# Improvement Innovation

# **Equipment Utilization**

City of Fredericton
Engineering & Operations Department
Presented By: Mike Walker, P.Eng

## **Equipment Utilization Project**

- February May 2018
- Project completed by Mark Symes,
   Symplicity Designs
- Roadway Operations, Parks & Trees, Water & Sewer, Pollution Control and Fleet divisions all participated

### Who am I?

- Manager of Roadway Operations and Parks
   & Trees divisions
- Certified Green Belt
- Like's Change



## **Equipment Utilization Project**

### Project Team

- Dylan Gamble, Director Engineering and Operations (Project Champion)
- Trent Brewer, Manager Water & Sewer, Fleet
- Mike Walker, Manager Roadway Operations
- Don Murray, Manager Parks & Trees
- Jim McIsaac, Supervisor Roadway Operations
- Andrew Bird, Foreman Fleet
- Rob Foster, Foreman Water & Sewer
- Rick Courier Parks & Trees

### **Executive Summary**

- We have heavy equipment that has been purchased and not being used for up to six months of the year.
- We have equipment not being utilized while other divisions rent same equipment for operations
- Sell excess equipment (right-size fleet)
- Share equipment with other divisions to reduce overall cost of ownership and operations

### **Problem Statement**

 "We have heavy equipment for the City of Fredericton that's been purchased and not being used for up to six months (or more) of the year. We aren't sure if we have the right equipment (mix), and it's unclear if we are getting the value (ROI) for the equipment. We don't have visibility of availability across divisions on the equipment. We don't have a pro forma or expectations of utilization and uptime on the gear, therefore we don't have value created expectations."

### **Goal Statement**

- The City of Fredericton has an improvement rate of 2.25%, which correlates to \$2.58M in savings annually
- We want to move our utilization of equipment from a base of X% to a plan of Y% with a stretch of Z% by May of 2018

## **Background Information**

- Fleet Division owns all City of Fredericton equipment
- No chargeback models exist (user divisions don't see any costs for capital and ongoing maintenance)
- Rental equipment is 100% charged to the user division
- · Individual divisions pay for fuel usage

## Project Scope

Scope	
In Scope	Out of Scope
- Heavy equipment within engineering	<ul> <li>Utilization technology in gear</li> </ul>
and operations (everything within the	(black box)
divisions)	- Specific utilization of
- Proforma and creating expectations	equipment while running
around value	- Light equipment (1 ton and
- Bench marking (where we can swipe)	below)
- Leverage CAMFM (Canadian	- Tow behind equipment (ie.
Association Municipal Fleet Managers)	trailers, etc.)
- Formal communication for leveraging	- Heavy equipment outside of
equipment	engineering and operations
- Elimination of services provided by	(other divisions, ie. police, fire
contractor (example: snow removal)	and building services)
- Increase level of service provided by	- Service levels
contractor for certain pieces of	- Elimination of doing private
equipment	work
- Excavators, tandems (salt, plow,	- Exploring the idea of a second
gravel and asphalt), loaders, backhoes,	
graters, farm tractors, trackless, 3 ton	- All specialty equipment (ie.
boom trucks	aerial lifts, chip trucks, vactor,
- Renting gear within	etc.)
	- Mowing
	- Procurement process
	- Renting gear to private industry

#### Voice of the Customer

 We sometimes had a hard time staying focused on who the customer truly was (Service Delivery to the Public Vs. Internal Customers)

#### **Current/Previous State**



### **Data Summation**

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		/											Weekly Utilization					
			Day 1:	Day 1:				Day 2: Day 3:							Day 4:			
Equipment Type	Equipment Number	r Equipment Description		Afternoor	Overtime	Overnight	Morning	Afternoor	Overtime	Overnight	Morning	Afternoor	Overtime			Afternoor	Overtime	Overnight
<i>-</i>																		

#### Main Issues Found

- This project was very similar to a staffing to demand exercise.
- Divisions weren't willing to share equipment for fear of not having it available
- Divisions hold on to equipment, for fear of not being able to replace it through Fleet
- Divisions didn't understand their own utilization of equipment
- Assumption that it is cheaper to rent certain equipment over ownership
- User Divisions pay for rental while Fleet division pays for ownership

### **Summation of Changes**

- Sell 4 Loaders
- Sell 1 Tractor
- Move Backhoe from W&S to P&T
- Move 1 trailer and mower from W&S to P&T

## Summation of Changes

- All mowing now completed by P&T division (the experts)
- Loaders rationalized for maximizing utilization
- 1 full time equipment operator assigned to P&T from RO to run backhoe for smaller work that historically has been contracted out.

#### **Summary of Savings**

- Hard savings
  - \$335,000 sale of equipment
  - \$50,000 annual maintenance costs
  - \$30,000-\$40,000 contractor costs
  - Approx. 16% of annual City improvement rate
- Time / capacity savings
- Improvements to customer experience
  - Equipment to demand increase utilization of equipment without affecting user departments

## Potential Further Savings

- Co-leasing equipment
- Continued rationalization of equipment utilization

### Lessons Learned

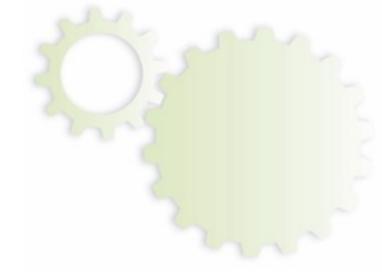
- Nobody likes change
- Getting rid of assets is tough

This too shall pass. It might pass like a kidney stone.

But it will pass.

### Acknowledgements

- Team
- Staff involved in the change
- Symplicity Designs



## Questions?