within IT Services, the IT Administrator asks for approval from the appropriate IT Division Manager. There are six Divisions (see Exhibit 1) handled by five IT Administrators. If the services or equipment is contract-based, the Contract Administrator in IT discusses the request with a procurement specialist. The list of all contracts resides in SharePoint.

The IT Financial Administrator coordinates with the outside vendor and places the orders. Each department receives its ordered items directly from the vendors or IT Services. If there is a shortage of items or a different item is received than what was ordered, the department notifies IT Services. All vendor invoices go to the Accounts Payable department in Finance that are sent to IT Services to match invoices to purchase orders. To manage the list of orders, the IT Financial Administrator monitors the outstanding tickets through their "backlog list."

All service receipts are communicated via e-mail and noted in TrackIT. It includes vendor communication as well as all exceptions like backorders, delayed shipping, or replaced items. Each IT administrator is responsible for the list of their orders. If a purchase order is over \$1,000, the relevant contract with the price quote is utilized to execute the order. The invoices are received at the IT Services e-mail address. Invoices are matched to purchase orders by the assistant handling the service order in IT Services. All IT Administrators report to the IT Financial Administrator.

For purchases under \$1,000, the IT Financial Administrator puts the purchase on his pcard. Besides the IT Financial Administrator, there are two senior accountants within IT Services who can also pay vendor invoices with pcards. In some cases, such as emergencies or backorders, the IT Financial Administrator purchases items up to \$5,000. Pcard transactions are processed by Truist bank. As of October 1, 2022, pcard purchases can also be viewed on the Infor system.

The assigned IT technician creates order notes in the "Resolution" tab of the ticket when it is completed. The log of all requests is downloaded from the TrackIT system to an excel spreadsheet that is used by the IT Financial Administrator and the IT Business Operations Manager for tracking purposes. Since the purchasing function had been developed in-house as an add-on to the TrackIT system, it has limited capabilities for reporting. A new IT Service Management (ITSM) tool is planned for implementation in the near future that has enhanced tracking and reporting capabilities.

Objectives and Scope:

The overall objective of the audit was to determine if internal controls are effective when: 1) ordering IT services and /or equipment, and 2) accepting and validating service and/or equipment deliveries prior to payment. The audit scope included the period from July 1, 2022, to December 31, 2022.

Methodology

The CAO conducted its assessment of internal controls using the May 2013 updated Internal Control—Integrated Framework established by The Committee of Sponsoring Organizations of the Treadway Commission (COSO). The framework defines internal control, describes the components

of internal control and underlying principles, and provides direction for all levels of management in designing and implementing internal control and assessing its effectiveness. The five components of the COSO framework are: control environment, risk assessment, control activities, information and communication, and monitoring activities.

The audit methodology included, but was not limited to:

- Performing data reliability and integrity assessment of related computer systems.
- Reviewing regulatory guidance, policies and procedures, and related requirements.
- Reviewing records and reports.
- Reviewing applicable Service Delivery Agreements.
- Performing process walk-throughs and conducting a review of internal controls.
- Interviewing appropriate personnel; and
- Performing detailed testing on selected activities.

We have identified one Finding and three Observations during the audit. A Finding results from a failure to comply with policies and procedures, rules, regulations, contracts, and fundamental internal control practices. An Observation represents an opportunity to improve the design or functionality of an existing internal control.

A finding is categorized as a “deficiency,” a “significant deficiency” or a “material weakness” as defined below:

- *A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance on a timely basis.*
- *A significant deficiency in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.*
- *A material weakness in internal control over compliance is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance will not be prevented, or detected and corrected, on a timely basis.*

This audit was conducted in accordance with generally accepted government auditing standards. These standards require that we plan and perform the review to obtain sufficient, appropriate evidence to provide a reasonable basis for our conclusions based on our objectives. We believe that the evidence obtained provides a reasonable basis for our conclusions based on our objectives.

During the course of the audit, we were able to substantiate that overall the above process is working as intended and that internal controls are effective. The IT Business Manager keeps detailed records and all approvals are evidenced. We would like to thank the department for its cooperation and timely delivery of the requested documentation.

Table of Contents

Audit Conclusion, Background, Objectives and Scope, and Methodology 1-3

FINDINGS

Finding 1- Lack of confirmation that the ordered IT service and/or equipment had been received by the requestor and working as expected 4-5

OBSERVATIONS

Observation 1- The City’s Policy and Standards Manual (PSM) 9.3.2 is outdated and it does not reflect the current computing environment and the IT Services department’s practices 6-7

Observation 2- City departments are not reviewing monthly Verizon cellphone invoices ..8

Observation 3- The current IT equipment and service ordering spreadsheet does not account for tracking the aging of the order tickets9

EXHIBITS

Exhibit 1- IT Services Organizational Chart11

Exhibit 2- PSM 9.3.2 12-13

FULL TEXT OF MANAGEMENT RESPONSES 14-18

FINDINGS

Finding 1 - Lack of confirmation that the ordered IT service and/or equipment had been received by the requestor and working as expected.

Condition

IT service and/or equipment delivery confirmation by the requestor is not in place. In some cases, the IT technician notes "completed" or "done" on the TrackIT ticket and the ticket is closed. In other cases, the ticket status is not marked, and/or the date of delivery is not entered.

Criteria:

Currently, there is no requirement that the requestor confirms that the IT service/equipment was delivered and working as intended.

The COSO framework establishes that:

"Principle 10. The organization selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels.

From the Points of Focus within Principle 10 include:

50. Determines relevant business processes, and

51. Evaluates a mix of control activity types."

Cause:

IT Services Management does not require supporting documentation confirming that the IT service, and/or equipment had been delivered and working as expected by the requestor.

Impact:

There is a risk that the requestor did not receive the ordered IT equipment/services or it is not working as expected. Additionally, IT management might be unaware of this fact as the tickets could be closed prematurely; therefore they are unable to monitor ticket status effectively.

Recommendations:

The CAO recommends that the City Manager require that the Director of IT Services implements internal controls to evidence receipt of IT Service/equipment delivery by the requestor.

This evidence could be in the form of an e-mail attached to the ticket or a notation of the date/time and the person's name who confirmed delivery noted under the "Resolution" tab of the ticket. It is expected that a new ITSM tool will be implemented in the near future; the department should explore whether the new software has better tracking capabilities than the current system in place.

Management Response:

Management concurs with this finding.

*Information Technology Services (ITS) has recently begun a three-year Transformation and Modernization plan with the goal of achieving IT service excellence by focusing on three critical areas, **Cybersecurity, Modernization and Workforce** (see Exhibit A – IT Transformation Matrix).*

ITS is currently finalizing the procurement of a new Information Technology Service Management (ITSM) system which will focus on standardizing service and support, operational efficiency as well as IT governance (see Exhibit B – IT Service Management Modernization Roadmap).

The goal of the ITSM project is not only to replace the existing unsupported and end of life program but to formalize, standardize, and modernize IT service management practices in the City. This initiative will include the adoption of the ITIL (Information Technology Infrastructure Library) framework which is an industry standard based on known and proven principles in efficient, effective, and successful IT management. ITSM modernization will also enable process improvement across the IT organization including asset management, change management, portfolio management, knowledge, contract, and vendor management as well as configuration management, all currently lacking in the IT organization today.

Additionally, key IT staff members are scheduled for a 4-day on-site IT Service Management Workshop on July 31, 2023, as part of the IT Transformation and Modernization three-year plan.

OBSERVATIONS

Observation 1 - The City's Policy and Standards Manual (PSM) 9.3.2 is outdated and it does not reflect the current computing environment and the IT Services department's practices.

Condition

The City's PSM 9.3.2, dated 07/18/2006, is outdated and it does not reflect current practices (see Exhibit 2).

Auditor Note: PSM 9.3.2 describes purchasing/leasing computer hardware and software by various City departments while IT Services' role is restricted to "attending meetings" when vendors solicit departments with new products and "schedule or contract" for training needs. Moreover, the PSM mentions outdated and non-viable technologies in today's environment, such as "ribbons, diskettes" among others.

Criteria

The COSO framework establishes that:

"Principle 12: The organization deploys control activities through policies that establish what is expected and procedures that put policies into action.

From the Points of Focus within Principle 12 include:

- 58. Establishes policies and procedures to support deployment of management's directives,
- 59. Establishes responsibility and accountability for executing policies and procedures,
- 60. Performs in a timely manner,
- 61. Takes corrective action, and
- 63. Reassesses policies and procedures."

Cause:

PSM 9.3.2 has not been periodically updated as per standard industry practices.

Impact:

In the case of turnover, institutional knowledge could be lost and current business practices may not be followed or followed incorrectly without written policies and standards.

Recommendations:

The CAO recommends that the City Manager requires the Director of IT Services to work on updating PSM 9.3.2. Additionally, developing internal policies should be considered that are reflective of the computing environment, the roles and processes of the IT Services department, and its internal controls.

Management Response:

Management concurs with this Observation.

The PSM 9.3.2 has been revised by ITS and reviewed by Structural Innovation and will be presented to the Executive Strategy Team for review by the 4th quarter of 2023.

Additionally, ITS is currently finalizing the procurement of a new Information Technology Service Management (ITSM) system which will focus on standardizing service and support, operational efficiency as well as IT governance (see Exhibit B – IT Service Management Modernization Roadmap).

Key IT staff members are scheduled for a 4-day on-site IT Service Mangement Workshop on July 31, 2023, as part of the IT Transformation and Modernization three-year plan.

Observation 2 - City departments are not reviewing monthly Verizon cellphone invoices.

Condition

We found no evidence of a review and approval of a Verizon monthly (October 23, 2022) cellphone invoice, totaling \$12,763.55. Further review revealed that monthly cellphone invoices are not reviewed by the departments.

Auditor Note: Currently, IT Services performs a cursory review on reoccurring monthly invoice total balances. If a large deviation is noted as compared to prior monthly invoices, IT Services inquires further, otherwise the invoice is paid.

We also noted a compensating control of an annual review of phones by each department.

Criteria

The COSO framework establishes that:

"Principle 10. The organization selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels.

From the Points of Focus within Principle 10 include:

- 50. Determines relevant business processes, and
- 51. Evaluates a mix of control activity types."

Cause:

Departments are not required to review their monthly cellphone invoices, nor do they have access to them.

Impact:

There is a potential that unnecessary IT services and/or equipment is paid for by the City.

Recommendation:

The CAO recommends that the City Manager require the Director of IT Services to take steps to enhance internal controls. Specifically, cellphones assigned to employees are reviewed at least quarterly for accuracy and the review is evidenced by a signature and date. PSM 9.3.2 should reflect these potential updates.

Management Response:

Management concurs with this Observation.

ITS will commence with a quarterly review for city departments to review their cellphones issued to employees for accuracy. The review will require a signature and a date.

Observation 3 - The current IT equipment and service ordering spreadsheet does not account for tracking the aging of the order tickets.

Condition

The current IT equipment and service ordering spreadsheet, exported from the TrackIT system, does not account for tracking the length of time outstanding for order tickets. Moreover, while dates of orders placed, and their priorities are listed, there are no standards established of how quickly a high, medium, or low priority ticket should be completed.

Criteria

The COSO framework establishes that:

"Principle 12: The organization deploys control activities through policies that establish what is expected and procedures that put policies into action.

From the Points of Focus within Principle 12 include:

- 58. Establishes policies and procedures to support deployment of management's directives,
- 59. Establishes responsibility and accountability for executing policies and procedures,
- 60. Performs in a timely manner,
- 61. Takes corrective action, and
- 63. Reassesses policies and procedures."

Cause:

The current spreadsheet is not set up to account for the aging of the order tickets. Additionally, timely completion of outstanding order tickets is not monitored effectively.

Impact:

IT Services management is unable to effectively and efficiently utilize their resources.

Recommendation:

The CAO recommends that the City Manager require the Director of IT Services to either expand PSM 9.3.2 or develop a new policy that includes, but is not limited to, establishing completion standards based on ticket priority. In addition, ticket completion should be tracked against these standards to ensure equipment and services are delivered, installed, and working within the established operating goals.

Management Response

Management concurs with this Observation.

ITS is currently finalizing the procurement of a new ITSM tool which will enable our teams to manage the end-to-end delivery of IT services to customers. This tool will leverage the Information Technology Infrastructure Library (ITIL) standards including Service Levels Agreements. The ITIL framework will allow the organization to establish a baseline from which it can plan, implement, and measure incident response and service requests. Several ITS employees have begun receiving their ITIL certification as part of the IT transformation and modernization three-year plan.

cc: Greg Chavarria, City Manager
D'Wayne Spence, Interim City Attorney
David Soloman, City Clerk
Susan Grant, Assistant City Manager
Anthony G. Fajardo, Assistant City Manager
Tamecka McKay, Director of IT Services
Valerie Florestal, Business Operations Manager, IT Services

EXHIBITS

Information Technology Services Department

FY 2023 Adopted Budget Organizational Chart

Total FTEs - 77*

IT ADMINISTRATIVE SERVICES - 14

Director - Information Technology Services	1
Business Operations Manager	1
Administrative Assistant	1
Copy Center/Mail Technician	1
Financial Administrator	1
Offset Printing Press Operator	1
Publishing Services Administrator	1
Senior Accounting Clerk	2
Senior Administrative Assistant	5

IT INFRASTRUCTURE & OPERATIONS SERVICES - 22

Technology Infrastructure and Operations Manager	1
IT Service Desk Manager	1
IT Service Desk Coordinator	3
IT Service Desk Supervisor	1
Network Engineer	2
Senior Network Engineer	1
Senior Systems Engineer	2
Senior Technical Support Analyst	2
Senior Voice Engineer	1
Systems Engineer	2
Technical Support Analyst	4
Technology Infrastructure Support Technician	1
Voice Engineer	1

IT APPLICATION SERVICES - 14

Application Services Manager	1
Application Support Specialist	3
Database Administrator	1
Data Warehouse Analyst	1
Geographic Information Systems Analyst	2
Senior Database Administrator	1
Senior Geographic Information Systems Analyst	2
Senior Technology Strategist	2
Technical Support Analyst	1

IT PUBLIC SAFETY SERVICES - 16

Police Information Technology Manager	1
Telecommunications Manager	1
Senior Technical Support Analyst	3
Senior Technology Strategist	2
Technical Support Analyst	4
Technical Support Coordinator	1
Technology Strategist	1
Telecommunications Coordinator	1
Telecommunications Technician	2

IT PROJECT MANAGEMENT OFFICE - 7

Division Manager	1
Senior Technology Strategist	1
Technology Strategist	5

IT SECURITY SERVICES - 4

Division Manager	1
Information Technology Security Analyst	2
Senior Information Technology Security Analyst	1

*Full Time Equivalent (FTE) includes new position(s)

FY 2022 Adopted	FY 2023 Adopted Budget	Difference
77	77	0

Supersedes Page Dated 05-21-01			9	3	2	1
			CH	SEC	SUBJ	PAGE
CITY OF FORT LAUDERDALE			DATE ISSUED: 07-18-06			
POLICY and STANDARDS MANUAL			CHAPTER: FINANCIAL AND PURCHASING			9
			SECTION: VENDOR SOLICITATION- AUTOMATED OFFICE EQUIPMENT			3
SUBJECT: PURCHASING/LEASING COMPUTER HARDWARE AND SOFTWARE			2			
PURPOSE	1. To obtain experienced technical information and advice relating to the purchase of computer hardware and software and coordination of related training.					
POLICY	2. Information Technology will provide assistance and technical information to City employees. Review of the department's technical needs will assist Information Technology when similar needs arise in other departments.					
	C	a. Training: Individual training will be grouped with other employees with similar needs to reduce department costs. Information Technology will review in-house training and contract training with private providers to determine the most cost effective training program.				
		b. Hardware and Software Standards: Hardware and software will be standardized wherever and whenever possible in the City. Standardization reduces training requirements when employees transfer between departments and it ensures that technical support from Information Technology will be available. Additionally, standardization reduces connection costs of equipment.				
	C	c. <u>The Information Technology Services Department will prepare requisitions, or give approval for RA numbers for ordering computers, or computer related hardware or software in conjunction with Office Automation.</u>				
	C	d. The Procurement Department will return all requisitions and turn down all requests for RA numbers unless prior approval has been received from the Information Technology Services Department.				
	C					
PROCEDURES	3. a. City employees are to notify Information Technology when contacted by firms selling information-oriented products or services.					
	b. Information Technology will participate in the evaluation of these products or services by attending meetings and demonstrations with the department and vendor.					
C = Change						

- C c. The department will contact Information Technology to schedule or contract all computer related training.

EXCEPTION

4. Excluded from this ruling are:
- a. supply materials such as computer or copier paper, ribbons, diskettes, toner or developer, film and specialty storage or furniture (except file cabinets).
 - b. process control hardware and software.

FULL TEXT OF MANAGEMENT RESPONSES



Memorandum

Memorandum No: 23-13

Date: June 26, 2023

To: Patrick Reilly, City Auditor

From: Greg Chavarria, City Manager 
Greg Chavarria (Jun 27, 2023 15:54 EDT)

Re: Audit of the Internal Controls Over Ordering Information Technology Services and/or Equipment – Management Responses

Management appreciates the City Auditor examining Internal Controls Over Ordering Information Technology Services and/or Equipment for compliance. The examination identified Findings and Observations that will be addressed by Management.

The following are Management Responses to the examination Findings:

FINDING 1

Finding:

The City Auditor recommends that the City Manager require that the Director of IT Services implements internal controls to evidence receipt of IT Service/equipment delivery by the requestor.

Recommendations:

This evidence could be in the form of an e-mail attached to the ticket or a notation of the date/time and the person's name who confirmed delivery noted under the "Resolution" tab of the ticket. It is expected that a new Information Technology Service Management (ITSM) tool will be implemented in the near future; the department should explore whether the new software has better tracking capabilities than the current system in place.

Management Response:

Management concurs with this finding.

*Information Technology Services (ITS) has recently begun a three-year Transformation and Modernization plan with the goal of achieving IT service excellence by focusing on three critical areas, **Cybersecurity**, **Modernization** and **Workforce** (see Exhibit A – IT Transformation Matrix).*

ITS is currently finalizing the procurement of a new Information Technology Service Management (ITSM) system which will focus on standardizing service and support, operational efficiency as well as IT governance (see Exhibit B – IT Service Management Modernization Roadmap).

The goal of the ITSM project is not only to replace the existing unsupported and end of life program, but to formalize, standardize, and modernize IT service management practices in the City. This initiative will include the adoption of the ITIL (Information Technology Infrastructure Library) framework which is an industry standard based on known and proven principles in efficient, effective, and successful IT management. ITSM modernization will also enable process improvement across the IT organization including asset management, change management, portfolio management, knowledge, contract, and vendor management as well as configuration management, all currently lacking in the IT organization today.

Additionally, key IT staff members are scheduled for a 4-day on-site IT Service Management Workshop on July 31, 2023, as part of the IT Transformation and Modernization three-year plan.

FINDING 2

Finding:

The City Auditor recommends that the City Manager requires the Director of IT Services to work on updating PSM 9.3.2. Additionally, developing internal policies should be considered that are reflective of the computing environment, the roles and processes of the IT Services department, and its internal controls.

Management Response:

Management concurs with this Observation.

The PSM 9.3.2 has been revised by ITS and reviewed by Structural Innovation and will be presented to the Executive Strategy Team for review by the 4th quarter 2023.

Additionally, ITS is currently finalizing the procurement of a new Information Technology Service Management (ITSM) system which will focus on standardizing service and support, operational efficiency as well as IT governance (see Exhibit B – IT Service Management Modernization Roadmap).

Key IT staff members are scheduled for a 4-day on-site IT Service Management Workshop on July 31, 2023, as part of the IT Transformation and Modernization three-year plan.

FINDING 3

Finding:

The City Auditor recommends that the City Manager require the Director of IT Services to take steps to enhance internal controls. Specifically, cellphones assigned to employees are reviewed at least quarterly for accuracy and the review is evidenced by a signature and date. PSM 9.3.2 should reflect these potential updates.

Management Response:

Management concurs with this Observation.

ITS will commence with a quarterly review for city departments to review their cellphones issued to employees for accuracy. The review will require a signature and a date.

FINDING 4

Finding:

The City Auditor recommends that the City Manager require the Director of IT Services to either expand PSM 9.3.2 or develop a new policy that includes, but is not limited to, establishing completion standards based on ticket priority. In addition, ticket completion should be tracked against these standards to ensure equipment and services are delivered, installed, and working within the established operating goals.

Management Response:

Management concurs with this Observation.

ITS is currently finalizing the procurement of a new ITSM tool which will enable our teams to manage the end-to-end delivery of IT services to customers. This tool will leverage the Information Technology Infrastructure Library (ITIL) standards including Service Levels Agreements. The ITIL framework will allow the organization to establish a baseline from which it can plan, implement, and measure incident response and service requests. Several ITS employees have begun receiving their ITIL certification as part of the IT transformation and modernization three-year plan.

-
- c: Susan Grant, Assistant City Manager
Anthony G. Fajardo, Assistant City Manager
D'Wayne Spence, Acting City Attorney
David R. Soloman, City Clerk
Tamecka McKay, Director of Information Technology

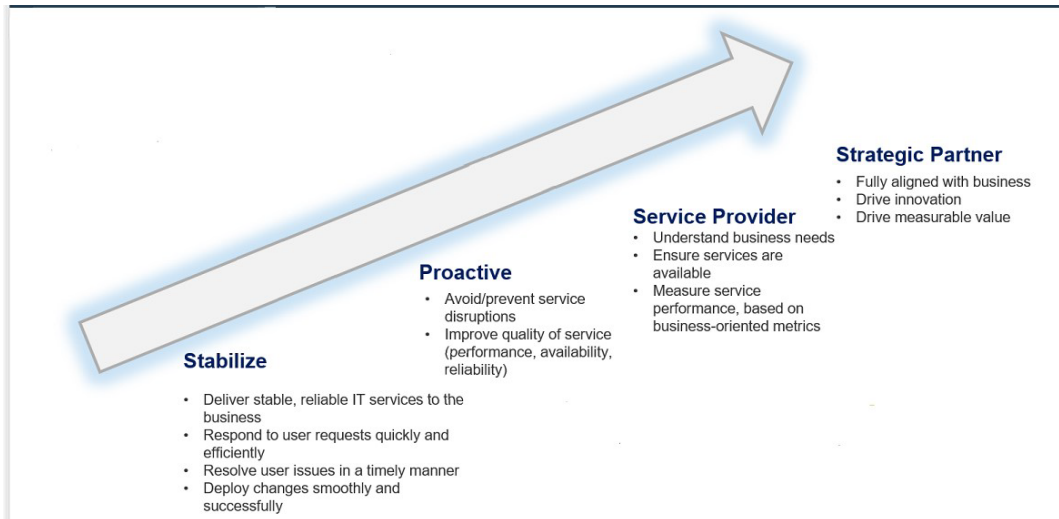
Attachments

- Exhibit A – IT Transformation Matrix Strategic Plan
Exhibit B – IT Service Modernization Roadmap

ITS TRANSFORMATION MATRIX

	<u>CYBERSECURITY</u>	<u>MODERNIZATION</u>	<u>WORKFORCE</u>
<u>PHASE I</u>	<ul style="list-style-type: none"> • Replace All End-Of-Life Hardware & Software • Conduct Cybersecurity Assessments • Mitigate Known Cybersecurity Vulnerabilities 	<ul style="list-style-type: none"> • Compliance (HIPPA, PCI, CJIS, FDLE) • ITSM Replacement • Standardize Service & Support 	<ul style="list-style-type: none"> • Fill Vacancies • Leverage Staff Aug. • Upskill Existing Staff
<u>PHASE II</u>	<ul style="list-style-type: none"> • Data Center Consolidation • Technology Infrastructure Redesign for Resilience (HA) • Disaster Recovery Strategy Modernization 	<ul style="list-style-type: none"> • ITIL Framework Implementation • Efficiency Study • Business Strategy Alignment • Technology Steering Committee 	<ul style="list-style-type: none"> • IT Reorg • Position Realignment • Career Advancement Plan
<u>PHASE III</u>	<ul style="list-style-type: none"> • Business Impact Analysis • Business Continuity Strategy • Infrastructure Lifecycle Refresh Plan 	<ul style="list-style-type: none"> • ITIL Framework (cont.) • Automation/Self Service • SmartCities/Broadband 	<ul style="list-style-type: none"> • Cross Training • Succession Planning • Mentor/Apprenticeship Program

ITS Service Management Modernization Roadmap



Foundational elements

- Operating model facilitates service management goals
- Culture of service delivery
- Governance discipline to evaluate, direct, and monitor
- Management discipline to deliver