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This report is based on information and documentation that was made available to KPMG at the date of this report. KPMG has not audited nor otherwise attempted to independently verify the information provided unless otherwise indicated. Should additional information be provided to KPMG after the issuance of this report, KPMG reserves the right (but will be under no obligation) to review this information and adjust its comments accordingly.

Pursuant to the terms of our engagement, it is understood and agreed that all decisions in connection with the implementation of advice, opportunities, and/or recommendations as provided by KPMG during the course of this engagement shall be the responsibility of, and made by, the City of Markham. KPMG has not and will not perform management functions or make management decisions for the City of Markham.

Comments in this report are not intended, nor should they be interpreted, to be legal advice or opinion.

KPMG has no present or contemplated interest in the City of Markham nor are we an insider or associate of the City of Markham. Accordingly, we believe we are independent of the City of Markham and are acting objectively.

Limitations

The analysis performed were limited in nature and extent, and the analysis and procedures will not necessarily disclose all matters about the City of Markham's functions, policies and operations, or reveal errors in the underlying information. Our procedures consisted of inquiry, observation, comparison and analysis of City-provided data and information. The following findings reflect information limited to what was collected in stakeholder conversations throughout September 2023 to December 2023, as well as review of relevant documentation and data provided by the City. Stakeholder feedback was collected via in-person and virtual engagement sessions through a variety of in-person tactics and virtually by using KPMG's Microsoft Teams, respectively. This analysis reflects a point in time view, and does not take into account ongoing organizational change and evolution. KPMG did not independently verify the accuracy and completeness of information received.

Glossary

The following terms will be used within the interim report. These are defined up front so that the reader is clear as to what the report is referring to when certain terms are used.

Term	Definition
Current State	The current state captures how Markham's processes are currently implemented and aims to capture any pain points and challenges that are related to the currently ways of doing things. This is not necessarily the way in which processes have been established nor how processes "should be", instead it reflects what is actually happening.
KPI	Key Performance Indicator(s)
Future State	The future state is adapted from understanding the current state, where solutions are adopted and processes are simplified to be more Lean and efficient.
Lean	Lean is a way of thinking that prioritizes creating value with fewer resources and less waste and requires continuous experimentation. Lean thinking and practice occur together.
Waste in Lean	Waste in Lean is any activity that consumes resources but brings no value to the end users.
OPA	Official Plan Amendment
ZBA	Zoning Bylaw Amendment
VOC	Voice of the Customer
DAP/DRP/DARP	Development Application Review Process

Contents

01

Executive Summary

Executive Summary

The City of Markham ('the City' or 'Markham') like many of its peers across the GTA is facing increasing population growth, affordability, and ultimately current-process sustainability pressures. Recently, the City has seen an increase in development activity and unprecedented levels of inquiries, property transactions, and development applications. As such, in August 2023, the City and KPMG began the review of processes for 14 application types, which included:

1. Official Plan Amendment;
2. Zoning By-law Amendment;
3. Draft Plan of Subdivision including Technical Review;
4. Draft Plan of Condominium;
5. Site Plan;
6. Minor Variance;
7. Consent;
8. Heritage Site Plan;
9. Heritage Permit;
10. Townhouse Siting;
11. Site Alteration;
12. Draft Plan Extension;
13. Building Permit Application; and,
14. Building Permit Inspections.

Over the course of this work, both internal and external stakeholders emphasized the many strengths of the City and positively reflected on the opportunities to refine and enhance current processes and efforts.

Project Overview

The City of Markham engaged KPMG to undertake a Lean review fourteen of the City's development application processes. The key objectives of this review were identified by the City form the outset with a focus on Lean modernization by:

- Mapping existing relevant processes and procedures.
- Engaging internal and external stakeholders.
- Identifying improvement opportunities in the processes by using the eight wastes of Lean methodology.
- Measuring the three Lean "How's" for key process steps – how well, how fast, how often – and initially quantifying the opportunities.
- Identifying leading practices and insights from comparable municipalities regarding development application review.
- Identifying strengths and challenges through a Lean lens

This report and the recommendations are grounded in a broad evidence base, including both qualitative and quantitative sources of information:

- Consultation with 25+ City staff members, including leadership, senior management, and staff from various departments, such as but not limited to Building, Planning, Engineering, Legal
- Workshops and interviews with 25+ external stakeholders that included developers, engineers, planners, and consultants
- Online industry survey with 75 responses
- A thorough review of available documentation and analysis of available data; and
- Leading practice insights from KPMG subject matter experts

Executive Summary

Summary of Key Findings

Throughout our discussions and consultations with key stakeholders, we heard that the City's processes are generally working well. Some strengths identified include:

- Problem solving and solution-oriented culture
- City embraces technology
- Staff are responsive, helpful, and committed to supporting clients

However, we also heard of key challenges for each of the applications. In summary, some of those examples include:

- Legislative changes and pressures (e.g., Bill 109 and Bill 23 pressures on processing times)
- Ensuring applicant compliance with submission requirements
- Process inefficiencies throughout
- Internal staff changes that impact applicant timelines and customer service standards

Recommendations

This report contains 18 key recommendations for the City's consideration, building on what is working well today, maximizing value for money, and creating resilience for future changes in demand and service delivery. The recommendations are grounded in extensive stakeholder engagement, document review, data analysis, leveraging leading practices locally and nationally, and with KPMG's experience with municipal development processes.

Implementation Plan and Next Steps

Section 11 presents an implementation roadmap with prioritized actions for each of the 18 key recommendations.

For these recommendations to be successfully implemented, there is a need for there to be a single point of ownership of the whole process, for example, through an implementation committee. The implementation should be supported and directed by leaders, and senior management, and delivered by dedicated resources. This cannot be seen as an ad hoc activity for individuals or teams that may already be overburdened. In addition to implementation roadmap we have included a scorecard to support in the monitoring of implementation efforts at a high-level. Furthermore, a high-level change management framework is outlined in the Appendix to assist in supporting the success of implementing these recommendations, for the City's consideration. Working with staff and applicants, and deliberately collaborating across the process and implementation activities, will be a critical enabler to benefits realization.

Potential Reduction in Application Processing Time

If the City is successful at implementing all of the recommendations outlined in this report, it is anticipated that development application processing times could be reduced by an average of 32 business days. The time savings opportunities contained in this report represent 189,085 staff time hours, and 25,211 business days of time savings, based on average annual applications of 786.

Detailed information regarding time savings can be found in Section 9: Data Analysis on page 67.

How to Read this Report

This report has thirteen sections in addition to this executive summary and appendices. This report is intended to provide the City with a set of key recommendations alongside a high-level implementation plan for the City's consideration. It builds on the Interim Findings from November 2023, in which KPMG provided an overview of the current state key themes and corresponding opportunities.

This report should be considered in its entirety. Selection of, or reliance on, specific portions of the report could result in the misinterpretation of our comments and analysis. KPMG will not assume liability in connection with the reliance by any third-party on this Report.

KPMG reserves the right, but will be under no obligation, to revise the findings, conclusions, and calculations in light of any information that becomes known to KPMG after the date of the report.

This report presents data gathered, analysis conducted, and synthesized findings of the review. The remainder of this report is outlined as follows:

Section 2: This section gives further details the projects background and additional context;

Section 3: Provides an overview the approach and methodology, consisting of the Lean methodology and terminology utilized throughout the analysis, as well as a summary of key sources of information relied upon and the three phased workplan;

Section 4: Voice of the Customer summarizes the insights gathered from External stakeholders and the role those insights have with respect to the Lean review;

Section 5: Recommendations overview;

Section 6: Details the prioritized recommendations identified;

Section 7: Opportunity prioritization methodology and PACE Matrix

Section 8: Covers specific elements and analyses related to ePLAN;

Section 9: Highlights key data analyses and various other data points assessed to support opportunity identification;

Section 10: This section briefly draws attention to Bill 109 and the impacts as it relates to the current state vs. future state process maps, potential actions, and potential risks for consideration;

Section 11: Presents an implementation roadmap with prioritized actions for each of the 18 recommendations outlined in the report;

Section 12: This section provides a high-level post improvement scorecard to support the implementation efforts. The scorecard assists in measuring the implementation of the 18 recommendations in this report.

Section 13: The Next Steps section provides insights for the City's consideration on how to proceed with this information moving forward, while outlining key considerations and guidelines towards the milestones for the next phases of work to realize the recommendations documented within this report; and,

Appendices: The appendices include a variety of supporting materials, such as the initial long list of preliminary opportunities, aspects detailing insights to change management, jurisdictional leading practices, current state voice of customer analysis, and current state process maps.

02

Background and Context

Background & Context

Markham is a fast-growing municipality with a bold ambition to provide world class-leading development services. In September 2019, the City retained KPMG LLP (KPMG) to conduct an assessment of its development review processes.

The objective of the assessment was to identify recommendations to help ensure that Markham's development review processes are efficient, effective, and support excellence in the work environment. The report included 21 distinct recommendations to help Markham scale operations to match the increasing complexity and volume of development it was experiencing.

This current project is to conduct a detailed Lean assessment of specific development application types. As such, this work builds on the previous 2019 Review by using a Lean approach to identify additional efficiencies related to 14 specific application types.

The proposed Lean approach is designed to identify process steps that add value, remove unnecessary steps or waste, to create more efficient and streamlined processes, enhance existing process capacity and capability to improve development application processing times, while maintaining legislated requirements and excellence in customer service.

Streamline Development Approval Fund (SDAF)

The scale of the challenges many municipalities are facing is reflected across the province and in January 2023, as part of the Ontario Provincial Housing Summit, a $45 million fund was set up. Each of Ontario's 39 largest municipalities received an allocation from the province to help modernize, streamline and accelerate processes. The City of Markham received funding which has partially been allocated towards this Lean Review.
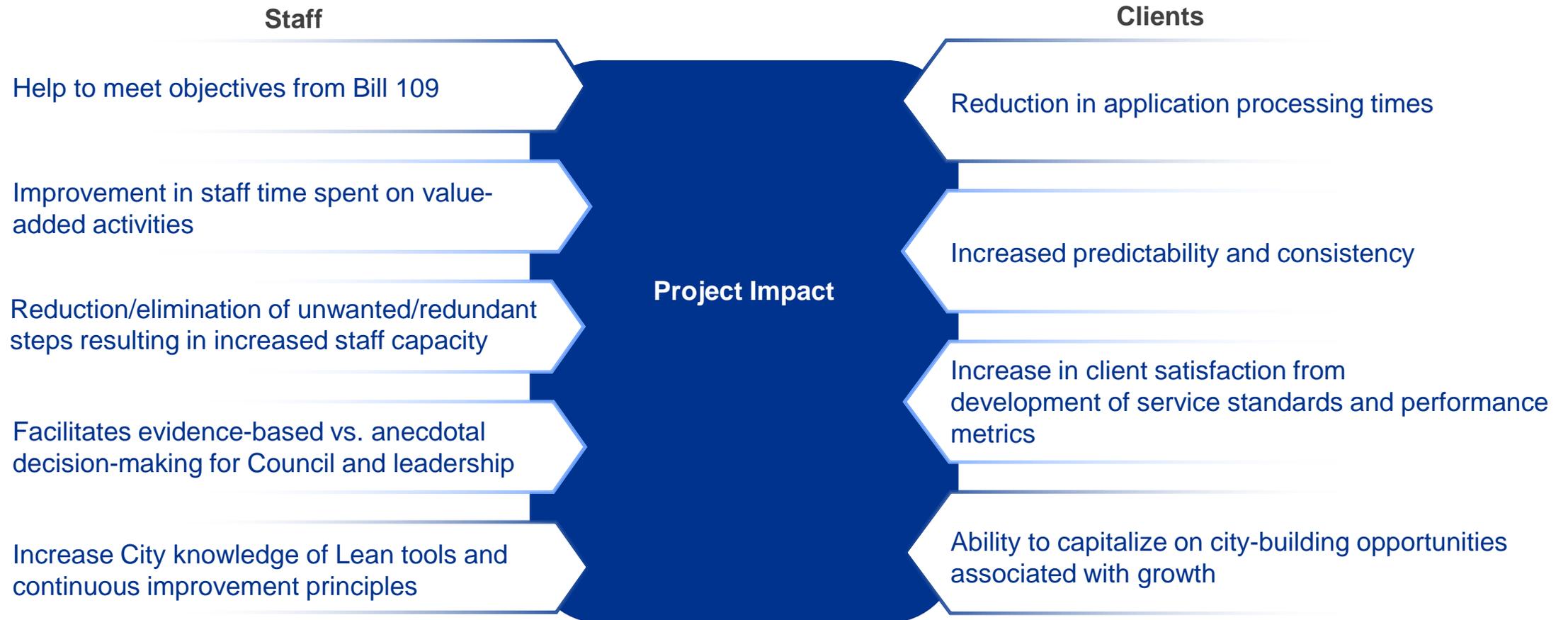
Project Objectives

The objective of the review is to improve the efficiency and effectiveness of Markham's Development Application Review Process (DRP) through a Lean modernization by:

- Mapping existing relevant processes and procedures
- Engaging internal and external stakeholders
- Identifying improvement opportunities in the processes by using the eight wastes of Lean methodology
- Measuring the three Lean "How's" for key process steps – how well, how fast, how often – and initially quantifying the opportunities
- Identifying leading practices and insights from comparable municipalities regarding development application review
- Identifying strengths and challenges through Lean lens, related to the development review process

The following application types are within scope for this project:

1. Official Plan Amendment
2. Zoning By-law Amendment
3. Draft Plan of Subdivision including Technical Review
4. Draft Plan of Condominium
5. Site Plan
6. Minor Variance
7. Consent
8. Heritage Site Plan
9. Heritage Permit
10. Townhouse Siting
11. Site Alteration
12. Draft Plan Extension
13. Building Permit Application
14. Building Permit Inspections

Why this Project Is Important

Staff

Clients

Project Impact

Help to meet objectives from Bill 109

Reduction in application processing times

Improvement in staff time spent on value-added activities

Increased predictability and consistency

Reduction/elimination of unwanted/redundant steps resulting in increased staff capacity

Increase in client satisfaction from development of service standards and performance metrics

Facilitates evidence-based vs. anecdotal decision-making for Council and leadership

Increase City knowledge of Lean tools and continuous improvement principles

Ability to capitalize on city-building opportunities associated with growth

03

Approach & Methodology

Lean Approach | Overview

KPMG's review was completed using a Lean methodology and approach. Our work was built on existing current state process maps and work-flows, identified pain points, challenges, and areas of opportunities within the context of the five Principles of Lean and the eight wastes.

Five Principles of Lean

1. **Voice of the Customer –** the expectations and needs of the stakeholders and what adds value from their perspective. Understanding the voice of the customer will help identify opportunities to remove waste in any process. This voice is imperative to knowing, and ultimately driving the directions of the remaining principles of Lean.

2. **Understand your Process –** having a thorough and complete appreciation of the current state processes and understanding which process steps add value and where waste may be present. Process mapping allows you to have a picture of your process so you can begin making improvements. Without it, it is difficult to have transparency and see where the problems are.

3. **Create Flow –** inefficiencies can sometimes be hidden, this is why it's important to identify 'wastes' in order to create improvements and flow. The goal of creating flow means for a process to have constant movement, eliminating bottlenecks or significant wait times to complete a task.

4. **Establish Pull –** many processes are pushed or "given" to the next user. This creates many forms of waste when the next area or person may not be ready to receive it - causing excess inventory and backlogs. Having a system of pull means you only supply what the customer wants, when they want it.

5. **Pursue Excellence –** Lean thinking is rooted in the continuous quality improvement philosophy. Lean is not a one-time event but rather a journey to continually improve our processes and always strive to supply the customer with value, from their perspective.

While reviewing the processes for the 14 application types, the Lean analysis focused on identifying opportunities within the following contexts:

- **Providing resolution to customers needs**
- **Identifying and eliminating process waste**
- **Redeploying resources into value-added activities**
- **Reduction or elimination of defects**
- **Improving process flows**
- **Doing necessary tasks**
- **Continual improvement**
- **Improving quality at the point of service**

Lean Approach | Eight Forms of Waste (DOWNTIME)

One of the first steps in the Lean approach is to start to "see" the waste in the processes. Generally speaking, waste in this context is defined as anything that does not add value from the customer's perspective. KPMG provided Markham staff a Lean 101 overview at the outset of this project, and each process mapping workshop was prefaced with an understanding of common Lean terminology, such as the eight forms of waste (below).

These terms are more than just words; they are critical elements that are used in categorizing and assessing areas of waste throughout each of the 14 application types. By categorizing areas of waste, it allows for clearer opportunity recognition and more fulsome appreciation for the implementation steps moving forward as an effort to mitigate wastes identified.

1 **Defects -** Work or services that are not completed correctly the first time. *e.g., applications that are not completed correctly the first time.*

2 **Over-production -** Doing more than what is required to complete the task. *e.g., multiple circulations leading to duplicate reviews and comments.*

3 **Waiting -** Idle time when material, information, people or equipment is waiting. *e.g., waiting on one or more commenting partners to complete their reviews.*

4 **Non-utilized Talent -** Not utilizing all the skills of the employees. *e.g., using plan staff for administrative tasks, versus value-add planning efforts.*

5 **Transportation -** Moving equipment, supplies or information from place to place. *e.g., the physical circulation of hard copies of development applications for review to 3rd party commenting partners.*

6 **Inventory -** More material, supplies, equipment, parts on hand than what is needed. *e.g., old documents sitting online, physical copies of paper files taking up space in office storage.*

7 **Motion -** Unnecessary movement by employees to complete an activity, including walking. *e.g., traveling to site, community meetings, etc.*
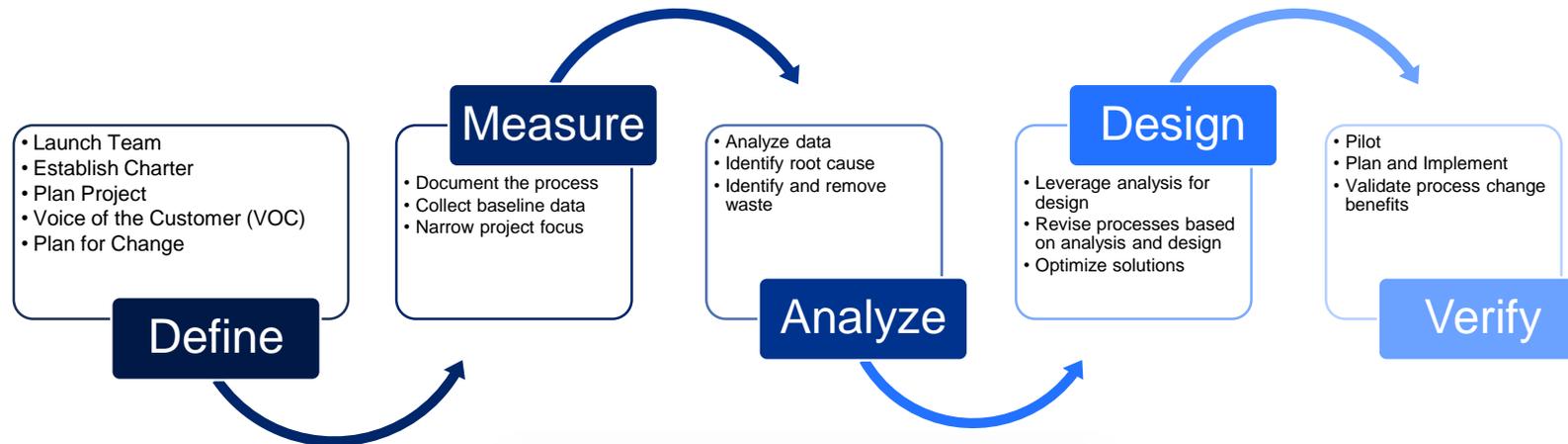
8 **Extra Processing -** Spending extra time and effort for an activity which often causes duplication of effort. *e.g., commenting partners reviewing resubmissions when the revisions are not relevant to their jurisdiction/authority/responsibility.*

Lean Methodology & DMADV Cycle

The first step of Lean is to identify who your customer is and determine what value means from their standpoint. For Markham, there are many different customers, both internal and external. The Define, Measure, Analyze, Design, and Verify (DMADV) process improvement methodology refers to a data-driven improvement cycle used for improving, optimizing and stabilizing business processes and designs. The DMADV improvement cycle is a core tool used to drive Six Sigma projects.

Process Improvement Methodology

Define
- Launch Team
- Establish Charter
- Plan Project
- Voice of the Customer (VOC)
- Plan for Change

Measure
- Document the process
- Collect baseline data
- Narrow project focus

Analyze
- Analyze data
- Identify root cause
- Identify and remove waste

Design
- Leverage analysis for design
- Revise processes based on analysis and design
- Optimize solutions

Verify
- Pilot
- Plan and Implement
- Validate process change benefits

Lean thinking is the belief that there is a simpler, better, easier way to complete our work

Project Work Plan | Overview

Phase 1: Planning & Project Initiation	Phase 2: Current State Assessment & Recommendations	Phase 3: Recommend and Report
Objectives Align on project plan, schedule & objectives, develop a strong foundation.	Map current processes; identify strengths, challenges, and opportunities for improvement.	Synthesize work into a final report.
Activities		
— Facilitate project kick-off	— Review and analyze documents and data	— Draft and present Future State Report
— Stand up project governance, key roles, and reporting structures	— Develop understanding of Voice of the Customer	— Review Future State Report with City Staff and Executive Leadership Team
— Confirm project objectives and scope	— Evaluate current as is process	— Deliver Future State Report
— Develop organizational change management workbook	— Conduct needs assessments workshops and interviews	— Present to the Development Services Committee (DSC) and Development Industry
— Identify documents & data	— Undertake benchmarking exercise	
— Develop stakeholder engagement plan	— Develop gap analysis	
— Finalize Workplan and Project Charter	— List improvement opportunities	
	— Develop future state process maps	
	— Identify problem areas, value add, and non-value add services	
Deliverables		
✓ Assessment Framework	✓ Current state report	✓ Implementation plan
✓ Project Charter	✓ Process maps – strengths, challenges, pain points	✓ Drivers of development process
✓ Bi-weekly status meetings	✓ Drivers, constraints and opportunities	✓ Prioritized recommendations
✓ Stakeholder engagement plan	✓ Identify 8 wastes of Lean in the process	✓ Lean savings calculator outputs
✓ Voice of the customer methodologies	✓ Process recommendations and mapping	✓ Considerations for implementation plan
✓ Organizational Change Management Workbook	› Train staff in Lean 101 (*to be completed in January '23*)	✓ Post-improvement evaluation plan
		✓ Updated process maps
		✓ Recommendations for ePLAN software workflows

✓ *Completed*

Document Classification: KPMG Public

Analysis

Through the period of September 2023 to December 2023, KPMG consulted with over 25 internal stakeholders to understand opportunities, challenges, and operational experience within each of the 14 development applications. Additionally, KPMG gathered 360-degree stakeholder feedback through Voice of the Customer consultations, which provided us with comprehensive perspectives of the development review process. Through this engagement of internal and external stakeholders, management and frontline staff, we have covered key touchpoints across the development review process. **The findings from our assessment are based on these five primary sources of information:**

Industry Engagement	Staff Engagement	Document Review and Data Analysis	Application Process Mapping	Industry Survey
25+ external Stakeholders (engineers, planners, consultants), discussing opportunities and strengths	**30+ hours of consultation with more than 25 City staff representing different job functions**	**210+ documents reviewed and an analysis of available data.**	**14 application types have been mapped through workshops**	**Industry survey which received 75 responses**

04

Voice of the Customer (Update)
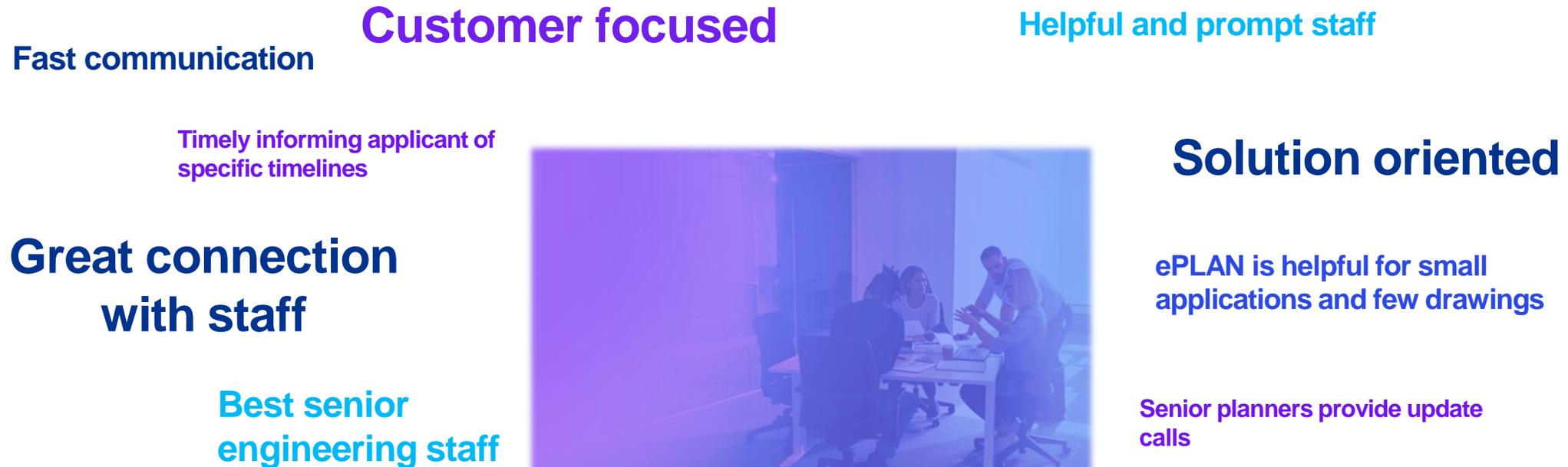
Voice of the Customer (VOC)

This section highlights the key findings from KPMG's VOC analysis of the current state of customer service delivered by City of Markham Development Services, based on feedback gathered during stakeholder interviews with local developers and planning consultants and online surveys.

KPMG hosted three VOC sessions with representation from over 25 of the City's largest and most influential clients in the development community. The VOC provides the City with insights into what adds value from the customers perspective, what the City currently does well, and where there are opportunities for improvements to the development review process from the customer's perspective. KPMG also distributed a survey to the industry to collect additional feedback on Markham's development review processes and received 75 responses.

Voice of Customer Analysis | Strengths

Throughout the consultations with internal and external stakeholders, there were several complimentary aspects captured as they relate to the caliber of staff with the City of Markham. At a high-level, some of those strengths are depicted below:

Customer focused

Fast communication

Helpful and prompt staff

Timely informing applicant of specific timelines

Solution oriented

Great connection with staff

ePLAN is helpful for small applications and few drawings

Best senior engineering staff

Senior planners provide update calls

Voice of the Customer Analysis | Key Opportunities

Insights from consultations held with internal and external stakeholders identified a number of pain points and challenges that occur in various stages of the development review process. These challenges have been further workshopped with City of Markham staff in an opportunities and prioritization exercise, resulting in key themes identified below. More details on insights including what stakeholders said in interviews and in survey responses can be found in Appendix E.

Conflicting Comments

Eliminate inconsistent and conflicting comments on application by establishing consistent procedures to reduce application churn and quantity of comments.

Application Contacts

Define single points of contacts for each application submitted to streamline communications internally and externally.

ePLAN Use

Review rigid intake ePLAN requirements and ensure they add value to the overall application submission rather than being an obstacle for applicants.

Empower Staff

Train and empower staff to make decisions on files to minimize recirculation of application and overall application process time.

Comments Matrix

Organize comments numerically in a matrix format in order for applicant to quickly and easily address application issues.

Application Transparency

Establish mechanisms that can provide applicants with automatic email notices of updates.

Key Opportunities

Document Classification: KPMG Public

Voice of the Customer Analysis | Survey Insights

KPMG's survey sent to the City's external stakeholders, developer and consultant engineers, designers, architects, etc. received 75 responses. Of those responses, notable findings supported the key challenges that were identified in the initial rounds of stakeholder engagement presented in the interim report and current stage assessment. Key highlights of survey results is captured in the figure below.

82%

70%

62%

42%

41%

75%
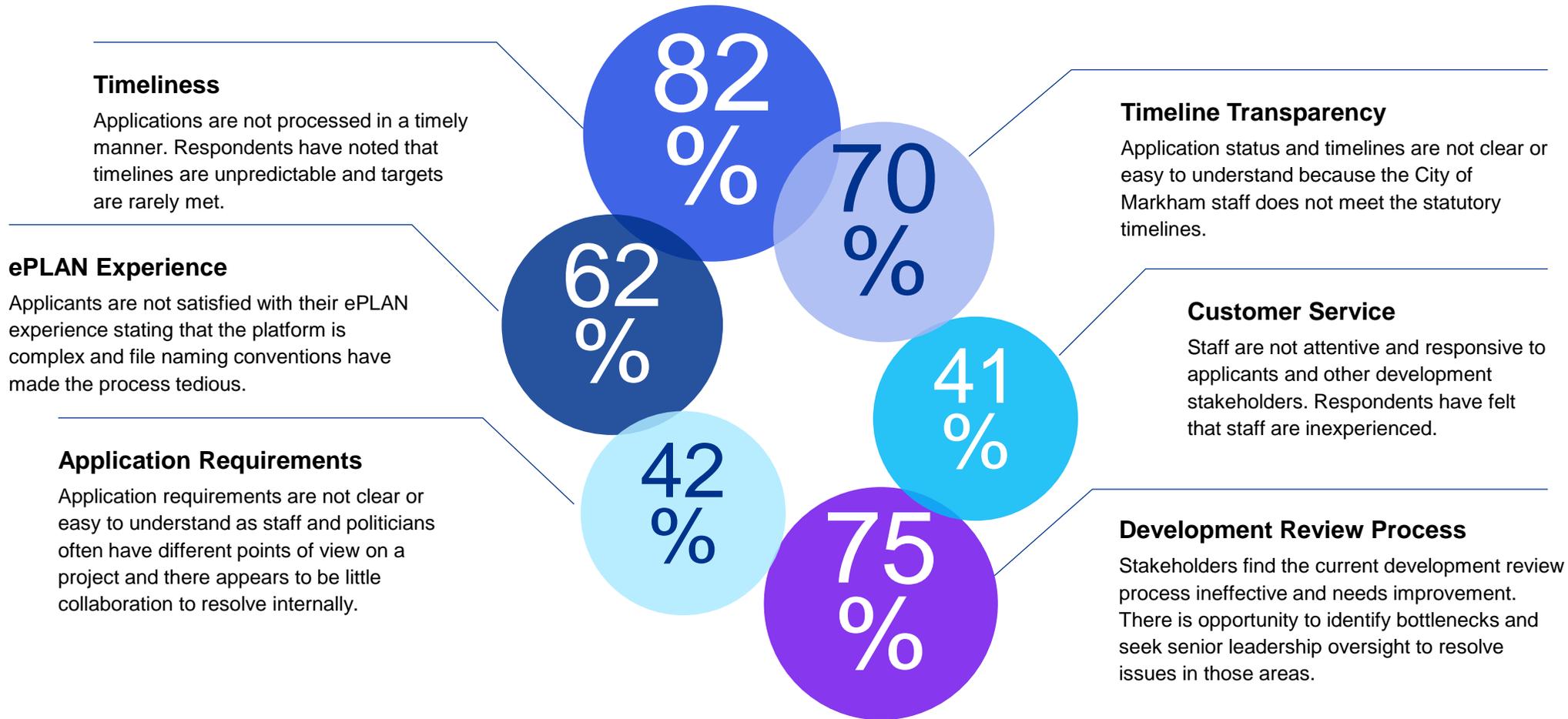
Timeliness

Applications are not processed in a timely manner. Respondents have noted that timelines are unpredictable and targets are rarely met.

ePLAN Experience

Applicants are not satisfied with their ePLAN experience stating that the platform is complex and file naming conventions have made the process tedious.

Application Requirements

Application requirements are not clear or easy to understand as staff and politicians often have different points of view on a project and there appears to be little collaboration to resolve internally.

Timeline Transparency

Application status and timelines are not clear or easy to understand because the City of Markham staff does not meet the statutory timelines.

Customer Service

Staff are not attentive and responsive to applicants and other development stakeholders. Respondents have felt that staff are inexperienced.

Development Review Process

Stakeholders find the current development review process ineffective and needs improvement. There is opportunity to identify bottlenecks and seek senior leadership oversight to resolve issues in those areas.

05

Recommendati ons Overview

Current State Assessment | Challenges

KPMG's Interim Report identified key challenges across the development application review process. Many of the challenges listed below were applicable to more than one of the 14 types of application that were reviewed and mapped with stakeholders as part of this project scope.

Pre-consultation and Application Submissions

- 15-day deadline to provide checklist is challenging to meet, especially from external agencies, e.g., York Region

- External agencies are not always in attendance

- Process inconsistencies across districts e.g., checklists via email, ePLAN or AMANDA

- Processes can stall when staff in different divisions do not agree on approach

Circulation and Commenting Process

- Applicants often require hand-holding during the application process

- Applications not always up to standard

- Commenting timelines are not met

- External commenting partners do not use ePLAN (MTO and CN Rail)

- All internal teams have the same 6-week deadline

- Limited licenses for software

- Limited agenda space in Council Meetings

- Multiple levels of approval are required for DSC report

Stakeholder Engagement and Approvals Process

- Site plan endorsement with conditions causes delays

- Frequent escalation from developers

- Lack of communication on application status

- Limited staff resources (1 GIS staff)

- Workflows in ePLAN are not flexible

- Inconsistency between completed construction and submitted plans, resulting in reapproval

- Lack of clear procedures, e.g., staff not always aware of OPA request form

Future State Recommendations

Building off the findings from our Current State analysis and the Prioritization Working Group sessions, 18 recommendations were identified and validated with leadership and grouped into four key opportunity areas below. Details and implementation considerations for each recommendation is included in *Section 6: Detailed Recommendations.*

Intake

Place greater emphasis on the process for review of application completeness during application pre-screen at Intake to ensure that requirements are met and applications are prioritized accordingly. This will reduce overall application Lead time and prevent negative impacts to application processing times downstream.

Circulation and Commenting

Department review and commenting tasks during circulation comprise up to 80% of staff time spent adding value to development application review and processing. Opportunities to find efficiencies in this area through staggering commenting circulations, producing commenting matrices, and standardization in a variety of ways, will contribute to an overall reduction in application processing timelines.

Approvals

Understanding delegation of authorities for approvals is vital to a streamlined process, and ensuring the relevant approvals are appropriate will contribute to efficiencies for Markham at the final approval stage of a process.

ePLAN

Fully utilizing and understanding ePLAN capabilities is vital for successful implementation of opportunities. Several of the previous themes all feed into ePLAN capabilities to fully implement.
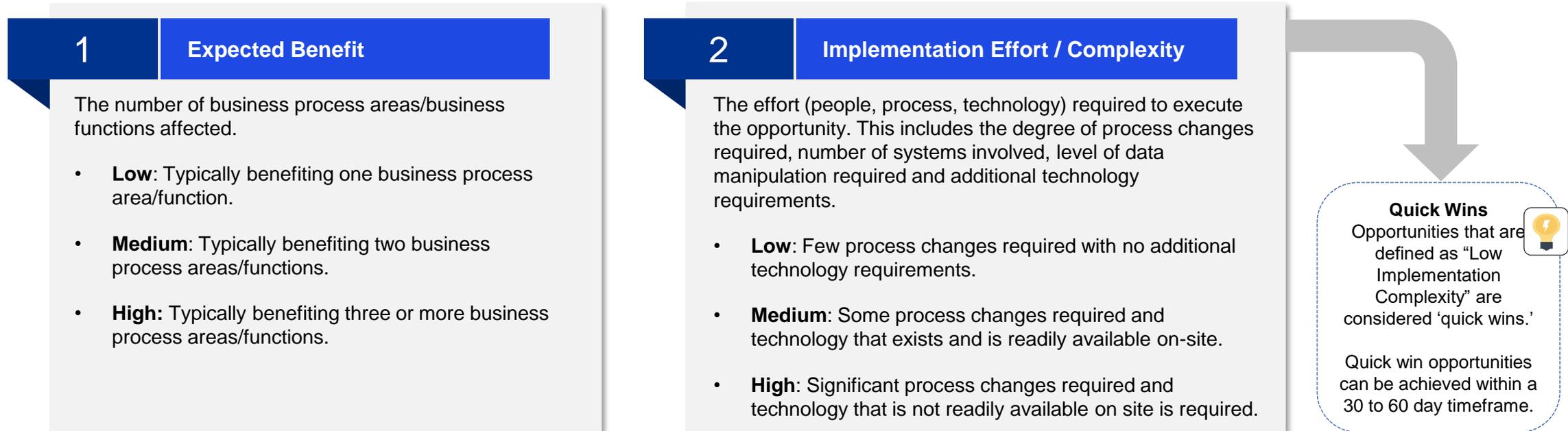
06

Detailed Recommendations

Improvement Opportunity Prioritization |
Methodology

Leveraging findings from the current state assessment, which included a list of challenges and opportunities gathered during the Voice of the Customer interviews and additional feedback from City of Markham staff, the original list of recommendations has been refined down to 18 recommendations. KPMG worked key members from the City of Markham in Working Group Prioritization Workshops to discuss the refined recommendations to understand which opportunities should be prioritized within an implementation plan. For each of the 18 recommendations, team members discussed relevance, validity, the level of effort required and the impact or benefit that the implementation of such a recommendation would bring to Markham.

Each opportunity was evaluated and considered across the following two dimensions:

1	Expected Benefit

The number of business process areas/business functions affected.

- **Low**: Typically benefiting one business process area/function.

- **Medium**: Typically benefiting two business process areas/functions.

- **High:** Typically benefiting three or more business process areas/functions.

2	Implementation Effort / Complexity

The effort (people, process, technology) required to execute the opportunity. This includes the degree of process changes required, number of systems involved, level of data manipulation required and additional technology requirements.

- **Low**: Few process changes required with no additional technology requirements.

- **Medium**: Some process changes required and technology that exists and is readily available on-site.

- **High**: Significant process changes required and technology that is not readily available on site is required.

Quick Wins
Opportunities that are defined as "Low Implementation Complexity" are considered 'quick wins.'

Quick win opportunities can be achieved within a 30 to 60 day timeframe.

The following slides describe each of the 18 refined recommendations for Markham in greater detail. Total application lead time and cycle time savings are outlined in **Section 9: Data Analysis**.

Detailed Recommendation #1: Application Intake

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• 42% of all applications require more than 2 submissions at the pre-screen stage due to minor housekeeping issues (e.g., file naming), which results in additional lead time for application processing • "Missing Required Sub-document; File Naming Issues" account for 40% of the reasons for resubmissions • Staff indicated that applications are accepted even when minimum submission requirements are not met
Opportunity theme	Application intake
Applications impacted	All
Savings opportunity	Time savings
Relevant metrics for analysis	• Average 28.71 days application stays in pre-screen stage
Savings opportunity	• 25% reduction of application processing time would save 53.9 hours (7.18 days) per application
Effort to Implement	High
Impact/Benefit	High

Specific Recommendations:

1. Reduce the number of documents required at submission to minimize file naming convention errors e.g., floor plans are supplementary and not required, so should be removed from the application package

2. Investigate what forms are being required as supporting documents for submission; ePLAN has these forms built into the system and if leveraged, would reduce errors and eliminate re-work

3. Development Technicians should develop a summary of application deficiencies in ePLAN and investigate system capacities to auto-generate an email notification to applicant with this summary of deficiencies

4. Development Technicians should track application deficiencies at pre-screen stage to determine what are the most common deficiencies and to prioritize opportunities to resolve those challenges with applicants

5. Create and publicize minimum design standards (similar to Development Engineering and Urban Design minimum standards) for application submission so applicant can build plans and drawings based on these requirements

6. Create submission standards templates for applicants to download and use for application drawings. The templates should be in landscape format, include space for stamp, and be in vector format with layers flattened, etc.

Implementation Considerations:

• Collaboration with internal departments and external users are required to determine document requirements
• Senior management involvement on strategic direction and development of design and submission standards
• Training/deployment strategy on new standards
• Meaningful monitoring strategies after implementation

Detailed Recommendation #2: Fee Calculation

In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• This process step is time-consuming and the errors in fee calculation often occur between "at submission" stage and "at approval" stage are not usually identified until annual review, creating errors in data and projections • The fee calculation process is automated based on data in info code, however, data is often not submitted in a standardized way and leads to fee miscalculation • Development Technicians must check if application fee has been paid prior to sending application into circulation and receive no notification from the system when payment is made
Recommendation theme	Application intake
Applications impacted	All
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• N/A
Effort to Implement	High
Impact/Benefit	High

Specific Recommendations:

1. Identify data required for reporting needs at intake

2. Include stat block requirement on drawings to facilitate automation

3. Re-evaluate existing fee by-law to streamline calculations and develop flat rates (include in upcoming fee review process)

4. Move data gathering and flat rate fee calculations to Quality Review/Deeming phase in process and collect per unit fee prior to approval to reconcile

5. Investigate system capabilities to trigger a notification to Development Technicians when application fee is paid

6. Provide training for Development Technicians on front end data input for automated fee calculation

7. Consider implementing a simple automated calculator for Development Technicians to use - collect full amount up front

Implementation Considerations:

• Training challenge on Development Technicians' interpretation of drawings
• Timing of collecting fees drives involvement of Development Technicians interpretation
• Most problematic application currently is subdivision
• Trickle down effect of collecting full amount up front – collaboration with internal departments and external users
• IT considerations and access to up-front fee model

Detailed Recommendation #3: Intake Workflow

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• No formal mechanism exists to assign work to Development Technicians at application intake. This results in lag time prior to Task Creation and Task Completion for application intake functions in ePLAN. Development Technicians receive notifications for every ePLAN action and can accept tasks depending on their workloads. • Lack of formal training to onboard new Development Technicians (a position that typically sees high turnover) causes inconsistencies in the process.
Recommendation theme	Application intake
Applications impacted	All
Savings opportunity	Time savings
Relevant metrics for analysis	• Current average lag time for application intake is 5.32 days. This means that an application is sitting in queue for value added work to start for over a business week.
Savings opportunity	• If lag time and task acceptance was reduced or eliminated, it would provide a 78% time savings that would reduce process task time from the current 9 business days to 2 business days.
Effort to Implement	Low/Medium
Impact/Benefit	High

Specific Recommendations:

1. Develop and implement a workload management system for Development Technicians to reduce task lag time;

2. Consider the formal assignment of applications based on workload balance (similar to Buildings Department) to align with division of assignment for planners

3. Consider assignment Development Technicians stay with application throughout application lifecycle to reduce time spent for staff to familiarize themselves with a new application

4. Ensure robust and up to date training program and SOPs for Development Technicians, and applicable supervisors

5. Develop a process to triage applications based on complexity/effort/building objectives etc., rather than relying on first in first out (FIFO) mechanism so that application process time relative to application complexity

6. Explore adding a feature to ePLAN that will generate notification with due dates to Development Technicians and Supervisors

Implementation Considerations:

• Current triage process is FIFO
• Development of a triage process and performance monitoring that includes staff and management
• Development and deployment of training program that includes staff and management
• System capabilities for system generated notifications

Detailed Recommendation #4: Standardization of Commenting and Circulation

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• Changes made by mark up are not tracked and system has no screening capabilities to compare and identify changes in file versions. Applicants to not typically provide an explanation of how comments were addressed. Development Technicians need to manually go through resubmitted drawings to confirm applicant has addressed all comments • Little criteria in place to determine project complexity and whether application is major or minor in nature and typically requires senior management input, causing delays • No standardized format for delivery of comments and markups on drawings • Commenting partners often do not provide detailed comments on ZBA, but will identify major concerns (fire and waste) in subsequent site plan applications usually submitted after second ZBA re-submission • External commenting partners do not adhere to required timelines for commenting
Recommendation theme	Commenting & Circulation
Applications impacted	All
Savings opportunity	Time savings
Relevant metrics for analysis	• Department review, comments and re-circulation make up 80% of total application time • Department review highest contributor of re-circulation (132 processing days)
Savings opportunity	• 25% reduction in department review would save 247.5 processing hours (33 days) per application
Effort to Implement	Low/Medium
Impact/Benefit	High

Specific Recommendations:

1. Supply applicant with comment matrix identifying deficiencies, and require applicant to complete comment matrix to demonstrate how each comment/issue has been addressed

2. Develop pick-lists for comments and standardize commenting to use Change Mark feature; so that comments can be easily exported from ePLAN to excel document to create a comment matrix

3. Identify and standardize what each department is reviewing during each circulation to eliminate duplicative work i.e., there is current overlap between what Operations and Engineering is reviewing and what Planners and Development Technicians are reviewing

4. Seek more detailed/less neutral comments during initial circulation, which should require fire and waste disciplines to provide comments for Site Plan applications

5. Set standing meeting with external commenting agencies to discuss active submissions requiring their input

6. Development Technicians should confirm that resubmissions have addressed all comments before accepting the application

Implementation Considerations:

• Involvement of senior management and collaboration with internal departments and external users in development of circulation standards

Detailed Recommendation #5: Knowledge Transfer Protocol

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• There is a lack of knowledge transfer or handoff mechanism for when staff are on leave or move to a new role • This results in contradicting comments and lack of consistency in file review
Recommendation theme	Commenting & Circulation
Applications impacted	All
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• N/A
Effort to Implement	Medium
Impact/Benefit	Medium/High

Specific Recommendations:

1. Establish a file transfer protocol through the use of SOPs to ensure consistency and to reduce duplication of work so that application progression is not stalled by new reviewers.

2. Provide training on how application file management should be kept so that file handover can be seamless for both the City and the applicant.

Implementation Considerations:

• Development and deployment of training program on knowledge transfer

• Involvement of senior management on development of standard operating procedures for file transfer

• Ongoing monitoring strategy to ensure goals are met

Detailed Recommendation #6: Application Review Sequence and Timelines

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• Development Technicians circulate applications to commenting partners and do not consider application assignment based on application type, complexity, etc. • Some departments' review are dependent on another team's comments, e.g., transportation can't provide comments until zoning review is complete • OPA/ZBA applications are occasionally stalled when staff cannot agree on approach, e.g., applications related to the Markham Centre Secondary Plan • 6-week commenting deadline is rarely met • VOC: employees are not able to make decisions without escalating issues to management • VOC: reviewer is not accountable for providing comments that do not add value
Recommendation theme	Commenting & Circulation
Applications impacted	All
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• N/A
Effort to Implement	Medium/High
Impact/Benefit	Medium

Specific Recommendations:

1. Standardize circulation criteria for each application type and build into system

2. Allocate time for lead planner to act as project manager to review and address conflicting comments (i.e., spearhead comment resolution), prior to returning application to applicant

3. Stagger the review and commenting timelines for key departments earlier, rather than circulating all at once - e.g., zoning needs to be involved earlier in the process to add value, same request of Parks - ePLAN has capabilities to allow a reviewer to create a sub-circulation

4. Establish standardized tier 1 circulation and tier 2 sub-circulation to accommodate dependent commenting cycles

5. Put emphasis on learning to equip staff with the knowledge they need to address application issues and make decisions using their professional judgement. Encourage planners to act as Project Managers for file progression.

6. Complete analysis on late stage comments to determine what comments add value and why new comments continue to be added in subsequent (3+) circulations

7. Enforce no late stage application resubmissions (beyond 2 resubmissions) unless approved by Manager/Supervisor

8. Enforce ending review cycles early

Implementation Considerations:

• Senior management is involved in determining circulation tiers and enforcement strategy
• Determination of penalties
• Development and deployment of staff training

Detailed Recommendation #7: Reject Mid-review Cycles

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• ePLAN circulation issues - sometimes applicants will email additional project drawings directly to reviewer and manually by-passes the system during a mid-review cycle, impacting performance metrics and reporting and creating significant risk to the City with staff working from different plans, etc. • Lack of coordination and disconnected communication from applicants and their consultants, impact delayed timelines for application processing
Recommendation theme	Commenting & Circulation
Applications impacted	All
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• N/A
Effort to Implement	Low
Impact/Benefit	Medium

Specific Recommendations:

1. Reject mid-review cycle uploads and do not permit workflows outside of ePLAN

2. If mid-review cycles are necessary, establish formal criteria for circumstances when an exception should be granted and ensure stakeholder are aware of this practice

3. Update ePLAN to include applicant owner and consultants on application related notifications and emails to improve communication between application

Implementation Considerations:

• ePLAN capabilities on adding additional users and assigning notifications

• Implications of removal of mid-review cycle upload and moving to an exception basis only due to risk exposure

Detailed Recommendation #8: PDF File Accessibility

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• Sign creation requires the use of an Adobe Illustrator template, but very few staff have access to the software, and the two available licenses are shared and can only be accessed through Citrix VPN. Staff estimate 25-45 mins is required to create each sign due to technology issues with Citrix
Recommendation theme	Commenting & Circulation
Applications impacted	All (except requiring Committee of Adjustment applications)
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• N/A
Effort to Implement	Low
Impact/Benefit	High

Specific Recommendations:

1. Take sign template and add to website for applicants to work on sign with planner sign-off

Implementation Considerations:

- Applicable for all applications except Committee applications
- Consider exploring purchasing full licenses of Adobe Illustrator software for designated staff for Committee applications
- Availability and willingness of planner for process change
- Development of instructions for completion of template and terms of applicability
- Collaboration requirement with planner

Detailed Recommendation #9: Streamline Workflow Approval

In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• Five levels of approval are required for each Staff Recommendation Report made to DSC • Approvals for this Report are not automated by eScribe
Recommendation theme	Approvals
Applications impacted	All
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• N/A
Effort to Implement	Low
Impact/Benefit	High

Specific Recommendations:

1. Automate workflow approvals in e-Scribe and fully leverage escribe for preparation, review and approvals of all reports for DSC.

2. Utilize components of Office 365 to streamline workflow commenting feedback and finalizing of the report live and provide training on use

Implementation Considerations:

• Office 365 go live date and capabilities available

• Ability for all reports requiring DSC approval to use eScribe

• Required approvals at each level

• Development of training program for use on Office 365

Detailed Recommendation #10: Review Endorsement Mechanism

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• Awarding "endorsed with conditions" decision is not a Planning Act requirement; exposes City to significant risk • Endorsement appears to be awarded pre-maturely where applications often have significant issues that have yet to be resolved (e.g., cost estimates and final drawings, land appraisal, and ESA process) • Applicants take advantage of the conditional building permit and continue to build, instead of just completing foundation work • Applicants sometimes wait until building construction is underway before submitting final drawings and outstanding securities and fees to the City • Developers often provide critical info as late as possible to reflect market value, adding to agreement timelines that take approximately six weeks to draft
Recommendation theme	Commenting & Circulation
Applications impacted	Site Plan
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• NA
Effort to Implement	Medium/High
Impact/Benefit	High

Specific Recommendations:

1. Consider alternate ways to minimize risk to City but still facilitate developer progress

2. Establish list of what endorsement supports e.g., grading and servicing, etc.

3. Consider establishing formal warnings or punitive actions to prevent developers from building beyond foundations

4. Consider removing endorsement process and only approve applications once all comments and conditions have been addressed

5. Consider taking securities in its entirety from developers up front

6. Implement opportunities through Bill 109 changes

Detailed Recommendation #11: ePLAN Integration with Legal Processes

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• Legal department does not use ePLAN • Legal lacks a line of sight on application status in ePLAN workflow, applicant puts pressure on legal staff to interject into planning approval and engineering technical review process to speed up agreement • Some conditions provided to legal do not make sense and require numerous circulations internally to clarify intent and finalize • Endorsements do not provide enough information for Legal to draft agreement • Agreements are circulated by email and any changes are made using tracked changes and will require Legal to manually copy changes into one master copy
Recommendation theme	ePLAN
Applications impacted	Site Plan
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• N/A
Effort to Implement	Low
Impact/Benefit	Medium

Specific Recommendations:

1. Legal to develop a document management system for review, edit and input of documents; or be provided with read-only access to facilitate line of sight for application status.

2. Planner should ensure that Legal is provided with agreement provisions from development engineering and urban design ahead of the endorsement so that agreement process can advance efficiently

3. New site plan agreement template that is under development (completion by the end of 2023), will provide departments with a pick-list of provisions, ensuring that phrases are worded correctly and applicable

4. Provide Legal department with read-only access to ePLAN to enable line of sight into status of applications for Legal.

Implementation Considerations:

• IT and access considerations for a new document management system

• Development and deployment on training of usage of document management system and agreement template

Detailed Recommendation #12: Application Stamping

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• ePLAN does not give option to re-endorse a plan after changes have been made to original approved document. Essentially drawings have to be re-stamped even after endorsement
Recommendation theme	ePLAN
Applications impacted	All
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• N/A
Effort to Implement	High
Impact/Benefit	High

Specific Recommendations:

1. Review ePLAN workflow and consider if changes to system need to be implemented to reduce re-stamping requirements

2. Evaluate the purpose / value in stamping drawings and consider eliminating re-stamping requirements and update/replace procedures to reflect electronic workflow

Implementation Considerations:

• Electronic workflow capabilities

• Compensating process steps if stamping eliminated

Detailed Recommendation #13: Final Sign-off

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• Draft Site Plan/Subdivision Agreement is circulated for review by all commenting partners for sign-off; There is no established timeline that is provided to departments, requiring them to sign-off on the agreement. • There is no timeline established for the final approval body. The final approval body does not utilize digital signatures, so the Agreement is delayed. Typical wait time for signed agreement is 2-6 weeks and final approval body never makes changes to agreement.
Recommendation theme	Approvals
Applications impacted	Site Plan/Subdivision
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• N/A
Effort to Implement	Low
Impact/Benefit	High

Specific Recommendations:

1. Establish formal timelines for commenting partners to complete final sign-off (sequence/deadlines etc.)
2. Final approval body to use digital signature
3. Consider redefining delegation of authority for site plan approvals, and have additional approvers to the Final approval body who have ability to sign-off

Implementation Considerations:

• Ability to modify delegation of authorities
• Current application turnaround time for site plan (urban design currently has 2-weeks)
• Delegation of authority potential modifications
• Circulation strategy on sequence and deadlines for commenting partner sign-off
• Potential training for digital signature usage

Detailed Recommendation #14: Heritage Committee Delegations

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• Heritage Markham committee (residents in heritage neighborhoods, appointed by council, and two city councilors) meeting held (once a month, second Wednesday each month) as an advisory body. Committee composition does not have design expertise, where their feedback may not be very valid. e.g., SPC are complicated and technical
Recommendation theme	Approvals
Applications impacted	Heritage Site Plan
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• N/A
Effort to Implement	Low
Impact/Benefit	Low/Medium

Specific Recommendations:

1. Decision-making authority should be delegated to staff. Reduce number of applications that require Committee approval, e.g., should only be required for ZBA and OPA, but not SPC

2. Delegate sign-offs on heritage site plan applications to manager level to speed up process decision-making

3. Revisit terms of reference on assigning Heritage Committee

Implementation Considerations:

• Redevelopment of delegation of authorities and messaging out on new delegations

Detailed Recommendation #15: Building Permit Submission Standards

In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• Staff reported 90% of applications are sent back for rework, submission standards based on system requirements, applicants aren't reading the 5-page guidance
Recommendation theme	ePLAN
Applications impacted	Building Permit
Savings opportunity	Time savings
Relevant metrics for analysis	• Average of 130 days spent on applicants resubmitting overall applications.
Savings opportunity	• 25% reduction in application re-submissions would save 244 processing hours (32.5 days) per application
Effort to Implement	Medium
Impact/Benefit	High

Specific Recommendations:

1. Determine if ePLAN system enhancements will address common submission errors, or consider adjusting submission requirements to address issues.

Implementation Considerations:

• Timing of ePLAN Wizard to be rolled out in next fiscal year

• ePLAN System enhancements terms and details for consideration

• Submission requirements

Detailed Recommendation #16: Building Inspection Report Submission

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• The building inspector will prepare a report (type of inspection as needed, some don't require a report) and send to applicant by email (target for same day). Report not able to be prepared/input on site - inspectors need to return to car or office and submit. Reports don't get sent out on the same day - insufficient time, holding applicant to apply for future inspections • Collection of engineer reports, site visit reports etc. from all consultants (structural, mechanical, architectural etc.) and completion of required filing • Receive lots of reports/folders and have to attach to AMANDA (very manual) to close permits - high time requirement - all via email for inspections
Recommendation theme	ePLAN
Applications impacted	Building Permit Inspection
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• N/A
Effort to Implement	Medium
Impact/Benefit	High

Specific Recommendations:

1. Have dropdown feature for all required documents based on applicant type to ensure documents complete and inspector aware when document uploaded (incorporate in new portal)

2. Investigate whether inspection results and report can be done on site (using new software) to provide report in real time

Implementation Considerations:

• System capabilities

• Training on use of new capabilities

Detailed Recommendation #17: ePLAN Application Submission

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• Inconsistency in the way applications and related files/supporting documents are received and file types – some are emailed directly, others are submitted via ePLAN • Applications sent via email need to be manually added to AMANDA as opposed to automatically when submitted via ePLAN. Results in extra work for Development Technicians
Recommendation theme	ePLAN
Applications impacted	All
Savings opportunity	Time savings
Relevant metrics for analysis	• Applicant resubmission is the second longest process after department review with an average of 130 days spent back and forth between the City and applicant
Savings opportunity	• 25% reduction in application re-submissions would save 244 processing hours (32.5 days) per application
Effort to Implement	High
Impact/Benefit	Medium

Specific Recommendations:

1. Require all application types to be submitted using ePLAN
2. Develop formal guidance on exceptions with input from senior management (e.g., when files do not need to be submitted through ePLAN etc.)

Implementation Considerations:

• Engagement with senior management to develop an ePLAN strategy
• Communication of changes to internal and external stakeholders

Detailed Recommendation #18: Zoning Examiner Availability

🌐 In the Working Group Prioritization Workshop, KPMG and Markham determined the following refined recommendations to be considered for implementation.

Topic	Analysis
Issue Summary	• There are only four full-time zoning examiners that cover work in the four planning districts, leading to frequent bottlenecks in the discipline
Recommendation theme	ePLAN
Applications impacted	Building Permit
Savings opportunity	Time savings
Relevant metrics for analysis	• NA
Savings opportunity	• N/A
Effort to Implement	High
Impact/Benefit	High

Specific Recommendations:

1. Review resources available for zoning reviews provided to planning department.

Implementation Considerations:

• Engage senior management on resource assessment and opportunities

07

Opportunity Prioritization

Recommendation Prioritization

Through the Working Group Sessions held with City of Markham leadership, the level of effort required and the benefits/impacts of each of the recommendations was better understood. This information help determine the placement on the PACE Matrix to influence recommendation prioritization. Recommendations for improvement are defined by projected implementation effort and outcome benefit to the organization/customer. Ideas are plotted on a matrix (see image below) to determine which opportunities to prioritize, action, consider, or eliminate.

P = Priority

These ideas have the highest anticipated benefit and are the easiest to implement. These ideas/solutions should be implemented first.

A = Action

These ideas have slightly lower benefit but are still relatively easy to implement. These ideas should occur as a follow-up after the P items have been implemented and are considered for short term implementation.

C = Consider

After P and A ideas have been implemented review the ideas that were in the consideration area. The team can decide as to whether the difficulty encountered with implementation is worth the benefit.

E = Eliminate

These improvement ideas are not considered within the scope of a Lean process improvement project and should be considered as long-term implementations as they represent high benefits and require significant effort to implement. These projects are considered strategic initiatives whereby they require process improvement, systems and culture considerations, and significant strategy assessment prior to implementation.
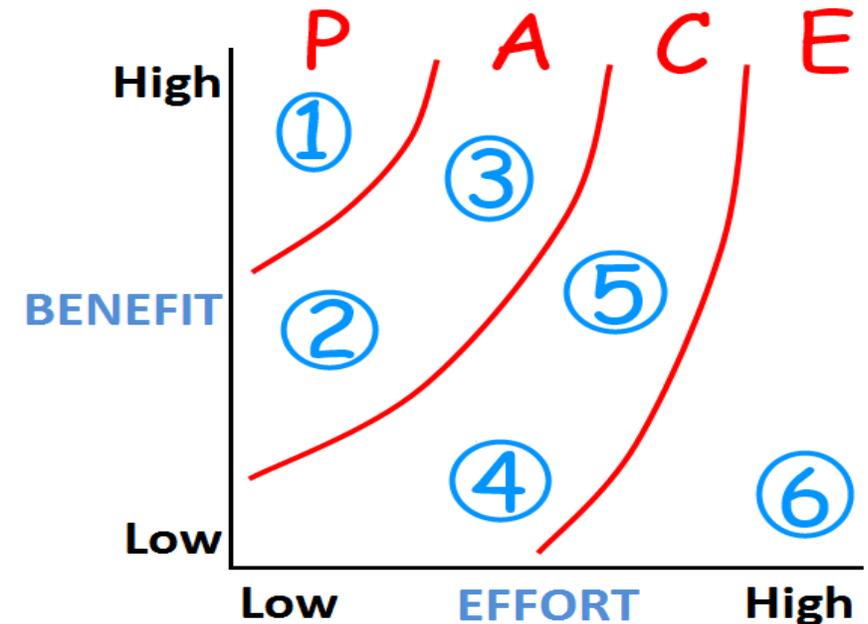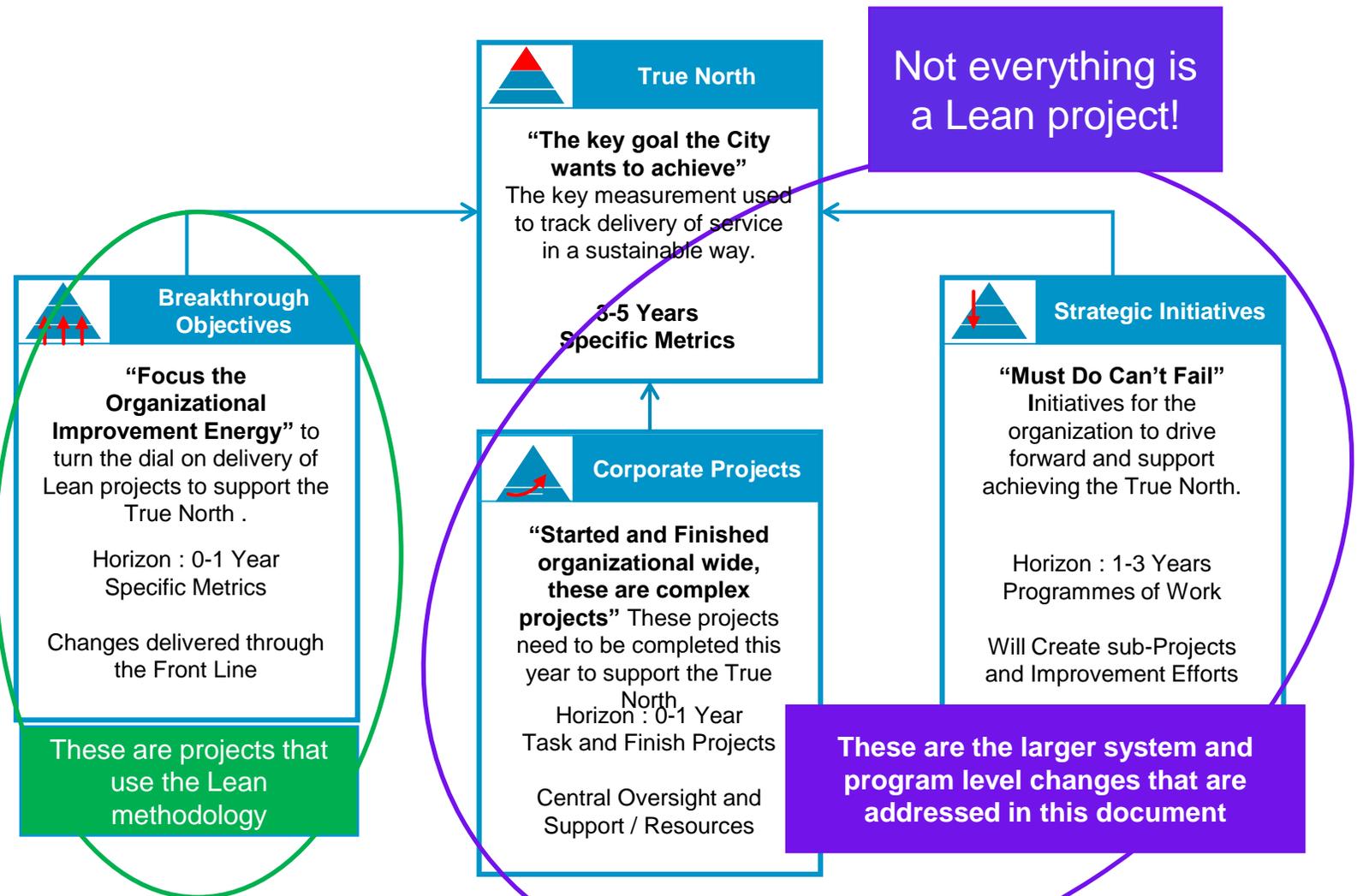
Understanding Where Lean Fits Into The City's Transformation

Lean Projects

A Lean project is delivered by a team and can be completed in a maximum 120 days. Most Lean projects focus on one process that can cover one to four business areas and is facilitated by a Yellow, Green, or Black Belt. A Lean project can support an overall system change initiative but would only be a portion of the overall project. The PACE matrix's first two categories are projects that could fall under the Lean methodology. The "C and E" are typically too large to use the Lean project methodology to complete.
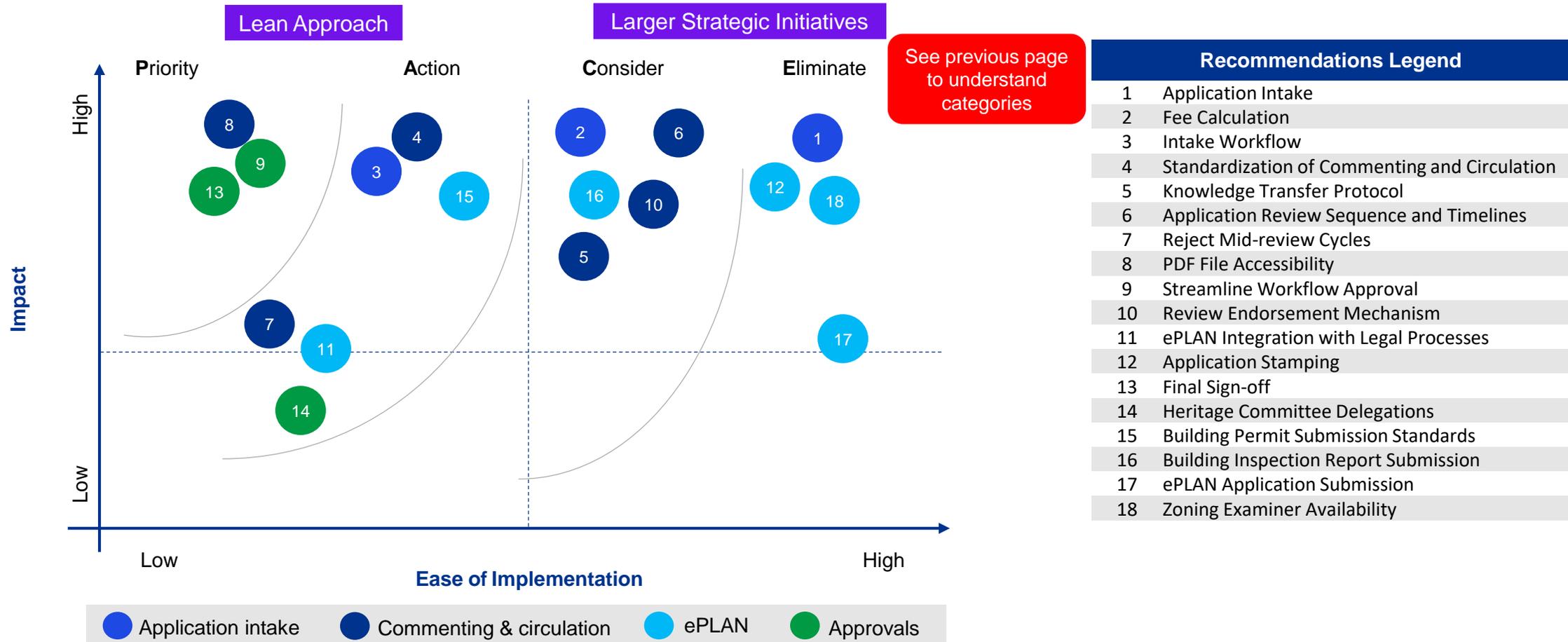
System Level Changes

This report identifies several system level changes that require significant support to complete. Some of these are identified in the "C and E" columns of the PACE matrix. Any item falling into the "E" or eliminate column mean they should not be approached using the Lean methodology to implement. These should have a full project management approach and are typically long term change initiatives. These are typically folded into Corporate and Strategic planning, this is due to the resources, both financial and human, that are required for successful implementation.

Breakthrough Objectives

"**Focus the Organizational Improvement Energy**" to turn the dial on delivery of Lean projects to support the True North .

Horizon : 0-1 Year
Specific Metrics

Changes delivered through the Front Line

These are projects that use the Lean methodology

True North

"**The key goal the City wants to achieve**"
The key measurement used to track delivery of service in a sustainable way.

3-5 Years
Specific Metrics

Corporate Projects

"**Started and Finished organizational wide, these are complex projects**" These projects need to be completed this year to support the True North.
Horizon : 0-1 Year
Task and Finish Projects

Central Oversight and Support / Resources

Strategic Initiatives

"**Must Do Can't Fail**" **I**nitiatives for the organization to drive forward and support achieving the True North.

Horizon : 1-3 Years
Programmes of Work

Will Create sub-Projects and Improvement Efforts

Not everything is a Lean project!

These are the larger system and program level changes that are addressed in this document

PACE Matrix Recommendations

The following matrix maps each of the 18 refined recommendations from previous slides for consideration in implementation. Three recommendations have been identified as priority for implementation and will be discussed in a Lean context on the following slide.

Lean Approach

Larger Strategic Initiatives

Priority   **A**ction   **C**onsider   **E**liminate

See previous page to understand categories

Impact (High / Low) — Ease of Implementation (Low / High)

	Recommendations Legend
1	Application Intake
2	Fee Calculation
3	Intake Workflow
4	Standardization of Commenting and Circulation
5	Knowledge Transfer Protocol
6	Application Review Sequence and Timelines
7	Reject Mid-review Cycles
8	PDF File Accessibility
9	Streamline Workflow Approval
10	Review Endorsement Mechanism
11	ePLAN Integration with Legal Processes
12	Application Stamping
13	Final Sign-off
14	Heritage Committee Delegations
15	Building Permit Submission Standards
16	Building Inspection Report Submission
17	ePLAN Application Submission
18	Zoning Examiner Availability

Legend: ● Application intake ● Commenting & circulation ● ePLAN ● Approvals

Prioritized Recommendations

Prioritized Lean Projects

Lean projects represent projects that can be fulfilled using Lean process improvement techniques, and can be resolved and remediated through process improvements. These projects can be completed through future state mapping, Kaizen event, Just Do It (JDI), Rapid Improvement Event, among other Lean tools.

Based on the PACE Matrix, the following recommendations should be prioritized sequentially for implementation as Lean projects:

- PDF File Accessibility (Recommendation #8)
- Streamline Workflow Approval (Recommendation #9)
- Final sign-off (Recommendation #13)
- Building Permit Submission Standards (Recommendation #15)
- Intake Workflow (Recommendation #3)

Prioritized Strategic Initiatives

Strategic projects represent projects that require significant effort and participation for implementation. There are process improvement components required in implementation, however require additional systems, culture and strategic input, senior management involvement among additional considerations.

Based on the PACE Matrix, the following recommendations should be prioritized for implementation as Strategic projects:

- Fee Calculation (Recommendation #2)
- Application Intake (Recommendation #1)
- Standardization of Commenting and Circulation (Recommendation #4)
- Application Review Sequence and Timelines (Recommendation #6)

08

ePLAN Analysis

ePLAN | Improvement Opportunities

KPMG facilitated three ePLAN specific workshops with Process Administrators, as well as consulted the City's external stakeholders (developers, consultants) on their experience using ePLAN. High level themes including lacking staff training, absence of standard operating procedures, gaps in management knowledge and engagement with system, and issues with data integrity were identified during our consultations. Key improvement opportunities are outlined below, and 15 pain points and improvement opportunities are included in our detailed recommendations on subsequent pages.

What We Heard

- Staff currently lack knowledge regarding the sequence of steps in the workflow and cannot make informed decisions on what actions to take in the system to proceed. This was evidenced by the absence of ePLAN specific pain points brought forward from Planning staff during KPMG's process mapping workshops. Staff are lacking confidence and knowledge regarding system functionality in order to effectively reflect on and identify system pain points.

- Standardized ePLAN procedure documentation is currently lacking. As new procedures are developed, there is no consistent means of communication to all staff on procedural changes.

- Staff reported 80% of ePLAN standard procedures are sitting in "draft" form but not yet approved by management.

- Process Improvements Committee has been established but is not effectively utilized to solution issues.

- Staff reported 98% of ZBA/OPA files still open in system due to staff not closing workflow loops when a project is finished, resulting in data integrity issues.

Staff Training

- Provide staff with more robust training of all ePLAN capabilities
- Ensure knowledge transfer process is established regarding ePLAN capabilities for continuous learning and onboarding of new staff.
- Identify ePLAN champions within each team to act as dedicated resource for training and answer related queries.
- Require use of standardized workflows and procedures within ePLAN and assign ownership for continuous updates standard operating procedures for internal and external stakeholders.

Management Engagement

- Identify one management level ePLAN champion who understands the system and can make decisions in collaboration with the Process Administrators.
- The management champion should understand system settings, determine staff permission levels, and be able to effectively communicate to all staff the importance of using standardized workflows for maintaining data integrity and reporting purposes.
- Standard operating procedures for ePLAN sitting in 'draft' form should be approved and implemented.

Data Integrity

- Develop procedures to close workflow loops in order to preserve data integrity and facilitate reporting
- Reconfigure workflows and ePLAN inputs as required to enable efficient means of data collection and reporting and minimize manual manipulation of data.
- Create ePLAN dashboard to provide line of sight into lifecycle of applications including Lead time, Cycle time, and Process time.

Best Practices

- Markham's Building Department can be looked to for some best practices regarding management engagement/structure around ePLAN, as the department has effectively trained all managers to have a functional understanding of the system.
- Stakeholders reported that the City of Mississauga has seen implementation successes regarding ePLAN. Learnings from KPMG's interview with the City of Mississauga regarding their ePLAN implementation is included on page 58.

Document Classification: KPMG Public

ePLAN | Detailed Recommendations (1/4)

Application Type	Process Step	Description	Ideas & Recommendations
All	ePLAN Workflow	Metrics are not taken in consideration in the workflor, currently not a step mapped in ePLAN. Timeline metrics while Dev Eng. is waiting reflects poorly on staff when reasons for delays may be beyond their control.	Include workflow step in ePLAN to improve performance metrics and data.
All	ePLAN Workflow	ePLAN workflows are lacking flexibility. Input from staff at time of initial implementation was based an 'ideal' process flow and workflows don't accommodate common deviations from ideal process, resulting in manual effort to 'tidy' up records and manipulate data for reporting purposes.	New versions *(version 9.2)* of ePLAN may solve some workflow flexibility issues. Custom workflows can be applied to specific applications, and there will be a teams approach for the externals. The new version will provide greater access on applicant side to facilitate greater application collaboration. An additional account could be created for consultants and property owners on Project Dox side in the interim.
Plans of Subdivision and Draft Plan Extension	Approval	Use of stamping function for resubmitted final drawings is not aligned.	Eliminate stamping requirement
All	Comments	External agencies e.g., MTO, TRCA, do not use ePLAN to return comments. Externals are confused by circulation process and commenting status terminology and often use the wrong status (which leads to miscommunication and manual intervention to 'correct' their inputs).	Investigate opportunity to have all external commenting agencies use e-Plan for commenting and technical review.
All	Comments	System does not provide alert when comments are posted. This requires applicant to regularly check-in to ensure comments have been addressed.	Set up ePLAN to provide notifications to both applicant/owner and consultant.
All	Comments	Comments are not provided in a consistent manner, and also no pictures are provided with the comments. Comments are also provided in a non-numerical format	Standardize commenting procedures using change mark. Utilize ePLAN capability to produce comment matrices for ease of use, organization, and improve customer service for applicant.

ePLAN | Detailed Recommendations (2/4)

Application Type	Process Step	Description	Ideas & Recommendations
All	Uploading Application	Application types and subtypes are not clear to Applicant *(e.g., SPC vs. PLAN. subtype and work type categorization of an application type)*, causing applications to be submitted for the wrong application type or in the wrong application order (e.g., SPC is submitted before having gone through PRCN). This results in application refunds and 'junk' folders in the system due to the requirement to keep record of the monetary transactions involved with the inappropriately applied for applications. Additionally, some of these mistaken applications such as SPC, are kept open in the system until after the PRCN is completed, resulting in errors in data and metrics.	Review instructions on application portal to determine if there is opportunity to refine instructions and application names to make clearer the different application types and categories. Specify in the Pre-con process the required order of application submissions.
All	Uploading Application	ePLAN does not allow complex folder structures to be uploaded. Sometimes the modelling files are packaged in complex folder structures (i.e., folders containing folders containing folders). There's a limit to the number of extension types that can be enabled, and limitation on number characters as a pass through, resulting in these files needing to be emailed or otherwise transferred to the City outside of ePLAN.	Identify which file extensions to enable as "pass-through" file types so they are able to be uploaded by the applicant. Establish protocol on how to receive files not able to be uploaded through system, and determine how they will be stored. File protocol should identify location of storage of files/submission, and who is responsible for stewarding these files e.g., the review discipline or the coordinating discipline of the application, etc.
All	ePLAN Review	Applicant doesn't complete their task and staff are not alerted to the fact that the 'ball is now in our court'. This is most common in the Pre-Screen stage. The applicant doesn't understand that there is an automated ePLAN workflow that assigns tasks to different users at appropriate times.	Three reminder notifications are currently sent to applicant via automated message. There is opportunity to error-proof the browser by adding feature on e-form to prompt the applicant to complete the task before closing out of system.

ePLAN | Detailed Recommendations (3/4)

Application Type	Process Step	Description	Ideas & Recommendations
All	Comments in ePLAN	Tiered commenting coordination not accommodated well by the ePLAN system - The system was meant to have 1 project coordinator. All reviewers are circulated at the same time and have the same commenting deadlines (review task due date). However, some review disciplines review and consolidate the comments of other reviewers into their own (e.g., Engineering coordinates comments of Waterworks) and act as 'mini coordinators'. If the City, as a whole, has a targeted commenting timeframe then the 'sub reviewers' must complete their reviews in a shorter time period than the 'mini-coordinator' to allow the 'mini-coordinator' time to do the comment consolidation.	Tiered commenting circulations and e-plan sub-reviewer option included in Detailed Recommendation #6: Application Review Sequence and Timelines on page 33.
All	Application submission	Inconsistent approach to processing different application types - Some application types have an automated workflow (e.g., SPC, PLAN) but other applications (e.g., MZO, HOLD, DEEM, PTLT, HE, HC, etc.) do not have an automated workflow. How the applicant uploads/submits their application files is different between applications types.	All application types to be managed with standardized workflows in ePLAN included in Detailed Recommendation #17 on page 44.
All	Standardized Procedure Documentation	Currently lacking administrative protocols and rules on if/when to deviate from standard protocols - e.g., Sale of property mid-application and/or applicant changes.	Establish file/applicant/owner change protocols which specify how to update people records, determine change fee, what documentation is required from the new/former applicant to indicate change, etc. Create sale of property form to be completed as part of file/applicant/owner change protocols that would be the responsibility of the file planner to process; Development Technicians would collect required fees and enter information into system to update file.

ePLAN | Detailed Recommendations (4/4)

Application Type	Process Step	Description	Ideas & Recommendations
All	Mid-review cycle upload	As a result of applicants causing an inflation of review cycles, staff make ad hoc allowances to prevent additional cycles *(e.g., asking Process Management Administrator to upload submission mid-review on the Applicant's behalf),* bypassing the automated review cycles in the workflow. This results in confusion for staff that are not notified of the new submission that has been received mid-review and could potentially impact subsequent reviewers from completing their reviews by the targeted timelines as well as staff reviewing wrong versions of documents. This also impacts performance metrics and data integrity.	Do not permit mid-review cycle submissions. This will reduce risk for the City and preserve application performance metrics and data integrity. This pain point will potentially be rectified with the implementation of Pdox 9.2.
Site Plan	Agreement and Conditions	The Legal department does not use ePLAN and because of this, they lack a line of sight on status of application in ePLAN workflow. Applicant put pressure on legal staff to interject into planning approval and engineering technical review process to speed up agreement.	Legal integration with ePLAN included in Detailed Recommendation #11: ePLAN Integration with Legal Processes on page 38.
OPA / ZBA	Entire workflow	We understand that OPA and ZBA applications can run concurrently and are currently tracked in the ePLAN system under the same application number, also including Subdivisions. Due to Bill 109 requirements, timelines for processing OPA / ZBA applications will have to be delineated, to reduce financial risk to the City resulting from refund of fees. As a result, staff will have to review three different application types in the same application number, separating comments by application type, and correspondence would be mirrored in all three types of applications. This could cause confusion and impact application processing times.	ePLAN has the system capability to have a primary application in the system, while also connected to secondary applications. This functionality could be utilized to reduce duplication of effort and minimize staff confusion during commenting and technical review. It is critical that the different data requirements from each of the Subdivision, OPA, and ZBA applications be identified and collected appropriately in the system.

Document Classification: KPMG Public

ePLAN | Strengths

In consultation sessions with internal stakeholders, the City of Markham's Building Department were identified as leaders in their use and implementation of ePLAN for performance measurement, data integrity, and reporting functions. Success of the Building Department's ePLAN implementation has been attributed to senior management engagement and support for the system, and data integrity has been achieved with real time workflow time tracking and date stamps prioritized and inputted by departmental staff. Examples of Building's performance metrics and visual dashboards are presented below. While some performance metrics and dashboards have been established for Planning and other departments involved in development review, these reporting mechanisms require a significant amount manual manipulation by the Program Administrators, data is sometimes changed to suit department needs, and results in ongoing challenges with the data integrity that ePLAN can provide.

ePLAN Performance at a Glance

Building Standards (Jan 1 – Dec 31, 2021)				
Total number of ePLAN Applications				4,432
Discipline Review				
Discipline	**Deficiencies**	**Number of Tasks**	**Average Staff Hours per Task**	**Average Review Cycles**
Total Deficiencies Cited	27,907			
Zoning	15%	4,281	2	1.5
Architectural	50%	3,810	4	2
Structural	4%	496	4	1.5
Mechanical	25%	2,720	3	2
Plumbing	4%	1,397	2	2
Management	2%	2,768	0.75	3

Source: City of Markham

ePLAN Integration | Best Practices

KPMG consulted with the City of Mississauga who have had success with the implementation of ePLAN (as reported by external stakeholders and applicants with experience working in both the City of Mississauga and the City of Markham) to gain a better understanding of best practices and implementation success factors.

The findings have been summarized below.

ePLAN Uploading

- Provide applicants with some leniency file naming standards.
- Warn applicants if their file name is different in a resubmission, since it will affect automatic file versioning function.
- Set up automatic notification emails to update applicants on current status of application.
- Develop and use tools to coach applicants virtually on how to use the system, intake staff and planners provide helpdesk

Commenting

- Comments matrix used to make it easier for applicants to review and address comments.
- Develop a custom project status report for the applicant and use it to track how comments have been addressed through the review process. This removes the requirement of the applicant having to continuously go back into ePLAN to see if their comments have been completed.
- An excel spreadsheet tracker is sent to applicants consolidating all the comments and application milestones.

Success Factors

- Delegating champions on each team which can be any level of staff who will be the team resource for all ePLAN related queries, including leading informal trainings, or to help drive more leadership team involvement.
- Establishing a project coordinator role that helps with admin work related to online commenting (e.g., circulation, reminders, notifications, etc.).
- Identify a dedicated development and design team that improves and make changes to ePLAN as needed by SMEs.
- Conduct 1 on 1 training for all reviewers and staff.
- Collect metrics to measure and identify opportunities for improvement.
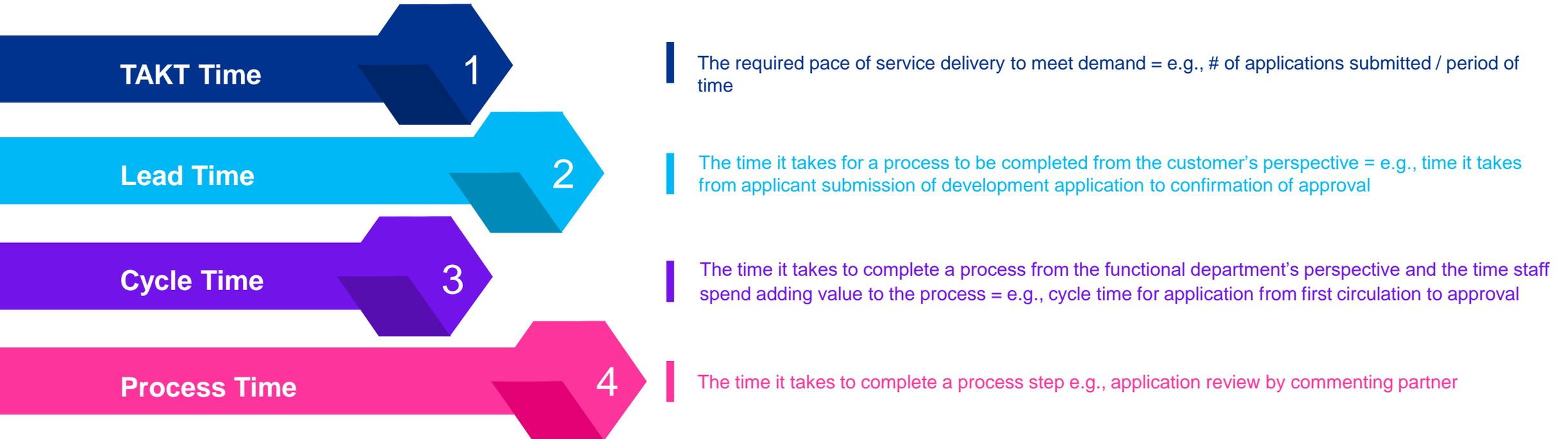
09

Data Analysis

Data Analysis

KPMG was provided with data from ePLAN relating to application tasks and processing times on 1,409 applications between January 2020 to October 2023. Our analysis was focused on two types of measures:

<u>Efficiency Measures</u>: The time it takes to complete a process (Lead Time, Cycle Time, Process Time)

<u>Effectiveness Measures</u>: How well the City performs particular processes (Defect or Error Rate)

The following pages highlight our key observations from the coherent data available, with a focus on opportunities to reduce overall application processing times.

TAKT Time — 1
: The required pace of service delivery to meet demand = e.g., # of applications submitted / period of time

Lead Time — 2
: The time it takes for a process to be completed from the customer's perspective = e.g., time it takes from applicant submission of development application to confirmation of approval

Cycle Time — 3
: The time it takes to complete a process from the functional department's perspective and the time staff spend adding value to the process = e.g., cycle time for application from first circulation to approval

Process Time — 4
: The time it takes to complete a process step e.g., application review by commenting partner

Data Limitations

The data provided for analysis had information gaps that are critical to the completion of a comprehensive analysis. **Out of 1,409 application, only 539 applications have a closed work flow cycle (Application Upload – Final Approval), and of these 539 files, only 58 application had reached final decision.**

The limitations are summarized below:

LIMITATION 1:
Data Integrity

1,409 unique applications were provided in the dataset, however only 539 (38.3%) applications were tracked through the established workflow (e.g., start date was Application Upload and end date was Final Approval). Due to poor application tracking and potentially erroneous task completion dates, many application files were deemed invalid for this analysis due to:

- Application remained in Application Upload task for extensive periods of time
- Start date for the application is at the Final Approvals step
- Application checks off multiple steps in the workflow on the same day

LIMITATION 2:
File Organization

Staff reported 98% of ZBA/OPA files still open in system due to unclosed workflow loops when a project is finished. The current data provided by the City of Markham also does not clearly separate OPA and ZBA applications (OPA and ZBA are under the "Plan" project files, which are combined with Plan of Subdivision applications as well) making it difficult to determine current state timelines and associated efficiency measures for Official Plan and Zoning Bylaw Amendment applications, as well as little to no useable data regarding OPA/ZBA application processing times.

This is information is critical to have prior to the implementation of Bill 109 to properly equip the City on how these applications will be impacted by the new mandatory timelines and associated refunds.

LIMITATION 3:
Workflow Timestamps

An analysis of the application data found that digital records of the application process did not always follow a sequential workflow, evident in the timestamped dates. Some applications have a starting task of Final Approval, while others have Circulation dates after the Final Approval.

City staff appear to not always be diligent in updating the status of an application to reflect current status, causing incorrect and unreliable analysis in determining lead time, cycle time and process time.

# Efficiency Measures | Lead and Cycle Time

Lead time: This metric represents the time it takes to process an application from the applicant's perspective. Lead time begins for the applicant from the date of initial submission and continues to final approval. The average lead time for the 539 applications that were correctly documented in ePLAN is 136 days. With a maximum of 272 days for SPC applications and minimum of 41 days for SC applications.

Cycle time: Cycle time begins once a City of Markham staff member has been assigned the task and begins working on value added tasks towards the application's completion. The average cycle time for the 539 applications that were correctly documented in ePLAN is 41 days with a maximum of 66 days for SPC, and a minimum of 26 days for CNDO applications.

Average Application Lead Time (Days)
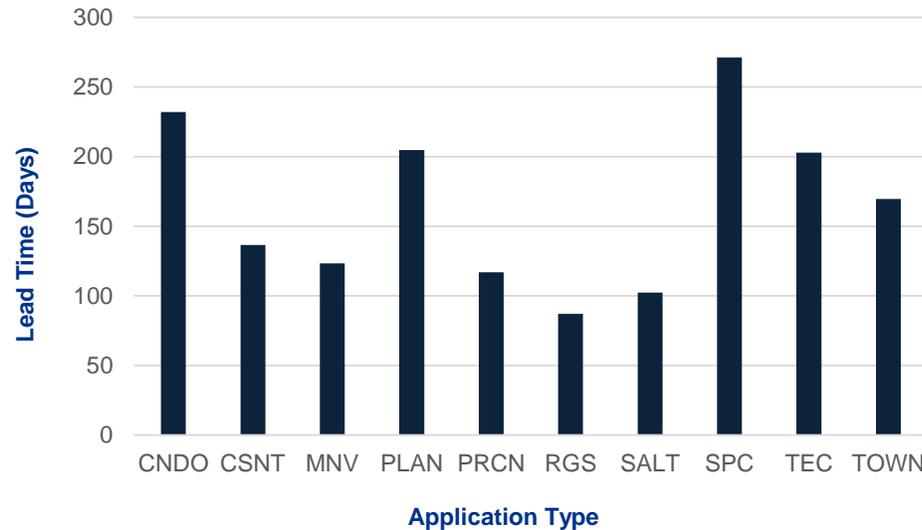
Average Application Cycle Time (Days)
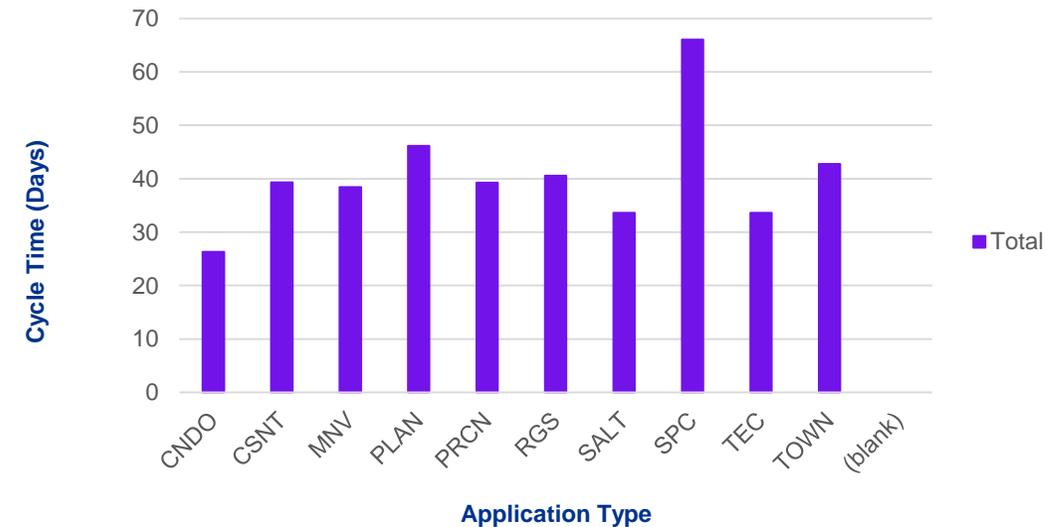
Note: Sample size is 539, representative of approximately one-third of the total data provided for applications processed between January 2020 to October 2023. See Slide 61 Data Limitations for details
Data is referencing business days

Efficiency Measures | Process Time Pareto Chart

An assessment of the data revealed the top five tasks with the highest process times to be:

1. Department Review

This task happens when the initial circulation is completed. The relevant departments (depending on application type and location) are to review the application package to provide comments.

2. Applicant Resubmit

The file is with the applicant and they are consolidating and resolving comments from department review.

3. Assign Request Reviews

This task occurs during the assigning of the reviews needed for the application.

4. Verification Review

This occurs in SPC applications once the applicant has verified reviews. This task sits with the project coordinator (planner).

5. Review Complete

The review complete task takes place after all comments have been resolved.

These tasks comprise 80% of the overall average processing time for development applications.

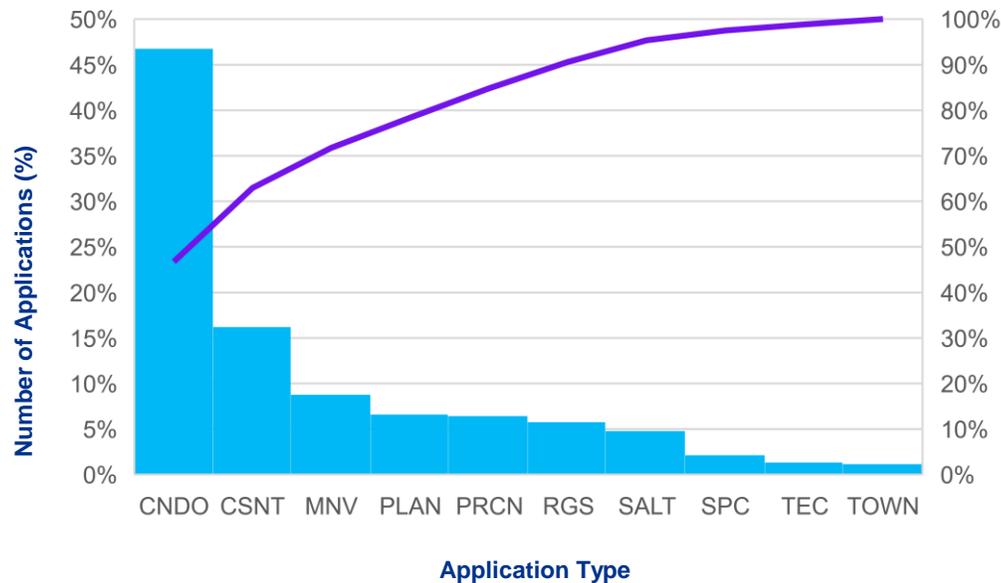**Average Process Time (Days) by Process Task**
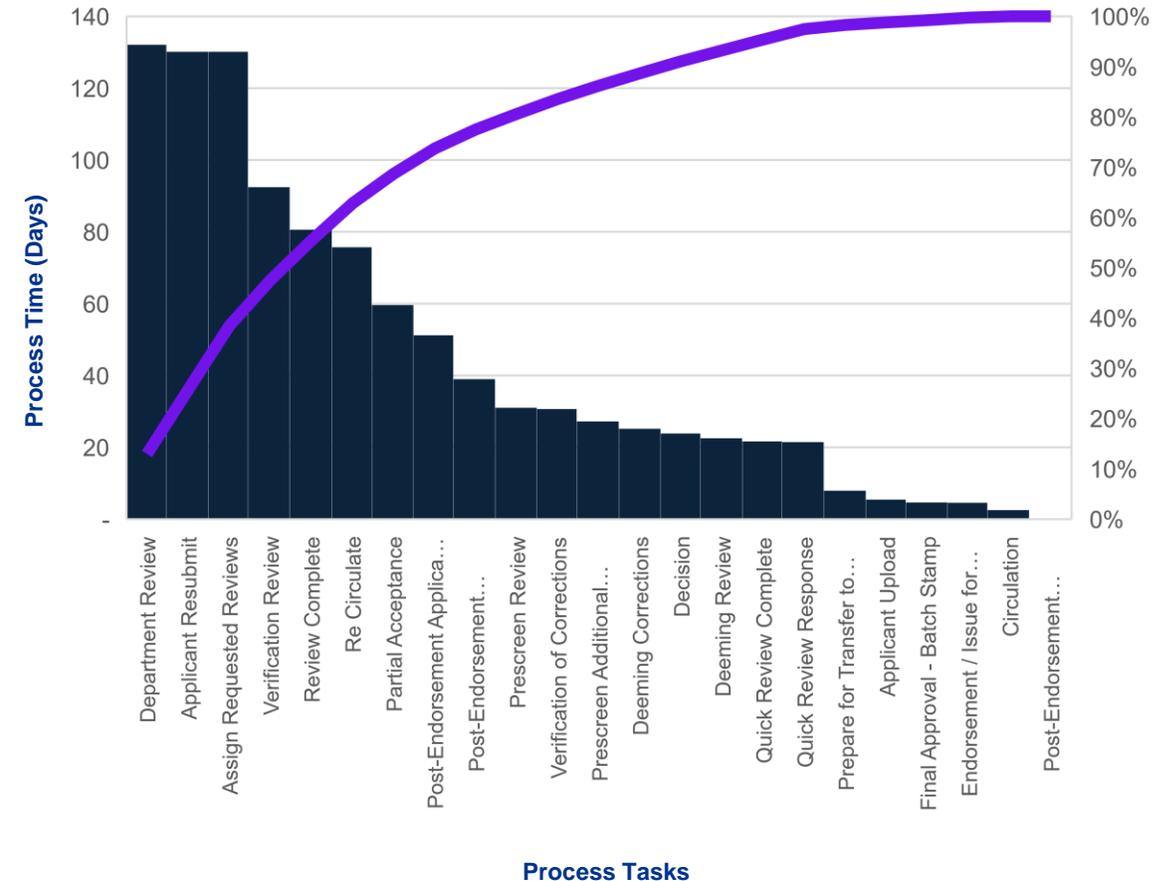
Note: Sample size is 539, representative of approximately one-third of the total data provided for applications processed between January 2020 to October 2023. See Slide 61 Data Limitations for details
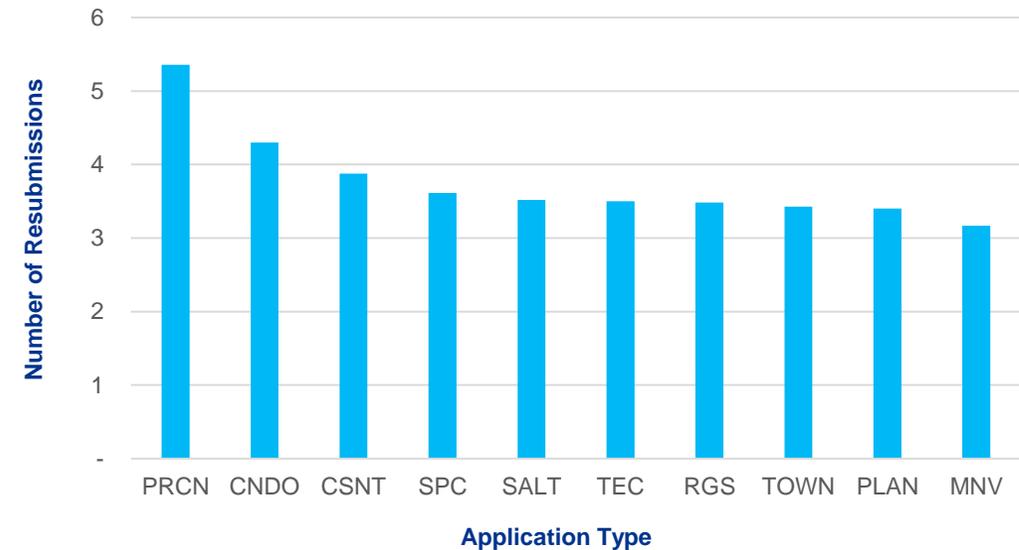*Data is referencing business days*

Effectiveness Measures | Intake Resubmissions

When reviewing number of submissions by project type, we were able to determine 42% of all applications required two or more submissions at the Pre-screen stage. CNDO, CSNT, MNV represent 80% of applications that require two or more submissions. Additionally, PRCN applications see an average of five resubmissions at the Pre-Screen stage.

Applications Requiring 2+ Resubmissions

Average Number of Resubmissions if 2+

Note: Sample size is 539, representative of approximately one-third of the total data provided for applications processed between January 2020 to October 2023.

Data is referencing business days

Effectiveness Measure | Reasons for Application Rejection

An assessment of the data for why applications were rejected and required resubmissions revealed the top five reasons to be:

1. Missing Requirements for Submission

The applicant did not follow requirements as set out in the checklist received from the pre-consultation meeting (e.g., missing environmental or traffic studies, missing elevations or grading plans).

2. File Naming Issues

Standard file naming procedures are enforces at the City of Markham for convenience in finding required files during the application review process. ePLAN is programmed to automatically detect drawing and file types if they follow the required file names.

3. No Blank Space

Drawings submitted as part of the application package are required to have a standard blank space (location and size) to allow for the City's stamp of approval.
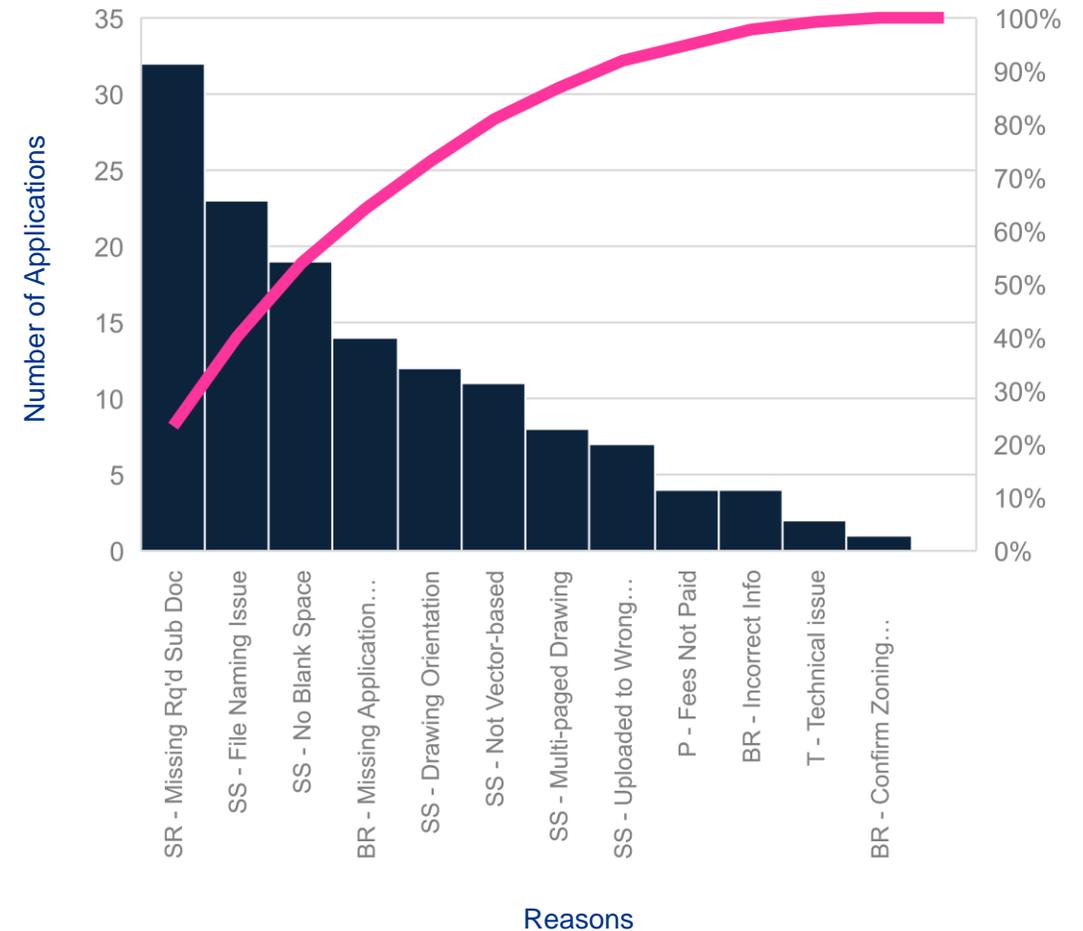
4. Missing Application Info

Application is missing info from applicant required to proceed, such as project description.

5. Drawings Orientation

Drawings submitted as part of the application package are not made in proper orientation.

Reasons for Application Rejection

Efficiency Measures | Lag Time at Pre-screen Stage

When analyzing the specific task times within the Pre-screen stage, the data indicated that the Pre-screen Review task (which is the only value adding task in this process) was the smallest contributor to the overall Pre-Screen cycle time. When determining opportunities to improve the Pre-screen cycle time, effort should be focused on reducing lag time for task creation and task acceptance. Lag time is defined as the time that passes between the end of one task and the start of the next task in the workflow.

Lag Time

Average Time to Create Pre-screen Review Task

5.32 days

Data Implication:
This data speaks to the amount of time it takes for the pre-screen review task to be created after the application has been received. This means that an application is sitting in queue for value added work to start for over a business week.

Task Acceptance

Average Time for Staff to Accept Pre-screen Review Task

2.63 days

Data Implication:
Once the pre-screen task has been created, it takes 2.64 days for a staff member to accept the task. Therefore in total, prior to work starting on the application, the application is waiting in ePLAN for nearly 8 business days.
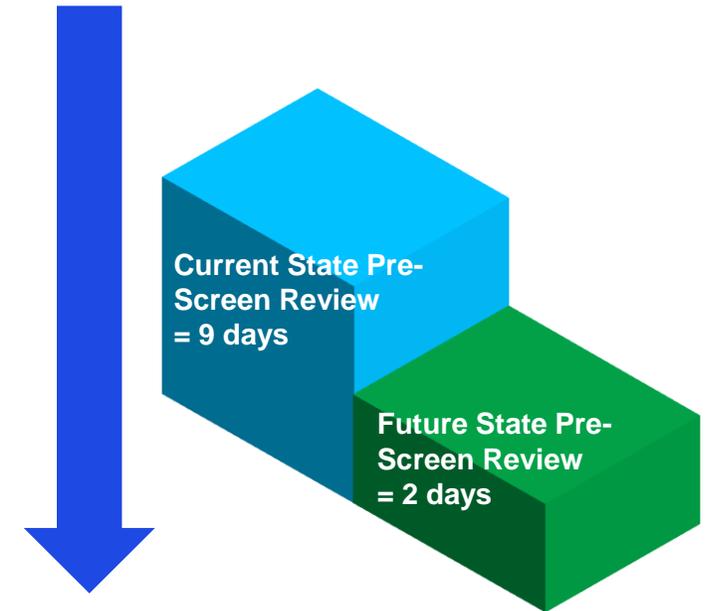
Value Add Time

Average Time for Staff to Complete Pre-screen Review Task

1.15 days

Data Implication:
Once the task has been created and accepted, the average number of days it takes staff to perform a pre-screen review is only 1.15 days.

Current State Pre-Screen Review = 9 days

Future State Pre-Screen Review = 2 days

If lag time and task acceptance was reduced or eliminated, it would reduce time required for the Pre-screen Review task from the current **nine business days** down to **two business days**.

*Data is referencing business days

Estimated Savings from Detailed Recommendations

KPMG utilized processing hours from data to determine average annual processing hours savings. The relevant data is based on the total number of applications in the data set of 1,409 as well as the total number of completed applications in the data set, of 539. KPMG used these numbers to determine average annual averages for calculation of total savings as demonstrated below.

Improvement Opportunity	Potential Savings
1. Streamline intake process and pre-screen processing time	53.9 processing hours x 768* applications = 41,395 processing hrs. ~ 5,519 processing days saved annually *Represents average total annual applications processed from data analysis (1,409 total applications)
4. Standardize commenting and circulation process and department review criteria	59.62 processing hours x 294* applications = 17,528 processing hrs. ~ 2,337 processing days saved annually *Represents average annual applications completed from data analysis (539 completed applications)
3. Eliminate lag time at Application intake	73.1 processing hours x 768* applications = 56,141 processing hrs. ~ 7,485 processing days saved annually *Represents average total annual applications processed from data analysis (1,409 total applications)
15. Determine submission errors and adjust submission requirements 17. Require all applications be submitted using ePLAN	244 processing hours x 294* applications = 71,736 processing hrs. ~ 9,565 processing days saved annually *Represents average annual applications completed from data analysis (539 completed applications)

Total estimated processing time savings from above improvement opportunities = 24,906 process days (186,795 processing hours)

~ Average processing days savings of 32 processing days per application*

*assumes average total annual applications of 768 per above

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10

Implementation Plan

High Level Improvement Road Map
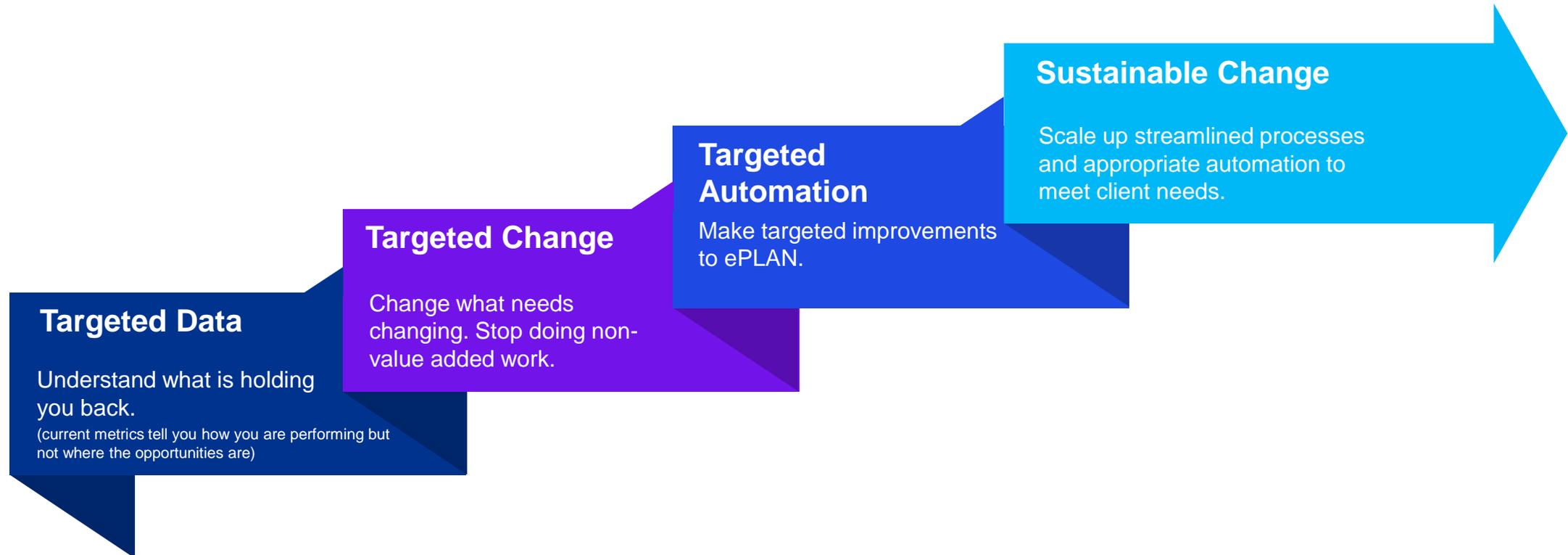
The figure below illustrates the recommended implementation road map, outlining key milestones along the journey to support the City of Markham in implementing long-lasting and sustainable improvements to the development review process. More details regarding implementation planning on subsequent slides.

Sustainable Change

Scale up streamlined processes and appropriate automation to meet client needs.

Targeted Automation

Make targeted improvements to ePLAN.

Targeted Change

Change what needs changing. Stop doing non-value added work.

Targeted Data

Understand what is holding you back.

(current metrics tell you how you are performing but not where the opportunities are)

Implementation Plan

This section presents a high-level plan for the City's consideration to implement the 18 recommendations outlined in this report. It provides practical insights and consideration into the time expectations, and constraints regarding the various improvement recommendations. While recognizing that each of these recommendations are individual projects (or initiatives), the City and/or other resources will need to ensure they work to develop the details and actions involved beyond what has been preliminary identified as potential steps to implementation. Wherever possible, the implementation plan should be integrated into existing programs of work and should be enabled by dedicated resources and effective governance.

High-level Implementation Roadmap

The proposed implementation timelines found in this report are based on assumptions that resources are adequately dedicated to this work. These anticipated timelines are indicative of the sequencing and relative level of effort required to implement the recommendations. Furthermore, although the timeline suggests a beginning and end date, progress against these recommendations should be reviewed and assessed on an on-going basis and it is likely that there will be need for adjustment based on changing context, priorities and other circumstances.

This roadmap covers a 12-month timeline to be closely monitored by the senior leadership team. However, in some cases, full implementation may stretch beyond 12 months and/or require additional dedicated resources (e.g., funding, staff, etc.).

Our implementation plan includes the specific plan for both **Lean projects** and **strategic projects.** Lean projects represent projects that can be fulfilled using Lean process improvement techniques, and can be resolved and remediated through process improvements, whereby strategic projects require additional system, culture and strategic input, and senior management involvement among additional considerations to successfully implement.

Implementation Considerations

✓ Finalized recommendations will require senior management approval and support from internal and external stakeholders for implementation

✓ Need to identify who will take the owner on implementation of each recommendation and build into resourcing workloads

✓ Engagement with key stakeholders to move recommendations forward will be critical, further explore feasibility and risks, and draft solution artefacts (e.g., guidance documents, process expectations, job aids, etc.)

✓ Establishment of key baseline metrics and data will be critical to Markham's success in a post-Bill 109 world. We recommend continuing to measure and analyze data once improvements are in place to ensure initiatives are performing as desired.
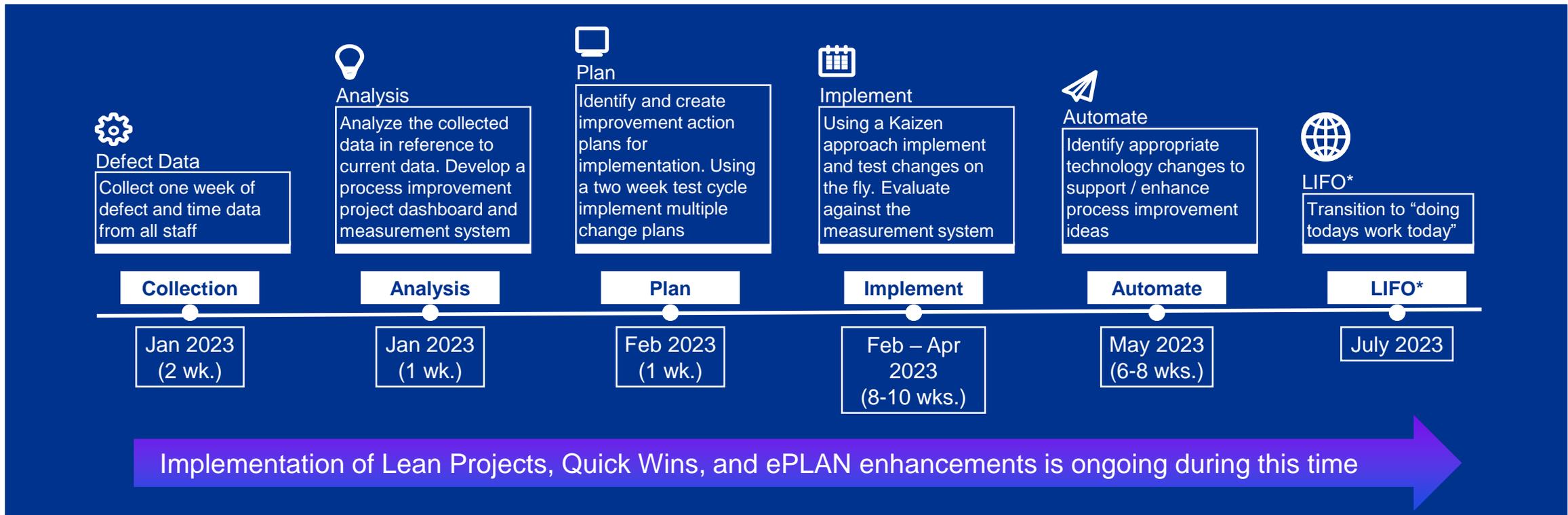
Implementation Roadmap

The Planning and Development Services leadership team reviewed 18 high priority improvement recommendations for implementation, and created a cadence for improvement implementation that reflects short term, medium term, and long term implementation timelines, identified as Lean Projects and Prioritized Strategic Initiatives. These specific improvements will be the inputs into the Process Improvement Roadmap on the following page, which details how each activity will fit into the overall improvement plan and be rolled out over the next six to twelve months, ultimately readying the organization for Bill 109 and ensuring long term sustainability of changes.

Opp. ID	Lean Project Implementation	Short Term (3-6 months)	Med. Term (6-12 months)	Long Term (12+ months)
8	PDF File Accessibility	■		
9	Streamline Workflow Approval	■		
13	Final Sign-off	■		
15	Building Permit Submission Standards	■		
2	Fee Calculation	■		
3	Intake Workflow	■		

Opp. ID	Prioritized Strategic Initiatives	Short Term (3-6 months)	Med. Term (6-12 months)	Long Term (12+ months)
1	Application Intake	■	■	
4	Standardization of Commenting and Circulation	■	■	
6	Application Review Sequence and Timelines	■	■	

Process Improvement Road Map

As Markham proceeds with implementing the 18 priority improvement recommendations and Quick Wins throughout 2023, this process improvement roadmap will provide the foundation and cadence for implementation success and sustainability. Once 75% of the identified and recommended process changes have been implemented, the City will switch to a Last In, First Out (LIFO) model for triaging and process applications affected by Bill 109. The backlog of previously submitted applications will continue to be worked down by a dedicated team, while new OPA/ZBA and Site Plan applications will be processed using LIFO. Markham's Planning and Development team will successfully make the switch to "doing today's work, today."

Defect Data
Collect one week of defect and time data from all staff

Analysis
Analyze the collected data in reference to current data. Develop a process improvement project dashboard and measurement system

Plan
Identify and create improvement action plans for implementation. Using a two week test cycle implement multiple change plans

Implement
Using a Kaizen approach implement and test changes on the fly. Evaluate against the measurement system

Automate
Identify appropriate technology changes to support / enhance process improvement ideas

LIFO*
Transition to "doing todays work today"

Collection	Analysis	Plan	Implement	Automate	LIFO*
Jan 2023 (2 wk.)	Jan 2023 (1 wk.)	Feb 2023 (1 wk.)	Feb – Apr 2023 (8-10 wks.)	May 2023 (6-8 wks.)	July 2023

Implementation of Lean Projects, Quick Wins, and ePLAN enhancements is ongoing during this time

*LIFO = Last In, First Out

11

Post-Improvement Evaluation Plan

Implementation Scorecard (1/2)

This scorecard assists in measuring the implementation of the 18 recommendations in this report. To facilitate change, it is critical to demonstrate progress to help build buy-in with internal and external stakeholders. This scorecard should be reviewed and approved by an Implementation Committee, a committee dedicated to supporting and overseeing the implementation of key recommendations. As the PACE Matrix identifies, there are various levels of effort with respect to the ease of implementation for each recommendation (see page 49). This committee should review the Scorecard monthly to measure progress and maintain momentum by monitoring the impacts of recommendations and effects on stakeholder groups.

Success Factor	Date Initiated	Status	Date Completed
Implementation Structure			
The recommendations and roadmap included in this report have been approved by City Council.			
A project governance structure has been established and is effective.			
Sufficient staff capacity and resources are dedicated to the tasks ahead and are working well.			
Project Management			
Work plans exist to support the implementation of all recommendations			
A communications strategy and accompanying communications plans are developed for relevant recommendations			
Recommendations are implemented according to roadmap timelines. Delays are justified and communicated.			
Status updates are regularly provided to the Implementation Committee and other key stakeholders (as appropriate).			
Recommendations that have been implemented are reviewed every six to 12 months for effectiveness.			

Document Classification: KPMG Public

Implementation Scorecard (2/2)

With respect to any changes, a level of appreciation for the City's clients (i.e., applicants) should always be considered to ensure that any changes or adjustments that the City conducts are in fact supporting applicants and are providing measurable benefits to the applicant experience.

Success Factor	Date Initiated	Status	Date Completed
Applicant & Public Experience			
Applicants are engaged in the implementation process (e.g., through regular status updates).			
The applicant experience is measured and improving.			
The public is engaged in the implementation process (e.g., consulted on appropriate recommendations).			
The public engagement experience is measured and improving.			

12

Immediate
Next Steps

Next Steps

Implementing change of this magnitude can be a daunting task, especially when management and staff have their regular portfolios to navigate daily. We have broken down Markham's suggested first next steps into a roadmap below, outlining key considerations and milestones for the next phase of work on this initiative.

Building on the momentum of this engagement, Markham should consider the following next steps to achieve real changes:

Change Management

- Create and implement change management plan to support successful implementation and sustained results.
- Begin consistent and frequent communication on the future state vision with key stakeholders to support change management efforts

Shift Focus to Data and Metrics

- Create project dashboard to provide visual sharing of progress on implementation throughout the year
- Focus on improving data integrity and begin to establish a culture of performance, driven by data-based decision making
- Educate staff on the importance of closing out ePLAN workflows to maintain data integrity and provide line of sight into application lifecycles.

Pursue Continuous Improvement Quick Wins

- Prioritize the Quick Wins identified through Phase 1 of this project for implementation and begin to achieve these Quick Wins to build momentum for change and gain staff buy-in and support.
- Leverage existing Improvements Committee to support prioritization and implementation.

Action ePLAN Workplan

- Identify project management team (departmental and management champions) for ePLAN improvements and steward system modifications through to implementation based on prioritized workplan
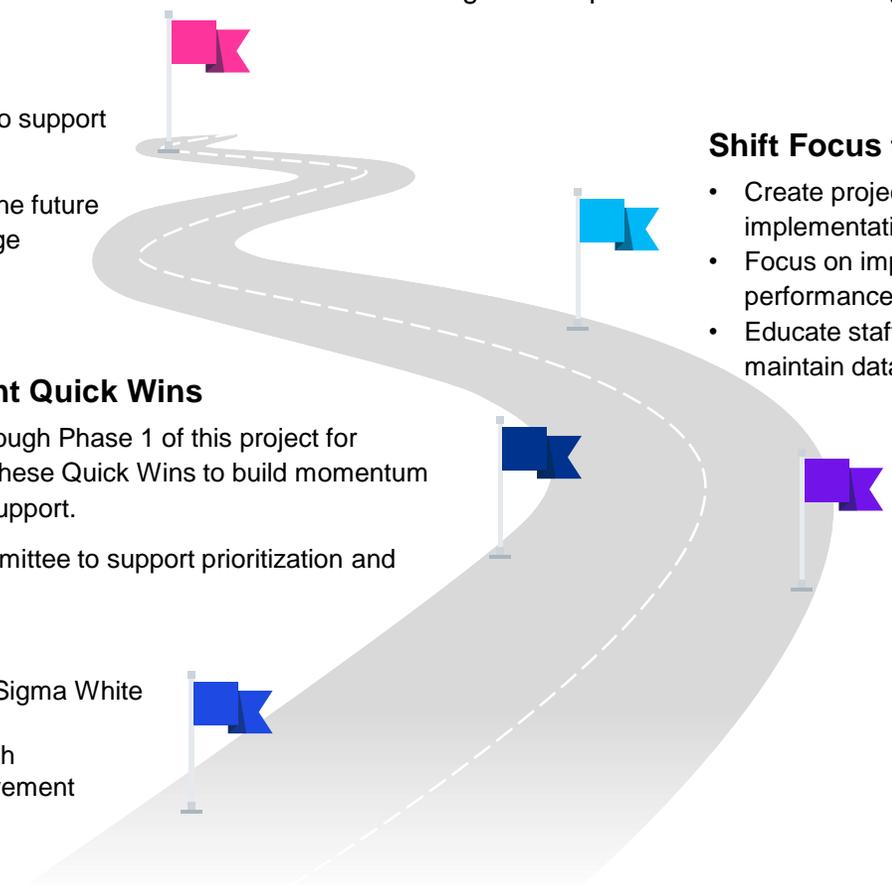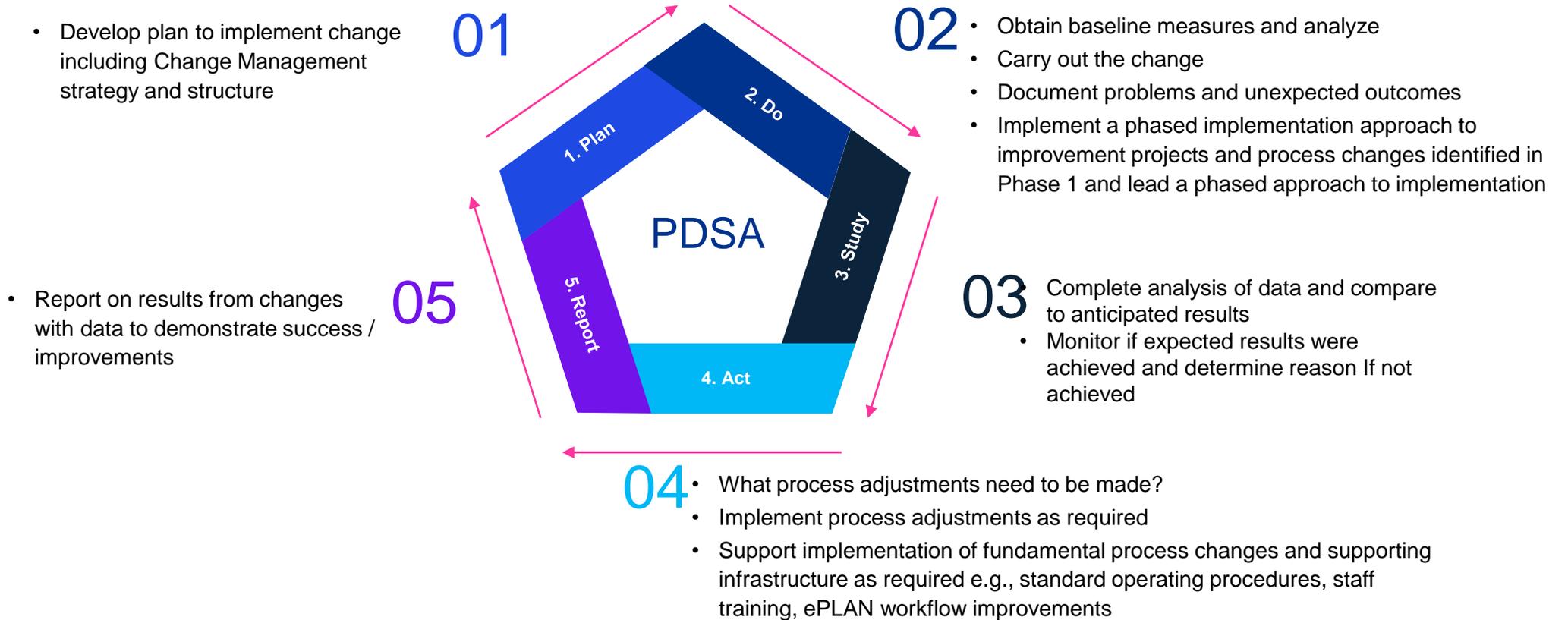
Upskill Staff in Lean

1. Train all Development Services staff in Lean Six Sigma White Belt level
2. Select 2-4 staff to obtain their Yellow Belts through implementation of Bill 109 related process improvement projects

Plan Do Study Act (PDSA)

Plan Do Study Act (PDSA) is a Lean methodology for implementation of rapid tests of change. Each of the Lean projects should be implemented this approach. If requested, KPMG can provide leadership and project management support throughout each PDSA cycle to ensure success for each initiative. The PDSA approach is outlined in detail below.

01
- Develop plan to implement change including Change Management strategy and structure

02
- Obtain baseline measures and analyze
- Carry out the change
- Document problems and unexpected outcomes
- Implement a phased implementation approach to improvement projects and process changes identified in Phase 1 and lead a phased approach to implementation

03
- Complete analysis of data and compare to anticipated results
- Monitor if expected results were achieved and determine reason If not achieved

04
- What process adjustments need to be made?
- Implement process adjustments as required
- Support implementation of fundamental process changes and supporting infrastructure as required e.g., standard operating procedures, staff training, ePLAN workflow improvements

05
- Report on results from changes with data to demonstrate success / improvements

PDSA

1. Plan
2. Do
3. Study
4. Act
5. Report

Appendices

Appendix A – Jurisdictional Leading Practices

Appendix A

Jurisdictional Leading Practices

Jurisdictional Leading Practices | Approach: General

This section summarizes our leading practices insights, based on extensive municipal engagement and projects within the development process review (DPR) sphere.

Approach

The purpose of the jurisdictional leading practices efforts was to identify leading practices used by other municipalities to inform the assessment and opportunity identification for the City of Markham's DRP. Given the unique complexity and volume of building activity in the City of Markham and the varying legislative structures across jurisdictions, we did not conduct an explicit and direct side-by-side comparison of relative performance.

Our research further focused on identifying emerging trends. We used these trends and leading practices, as previously identified, as inputs to support the identification of potential opportunities for the City of Markham in an effort to align with other leading practices.

Limitations

Of note, the information provided with respect to the jurisdictional leading practice analysis is based on single point-in-time conversations previously held with municipalities. It is important to recognize that these were one-off conversations and therefore data gathered is limited and reflective of a point-in-time; compared to the extensive research, engagement, and analysis conducted directly with the City of Markham. As such, the information depicted in this section must be considered within that narrow context.

Jurisdictional Leading Practices | General: Key Findings (1/2)

This section identifies leading practices for the development application review and policy formulation processes. They are organized into six layers of an assessment framework.

Services and Processes

- Focus effort and resources during the early stages of the development application review process to improve application quality.
- Identify, resource and empower project leads to case manage development applications.
- Tailor resources and processes to risk and applicant need (i.e., triage based on applicant experience).
- Document and use standard operating procedures and other practice management tools to improve speed, consistency and transparency.
- Establish mechanisms to identify and prioritize strategic applications (e.g., affordable housing).

Organization, People, and Culture

- Consider integrated, co-located, multidisciplinary teams to improve speed, consistency and collaboration.
- Establish a formal, process-wide governance structure to improve oversight and accountability. Develop process maps with swim-lanes.
- Identify and empower a dedicated operational lead for the end-to-end development application review process.
- Formalize staff and applicant meetings at critical application milestones to improve communication, coordination and collaboration.
- Clearly define the roles and responsibilities of all commenting partners and development review stakeholders.

Performance Management & KPIs

- Establish an integrated, process-wide performance management framework.
- Define target levels of service (i.e., target review timelines).
- Regularly review the effectiveness of the performance management framework and supporting performance metrics.
- Develop dashboards to improve oversight and accountability.
- Use time tracking for development-related staff to improve resource management.

Jurisdictional Leading Practices | General: Key Findings (2/2)

Technology & Information

- Use a modern, process-wide application management platform to improve speed, consistency and oversight.
- Leverage groupware (collaboration tools) to improve and external collaboration.
- Establish self-service applicant portals for e-payments, online submissions and status updates for full transparency.
- Continually identify and make available critical development review-related information to improve application quality and reduce application costs.

Legislation & Policy

- Delegate simple, minor or low risk development-related approvals to staff.
- Integrate development planning staff into the policy planning process (and vice versa).
- Regularly and systematically review development policy, guidelines and standards for effectiveness, efficiency and cost.
- Use a cost-benefit analysis (or similar tool) to evaluate policy, guidelines and standards prior to implementation.
- Make all development policy, guidelines and standards available online in an easy-to-use portal.

Applicant Experience & Public Engagement

- Actively engage industry and industry associations in the development application review and policy formulation processes.
- Proactively share resources and information with industry to improve application quality.
- Encourage high quality applications with streamlined processes and other incentives.
- Use plain, easy-to-understand language in all public-facing development-related communications.
- Create public-facing development guides (e.g., a "development 101" presentation) to improve education and awareness.

Jurisdictional Preliminary Opportunities | Approach: Bill 109

This section summarizes our findings to-date based on various interactions and engagements with multiple other municipalities through Ontario and the specific findings regarding Bill 109 potential impacts.

Approach

Our scope of work is focused on a Lean Review across the 14 development applications within the scope. As such, despite our scope of work not being specifically related to Bill 109, KPMG is in a unique position to share insights gathered based on various other municipal interactions as it may relate to Bill 109 and the pending impacts. The purpose of the following is an effort to begin to the conversation to support the City of Markham in recognizing the practices being incorporated by other municipalities as they see the opportunities to adjust to Bill 109 and mitigate those potential impacts. Given the varying legislative structures that support building regulators across jurisdictions and within the confines of our scope, we did not conduct an explicit assessment of the real or perceived benefits of these adjustments.

These preliminary sharing's are focused on identifying emerging trends to support the City of Markham in the next steps and journey related to Bill 109. The City of Markham may view these initial trends as inputs to support the identification of potential opportunities for the City of Markham in their effort as it may relate to internal initiatives to adjust to Bill 109.

Limitations

Of note, the information provided with respect to the jurisdictional leading practice analysis for Bill 109 is based on single point-in-time conversations previously held with municipalities. It is important to recognize that the circumstances surrounding Bill 109 are on-going and the efforts required to adjust for each municipality are also on-going and evolving. As such, the information depicted in this section must be considered within that narrow context and the details provided are in an effort to support the City in their own internal initiatives, as these opportunities may or may not be directly related to our scope of work.

Jurisdictional Preliminary Opportunities | Bill 109: Key Findings

01

Front Loading

Municipalities are looking to determine how much of their processes can be moved to a pre-consultation process in an effort to 'front load' the informal process before their formal processes begin and the submission clock begins.

02

Clarification on Complete Applications

Municipalities are looking to further clarify and explicitly articulate the requirements of an acceptable 'complete' application, which allows the city to be in a better position to defend and/or reject 'incomplete applications' to avoid the formal submission clock from starting too early.

03

Responsibility Delineation

Municipalities are seeking to clarify and establish where the responsibility and accountability lies for applicants vs. city staff and to further delineate when the submission clock formally begins and/or pauses, based on responsibilities. e.g., when applications are sent back to applicants, should this pause the clock? Or, if there's an on-going review and the city receives changes, what are the impacts on the timeline for the formal submission?

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