

## How Mississauga's Lean Program is strengthening its culture of continuous improvement

The City of Mississauga has a long history of examining its services to ensure they are being delivered efficiently and effectively, and has established implementing cost containment strategies as a key priority of its annual Business Planning and Budget process. The City has undertaken several reviews of its services, and since 2009, Service Areas have been committed to reducing their respective operating budgets by 1% each year. The cumulative savings of this program have saved \$53 million to date without impacts to service levels. To support these objectives, the City's Lean Program was established in 2016 following a small pilot, with the goal of strengthening the culture of continuous improvement across the organization.

At its core, Lean thinking looks to maximize value and minimize waste, simplify processes, reduce costs and complexity, and improve customer satisfaction. Its principles align with the City's priority to implement cost containment strategies, and provide a framework for staff to identify customer issues, engage the staff who are performing the work and measuring the outcomes of a process.

The Lean methodology believes that those who perform the work are the experts in a process, and are best suited to make meaningful, lasting changes to their work. Staff across the organization are empowered to make improvements in their daily work through the application of Lean tools. Additional tactics are implemented to monitor process performance, understand the root causes of a problem, and identify solutions in a collaborative manner.

A variety of tactics are applied to influence the adoption of Lean as a way of work across the City of Mississauga.

### Training and Development

**White Belt Training:** Provides a basic introduction and awareness to Lean thinking and its benefits to both themselves and the organization. The training involves staff identifying issues within their own processes, with solutions developed that can be immediately applied to the workplace. Over 2,500 City staff have been trained as White Belts since the development of the program, with the goal of training all staff.

**Yellow Belt Training:** Provides an overview of the tools and practises that can be applied to increase process efficiency and quality, improve resident and employee satisfaction and reduce waste. Staff receives 2 days of in-class training, take an examination and must successfully deliver a small Rapid Improvement Event. Introduced in 2017, 17 staff have been certified as Yellow Belts, with an additional 25 staff currently working towards their certification. The program trains 30 staff annually.

**Green Belt Training:** Provides in-depth, hands on training on more advanced Lean tools and practises, with an emphasis on managing more complex process improvement projects. Staff receive 5 days of in-class training, take an examination and must successfully deliver a process improvement project. 40 current staff have been certified as Green Belts across the City through the program, with 16 staff currently working towards certification. The program delivers training to 15 Green Belts per year.

### Process Improvement Projects

Process Improvement Projects deliver a comprehensive review of a current process with customers, those performing the work and other stakeholders to deliver breakthrough improvements. Projects can vary depending on the complexity of the process being reviewed, and range in time taken to deliver from 4

months for simple projects to up to 1 year for more complex processes. To date, 47 process improvement projects have been completed, including 7 projects delivered so far in 2018. There are an additional 24 projects underway. Some recent examples of successful projects include:

#### ***Forestry Tree Planting***

The Forestry Tree Planting process focused on the removal, stumping and replanting of publicly owned street trees. By standardizing information for planting and minimizing the number of inspections that are required, the number of trees planted per hour was increased by 26%, and the total time taken from service request to tree in the ground was reduced by 49%

#### ***IT Storefront Hardware Provisioning***

This process focused on the management, deployment and control of IT hardware. By improving the storage layout, balancing workloads more equitably and improving the tracking of key processes and performance measures, the team was able to reduce storage space by 50% and reduce the time required to process service requests by over 55%.

#### ***Works Operations Service Requests***

Works Operations receives service requests to respond to demand maintenance issues along the road right of way. By establishing alerts for duplicate requests, drop-down menus for public e-mail submissions and providing timely feedback to the 3-1-1 Citizen Contact Centre, the amount of re-work in the process was reduced by 27%.

#### ***Tax Correspondence Inquiries***

Revenue & Taxation receive over 17,000 inquiries per year related to property taxes through various channels. By implementing Infor to electronically handle Service requests, correspondence documents are now stored electronically, service levels are measured and the response time for inquiries is reduced by 84%.

#### **Rapid Improvement Events**

Rapid Improvement Events (RIE's) are a project delivery mechanism for smaller, more narrowly scoped processes. Generally, staff have an idea of the issues the process faces but require the application of Lean tools and principles to better understand the root cause and opportunities. These projects require a Yellow or Green Belt facilitator, and an action plan with the majority of the deliverables being able to be completed within 3-4 months. 26 RIE's have been completed across the organization, with an additional 26 currently in progress. Some recent examples of successful recent Rapid Improvement Events include:

#### ***Parts Supplies for Fleet Preventative Maintenance***

Fleet yards did not have access to on-site parts and supplies, resulting in delays in completing preventative maintenance activities and routine work. By establishing small on-site inventories and tracking tools, the time spent on parts delivery was reduced by 67%.

#### ***Parks Operations General Maintenance Work Orders***

Parks Operations staff improved the tracking, visibility and quality of work orders submitted to General Maintenance staff, improving lead time by 30% and reducing re-work in the process by 70%.

#### ***Custodial Inventory & Equipment Storage***

Facilities and Property Management Custodial staff often saw items out of stock and often had to find supplies in other buildings. By improving the layout of storage rooms, and establishing inventory triggers, the time to restock carts was reduced by 67%.

#### ***Maintenance of Pre-Authorized Tax Payments***

The Pre-Authorized Tax Plan (PTP) is an automatic withdrawal payment option that residents can opt into which allows property taxes to be withdrawn from their bank account on a monthly basis. The project removed the backlog of 2,200 applications every six months, and pre-authorized enrolment for residents is now completed immediately, reducing the enrolment time by 94%.

## Small Improvements

Small improvements are an improved process step or an improvement to an employee's work environment within their span of control using Lean tools and concepts.

Small Improvements are "Just-do-it" items that are completed and then reported to the Lean Office. To date, 1,146 small improvements have been submitted by staff City-wide, including 708 in 2017 and 170 in 2018 so far. Examples of small improvements include:

- Reducing time spent on adding water and Stormwater charges to the tax roll
- Meadowvale Theatre staff created a space with hanging wall files that are labelled and utilized to easily track and prioritize work orders.
- Created visual, step by step documents to support training for new Transit staff
- Created holiday schedules to turn lights off and switch HVAC modes to unoccupied in City facilities not in use during statutory holidays.

## Lean Management

A successful Lean transformation includes creating the necessary structures to sustain the momentum, and strong leadership commitment to make results stick. To support this, the Lean Program is currently developing Lean Management for leaders in the organization.

Leaders will be taught and coached on the managerial routines and thinking behind Lean, and how to apply it to public sector environment like the City. The underlying theory behind Lean Management will focus on research performed on Lean Daily Management and best practises that have been studied from the Toyota Production System.

## Networking and Outreach

The City's Lean Program has been recognized as a leader in Lean Transformation practises across Canada. Staff regularly speak at external conferences, and receive several requests from other Municipalities, Regions and the Provincial Government to learn from the practises

implemented at the City. In May 2017, the Lean Program also hosted a trade delegation from Ireland including Sean Canney TD, Minister of State for Public Works and H.E. Jim Kelly, Ireland's Ambassador to Canada.

A new Lean Program video was released in 2017, highlighting some key projects and how the program delivers on its goal of strengthening the City's culture of continuous improvement. [https://youtu.be/1HEIYPr\\_F-c](https://youtu.be/1HEIYPr_F-c)

The Lean Program's internal resources include case studies, program statistics, tools, how-to guides and templates to enable staff to deliver Lean improvements and be self-sustainable on their continuous improvement journey.

## Program Benefits

The Lean Program provides a wide range of benefits beyond traditional cost savings and freed up capacity. Improvements also include enhancements to customer experience, improved quality, and safety for both customers and those performing the work, and environmental benefits. The program has achieved \$5.2 million in cost savings and cost avoidance, and has freed up over 73,000 hours of staff time for other value added work.

The City constantly looks to challenge the status quo and develop innovative, cost effective ways to deliver its services. The Lean Program has built significant momentum on its mandate to strengthen the culture of continuous improvement across the organization, build capacity and empower staff to make improvements in their day to day work.

## Want to Know More?

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