

Date: November 3, 2020

To: Chair and Members of Budget Committee

From: Gary Kent, CPA, CGA, ICD.D, Commissioner of
Corporate Services and Chief Financial Officer

Originator's files:

Meeting date:
November 23, 2020

Subject

Continuous Improvement Update

Recommendation

That the report titled "Continuous Improvement Update" dated November 3, 2020 from the Commissioner of Corporate Services and Chief Financial Officer be received for information.

Report Highlights

- The City's Continuous Improvement programs, as listed in this report, have transitioned all associated training and workshops to a virtual delivery method to meet the demands of a mobile workforce.
- The City's Lean efforts represent the most comprehensive investment in Lean as a methodology in Canadian municipal Government for a city the size of Mississauga.
- Notwithstanding the COVID-Pandemic, the City's Continuous Improvement initiatives continue to deliver significant results for the organization.
- 45 Lean process improvements and 937 Small Improvements have been completed as of Oct 26, 2020 (This differs from the City's Business Plan due to printing deadlines), bringing the totals to 197 Lean process improvements and 5,005 Small Improvements completed since the inception of the program. Seventy-three process improvement projects are currently in progress.
- The City's Continuous Improvement programs have provided a total of 21,917 hours of training over the last three years, servicing 5000 staff.
- The City's 1% budget reduction program has saved \$68.4 million since 2009, including \$10.8 million identified as part of the 2021 Business Plan and Budget.
- The Lean Program is complemented by other continuous improvement efforts across the organization such as Performance Measures, Information and Technology, Project Management Support and Innovation programs.

Background

The City has a long history of examining our services to ensure they are being delivered efficiently and effectively, and has established implementation of cost containment strategies as a key priority of the annual Business Planning and Budget process. The City has undertaken several reviews of its services, and since 2009, Service Areas have committed to reducing their respective operating budgets by 1% each year. The cumulative savings of this program have reached \$68.4 million to date without impacts to existing service levels.

Within the last 5 years Council has approved both a permanent Lean Program and a Performance Measures Program with the goal of strengthening the City's culture of continuous improvement. These programs are managed by the Corporate Performance and Innovation Section of the Strategic Initiatives Division within the City Manager's Department. Over the last 5 years, the City has continued to establish its Continuous Improvement programs such as Lean, Performance Measures, and Change Management which have positioned the City well to tackle the challenges of COVID-19. Notwithstanding the COVID-Pandemic, the City's Continuous Improvement initiatives continue to deliver significant results for the organization, along with the reputation and recognition as a national leader in its continuous improvement efforts.

This report provides an update on the progress of the City's Lean Program, along with an update on other continuous improvement programs and initiatives across the organization.

Comments

Lean Program Update

At its core, Lean 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 therefore the ones 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 have been applied to influence the adoption of Lean as a way of work across the organization:

Training and Development

White Belt Training: Provides a basic introduction and awareness of Lean thinking and the benefits to both staff and the organization by implementing Lean principles. To date, 2,749

active City staff (fulltime and part-time) have received White Belt Training from every Service Area. Eighteen divisions currently have over 90% of their staff trained as White Belts.

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 receive an equivalent of 2 days of in-class training, take an examination and must successfully deliver a small Rapid Improvement Event. Since the introduction of the training in 2017, 60 (56 active) staff have been certified as Yellow Belts across the City, with an additional 41 staff currently working towards their certification. The program looks to train and certify 18-30 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 an equivalent of 5 days of in-class training, take an examination and must successfully deliver a process improvement project. 60 (52 active) current staff across the organization have been certified as Green Belts through the program, with an additional 19 staff currently working towards certification. The program aims to deliver training for 15 Green Belts per year.

Lunch and Learns: The Lean Program also offers 1.5 hour sessions over the lunch hour to introduce specific Lean tools and concepts, along with case studies of how these tools have been implemented at the City. Staff are empowered through these sessions to apply what they've learned and implement Small Improvements within their business units.

Lean 1-day Training: Throughout 2021, 250 staff will receive training in critical Lean principles and concepts including 5S Workplace Organization, Value Stream Mapping, Improving Process Flow, Facilitating a Kaizen Event, and Lean Daily Management. To accomplish this, the Lean program will deliver 10 one-day training workshops for 25 staff per session over the next 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 6 months for simple projects to 1 year for more complex processes. To date, 82 process improvement projects have been completed, including 9 projects delivered in 2020. There are an additional 25 projects underway. Some recent examples of successful Process Improvement Projects include:

- **Engineering Submissions Review Process for Lifting of H (HOZ) Applications**
(T&W): Reduced turnaround time for the Engineering Submission review by 64% (from 515 to 186 days) with first-pass rate (without rework) improved from 45% to 100%. Reduced staff effort by 2,089 hours per year (spread over 3 departments) through the consolidation of 3 reviewing streams into 1 for HOZ applications.

- **Technical Support for ePlans (P&B):** Reduced customer wait time for ePlan inquiries by 50% (from 24 to 12 hours) and improved First Call Resolutions to 91% (from 50%). Over 2,400 inquiries per year are now addressed that were previously transferred, resulting in better customer service, increased staff morale, and clearer staff expectations
- **Allocated Outdoor Facility/Park Bookings (CMS):** Reduced turnaround time of the booking from intake to confirmation by 40% (from 10 to 6 months) by developing a singular booking intake and allocation process (freed 90 hours per year).
- **Rent Collection Process (CPS):** Reduced turnaround time of collection of invoiced rent by 39% (from 23 to 14 days) as well as staff effort by 56%

A breakdown of the results of all completed 2020 process improvement projects are listed in Appendix 1. A breakdown of in-progress process improvement projects are listed in Appendix 2.

Rapid Improvement Events

Rapid Improvement Events are a project delivery mechanism for smaller, more narrowly scoped processes usually affecting only 1-2 Divisions. 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 completed within 4-6 months. Introduced in 2017, 115 Rapid Improvements have been completed across the organization, including 36 in 2020 with an additional 48 currently in progress. Some examples of successful Rapid Improvement Events completed in 2020 include:

- **POA Interpreter Scheduling - Phase 2 (CPS):** Reduced the time spent on interpreter scheduling by 69% (from 28 to 8.75 hours/week). This was achieved by utilizing a SharePoint list and increasing cases booked per interpreter from 1.48 to 2.32. Since interpreters are paid at minimum of 3 hours, by increasing the number of cases per interpreter booking a cost savings of 42% was achieved.
- **Existing Land Use Mobile Data Collection (P&B):** Staff used existing technology (ArcGIS ModelBuilder) to digitize a previously manual process, reducing staff effort by 50% (140 hours). The one-time data setup is reusable year-over-year, also leading to a decrease of 50% in lead time for reviewing/updating maps.
- **Bus Alternator Failures (T&W):** By replacing the faulty oil-cooled alternators with air-cooled (new technology) units on New Flyer busses from 2006 to 2009, staff were able to reduce the alternator failure rate by more than 80%. By reducing the volume of alternators needing repair, the project also resulted in reduced annual staff touch time as well as bus-downtime.
- **Asian Long Horned Beetle (ALHB) City Dump Site Closure (CMS):** Availability of dump site service increased by 67% (from 3 day/week to 5 days/week) by utilizing the

City of Toronto quarantine site. It resulted in reduction of rental and contractor fees, net material removal costs and illegal dumping.

- **Insurance Renewal Data Collection (CMO):** Reduced the response lead time by 75% by using confirmation of last renewal application template and completing each insurance applications as they came in (i.e. eliminated batching). The faster turn around time increased the City's insurance applications out in the market 2 weeks longer, giving more review time for insurers.

A breakdown of the results of all completed 2020 Process Improvement Projects and Rapid Improvement Events is listed in Appendix 1. A breakdown of in-progress engagements are listed in Appendix 2.

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, 5,005 small improvements have been submitted by staff City-wide, 937 of which have been submitted in 2020 alone. In addition to the small improvements submissions, staff have submitted 90 additional Continuous Improvements. Examples of small improvements include:

- **Assignment of Municipal Prosecution Files (CMO):** Changed the process of assigning case files to prosecutors to allow continuity and level loading. Saves staff time of over 1,800 hours by reducing handovers.
- **New Armour Stone Rest Area (bench) Park Dev. Standard (CMS):** Improved standard with new Armour Stone Rest Area (bench) as Park Dev. Standard to eliminate challenges and cost related to damage due to environment condition (within conservation lands that are susceptible to flooding), equipment installation, and on-going maintenance.
- **Utilities Consolidated Billing (CPS):** Eliminated extra-processing and saved staff effort time of 300 hours annually by consolidating hundreds of utilities bills into only 4 monthly bills.
- **Licence Application Online Review & Processing (T&W):** Enhanced customer experience and reduced staff processing time by 50% by receiving, reviewing application and supporting documents online instead of over a service counter.

Embedding Lean into Our Culture

A successful Lean transformation includes creating the necessary structures to sustain the momentum. To ensure results last over the long term, the Lean Program works with individual Service Areas to embed a Lean culture within the work practises of staff. Strengthening the culture of continuous improvement is a long term proposition, and changing the existing work habits of staff takes time and commitment at all levels. 2020 has shown strong signs of cultural adoption. One of the key indicators for cultural adoption is the number of business-led initiatives which seen its ratio doubled over the last twelve months.

Several Service Areas have also undertaken Lean Embedding engagements, with their successes recorded through Small Improvements, Rapid Improvements and Projects undertaken and completed. Qualitative benefits that are produced through Lean Embedding include regular discussions on continuous improvement, increased customer first thinking, the use of data to drive decision making, and the application of Lean tools in the workplace.

Networking and Outreach

The City's Lean Program has been recognized across Canada as a leader in the delivery of municipal Lean transformation. In 2020, staff from the Lean Program Office have spoken at Ontario Public Service (OPS) online forum (in April and Oct) and at the Ontario Municipal Lean Community of Practice (in May).

Other Continuous Improvement Programs and Initiatives

Lean is only one method of continuous improvement that is delivered across the City. A variety of other programs and channels are used to actively review how we work and to explore ways to identify new opportunities:

1% Budget Reduction

In 2009, the City Manager introduced a new component to the annual Business Plan and Budget process where all Service Areas were asked to identify efficiencies and cost savings opportunities to reduce their gross operating budget by 1%. To date, cost savings of \$68.4 million have been identified, including \$10.8 million as part of the 2021 Business Plan and Budget. Some specific operating budget savings for 2020 include:

- **Information Technology:** \$280,000 reduction through Software Rationalization (eSolutions, Commvault, Product Plan, HP etc.)
- **Recreation:** \$594,000 Reduction through various full-time position deletions
- **MiWay:** \$4,114,000 savings through the transitioning of service from Islington Bus Terminal to Kipling Bus Terminal

A breakdown of the 2020 Efficiencies and Cost Savings identified by Service Area are listed in Appendix 3.

Performance Measures Program

The Performance Measures Program was approved by Audit Committee and established in 2018 as a result of the external maturity assessment on the City's performance measures performed by KPMG. This program aims to increase the maturity of evidence-based decision-making, particularly for executive leadership, managers, and supervisors to support service performance and resource utilization decisions.

Based on a number of fundamental principles introduced by the Lean program, the Performance Measures team has developed a methodology that is both "made in Mississauga" and rooted in industry best practices. This methodology includes both formal education and hands on

workshops to help divisions define, automate, and apply operational metrics through rapid and iterative engagements. These metrics help divisions tell their story, identify areas of improvement, and demonstrate our ability as an organization to execute strategy.

The program strives to build upon the City's culture of continuous improvement by focusing on incremental changes to strengthen the City's reputation of accountability and transparency.

In 2020, the Performance Measures Program addressed the Covid-19 pandemic by transitioning all of its training and design methodology to virtual delivery. In addition, this program has launched dashboards for the Parks and Forestry division and has designed measures for Works Operations and Maintenance, Facilities and Property Management, and Legislative Services.

Looking forward, Works Operations and Maintenance, Facilities and Property Management and Legislative Services dashboards will be launched in 2021 and the Performance Measures team will continue working with divisions such as Library Services, Legal Services, Development and Design, and Communications to advance the maturity of evidence-based decision-making across the organization.

Innovation

In 2010, a Business and Innovation Coach was established to lead and support a concerted, intentional effort to grow a culture of innovation across the organization. The goal was to help drive innovative change by: inspiring fresh thinking and perspective, stimulating innovation, facilitating strategic planning and decision making, and creating opportunities for cross-departmental collaboration.

In 2020, the Business and Innovation coach delivered 41 workshops engaging over 450 staff and 15 of 23 Divisions, in strategic planning, project debriefings, team building, community engagement, IT Roadmaps, and human centred design. In addition, 18 staff representing different levels and Departments are trained as internal Innovation Coaches-at-Large. They are assisting to further drive innovation across the organization. Three new innovation training courses have been developed and are offered virtually, in order to further staff development and innovation maturity during the pandemic. An Innovation Community of Practice, open to all City staff, has been operating for seven years and now has over 90 members. The Community of Practice provides opportunities to network, share knowledge and best practices and acquire new skills.

Project Management Support Office

The Project Management Support Office (PMSO) was created in 2010 as a result of Internal Audit Recommendations. The office focuses on promoting best practises in project management across the City by offering training, support, tools, templates, and networking events. The PMSO recently developed an active approach to project management support by

establishing five in-house City-oriented training that offers tailored project management tools and techniques.

The PMSO's services complement each other to enable staff to deliver projects successfully, fulfilling requirements, and satisfying the project customer. Since 2015, 1,859 hours of training have been delivered to 2,587 staff, and 50 staff were supported in their journey to obtain their Project Management Professional (PMP) Certification. Eighty-eight staff are now PMP certified versus 9 in 2010. Thirty-one corporate wide nominations were made for the Excellence in Project Management Project Team and Project Lead awards in 2020.

Corporate Policy Program

The Corporate Policy Program ensures that Corporate Policies and Procedures are necessary, cost effective, enforceable, legal and consistent. The Corporate Policy Analyst is responsible for researching issues and options for policy direction, and providing support to Departments in researching and analyzing issues. In 2020, 5 new policies have been created, 4 major revisions to policies were made, 28 policies were reviewed to ensure that they remain relevant and necessary (1 policy was deemed no longer required and rescinded) and 48 policies were updated to reflect changes to operational procedures (e.g. to reflect the requirement for all employee reimbursements to be to the employee's primary bank account; referencing a new, related policy). The Corporate Policy Analyst is also a staff member of the Accessibility Advisory Committee and on the implementation team for the Corporate Disposal Policy.

Information Technology Projects

While technology is only one component of continuous improvement, its application supports and modernizes services to residents in a variety of ways. Some recent examples of continuous improvement information technology improvements include:

- **Front Desk:** is a contactless queue and appointment management system that has been deployed across multiple Service Areas including Legislative Services, Regulatory Services, and Land Development Services.
- **Active Assist Online Application:** (August 2020) Customers can now apply for Active Assist (the City's fee assistance program) online instead of visiting a Community Centre in person.
- **Agenda Management Replacement – eSCRIBE Implementation Project:** (September 2020) this is a significant replacement project that deployed new technology for developing corporate reports and managing associated workflows and approvals. It is used by hundreds of staff across the City to improve efficiency and completeness for corporate reports and includes functionality such as a new council calendar, live streaming, video tags and closed captioning.
- **AVL/GPS Telematics for City Fleet:** (Expected completion in November 2020) an upgrade of technology in city fleet vehicles provides the foundation for advanced analytics, operational visibility and predictive analysis leading to efficiencies in fuel, salt

and material utilization, route optimizations, map and sensor based reporting through web and mobile platforms.

- **Digital Modernization Project:** (September 2020) this project is a rebuild of Mississauga.ca and implements people-centred digital services that are fast, clear and easy to use for people of all abilities. The new Mississauga.ca is built on a modernized technology platform that enable innovation, agility, and rapid delivery of websites and online services. This results in savings and efficiencies as well as a coordinated customer experience.
- **eBidding and eEvaluation IT Project:** (August 2020) this project automated Materiel Management's processes related to receiving and evaluating procurement bids. The initiative enabled the City to efficiently comply with the requirements of the Comprehensive Economic and Trade Agreement (CETA) that came into effect in 2017. The system is used by City staff and vendors to electronically receive and evaluate bids and results in significant time savings and reduced paper use.
- **Efines:** Soft launch in Oct. 2020. Allow customers to pay library fines online using their credit cards. Previously customers would have to visit a branch in person to pay their fines and clear their accounts.
- **MOH Ambulance CAD to Fire CAD interface:** (October 2020) allows Fire Dispatch to send and receive call information with Emergency Medical Services, Ministry of Health. We are the first Fire service in the Province to interface with the Ministry of Health on their new Computer Aided Dispatch system.
- **Online Program Registration:** (August 2020) allows customers to register for Library Programs online, using the same application (Class) that is used to register for Recreation Programs.

Financial Impact

Since the implementation of the 1% budget reduction program in 2009, the cumulative cost savings of the program has been \$68.4 million, including \$10.8 million as part of the 2021 budget.

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. Since the inception of the program, staff have implemented cost savings and cost avoidance benefits of \$21.8 million, including \$3.4 million saved and avoided in 2020 (validated as of Oct. 29, 2020). These benefits are verified by Financial Analysts through the Money Belt program to ensure that a consistent, standard and accurate approach to quantifying the Lean Program's results are in place.

Conclusion

The City has consistently looked to challenge the status quo and develop innovative, cost effective ways to deliver its services. The City's Continuous Improvement Programs continue to deliver on their shared mandate of strengthening the culture of continuous improvement across the organization, build capacity and empower staff to make improvements in their day to day work.

Attachments

Appendix 1: Summary of 2020 Completed Lean Process Improvements

Appendix 2: Summary of Lean Process Improvements in Progress

Appendix 3: List of 2020 Efficiencies and Cost Savings Identified by Service Area



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