



***Office of the Auditor General***

**Follow-up to the 2011 Audit of OC Transpo Communication of  
Cancelled Bus Trips**

**Tabled at Audit Committee - October 8, 2015**



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## ***Executive Summary***

### **Introduction**

The follow-up to the 2011 Audit of OC Transpo Communication of Cancelled Bus Trips was included in the Auditor General's Audit Plan.

The key findings of the original 2011 audit included:

- The City's process for communicating cancelled bus trips to the travelling public needs improvement. The process is not entirely automated and relies on human initiation and interaction at key steps before the ridership is notified of a trip cancellation.
- OC Transpo's trip cancellations are inconsistently sent to passengers' text alerts or e-mails. Of the 55 separate cancellations we examined, communication was accurate and timely in only 7 cases.
- OC Transpo had not registered 15 routes out of 141 possible bus routes to send alerts to passengers who had requested them.
- The City should correct the email and text issues and regularly monitor notifications to ensure accuracy.

## Summary of the Level of Completion

The table below outlines our assessment of the level of completion of each recommendation as of June 2014.

**Table 1: OAG's assessment of level of completion of recommendations**

Category	% Complete	Recommendations	Number of Recommendations	Percentage of Total Recommendations
Little or no action	0 to 24	n/a	n/a	n/a
Action Initiated	25 to 49	n/a	n/a	n/a
Partially Complete	50 to 74	1, 2	2	67%
Substantially Complete	75 to 99	n/a	n/a	n/a
Complete	100	3	1	33%
Total			3	100%

The table below outlines management's assessment of the level of completion of each recommendation as of November 2014 in response to the OAG's assessment. These assessments have not been audited.

**Table 2: Management's assessment of level of completion of recommendations**

Category	% Complete	Recommendations	Number of Recommendations	Percentage of Total Recommendations
Little or no action	0 to 24	n/a	n/a	n/a
Action Initiated	25 to 49	n/a	n/a	n/a
Partially Complete	50 to 74	2	1	33%
Substantially Complete	75 to 99	n/a	n/a	n/a
Complete	100	1, 3	2	67%
Total			3	100%

## Conclusion

Management has fully completed one of the three recommendations from the original audit and continues to work on the other two.

In relation to Recommendation 1, management informed us that route registration is tested whenever changes are made to the transit service or the web system configuration. However, we found that the e-mail/text alert registration issue highlighted in the original audit had not been fully corrected. We tested all 143 routes and the O-Train for trip cancellation in May 2014 using two separate

accounts. For both accounts, we could not register for cancellation alerts to 5 of the 144 possible routes.

With regards to recommendation 2, funding for the customer service platform was included and approved in the 2012 Transit Services budget. At the time of our follow-up, OC Transpo was in the process of hiring employees associated with the new customer service platform. Management informed us that they were working towards full implementation in Q1 or Q2 of 2015.

Recommendation 3 was fully implemented in February 2014. However, a cost-benefit analysis was not completed.

### **Acknowledgement**

We wish to express our appreciation for the cooperation and assistance afforded the audit team by management.

The following section is the detailed follow-up report.





## ***Detailed Follow-up Report***

### **Introduction**

The follow-up to the 2011 Audit of OC Transpo Communication of Cancelled Bus Trips was included in the Auditor General's 2013 Audit Plan.

The key findings of the original 2013 audit included:

- The City's process for communicating cancelled bus trips to the travelling public needs improvement. The process is not entirely automated and relies on human initiation and interaction at key steps before the ridership is notified of a trip cancellation.
- OC Transpo's trip cancellations are inconsistently sent to passengers' text alerts or e-mails. Of the 55 separate cancellations we examined, communication was accurate and timely in only 7 cases.
- OC Transpo had not registered 15 routes out of 141 possible bus routes to send alerts to passengers who had requested them.
- The City should correct the email and text issues and regularly monitor notifications to ensure accuracy.

### **Key Findings of the Original 2011 Audit**

Management has a process in place for the reassignment of buses and the communication of cancelled trips. We have observed and confirmed with management that this process is not entirely automated and relies on human initiation and human interaction at key steps before the ridership is notified of a trip cancellation. We believe that these trip cancellations and cancellation process are common and considered acceptable in the transit industry for systems of OC Transpo's size and complexity.

The audit team recorded a total of 55 trip cancellations over five days during the monitoring period. This is a low number of cancellations relative to the over 40,000 passenger trips that OC Transpo delivered across the city in this same period.

Of these 55 trip cancellations:

- Communication was consistent in 7 instances.
- Communication was inconsistent in 40 instances.
- Due to timing of certain notifications, we were not able to confirm the consistency of communication for 8 trip cancellations and these findings are deemed inconclusive.
- Trip cancellations are consistently posted on the website and mobile website, but we did not consistently receive a text alert or e-mail.
- E-mail and text alerts are always consistent with each other. If a text alert was received, then an e-mail alert was also received for all trip cancellations. The same applies if a text alert is not received -- an e-mail is not received as well.

- The 560-1000 phone (where you can enter the 4 digit stop number to obtain bus arrival information) and 560560 text message methods are generally up to date and provide accurate information when we requested information from these services.

Other observations by the audit team include:

- A notable percentage (23% or 13 of the 55 trips) of trip cancellation notifications were received quite late which made it difficult to phone or text message a stop to verify the real time schedule with the schedule on the website. As noted earlier, 8 of these 13 cancellations were received so late that we could not verify their consistency through Teleride (i.e., 613-560-1000 with the 4 digit stop number) or text message (i.e., 560560).
- In three instances, the online schedule did not match the 560-1000 phone and 560560 text message real time schedules.
- There were some notable delays when the notifications were posted on the website. For example, on Thursday, November 10, 2011, the Route 1 South Keys trip was cancelled at 7:53 a.m. on the mobile website (the trip started at 7:52 a.m. and ended at 8:08 a.m.). The notification was not posted on the website until 8:08 a.m.

Following the results of our observations, further investigation was conducted.

After creating two accounts on OC Transpo's website, we subscribed to receive notifications for all of the routes. Once this subscription was complete, OC Transpo's website provided a simple confirmation, "Alert notification preferences saved."

As a result of the e-mail/text alert discrepancies, we examined the two accounts which had been created and found that although we had initially subscribed to receive alerts for all 141 possible bus routes, only 126 routes had actually been registered for alerts and the system had not registered us for the other 15 routes. We subsequently determined that the e-mail/text alert discrepancies we observed for routes 30, 41, 101 and 105 were because our initial registration of these routes to the accounts were not saved by the server.

Considering that we had created two accounts that were subscribed to 126 routes, we decided to test this apparent subscription issue using only a few routes. We created a third, new account on the OC Transpo website and attempted to subscribe only to routes 30, 41, 101, and 105. After receiving the confirmation message, we returned to the account settings and were able to confirm that routes 30, 41, 101, and 105 had not been registered to the account by the server.

The audit team raised the registration issue with OC Transpo Management during the course of the audit. Management indicated that adjustments were made to the registration system and the problem has been fixed.

## **Status of Implementation of 2011 Audit Recommendations**

### **2011 Recommendation 1**

**Management should take immediate steps to ensure that the e-mail/text alert registration issue has been corrected and investigate/resolve the source of other discrepancies.**

### **2011 Management Response**

Management agrees with this recommendation.

After the audit, all routes within the registration system were tested to ensure proper registration. The issue identified in the audit was corrected in Q4 2011.

### **Management Representation of Status of Implementation of Recommendation 1 as of July 1, 2013**

As noted in the management response, all routes within the registration system were tested to ensure proper registration. The issue identified was corrected in Q4 2011. Management considers implementation of this recommendation to be complete.

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***Management: % complete*** ***100%***

### **OAG's Follow-up Audit Findings regarding Recommendation 1**

Management informed us that route registration is tested whenever changes are made to the transit service or the web system configuration. Although routes were tested and corrected in Q4 2011, we re-tested using two separate accounts all 143 routes and the O-Train for trip cancellation in May 2014. We could not subscribe to 5 of the 144 possible routes i.e., 102, 106, 107, 602 and the O-Train. We advised Management of this during our fieldwork in June.

The original 2011 audit identified 15 routes out of 141 possible bus routes that could not be registered to for receiving cancellation alerts. Although improved, all routes should be correct.

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***OAG: % complete*** ***65%***

### **Management Representation of Status of Implementation of Recommendation 1 as of November 12, 2014**

Management agrees with the original audit recommendation and has introduced processes to check that the problems noted do not occur. OC Transpo schedules are changed four times per year and with every change, active monitoring is carried out, so that there is a check undertaken at a minimum approximately ten times per year. These periodic checks are to assure Management that the alert system is working properly, that schedule changes have been properly reflected, and to check that specific issues identified by the Audit or by customers are not reoccurring. In addition to this active monitoring, management corrects any errors that are brought to its attention via customer feedback. Management does not support additional monitoring beyond the current practice described above.

In examining the comments provided by the OAG in the follow-up audit, Management was not able to reproduce the problem that the OAG found. Notwithstanding this, Management does check for this problem in the ongoing test protocols described above. One possible cause of the issues found by the OAG was identified – problems with the browser cache. For that reason, a message has been added at the end of the registration form to alert people to the possibility that, if they do not see recent edits, they should “clear their browser cache”. Clear instructions have been provided on how to complete this task. Management is also investigating a longer-term solution to problems caused by the cache.

**Management: % complete**

**100%**

### **2011 Recommendation 2**

**Management should start immediately to regularly monitor and conduct comprehensive testing to confirm that the notifications are consistent and accurate across all of its communications tools.**

### **2011 Management Response**

Management agrees with this recommendation.

As part of the Customer Service Platform, an independent firm will be secured through an RFP process to regularly test the different platforms and report and correct any discrepancies. It is anticipated that this will be implemented by the end of Q2 2013. This timeline is dependent on the implementation of the new Customer Service Platform and approval of funding for this initiative. A request for funding will be included in the 2013 Transit Services budget.

### **Management Representation of Status of Implementation of Recommendation 2 as of July 1, 2013**

Regular monitoring and testing is currently in place across some tools. Regular monitoring and comprehensive testing to confirm that notifications are consistent and accurate across all tools is dependent on a thorough review of OC Transpo IT priorities. The OC Transpo IT Review is scheduled to be presented to the Transit Commission in September 2013. The new Customer Service Platform is one of many competing technology projects that OC Transpo is pursuing. The Customer Service Platform is one of the priorities established as part of the IT Review, if approved, a project is planned to start in Q1 2014.

It is also important to note that, in addition to regular monitoring, management corrects any errors that are brought to its attention via customer feedback.

**Management: % complete**

**50%**

### **OAG's Follow-up Audit Findings regarding Recommendation 2**

Management informed us that there was limited documentation we could review of the monitoring and testing that was in place across some tools; and, no documentation of errors corrected as a result of customer feedback. We were able to review examples provided of testing for a revision to the Short Message Service (SMS) application.

For the period May 1 to May 15, 2014, OC Transpo provided us a database of 457 trip cancellations. Based on the alerts reviewed, we found that 46% of these alerts had been sent after 20 minutes from the first cancelled stop. Since in most cases, the next scheduled bus had gone by under the 20 minutes threshold, there is no real advantage to having sent out these alerts. The OC Transpo IT Review was tabled at Transit Commission on October 16, 2013. Funding for the customer service platform was included and approved in the 2012 Transit Services budget. At the time of our follow-up, OC Transpo was in the process of hiring employees associated with the new customer service platform. Management informed us that they were working towards full implementation in Q1 or Q2 of 2015.

***OAG: % complete*** ***70%***

**Management Representation of Status of Implementation of Recommendation 2 as of November 12, 2014**

As noted above, the Customer Service Platform was confirmed as an IT priority project by the Transit Commission as part of the IT Review in the fall of 2013. The software has been acquired and work began on the project in Q4 2014.

The first phase to be completed is the Business Process Review. The additional comments from the Office of the Auditor General, along with those from customers and staff, will inform the Business Process Review and work plan. It is anticipated that the Business Process Review will be completed Q3 2015. At this time, an exact go-live date cannot be established, however, it is anticipated that it will be in 2016.

Once again, it is important to note that, in addition to regular monitoring, management corrects any errors that are brought to its attention via customer feedback.

***Management: % complete*** ***70%***

**2011 Recommendation 3**

**Management should conduct a cost-benefit analysis and implement upgrades to the computer system(s) to automate the process step of cancelled bus trip notification (on the website, mobile website, e-mail alerts, text message alerts, travel planner, and Teleride) once the Operations Centre has made the decision to cancel a bus trip.**

**2011 Management Response**

Management agrees with this recommendation.

After the audit, an upgrade to the aggregator software was completed and since then the 560560 SMS service has been very stable in providing next trip information. This was completed in Q3 2011. Management recognizes that automation is required to achieve efficiency and consistency across all platforms. The current IVR 560-1000 system is reaching the end of its lifecycle and will be replaced with a system that will rely on the real-time bus position database and the travel planner database, making it consistent with all existing systems. This is scheduled to be completed by the end of Q1 2013.

**Management Representation of Status of Implementation of Recommendation 3 as of July 1, 2013**

The update to the aggregator software was completed in December 2011. Since that time the 560560 SMS service has been very stable. The replacement of the MR 560-1000 system is scheduled to be completed in Q3 2013.

**Management: % complete** **90%**

**OAG's Follow-up Audit Findings regarding Recommendation 3**

Implementation of the MR 560-1000 system replacement was completed in February 2014.

A cost-benefit analysis was not completed.

**OAG: % complete** **100%**

### Summary of the Level of Completion

The table below outlines our assessment of the level of completion of each recommendation as of June 2014.

**Table 3: OAG's assessment of level of completion of recommendations  
(Repeat of Table 1 in Executive Summary)**

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Complete	100	3	1	33%
Total			3	100%

The table below outlines management's assessment of the level of completion of each recommendation as of November 2014 in response to the OAG's assessment. These assessments have not been audited.

**Table 4: Management's assessment of level of completion of recommendations  
(Repeat of Table 2 in Executive Summary)**

Category	% Complete	Recommendations	Number of Recommendations	Percentage of Total Recommendations
Little or no action	0 to 24	n/a	n/a	n/a
Action Initiated	25 to 49	n/a	n/a	n/a
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With regards to recommendation 2, funding for the customer service platform was included and approved in the 2012 Transit Services budget. At the time of our follow-up, OC Transpo was in the process of hiring employees associated with the new customer service platform. Management informed us that they were working towards full implementation in Q1 or Q2 of 2015.

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