

**Minutes – Standing Policy Committee on Finance – January 9, 2018**

**REPORTS**

**Item No. 5                    Automatic Fare Collection System**

**STANDING COMMITTEE DECISION:**

The Standing Policy Committee on Finance concurred in the recommendation of the Winnipeg Public Service that the financial status of the Automatic Fare Collection System, be received as information.

**Minutes – Standing Policy Committee on Finance – January 9, 2018**

DECISION MAKING HISTORY:

Moved by Councillor Mayes,

That the recommendation of the Winnipeg Public Service be concurred in.

Carried

# ADMINISTRATIVE REPORT

**Title:** Automatic Fare Collection System,  
Project ID: 4230001409,  
Quarterly Project Status Report No. 21  
For the Period Ended September 30, 2017

**Critical Path:** Standing Policy Committee on Finance

## AUTHORIZATION

Author	Department Head	CFO	CAO
K. Cumming	G. Ewankiw	B. D'Avignon, Acting for M. Ruta	G. Chartier, Acting for D. McNeil

## EXECUTIVE SUMMARY

**Project On Schedule:** Yes  No

**Project On Adopted Budget:** Yes  No

**Percent of Schedule Complete:**

**Percent of Adopted Budget Spent:**

This is a multi-phase capital project that has updated Transit's fare collection hardware with electronic fareboxes and has introduced a smart card system for fare payments to replace paper tickets and passes. The updated technology has improved flexibility and convenience for passengers to purchase fare products, and enhanced security and data collection over the previous manual fare collection system.

During the period from July 1, 2017 to September 30, 2017, the peggo smart card functionality of the system experienced a period of instability that caused some online customer orders to not successfully transfer to customers' cards. These issues have been resolved and progress is now being made toward outstanding project milestones.

The Advisory Committee has reviewed this report and recommends that the report be sent to the Standing Policy Committee on Finance.

## RECOMMENDATIONS

That the financial status of the Automatic Fare Collection System, as contained in this report, be received as information.

## REASON FOR THE REPORT

The Asset Management Administrative Standard FM-004 requires all projects with a total estimated cost of \$22 million (2018) or more report quarterly to the Standing Policy Committee on Finance. This threshold is adjusted annually for construction inflation as part of the annual Capital Budget approval. The Standing Policy Committee on Finance may also request reporting on any capital project.

## IMPLICATIONS OF THE RECOMMENDATIONS

No implications.

## HISTORY/DISCUSSION

See Appendix C – Key Project Events (History)

**Construction** (Update from last report)

No updates since last report.

Table 1 – Contracts

Bid Opportunity #	Company Name	Description	Original Contract Award Value (GST & MRST extra as applicable)	Total Approved Over-Expenditures (Over-Expenditure amount only) <sup>2</sup>	Date of Award	Date of Completion	Estimated % Complete
550-2008	The Gooderham Group	Consultant Services for the Update of Transit Fare Collection Systems and Technology	\$86,973.00	\$ -	Oct 2008	Dec 2011	100%
345-2011	Infodev Electronic Designers International	<sup>1</sup> Integration of On-Board Security Camera and Fare Collection Systems with Existing Advanced Transit Communication and Vehicle Location System	\$919,175.00	-	May 2011	Nov 2012	100%
777-2011	McKim Cringan George	<sup>1</sup> Development and Implementation of a Multimedia Public Information Campaign	\$159,400.00	-	Nov 2011	Dec 2016	100%
878-2011	The Gooderham Group	Implementation Project Manager	\$285,526.00	-	Nov 2011	Dec 2015	100%
925-2010	Garival Inc.	Automatic Fare Collection System	\$12,934,470.00	-	Jan 2012	Jul 2018	81%
877-2011	Ernst and Young LLP	Professional Accounting/Audit Advisory Services	\$22,750.00	-	Feb 2012	Dec 2014	100%
Sole source	KPMG LLP	Consulting Services	\$85,000.00	-	May 2012	Dec 2014	100%
Sole source	The Gooderham Group	Implementation Project Manager	\$36,000.00	-	Apr 2016	Jul 2018	71%
<b>Total</b>			<b>\$14,529,294.00</b>	<b>\$ -</b>			

**Upcoming Procurements:**

Description	Anticipated Award Date

Total Award Amount \$14,529,294.00

<sup>1</sup>A portion of these awards have been charged to separate projects as the contract work spanned multiple projects (\$461,125.00)

Total Award Amount Applied to Fare Collection \$14,068,169.00

<sup>2</sup> Historical information. To be updated in future reports.

<b>Garival Contract Details</b>	
Contract Value	12,934,470
Payments to Date	(10,476,972)
Milestone Payments Not Yet Earned	2,457,498

### **Schedule** (Update from last report)

The project remains within amended budget but is behind schedule. This is due to a failure of the contractor, Garival Inc., to deliver on several remaining Phase 2 milestones.

Progress on these milestones was disrupted during the period of July 1, 2017 – September 30, 2017. On July 11, 2017, the peggo system's software's capacity to load products onto cards from online purchases was overloaded. The contractor responsible for support of the system, Garival Inc., undertook emergency measures to return the system to operation. However, their actions caused a problem with some of the data that is responsible for transferring online product purchases to customers' cards. The contractor indicated they had resolved the problems in the data and Winnipeg Transit undertook case-by-case resolution for those customers the contractor identified as situations they were unable to fix.

On August 19, 2017, a secondary failure of the process mentioned above occurred. As a result, some online customer orders did not successfully transfer to the customer's card. Garival worked since this time to restore all products to peggo customers. Over the course of September, outstanding customer issues were resolved and the system was returned to a stable state.

Table 2 – Milestones

<b>Deliverable</b>	<b>Original Targeted Completion Date</b>	<b>Revised Targeted Completion Date</b>	<b>Actual Completion Date</b>	<b>Estimated % Complete</b>
2.2 - Successful test of the full system in production environment	2016 Q1	2016 Q1	2016 Q1	100%
2.3 - Installation of all devices and system updates in production environment	2016 Q2	2016 Q2	2016 Q2	100%
2.4a - Field test of full system in production environment and completion of training programmes	2016 Q2	2016 Q2	2016 Q2	100%
2.4b - Launch	2016 Q3	2016 Q3	2016 Q3	100%
2.2b - Phase 2B elements (visitor card) testing completed	2016 Q3	2017 Q4	-	20%
2.3b - Phase 2B elements (visitor card) equipment (functionality) installed	2016 Q3	2017 Q4	-	0%
2.5 - Successful completion of Revenue Acceptance Test	2016 Q3	2018 Q1	-	0%
2.6 - Successful completion of six month Operational Performance Test and completion of all escrow obligations	2017 Q1	2018 Q3	-	0%

### **Risk** (Update from last report)

Updates reflected in Risk Table 3. On-going system stability issues have meant that Winnipeg Transit information technology staff have taken a greater role in attempting to ensure proper system operation.

Table 3 – Significant Risks and Mitigations Strategies

<b>Significant Risks and Mitigation Strategies<sup>1</sup></b>	
<b>Risk Statement and Explanation</b>	<b>Risk Mitigation Management Plan</b>
<b>New:</b>	
<b>Ongoing:</b>	
Potential passenger dissatisfaction should system not function as promised	Extensive testing and verification has been performed before being introduced to the public.
	Quick customer service response to customer and agent issues once smart cards are in circulation.
	Delayed removal of paper fare products until technical issues are addressed.
	Winnipeg Transit Information Systems staff work with the contractors to help diagnose any software issues quickly and direct them to appropriate solutions.
<b>Mitigated:</b>	
Risk of card distribution problems if every passenger is allowed to acquire a smart card at the same time.	Smart cards have been introduced by passenger class, specifically Handi-Transit registrants, seniors, youth, full-fare, eco-pass and post-secondary customers.
	Also, paper products will not be phased out until the volume of smart cards sold is sufficient to prevent a surge in demand, and excessive line-ups at card distribution points.

**Financial** (Update from last report)

For further information, refer to Appendix B – Financial Forecast

No updates from last report.

**Funding** (Update from last report)

No updates from last report.

Table 4 – Project Funding Forecast and Receivable

<b>Funding Source</b>	<b>Adopted Budget (in millions)</b>	<b>Amended Budget (in millions)</b>	<b>Committed (in millions)</b>
<b>Class of Estimate</b>	<b>Class 3</b>		
Cash to Capital	8.240	7.557	7.557
Retained Earnings	-	2.850	2.850
Public Transit Reserve	-	0.089	0.089
Federal Gas Tax	-	0.244	0.244
Manitoba Winnipeg Infrastructure	7.000	7.000	7.000
Other Contributions	-	-	-
<b>Total</b>	<b>\$ 15.240</b>	<b>\$ 17.740</b>	<b>\$ 17.740</b>

**Property Acquisition** (Update from last report)

Not applicable.

**Stakeholder Engagements/Communications** (Update from last report)

No update.

**Subsequent Events after Report Period End Date**

Since September 30, 2017, the peggo system's software and fareboxes have experienced increased stability and reliability, and customer concerns have been significantly reduced. This has allowed the contractor responsible for support of the system to make progress in the outstanding milestones as detailed in the Schedule section. The visitor card has been successfully tested, meaning that milestone 2.2b has been achieved, with 2.3b anticipated to follow very soon.



**FINANCIAL IMPACT**

**Financial Impact Statement**    **Date:**    [December 21, 2017](#)

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**Project Name:**

**Automatic Fare Collection System,  
Project ID: 4230001409,  
Quarterly Project Status Report No. 21  
For the Period Ended September 30, 2017**

**COMMENTS:**

There is no financial impact as this report is for information only.

**original signed by**

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Laurie Fisher, CPA, CA  
Manager of Finance & Administration

## CONSULTATION

This Report has been prepared in consultation with:

N/A

## OURWINNIPEG POLICY ALIGNMENT

01-3 Prosperity Direction 1: Provide efficient and focused civic administration and governance. This report supports demonstration of accountability through service performance measurement and reporting.

## SUBMITTED BY

**Department:** Transit

**Division:** Information Systems

**Prepared by:** Kirk Cumming, Manager of Information Systems

**Date:** December 21, 2017

### **Appendices**

Appendix A – Key Project Facts

Appendix B – Financial Forecast

Appendix C – Key Project Events (History)

## Appendix A – Key Project Facts

<b>Appendix A – Key Project Facts</b>	
<b>Project Name</b>	Automatic Fare Collection System
<b>Business Owner (Department)</b>	Winnipeg Transit
<b>Project ID</b>	4230001409
<b>Project Sponsor</b>	
<b>Project Sponsor</b>	Greg Ewankiw
<b>Department Responsible for Project Delivery</b>	Winnipeg Transit
<b>Consultant Engineer</b> (Company Name)	N/A
<b>Adopted Budget</b>	
<b>Adopted Budget</b>	\$15,240,000
<b>Class of Estimate (Adopted)</b>	Class 3
<b>Range of Estimate (Adopted)</b>	-20% to + 30% \$12.700 M - \$19.812 M
<b>Amended Budget</b>	
<b>Amended Budget</b>	\$17,740,000
<b>Class of Estimate (Amended)</b>	Class 3
<b>Range of Estimate (Amended)</b>	-20% to + 30% \$14.783 M - \$23.062 M
<b><u>Project Scope</u></b>	
Phase 1	
The design, supply, delivery, installation, commissioning, warranting and servicing of a turnkey automatic farebox fare collection system for conventional and BRT buses operated by Winnipeg Transit	
Phase 2	
Design, supply, delivery, installation, commissioning, warranting and servicing of a smart card system for payment of fares, a purchasing system for merchant partners to sell fare products, a point-of-sale system for Winnipeg Transit to sell fare products, and a web-based system for self-service online purchase of fare products	
<b>Major Capital Projects Advisory Committee Membership:</b>	
<ul style="list-style-type: none"> <li>- Greg Ewankiw, Acting Director of Transit</li> <li>- Kirk Cumming, Manager of Information Systems</li> <li>- Paul Olafson, Corporate Controller, Corporate Finance Department</li> <li>- Cindy Fernandes, Director of Community Services</li> <li>- Laurie Fisher, Manager of Finance &amp; Administration</li> </ul>	

## Appendix B – Financial Forecast

### Appendix B - Automatic Fare Collection System \* As at September 30, 2017

Project Component Deliverables	Budget (in 000's)			Actual Costs To Sept 30, 2017	Expenditure Forecast (in 000's)				Total Forecasted Costs	Surplus (Deficit) From Amended Budget	Variance Last Report	Change in Variance
	Adopted Budget	Council Approved Change **	Amended Budget		Projected Costs							
					2017	2018	2019	2020				
Engineering, Design and Other <sup>1</sup>	\$ 13,715	\$ 2,500	\$ 16,215	\$ 13,265	\$ 150	\$ 2,838			\$ 16,253	\$ (38)	-\$ 38	\$ 0
Construction	\$ -		\$ -						\$ -	\$ -	\$ -	\$ -
Land Acquisition	\$ -		\$ -						\$ -	\$ -	\$ -	\$ -
Internal Financing / Overhead Costs	\$ 999		\$ 999	\$ 655		\$ 306			\$ 961	\$ 38	\$ 38	\$ (0)
Contingency <sup>2</sup>	\$ 526		\$ 526	\$ -				\$ 526	\$ 526	\$ -	\$ -	\$ -
<b>Total Project Budget</b>	<b>\$ 15,240</b>	<b>\$ 2,500</b>	<b>\$ 17,740</b>	<b>\$ 13,920</b>	<b>\$ 150</b>	<b>\$ 3,144</b>	<b>\$ -</b>	<b>\$ 526</b>	<b>\$ 17,740</b>	<b>\$ 0</b>		
<b>% of Project Budget Spent</b> (Actual Costs to Date / Adopted & Amended Budget)	91%		78%									

\* Amended budget and actual costs to date have been agreed to the City's general ledger and Monthly Capital Expenditures Report.

\*\* Approved by Council July 20, 2011

1 Engineering, Design and Other include amounts previously reported under Professional Services, External Contracts, and Other Equipment

2 Original budget amount per category has been restated to separate the contingency into its own category. The overall project budget remains unchanged. The budgeted contingency disclosed represents the remaining amount as of the end of the reporting period.

## **Appendix C – Key Project Events (History)**

On February 22, 2006, Council approved the report submitted by the Transit Department entitled Implementation Plan for Rapid Transit Task Force Recommendations. The implementation plan included a recommendation that the existing fareboxes be replaced with an automated fare collection system. The fareboxes dated back to the early 20th Century and had been out of production for decades. Implementation of a new fare collection system was intended to modernize and simplify the fare collection process, provide more convenience and options for passengers, and improve the security of fare collection.

The Automatic Fare Collection System has a total budget of \$17.74 million; \$15.24 million was approved in the 2011 and earlier Capital Budgets and Council approved the transfer of an additional \$2.5 million from surpluses in the 2011 Transit Buses Capital Project and the Transit System Funds retained earnings at its meeting of July 20, 2011.

The Automatic Fare Collection System Project was delivered in two phases. Phase 1 was completed in June 2013 and consisted of the installation of the new fareboxes on the entire bus fleet. Paper tickets and monthly and weekly flash passes are continuing to be used in Phase 2 of the project.

Phase 1 of the project consists of the installation of the great majority of the hardware necessary for the project including all fareboxes and cash vaults. The payment for this phase makes up 60% of the total value of the contract. The reliability of farebox transfer printers has improved, and the requirement to achieve a specified reliability level has been transferred to one of the remaining Phase 2 milestones. A written agreement regarding this specified reliability levels and the transfer of this requirement to a Phase 2 payment milestone has been accepted by Garival Inc.

Smart cards have been implemented as Phase 2 of the project. The smart card system has been in development since 2013. The complexity of the implementation has required more system development, verification and rework than was initially anticipated and this has caused the project to fall behind schedule.

As an enhancement to this project, Transit has introduced a single ride token that is used exclusively by schools and social service agencies. The tokens were produced by the Royal Canadian Mint and have a unique electro-magnetic signature that are verified by the new fareboxes to prevent counterfeiting. The tokens should last a minimum of 10 years. Tokens were introduced into service on August 4, 2016.

The smart card system was implemented for seniors on July 4th, 2016 with Full Fare and Youth passengers commencing August 8, 2016. The University of Winnipeg rolled out pegggo for U-Pass in September 2016.