Appendix 3: KPMG Lean-In Audit Workshop Details

In October, 2019, the CAOs Office engaged the services of KPMG to assist the PP&D Director with a review of key functional services (processes) of the Department.

The functional areas explored with KPMG from October to December, 2019 included:

- Commercial Building and Trade Permit Inspections processes (currently based on the Interim Commercial Inspections Strategy – Standard Operating Procedures)
- Commercial Building and Development Permitting Processes.

The KPMG Lean-in Audit Workshop process brought together staff representing key roles and responsibilities within a process to map key process activities, identify existing 'pain points', and create an action plan for improvement.



The full-day Commercial Inspections Lean-in Audit workshop brought together staff representing each role in the commercial inspections process. Key support services areas including Information Systems (both at the departmental and corporate levels) and Operational and Support Services (Divisional Process Improvement staff) were also in attendance.

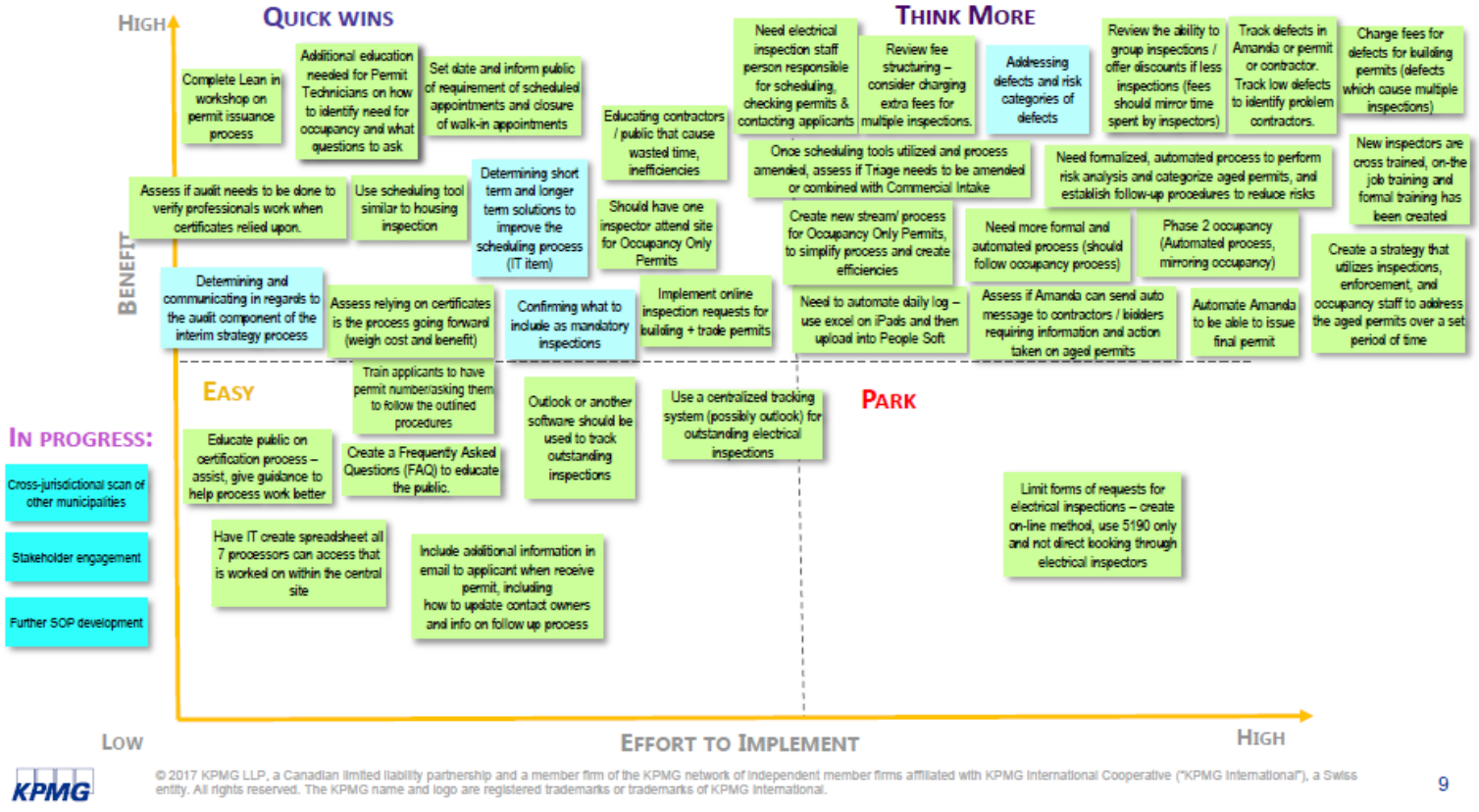
An initial presentation was provided by KPMG to explain fundamental concepts of LEAN, including the various types of waste that can be apparent within processes. The group also

discussed the importance of standardization within the processes as a key means of avoiding waste and the concept of smooth flow within processes. Commercial Inspections team developed Standard Operating Procedure Documentation earlier in late July 2019 in order to implement the Commercial Inspections Interim Management Strategy. The KPMG workshop enable the team to now step back, four months after the creation and operationalization of the strategy, to see how the process was functioning, from a LEAN-In perspective.

The workshop enabled staff to map the process at a high level, identify current issues ('pain points') from a staff perspective, and opportunities/suggested actions for further improvements. The suggested actions were then prioritized, in consideration of their value (benefits) and ease of implementation (Figure 1). These opportunities form a part of the proposed action plan for Development & Inspections 2020 Improvements (Appendix 8).

Improvement Opportunities

A number of recommendations based on observations by the City of Winnipeg from the workshop are summarized below and prioritized based on assessment during the workshop. The City of Winnipeg should translate these opportunities into specific action plans for implementation and benefit realization within the next 6 weeks.



KPMG

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Figure1. KPMG LEAN-in Audit Commercial Inspections Workshop Outcomes

KPMG

City of Winnipeg

Lean in Audit™: Commercial Permit Workshop

HELD: December 4, 2019
ISSUED: December 11, 2019



The full-day Commercial Permitting Lean-in Audit workshop brought together staff representing key roles in the commercial permitting process. The commercial permitting process is focused on the review and issuance of both building permits (building code and standard compliance) and development permits (zoning and planning policy compliance) . Table 1 provides an overview of the type of uses and work associated with the Commercial Permitting stream.

Table 1. Commercial Permitting: Common Categories of Use and Project Work Types

Common Commercial Building Permit Use Categories	Common Work Types Associated with Commercial Building Permits
• Commercial Storage (CS) • Health Services/Education (EH) • Manufacturing (MP) • Multi-Residential(excludingrow housing) • Office (OP) • Personal Services (PE) • General Public/Institutional (PI) • Public Utility (PU) • Recreation/Entertainment (RE) • Retail (RP) • Safety/Protection (SA) • Signs (SP) • Temporary Approvals (TA) • Special Events (TA) • Temporary Building Renewals (TB)	• New Construction – Locate • New Construction – Staged • Additions • Additions – staged • Interior alteration/Repair/Estimated Occupancy load/Change of Use • Interior Alterations – Staged • Demolition/Removal • Occupy Only • Boarding Permit • Occupancy Load (Fire) • OPCP (Optional Professional Certificate Program)

Given the scope of work involved in the Commercial Permitting stream, commercial building and development permits are reviewed and processed concurrently by functional units across the organization, including:

- Zoning Branch Staff, who further coordinate with staff from the Planning and Land Development Branches as required, including district planners and specialists in the areas of urban design, heritage planning and waterways
- Commercial Plan Examination Branch staff, including specialist staff in the areas of structural, mechanical, electrical code review
- Fire Protection Officer staff who currently work within the Commercial Plan Examination Branch office to review and coordinate with the Branch on permit review processing,
- Water & Waste Department staff, including specialists in the areas of engineering, solid waste, water planning, wastewater planning and land drainage
- Public Works Department staff, including specialists in the areas of street maintenance, transportation and traffic assessment and underground structures

Additionally, for certain application types, the Department liaises during the commercial permitting process with external agencies, including Manitoba Hydro and Manitoba Health.

A key benefit of the KPMG workshop was to enable the above cross-section of City of Winnipeg functional units to map at a high level the commercial permitting process with KPMG, and similar to the commercial inspections workshop, to identify pain points and opportunities for improvement. The collaborative nature of this exercise helped to broaden participants understanding of the permitting process, beyond their own area of expertise, and helped to ensure a more integrated approach to further process improvement activities.

Similar to the Commercial Inspections workshop, An initial presentation was provided by KPMG to explain fundamental concepts of LEAN, including the various types of waste that can be apparent within processes. The group also discussed the importance of standardization within the processes as a key means of avoiding waste and the concept of smooth flow within processes. A number of opportunities were identified as a result of the workshop and are summarized in Figure 3. These opportunities form a part of the proposed action plan for Development & Inspections 2020 Improvements (Appendix 8).

Key process improvement topics are discussed in more detail in the following sections.

Improvement Opportunities

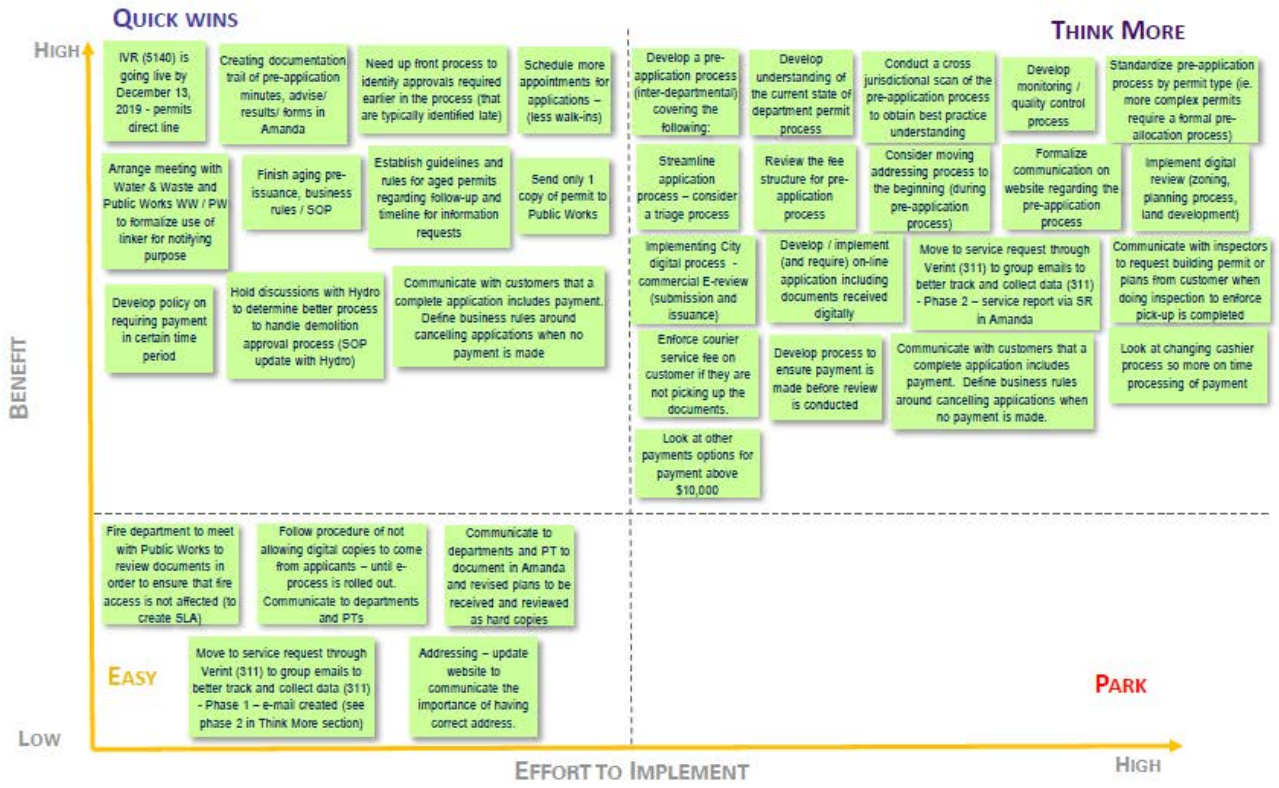

Figure1. KPMG LEAN-in Audit Commercial Inspections Workshop Outcomes

Concurrent Processing of Building Permits and Development Permits

City of Winnipeg currently processes building permits (which assess compliance with building codes and standards) concurrently with development permits (which assess compliance with zoning and planning policy and approvals).

While such concurrent processing can create efficiencies for less complex projects, it is recognized that the process can be complicated when development permit processes trigger the need for additional planning or land development approvals.

As the Division continues to explore opportunities for improvement, it would like to review the pros and cons of concurrent processing. Such review would include a jurisdictional scan of similar cities in Canada and the United Stated States, and closer examination of permitting data to understand the extent to which development permitting processes impact the timing and efficiency of the building permit process. Depending on the outcomes of such work, the Division could look at holding a LEAN-in Audit style workshop to examine opportunities for improving this aspect of the process further.

Digital Processing

The Development & Inspections Division's primary process improvement focus in 2017-18 was on the transition of the permitting process to a digital format. In 2018, the Division enabled the electronic processing of all Housing Stream building and development permit application (whether received in hard copy or digitally). The shift from hard copy/paper processing to digital processing for the Housing/Residential Stream required:

a) Process Redesign
    - Integration upstream and down streams, updating Standard Operating Procedures (SOP) /Work Instructions (WI),
    - Restructuring/relocation of scanning resources, redesign of scanning priorities/business model to support immediate scanning of hard copy materials and uploading of digital files into digital application folders to enable electronic processing.
b) IT Development
    - AMANDA information system updates/programming
    - Bluebeam Software installation (to mark plans electronically) and training for all Plan Review staff (within both Housing and Commercial Plan Examination areas)
c) Training/Communication
    - Customer Service & Permit Techs (Intake of digital applications)
    - Scanning Team
    - Electronic Review (Bluebeam)
    - Customer guides/communication
d) Change Management
    - Training and adoption of Kaizen/LEAN Principles
    - Team based - Participatory redesign processes
    - Process mapping/Standard Operating Procedure/Work Instruction driven
    - PDCA Management once implemented to enable continuous improvements to occur

Process Improvements initially planned for 2019 involved transitioning the Commercial Permits process to a digital review format. The first phase of this transition recently occurred to the Optional Professional Certificate Program (OPCP) stream of commercial permitting, where applications materials are now submitted and reviewed digitally and permits are issued digitally. The Division plans to move forward with electronic processing of the remaining commercial permits in 2020.

Digital processing is a key solution to internal process improvement within the permitting system, helping to address:

- Removal of transportation waste within the system
- Electronic tracking of process starts and stops, enabling the development and monitoring of key performance indicators
- Transparency, coordination and visibility of application materials and application status internally by all functional units at the same time

Permits Online Services

Since 2017, process improvement activities have also been focused on the expansion of online services through Permits Online (https://winnipeg.ca/ppd/permits/permits_online.stm), an online portal which customers can connect to manage their permitting process. The system is being developed in-house.

From a customer experience perspective, the Division's current goals with respect to Permits Online are to offers its customers the ability to:

- Apply on-line
- Pay on-line
- View the status on applications on line
- Participate within the review stages of the application electronically
- Receive their permits and documentation electronically, and
- Access permitting information and history on-line.

Table 2 provides an overview of current services offered through Permits Online.

Table 2. Current Status of Permits Online Services

Permits Online Services	Current Offerings	Remaining Gaps in Service
Registration and access to Permits Online	• All applicants are able to register for Permits Online	• Manual processes are required to finalize the registration process and edit registration information, including emails and additional persons/consultants being added to an application folder
Apply directly on-line (through established on-line application forms that link directly to the AMANDA data base system)	• Licensed/Eligible contractors able to apply for some Housing stream applications. Spring 2020 launch of additional application opportunities for Housing stream applicants (accessory structures) • Sign contractors able to apply for sign permits	• Development remaining Housing stream online application submission processes; • Development of all commercial online application submission processes
Pay Online	• All applicants are able to pay online with a credit card up to $10,000.	• Online options for alternative payment methods and payments above $10,000. • Processes to ensure payment prior to application review
View Application Status	• All applicants are able to view the status of their applications	
Applicant participation in review process digitally	• Applicants are able to email with staff/reviewers • Housing stream applicants can submit revised information digitally (via email or can upload directly into Permits Online)	• Communications with customers often occurs outside of the permits online portal/AMANDA system (via individual emails) • Development of commercial online submission features
Receipt of permit/documentation digitally	• All applicants receive a PDF of their building and development permit electronically. • Housing stream applicants receive their permit supporting documentation via a ZIP file	• Delivery of commercial building and development permit supporting information electronically
Access to permitting information and history online	• Public can currently access building permit records via an online website portal: https://ppdportal.winnipeg.ca/Permits/PropertyPermitSearch/Start.jsp	• Customer Access to digital documentation via Permits Online

Alternative Online Permitting Tools & Long-Term Digital Permitting Strategy

While significant strides and innovation are occurring with the development of the Permits Online application, it is recognized that there remain a number of service gaps, as noted above. It is estimated that it will take a number of years to fully build out Permits Online services for the building and development permit streams. It is further recognized that the Planning and Land Development Branches of the Department have not had the benefit of process improvement resources and as such have a significant amount of process improvement activity to be able to offer full digital servicing of planning related services.

Development and maintenance of in-house digital platforms requires a long-term commitment by the City for IT resources and sustenance of the AMANDA system. Currently, the PPD IT digital permitting work program is limited by the team's limited staffing resources, and the lifespan of the AMANDA system cannot be guaranteed.

In 2019, the Division was approached by 3rd party businesses with cloud-based solutions for permitting and/or inspections services. Such solutions offer a web-based experience for customers that links to an organizations data base system. Such services may have the potential to offer greater customer experience than can potentially be offered through in-house built solutions, and would reduce the demands for in-house application development by PPD IT services, enabling IT services to focus more on the integrity and function of the AMANDA systems as a records database system.

There are pros and cons to each approach (cloud-based vs. in-house application development).

Given the strategic importance of the development permits process, it is recommended in 2020 that the Division:

- continue to enable/transform the processing of commercial permits to a digital format
- continue to expand Permits Online offerings, including the spring launch of additional Housing Stream online application submission features
- carry out a strategic planning exercise to establish a long-term plan for the support of digital permitting services, supported by IT Resources funded by the permit researve
- as part of its strategic planning and investigation of options, that the Division pilot potential solutions in order to better understand the potential cloud-based solutions as long-term alternatives to in-house options.

The above recommendations are reflected in the PP&D Continuous Improvement Plan .