

# CENTRAL FLORIDA EXPRESSWAY AUTHORITY

**AGENDA  
CENTRAL FLORIDA EXPRESSWAY AUTHORITY  
AUDIT COMMITTEE MEETING  
April 29, 2019  
10:00 AM**

**Meeting location: Central Florida Expressway Authority  
Pelican Room #107  
4974 ORL Tower Road  
Orlando, FL 32807**

**A. CALL TO ORDER**

**B. PUBLIC COMMENT** – Pursuant to Florida Statute 286.0114 the Audit Committee will allow public comment on any matter either identified on this meeting agenda as requiring action, or anticipated to come before the Committee for action in reasonable proximity to this meeting. Speakers shall be limited to three minutes per person and the assignment of one person's time to another or designation of group spokesperson shall be allowed at the discretion of the Committee Chairman.

**C. APPROVAL OF THE JANUARY 31, 2019 MINUTES** – (Action Item)

**D. INTERNAL AUDIT MATTERS** – Protiviti

1. Status Update: Fiscal 2019 Internal Audit Plan – (Info Item)
2. Review and Acceptance of Fiscal 2019 Internal Audit Reports
  - a. Customer Service Center Performance Review – (Action Item)
  - b. Prior Audit Recommendations: Semi-Annual Follow-Up – (Action Item)
  - c. DAVID Data Security Assessment – (Action Item)
  - d. Cyber Security Incident Response Review – (Action Item)
3. In-Process Internal Audits – (Info Item)
  - a. Toll Revenue Audit
  - b. Accounting and Finance Controls Review
  - c. Ransomware Review
  - d. IT Project Management Review
  - e. 2020 Internal Audit Plan and Risk Assessment

**E. ANNUAL MANAGEMENT REVIEW OF INTERNAL CONTROL MATTERS** – (Info Items)

1. Effectiveness of the Internal Control System, Including IT Security and Control – Lisa Lombard
2. Process for Assessing, Monitoring and Controlling Significant Risks – Lisa Lombard
3. System for Monitoring Compliance with Laws and Regulations – Joe Passiatore
4. Adequacy, Administration and Compliance with the Authority's Code of Ethics – Joe Passiatore
5. Procedures for "Hotline" Reporting – Joe Passiatore

4974 ORL TOWER RD. ORLANDO, FL 32807 | PHONE: (407) 690-5000 | FAX: (407) 690-5011

**F. OTHER BUSINESS**

**G. ADJOURNMENT**

This meeting is open to the public.

Note: Any person who decides to appeal any decision made at this meeting will need record of the proceedings and for that purpose, may need to ensure that a verbatim record of the proceedings is made which includes the testimony any evidence upon which the appeal is to be based, per Florida Statute 286.0105.

In accordance with the Americans with Disabilities Act (ADA), if any person with a disability as defined by the ADA needs special accommodation to participate in this proceeding, then not later than two (2) business days prior to the proceeding, he or she should contact the Central Florida Expressway Authority at (407) 690-5000.

Persons who require translation services, which are provided at no cost, should contact CFX at (407) 690-5000 x5316 or by email at [Iranetta.dennis@CFXway.com](mailto:Iranetta.dennis@CFXway.com) at least three business days prior to the event.

# CENTRAL FLORIDA EXPRESSWAY AUTHORITY

## DRAFT MINUTES

### CENTRAL FLORIDA EXPRESSWAY AUTHORITY AUDIT COMMITTEE MEETING January 31, 2019

Location: Central Florida Expressway Authority  
4974 ORL Tower Road  
Orlando, FL 32807  
Pelican Conference Room 107

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#### Committee Members Present:

Megan Zee, Citizen Representative, Chairman  
Brian Battles, City of Orlando Representative  
Kaye Dover, Osceola County Representative  
Kristy Mullane, Lake County Representative

#### Participating by Phone:

Bruce McMenemy, Seminole County Representative

#### Also Present:

Ruth Valentin, Recording Secretary/Administrative Coordinator  
Laura Kelley, Executive Director  
Lisa Lumbar, Chief Financial Officer  
Joseph L. Passiatore, General Counsel  
Corey Quinn, Chief of Technology/Operations  
Michael Carlisle, Director of Accounting and Finance  
Aneth Williams, Director of Procurement  
Teresa Mallary, Protiviti  
Jeff Tecau, Protiviti  
David Taylor, Protiviti  
Chris Porter, Protiviti

The agenda was taken out of order due to quorum requirements.

#### **A. CALL TO ORDER**

The meeting was called to order at approximately 1:09 p.m. by Chairman Megan Zee.

#### **B. PUBLIC COMMENT**

There was no public comment.

**D. INTERNAL AUDIT MATTERS**

1. Status Update: Fiscal 2019 Internal Audit Plan

Jeff Tecau of Protiviti presented a status update on the Fiscal Year 2019 Internal Audit Plan.

(This item was presented for information only. No formal committee action was taken.)

3. Upcoming Internal Audits

Mr. Tecau presented an overview of all upcoming audits.

(This item was presented for information only. No formal committee action was taken.)

**F. INTERNAL AUDIT BUDGET FOR FISCAL YEAR 2020**

Lisa Lumbar, Chief Financial Officer, presented the Fiscal Year 2020 Internal Audit budget. The committee came to a consensus to maintain the current audit budget for next fiscal year.

(This item was presented for information only. No formal committee action was taken.)

**G. OTHER BUSINESS**

Laura Kelly, Executive Director, presented an update on the SunPass Centralized Customer Service System.

**Brian Battles arrived at this time 1:34 p.m.**

**C. APPROVAL OF MINUTES**

**A motion was made by Ms. Mullane and seconded by Ms. Dover to approve the October 30, 2018 minutes as presented. The motion carried unanimously with four (4) members present voting AYE by voice vote; one (1) member, Mr. McMenemy voting AYE by phone.**

**D. INTERNAL AUDIT MATTERS**

2. Review and Acceptance of Fiscal Year 2019 Internal Audit Reports

a. Payment Card Industry (PCI) Assessment with Report on Compliance

David Taylor of Protiviti presented the PCI Assessment with Report on Compliance for review and acceptance.

**A motion was made by Mr. Battles and seconded by Ms. Mullane to approve the Payment Card Industry Assessment with Report on Compliance as presented. The motion carried unanimously with four (4) members present voting AYE by voice vote; one (1) member, Mr. McMenemy voting AYE by phone.**

b. DHSMV Data Security Assessment

Mr. Taylor presented the DHSMV Data Security Assessment for review and acceptance.

**A motion was made by Ms. Dover and seconded by Mr. Battles to approve the DHSMV Data Security Assessment as presented. The motion carried unanimously with four (4) members present voting AYE by voice vote; one (1) member, Mr. McMenemy voting AYE by phone.**

c. Procurement and Contract Billing Audits

Teresa Mallary of Protiviti presented the Procurement and Contract Billing Audits for review and acceptance.

**A motion was made by Ms. Mullane and seconded by Ms. Dover to approve the Procurement and Contract Billing Audit as presented. The motion carried unanimously with four (4) members present voting AYE by voice vote; one (1) member, Mr. McMenemy voting AYE by phone.**

d. Customer Service Center Performance Review

Mr. Tecau informed the committee that this item will be removed and presented at the next Audit Committee meeting.

**E. ANNUAL REVIEW AND APPROVAL OF THE AUDIT COMMITTEE CHARTER**

Ms. Lumbard informed the Committee that Eric Gassman will no longer serve on Audit Committee due to a new position with the County. To date a replacement has not been appointed.

By consensus the Committee instructed Mr. Joseph L. Passiatore, General Counsel, to revise the Audit Committee Charter to reflect provisions for committee members to call in and clarification of who is the appointed chairman if a citizen representative is not appointed. The revised charter will be presented to the Audit Committee at its April meeting.

**H. ADJOURNMENT**

Chairman Zee adjourned the meeting at approximately 2:02 p.m.

Minutes approved on \_\_\_\_\_, 2019.

*Pursuant to the Florida Public Records Law and CFX Records Management Policy, audio tapes of all Board and applicable Committee meetings are maintained and available upon request to the Records Management Liaison Officer at [publicrecords@CFXway.com](mailto:publicrecords@CFXway.com) or 4974 ORL Tower Road, Orlando, FL 32807.*

DRAFT

D.1. STATUS UPDATE: FISCAL 2019  
INTERNAL AUDIT PLAN

No Backup



# CENTRAL FLORIDA EXPRESSWAY AUTHORITY

## Customer Contact Center Performance Assessment

January 2019



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# EXECUTIVE SUMMARY

## Overview

In accordance with the 2019 Internal Audit Plan, Protiviti conducted a follow-up assessment of the Central Florida Expressway Authority (CFX) customer contact center operation's performance leveraging a contact center subject matter expert. The last performance assessment was performed in February 2017.

The CFX E-PASS customer service centers and violations enforcement operations services are outsourced to a third party vendor under a five year contract with an additional five, one year renewal options. Under the agreement, the third party vendor provides the trained personnel necessary to operate the customer service centers, including the phone center. CFX provides the primary software and systems for processing customer accounts and transactions, the Interactive Voice Response system (IVR), web site, and Violation Enforcement System (VES) image review software. CFX also provides management oversight of the customer service center operations.

The customer contact phone center currently leverages a total of 82 full and part-time agents, excluding image processing personnel, five supervisors, and a call center manager to support the customer contact center operations. For the period reviewed from October 2018 through November 2018, the average daily call volume was approximately 4,244 calls per day, which is almost twice the average daily call volume of 2,400 calls per day during the fiscal year 2017 assessment. The increase in call volume was primarily due to E-PASS and SunPass customers requesting information related to a SunPass invoicing backlog that occurred during the second half of calendar year 2018.

The call volume follows a consistent pattern, with volume peaks in the morning and late afternoons and the highest volumes occurring on Mondays and Fridays. The customer contact center services consist of Pay By Plate payments (30%), customer service (38%), Violation Enforcement System (VES) response line (18%), account replenishments (6%), Spanish, which encompasses all call types (7%) and new E-PASS accounts (1%).

The technology used in the customer contact center is based on an Avaya 8700 platform that is implemented in a configuration using multiple physical data centers. The contact center's summarized historical performance data is retained for at least 12 months. However detailed level performance data is retained for approximately 60 days. CFX implemented Monet Workforce Management in January of 2017 and a new SwampFox IVR (Intelligent Voice Response) solution in June of 2016. These tools enable CFX to more effectively route calls, match agent staffing levels to call volume patterns and forecast agent scheduling needs.

# EXECUTIVE SUMMARY

## Objectives

The objectives of the review were to:

- Perform an assessment of the customer contact center performance.
- Evaluate key performance indicators.
- Follow-up on areas of concern identified during the last customer contact center assessment in fiscal year 2017.

## Approach

The Contact Service Center Performance Review was completed through a series of four phases that include data gathering, data analysis, process and organizational review, and recommendations and findings development.

### Phase I – Data Gathering

Phase I of the project was performed by requesting and obtaining statistical data from various sources including the ACD system, Monet, and Quality systems in order to complete a statistical analysis of contact center performance for the period of October 2018. Data gathered was analyzed and collated in Phase II and later incorporated into audit findings and recommendations.

### Phase II – Data Analysis

During Phase II of the audit, the statistical data gathered was analyzed to evaluate the performance of the contact center operation. Key measures such as call volumes and patterns, service levels, quality, and schedule adherence were evaluated and documented to measure performance. In addition the statistical analysis was compared to the results of the last contact center assessment performed in fiscal year 2017.

Due to the usually high call volume during October 2018, as compared to the last time the assessment was performed in 2017, additional data was requested for the month of November 2018 to determine if the call volume remained consistent.

# EXECUTIVE SUMMARY

## Approach (cont.)

### Phase III – Process and Organizational Review

The process and organizational component of this review was designed to analyze, document, and quantify the customer contact center 's application of people, process, and technology to provide customer service

- People: Executive, Operations, IT, and Contact Center Management Interviews
- Process: Detailed Contact Analysis leveraging statistical data and historical reporting obtained and analyzed in Phases I and II
- Technology: Infrastructure and Application Review

### Phase IV – Findings and Recommendations Development

Internal Audit summarized the observations and enhancement opportunities identified during the assessment.

# EXECUTIVE SUMMARY

## FY 2019 vs FY 2017 Call Handling Performance

The chart below provides a comparison of key call handling performance metrics for the period reviewed in 2019 as compared to the period reviewed in 2017.

Performance indicator	Oct 2018	Nov 2018	FY 2017 Assessment Period *	Change
Contact Center Agents (FTE)	82	82	57	44% increase
Average Daily Call Volume	4,448	4,041	2,400	68% increase
Average Speed of Answer	86.6 seconds	62.8 seconds	36 seconds	74% increase
Abandoned Call Rate	8.1%	5.7%	6% – 10%	43% decrease
Average Auxiliary Time Rate	23%	Not Available	28%	18% decrease
Average Talk Time	316.5 seconds	316.6 seconds	237 seconds	34% increase

\*Includes call data for the period of January 2017 through February 2017.

CFX experienced unusually high call volume in October and November 2018. This was primarily due to SunPass and E-PASS customers contacting the CFX customer contact center to obtain information and assistance with backlogged SunPass toll charges that resulted from a recent SunPass system upgrade. Although CFX is not affiliated with SunPass, due to the interoperability relationship between the two agencies the CFX contact center agents provide SunPass customers with applicable information when possible. During the period reviewed from October 2018 through November 2018, the CFX's contact center received approximately 30,000 calls from SunPass customers and converted 1,100 SunPass customers to E-PASS accounts.

The increased call volume, in addition to marketing and communication efforts to increase the number of E-PASS customers, negatively affected the Average Speed of Answer and the Average Talk Time for the period reviewed. However, CFX saw an increase in the E-PASS customer base of 29%, or 97,000 customers, since the last assessment in 2017.

# EXECUTIVE SUMMARY

## Summary of 2019 Observations

Although the Sunpass billing issues lead to unusually high call volumes over the period of audit and the high call volumes impacted CFX's call handling performance, CFX quickly adapted by increasing staffing, redeploying staff, and modifying over-the-phone marketing efforts. Overall, the contact center's performance levels were considered good given the circumstances.

While performing the 2019 performance assessment, Internal Audit identified four observations and enhancement opportunities for CFX to consider. The related recommendations outlined below could help CFX make incremental improvements to call handling performance when unexpected events occur. Internal Audit classified the findings using a relative priority of high, medium, or low to provide management with a basis for evaluating them in the overall context of this report.

Observation #	Observation:	Relative Priority
Observation #1: Agent Utilization	While CFX is generally achieving its schedule adherence goals according to Monet reports provided, opportunities exist to improve overall agent utilization, which would increase agent's availability to answer more calls with the same number of agents.	<i>Medium</i>
Observation #2: Call Abandon Rates	Although call abandonment rates of 5% to 8% improved (decreased) as compared to the period of last assessment, abandonment rates of 5% to 8% are above the contractual service level target of less than 5%. Call volumes were abnormally high during the period reviewed due primarily to recent issues with SunPass and related services calls received by CFX.	<i>Medium</i>
Observation #3: Intelligent Voice Response (IVR) Solution	There is opportunity to improve the reporting used to monitor IVR (Intelligent Voice Response) utilization. Although the new SwampFox IVR solution implemented in June of 2016 has been very effective at segmenting customers and completing some automated self-service, the current reporting makes it difficult to ascertain how calls are flowing through the IVR, what paths these calls are taking, and where improvements could be made to the IVR to increase service automation.	<i>Medium</i>
Observation #4: Business Intelligence/Data Analytics	CFX could further improve its ability to monitor and manage the centers operation by making contact center data available in highly-consumable analytics dashboards, particularly dashboards designed to provide historical data for trend analysis and dashboards designed to provide real-time data for intraday management.	<i>Medium</i>



# DETAILED OBSERVATIONS

# DETAILED OBSERVATIONS

## Observation 1 – Agent Utilization

Relative Priority: **Medium**

Auxiliary (aux) time reporting captures the time agents spend in typically non-productive work states such as break, lunch, etc. Data collected in the Avaya Auxiliary reports shows that customer contact center agents spent 23% of their staffed time in auxiliary states. Although the overall Average Auxiliary Time Rate decreased 5% from 28% to 23% in FY2019, the industry average for auxiliary time is between 15% – 20%. While 47% of the agents average below 20% auxiliary time, 53% of the agents appear to routinely spend an average of 30% of their staffed time in various auxiliary states.

Oct 2018 Auxiliary Rates			Feb 2017 Auxiliary Rates		
Agents < 16% Aux	Agents between 16% - 20%	Agents > 20% Aux	Agents < 16% Aux	Agents between 16% - 20%	Agents > 20% Aux
15 agents/18%	24 agents/29%	43 agents/53%	34 agents/60%	3 agents/5%	20 agents/35%
Average Aux	Average Aux	Average Aux	Average Aux	Average Aux	Average Aux
14%	18%	30%	10%	17%	64%

CFX uses a 30% auxiliary time model within Monet Workforce Management. The above data suggests that while overall agents may be within the overall 30% aux time on a daily basis, there is an opportunity to improve auxiliary time usage and therefore agent utilization to align with the industry average.

# DETAILED OBSERVATIONS

## Observation 1 – Agent Utilization (continued)

### Recommendation:

Management should consider adjusting the auxiliary time model within Monet Workforce Management to 20% and assess the impact to the staffing requirements. Additionally, auxiliary time usage throughout the day should be monitored to identify agents with auxiliary time in excess of the target. Coaching should be provided to those agents to improve their utilization.

### Management Response:

Management concurs.

### Management Action Plan:

CFX Toll Operations staff will work with the third party vendor to adjust the auxiliary time model within Monet Workforce Management to 20%, assess the impact to the staffing requirements and manage staffing levels for schedule adherence.

### Action Plan Owner / Due Date:

David Wynne, Director of Toll Operations / June 30, 2019

# DETAILED OBSERVATIONS

## **Observation 2 – Call Abandon Rates**

*Relative Priority: **Medium***

The call abandon rate was 5% to 8% in FY 2019 and 6% to 10% in FY 2017. Although this is a positive trend, the abandon rates are higher than the contractual service level target of less than 5%. In addition, the average speed of answer increased by 74% to 62.8 seconds, with monthly average speed of answer for October 2018 and November 2018 over 60 seconds for the Spanish, customer service and VES queues. The high average speed of answer in these queues may be negatively impacting the abandon rate.

### **Recommendation:**

CFX management should evaluate the current staffing levels and the need for additional full/part time staff to provide additional call handling resources, including the need for additional Spanish speaking agents. In addition, improving the agent auxiliary rates should help to improve upon current average speed of answer and call abandon rates.

Also, management should ensure the appropriate staffing levels are maintained after the Orlando Airport Visitor Toll Pass Program is opened in May 2019 and agents are reallocated to that center. It is possible that abandon rates and wait times will peak if resources are not appropriately staffed or are lost.

# DETAILED OBSERVATIONS

## Observation 2 – Call Abandon Rates (continued)

### Management Response:

CFX management is constantly evaluating staffing levels and making adjustments as needed that are supported by budget dollars, facility capacity and current business conditions. Currently the E-PASS Call Center facility is at the maximum capacity and additional positions can not be easily added without major facility adjustments.

### Management Action Plan:

CFX staff will work with the third party vendor to adjust the auxiliary time model within Monet Workforce Management and possibly implement schedule adjustments to provide efficiencies in call handling, thus reducing the abandon rate.

Long term, CFX is looking into options to expand call center operations, including opening another call center location and recruiting more bilingual staff to assist a growing Spanish speaking demographic.

### Action Plan Owner / Due Date:

David Wynne, Director of Toll Operations / December 31, 2019

# DETAILED OBSERVATIONS

## **Observation 3 – Intelligent Voice Response (IVR) Solution**

*Relative Priority: **Medium***

In June 2016, CFX implemented an IVR solution from Swampfox to identify callers, direct calls, and automate common functions such as payment of toll violations. At the time of this assessment, the IVR solution was having a significant impact on the center, deflecting 40% to 50% of the calls that would have otherwise required agent assistance to complete. By servicing callers in the IVR, CFX is completing the transactions more rapidly, while simultaneously reducing the number of agents required to handle customer contacts.

While the IVR solution has been very effective, the reporting used to monitor IVR utilization could be improved. The current reporting makes it difficult to ascertain how calls are flowing through the IVR, what paths these calls are taking and where improvements could be made to the IVR to increase service automation.

### **Recommendation:**

CFX should consider working with Swampfox to develop Call Path Reporting so the use of the IVR can be more effectively monitored and improved over time. Implementing Call Path Reporting would allow CFX to track the path of calls through the IVR by showing the following:

1. Show all paths taken through the IVR by calls for a given reporting period, including the total number of calls that used the path and the percentage of total calls that took the path.
2. Service automation utilization – this reporting shows the total number of calls that attempted to utilize each servicing module (e.g. provide payment locations or accept payment), the number that completed successfully, the number that abandoned in the transaction (without completing), the number that completed the transaction, the number that ended the call/abandoned after completing, and the number that opted to an agent.
3. Error reporting – listing/count of all calls that were forced to either abandon or op—out to an agent due to a specific error such as payment failure, web service failure, etc. by failure type and “node”.

As a next step, CFX should develop a roadmap or strategy for developing and utilizing call path reporting to understand the path customers take in the IVR and identify opportunities to improve the IVR to increase service automation.



# DETAILED OBSERVATIONS

## Observation 3 – Intelligent Voice Response (IVR) Solution (continued)

### Management Response:

CFX is in the process of making changes to the tolling operations system. The new toll operation system will likely require modifications be made to the IVR.

### Management Action Plan:

CFX will develop a roadmap or strategy to update and modernize the IVR as it is integrated with the new tolling operations system.

### Action Plan Owner / Due Date:

Jim Greer, Director of Information Technology, and David Wynne, Director of Toll Operations / June 30, 2020.

# DETAILED OBSERVATIONS

## **Observation 4 – Business Intelligence/Data Analytics**

*Relative Priority: **Medium***

Through the changes and improvements CFX has made to its organizational structure, QA programs, and Workforce management, CFX currently has easy access to accurate and complete historical data related to performance as well as real-time (and near real time) data from its various platforms. While this complete data is available via various historical reports, it is not generally available to the broader contact center team (agents and supervisors) or to the management team.

Additionally, CFX retains summarized contact center operation historical data over 12 months. However, detailed level data is only retained for 60 days. This limits the ability to perform lookback and trend analysis at detailed levels, such as intraday time periods or agent performance levels.

### **Recommendation:**

CFX could further improve its ability to monitor and manage the center's operation by making contact center data available in highly-consumable analytics dashboards, particularly those designed to provide historical data for trend analysis and those designed to provide real-time data for intraday management. The use of highly visible dashboards showing real-time performance often enables a management team to more readily identify and respond to conditions in the contact center which may require immediate attention (unanticipated call volumes, service level issues, etc.) and improve overall service.

The Avaya ACD and the Monet Workforce Management systems store data needed to create these dashboards and wallboards. However, these tools do not have a visual studio functionality to design dashboards in a consumable, user-friendly presentation. Management should consider a visual studio product to provide the functionality to create the dashboards.

The process of setting up and implementing business analytics and related dashboards typically follows the approach outlined below:

1. Identify the data and Key Performance Indicators (KPI) that should be presented and/or trended for performance monitoring
2. Agree upon how these Key Performance Indicators will be measured and calculated
3. Determine source data/systems responsible for producing or providing data required to support analytics
4. Design and set up a repository for data to be managed in the analytics solution
5. Design Dashboard UI's including all visualizations, filters, and drill-downs
6. Implement dashboards in the center. Examples are provided in Appendix B.

# DETAILED OBSERVATIONS

## **Observation 4 – Business Intelligence/Data Analytics (continued)**

Additionally, in order to retain a larger amount of historical data, CFX should consider off-boarding its CMS data to an external database that can retain the data for at least 13-months.

### **Management Response:**

CFX is in the process of making changes to the tolling operations system, which may improve CFX's toll operations reporting and dashboard capabilities.

### **Management Action Plan:**

As CFX pursues the new tolling operations system, CFX will perform a cost analysis to evaluate the cost of capturing detailed level data for 13 months. In addition CFX will develop a roadmap for designing dashboards and reports that contain pertinent information, performance indicators and trend analysis in a user-friendly presentation.

### **Action Plan Owner / Due Date:**

Jim Greer, Director of Information Technology, and David Wynne, Director of Toll Operations / June 30, 2020.

# APPENDIX A

Status of FY2017 Recommendations

# EXECUTIVE SUMMARY

## Summary of 2017 Observations

Overall, CFX has improved the effectiveness and efficiency of the customer contact center operations since the time of the last review in 2017. The table below provide a summary of the progress made toward implementing the prior recommendations made during the 2017 call center performance review:

Observation #	FY17 Recommendations	Status of FY17 Recommendations
Observation #1: Service Level Performance	While CFX is doing a very good job of maintaining overall service levels, it appears that there is a consistent issue maintaining service level at the end of shift (beginning around 4 to 4:15 PM each day) due to the number of agents going off shift at this time of day.	CFX made adjustments to their schedules, particularly at end-of-shift to provide greater coverage, which fully addressed this observation.
Observation #2: Business Analytics / Performance Monitoring	CFX could further improve its ability to monitor and manage the centers operation by making contact center data available in highly-consumable analytics dashboards, particularly those designed to provide historical data for trend analysis and those designed to provide real-time data for intraday management. The use of highly visible dashboards showing real-time performance often enables a management team to more readily identify and respond to conditions in the contact center which may require immediate attention (unanticipated call volumes, service level issues, etc.) and improve overall service.	CFX has not yet created a business analytics solution to support real-time monitoring and analysis of call volumes, distribution, and agent performance monitoring. This recommendation is repeated in 2019. See 2019 observation #4.

# EXECUTIVE SUMMARY

## Summary of 2017 Observations (continued)

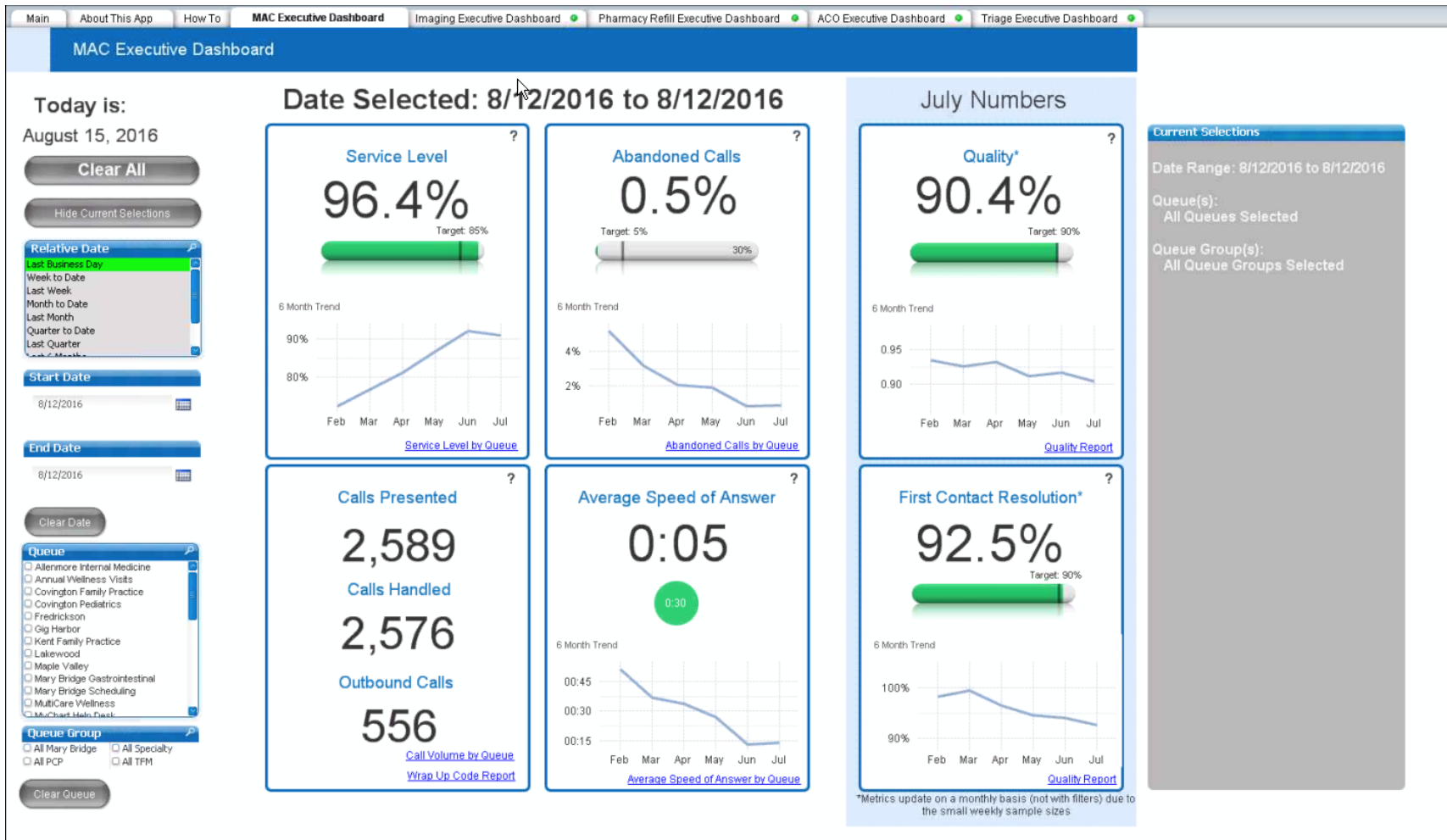
Observation #	FY17 Observation	Status of FY17 Observations
Observation #3: IVR Solution Reporting and Monitoring	CFX should work with Swampfox to implement enhancements to its IVR reporting so the use of the IVR can be more effectively monitored and improved over time.	CFX has not been able to take advantage of this opportunity to date. This recommendation is repeated in 2019. See 2019 observation #3.
Observation #4: Quality Assurance Processes	<ol style="list-style-type: none"> <li>1. Contact center supervisory staff should conduct one to two weekly QA monitors per agent. The use of supervisory staff in the QA process tends to help ensure cohesion between QA the rest of the contact center</li> <li>2. Make QA data/performance available in real-time</li> <li>3. Increase number of screen captures for quality purposes</li> <li>4. Provide agents with time at beginning of shift to review prior day performance, CFX marketing material, training, or other materials to better prepare them for the shift.</li> </ol>	These recommendations have been adopted.



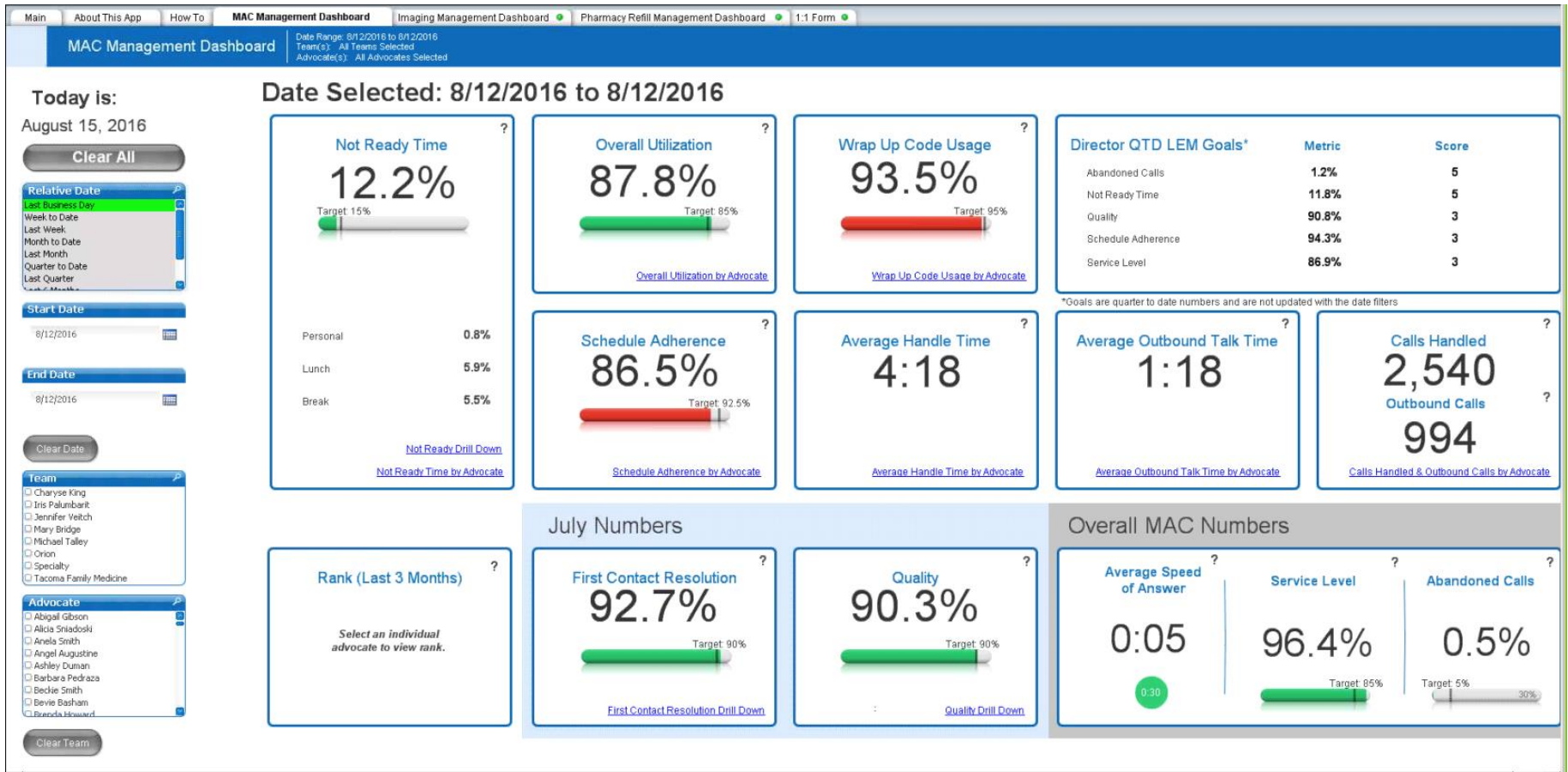
# APPENDIX B

## Sample Dashboards

# APPENDIX B – DASHBOARD EXAMPLE



# APPENDIX B – DASHBOARD EXAMPLE



# APPENDIX B – DASHBOARD EXAMPLE

Main About This App How To MAC Executive Dashboard **By Queue Drill Down (MAC)** Imaging Executive Dashboard Pharmacy Refill Executive Dashboard ACO Executive Dashboard Triage Executive Dashboard

**MAC Executive Dashboard**

Today is: August 15, 2016

Date Selected: 7/1/2016 to 7/31/2016

Table Call Volume Graph Metric Comparison Graph

By Queue Table

Queue	Service Level	Abandoned Calls	Average Speed of Answer	Calls Presented	Calls Handled
	<b>91.0%</b>	<b>0.9%</b>	<b>0:13</b>	<b>60,312</b>	<b>59,782</b>
Allenmore Internal Medicine	91.6%	0.9%	0:13	3,462	3,430
Annual Wellness Visits	96.0%	0.0%	0:14	101	101
Boeing	100.0%	0.0%	0:02	15	15
Care Management	75.0%	0.0%	0:31	12	11
Covington Family Practice	92.1%	0.7%	0:12	6,049	6,008
Covington Pediatrics	96.9%	0.1%	0:05	2,834	2,831
Fredrickson	91.6%	0.6%	0:16	1,289	1,281
Gig Harbor	91.4%	1.1%	0:12	6,491	6,419
Humana	100.0%	0.0%	0:01	1	1
Kent Family Practice	92.3%	1.0%	0:11	4,622	4,578
Lakewood	90.8%	0.8%	0:14	3,080	3,055
Maple Valley	91.7%	1.1%	0:12	2,642	2,612
Mary Bridge Gastrointestinal	91.0%	0.3%	0:12	3,161	3,151
Mary Bridge Scheduling	90.1%	0.5%	0:14	3,018	3,003
MultiCare Wellness	93.2%	3.0%	0:06	266	255
MyChart Help Desk	100.0%	0.0%	0:01	9	9
MyConnected Care	100.0%	0.0%	0:01	5	5
No Doc	95.8%	0.5%	0:07	191	189
Northshore	91.5%	0.5%	0:14	2,425	2,413
Optum	92.9%	0.0%	0:09	14	14
Pharmacy - MAC	72.5%	6.5%	0:37	604	564
South Hill	90.6%	1.2%	0:14	2,766	2,733
Spanaway	88.5%	0.7%	0:18	2,703	2,685
Tacoma Central Family Me...	91.4%	0.8%	0:13	2,371	2,353
Tacoma Central Internal Me...	91.1%	0.7%	0:15	3,372	3,350
Tacoma Family Medicine	87.2%	1.2%	0:19	4,377	4,325
Tacoma Family Medicine O...	88.2%	1.5%	0:16	797	785
Triage-MAC	98.2%	0.4%	0:02	452	449
Triage-TFM	87.1%	0.6%	0:18	155	152
WA Employees	100.0%	0.0%	0:01	17	17
West Tacoma	90.4%	0.7%	0:14	3,011	2,988

Metric Shown

- Abandoned Calls (%)
- Average Speed of Answer (mm:ss)
- Calls Handled (#)
- Calls Presented (#)
- Service Level (%)

Weekday

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

Time

- 12:00 AM
- 12:30 AM
- 1:00 AM
- 1:30 AM
- 2:00 AM
- 2:30 AM
- 3:00 AM
- 3:30 AM
- 4:00 AM
- 4:30 AM
- 5:00 AM
- 5:30 AM
- 6:00 AM
- 6:30 AM
- 7:00 AM
- 7:30 AM
- 8:00 AM
- 8:30 AM

Relative Date

- Last Business Day
- Week to Date
- Last Week
- Month to Date
- Last Month
- Quarter to Date
- Last Quarter
- Last 6 Months
- Year to Date
- Last Year

Queue

- Allenmore Internal Medicine
- Annual Wellness Visits
- Covington Family Practice
- Covington Pediatrics
- Fredrickson
- Gig Harbor
- Kent Family Practice
- Lakewood
- Maple Valley
- Mary Bridge Gastrointestinal
- Mary Bridge Scheduling
- MultiCare Wellness
- MyChart Help Desk

Queue Group

- All Mary Bridge
- All PCP
- All Specialty
- All TFM

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# CENTRAL FLORIDA EXPRESSWAY AUTHORITY

Prior Audit Recommendations Follow-Up

February 15, 2019

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# EXECUTIVE SUMMARY



## Overview

As part of the Fiscal Year 2019 Internal Audit plan, Internal Audit performed a review of open audit recommendations from prior audit reports as of February 15, 2019 to verify the implementation status reported by management. Open recommendations from the following audits were evaluated:



2013 Toll Revenue Audit	2018 Safety and Maintenance Compliance Audit
2017 Customer Service Center Performance Assessment	2018 Pay By Plate Audit
2017 Business Continuity Management Review	2018 IT General Controls Review
2017 Change Management – Tolling System Replacement Audit	2018 Penetration Test

Internal Audit last reviewed the status of open audit recommendations in September 2018. Results were reported to the Audit Committee at that time.



## Objectives, Scope, and Approach

This review was completed as of February 15, 2019 and consisted of meetings with management to determine the status of open audit recommendations and testing of management's response and status. In addition, only those recommendations that remained open at the time of the last review have been included in this report. If a recommendation was completed as of September 30, 2018, no further work was performed and the recommendation was not included for review.

Testing performed included inquiry with the employees responsible for completing the recommendations and/or review of documentation evidence to confirm management's reported status and explanation. In instances where the evidence obtained did not agree with management's status, discussions with management were held and the differences were resolved. There were no instances where management and Internal Audit did not come to an agreement on the status of a prior audit recommendation.



# EXECUTIVE SUMMARY



## Recommendations Summary

Audit	Open as of September 30, 2018	New Action Plans	Completed as of February 15, 2019	In Progress as of February 15, 2019*	Past Due
2013 Toll Revenue Audit	1	0	0	1	0
2017 Customer Service Center Performance Assessment	1	0	0	1	0
2017 Business Continuity Management Review	2	0	2	0	0
2017 Change Management - Tolling System Replacement Audit	1	0	0	1	0
2018 Safety and Maintenance Compliance Audit	3	0	3	0	0
2018 Pay By Plate Audit	5	0	3	2	0
2018 IT General Controls Review	1	0	0	1	0
2018 Penetration Test	N/A	2	0	2	2
<b>Total</b>	<b>14</b>	<b>2</b>	<b>8</b>	<b>8</b>	<b>2</b>

\*8 recommendations are classified as "In Progress." 2 of these recommendations are considered "Past Due."

# STATUS OF PAST DUE RECOMMENDATIONS

#	Audit	Management Action Plan	Responsible Party	Summary of Status	Due Date
1	2018 Penetration Testing	<b>Exempt F.S.282.318</b>			
2	2018 Penetration Testing	<b>Exempt F.S.282.318</b>			

# STATUS OF ALL OPEN RECOMMENDATIONS

# STATUS OF ALL OPEN RECOMMENDATIONS

## 2013 Toll Revenue Audit

Management Action Plan	Responsible Party	Status	Summary of Status	Due Date
<p><b>Potential Revenue Leakage/Toll Collections Audit:</b></p> <p>CFX will automate certain aspects of the Toll Plaza Attendant's Shift Record Log by integrating tracking of unusual occurrences, violations, and insufficient fund transactions within system. This recommendation will be implemented as a function of the Tolling System replacement.</p>	David Wynne, Director of Toll Operations	In Progress - Pending completion of the Toll System Replacement Project	Per discussion with Dave Wynne, Director of Toll Operations, this recommendation is planned to be implemented as a function of the Toll System Replacement (TSR) project. However, given the delays surrounding the TSR project, CFX is currently reviewing this action plan to determine if it is among the critical priorities involved in the TSR project and if the automation of this process will continue to be included in the project scope. As it stands, management expects this action plan to be implemented by the second revised date or removed from scope of the project completely.	<p>Original: 7/1/15</p> <p>Revised: 12/31/17</p> <p>Revised: 12/31/19</p>

## 2017 Customer Service Center Performance Assessment

Management Action Plan	Responsible Party	Status	Summary of Status	Due Date
<p><b>Intelligent Voice Response (IVR) Solution:</b></p> <p>To ascertain how calls are flowing through the IVR and what paths these calls are taking, CFX has identified a Call Path Report within IVR that consists of historical graph, error reporting, and service utilization. CFX will work with the third party contact center vendor to provide data in an acceptable format and provide an internal link for Toll Operations to access the data.</p>	Corey Quinn, Chief of Technology/ Operations	In Progress – Pending Tolling Operations System Replacement	Per discussion with Corey Quinn, Chief of Technology and Operations, CFX is currently obtaining price estimates for the system automation required to produce the SwampFox Call Path Reports. CFX will evaluate whether the project will be a valuable investment. CFX expects to have an investment analysis by the revised due date and make a decision whether to move forward with the recommendation.	<p>Original: 4/30/18</p> <p>Revised: 7/15/19</p>

# STATUS OF ALL OPEN RECOMMENDATIONS

## 2017 Business Continuity Management Review

Management Action Plan	Responsible Party	Status	Summary of Status	Due Date
<b>Crisis Management Testing:</b>  Management will create a crisis management testing program.	Evelyn Wilson, Director of HR  Michelle Maikisch, Chief of Staff	Complete	Per inspection of the Crisis Management Plan, Internal Audit verified a testing program has been developed by management. In accordance with the plan, a full scale test of the plan is to be performed every two years.	Original: 12/31/17  Revised: 10/31/18  Revised: 3/31/19
<b>Crisis Management Plan:</b>  Management will formally document a Crisis Management Plan.	Evelyn Wilson, Director of Human Resources  CFX Crisis Management Team ("CMT")  CFX Executive Management	Complete	Per discussion with Evelyn Wilson, Director of Human Resources, CFX has formally documented the Crisis Management Plan. Internal Audit obtained and inspected the plan document and verified the policy, procedures, responsibilities, maintenance and training were outlined in the Crisis Management Plan document.	Original: 12/31/17  Revised: 10/31/18  Revised: 3/31/19

## 2017 Change Management - Tolling System Replacement Audit

Management Action Plan	Responsible Party	Status	Summary of Status	Due Date
<b>TSR Vulnerability Scans:</b>  Management will remediate the Medium vulnerabilities near the completion of the TSR project.	Corey Quinn, Chief Technology Officer	In Progress	Per discussion with Corey Quinn, Chief of Technology and Operations, the remediation of these vulnerabilities is contingent upon the Toll System Replacement project completion. Due to external factors affecting the priorities of IT project completion, the due date of Tolling System Replacement has been revised to December 2020.	Original: 6/30/19  Revised: 12/31/20

# STATUS OF ALL OPEN RECOMMENDATIONS

## 2018 Safety and Maintenance Compliance Audit

Management Action Plan	Responsible Party	Status	Summary of Status	Due Date
<p><b>Internal Maintenance &amp; Safety Policies and Procedures:</b></p> <p>The Director of Maintenance will document written policies and procedures for CFX's maintenance and inspection program in the Maintenance and Safety Procedures Manual. The Manual will be published on SharePoint and reviewed and updated at least annually.</p>	Donald Budnovich, Director of Maintenance	Complete	<p>Per inspection of the CFX Maintenance Procedure Manual, obtained from Donald Budnovich, Director of Maintenance, Internal Audit verified that the manual contains a section designated to Maintenance Procedures for Roadways, addressing the following:</p> <ul style="list-style-type: none"> <li>a. Incident Response Procedures</li> <li>b. Safety</li> <li>c. Incident Management Plan</li> <li>d. Bridge and Overhead Sign Inspection</li> <li>e. BrM and Electronic Document Management System Access</li> <li>f. FDOT Work Order Management</li> <li>e. QA/IA Program</li> </ul> <p>The manual has been finalized and published to the internal internet site and made available to maintenance for reference. Going forward, the Maintenance department will continue to make additional updates as needed. Internal Audit obtained and inspected the procedure manual and verified the manual on was posted on SharePoint to support the completion status.</p>	Original: 12/31/18
<p><b>Quality Assurance Procedures:</b></p> <p>The Director of Maintenance has included a Quality Assurance Program contractor within the fiscal 2019 budget request. The contractor would conduct quality assurance reviews of work performed by maintenance contractors, review Right of Entry permits, conduct daytime and nighttime inspections, oversee major repairs, and conduct field verification for compliance with utility permits in order to enhance the Maintenance and Safety Quality Assurance process.</p>	Donald Budnovich, Director of Maintenance	Complete	<p>Per discussion with Donald Budnovich, Director of Maintenance, the request for the Quality Assurance Program contractor was not approved as a part of the FY19 budget. The maintenance department was, however, given approval to hire an employee to assist in quality assurance efforts. The employee was hired on 8/1/2018. With the addition of a third inspector, CFX has been able to reassign duties within the maintenance department and allow for the capacity to perform quality assurance duties in the field. The maintenance department has developed a defined quality assurance process that is to be performed over project deemed to have significant public safety components. Internal Audit inspected the QA process within the procedure manual to support the completion status.</p>	Original: 12/31/18

# STATUS OF ALL OPEN RECOMMENDATIONS

## 2018 Safety and Maintenance Compliance Audit (Continued)

Management Action Plan	Responsible Party	Status	Summary of Status	Due Date
<p><b>Asset Tracking:</b></p> <p>CFX will develop an annual process to verify asset accuracy and update the asset tracking spreadsheet for ongoing construction projects. The process will be recorded in the Maintenance and Safety Procedures Manual.</p> <p>In addition, CFX will determine the best information management tool or options to store and maintain asset information.</p>	Donald Budnovich, Director of Maintenance	Complete	<p>Per discussion with Donald Budnovich, Director of Maintenance, each asset is being updated within the asset tracking spreadsheet as work orders for the asset are received. Each time the spreadsheet is updated, a new version is saved to increase the ease and accuracy of tracking from one period to the next.</p> <p>Maintenance Contracts Support Specialist has assumed responsibility for the daily entry and management of the spreadsheet. Internal audit reviewed the asset tracking files to support the completion status.</p>	Original: 6/30/19

## 2018 Pay by Plate Audit

Management Action Plan	Responsible Party	Status	Summary of Status	Due Date
<p><b>Image Processing Reports:</b></p> <p>TransCore is in the process of refining the image processing system reports that provide the data required to monitor the accuracy of the Q-Free system and VES Image Review Clerk blind reviews. Once the reports are finalized Toll Operations will incorporate the review of these reports into the department's monitoring procedures noted in observation 2.</p>	David Wynne, Director of Toll Operations	Complete	Per discussion with David Wynne, Director of Toll Operations, the automation report has been developed and is operational. Internal audit obtained and inspected a copy of the report to support the completion status.	Original: 12/31/18

# STATUS OF ALL OPEN RECOMMENDATIONS

## 2018 Pay By Plate Audit (Continued)

Management Action Plan	Responsible Party	Status	Summary of Status	Due Date
<p><b>Pay By Plate Program Management Procedures:</b></p> <p>The Director of Toll Operations, the Manager of E-PASS and Plaza Operations, and the Manager of VES and Special Projects will document written procedures for CFX's Pay By Plate program to address the clearly define the review and monitoring control activity. The procedures will be reviewed and updated at least annually and published on SharePoint.</p>	<p>David Wynne, Director of Toll Operations</p> <p>Paul Schatz, Manager of VES and Special Projects</p>	In Progress	Per discussion with David Wynne, Director of Toll Operations, and Paul Schatz, Manager of VES and Special Projects, the algorithms for the new system are complete. CFX is in the process of documenting the process by which tolling transactions are reviewed and monitored. This management action plan is expected to be implemented by the due original due date.	Original: 6/30/19
<p><b>User Access Review:</b></p> <p><b>Redacted F.S.282.318</b></p>		Complete		
<p><b>User Accounts:</b></p> <p><b>Redacted F.S.282.318</b></p>		In Progress		
<p><b>Backup Job and Batch Job History:</b></p> <p><b>Redacted F.S.282.318</b></p>		Complete		



# STATUS OF ALL OPEN RECOMMENDATIONS

**2018 IT General Controls Review Exempt F.S.282.318**

**2018 Penetration Test Exempt F.S.282.318**

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© 2019 Protiviti Inc. All Rights Reserved. This document has been prepared for use by CFXs management, audit committee, and board of directors. This report provides information about the condition of risks and internal controls at one point in time. Future events and changes may significantly and adversely impact these risks and controls in ways that this report did not and cannot anticipate.

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# **DAVID Data Security Assessment**

**Central Florida Expressway Authority**

**February 2019**

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## Executive Summary

### Overview

During the period of January 22, 2019 to February 6, 2019, Internal Audit performed a Data Security Assessment of the Driver and Vehicle Information Database systems (“DAVID”) data within the Central Florida Expressway Authority (“CFX”) environment. The objectives of the assessment were to review internal controls for gaps in design related to the requirements set forth in *Section V – Safeguarding Information*, of the DHSMV Driver and Vehicle Information Database Data Exchange Memorandum of Understanding (“MOU”).

The summarized objectives of *Section V* are:

- Information exchanged will not be used for any purposes not specifically authorized by the MOU. Unauthorized use includes, but is not limited to, queries not related to a legitimate business purposes, personal use, and the dissemination, sharing, copying or passing of this information to unauthorized persons.
- The Requesting Party shall not indemnify and shall not be liable to the Providing Agency for any driver license or motor vehicle information lost, damaged, or destroyed as a result of the electronic exchange of data pursuant to the MOU, except as otherwise provided in Section 768.28, Florida Statutes.
- Any and all DAVID-related information provided to the Requesting Party (CFX) as a result of the MOU, particularly data from the DAVID system, will be stored in a place physically secure from access by unauthorized persons.
- The Requesting Party shall comply with Rule 74-2, Florida Administrative Code, and with Providing Agency’s security policies, and employ adequate security measures to protect Providing Agency’s information, applications, data, resources, and services. The applicable Providing Agency’s security policies shall be made available to Requesting Party.
- When printed information from DAVID is no longer needed, it shall be destroyed by cross-cut shredding or incineration.
- The Requesting Party (CFX) shall maintain a list of all persons authorized within the agency to access DAVID information, which must be provided to the providing agency upon request.
- Access to DAVID-related information, particularly data from the DAVID System, will be protected in such a way that unauthorized persons cannot view, retrieve, or print the information.
- Under the MOU agreement, access to DAVID shall be provided to users who are direct employees of the Requesting Party (CFX) and shall not be provided to any non-employee or contractors of the Requesting Party (CFX).

## Scope and Approach

Internal Audit conducted an assessment of the process used for safeguarding DAVID data in the CFX environment. In order to complete this review, the following procedures were performed:

- Reviewed policies and procedures related to the safeguarding of electronic and physical data transfers, data storage, and data access.
- Conducted interviews with key personnel to understand the *Drivers and Vehicle Information Database System Data Exchange* process.
- CFX Management approved the scope of work and believed it to be sufficient to meet the requirements of the MOU. Performed testing of controls related to the following areas:
  - Policies and Procedures
  - Application Access
  - Risk Management
  - Change Control
  - Data Storage
  - Data Transfer
  - Network Firewall
  - Network Architecture
  - System Authentication
  - Access Controls
  - Physical Security
- After testing was completed, analysis was performed to compare the results of testing to the control objectives outlined in the MOU.

## Summary of Results

As a result of this review, Internal Audit identified zero (0) observations that should be addressed in order to enhance CFX's Driver and Motor Vehicle Database system Data Exchange process.

## Appendix A – Controls Tested

	Control Objective	Control Description	Testing Results
1	Document and manage legal and regulatory requirements regarding cybersecurity, including privacy and civil liberties obligations.	<b>Policies and Procedures:</b> CFX has identified cybersecurity legal and regulatory requirements and identified individuals responsible for managing requirements.	<b>Control Effective</b>
2	Ensure governance and risk management processes address cybersecurity risks.	<b>Risk Management:</b> CFX has documented risk management processes in place to address cybersecurity risks.	<b>Control Effective</b>
3	Identify and prioritize risk responses, implement risk mitigation plans, and monitor and document plan implementation.	<b>Risk Management:</b> CFX has implemented risk management processes in place to mitigate risks identified.	<b>Control Effective</b>
4	Determine risk tolerance as necessary, based upon: their analysis of sector specific risks; the agency’s industry sector; agency-specific risks (e.g., Health Information Portability Accountability Act of 1996 compliance for agencies that maintain this information); and the agency’s role in the state’s mission.	<b>Risk Management:</b> CFX has implemented risk management processes in place to identify industry specific risks.	<b>Control Effective</b>
5	Establish parameters for IT Staff participation in procurement activities.	<b>Procurement Activities:</b> CFX has implemented policies and procedures for procurement activities.	<b>Control Effective</b>
6	Identify the IT issues IT staff must address during procurement activities (e.g., system hardening, logging, performance, service availability, incident notification, and recovery expectations).	<b>Procurement Activities:</b> CFX has implemented policies and procedures to ensure proper requirements are addressed during procurement activities.	<b>Control Effective</b>



# FY2019 DAVID Data Security Assessment

	Control Objective	Control Description	Testing Results
7	Prior to introducing new IT resources or modifying current IT resources, perform an impact analysis. The purpose of this analysis is to assess the effects of the technology or modifications on the existing environment.	<b>Change Control:</b> Changes are classified prior to implementation to identify the effects of changes within the environment. CFX appropriately documents and tests each change.	<b>Control Effective</b>
8	Ensure that privileged users understand their roles and responsibilities.	<b>Privileged Access:</b> All individuals / users with privileged access are aware of their responsibilities to CFX's data security.	<b>Control Effective</b>
9	Maintain adequate capacity to ensure system availability and data integrity.	<b>System Monitoring:</b> CFX has implemented automated mechanisms to monitor system capacity and data integrity.	<b>Control Effective</b>
10	Integrity checking mechanisms are used to verify hardware integrity.	<b>Hardware Integrity:</b> Access to physical devices is restricted to authorized individuals and additional integrity monitoring is in place to detect changes to critical system files associated with hardware devices.	<b>Control Effective</b>
11	Ensure backups of information are conducted, maintained, and tested periodically.	<b>Backup Procedures:</b> Backups are conducted and tested periodically.	<b>Control Effective</b>
12	Establish a policy and procedure review process that facilitates continuous improvement to protection processes.	<b>Security Improvement:</b> CFX has implemented a risk assessment process to monitor and facilitate improvement of security controls currently in place.	<b>Control Effective</b>
13	Ensure that effectiveness of protection technologies is shared with stakeholders that should or must receive this information.	<b>Technology Effectiveness:</b> CFX communicates the effectiveness of implemented technologies related to cybersecurity when deemed necessary.	<b>Control Effective</b>
14	Each agency shall perform maintenance and repairs of information systems and components consistent with agency-developed policies and procedures.	<b>System Maintenance:</b> Maintenance on in-scope systems is documented and performed by appropriate personnel or approved vendors where maintenance agreements are in place.	<b>Control Effective</b>

# FY2019 DAVID Data Security Assessment

	Control Objective	Control Description	Testing Results
15	Not engage in new development of custom authenticators. Agencies assess the feasibility of replacing agency-developed authenticators in legacy applications.	<b>Authentication Mechanisms:</b> CFX utilizes Active Directory authentication on in-scope systems. For systems not utilizing Active Directory authentication, CFX utilizes .NET authentication frameworks for one in-scope system with plans to implement Active Directory authentication for future system implementation.	<b>Control Effective</b>
16	Protect and restrict removable media in accordance with agency-developed information security policy.	<b>Removable Media:</b> CFX has implemented controls to prevent removable media where not required for business purposes.	<b>Control Effective</b>
17	Protect communications and control networks by establishing perimeter security measures to prevent unauthorized connections to agency IT resources.	<b>Network Firewall:</b> CFX has an operational firewall in place to restrict access to the internal network.	<b>Control Effective</b>
18	Mechanisms (e.g., failsafe, load balancing, hot swap) are implemented to achieve resilience requirements in normal and adverse situations.	<b>System Availability:</b> CFX has implemented a redundant data center to provide resiliency in the event of system outages.	<b>Control Effective</b>
19	Each agency shall develop policies and procedures that will facilitate detection of anomalous activity in a timely manner and that will allow the agency to understand the potential impact of events. Such policies and procedures shall establish and manage a baseline of network operations and expected data flows for users and systems	<b>Logging &amp; Monitoring:</b> Logging and auditing functions are enabled on all in-scope entities. In addition, all system logs are monitored for unauthorized access and irregular activity.	<b>Control Effective</b>
20	Monitoring for unauthorized personnel, connections, devices, and software.	<b>Access Controls:</b> CFX has implemented badge access and cameras at facilities, and firewalls, file integrity, and antivirus software on systems to restrict access to the internal network, and unauthorized software.	<b>Control Effective</b>



# **Cybersecurity Incident Response Review**

**Central Florida Expressway Authority**

**April 2019**

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# 2019 Cybersecurity Incident Response Review

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## I. Executive Summary

### Background

During the period between December 3rd and December 21st, 2018, Internal Audit (“IA”) performed a Cybersecurity Incident Response review for Central Florida Expressway Authority (“CFX”). An effective Cybersecurity Incident Response (IR) Plan outlines the organizations purpose and scope, team structure, incident handling guidelines, and the overall response strategy employees should utilize, based on their job responsibilities (e.g., Information Technology team, Human Resources, Legal, etc.).

### Overview

This report represents the results of the Cybersecurity Incident Response Review conducted by IA for CFX. IA reviewed the existing Incident Response Plan as well as the effectiveness of related policies, procedures, and supporting technologies deployed throughout the environment.

### Summary of Observations

As a result of this review, Internal Audit identified eight (8) observations. The observations describe issues with both process and documentation related controls. Specifically, issues include:

- Criticality assignments.
- Planning procedures.
- Retention procedures.
- Evidence procedures.
- Incident documentation procedures.
- Metric collection procedures.
- Post-incident procedures.
- Alerting procedures.

# 2019 Cybersecurity Incident Response Review

## II. Scope and Approach

### Scope

The CFX Incident Response Plan was reviewed to assess the structure of the plan, policies, and procedures currently in place.

### Approach

IA's approach to performing the Cybersecurity Incident Response review included:

- Utilizing the best practices identified in the NIST 800-61 the Computer Security Incident Handling Guide to assess CFX's approach to Incident Response.
- Evaluating the approach used to rank (high, medium, low) systems, data, and applications based on risk and sensitivity level (e.g., Personally Identifiable Information, Personal Health Information, etc.)
- Reviewing the process used to differentiate between incident response responsibilities assigned to CFX personnel (and any key vendors or business partners involved)
- Assessing the Incident Response approach for containment, eradication, and recovery in the event of an IT incident. This includes tools and methods utilized to detect and analyze data when an incident has occurred (i.e., intrusion detection system, system audit logs, vendor or business partner alerts, etc.).
- Reviewing the approach to performing computer forensics (e.g., data recovery method used to salvage inaccessible data from corrupted or damaged secondary storage, removable media, or files).
- Reviewing the Computer Security Incident Response Team (CSIRT) structure.
- Evaluating the CSIRTs preparation and training for handling an incident (e.g., ransomware, malware, etc.)
- Reviewing the integration of the Incident Response Plan with Business Continuity and Disaster Recovery Plan.
- Analyzing a sample of previous incidents that have occurred at CFX, if any, and how each was handled and addressed.
- Reviewed logging and monitoring capabilities, technologies, and related procedures that enable CFX to identify potential security incidents.
- Evaluating the process to add or remove servers or network segments from the logging / monitoring procedures as they are implemented or retired.
- Assessing the processes to identify and respond to malicious activity in the environment.
- Evaluating current protocols involving, but not limited to recording all events, decisions and actions taken, and all personnel involved, evidence handling, and chain of custody.
- Reviewing post-incident activities around communication of lessons learned, and training updates.
- Reviewing internal and external communication strategies after an incident has occurred.





## D.3. IN PROCESS INTERNAL AUDITS

No Backup

E. ANNUAL MANAGEMENT REVIEW  
OF INTERNAL CONTROL MATTERS

No Backup