



LEAN SIX SIGMA ACROSS THE COUNTRY

CAMA RAPID FIRE

May 30, 2017



PUBLIC WORKS ARE CENTRAL TO CHANGE

CAMA CONFERENCE MAY 30, 2017



Service des travaux publics

PURPOSE OF THE PRESENTATION

- ① Share Gatineau's Public Works department experience with Lean Six Sigma tools

OUR JOURNEY

2008

New management
as of late 2008



2009-2010

Organizational structure
revamped in 2009

- ⦿ Before: organized by geographic sector
- ⦿ After: organized by activity area

- 5 operational divisions
 - Roads
 - Parks, green spaces and arenas
 - Water distribution, sewers and surface drainage
 - Buildings
 - Fleet and equipment management
- 2 support divisions
 - Technical Services
 - Administrative Services

OBSERVATIONS

- ⦿ A culture and way of doing things ingrained for decades.
- ⦿ Major associated drawbacks in terms of:
 - productivity;
 - work ethic;
 - respect; and
 - negative image of the Public Works department.

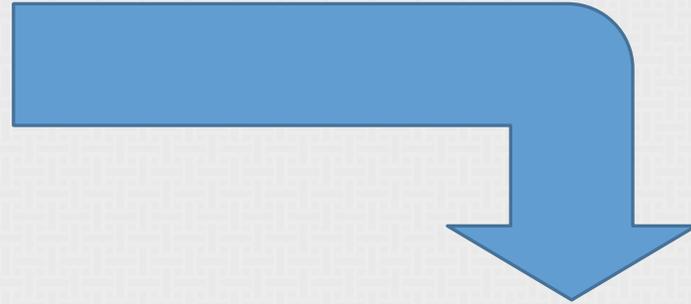


OUR SOLUTION

The implementation of a culture of effective services.



GOAL



Bring about a change in **culture** in order to **improve**
performance and **productivity** as well as **commitment** and the
work climate.

THE GOOD NEWS

- ◎ For many aspects, there were already tools under the *Lean Six Sigma best practices* approach that we could use to achieve our goal.



IMPROVEMENT AND REORGANIZATION OF THE WORKPLACE

Some of the *Lean Six Sigma* tools used:

- 5S
- Efficient teamwork and communication plan

(R = Q X A)

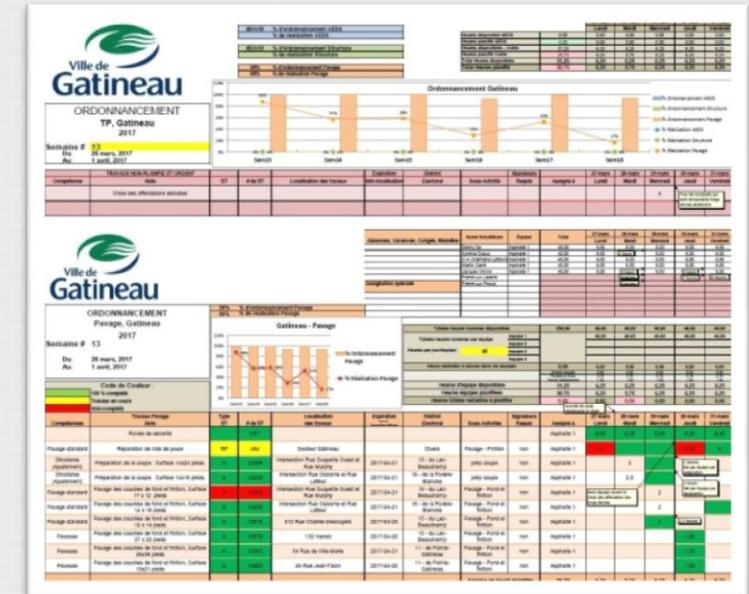


Since 2011, Gatineau's Public Works department has completed 22 5S projects, resulting in improvements to 16 workshops and 23 vehicles.

PLANNING AND PRODUCTIVITY

Some of the tools that were used:

- Performance indicators and dashboard
- Computerized Maintenance Management System
- Schedule tables



In 2011, Gatineau's Public Works department acquired the CMMS software *Guide TI*, and adapted it to its requirements. In addition, five planners were hired over the years.

CONTINUOUS IMPROVEMENT

Some of the *Lean Six Sigma* tools used:

- Kaizen
- The DMAIC method
(Define, Measure, Analyze, Improve, Control)
- Value stream mapping
- The *Gemba walk*



In 2013, the Public Works department trained seven professionals for black belt certification, and hired two continuous improvement advisors.

TANGIBLE GAINS:

- Financial
 - Operational (approximately \$4.7M in savings)
 - Equipment (more than \$5.2 M in savings)

INTANGIBLE GAINS:

- Culture
- Organizational climate
- Mobilization
- Effectiveness and efficiency
- Quality of work
- Intervention timelines / service levels
- Cost avoidance

THE CHALLENGES MET

Culture

Culture of tolerance ingrained for decades

Communication

Employees dispersed throughout the territory
Different shifts
Communicating is not easy, and was not a reflex

Operations

Priority on emergencies vs. planning
Time/burnout
Occupational health and safety, non priority

Change management

Fear, discomfort, reactions

THE CONDITIONS OF SUCCESS FOR INNOVATION AND PERFORMANCE

- ⦿ A common vision shared with committed leaders
- ⦿ Organizational culture focused on continuous improvement and optimization
- ⦿ Managerial courage
- ⦿ Communicate, communicate, communicate
- ⦿ Measure, measure, measure
- ⦿ Follow up, follow up, follow up





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Michele Peach, CAO



CITY OF
Mount Pearl



MUSINGS FROM A LEAN THINKER

lean.org/leanpost



The Optimist

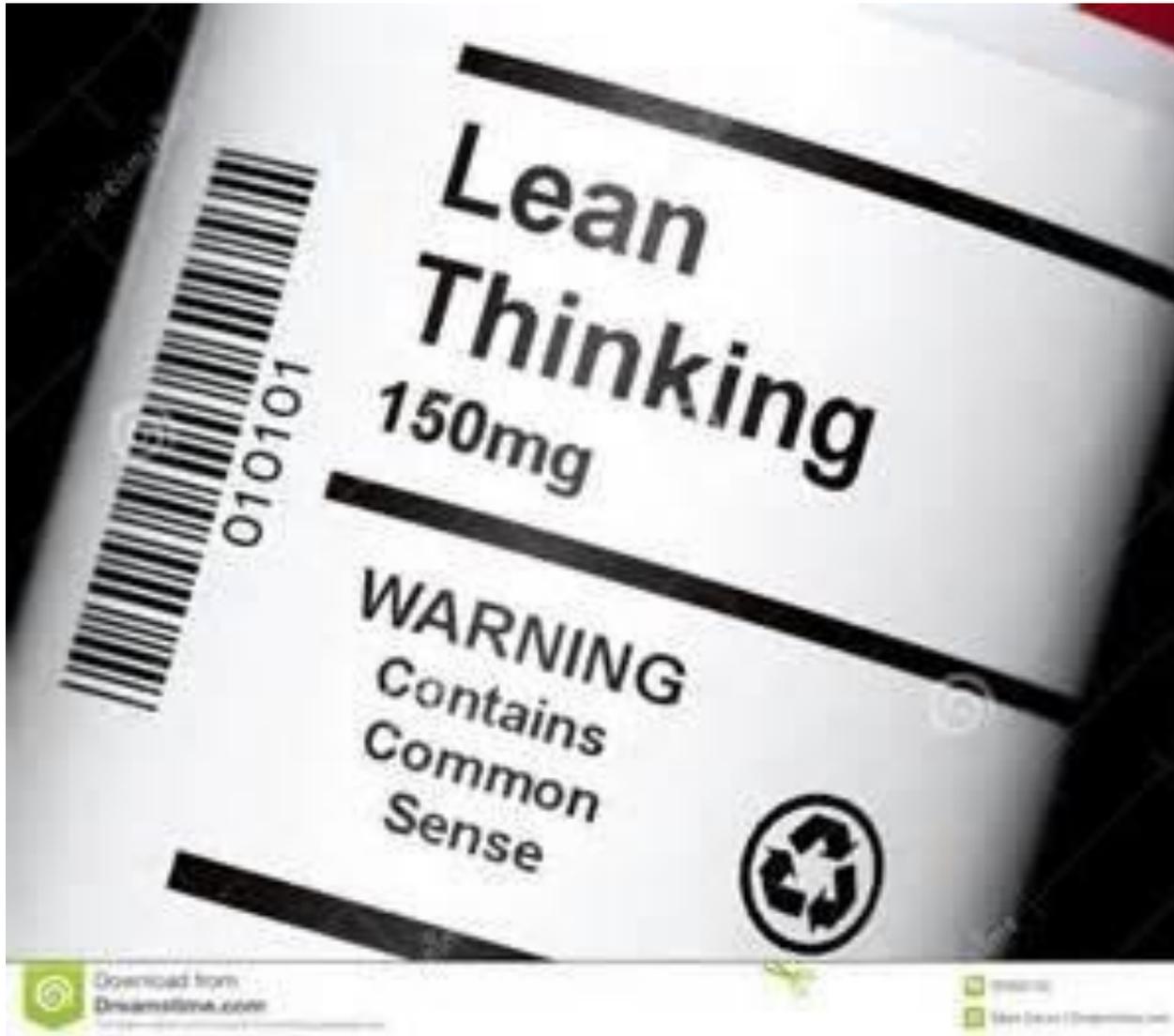


The Pessimist

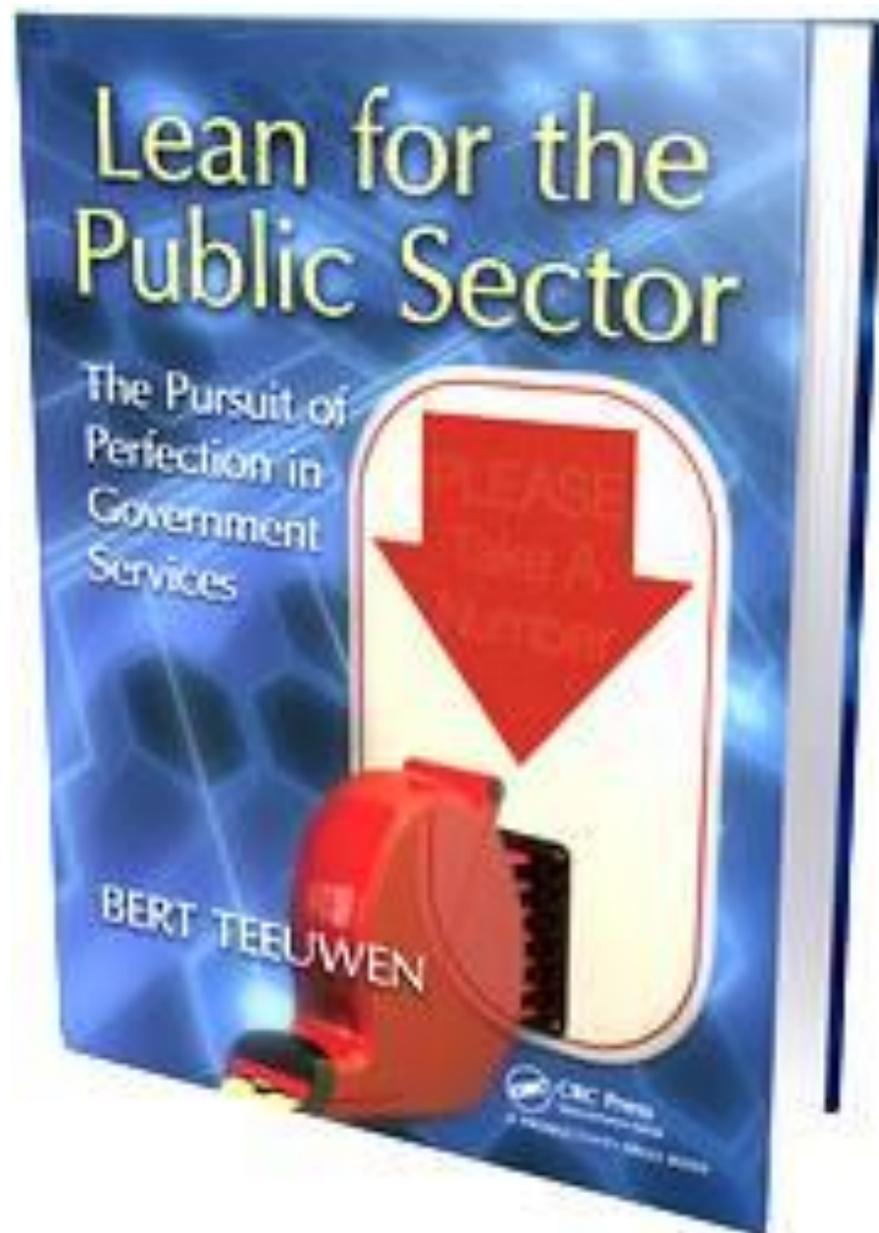


The Lean Thinker

Why Why Why Why Why Why ????



Lesson #1 - Lean thinking is not common sense

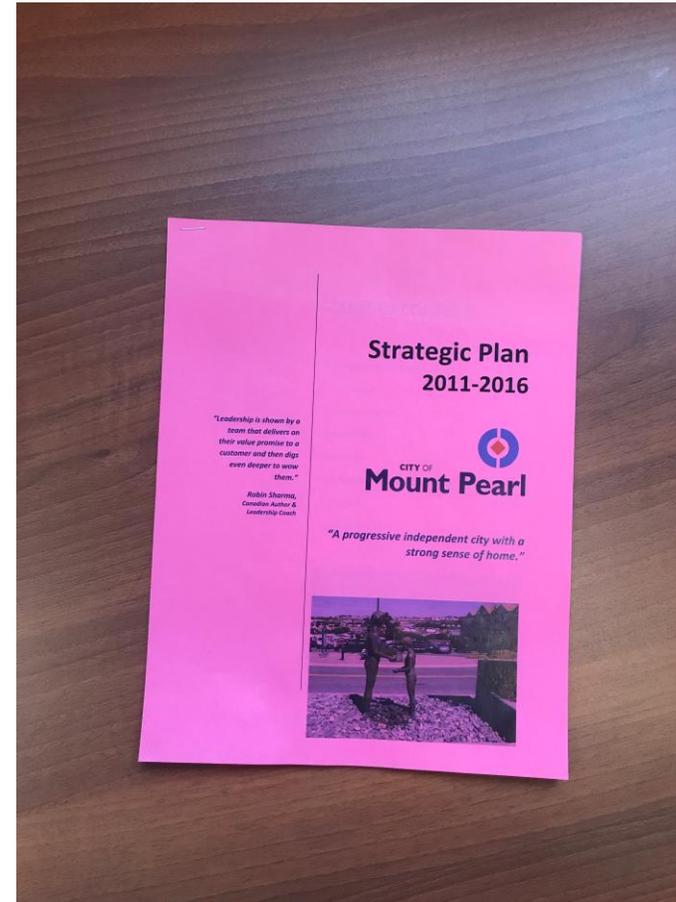


April 2011

May 2011

Appointed CAO
Mount Pearl

***"Slow Subtle Change"
"Persuasion and Influence"***



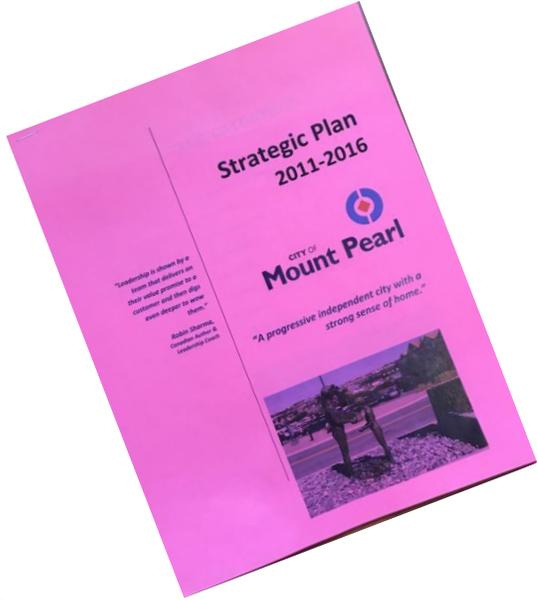


2012
Strat Plan
Blitz - Kaizen
floated

2013
Managers'
Forum -
Kaizen
Committee

2014
Employee
Engagement
Initiatives

2015
Two Month
Secondment
- Kaizen
Charter



"I'm too busy cutting this tree down to listen to you right now!"



MISA Atlantic & Summit April 17-20, 2016

- Summit Only: April 17-19, 2016
- MISA Atlantic Meetings Only: April 20, 2016



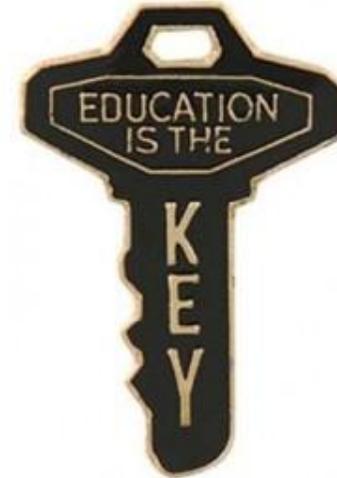
2016 Canadian Public Sector Lean Summit

Building Resilient and Sustainable Communities using Lean Six Sigma and Asset Management
Fredericton Convention Centre,
Fredericton, New Brunswick, Canada

www.CdnLeanSummit.ca  



Fredericton



Lesson #2 - Training is critical

Employees trained

2016



9



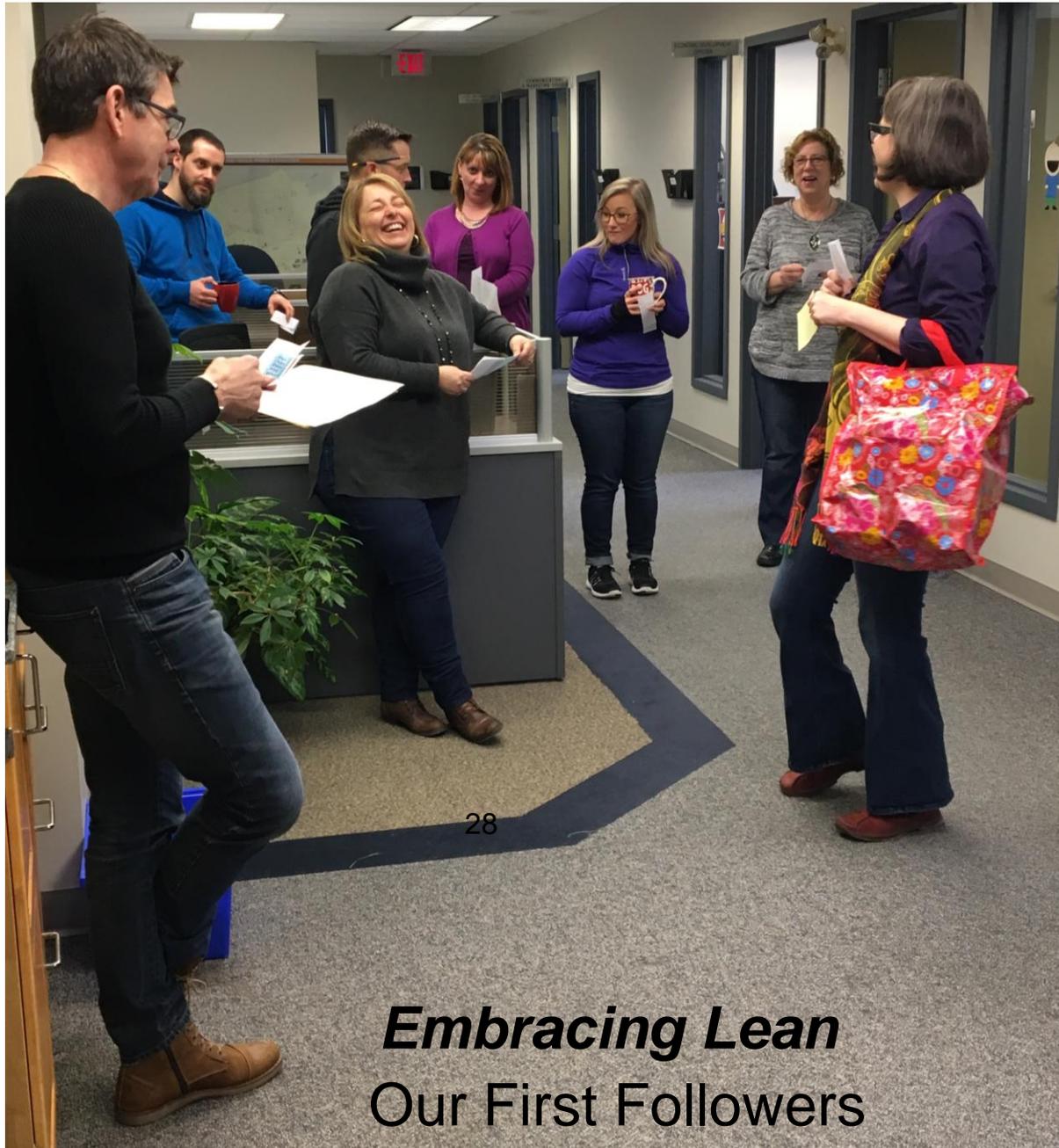
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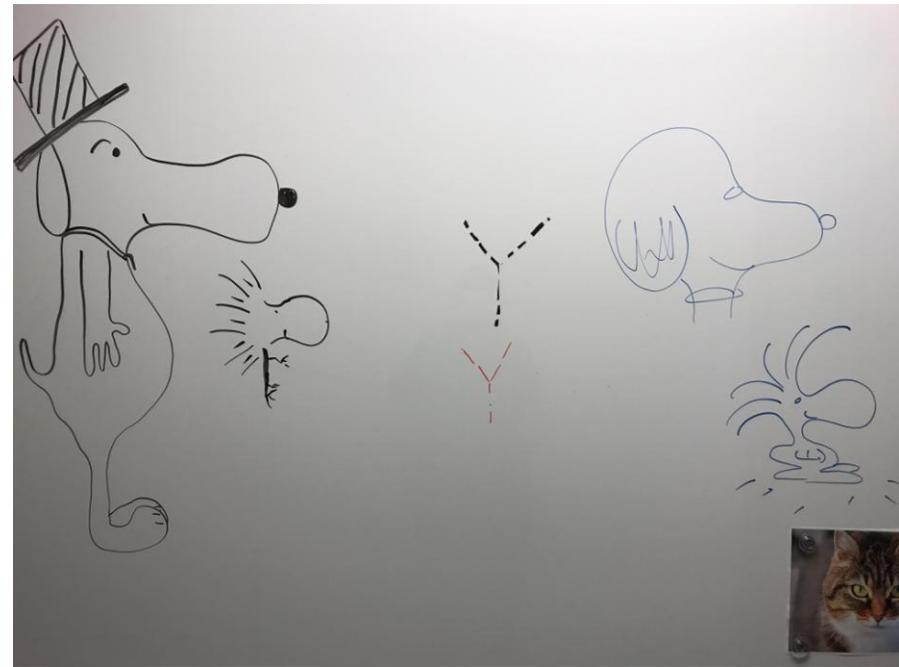
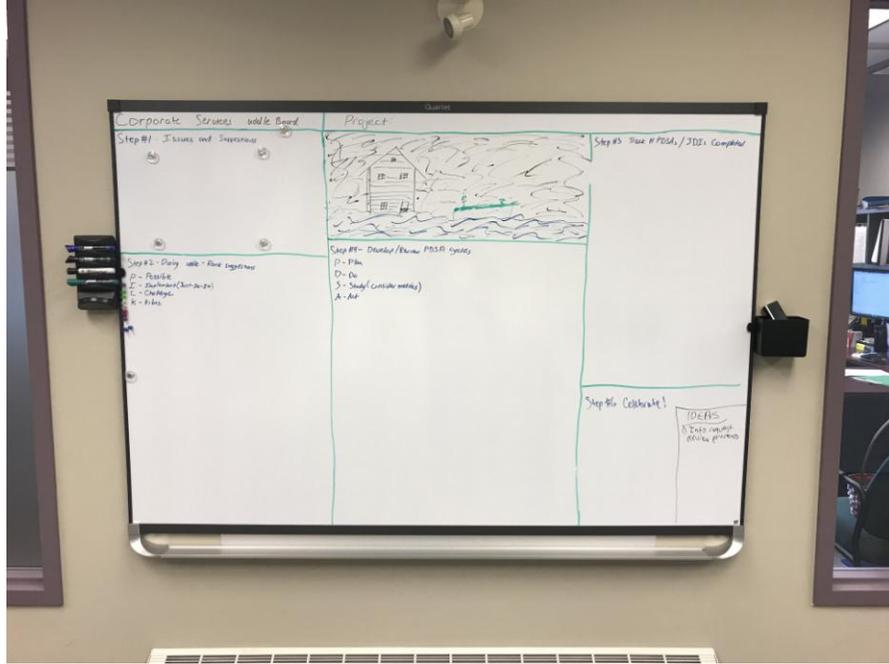
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28

Embracing Lean
Our First Followers





Lesson #3 - You won't change the culture
(but the culture will change)

EXECUTIVE GREEN BELTS = 15

2017



Vision
A progressive independent city with a strong sense of home



Key Strategies:

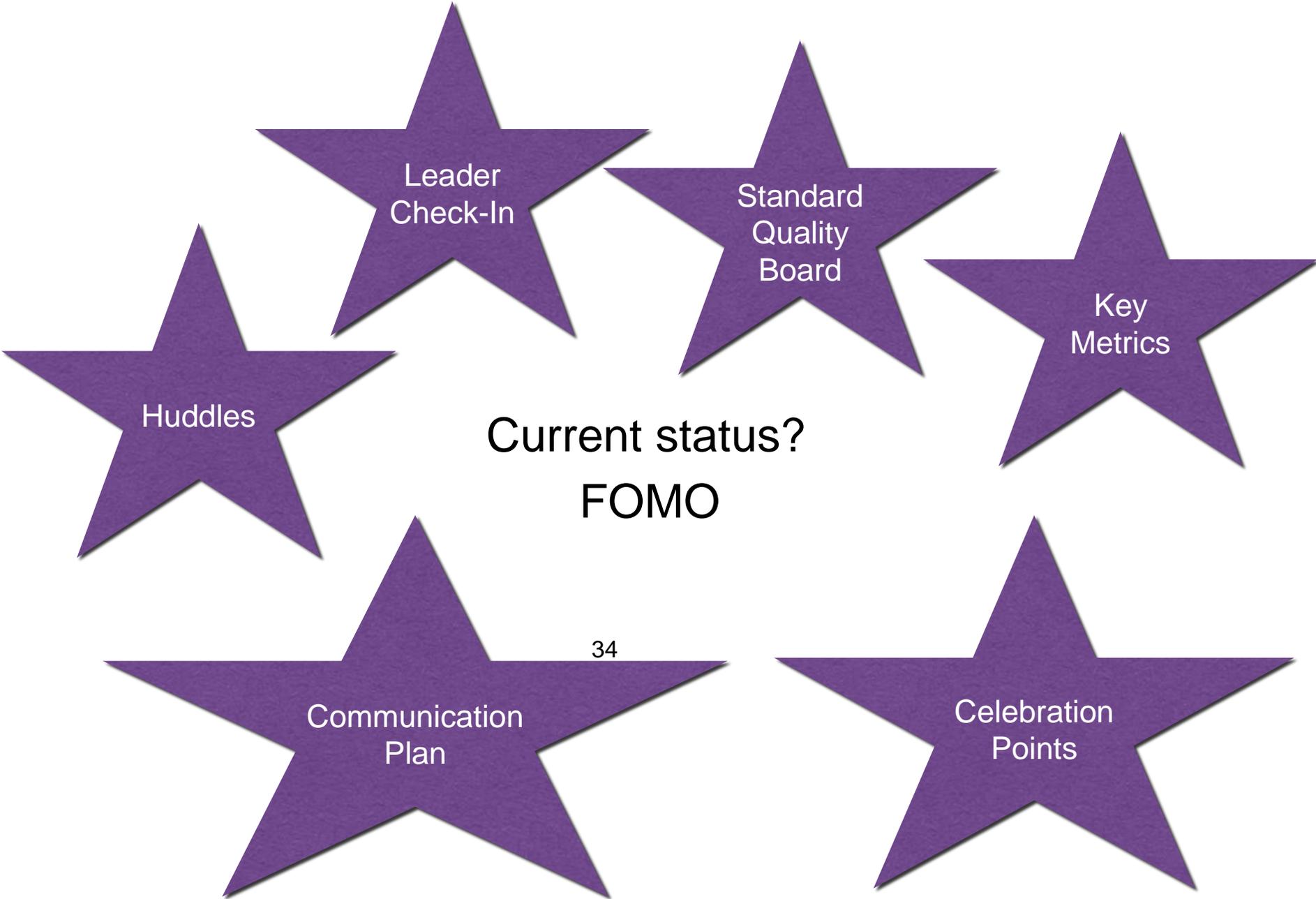
- Make it Better
- Innovative, creative & sustainable services & programs
- Responding to demographic shifts
- Attract, retain & engage qualified employees
- Effective Council & decision making processes

Breakthrough Strategies:

- To be developed by each department/division

Make It Better







Lesson #4 - Slow and steady wins the race



MERCI



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CAMA RAPID FIRE

May 30, 2017

Lean in Mississauga

Wes Anderson

Manager, Lean Program

City of Mississauga

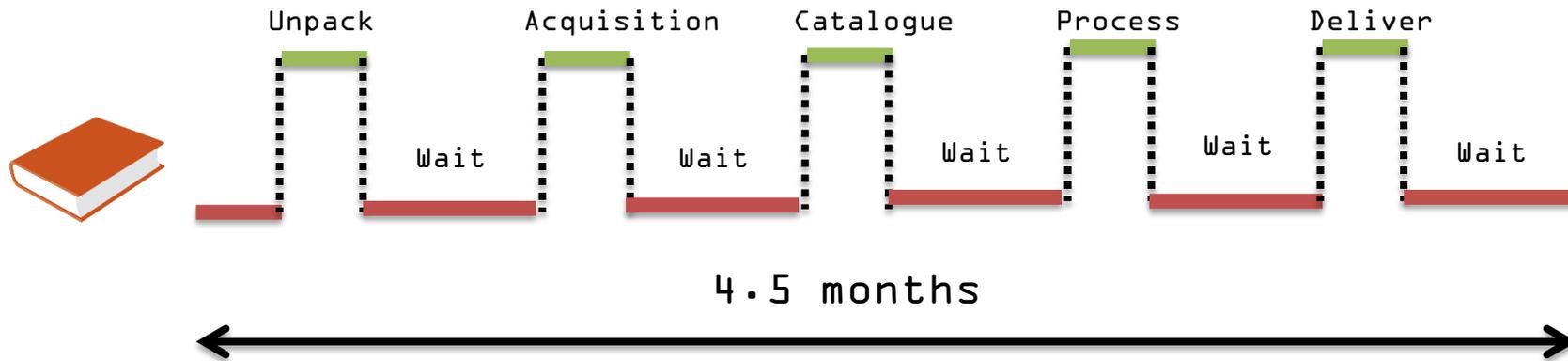
CAMA Conference

May 30, 2017



MISSISSAUGA

Delivering New Library Materials



$$60 \text{ minutes} / 4.5 \text{ months} = 0.01\%$$

We have efficiency

Traditional backwards

- Focus on unit costs
- Multi-tasking
- Batches
- Lots of waiting between process steps

We have efficiency

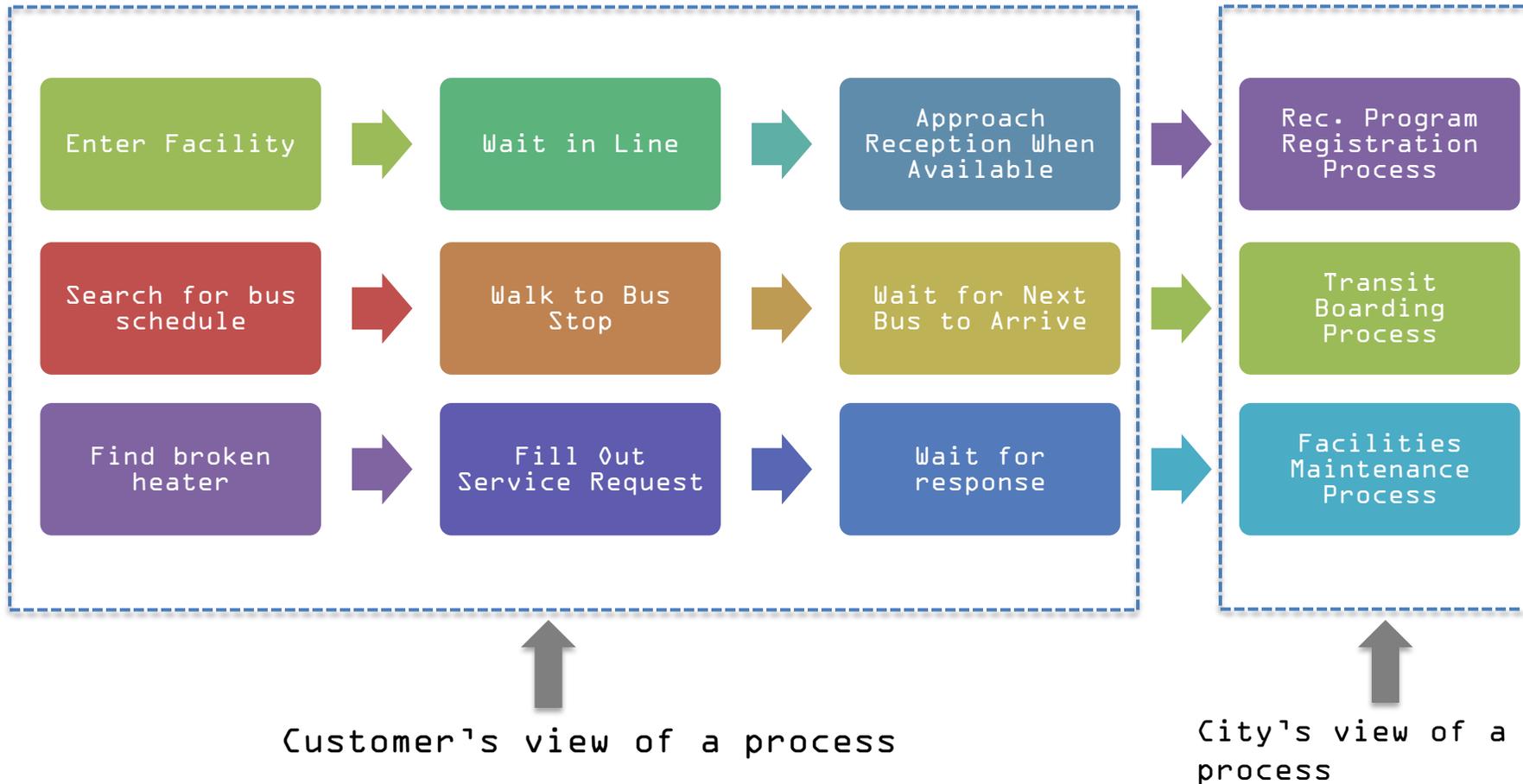
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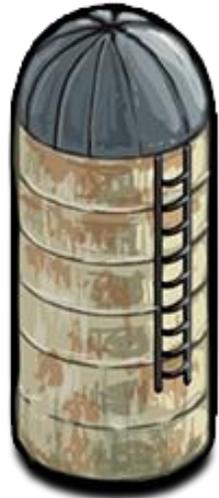
Lean

- Focus on fulfilling customer needs
- Simplicity
- Low batches
- Short/no wait

The shift



The shift



Our start

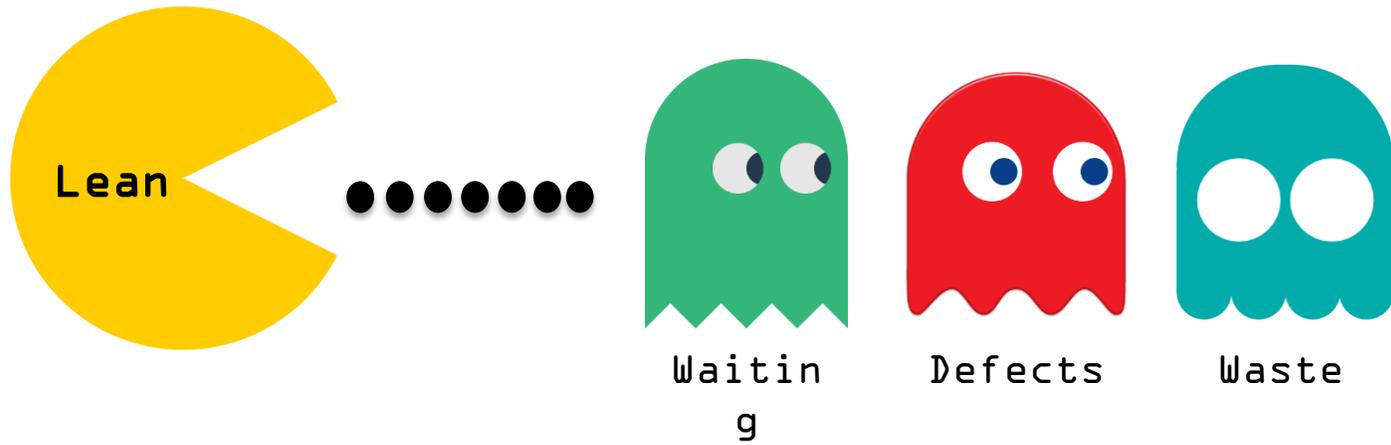


 **Recycling**
Paper, Glass,
Plastic, Cans
No Dog Waste



Sim•plic•i•ty

noun



Our Goals



1. Understand the voice of the customer
2. Make processes more efficient
3. Strengthen performance monitoring

Our Goals



4. Enhance skills and training
5. Influence culture and behaviours

Program Delivery

Process
Improvements

Training and
Development

Lean Embedding

Metrics and
Reporting

Supported by

Facilitation,
Coaching and
Support

Resources and
Tools

Networking and
Communications

Process
Improvements

Training &
Development

Lean Embedding

Metrics &
Reporting

Done:

- 357 Small Improvements
- 23 Lean Projects



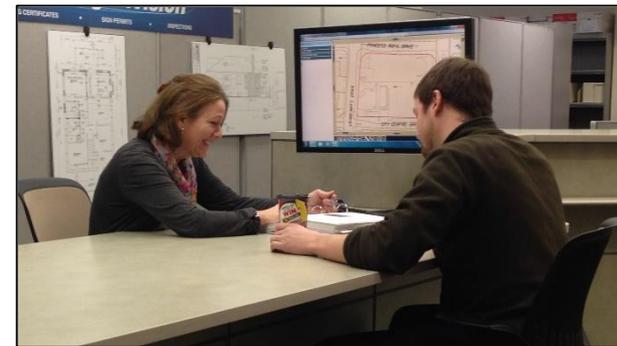
New Library Materials



Courthouse Early Resolution



What's Underway



Process
Improvements

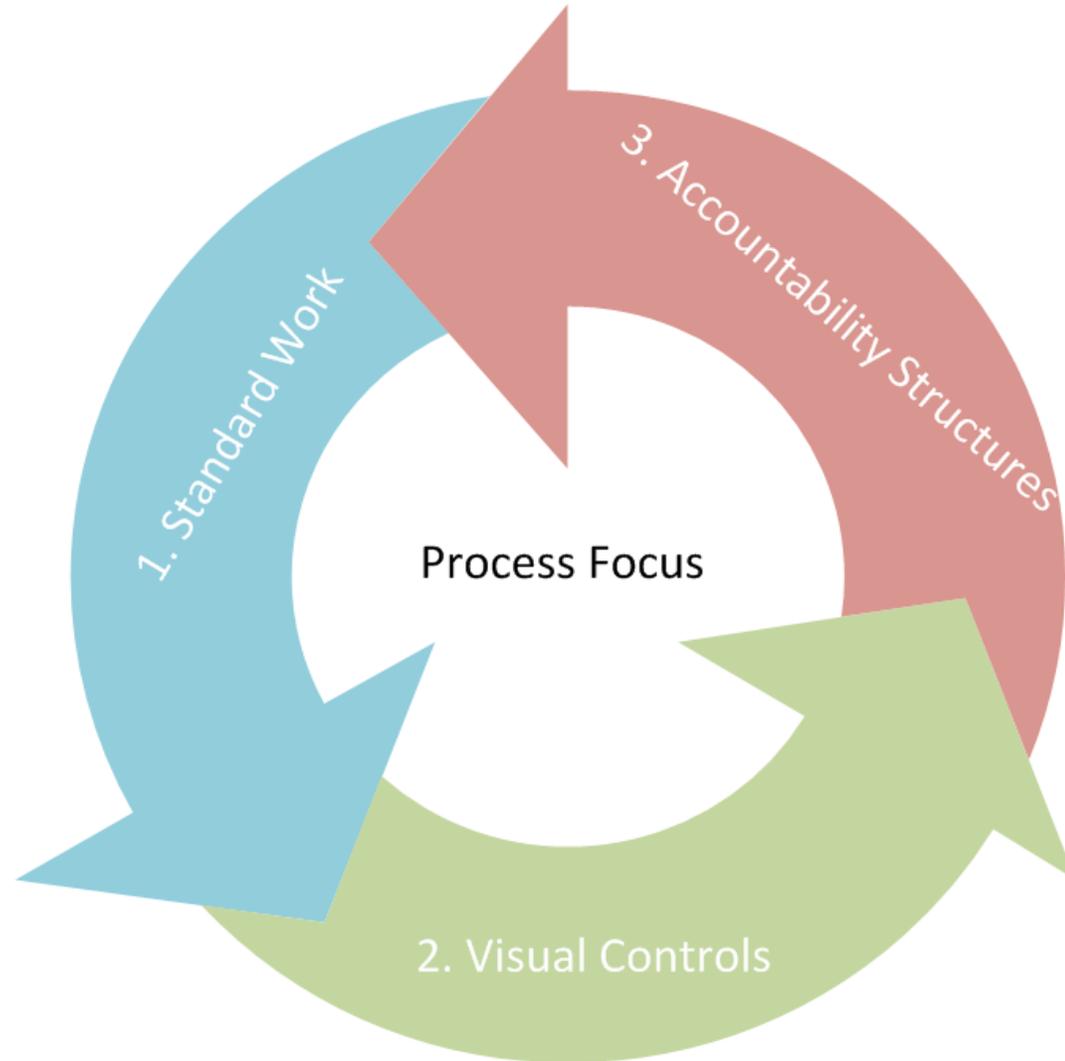
Training &
Development

Lean Embedding

Metrics &
Reporting

- White Belt: 1,800 Trained
- 25 Certified Green Belts

Process Improvements
Training & Development
Lean Embedding
Metrics & Reporting



Process
Improvements

Training &
Development

Lean Embedding

Metrics &
Reporting

- Money Belts apply a consistent approach to benefit reporting
- \$1.6 million in cumulative cost savings to date
- \$2.2 million in cost avoidance and re-directed capacity to date.

Beginning in 2017



15 Green Belts



30 Yellow Belts



45-50 Projects



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City of Fredericton



The situation in 2010

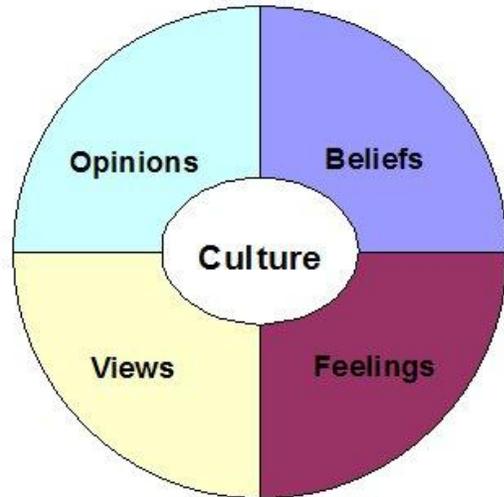
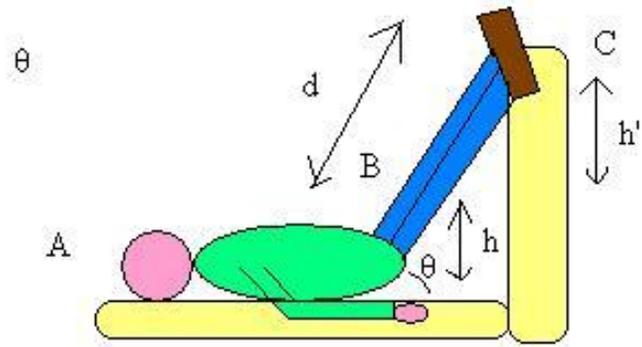




- Goal - \$5.0 Million annually over 10 years
- No decrease in service
- No tax increases



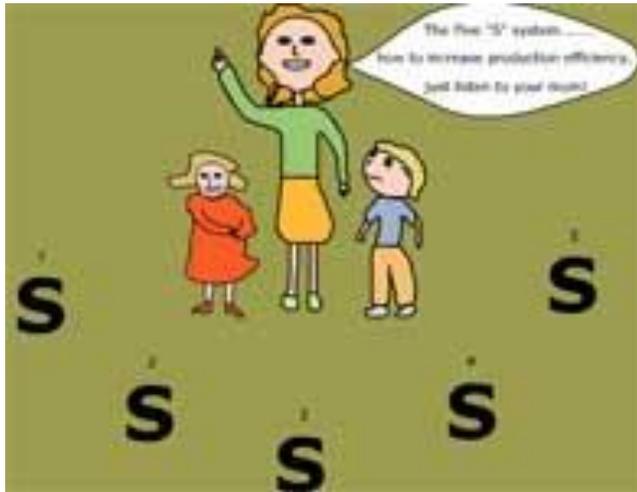
2010 – the organization



We test drove LEAN 6 SIGMA



Where do you start?



Some early mistakes



The realities

SUCCESS
IS
THE
BEST
REVENGE

P R E T E N D E R S

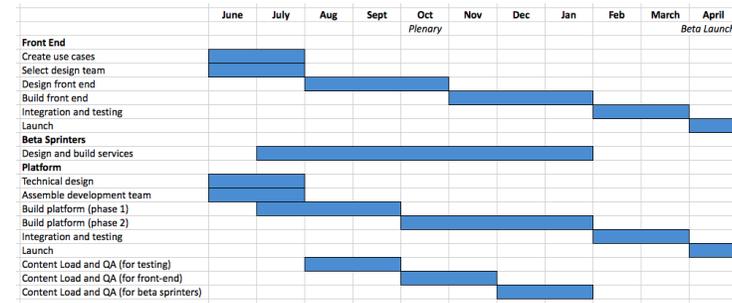


Keys to successful implementation



Some data – 5 years

- Completed 109 projects
- 76 waste walks
- 213 just do its
- 26 - 6S
- 12 Kaizens



Training

- 22 Black Belts
- 34 Green Belts
- 159 waste walkers

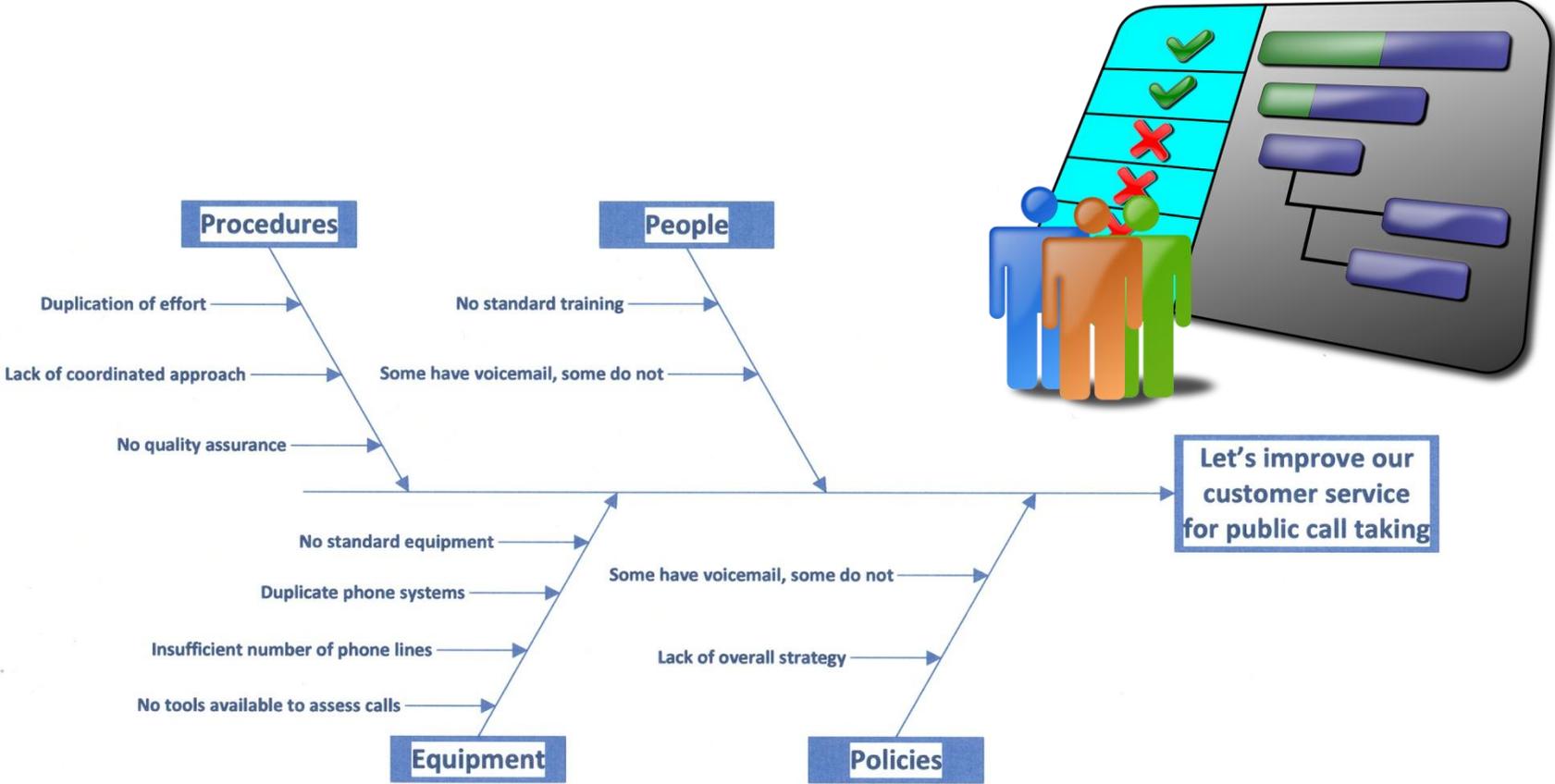


Staffing to demand

- Deputy Police Chief in-house expert
- Examples – matching Police officers to calls for service, matching 911 operators to call volumes



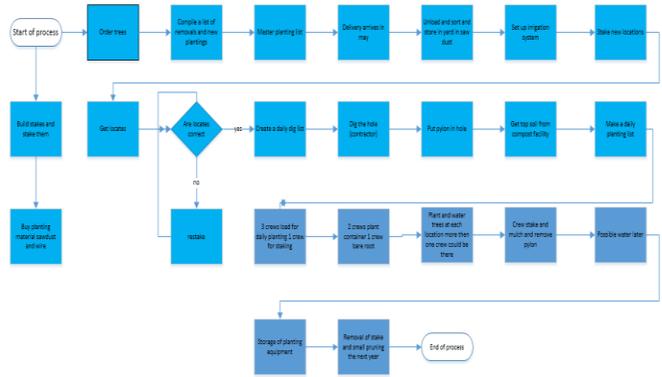
Waste walks



Projects



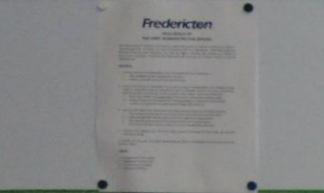
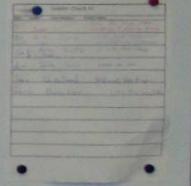
CURRENT PROCESS



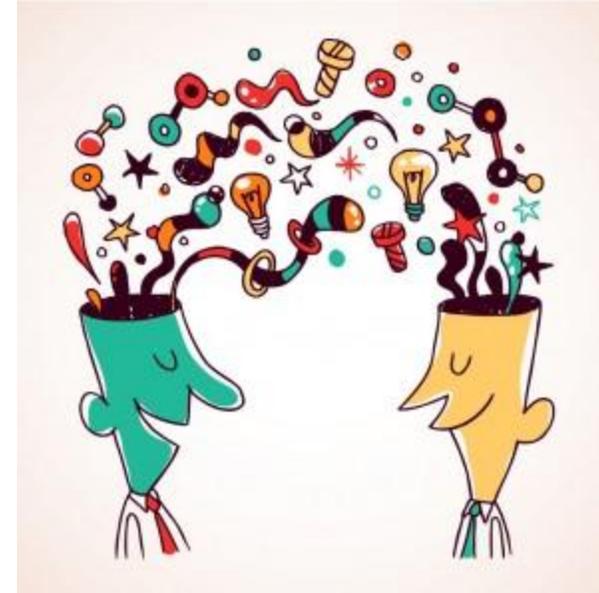
Kaizens



Daily Management

Who We Are	Plan / Do	CHECK	ACT	SUCCESSSES																					
CORPORATE	WHAT WE ARE DOING	HOW ARE WE DOING	HOW ARE WE IMPROVING																						
<p>Frederickton</p>  <p>DEPARTMENT GOALS</p> 	<p>CITY OF FREDERICKTON - WATER & SEWER PROGRAM</p> <table border="1"> <thead> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>STATUS</th> </tr> </thead> <tbody> <tr> <td>2016-07-21</td> <td>SA FLUSHING PROGRAM</td> <td>COMPLETED</td> </tr> <tr> <td>2016-07-21</td> <td>METER READING</td> <td>COMPLETED</td> </tr> <tr> <td>2016-07-21</td> <td>SERVICE TIE-OVERS - REGENT ST PROJECT</td> <td>COMPLETED</td> </tr> <tr> <td>2016-07-21</td> <td>TEMPORARY WATER SYSTEM DE-COMMISSIONING - GREENWOOD (PHASE I)</td> <td>COMPLETED</td> </tr> <tr> <td>2016-07-21</td> <td>WSI'S</td> <td>COMPLETED</td> </tr> <tr> <td>2016-07-21</td> <td>HYDRANT REPAIRS</td> <td>COMPLETED</td> </tr> </tbody> </table>	DATE	DESCRIPTION	STATUS	2016-07-21	SA FLUSHING PROGRAM	COMPLETED	2016-07-21	METER READING	COMPLETED	2016-07-21	SERVICE TIE-OVERS - REGENT ST PROJECT	COMPLETED	2016-07-21	TEMPORARY WATER SYSTEM DE-COMMISSIONING - GREENWOOD (PHASE I)	COMPLETED	2016-07-21	WSI'S	COMPLETED	2016-07-21	HYDRANT REPAIRS	COMPLETED	<p>NEW KPI FORMAT</p>  <p>WHAT GOT IN OUR WAY</p> 	<p>ISSUES IDENTIFIED</p> <ul style="list-style-type: none"> - CONVEX MIRRORS - AQUATECH - SQUIRES @ REGENT TOWNHOUSE DEVELOPMENT HAD SERVICE INSTALLED BY PLUMBER. NO TAPPING WIRE ON SERVICE CONTRACTOR MUST ESCALATE & HAVE TAPPING WIRE INSTALLED - COOKING AT TABLETS OR LAPTOPS TO INSTALL IN SERVICE TRUCKS IN 2017 - WOULD ALLOW CREWS TO RECEIVE PWDS WORK ORDERS DIRECTLY WITHOUT PRINTING EACH OF THEM - DEVELOPING APP FOR iPad TO REPLACE PAPER FORMS FOR - WATER MAIN FAILURE REPORTS - SERVICE LEAK REPORTS 	<p>TENDERS AWARDED:</p> <ul style="list-style-type: none"> - REGENT ST - M.U.S. - MLEOD HILL - CHADWICK - GREENWOOD DR - PIRSON - CARLETON ST(SA) - PIRSON - HACTY ST - SQUIDEN & SONS - McEVY ST - McCAFFERTY & SONS - HAWKINS ST - CT CHADWICK - LOMBARDI LAWN - FURZON - MARYSVILLE TRAIL(SA) - MNS - WESTWOOD ST - PIRSON <p>2016 UDF PROGRAM COMPLETED 2016-07-21</p> <ul style="list-style-type: none"> - LEAKING MAIN STOP REPAIRED ON CARLETON 2016-07-23 - SUCCESSFUL TIE-OVERS OF 3 SERVICES ON REGENT PROJECT 24/6-07-21 - NEW BAY DOOR INSTALLED ON COPPER SHED 2016-07-21
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<p>DIVISION GOALS</p> <p>PROCESSES</p> <p>Frederickton</p> <p>EMPLOYEES</p> 	<p>WHAT WE PLAN TO DO</p> <p><u>Week of July 25th</u></p> <ul style="list-style-type: none"> - SA FLUSHING PROGRAM - METER READING - METER SERVICE WORK - SERVICE TIE-OVERS - REGENT ST PROJECT - TEMPORARY WATER SYSTEM DE-COMMISSIONING - GREENWOOD (PHASE I) - WSI'S - HYDRANT REPAIRS 	<p>WHAT GOT IN OUR WAY</p> <p>* HANDHELD UNITS / GPS MALFUNCTIONS CAUSED 20 MINUTE DELAY TO METER READING FRIDAY, 2016-07-22</p> <p>ISSUES WITH THESE UNITS TO BE TRACKED</p>	<p>IMPLEMENTATION</p> <ul style="list-style-type: none"> - RECORD OF IMPROVEMENT BEING DEVELOPED FOR PRE-CHECKING HOUSES FOR STRAY CURRENT (SUCCESSFUL HACTY ST. PILOT PROJECT) - CHECK E-BULLETIN BOARD REGULARLY FOR NEW CONTENT & ANNOUNCEMENTS <p>CANCELLED/OFFERED</p> <ul style="list-style-type: none"> - NEW HYDRANT SNOW REMOVAL STANDARD UNDER DEVELOPMENT TO BE TESTED WINTER 2016-17 * WIS RESPONSIBLE FOR OVERNIGHT FLOWING ROOTS * RIS RESPONSIBLE FOR DAY TIME HYDRANT FLOWING 	<p>LEADER CHECK IN</p> 																					

Idea Generation



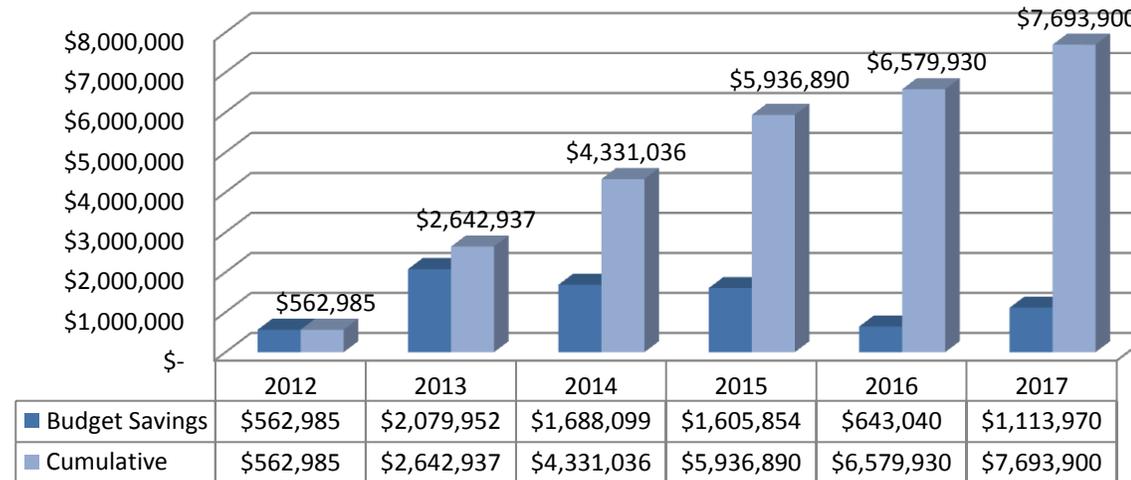
canadian 2017 Lean Summit



Just do it

Results 2011 - 2017

Annual Budget Savings



LEAN SIX SIGMA ACROSS THE COUNTRY

Questions?

Comments?



City of Fredericton

