

Money Belt

– Lean Benefit Verification Program

Kenneth Leung
Lean Program Manager

Agenda

- 1 About the City of Mississauga and the Lean Program
- 2 The Money Belt Program and its Journey
- 3 Examples of Benefit Verification
- 4 Lessons Learned and Q&A

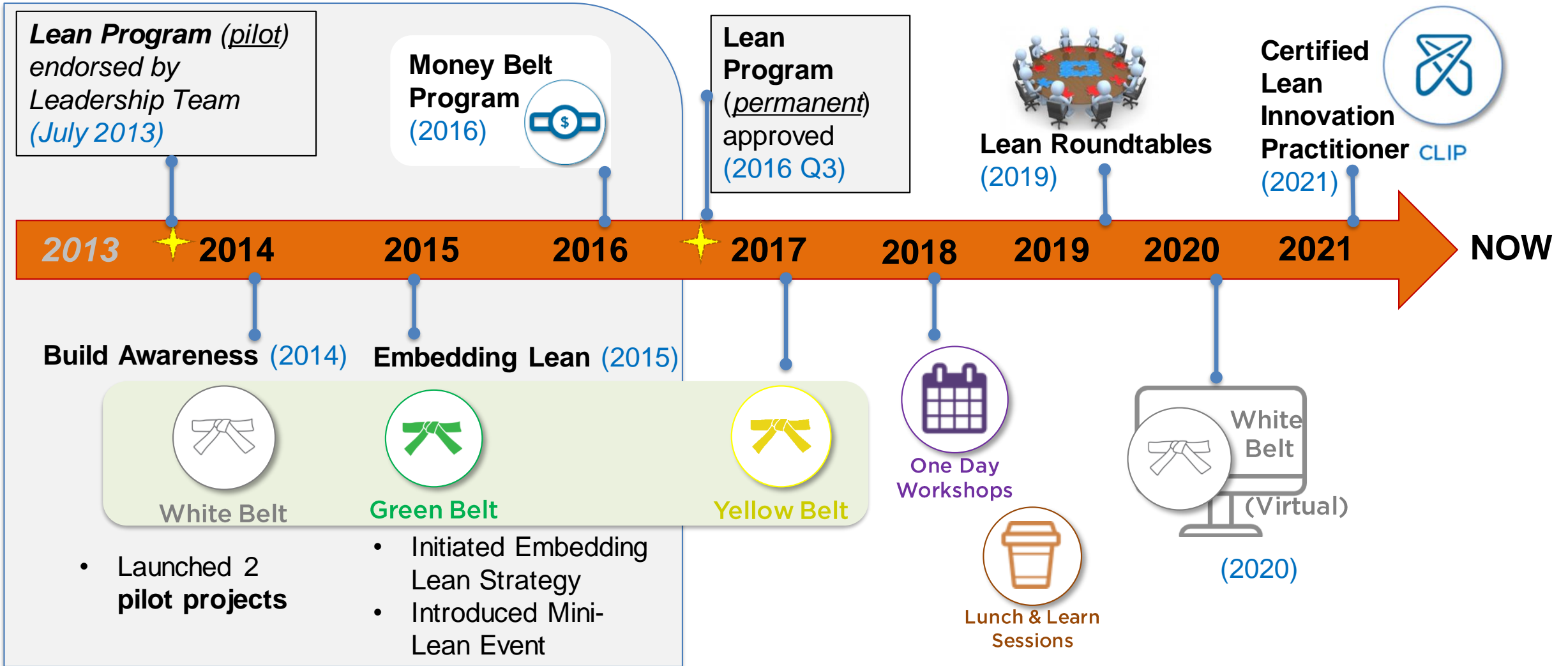
About City of Mississauga



MISSISSAUGA



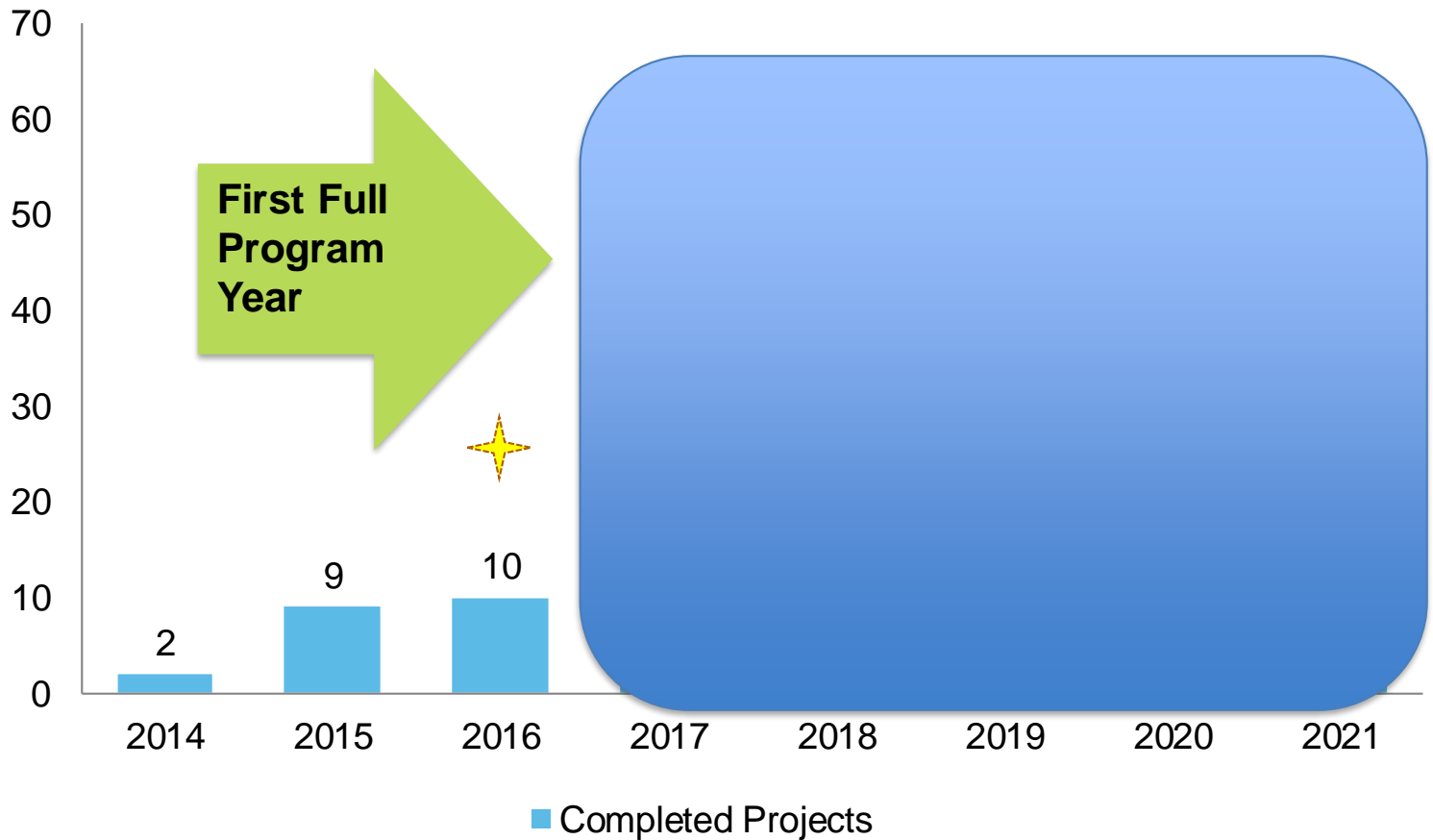
Lean Journey at the City of Mississauga



Lean Projects

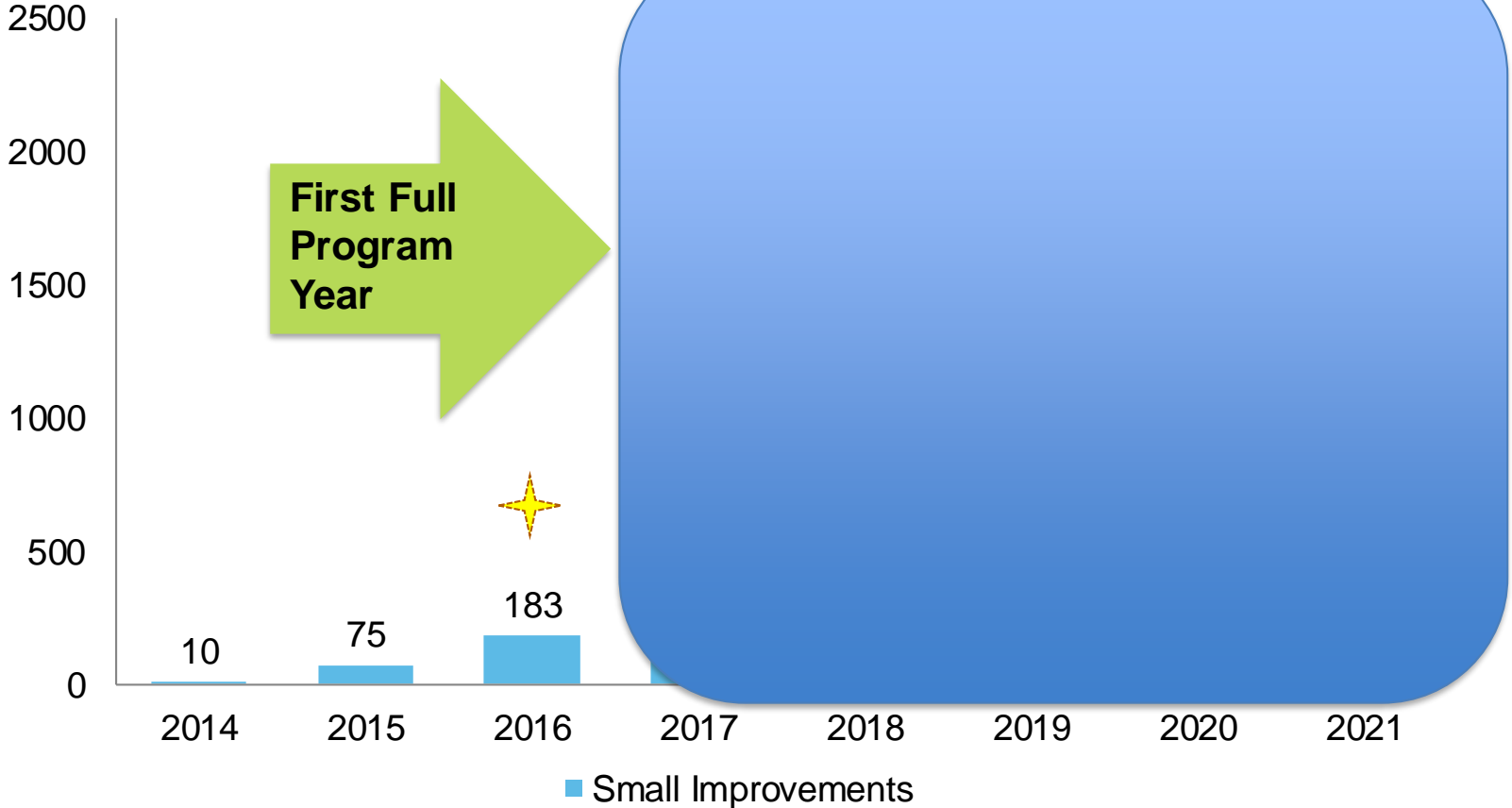
- Stormwater Erosion Control
- Fire Prevention Complaints
- Transit Garage Bus Allocations
- Capital Works In Progress
- Parks Seasonal Staff Hiring
- Small Business Support Intake
- Court Interpreter Scheduling
- Development Pre-Applications
- Custodial Inventory Storage
- Vote Anywhere IT Deployment
- Web Content Approval
- Fleet Part Supplies
- Traffic Signals Troubleshooting
- Tax Correspondence Handling
- Graffiti Removal
- News Releases

And More.....



Small Improvements

Click Icon to Submit a Small Improvement



Current State (2016)



✓ Increase Volume of Improvement

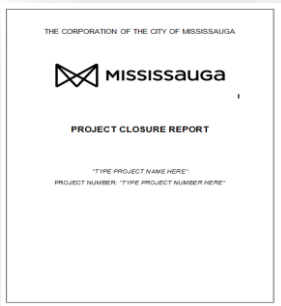
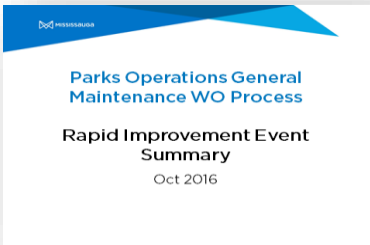
✓ Better Decision-Support

e.g. budgeting, resourcing, project selection, etc.



Results & Benefits Reporting

1 Final Report & Closure Submission



?

White Belt Lean Report

I have reviewed this White Belt Report with my direct supervisor/manager prior to submitting this document to the Lean office at lean@mississauga.ca YES NO

NAME: (Click here to enter text)

TITLE OR REPORT: (Click here to enter text) DATE: (Click here to enter a date)

DEPARTMENT: (Choose an item) DIVISION: (Choose an item)

STATE / PAIN POINT

What was the problem being experienced?

ROOT CAUSE

What was causing the issue?

SOLUTION

What was the solution?

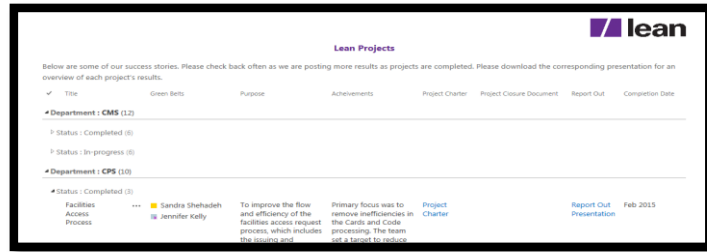
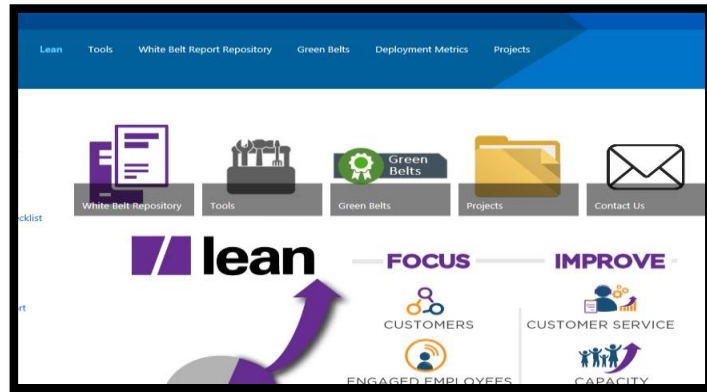
BENEFITS

What improvements have resulted from the solution? (i.e. Improved Quality, Enhanced Customer Experience, Dollar Savings, Reduced Lead Time, Reduced Process Steps, Removed Buildings, Environmental Impact, etc.)

If applicable, please fill in the following

Cost Saved:	Free Capacity (Labour hours per year):	
Cost Avoidance:	Increased Safety:	<input type="checkbox"/> yes <input type="checkbox"/> no
Environmental Impact:		<input type="checkbox"/> yes <input type="checkbox"/> no

2 Archive and Access of Lean Repository



Reporting

L
M
S



Results/Benefits Reporting

Results & Benefits Reporting

1 Final Report & Closure Submission

2 Archive and Access of Lean Repository

L
M
S

Multiple-Source
for benefit/ savings reporting

Inconsistent
reporting

Inconsistent measures
& calculation

No official validation (i.e.
different versions)

Multiple-Source
for benefit/ savings reporting

Reporting

Goals of a Money Belt Program

- 1) **A Standard Approach** - consistency in calculating benefits and savings:
 - Standard Documents and Guidelines
- 2) **"Single Source of Truth"** for reporting Lean Benefits and Savings
 - Process to validate and update to a "single source" for reporting
- 3) **Trusted & Validated Record** - Validate ALL reported Lean initiatives
 - Implementation (verify old & new improvements)

The Journey of Money Belt Program



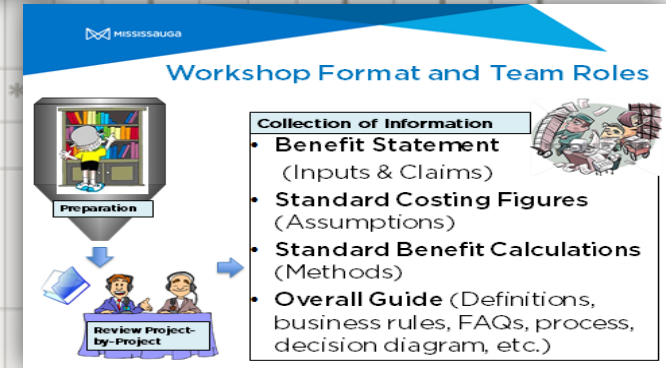
MISSISSAUGA

Phase I: White Belt Training & Kick-Off for all Financial Analysts (Preparation)



Phase II: Develop Framework

- Develop process, standards/ guidelines, and Training Package (Series of workshops)



Phase III: Verify Benefits

- Verify old improvements
- “Check and Adjust”
- Verify new improvements

As of May 12, 2016

Dept.	Lean Project w/ financial implication	Small Impr.	
		claim >\$10k	Claim >\$1k (but <\$10k)
CMS	4 / 5	0 / 0	0 / 2
TW	1 / 1	5 / 5	0 / 7
CPS	2 / 2	1 / 1	0 / 0
CMO	0 / 0	0 / 0	0 / 0
P&B	1 / 1	0 / 0	0 / 0
Total Req'd	8 / 9	6 / 6	0 / 9

By: End of April 2016 **May 2016**

Phase IV: Future Evolution in Roles & Responsibilities

Phase I: WB Training & Kick-Off for all Financial Analysts (Preparation)

Lean Awareness - White Belt Training to all Finance Staff



Gain Commitment

- Create Money Belt Charter with sponsor's approval
- Identify core team
- Kick-Off session with core team

Prepare Collaborative Work Environment

- Create project site
- Schedule workshops

Title: Lean Money Belt Development
Owner: Jeff Jackson
Project Manager: Kenneth Leung
Project Start: 2018-01-01
Project End: 2018-03-31
Project Status: In Progress
Project Description: To create a "single source of truth" for reporting Lean benefits/costs/savings (benefits/costs/savings) to develop structure and standard for the money-belt programs, by establishing process, standards/guidelines, and training.

Deliverables:

- 1) Training Package
- 2) Establish core team of Money Belts to partner with and bridge between services areas
- 3) Develop a process for a "validating" the "single source of truth" of quantifiable benefits for Lean initiatives in each department
- 4) Develop standards and guidelines (and any other applicable documents)
- 5) Training Package

Core Team Members

Bus. Service (6)	Financial & Treasury (5)	Bus. Planning & Reporting (2)
Luigi, Julia	Gina, Harish, Barbara CG	Ida, Muhammad
Steven, Connor		
CMO	2	Nelson, Chris
P&B	1 (2)	7

Home Departments My City Career Policies Forms Apps Support Employee Interests Team Sites Kenneth Leung

MISSISSAUGA Money Belt Development and Deployment EDIT LINKS

Welcome to Your Project Site

Project Name: Money Belt Development and Deployment
 Project Site #: 181
 Project Start Date: 2018-01-01

Project Purpose: To create a "single source of truth" for reporting Lean benefits/costs/savings (benefits/costs/savings) to develop structure and standard for the money-belt programs, by establishing process, standards/guidelines, and training.

Checking for PMSO Updates and Announcements.

Project Announcements

new announcement or edit this list

✓	Title	Modified
	There are no items to show in this view of the list.	

- ### Shared Documents
- Presentations
 - Samples
 - WIP Documents
 - Etc.

Core Team Members

Dept.	Bus. Service Rep. (6)	Financial & Treasury (3)	Bus. Planning & Reporting (2)
CMS	<i>Luigi, Julia</i>		
T&W	<i>Steven, Eleonore</i>	<i>Gina,</i>	<i>Ida,</i>
CPS		<i>Harish,</i>	<i>Muhammad</i>
CMO	<i>Nelson, Chris</i>	<i>Barbara CG</i>	
P&B			

- Cross-functional Team
- Financial Analyst reps from different departments

Learn from the Existing Cases

Select examples for each group by department:

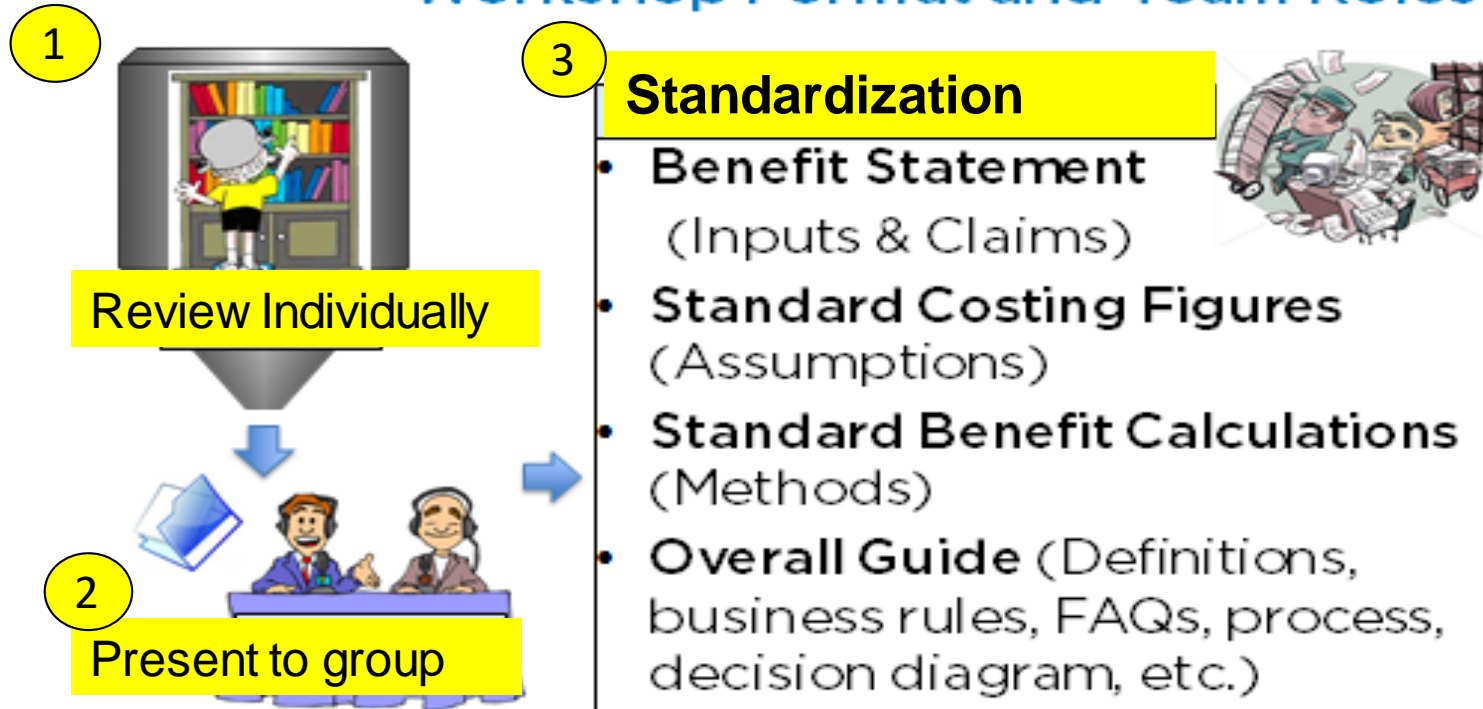
- i. 1 project, 1 small improvement
- ii. Apply “80-20 rule” on common scenarios

- Projects- [Benefit Claim as of Nov 2015 \(Unverified\)](#)
 - TW: Compliance Resolution (i.e. Labour Re-allocation)
 - CPS: Vacancy Rebate – Recovered Revenue (i.e. One Time Savings)
 - CMS: Library Material Supply Chain – Floor Space, Cart (Cost Avoidance)
- Small Improvement Reports
([Lean Website](#) → [Small Improvement Repository](#))
 - CPS: F&PM Transit Access Card – Mileage, mtce, benefiting other department
 - TW: GIS – Paper Saving
 - CMS: (P&F) – Diesel Tank

Phase II: Develop Framework

- Develop process, standards/ guidelines, and Training Package (Series of workshops)

Workshop Format and Team Roles



Deliverables

Q: “WHAT” are the claims?

Benefits Statement Template(s)

Q: “HOW” are they calculated?

Guideline for Benefit Calculation

Project/Process	(1st Step: Fill in the Absence Request Form, --> Last Step: Payment for the Period the Employee is absent.)		Result		
	Current (Baseline)	Future (Target)	Actual		
Business Impact			1st period	2nd Period	3rd Period
KPI1: Staff Time					
KPI2: Error Reduction					
Process	# of Steps or # of Transactions	70	20	18	23
	Re-Work ("Is it done right the first time?")	70 (searches) 20 (corrections)	20 (searches) 20 (corrections)	18	23
Time	Lead time				
	Touch time - (person A)	28 min/correction	5 min/correction	5 min/correction	5 min/correction
	Touch time - (Person B)				
Financial	Labour Cost (reduction)				
	Labour Cost (reallocation)	667.3 h/year \$30,964/year	138.7 h/year \$6,434/year	145.6 h/year \$5,791/year	143 h/year \$7,399/year
	Materials cost (Excess/ Redeploy), incl. mileage/gas				
	Floor Space				
	Production / operation				
Other Benefits	- culture - safety, morale - Quality - Customer Sat. - Environment - Quality of the data has been increased by 72% - Reduction in the errors increased the Transit Operators satisfaction - Efficiency increase - 80% reduction in cycle time				
Benefit Statement					
Quality	72% reduction of re-work (from 70 to 20 searches)		Safety		
Delivery	80% reduction in cycle time (from 28 minutes to 5 minutes)		Morale	Increased Transit Operators satisfaction	
Financial Impact					
Savings			Re-directing Capacity		
	Re-curring (/yr)	One-Time	Process Saving (/yr)		
Savings			\$24,530		
Expense					
Net Savings (Cost)			w/ Budget Impact?	Money-Belt Notes: Re-directed capacity equates to 528.7 hours avoided per year (667.3-138.7) & \$24,530 in labour costs avoided per year (\$30,964-\$6,434).	
			YES / NO		
Prepared by:	Monica Socol (Project Lead / Manager)		Date:	21-Jul-16	
Financial Calculation Verified by:	Marcello Gaudio & Steven Freitas (Financial Analyst)		Date:	2016/07/26	
Reviewed & Approved by:					
Directors / Steering Committee members/Project Decision Makers					
Name:	Title:	Date:	Signature:		



- 1) Lean performance measures
- 2) Capacity
- 3) Financial Results

Benefits Statement Template(s)

("WHAT" are the claims?)

Using Standard Calculations

- Calculating Standard Costs (formulas)
- Standard Conversion Factors (constant figures)

Table of Content

- 1.0 Introduction
 - 1.1 Document Purpose
 - 1.2 Scope
- 2.0 Defining Lean Benefits
 - 2.1 Outputs, Outcomes & Benefits
 - 2.2 Benefits Classification
 - 2.3 Types of Lean Benefit Reporting
- 3.0 Roles, Responsibilities and Processes
 - 3.1 Roles and Responsibilities
 - 3.2 Service Levels
 - 3.3 Reviews
 - 3.3 Small Improvement Benefits Verification Process
 - 3.4 Rapid Improvement Events & Process Improvement Project Benefits Verification Process
- 4.0 Standard Calculations
 - 4.1 Calculating Standard Costs
 - 4.2 Standard Conversion Factors

Benefit Verification Guide

- 1. Purpose of the Document
- 2. Definitions & Business Rules
- 3. Verification Process and Roles

- 4. Table: Standard Calculation by Benefit Type
- 5. Table: Standard Costing Figures
- 6. Appendix A – FAQs
- 7. Appendix B – Reference Documents
 - o Benefit Statement
 - o Small Improvement Report

Version #:	Date:	Description of Change(s):	Change(s) made by:
1	April 1, 2016	Creation of Document	n/a

Guideline for Benefit Calculation

("HOW" are they calculated?)

MISSISSAUGA Inside Mississauga

Lean Program Info Training Small Improvements Rapid Improvement Events

Welcome to the Lean Money Belt Training Wiki!

What is this wiki?
In business environments, a wiki library provides a low-maintenance way to record knowledge. Information that is usually traded in business environments is often lost. This Money Belt Wiki is intended to provide training and guidelines for all staff on a standard, adaptable knowledge-base to support the Lean Money Belt program.

This wiki will take approximately 2 hours to review and complete the quiz.

Table of Contents

- 1. Lean & The City's Lean Program Explained
- 2. How Lean Outcomes are Created
- 3. Benefits Management Strategy
- 4. The Roles and Responsibilities of Staff in Lean Engagements
- 5. Why Measure the Benefits of Lean Engagements?
- 6. Financial Guidelines and Standard Calculations
- 7. The Lean Money Belt Verification Process
- 8. Understanding the Benefits Statement
- 9. Verification Service Levels and Performance Measures
- 10. What Verified Lean Benefits are Reported For
- 11. Becoming a Certified Money Belt
- 12. Frequently Asked Questions
- 13. Examples of Verified Benefits
- 14. Ongoing Adjustments and Continuous Improvement

Calculating Standard Costs (Formulas)

Benefit Type	Calculation
Labour Time– Full Time	[Hr] x [Mid-Grade] x [Fringe]
Labour Time– Part Time	[Hr] x [Mid-Rate] x [Fringe]
Overtime	[Hr] x [Over-Time Rate]
Floor Space	[Sq.ft.] x [\$/Sq.ft.]
Paper Printing and Photo Copying	[# of paper] x [paper cost] + [# of page] x [\$ per print]
Mail (separate from labour time savings)	[# of mail] x [std mailing cost]
Mileage	[Mileage] x [car allowance rate]

Standard Conversion Factors (Constant Figures)

4.2 Standard Conversion Factors

Standards conversion factors will be reviewed on an annual basis (unless links are provided for accessing the latest information from the source). The source references are outlined below:

- HR – Salary, Rate, Fringe Schedule, car allowance
- F&PM Land Management (Supervisor/Manager of Realty Services) – Floor Space / Leasing cost
- Environment – benefit of paper-saving in terms of tree, water, landfill, oil, energy; benefit of reduction in vehicle-travel in terms of carbon footprint (CO₂ per km)
- SAP – US Currency Exchange Rate (update based on investments purchases)
- Print shop – Printing, mailing
- Other Department specific conversions

4.2.1 Salary and Hourly Rate Sources

Standard Cost	Sub-Category	Conversion Factor	References*
Salary (Full Time)	Permanent Temporary (non-union)	<ul style="list-style-type: none"> • Salary Schedule • Salary Schedule – Temp Equivalent 	<ul style="list-style-type: none"> • Source: HR Website - Salary Schedule 2016-201X • Temp Equivalent 2016+ - 35 hr, 37.5 hr, 40 hr • 2016 Weighted Average Wage for City Employees
	Union CMS Unions T&W Unions	<ul style="list-style-type: none"> • Fire Wage Table • Library Union Salary Schedule • Transit Call Centre Representatives (Full Time) 	<ul style="list-style-type: none"> • Fire Wage Table (2011-2014) • Library CUPE 966 Collective Agreement (2011-2015) • UFCW - Transit Call Centre Representatives <ul style="list-style-type: none"> ○ 1) Customer Service/ Information ○ 2) Customer Service/Reception at CPY
Hourly-Rate	Non-Union	<ul style="list-style-type: none"> • E Grades Part-Time /Temp 	<ul style="list-style-type: none"> • E Grades Part-Time /Temp Rate

- **Salary and Hourly Rate**
- **Printing & Mail**
- **Miscellaneous Costs**
(floor space, mileage, etc.)
- **Environmental Conversion Factors**
(paper, mileage, utility consumption conversions, etc.)

Initiative Summary (Project)

Lean Initiative Summary
 Initiative Name: Click here to enter text.
 Department: Corporate Services Division: Enter Division Here
 Project Team: Enter Project Team Members Here



Problem Statement	Objectives								
Background Information	ROI/Benefits								
Issues/Root Causes	<table border="1"> <tr> <td>Steps Removed:</td> <td></td> <td># of Hours Saved:</td> <td></td> </tr> <tr> <td>Cost Savings:</td> <td></td> <td>Cost Avoidance:</td> <td></td> </tr> </table>	Steps Removed:		# of Hours Saved:		Cost Savings:		Cost Avoidance:	
Steps Removed:		# of Hours Saved:							
Cost Savings:		Cost Avoidance:							
Actions Taken	Performance Measures								
	Next Steps								

Report verified financial benefits



Calculator for savings from freed-up capacity

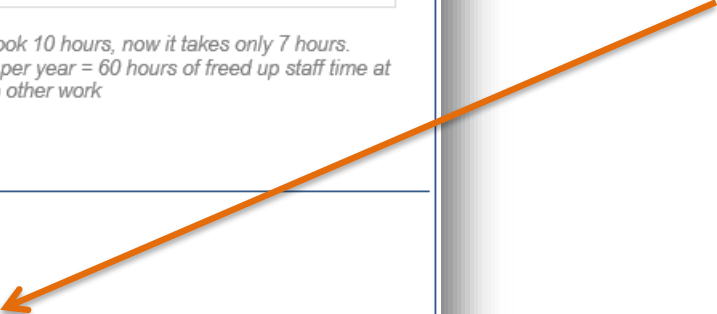
Process Step	Touch Time in Total Hours PER YEAR (Baseline)	Touch Time in Total Hours PER YEAR (Achieved)	Total Hrs. Saved PER YEAR at Process Step	Position	Cost Savings or Avoidance?	Cost Savings	Cost Avoidance	Total Benefits
Step 1	1.00	0.00	1.00	Position 1	Cost Avoidance		\$47.42	\$47.42
Step 2								
Step 3								
Step 4								
Step 5								
Step 6								
Step 7								
Step 8								
Step 9								
Step 10								
Step 11								
Step 12								
Type additional steps here								
Total			1.00			\$0.00	\$47.42	\$47.42

GENERAL STAFF EMPLOYEE STATS	
Hour Per Year	1820
Days Per Year	260
Days Per Week	5
Less 1st Holiday and 2 Rotations	258
Less Holiday (5 Days)	243
Less Sick days (6)	237
Weeks Per Year	47.4

Small Improvement Reporting

SMALL IMPROVEMENT FORM	
Not sure How-To fill this form, then click here	
Information	
Improvement Title	<input type="text"/>
Attachments	<input type="button" value="Click here to attach a file"/>
Name(s) of who completed the initiative	<input type="text"/>
Date of Improvement	<input type="text"/> <input type="button" value="Calendar"/>
Department	<input type="text"/> ▼
Division	<input type="text"/> ▼
Section	<input type="text"/> ▼
Issue and Root Cause	<input type="text"/> <small>What was the problem, and what was causing it?</small>
Actions Taken and Solutions	<input type="text"/> <small>How did you solve the problem?</small>
Benefits	
Qualitative Benefits	<input type="text"/> <small>What benefits did your improvement lead to?</small>
Customer Service	<input type="text"/>
Increased Safety?	<input type="checkbox"/> Yes
Environmental Improvement?	<input type="checkbox"/> Yes
Measurable Outcomes	
Number of Hours Saved for the year	<input type="text"/> <small>EXPLAIN: Previous process took 10 hours, now it takes only 7 hours. Therefore, 3 hours x 20 times per year = 60 hours of freed up staff time at Grade C can be reallocated to other work</small> Total Hrs. <input type="text"/> 0
Cost Avoidance	<input type="text"/> \$0 <small>Ex. 60 hours x Grade D = \$ Simple Benefit Tool</small>
Cost Saved	<input type="text"/> \$0 <small>Ex. 1000 less sheets of paper = \$ Ex 2. 100 KMs less driving</small>
Approver Supervisor or Manager	<input type="text"/> <input type="button" value="User"/> <small>Only one required</small> <small>Note: The "Approver" cannot be in the "Name(s) of who completed the initiative"</small>

Report verified financial benefits



Phase III: Benefit Verifications

- Verify old records
- Verify new records
- Check and Adjust

1) Verification of Old Records (Prior to April, 2016)

Housekeeping & Transitioning

2) Verification of Existing & On-Going Records

Adopt to the new process

3) Check and Adjust...

Sustain and improve the process

Dept.	Lean Project w/ financial implication	As of May 12, 2016 Small Impr.	
		claim >\$10k	Claim >\$1k (but <\$10k)
CMS	4 / 5	0 / 0	0 / 2
TW	1 / 1	5 / 5	0 / 7
CPS	2 / 2	1 / 1	0 / 0
CMO	0 / 0	0 / 0	0 / 0
P&B	1 / 1	0 / 0	0 / 0
Total Req'd	8 / 9	6 / 6	0 / 9

By: End of April 2016 May 2016

Follow-Up Structure (Continuous Improvement)

Monthly Core Team Update Meeting (1 hr/ month)

1. Update status (verified vs. to-be-verified; on-going action items)
2. Identify unique scenario that require team consensus on approach
3. Update standards as required



Standardize and Share

Training Matrix
(for all Financial Analysts)

		Basic Lean Knowledge	MB Orientation		Hands-On Experience			MB Certified		
		PMR: Lean Team		PMR: Team Supervisor						
Team	Name	WB Trained	MB Info Session / Training (1 hr)	Mentor Name	Assigned with an Service Area	Verified Small Improvement	Verified Project	Attended a MB Core Team Meeting		
TSW	...	Y	...						✓	
									✓	
				Steven	Operating & Capital for Transit (excluding Transitway & LRT)	2016/08/22 - Transit Air Dryers - New vs Rebuild	2016/07/27 - Transit Return to Work Green Belt	Yes - 2016/08/12	✓	Met Requirement as of Aug 2016
T&W						2017/10/16 -	2017/10/23 -			

Build awareness & knowledge

1. White Belt Training
2. MB info session (1 hr)

Practice

3. Hands-On Training with assigned mentor and service area

Support sustainment and Continuous Improvement

4. Attending MB Core Team Meeting



Certified & In-Progress Money Belts

Search this site

Money Belt Training Wiki

Here you'll find a list of all certified and in-progress Money Belts

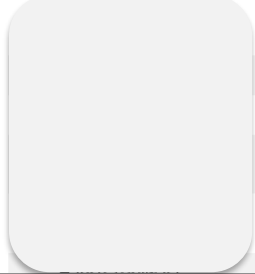
Certified & In-Progress Money Belts

List of In-Progress and Certified

+ new item

Grouped All Items Find an item

✓	Name	Department	White
Employee Status : Active (23)			
MB Team Status : Active (17)			
...	Transportation & Works	Yes	
...	Corporate Services	Yes	
...	Corporate Services	Yes	
...	Transportation & Works	Yes	
...	Corporate Services	Yes	
...	Transportation & Works	Yes	



Passed Money Belt Quiz

Yes

Yes

Yes

N/A

N/A

N/A

certified Money Belts, or to update the information on this page, contact the [Lean Program Office](#).

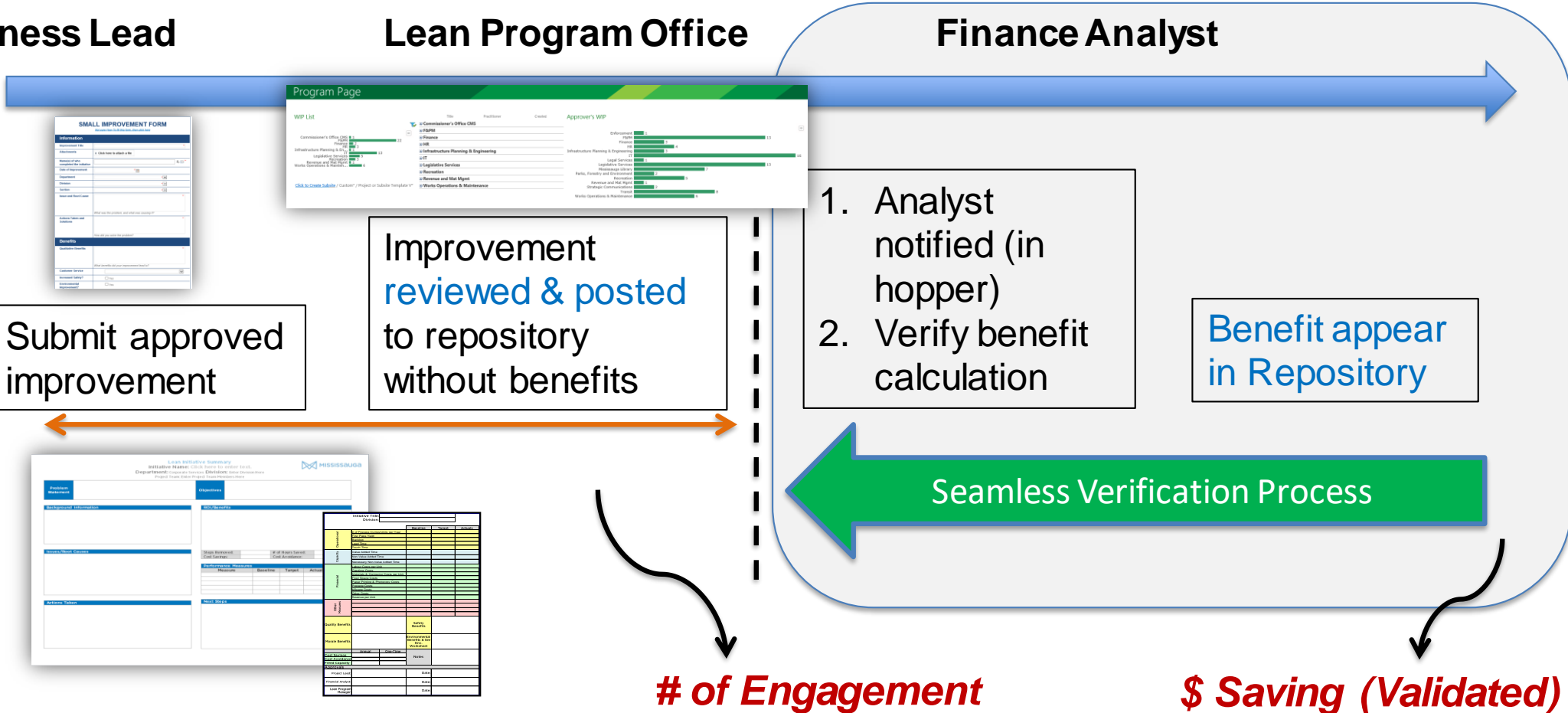
Title	Verified Project/RIE Title	Employee Status	Certification Status	Analyst Type	MB Team Status
	Roadway Asset Management	Active	Certified	Full Time	Active
	NOT APPLICABLE	Active	Certified	Contract	Active
em	School Information Updates	Active	Certified	Full Time	Active
Preventative Maintenance Work	Works Operations Service Requests	Active	Certified	Full Time	Active
	Custodial Inventory & Equipment Storage	Active	Certified	Full Time	Active
		Active	In-Progress	Full Time	Active

Improved Verification Process

Business Lead

Lean Program Office

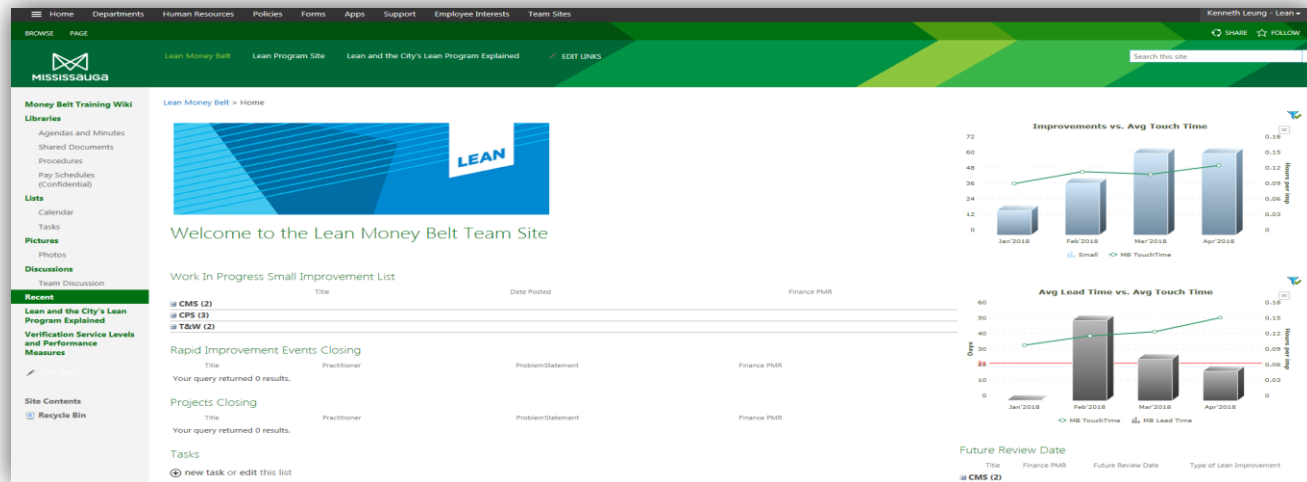
Finance Analyst



Phase IV: Future Evolution in Roles & Responsibilities

Money Belt Management

Created Money Belt Site (operational)



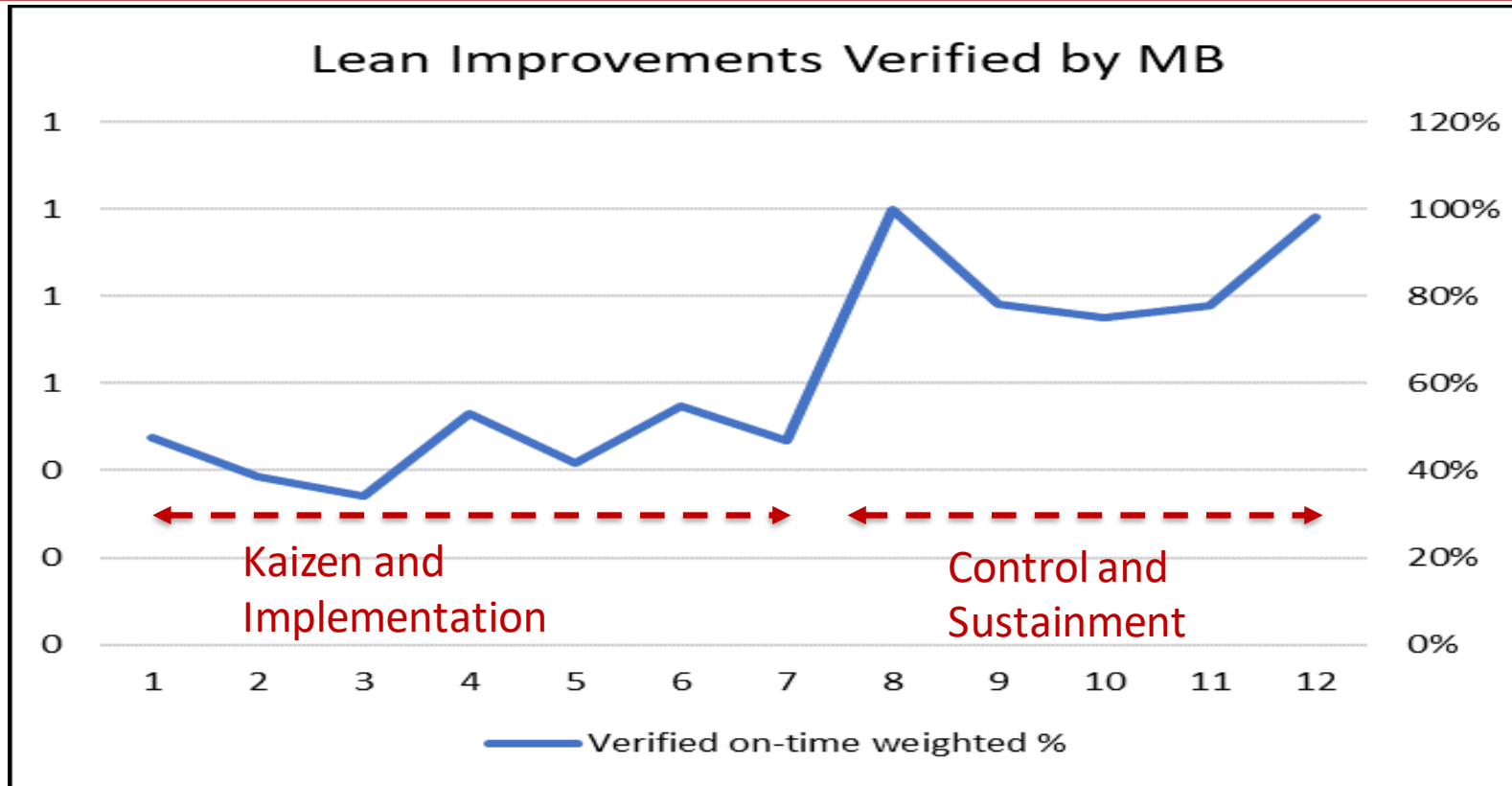
- Provide at-a-glance status and service level
- List of outstanding items

Money Belt Program Revamp (2020/21)

Money Belt Performance Measures - As of December 21, 2021

	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Dec 2021
Verified On-Time (weighted ³ %)	48%	39%	34%	53%	42%	55%	47%	100%	78%	75%	78%	98%

Lean Improvements Verified by MB



Money Belt Scorecard

- On-Time verifications
- Accurate Verifications

- **Increased on-time validation** from 13% (March 2020) to 84% verified within SL
- **Reduced MB WIP** in December (highest volume month) by 83%
- **Reduced total staff effort time** by 9%

Examples of Benefit Verification



Project Benefit Reporting and Verification



Business Lead

Lean Program Office

Finance Analyst



Submit approved improvement

Review statement
Forward statement to FA

1. Analyst notified
2. Calculation of benefit verified (sign-off)

Benefit appear in Repository

Improvement **posted** to repository without benefits

Next... Verification takes place in the background

Lean Initiative Summary
Initiative Name: Garage Management - Bus Resources & Assignment
Department: Transportation Services, Customer Support

Problem Statement: The weekly bus allocation process is excessive (3 days) and leads to the release and use of 150 per year partnership with us 2010. There is also no financial management on the cost of vehicles and the impact of acquisition on vehicle types in service.

Objectives:

- To have enough vehicles by type and by time/hour to meet customer requirements.
- To update the cost of assets and provide a pre-approval of vehicles by all departments to meet time. To have verification of maintenance of assets under

Key Performance Indicators (KPIs):

- Cost of Assets (per day)
- Vehicle Turnover (per day)
- Vehicle Acquisition (per day)
- Vehicle Disposal (per day)
- Vehicle Maintenance (per day)
- Vehicle Repair (per day)
- Vehicle Fuel (per day)
- Vehicle Insurance (per day)
- Vehicle Depreciation (per day)
- Vehicle Registration (per day)
- Vehicle Licensing (per day)
- Vehicle Insurance (per day)
- Vehicle Depreciation (per day)
- Vehicle Registration (per day)
- Vehicle Licensing (per day)

Initiative Summary

Benefit Statement

Category	Benefit	Value	Actual
Operational	Reduced Turnover (per day)	150	150
	Reduced Acquisition (per day)	150	150
Financial	Reduced Depreciation (per day)	150	150
	Reduced Insurance (per day)	150	150
Quality / Delivery	Reduced Fuel (per day)	150	150
	Reduced Registration (per day)	150	150

Benefit Statement

Lean Initiative Summary
Initiative Name: Garage Management - Bus Resources & Assignment
Department: Transportation & Vehicle Services

Problem: The vehicle allocation process was inefficient and caused delays in vehicle assignment. There was also a significant amount of vehicle downtime due to maintenance issues.

Objectives:

- To have enough vehicles by time and by time/location
- To reduce the amount of vehicle downtime due to maintenance issues
- To reduce the amount of vehicle downtime due to maintenance issues

Key Results:

- Correct vehicle assignment increased by -10%
- Reduced potential trip delays by 87% (from 750 to 100 delays/year)
- Reduced lost time caused by garage mechanical/no-start issues between Sept to Dec (from 380 to 0 min)

Standardized process: All stakeholders are aware of their roles

Cost Savings: \$164,824

ROI/Benefits

Improved service performance: Right bus type on the designated published service.

- Correct vehicle assignment increased by -10%
- Reduced potential trip delays by 87% (from 750 to 100 delays/year)
- Reduced lost time caused by garage mechanical/no-start issues between Sept to Dec (from 380 to 0 min)

Allow for a more proactive management of allocation/fleet.

- Reduced garage-duties lead time by 71-80%
- Operations is able to inform maintenance of mechanical issues 2.5-4 hours earlier

- Supervisors have **more face-time with staff** to identify and address concerns

- **Freed up 12 bus parking spaces** (total of 4,800 sq.ft.) at CX Garage that were previously taken up by maintenance

- **Standardized process** - All stakeholders are aware of their roles

Steps Removed:	# of Hours Saved:	2,000 /per year
Cost Savings:	Cost Avoidance:	\$ 164,824

Guideline

Standard Cost	Sub-Category	Conversion Factor	Unit r exper prop Prop leases decla Facili
Floor Space (\$/ Sq.Ft.)	-Commercial -Retail -Office	<ul style="list-style-type: none"> • Commercial/ Retail- \$33 psf (low end of \$33-52 psf, annual rate) • Office - \$35 psf (annual rate) • Industrial/warehouse - \$11 psf (annual rate) 	

• Industrial/warehouse - \$11 psf (annual rate)

Initiative Summary

Initiative Title: Garage Management - Bus Resources & Assignment

Category	Item	Baseline	Target	Actuals
Operations	Lab Labour Cost (per year)	133,429.00		26,685.80
	Overtime Costs			
	Materials & Contractor Costs per Unit			
	Floor Space Costs (freed up 12 parking spots at CX garage)			\$58,080
Capital	Floor Space Cost			
	Freight Costs			
	Mileage Costs			
	Other Costs			
Revenue	Revenue per Unit			
	Revenue per Unit			

	Baseline	Target	Actuals
Lab Labour Cost (per year)	133,429.00		26,685.80
Overtime Costs			
Materials & Contractor Costs per Unit			
Floor Space Costs (freed up 12 parking spots at CX garage)	(44'x10') x 12 x \$11/sq.ft. =		\$58,080
Floor Space Cost			
Freight Costs			
Mileage Costs			
Other Costs			
Revenue per Unit			

Benefit Statement

Assumptions:
Hours per Year saved

	Baseline	Target	Actuals
Touch Time - Route Supervisor - CX (hr per day) (per year)	5 1250		1 250
Touch Time - Route Supervisor - MA (hrs per day) (per year)	5 1250		1 250

Position information

Employee Position Title	# of Employees	FT or Contract / PT	Grade	Hrs. Worked Per Week
Route Supervisor -CX	1	FT	F	40
Route Supervisor - Malton	1	FT	F	40
Position 3				
Type additional positions here				Weeks Per Year

Impacted Process Steps

Process Step	Touch Time in Total Hours PER YEAR (Baseline)	Touch Time in Total Hours PER YEAR (Acheived)	Total Hrs. Saved PER YEAR at Process Step	Position
Allocation of vehicles - CX	1,250.00	250.00	1,000.00	Route Supervisor -CX
Allocation of vehicles - Malton	1,250.00	250.00	1,000.00	Route Supervisor - Malton
Step 7			0.00	

Process Step	Hours PER YEAR (Baseline)	Touch Time in Total Hours PER YEAR (Acheived)	Total Hrs. Saved PER YEAR at Process Step	Position	Cost Savings or Avoidance?	Cost Savings	Cost Avoidance	Total Benefits
Allocation of vehicles - CX	1,250.00	250.00	1,000.00	Route Supervisor -CX	Cost Avoidance		\$53,371.87	\$53,371.87
Allocation of vehicles - Malton	1,250.00	250.00	1,000.00	Route Supervisor - Malton	Cost Avoidance		\$53,371.87	\$53,371.87
Step 3			0.00					
Step 4								
Step 5								
Step 6								
Step 7								
Step 8								
Step 9								
Step 10								
Step 11								
Step 12								
Type additional steps here								
Total	2500	500						

Financial Implications

Cost Savings or Avoidance?	Cost Savings	Cost Avoidance	Total Benefits
Cost Avoidance		\$53,371.87	\$53,371.87
Cost Avoidance		\$53,371.87	\$53,371.87

Reporting Verified Benefit (Projects)

BROWSE PAGE PUBLISH

Lean Completed Projects

Practitioner Safety Improvement?

- Department : CMO (1)
- Department : CMS (15)
- Department : CPS (13)
- Department : P&B (5)
- Department : T&W (14)

Title: Parking Enforcement Part-Time Staff Scheduling
Practitioner: Kevin Kealy
Safety Improvement?:
Verified By Financial Analyst?: Yes
Cost Saved: \$37,943.60
Cost Avoidance: \$1,451.71
Freed Capacity: 24
StartDate: 10/19/2015

ProblemStatement: Parking Enforcement PT Staff is operating under extended hours, which has created issues with complying to Corporate Policy. There are also precieved fairness issues related to how part-time staff are scheduled

Compliance

- Reduced "4+ shifts/week" incidents by 50% (from 256 to 129)
- Extreme circumstance (5+shift/week cases) eliminated
- Increased standard work for scheduling (process and criteria)

Fairness and Transparency

- Reduced by Shift-Fill-Rate Variation among Part-Time Staff by 37-53%
- Increased transparency of scheduling critria and scheduling information

ROI

- Reduced the amount of rework as a result of rescheduling issues.
- Partime Staff Overtime: PT OT will be eliminated with the increased pool of part-time officers (reduced from 184 OT Shifts in 2015)
- Supervisor Scheduling Time: Reduced supervisor's effort in scheduling from 2 hours per month to 30 seconds

Title: Parking Enforcement Part-Time Staff Scheduling
Practitioner: Kevin Kealy
Safety Improvement?:
Verified By Financial Analyst?: Yes
Cost Saved: \$37,943.60
Cost Avoidance: \$1,451.71
Freed Capacity: 24
StartDate: 10/19/2015

ProblemStatement: Parking Enforcement PT Staff is operating under extended hours, which has created issues with complying to Corporate Policy. There are also precieved fairness issues related to how part-time staff are scheduled

Compliance

- Reduced "4+ shifts/week" incidents by 50% (from 256 to 129)
- Extreme circumstance (5+shift/week cases) eliminated
- Increased standard work for scheduling (process and criteria)

Fairness and Transparency

- Reduced by Shift-Fill-Rate Variation among Part-Time Staff by 37-53%
- Increased transparency of scheduling critria and scheduling information

ROI

- Reduced the amount of rework as a result of rescheduling issues.
- Partime Staff Overtime: PT OT will be eliminated with the increased pool of part-time officers (reduced from 184 OT Shifts in 2015)
- Supervisor Scheduling Time: Reduced supervisor's effort in scheduling from 2 hours per month to 30 seconds

Small Improvement Benefit Reporting & Verification

Business Lead

Lean Program Office

Finance Analyst



Submit approved improvement

Improvement **posted** to repository without benefits

1. Analyst notified
2. Calculation of benefit verified

Benefit appear in **Repository**



Click Icon to Submit a Small Improvement



Benefits	Customers will only have to go to one location for all Sign-out equipment needs. Frees up time from A/V specialists and Technicians to work on their projects. Rationale: <u>A/V Technicians and Specialists save up to 5 hours a week</u> from not having to do Sign-out requests and setups, totalling to <u>260 hours a year.</u>
Solution	A/V equipment was consolidated into Tech Hub. Combined equipment was added to the A/V request form.
Benefits	Customers will only have to go to one location for all Sign-out equipment needs. Frees up time from A/V specialists and Technicians to work on their projects. Rationale: A/V Technicians and Specialists save up to 5 hours a week from not having to do Sign-out requests and setups, totalling to 260 hours a year.
Customer Impact	<input type="text"/>
Safety Improvement?	<input type="checkbox"/>

Financial Benefits	
Verified By Financial Analyst	<input checked="" type="checkbox"/> TRUE
One Time Cost Saving?	<input type="checkbox"/> yes
Cost Avoidance	\$18,278
Freed Capacity	260
In labour hours per year	
Cost Saved	\$0

Reporting Verified Benefit

- + **Department : CMS (429)**

- + **Department : CPS (541)**

- + **Division : Commissioner's Office CPS (40)**

- + **Division : Communications (36)**

- + **Division : F&PM (194)**

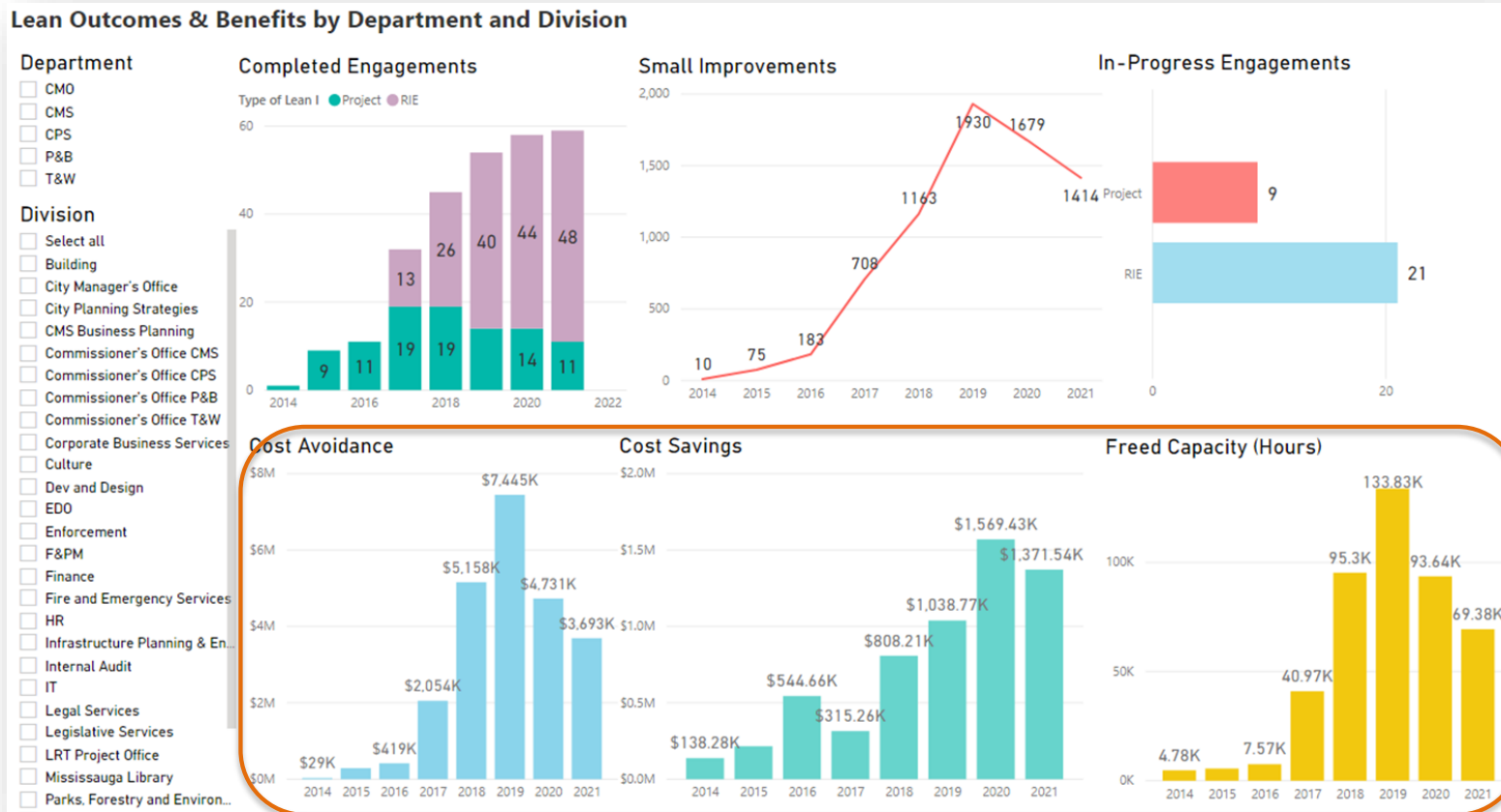
- [Small Job Day Labour Invoices](#)
- [Service request filing](#)
- [Advertising Signage Schedule Revision - Iceland](#)
- [Change to Cleaning Schedule for 950 Burnhamthorpe](#)
- [Streamlined Transit Enforcement Communications](#)
- [Baseload Tool Improvement](#)
- [Cold Water Resurfacing Pilot](#)
- [Parking Lot lighting timing revised – Carmen Corbasson CC, Erin Mills TA, Iceland, Malton CC, Tomken TA](#)
- ["Smart" Ice Plant Controls](#)
- [Best Practice Checklist/Cheat Sheet for the "Smart" Ice Plant Controls](#)
- [Energy Management Equipment Inventory Tracking](#)
- [Greening the Photo ID Badging Process](#)

Cost Saved	Cost Avoidance	Freed Capacity	Environmental Benefit?	Safety Improvement?
------------	----------------	----------------	------------------------	---------------------

Cost Saved	Cost Avoidance	Freed Capacity	Environmental Benefit?	Safety Improvement?	
			\$1,294.95	24 No	No
			\$3,669.04	68 No	No
\$0.00	\$0.00		0 No	No	
			No	No	
\$0.00	\$414.92		10 No	Yes	
\$0.00	\$0.00		0 No	No	
\$31,000.00			0 No	No	
\$0.00	\$0.00		0 No	No	
\$0.00	\$0.00		0 No	No	
\$0.00	\$0.00		0 No	No	
\$0.00	\$0.00		0 No	No	
\$336.96	\$2,733.17		51 Yes	No	

Enabling Self-Service Data Analytics

- To support decision-making & reporting
- To increase transparency & accountability



Business Planning Cycle

2020 Budget

Presentation to Budget Committee
November 2019

Business Planning Lean Program Statistics By Service Area

Service Area

- (Blank)
- Business Services
- City Manager's Office
- Culture
- F&PM
- Fire
- Fire and Emergency Services
- Information Technology
- Land Development Services
- Legislative Services
- Library
- Parks, Forestry and Environment
- Recreation
- Regulatory Services
- Roads
- Stormwater
- Transit

Completed Small Improvements

Improvement Type	2014	2015	2016	2017	2018	2019	Total
Small	10	75	183	708	1163	900	3039

Completed Rapid Improvements and Projects

Improvement Type	2014	2015	2016	2017	2018	2019
Project	1	9	11	19	20	8
RIE				13	26	25

Year Posted	Cost Savings and Avoidance	Customer Service Improvements	Safety Improvements	Environmental Improvements
2014	\$166,780.00		9	5
2015	\$504,820.26		62	18
2016	\$963,500.19		139	32
2017	\$2,368,779.77		369	79
2018	\$6,119,698.05		462	181
2019	\$3,850,461.07		516	158
Total	\$13,974,039.33		1557	473

Year Posted	Cost Avoidance	Cost Saved	Freed Capacity (Hrs.)
2014	\$28,500.00	\$138,280.00	4,779.00
2015	\$288,908.17	\$215,912.09	5,569.17
2016	\$418,838.73	\$544,661.46	7,570.14
2017	\$2,053,516.98	\$315,262.79	40,968.65
2018	\$5,311,486.02	\$808,212.03	97,812.69
2019	\$3,307,654.16	\$542,806.91	67,514.43
Total	\$11,408,904.05	\$2,565,135.28	224,214.08

Note: Freed capacity in this table are only hours that have been verified by Finance. Other tables may include hours not yet verified.

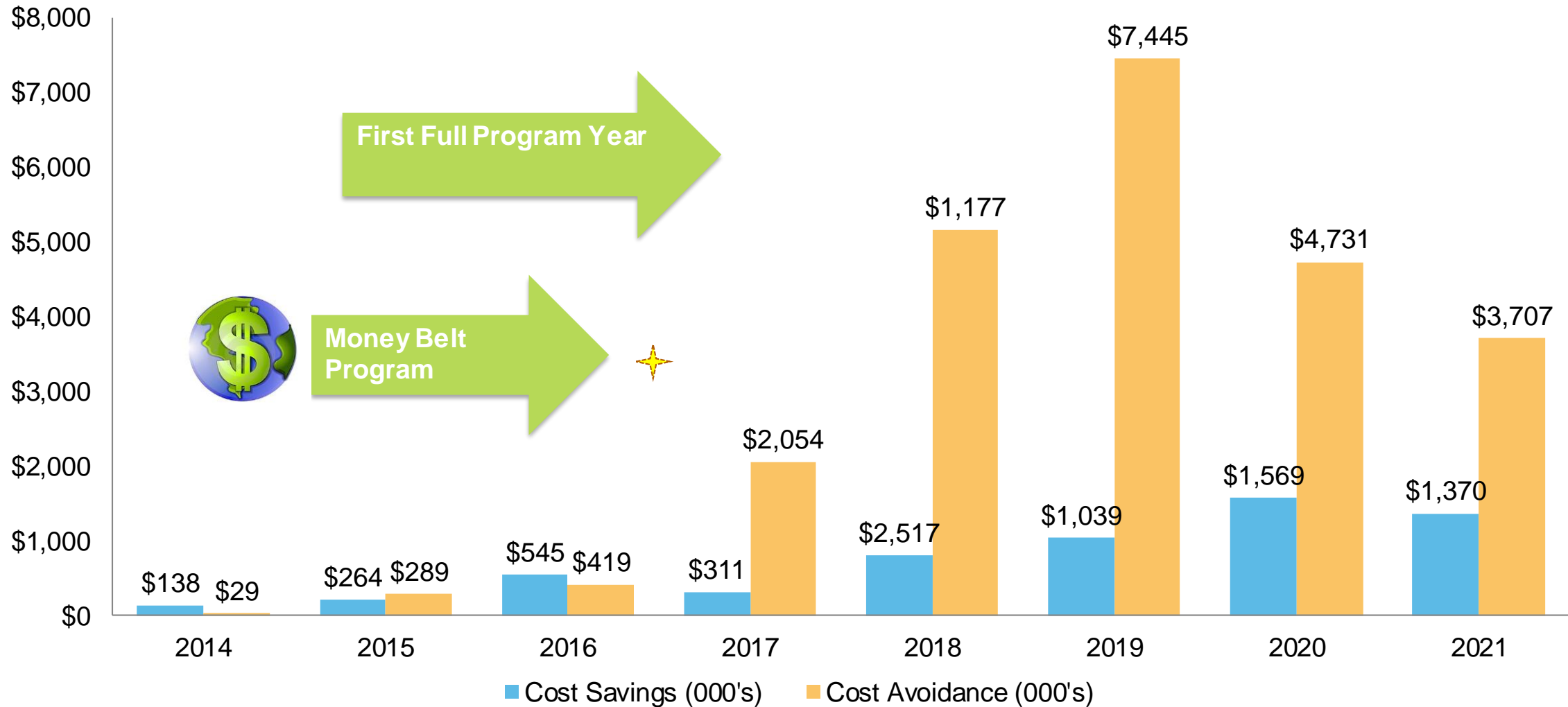


Verification Process (Now)

- Financial Analysts are trained as Money Belts
- Consistent calculation of monetary and environmental benefits
- Verified results to be used for
 - ✓ Corporate Reports
 - ✓ Council Presentations
 - ✓ 1% Budget Reductions



Financial Benefits

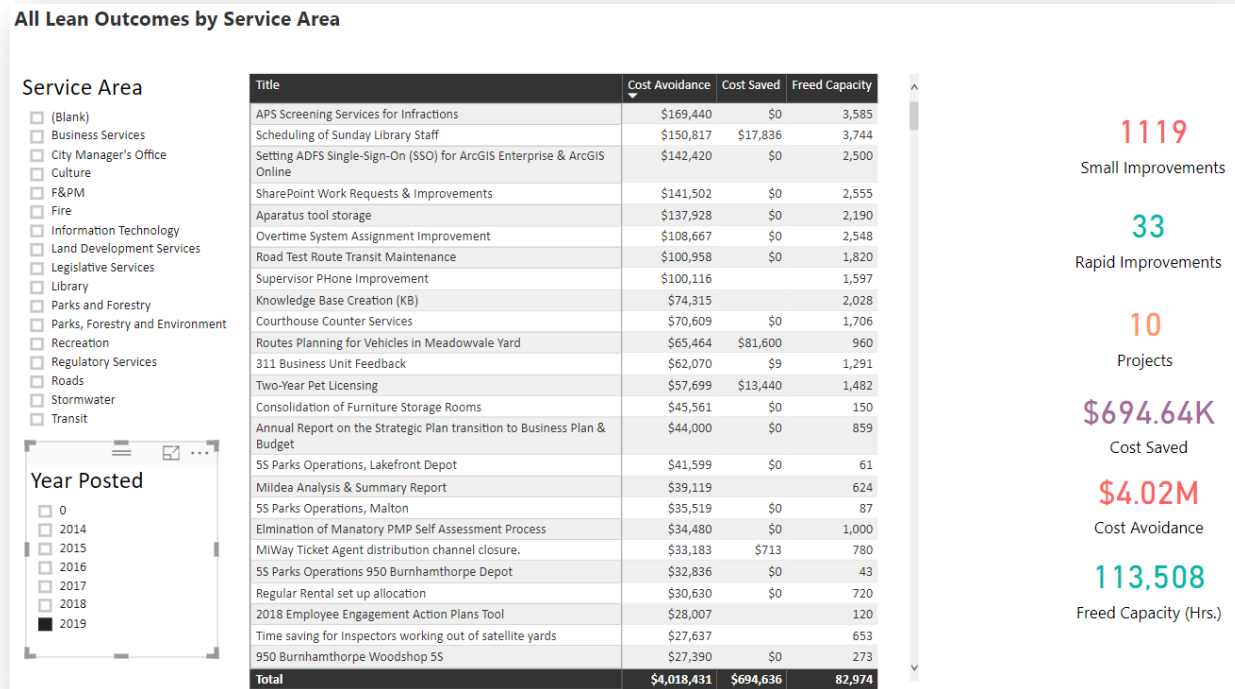


“What’s Next” & Lessons Learned



MISSISSAUGA

Going from “Reporting” to “Business-owned” and “Decision-Support”



- Support budget-planning and business planning decisions (i.e. resource allocation)
 - Cost Savings (\$)
 - Freed Capacity (hours)

Lesson Learned

Support

- Commitment from Finance Staff and Leadership is key
- Clarify and confirm roles (Finance vs. Business Lead)

Approach

- Focus on maturity-building
- Build process ownership with coaching; short iterative cycles of “check & adjust”

Culture

- It’s about shifting the mindset – “this is not our job”...well, is it not?
- Build the transition from “project” to “operation”



Thank You!

Money Belt – Benefit Verification Program

Kenneth Leung

City of Mississauga

kenneth.leung@mississauga.ca

Call to Action

Benefit Verification Guide

1. Purpose of the Document
2. Definitions & Business Rules
3. Verification Process and Roles
4. Table: Standard Calculation by Benefit Type
5. Table: Standard Costing Figures
6. Appendix A – FAQs
7. Appendix B – Reference Documents
 - o Benefit Statement
 - o Small Improvement Report

Version #	Date	Description of Change(s)	Change(s) made by
1	April 1, 2016	Creation of Document	na



How are we telling our improvement stories? Does it support decision-making?

Challenge the team to quantify benefits based on the objectives and impacts

Is there a standard? (consistency and reliable)

Let's get a working team to outline some rules and guidelines

Is standard practice adequate?

Let's 'check and adjust' regularly, and involve the working team to improve the process and culture