Calgary Transit
Zero-Based Review

Opportunity Identification Report

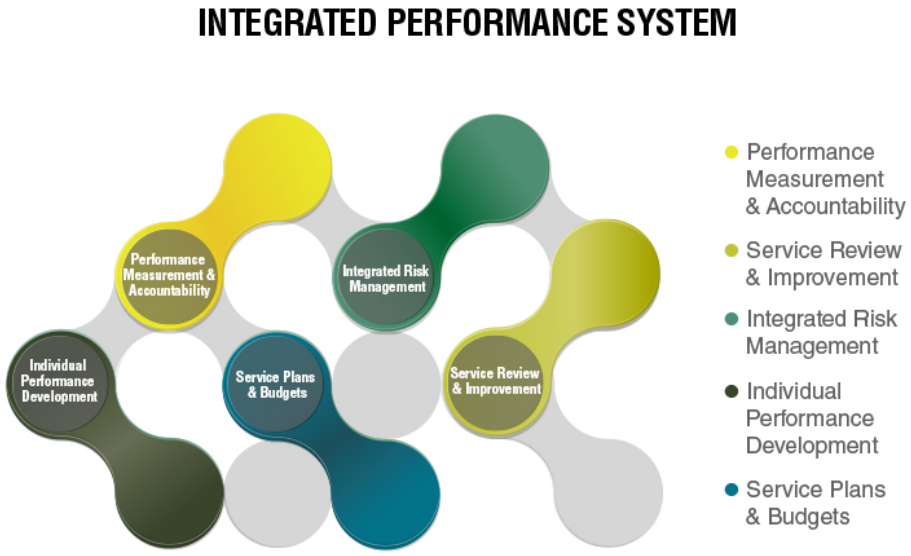
May 2016

Prepared by: Corporate Initiatives, Chief Financial Officer's Department

zbr | zero~based review program

INTRODUCTION

The Zero-Based Review (ZBR) program is one component of The City of Calgary's Integrated Performance System to promote innovation and continuous improvement. The system includes four additional performance improvement programs that are complementary to the Zero-Based Review program and are integrated into the ZBR approach.



A Zero-Based Review evaluates services and budgets in light of strategic organizational goals, customer and citizen needs, and benchmarking and best practices information. Using this information, a ZBR provides business cases and recommendations regarding:

1) Changes to service level or delivery that would achieve cost savings or mitigate future cost increases (efficiency improvements); and

2) Changes to service level or delivery that would improve results or outcomes (effectiveness improvements).

The Opportunity Identification phase for the Calgary Transit ZBR occurred from January to May 2015. During this phase, the Service Efficiency and Effectiveness team within Corporate Initiatives conducted a high level review of services in order to identify areas with the greatest potential for efficiency and effectiveness gains. The result is a number of recommended opportunities for improvement and associated rationale for pursuing these within the ZBR.

The opportunities identified in this report were used as the basis for an external consultant to develop detailed business cases and recommendations (presented in a separate report).

OVERVIEW OF CALGARY TRANSIT

Calgary Transit is the largest business unit in The City of Calgary. There are over 3,000 employees who provide transit services 365 days a year. Their work includes:

- Daily operation of the transit system
- Transit planning and scheduling for 160 bus routes, two train lines and over one million paratransit trips, as well as future bus routes and rail lines
- Purchasing, maintaining and servicing a fleet of over 1,000 buses and almost 200 light rail vehicles
- Maintaining and servicing buildings including 44 stations and 4 garage/office facilities
- Maintaining the train system, including the track and overhead power system
- Providing and maintaining over 16,000 parking spaces at 33 park and ride locations
- Managing over 3,000 employees, including recruiting and training
- Providing public safety and security for customers on the system via 100 Peace Officers on the ground, help phones and surveillance cameras monitored by staff
- Providing customer service through various channels including the call centre, website, customer service centres, Twitter, etc.
- Delivering over one million specialized shared-ride trips per year for people with disabilities (Calgary Transit Access)

High Level Statistics (2014)

Ridership	110 million customers
Number of Calgary Transit Access trips	1 million
Number of bus routes	155
Number of CTrain stations	45
Total kilometres of transit routes	3,864
Transit fleet size	1,203 active vehicles
Number of transit operators	2,150
Number of transit staff total	3,311

Zero-Based Review Project Scope

The scope for this ZBR includes all operating dollars included in the Calgary Transit 2014 budget, which was approximately $389 million.

These expenditures can be broken down into four services and fifteen sub-services as follows:

Service	Sub-Service	Operating Budget (2014) in millions
Provide Bus and Train Service	Operate bus and train service*	$165.1 M
	Maintain and service buses	$80.4 M
	Maintain and service trains	$23.6 M
	Cleaning services and outside maintenance	$10.4 M
	Track and rail system maintenance	$24.5 M
	Building maintenance, upgrades and expansion	$16.5 M
	Subtotal	**$320.5 M**
Provide Safe and Secure Transit	Transit public safety and enforcement	$13.6 M
	Transit organization safety, security and sustainability	$2.1 M
	Subtotal	**$15.7 M**
Provide Specialized Transit for Persons with Disabilities (Calgary Transit Access)	Calgary Transit Access customer service	$0.9 M
	Calgary Transit Access operations	$33.6 M
	Subtotal	**$34.5 M**
Customer Service and Transit Planning	Customer service	$8.7 M
	Transit planning and scheduling	$4.6 M
	Internal services	$4.0 M
	Revenue Streams**	N/A
	Subtotal	**$17.3 M**
TOTAL		**$388 M**

Notes:

*Within this budget, $149.4 million is for operator salary and wage.

**The Revenue Streams sub-service accounted for approximately $189 million in revenue in 2014.

RESEARCH APPROACH

Starting in January 2015, Corporate Initiatives began collecting and analysing information in order to identify opportunities for improvement in Calgary Transit, using the following approach:

Understand the business unit	• Identified and defined Calgary Transit's services and sub-services • Participated in site visits to key transit facilities
Generate ideas and opportunities for improvement	• Conducted interviews with Calgary Transit employees • Analysed performance measures and benchmarking data • Held Results Based Accountability workshops • Reviewed budget/financial information • Reviewed key strategic documents, policies, and audits • Reviewed customer and employee survey results
Validate, scope and prioritize opportunities	• Requested additional data and follow-up interviews to validate and scope opportunities • Developed and applied prioritization criteria to select opportunities for the ZBR

Details of the research undertaken for this ZBR, including a complete list of interview participants and documents reviewed, can be found in the Appendix.

Note: The financial and budget data referenced in this report have been adjusted for inflation using constant 2014 dollars.

STRENGTHS OF CALGARY TRANSIT

During the Opportunity Identification phase, Corporate Initiatives identified the following strengths within Calgary Transit:

CUSTOMER FOCUSED

- ✓ Customers and service delivery are at the heart of all Calgary Transit operations
- ✓ Whether in the front lines of service delivery or back-of-house operations, employees are focused on how their work impacts the customer experience

CULTURE OF CONTINUOUS IMPROVEMENT

- ✓ Calgary Transit is constantly identifying ways to improve service delivery and reduce costs; for example:
  - Extending the life of buses and trains through maintenance and refurbishment
  - Optimizing work flow at garages to reduce operator overtime costs
  - Improving the customer experience with real time bus information, security cameras on buses, the “one window” initiative for low-income passes, and a more streamlined eligibility process for Calgary Transit Access
  - Investing in security and cleanliness, which has led to significant increases in customer satisfaction rates

DATA DRIVEN

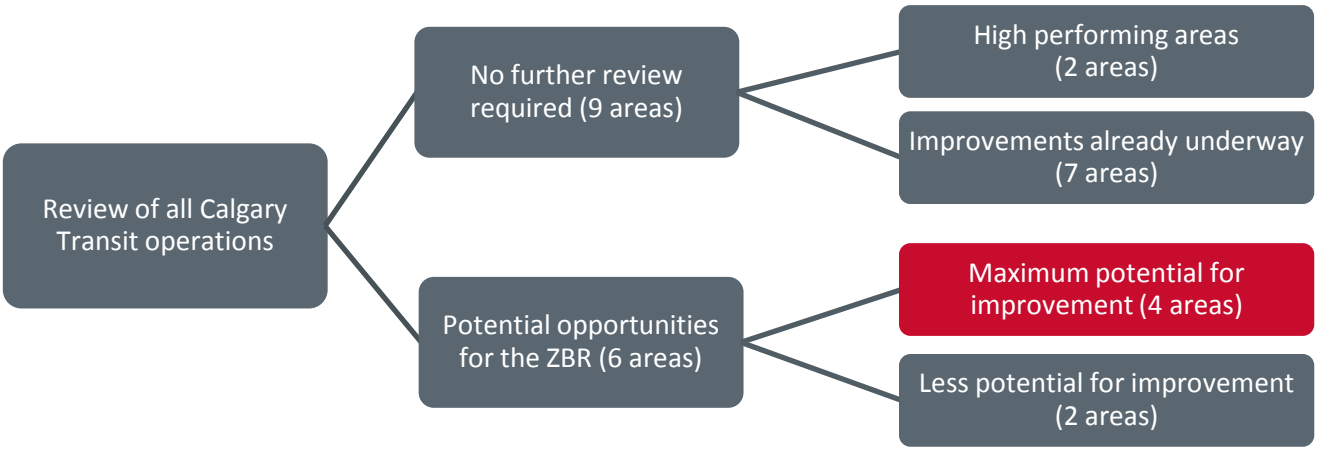
- ✓ Calgary Transit is sophisticated in its use of data for decision making. Some examples include “intelligence led policing” for the Transit Peace Officers and extensive use of the HASTUS system to inform route planning and scheduling

PROUD & LOYAL WORKFORCE

- ✓ Employees are enthusiastic and proud to work for Calgary Transit
- ✓ Many employees have made life-long careers at Calgary Transit, experiencing many different aspects of service delivery
- ✓ Employees were eager to talk to Corporate Initiatives about the work that they do and how to improve service for customers

SUMMARY OF FINDINGS

As with all Zero-Based Reviews, the Calgary Transit ZBR began with a high-level review of all operations to identify areas with the greatest potential for efficiency and effectiveness gains. This staged approach (outlined below) ensures that the ZBR is focusing on areas with the greatest likelihood for improvement, maximizing the use of resources in the ZBR.



From this high level review, 9 areas were identified that would not benefit from further review, either because they are currently performing well or work is already underway to address emerging issues.

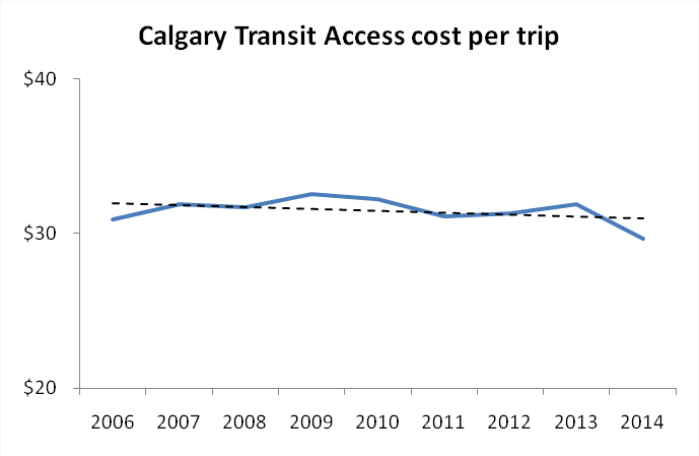
Six opportunities for improvement were identified that would benefit from additional review through the ZBR. These opportunities were evaluated to identify those with the greatest potential; based on this analysis, four opportunities were selected for the ZBR.

No Further Review Required	Potential Opportunities for the ZBR
High performing areas: • Calgary Transit Access • Transit Public Safety & Enforcement **Improvements already underway:** • Calgary Transit Call Centre • LRT Signals • Employee Safety & Accommodation • Energy Efficiency • Downtown Congestion • Bus Route System Optimization • Operator Schedule Sign-Up	**Maximum potential for improvement:** • Procurement & Inventory Management • Fleet Maintenance • Service Delivery Approach • Transit Revenues **Less potential for improvement:** • Infrastructure Maintenance • Operations Support

Details on each of these areas are provided in the following sections of this report.

Calgary Transit Access

Calgary Transit Access provides specialized transportation options to Calgarians with disabilities who cannot use regular Calgary Transit buses or trains. The average cost per trip decreased by 4% between 2006 and 2014.



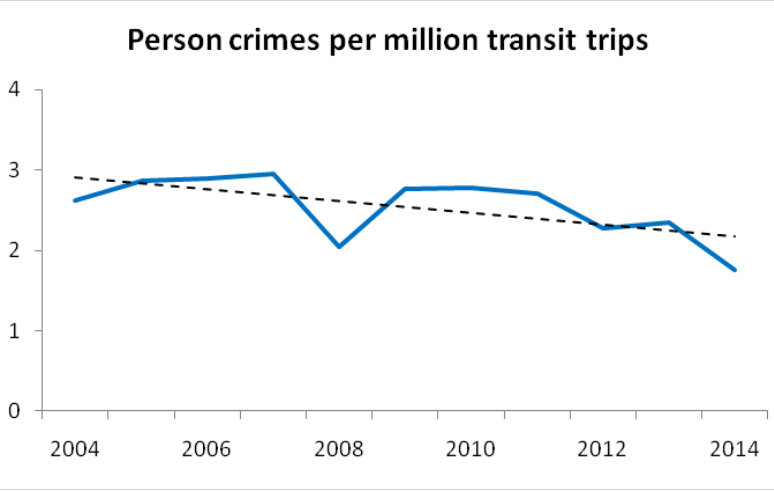
Meanwhile, on-time performance remained stable at approximately 88% and customer satisfaction related to ability to get a booking increased from 89% (2005) to 97% (2013).

Finally, a 2013 performance audit found that the service delivery model used by Calgary Transit Access is an efficient and effective model, and is considered best practice in the industry.

Transit Public Safety & Enforcement

Calgary Transit Peace Officers patrol the transit system to address safety issues and bylaw infractions, including fare evasion.

- Person crimes per million transit trips decreased 33% from 2004 to 2014.
- The fare compliance rate increased from 95.5% (2009) to 97.2% (2014).
- The customer safety rating improved from 7.2/10 (2008) to 7.9/10 (2014).



IMPROVEMENTS ALREADY UNDERWAY

Corporate Initiatives identified seven opportunities where improvements are already planned or underway.

Opportunity	Description	What is Calgary Transit doing to address this opportunity?
Calgary Transit Call Centre	Calgary Transit operates a call centre to respond to customer inquiries and service requests. The average cost per call to the call centre increased 263% between 2005 and 2014, due in part to a 59% decrease in the number of calls received and an increase in average talk time.	In 2015, there was a re-alignment of staff responsibilities and an increase in knowledge base to allow call centre staff to respond to calls in a more efficient manner. Based on a report by Delcan, Calgary Transit will be implementing a restructuring of the call centre when it is moved to a new facility (Westbrook) in 2017, along with PS100 and the operations control centre.
LRT Signals	LRT signals at roadway intersections and along the track are maintained by the Roads business unit. A 2013 Calgary Transit internal discussion paper stated that the limited hours of the signals group (weekdays only) resulted in signal-related delays in LRT service. An external review of the rail safety program noted that most LRT signal systems are managed and maintained by the transit agency (2014 APTA Preliminary Safety Review Report).	Calgary Transit and Roads have engaged in ongoing discussions over the past few years to discuss options to improve this service. This will continue to be pursued within the Transportation department.
Employee Safety & Accommodation	Calgary Transit WCB claims are the highest in the corporation. Interviews with Calgary Transit staff highlighted challenges with finding suitable accommodated work placements when an employee is injured, which can result in productivity loss. Limited data was available to confirm the scale of this opportunity.	Calgary Transit is working with Human Resources to improve the availability and quality of data on work accommodation to enhance understanding of this issue. Calgary Transit is piloting new approaches to work accommodation, such as the "Clean Team" – a team of accommodated employees who clean the trains during the day, which fills a gap in terms of customer service and is a productive use of the accommodated employees' time.

Energy Efficiency	Calgary Transit consumes significant amounts of energy (fuel, electricity, and natural gas) in order to deliver transit service. In 2014, Calgary Transit spent $49.7 million on energy costs (approximately 13% of the total budget). Fuel consumption per bus kilometre of service increased 8% from 2007 to 2014.	Calgary Transit has a number of energy efficiency projects underway, including: piloting natural gas and electric buses, piloting LED lighting on buses, and using micro turbines in garage facilities that use excess heat to generate electricity. A Transportation Department Energy Management Plan was completed in 2015 that prioritizes energy efficiency opportunities going forward.
Downtown Congestion	Calgary Transit bus routes that travel through the downtown core experience significant slowdowns. Staff interviews revealed that congestion in the downtown core is a significant challenge – it adds to operating costs and makes transit a less appealing option, which impacts ridership. A 2015 analysis of variability in downtown trip times showed that routes going through downtown require significantly more buses to accommodate for slowdowns and ensure reliability for customers.	Calgary Transit is currently reviewing parts of the downtown bus network in coordination with the Green Line and the SW Transitway. Next steps include a comprehensive review of the network and exploration of transit priority measures.
Bus Route System Optimization	Calgary Transit bus routes and schedules are analysed to optimize the transit system and identify low performing routes (those that do not meet the minimum passengers per revenue operating hour). However, staff interviews highlighted the sensitivity and challenges associated with eliminating existing routes, even if they are low performers and an inefficient use of resources.	Calgary Transit recently established a cap on the number of low performing routes that are in operation. This number was incorporated into Calgary Transit's 2015-2018 business plan and budget. Since 2015, real-time data and associated software has assisted with improving bus schedules. A service review with a focus on the NW sector of the city is being completed in 2016.
Operator Schedule Sign-Up	Bus and LRT operators sign up for their schedules and routes every four months. The sign-up process is currently done manually (in person or over the phone).	Operators can now check the schedules online, but are still required to sign-up manually. Online registration is currently being considered and discussed.

Opportunity:	PROCUREMENT & INVENTORY MANAGEMENT

Description

Review and streamline the current procurement and inventory management processes to reduce costs and increase the availability of buses and LRVs.

Context

In partnership with the Supply business unit, Calgary Transit procures and stores parts and tools needed to maintain and repair assets. In 2014, Calgary Transit spent $27.7M on supply management and parts.

Site visits to fleet maintenance facilities and interviews with staff revealed challenges with the procurement and inventory processes. Fleet mechanics are often waiting for parts in order to repair vehicles, which impacts the number of spare vehicles required to provide full transit service. The US Federal Transit Administration recommends that spare bus ratios should not typically exceed 20%. Calgary Transit's spare bus ratio exceeded 20% for six of the last ten years.

The challenges also appear to be creating inefficiencies and work-arounds, such as use of credit cards to purchase parts and stockpiling of materials on the shop floor. Currently, there is no Service Level Agreement between Calgary Transit and Supply.

External consultants have previously identified similar issues with the procurement and inventory processes within bus and LRV maintenance (2009 Muir and Associates Report, 2012 APTA Peer Review).

Benefits

A 2009 Six Sigma report by Muir & Associates estimated that approximately 22 additional buses are required due to delays in supplying parts. The costs associated with purchasing, maintaining and storing 22 additional buses is significant. About one-third of the 54 recommendations in this report have been implemented since 2009; however, the fundamental issues have not been resolved.

Similarly, a 2012 APTA Peer Review found that the supply of parts was a "choke point" for LRV maintenance efficiency, which leads to "significant additional costs."

What are the next steps if we pursue this opportunity?

- Conduct a gap analysis to assess alignment between Calgary Transit and Supply's processes and policies
- Identify impacts and outcomes on Calgary Transit resources, assets and performance
- Assess alternative organizational options or processes

Opportunity:	FLEET MAINTENANCE

Description

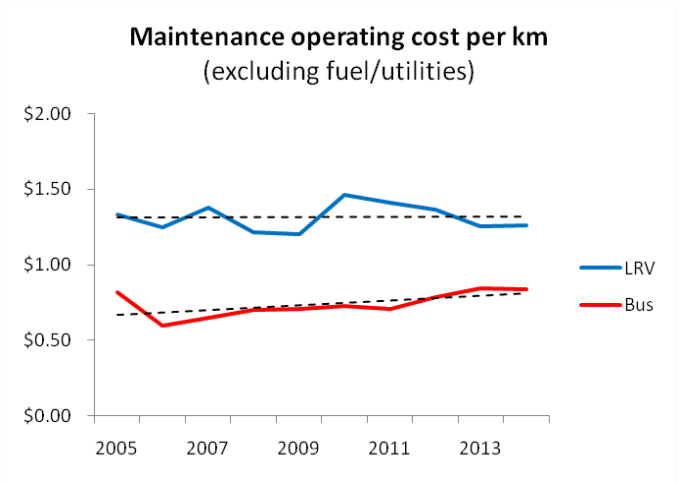
Review fleet maintenance processes to determine whether current practices are financially sustainable given the projected growth of the Calgary Transit system.

Context

The maintenance of buses and light rail vehicles (LRVs) is a crucial component of service delivery in Calgary Transit. It accounts for 18% of Calgary Transit's operating expenditures ($70.2M in 2014). Fleet maintenance includes regularly scheduled maintenance, refurbishment, and unscheduled repairs.

The US Federal Transit Administration recommends that spare bus ratios should not typically exceed 20%. Calgary Transit's spare bus ratio exceeded 20% for six of the last ten years, which could be a reflection of the fleet maintenance processes in place.

Maintenance operating costs per km increased 3% for buses and decreased 6% for LRVs (excluding fuel/utility costs) between 2005 and 2014. While these numbers do not indicate an issue with rising costs, interviews with Calgary Transit staff identified a sense of uncertainty about whether current fleet maintenance practices reflected best practices in the industry.



A 2012 Siemens LRV Maintenance Business Review identified an opportunity to move towards a more proactive maintenance regime.

Benefits

A 2012 Siemens review estimated a potential 10% improvement in LRV reliability through improved performance measurement and more proactive maintenance. This would mean more reliable service for customers and could also reduce the amount of spare vehicles required to provide full transit service.

Since fleet maintenance represents such a large proportion of Calgary Transit's budget, a relatively small improvement in process efficiency could result in significant savings. For example, a 1% efficiency gain in this area would result in $700,000 in annual savings. A 5% efficiency gain would result in approximately $3.5 million in annual savings.

What are the next steps if we pursue this opportunity?

- Review Calgary Transit's current business practices required to maintain buses and LRVs
- Identify process changes to improve performance

Opportunity:	SERVICE DELIVERY APPROACH

Description

Review the current service delivery approach used by Calgary Transit in three areas (vehicle service lanes, janitorial & outside maintenance, and rail system communications) to determine the optimal balance of internal and external resourcing to deliver the service.

Context

The Calgary Transit vehicle service lanes group is responsible for cleaning, fuelling and lining up buses and trains in the garage to prepare them for the next day's service. Customer cleanliness ratings for buses and LRVs improved significantly between 2005 and 2014 and service lane operating costs increased 69% for buses and 93% for trains over that same period. There is an opportunity to explore alternative service delivery models (including the use of external contractors) to potentially reduce costs while maintaining current standards and customer ratings.

A similar story emerged regarding janitorial services and outside maintenance (cleaning, landscaping, and snow and ice control at stations, park and ride lots, and other Calgary Transit facilities). Customer cleanliness ratings of good/excellent improved for LRT stations from 50% in 2008 to 77% in 2014. Meanwhile, the operating cost per square metre increased 111% between 2005 and 2014. Calgary Transit is already an industry leader in its use of external contractors for this work and the percentage of work completed by external contractors has increased steadily since 2005. However, the breakdown of work between internal and external resources has primarily been determined on an ad hoc basis as the transit system has grown.

Finally, there is an opportunity to review the maintenance work related to the LRT rail system communications. Currently, this work is provided by ENMAX; however, ENMAX has informed Calgary Transit that it will no longer provide this service after the current agreement expires in 2018. Calgary Transit's payments to ENMAX for this work increased 187% between 2006 and 2014 (excluding utility costs). There is an opportunity to determine whether there are cost savings to be achieved by bringing the service in-house or by using a different external service provider.

Benefits

Customer satisfaction in these service areas has already improved greatly due to a concerted effort by Calgary Transit. However, there are potentially significant financial benefits associated with optimizing the use of internal and external resources to deliver these services while maintaining quality. The total spend in all three of these areas is approximately $25 million per year. For example, a 1% efficiency gain in this area would result in $250,000 in annual savings; a 5% efficiency gain would equal $1.25 million in annual savings.

What are the next steps if we pursue this opportunity?

- Assess the current service delivery model for service lanes and janitorial and outside maintenance functions and determine the optimal balance of internal and external resourcing
- Evaluate Calgary Transit's ability to perform rail system communications functions in house and determine the optimal approach going forward

Opportunity:	TRANSIT REVENUES

Description

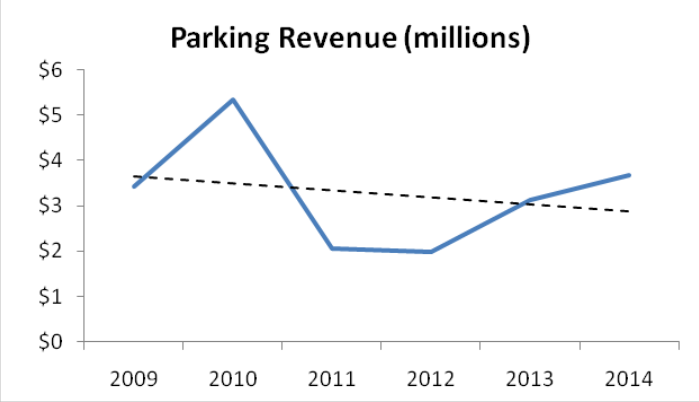
Review Calgary Transit's revenue streams (including fares, advertising, parking, and all other sources of revenue) and identify opportunities to maximize revenue.

Context

Calgary Transit collects approximately $190 million per year in revenue from fares and other sources. Calgary City Council established a target revenue/cost ratio of 50-55% for Calgary Transit, which measures the proportion of transit expenditures that are funded by user fees versus property taxes. This ratio has been on a downward trend from 58% in 2006 to 50% in 2015.

Route Ahead identified a funding gap for Calgary Transit in the order of $8 million per year if the goals outlined in that plan are to be met. The ability to meet the targets in Route Ahead was identified by Calgary Transit as a significant risk given the funding gap, and identifying alternative revenue opportunities was listed as a key mitigation strategy.

One potential opportunity is to look at the current fare discounts offered by Calgary Transit. Overall, Calgary Transit's fare discounts tend to be lower than comparable cities and there is a question whether the discounts are keeping up with inflation. For example, the low-income pass was originally set at 50% of the regular transit fare but is now closer to 40%.



Finally, parking revenue from Calgary Transit's park-and-ride lots has fluctuated significantly since 2009 as parking policies have changed. Route Ahead recommends that parking policies be reviewed; currently, all lots follow the same parking policies and pricing structure, despite significant differences in terms of supply and demand.

Benefits

Maximizing Calgary Transit revenues while maintaining affordability and accessibility would improve the financial sustainability of the service going forward. It would also help address the downward trend in the revenue/cost ratio and the funding gap identified in Route Ahead to achieve future transit goals. A 1% increase in revenue would equal $1.9 million in additional annual funding; a 5% increase would equal approximately $9.5 million.

What are the next steps if we pursue this opportunity?

- Review current revenue streams and policies in the context of future Calgary Transit goals
- Identify opportunities to increase revenue and improve the long-term financial sustainability of the service

Opportunity:	INFRASTRUCTURE MAINTENANCE

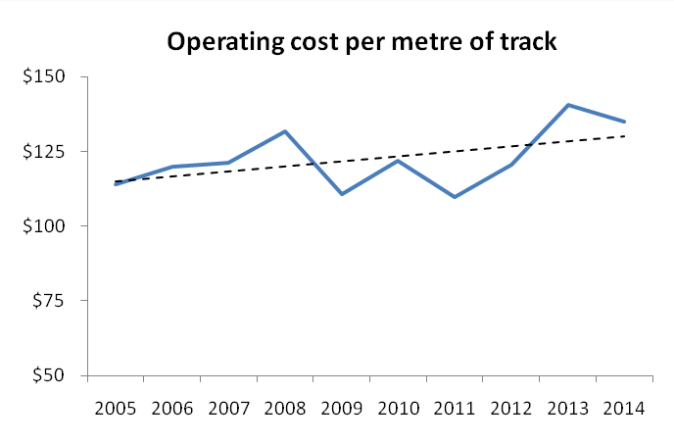
Description

Determine whether current infrastructure maintenance practices are the most efficient approach to achieving Calgary Transit's objectives.

Context

The Calgary Transit Infrastructure Division maintains all Calgary Transit buildings (including LRT stations, garages and offices) and the LRT track and rail system (including track, rail signals, and the Overhead Catenary System). This work accounts for approximately 7% of Calgary Transit's operating expenditures ($26.5 million in 2014).

Between 2005 and 2014, the operating cost of building maintenance (excluding utilities) per square metre increased 129% and the operating cost of rail maintenance per metre of track increased 19%.



A current challenge in this area is a shortage of performance data that would allow Calgary Transit to optimize its maintenance activity. For example, a 2014 business process review of building maintenance highlighted the need to better track unplanned maintenance and to enhance the work order tracking system. These recommendations are currently being implemented.

Interviews with Calgary Transit staff found that the Infrastructure Division has started using reliability centred maintenance techniques but there are still many opportunities to adopt best practices. However, these maintenance techniques require a more robust and effective work tracking system to be in place first.

Benefits

Optimizing the infrastructure maintenance program could result in financial savings (by reducing both planned and unplanned maintenance) and could potentially improve reliability by focusing maintenance efforts on critical assets. However, at this stage it is difficult to estimate the scale of potential benefits given a lack of data and visibility of current performance.

What are the next steps if we pursue this opportunity?

- Review Calgary Transit's current business practices required to maintain infrastructure
- Identify process changes to improve performance

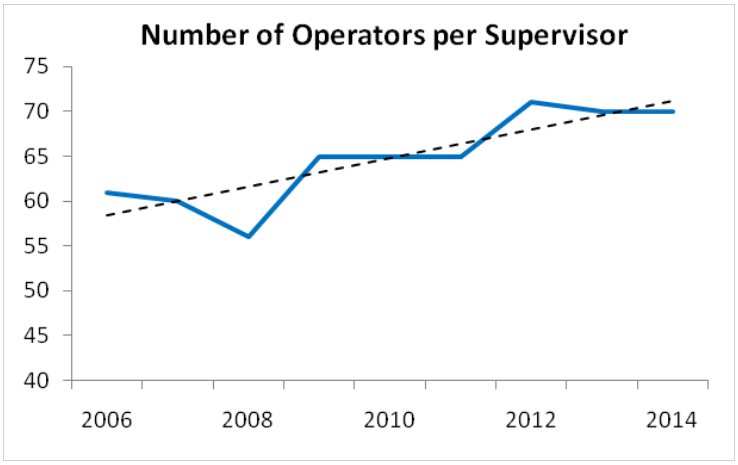
Opportunity:	OPERATIONS SUPPORT

Description

Review Calgary Transit's current programs to recruit, train and supervise bus and LRV operators.

Context

Calgary Transit employs over 2000 people to operate its buses and LRVs. Managing a workforce of this size comes with many challenges, and Calgary Transit has a number of programs in place to ensure operators are delivering high quality service to customers.



Between 2006 and 2014, the Operator to Supervisor ratio increased from 61:1 to 70:1. Interviews found that supervisors feel they do not have enough time to properly monitor performance and provide meaningful feedback to each of their operators.

An additional challenge in this area for Calgary Transit is operator training. A 2007 APTA Peer Review noted that Calgary Transit training programs for operators are condensed into shorter timeframes compared to other transit systems of similar size. One potential implication is the pass rate for LRV operator training, which decreased from 71% in 2012 to 46% in 2014.

Finally, turnover among operators presents another challenge. Given the costs associated with recruiting and training new operators, there may be a business case for increasing investment in employee retention strategies to reduce the attrition rate.

Benefits

The primary benefits of pursuing this opportunity are improvements to customer service and the quality of transit service delivery. There are limited financial benefits, since most of the solutions identified would require additional investment (e.g. additional supervisors, longer training programs or different training opportunities).

What are the next steps if we pursue this opportunity?

- Evaluate the existing programs and processes in place to support bus and LRT operators
- Identify opportunities to improve customer service and/or operator performance

SELECTION OF OPPORTUNITIES FOR THE ZBR

In order to select a manageable number of opportunities to pursue within the ZBR timeline and budget, Corporate Initiatives prioritized opportunities based on the following criteria:

- **Potential Efficiency Improvement**
  Likelihood for significant improvement to per unit costs or revenue

- **Potential Effectiveness Improvement**
  Likelihood for significant improvements in service outcomes or customer satisfaction

- **Data Availability**
  Data on the opportunity currently exists or can be collected within ZBR timeline

- **Budget Size**
  Service budget size relative to the overall Calgary Transit operating budget

Potential opportunities were given a rating of 1 (low), 2 (medium) or 3 (high) for each criterion.

Potential Opportunity	Efficiency Potential	Effectiveness Potential	Data Availability	Budget Size	Total
Procurement & Inventory Management	3	3	2	3	11
Fleet Maintenance	3	3	2	3	11
Transit Revenues	3	1	3	3	10
Service Delivery Approach	3	1	2	2	8
Operations Support	1	3	2	2	8
Infrastructure Maintenance	2	2	1	2	7

Taking into consideration the prioritization criteria as well as the ZBR objectives, timeline and budget, the Steering Committee selected four opportunities to pursue in the Calgary Transit ZBR:

- Procurement & Inventory Management
- Fleet Maintenance
- Transit Revenues
- Service Delivery Approach (includes Vehicle Service Lanes, Janitorial & Outside Maintenance, and Rail System Communications)

Opportunities Selected for the ZBR	Approximate 2014 Budget (millions)	Approximate 2014 Budget (% of total)
Procurement & Inventory Management	$27.7	7.2%
Fleet Maintenance	$70.2	18.3%
Service Delivery Approach	$25.0	6.5%
TOTAL	**$122.9**	**32%**

The scope of the Transit Revenues opportunity includes all Calgary Transit revenue streams (approximately $189 million in 2014).

The remaining two opportunities (Operations Support and Infrastructure Maintenance) will be considered by Calgary Transit for potential projects outside of the ZBR.

APPENDIX

Details of Research and Engagement

Site Visits

January 20, 2015

- Anderson Garage (fleet maintenance, LRT training)
- Victoria Park (Operations Control Centre, PS100, call centre, bus maintenance, dispatch and supervisors, cash processing)

January 23, 2015

- Spring Gardens (recruitment and training, fleet maintenance, infrastructure, strategic planning, operational planning, dispatch)
- Oliver Bowen Maintenance Facility (train maintenance, servicing and storage)

January 30, 2015

- Lot 91 (outside maintenance)
- Public Safety and Security Office
- Customer Service Centre (8th Avenue)

February 2, 2015

- Spring Gardens (Calgary Transit Access, scheduling, dispatch, parking management)

Interview and Workshop Participants

Calgary Transit Management Team Interviews (Feb 9 to 19, 2015)

- Doug Morgan, Director of Calgary Transit
- Russell Davies, Manager of Transit Fleet
- Amin Dhalla, Manager of Service Design
- Stephen Hansen, Manager of Safety & Security
- Craig Harper, Manager of Infrastructure
- Chris Jordan, Manager of Strategic Planning
- Brenda Keller, Acting Manager of Operations
- Neil Mckendrick, Manager of Operational Planning
- Karim Rayani, Manager of Calgary Transit Access

Results Based Accountability Workshop Participants (March 5 and 12, 2015)

- Tess Abanto, Coordinator of Revenue Streams
- Andrea Adams, Customer Experience Lead
- John Belsham, IT Account Manager
- Russell Davies, Manager of Transit Fleet
- Amin Dhalla, Manager of Service Design
- Tania Fraser, Coordinator of Operations Control Centre

- Steven Gorman, HR Business Partner
- Stephen Hansen, Manager of Safety & Security
- Craig Harper, Manager of Infrastructure
- Tim Johnson, Finance Lead
- Chris Jordan, Manager of Strategic Planning
- Zorana McDaniel, Customer Experience Lead
- Neil Mckendrick, Manager of Operational Planning
- Ashraf Mithani, Coordinator of Calgary Transit Access Operations
- Doug Morgan, Director of Calgary Transit
- Tony Scherpenisse, Business Analyst
- Abdou Souraya, Executive Assistant to the Director
- Adam Storms, Project Specialist
- Darrin Walker, Coordinator of Field Operations

Additional Interviews/Meetings as part of Site Visits or Follow-Up Discussions

- Heidi Birrell, Coordinator of Customer Service
- Dave Brewster, Coordinator of Transit Fleet
- Sean Brown, C-Train Operator
- Bal Dhinsa, Bus Operations Controller
- Wayne Edwards, Coordinator of Transit Fleet
- Patrick Gaudet, Trades Foreman
- Scott Hale, Business Analyst
- Dan Jaremchuk, Bus Training Officer
- Al-noor N. Jinnah, Coordinator of Field Operations
- Jonathan Lea, Senior Transit Planner
- Tanner Leach, Journeyman
- Joey Lyon, C-Train Operator
- Peter Mankowske, Trades Foreman
- Randy Martelock, Team Leader of Cash Processing
- Don McCreadie, LRT Operations Controller
- Dale Ogg, Coordinator of Technical Services
- Steve Sammartino, Operations Supervisor
- Ed Trembley, Coordinator of Transit Fleet
- Brian Whitelaw, Coordinator of Public Safety and Enforcement

Documents Reviewed

- RouteAhead: A Strategic Plan for Transit in Calgary (2013)
- 2012-2014 Transportation Business Plan and Budget
- 2015-2018 Action Plan - Transportation Section
- 2015-2024 Transportation Infrastructure Investment Plan
- Calgary Transit Organizational Chart
- ATU 583 Union Agreement
- Transportation Department Energy Management Plan (2014)
- Calgary Transit Overtime Audit (2013)
- TRCP Spare Bus Ratios Update (2013)
- Maintenance Business Review (Siemens 2012)
- Operator Maintenance and Training - APTA Peer Review (2007)
- Light Rail Vehicle Maintenance Practices - APTA Peer Review (2012)
- Six Sigma - Reduce Cycle Time to Deliver Bus Parts (2009)
- Building Maintenance - Business Process Review and Implementation Plan (2014)
- Transit Safety Audit (2009)
- Calgary Transit Access Performance Audit (2013) and Management Response (2014)
- Calgary Transit Fare Strategy (2014)
- CUTA Federal and Provincial Funding of Public Transit in Canada (2009)
- Review of Transit Advertising Program (2015)
- Calgary Transit Marketing Strategy - Focus Group Research (2011)
- Calgary Transit Technology and Sustainment Strategy (2014)
- Customer Fare Compliance Study (2014)

Performance Data Reviewed

- City of Calgary Citizen Satisfaction Survey - Transportation Summary
- Calgary Transit Customer Satisfaction Survey and Non-User Survey
- Calgary Transit Safety, Security and Cleanliness Survey
- Calgary Transit Access Customer Satisfaction Survey
- Calgary Transit Employee Survey
- Calgary Transit Performance and Comparative Data
- CUTA - Urban Transit Statistics Benchmark Report
- Calgary Transit Ridership Reports
- Employee Attendance / S&A data and benchmarking