Fare Collection & Reconciliation

Governance & Audit Report No. 2021-2

Report Issued June 10, 2021

EXECUTIVE SUMMARY

Background

The FY 2021 Internal Audit Work approved by the Governance and Audit Committee included an audit of IndyGo's Fare Collection, Counting, and Reconciliation process. Currently fares are collected across the IndyGo system either in cash, through various types of pre-printed tickets and passes, by pre-loaded media cards, and by scanning the MyKey smartphone app. Prior to riding, fares can be pre-purchased online, at IndyGo's Julia M. Carson Transit Center, or via ticket vending machines at any of the Bus Rapid Transit stations. Riders can also load fares into their MyKey account via either the smartphone app or at a MyKey kiosk.

Our assessments are performed in accordance with the professional practice standards of the Institute of Internal Auditors. This report was prepared for use by IndyGo's Board of Directors, Governance and Audit Committee, and management.

Objective, Scope, and Approach

Our first objective in performing this audit was to obtain and document an understanding of key subprocesses supporting the effective and secure collection and recording of fares. In doing so we wanted to confirm the effectiveness of internal controls operating throughout the process, as well as document the process flow to support the design of the new Celadon Treasury facilities.

Accordingly, our scope included reviewing the cash fare counting process, including farebox collection from buses through cash deposit to the bank and reconciliation with Smart Farebox passenger reporting. Also included in scope was the MyKey fare collection system implementation and effectiveness, as well as the agency's readiness for the forthcoming Retail Card Network implementation.

Our approach included performing interviews with members of IndyGo Treasury management, performing process walkthroughs and physical observations, substantive testing, and comparing current procedures to leading practices.

Overall Report Rating & Observations
(See Appendix A for definitions)

	Report Rating	Number of Observations by Rating		
		High	Medium	Low
Fare Counting & Reconciliation	**Medium**	**2**	**1**	**1**

Overall Summary and Highlights

IndyGo has long been pursuing fare modernization across its entire system. With its MyKey implementation, IndyGo has moved down a path whereby riders would be enabled to easily move to virtual fare media facilitated over their smartphones. With a successful roll-out of the planned Retail Card Network, riders would be provided yet another avenue to move away from cash fares to conveniently available reloadable cards.

Through successful fare modernization, risk of loss typically present with cash fares is virtually eliminated, and significant cost savings can be realized in the fare counting and reconciliation process. IndyGo has taken significant steps in the right direction; however, we have noted in this report certain areas that require attention in the near term to help ensure that progress continues.

The item to which we've ascribed the highest risk is related to the bankruptcy of the vendor selected to supply the physical media cards for the Retail Card Network. While the bankruptcy was out of IndyGo's control, swift mobilization around contingency planning will be essential to avoid potential delays to the roll-out of the Network.

We would like to thank IndyGo staff and all those involved in assisting us in connection with the audit. Questions should be addressed to the IndyGo Department of Governance and Audit at: batkinson@indygo.net.

EXECUTIVE SUMMARY (*CONTINUED*)

OBSERVATIONS SUMMARY

Following is a summary of the observations noted. Definitions of the observation rating scale are included in Appendix B.

Governance and Audit Observations	
Recommendation Title	**Rating**
1. Retail Card Network	**High**
2. MyKey Fare Collection System	**Medium**
3. Reconciliations	**Low**
4. Fare Data Analytics	**High**

1. Retail Card Network		
Observation: There is a risk that both the physical cards and the necessary packaging could be unavailable in time for the time go-live of the Retail Card Network.	**Recommendation:** IndyGo should ensure the proper steps are taken to ensure that the planned Retail Card Network go-live is not delayed due to lack of physical cards.	**Management's Response:** IndyGo procurement has explored options for replacing the current vendor; however, the global chip shortage may not be able to be mitigated quickly enough.

Observation Rating: High

In May the vendor originally selected to provide both the plastic cards and the necessary packaging notified IndyGo that they were filing Chapter 11 Bankruptcy.

The vendor, EDM, initially assured IndyGo that they would be able to fulfill their contractual obligations. Since that time, however, EDM has not been returning email communications from IndyGo and it is yet unknown whether they will be able to fulfill their commitments.

Specific concerns include:

- EDM's ability to continue operations during bankruptcy proceedings.
- Availability of the chips necessary for the cards, in the volume needed by IndyGo.
- Given current labor shortages, EDM's ability to maintain the employees necessary to complete the work entailed.

IndyGo management should:

- Explore legal remedies available, up to and including immediate contract termination if adequate progress on production planning is clearly and transparently disclosed by EDM.
- Perform emergency-basis contingency planning to immediately sole source an alternate card supplier.

Action Plan: The market is extremely volatile, and at this time, the current contractor has notified IndyGo that they fully intend to satisfy obligations to provide materials. However, our contract does address bankruptcy and the inability to perform due to it. The contract offers legal remedy to ensure timely performance. In the event these remedies cannot be carried though, IndyGo will rely on the termination of convenience provision listed within the contract. IndyGo will then contract on an emergency basis with a vendor that may be able to perform the same function. IndyGo procurement has already explored this avenue and determined there are other viable players in the market. With that said, the shortage is on the global level and even if there is an alternate vendor, lead times may persist.

Responsible Parties:

Treasury Manager; Director of Procurement & Supply Chain Management; General Counsel

Due Date:

Ongoing issue

2. MyKey Fare Collection System

Observation:	Recommendation:	Management's Response:
There remain apparent shortcomings with the execution of certain aspects of the MyKey Fare Collection System.	Management should continue to work with MyKey to examine ways to remediate these shortcomings in the near term.	IndyGo Management holds weekly conference calls with Flowbird to discuss new and outstanding issues. Flowbird visits IndyGo periodically for hands-on training and device troubleshooting.

Observation Rating: Medium

During our audit, we observed two apparent shortcomings – one related to fare payment and one related to fare presentation – of the MyKey system.

First, as part of our physical observations during our audit procedures, we noted difficulties with presenting fares via the MyKey smartphone app. Individuals attempting to scan their MyKey smartphone app at the MyKey kiosk on a bus were either unable to scan or could scan only after a prolonged period of time spent adjusting and re-adjusting their phone under the reader. To prevent causing passenger boarding bottlenecks which in turn can cause route delays.

Second, we observed the timeout of a credit card reload transaction at a point-of-sale terminal. Upon attempting to reload their MyKey account at a POS terminal, the credit card transaction times out, forcing the rider to move to live customer service assistance to confirm their transaction. The customer service agent then must manually add the fare value to the card through a separate terminal connected to the MyKey portal.

IndyGo management should ensure that these issues are included in the ongoing post-implementation service and support discussions between IndyGo's project management team and the MyKey team working with IndyGo.

Management may also want to consider whether an alternate optical reader technology may be available to integrate into the MyKey terminals to remediate the scanning problems.

Action Plan: IndyGo Treasury troubleshoots MyKey issues as they are brought to our attention. Periodically, IndyGo Public Affairs launches online educational and training material related to how to use the MyKey devices for the public to view. Flowbird continues to release new software versions for the MyKey application, Ticket Vending Machines, fare validators on the buses and station platforms.

Regarding the timeout credit card reload issue, the Customer Service team can assist the customer manually to rectify this issue. While it is not a frequent issue, it is currently being investigated by the Flowbird team to develop a resolution.

Responsible Parties:

Treasury Manager; Customer Service

Due Date:

September 30, 2021, for the time-out issue to be resolved

As part of the reconciliation process, Customer Service confirms that the credit card transactions do clear and are credited timely to IndyGo. However, from the rider's perspective the extra time and uncertainty involved in the process may cause MyKey users to either reduce their usage and not register their account, or even abandon the MyKey system altogether.

3. Reconciliations		
Observation: IndyGo has opportunities to improve the already strong fare reconciliation process.	**Recommendation:** Management should consider evaluating the cost-benefit of adding these control enhancements to provide even greater assurance around the fare collection process.	**Management's Response:** IndyGo Accounting will consider this recommendation and define the best approach to improve our internal controls.
Observation Rating: Low		
For IndyGo's fixed route and bus rapid transit lines, Accounting currently reconciles cash fares between: • Physical cash fares counted by either the IndyGo Treasury dept. (coins) or IndyGo's bank (bills), • Cash deposits recorded daily by IndyGo's bank, and • Fare data recorded by Flowbird at the point of passenger boarding. Additional fare reconciliations are performed by Transdev for Mobility Services fares collected for paratransit rides. Overall, the reconciliation process is strong, with appropriate reviews in place and consistently positive results. Two enhancements, however, may further strengthen the process. • Setting formal tolerances for investigating reconciling differences can save staff time, and • Establishing a formal periodic process to analyze trends over reconciliation results can add additional control over identifying questionable trends in reconciliation differences.	IndyGo Treasury and Accounting management should work together to determine the feasibility of adding these controls into the process. • Management could perform analytics to assess average cash fare revenue over a given period of time and agree upon a percentage of that average under which reconciling differences could be waived without investigation or review. • Accounting could design a process whereby certain metrics from the reconciliation process are collected on a daily basis and then analyzed on a monthly or quarterly basis. Trends can be identified and assessed for significance and follow-up if needed.	**Action Plan:** As of right now, due to the Pandemic in 2020, ridership is low. Once the economy recovers and our ridership shows increases back to the norm, we will review an action plan. In the meantime, we will determine factors and criteria that affect this consideration, as well as review one year of data and analyze variations to determine the most accurate measurement. **Responsible Parties:** Treasury Manager; Director of Accounting **Due Date:** July 31, 2022

4. Fare Data Analytics

Observation:	Recommendation:	G&A Plan:
IndyGo does not currently leverage fare data to strengthen agencywide analytics.	Management should establish a comprehensive, agencywide data analytics strategy.	We recommend a special project to be performed by G&A.

Observation Rating: High

Fare data can be used across the agency to enhance many areas of strategic planning and analysis. For example, fare data can be used to:

- Feed Operations for better route planning and to help gain an understanding of passenger behavior,
- Further analyzing passenger behavior in correlation with ridership demographics to explore potential opportunities in Mobility-as-a-Service,
- Understand ridership patterns and habits to design congestion management solutions along bus rapid transit (BRT) lines,
- Provide greater precision and predictability around preventative maintenance,
- Allow for quicker identification of rider-based fraud risk flags, etc.

While there are efforts underway to enhance the agency's data analysis capabilities, presently IndyGo cannot leverage its fare data, as well as most other data, due to an ongoing lack of data integrity.

We have identified similar challenges within other departments and have reported observations and made recommendation in prior audit reports.

For example, in conversations during multiple prior audits, we noted that contributing factors hindering the success

Beyond simply fare data, IndyGo management should perform a root cause analysis to identify actionable recommendations to improve the ongoing data integrity challenges across all agency departments.

Integral to the success of any data analysis is ensuring integrity over the data being analyzed. IndyGo systems, including all vendor-provided systems, should be assessed for data integrity risk.

Currently there are many technology tools in place for data analysis purposes, including:

- R (a language and environment for statistical computing and graphics),
- Tableau (a business intelligence and visualization tool),
- Crystal Reporting (another business intelligence reporting application), and more.

IndyGo has also made strategic hires over recent months to enhance its data analytics capabilities, including data analysts and statisticians.

These efforts notwithstanding, there does not appear to be a unified solution yet identified to support a robust and efficient data analytics environment. Additionally, it has become apparent over the course of multiple internal audits that there may be multiple root causes at plan. As such, we recommend that further investigation

Action Plan: We recommend that the G&A Committee approve the addition of a special project to the remaining 2021 G&A work plan. G&A would add a new assessment to look further into the people, process, and technology limitations affecting the ongoing data integrity issues.

Due Date:

To be reported to the G&A at the January meeting.

of ongoing efforts to improve the agency's data analytics involve various factors around the completeness and accuracy of data coming from key systems, such as HASTUS and Avail.

As a result of the ongoing data integrity challenges, data analytics and the establishing of key performance indicators have become inordinately difficult. In addition, NTD reporting routinely involves an extraordinary amount of manual effort on the part of IndyGo's data analysts, thereby introducing unnecessary risk into the completeness, accuracy, and timeliness of key FTA compliance reports.

be performed in this area to identify an actionable path forward.

APPENDIX A – RATING DEFINITIONS

Observation Rating Definitions		Report Rating Definitions	
Rating	**Definition**	**Rating**	**Explanation**
Low	Process improvements exist but are not an immediate priority for IndyGo. Taking advantage of these opportunities would be considered best practice for IndyGo.	**Low**	Adequate internal controls are in place and operating effectively. Few, if any, improvements in the internal control structure are required. Observation should be limited to only low risk observations identified or moderate observations which are not pervasive in nature.
Medium	Process improvement opportunities exist to help IndyGo meet or improve its goals, meet or improve its internal control structure, and further protect its brand or public perception. This opportunity should be considered in the near term.	**Medium**	Certain internal controls are either: 1. Not in place or are not operating effectively, which in the aggregate, represent a significant lack of control in one or more of the areas within the scope of the review. 2. Several moderate control weaknesses in one process, or a combination of high and moderate weaknesses which collectively are not pervasive.
High	Significant process improvement opportunities exist to help IndyGo meet or improve its goals, meet or improve its internal control structure, and further protect its brand or public perception presents. This opportunity should be addressed immediately.	**High**	Fundamental internal controls are not in place or operating effectively for substantial areas within the scope of the review. Systemic business risks exist which have the potential to create situations that could significantly impact the control environment. 1. Significant/several control weaknesses (breakdown) in the overall control environment in part of the business or the process being reviewed. 2. Significant non-compliance with laws and regulations. 3. High observations which are pervasive in nature.
Not Rated	Observation identified is not considered a control or process improvement opportunity but should be considered by management or the board, as appropriate.	**Not Rated**	Adequate internal controls are in place and operating effectively. No reportable observations were identified during the review.