

City of Burlington
Streamline Development Application Process (SDAF) Project
Report from Lean Agility

20 June – 17 November 2022

Prepared by: Alain L'Abbé

LEAN AGILITY 

Project Introduction & Background

In January 2022, as part of the Provincial Housing Summit with big city mayors and regional chairs, Premier Doug Ford announced the launch of the \$45 million Streamline Development Approval Fund (SDAF) Initiative. Ontario's 39 largest municipalities could each receive an allocation from the province to help modernize, streamline, and accelerate processes for managing and approving housing applications. The City of Burlington received provincial funding to execute on this work.

The City of Burlington had completed several process reviews both through consulting work and internally by staff. These reviews made recommendations for improvement, some of which have been implemented while others have not. Staff and Leadership involved were seeking the opportunity to make meaningful change to the end-to-end process and seek to avoid redundant process review work already completed.

Lean Agility used the full Lean Agility toolkit (i.e. Lean, Agile/Scrum, Service Design/Design Thinking, Six Sigma) and Change Management principles and practices, to review the organization's previous work on process improvements, guide a planned improvement project approach that would, in addition, support the implementation of solutions that will enable the City to achieve its goal in streamlining development application processes.

Taking into consideration that the City had already completed other process reviews the focus of the project was to identify which process improvements will have the greatest impact for improvement and to focus on the implementation of these prioritized solutions. The organization emphasized the intent for seeking active support for implementation activities.

Project Scope and Intended Outcomes

The goal of the project was to improve the development application process and reduce or eliminate non-value add capacity demands on staff. To ensure the process was efficient and streamlined when reviewing and approving development applications, new technology options were to be considered. The intent of these improvements was to allow for development approvals to be processed faster for the client.

Specifically, the project focused on the processes and improvements that will support these intended outcomes;

1. Increase clarity in process for both staff and customers
2. Reduce application review time
3. Reduce process touchpoints and rework
4. Reduce waiting at various process steps
5. Reduce manual work and rework required by staff
6. Improve communication between internal departmental staff

The project plan developed by Lean Agility was intended to engage and prepare staff and leadership for change, review and assess past improvement recommendations and solutions, align with current and new options for technology, create an implementation plan and deliver on implementation. The intention was to uniquely take the project from design to full improvement implementation and embed the practice of continuous improvement within the project participants. The following pages outline the approach, data and information collected, the consultant observations, the experiments undertaken and the results of the improvements to date.

Participants

Project Team

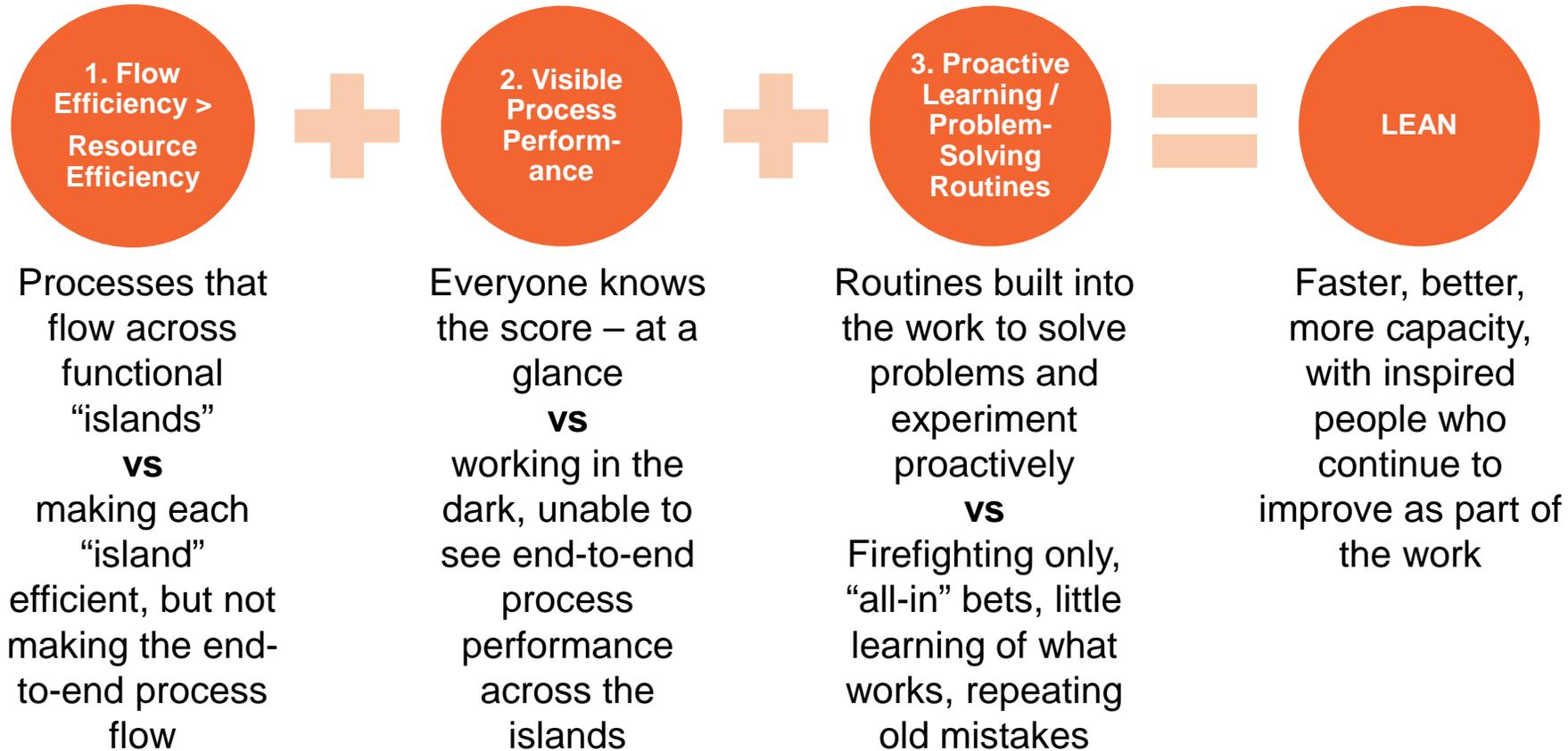
- Jamie Tellier
- Ellen Chen
- Danielle Beck
- Nathan Dart
- Steve Robinson
- Tina Vassali
- Rade Kuruc
- Cathy Marion
- Dymika Harte
- Jessica Randall
- Alison Enns
- Larissa Howe
- Thanh Le
- Jeff McIsaac
- Adam Scott
- Luke Zygalko
- Chris Koabel
- John Le
- Melissa Torchia
- Eric Canham
- Wendy Hugh
- Jennifer Parker
- Mark Darlymple
- Kyle Plas
- Annette Simpson
- Dio Ortiz
- Rob Hagley
- Greg Bunker
- Tina McHugh
- Ryan Parker
- Jeanette Bax
- Alain L'Abbé (facilitator)

Engaged Sponsors

- Brynn Nheiley
- Nick Anastasopoulos
- Mark Simeoni
- Chad MacDonald
- Stephanie Venimore
- Jamie Tellier

Lean Fundamentals

Lean: 3 Key Decisions



From: This is Lean:
Modig & Ahlstrom

Value Added vs Non-Value Added

Value Added

Pure Value Added (VA):

A process step that the Client **would be willing to pay for** if they knew about it;
Performed correctly

Non-Value Added (2 types)

Business Value Added (BVA):

Does not add value in eyes of end user/Client, but it is **currently** necessary to deliver the product or service.

Pure Non-Value Added (NVA):

Does not add value in eyes of end user/Client, **and** if you stopped doing it, nothing bad would happen

Value-added:

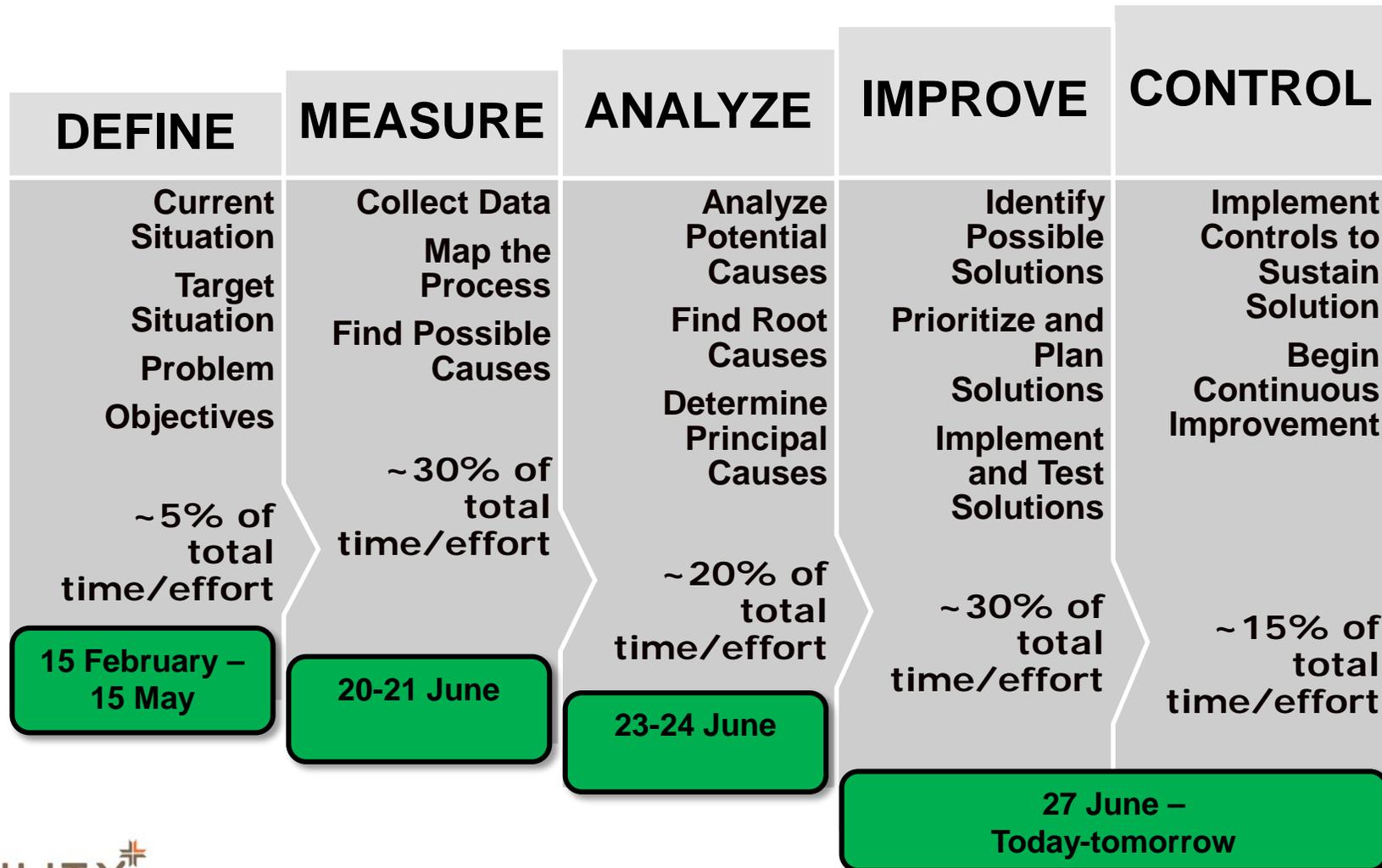
- 1) Approval of application by 3 Depts
- 2) Get a building permit

8 Interruptions to Flow / Wastes

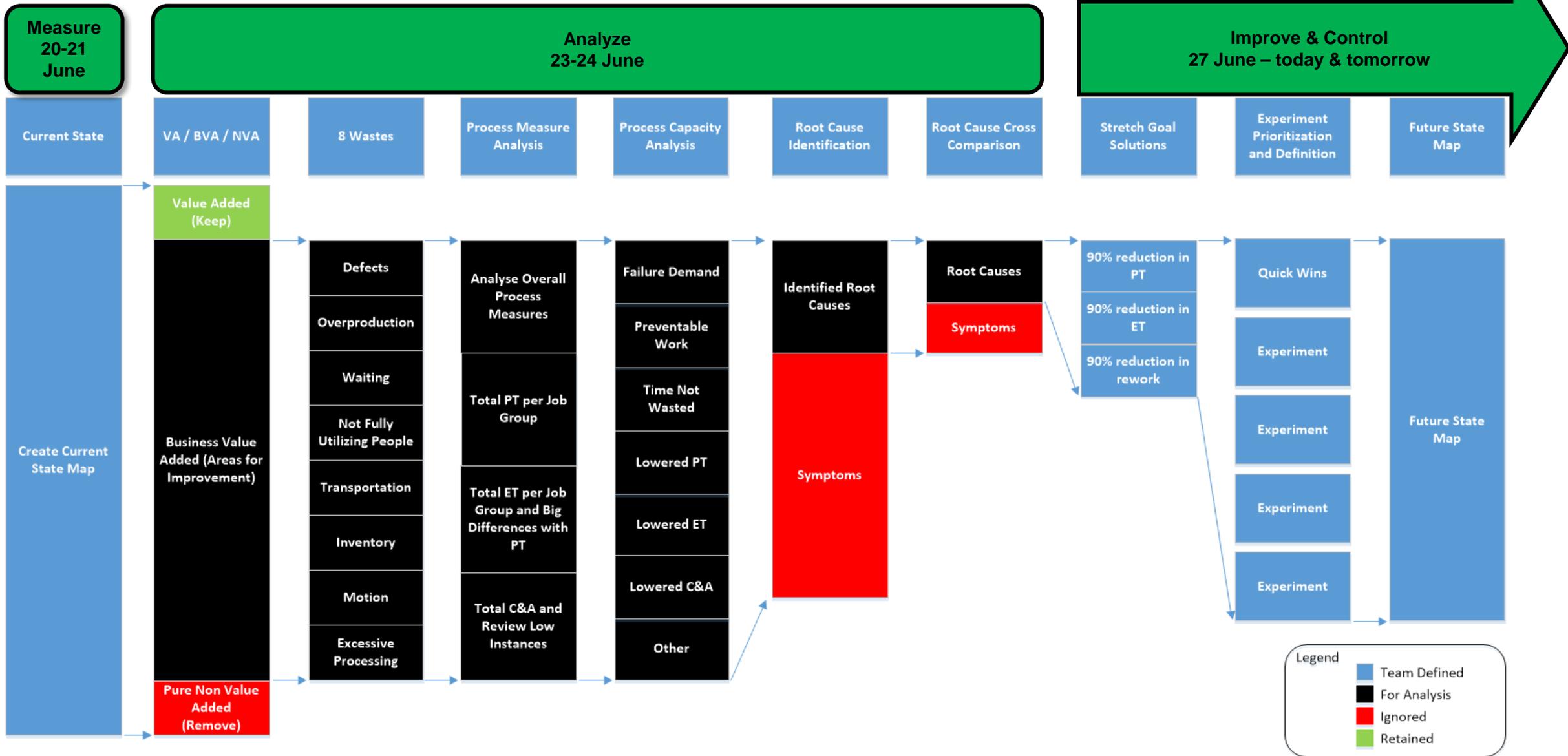
1. Defects / Errors
2. Overproduction
3. Waiting
4. Not fully utilizing people
5. Transport
6. Inventory
7. Motion
8. Excessive processing

Executive Summary

Approach taken: Project Problem-solving Model



Methodology



DEFINE

Define phase

- Objective of this phase: Create the conditions for success of the project, from scope definition, to assembling a project team, to planning the project, etc.
- Building block activities completed by Executive sponsor, sponsor and project lead during the Measure phase:
 1. Project Charter – defined goals, strategic objectives
 2. Completed a SIPOC – to understand high level process:
Supplier – Inputs – Process – Outputs – Clients – Outcomes
 3. Assembled a project team
 4. Walked through the project Kanban board to show all the phases and steps, and building block activities at each of the phases
 5. Planned the schedule - project timelines
 6. Delivered 3-day Lean Yellow Belt Training to 27 frontline staff and 7 leaders
 7. Conducted an environmental scan with 3 cities: Oakville, Markham and Brampton

MEASURE

Measure phase

- Objective of this phase: Explore from multiple perspectives and map out the value stream of the process, capturing key data points
- Building block activities the Team completed during the Measure phase:
 1. Conducted interviews to complete the Voice of customers
 2. Built current value stream map
 3. Captured data points:
 - Process Time (PT)
 - Elapsed Time (ET)
 - % Complete & Accurate (% C&A)

ANALYZE

Analyze phase

- Objective of this phase: Analyze the problems exposed in the Measure phase. Narrow them down to the most important ones. Get to the root causes, not the symptoms
- Building block activities the Team completed during the Analyze phase:
 1. Identified Value Added vs Non-Value Added process step
 2. Identified the wastes
 3. Identified the sources of overwhelm and unevenness
 4. Conducted data analysis from the measures captured during the Measure phase
 5. Conducted a Fishbone diagram activity to help focus on root causes
 6. Brainstormed top issues, completed an affinity diagram and Team voted on top issues
 7. Analyzed top issues in an Interrelationship diagram to objectively rank top issues

IMPROVE

Improve phase

- Objective of this phase: From the top root causes identified at the Analyze phase, find solutions to experiment with to address those root causes
- Building block activities the Team completed during the Improve phase:
 1. Brainstormed solutions, completed an affinity diagram and Team voted on top solutions to address root causes
 2. Co-created the future value stream map
 3. Agreed on sequencing the experiments
 4. Developed a plan for each of the experiments
 5. Introduced the Experimentation / Implementation board, including metrics to measure results
 6. Introduced the Huddle/Stand-up Meeting routine to measure progress and identify issues
 7. Implemented successful experiments
 8. Conducted more Plan-Do-Check-Adjust cycles for experiments that did not get the results sought

CONTROL & CONTINUE IMPROVING

Control phase

- Objective of this phase: Make the change stick and continue experimenting and improving with the new way of working
- Building block activities for the Control and Continue to Improve phase:
 1. The 3 Lean principles are now part of the culture, part of the new way of working:
 - Seek flow efficiency
 - Make the process visible
 - Have routines built into the work to solve problems and experiment proactively
 2. For the experiments the Team successfully implemented, continue to measure results and complete Plan-Do-Check-Adjust cycles if seeking more improvements
 3. Continue improving with new experiments (Plan-Do-Check-Adjust cycles)
 4. Make your process and your work visible. Share results and show what is implemented and what is outstanding with the help of the heat map
 5. Continue having regular Huddle / Stand-up meetings to measure progress and identify issues

Summary of key findings

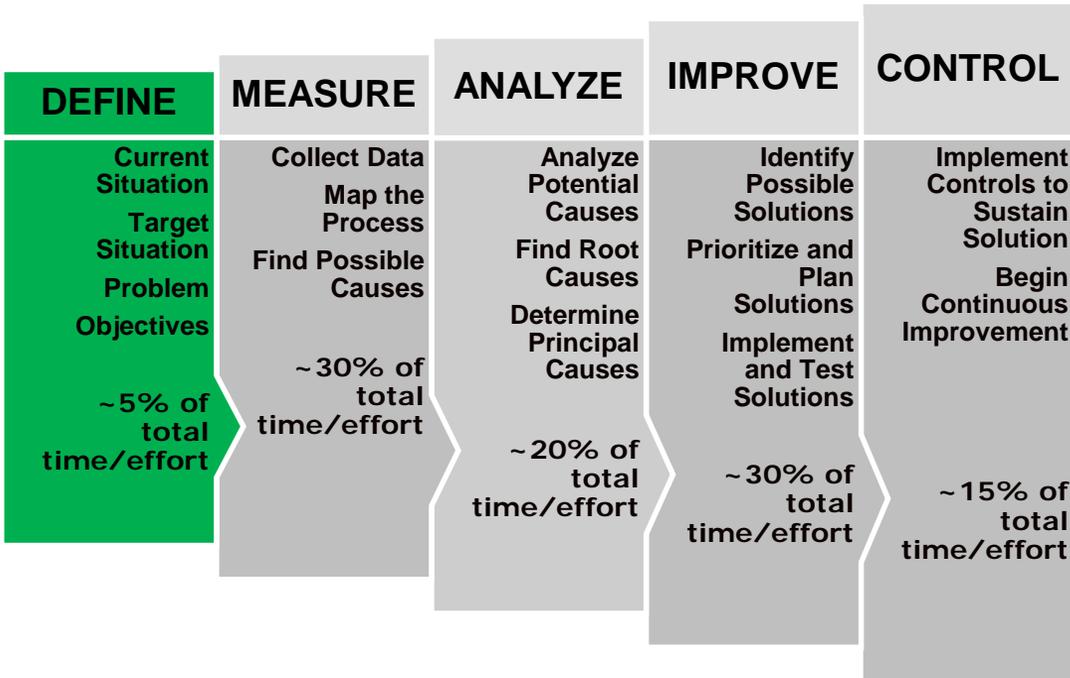
- “No continuous improvement routines” was the biggest issue/root cause
- Most application requires 3 formal review for compliance to issue a permit, which equals to:
 - 36-65 hours of effort time per file
 - 107.5-270.5 days of elapsed time before issuing a permit
 - 30 handoffs per file

Summary of realized key outcomes

- Goal statement and business / strategic objectives **have been met**
- Engaged and collaborated with **6 leaders and 20+ staff members** for more than 7 months
- Successfully implemented 5 experiments with **realized measurable gains**:
 - 9-20 hours less effort time per file. **A realized gain of PT = 25-32%**
 - 62.5-129.5 days less elapsed time to issue permit. **A realized gain of PT = 48-58%**
 - 11 less handoffs per file. **A realized gain of PT = 37%**
 - **Free-up RDT capacity by 39-44%** to do more value-added work

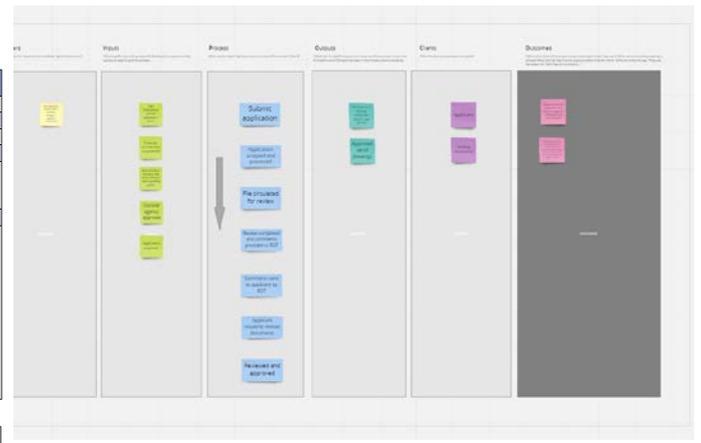
Summary of potential for additional key outcomes

- **“Continuous improvement routines”** be part of our way of working
- **For every file requiring only one formal review cycle** to approve application post-prescreen instead of 3 cycles; and
- **By continuing to improve the IT solution** to automate process steps currently done by RDT
- There is **potential for additional savings**:
 - Reduce PT from 27-45 hours down to PT = 20-29 hours. **An additional potential gain of PT = 19-24%**
 - Reduce ET from 45-141 days down to ET = 25-62 days. **An additional potential gain of ET = 19-29%**
 - Reduce number of handoffs by staff from 19 down to 11. **An additional potential gain of 26%**
 - **An additional “Free-up RDT capacity” by 47-52%** to do more value-added work



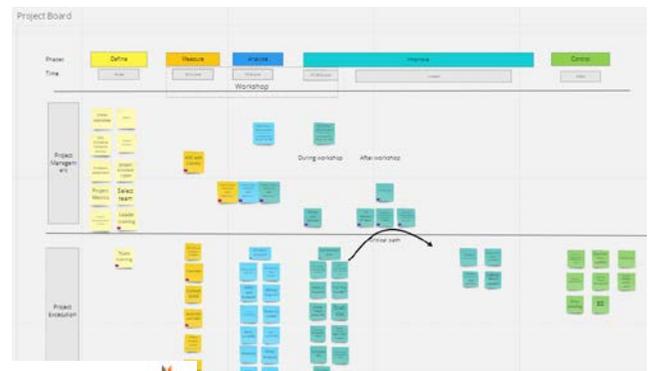
Project Charter

Project		
Start Date	February 2022	
End Date	February 2023	
Department	Project Sponsor	Project Leader
Planning Building & By-Law Finance	Sue Connor	Jamie Tellier Jeanette Bax
Team Members		Key Stakeholders
Mark Simeoni Nick Anastasopoulos Stephanie Venimore Chad MacDonald Alison Enns – participating in a parallel project that will also utilize funding from this grant Helen Walshura Other departmental staff as required – to be included in project work as it connects to their departments and their roles		Ontario Government Council City Leadership City Staff Residents Development Industry Housing Strategy Team
Author	Version	Date
Jeanette Bax & Jamie Tellier	1.0	March 2022



Assembling a Project Team

Name	Role
Sponsor	Visibly supports project, remove obstacles, provide resources
Facilitator	Advocate of methodology, leads project
Core Team	Participates fully in project, implements solutions
Final manager	Provides their input, implements solutions
	Provides help if required
	Participates fully in project, ensures Voice of Client is considered



DEFINE

High-level Project Planning	Activity	Start	End	Team	Priority																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Training Phase	Complete the study of current process	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

Goal Statement

- To improve the development application process and reduce or eliminate non-value add capacity demands on departmental staff
- To ensure the process is efficient and streamlined when reviewing and approving development applications
- The impact of these improvements will allow for housing approvals to occur in a timelier fashion

Business / Strategic Objectives

- Ability to support faster development within the City
- Support for vision to focus strategic priorities by increasing housing options and enabling responsive growth management
- Learning and development of staff in the areas of process improvement and product design
- Intentional practice of new and innovative approaches to continuous improvement that will increase the sophistication of the organization's business practices

Plan for Freed-Up Resources

(NO JOB LOSS FROM THIS PROJECT)

- Team to work more on strategic work, less on fighting operational fires (prioritization and sequencing)
- Reassign resources to top priorities
- Deal with new, unexpected requests without heroics
- Include change management strategies and communication plan

Principles

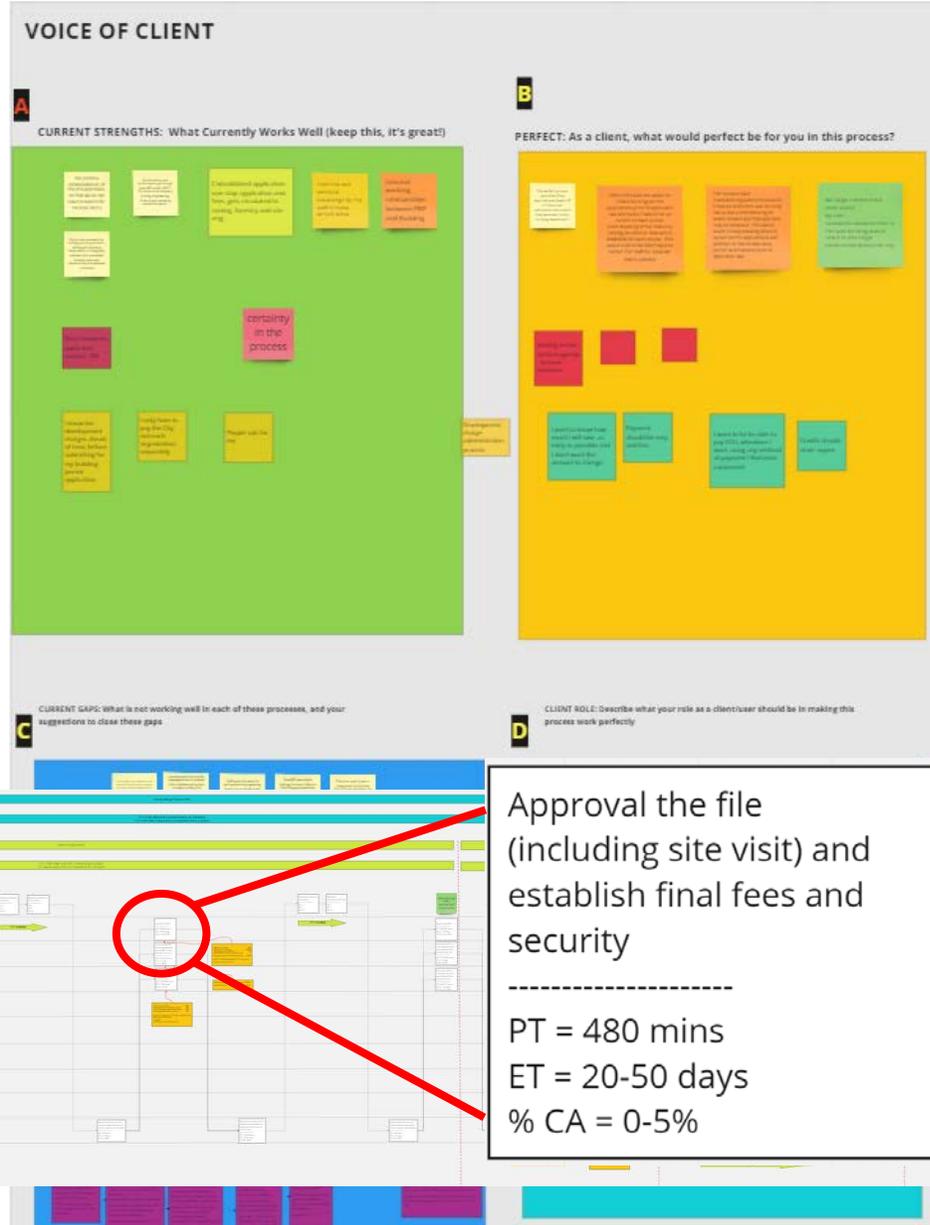
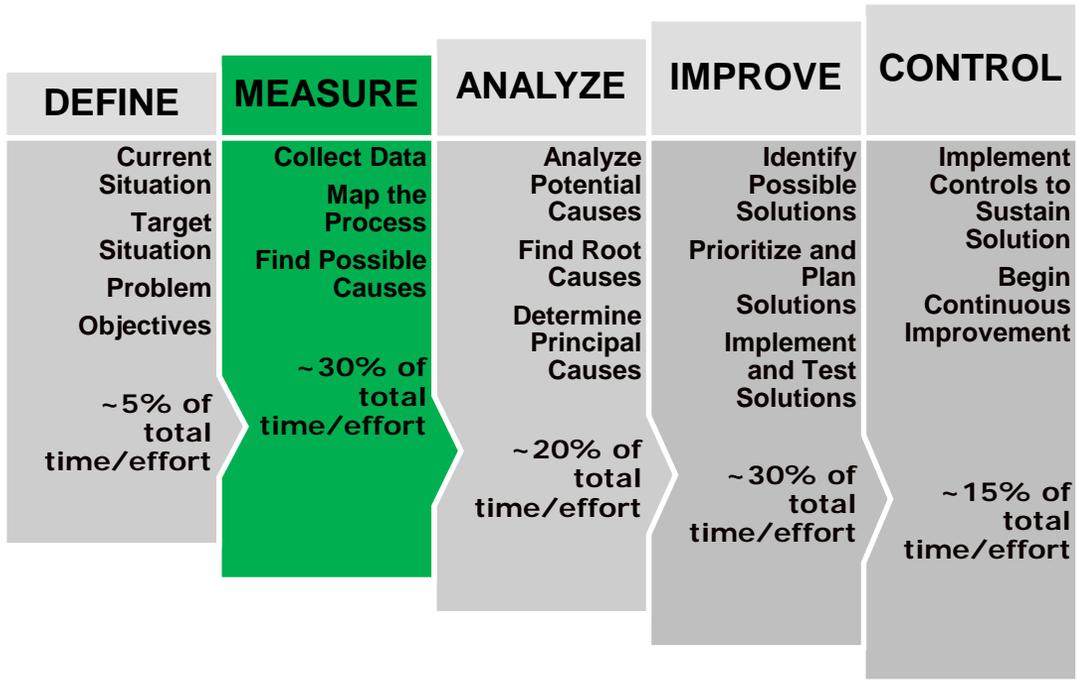
- A bad process beats a good person almost every time
- Be tough on the process, easy on the people – create psychological safety
- “No Blame” environment
- Not a “job-cutting” exercise – free up capacity to do more core and value-added work
- Don’t get stuck in details – focus on the “majority” path of the file

Facilitator's Positive Observations

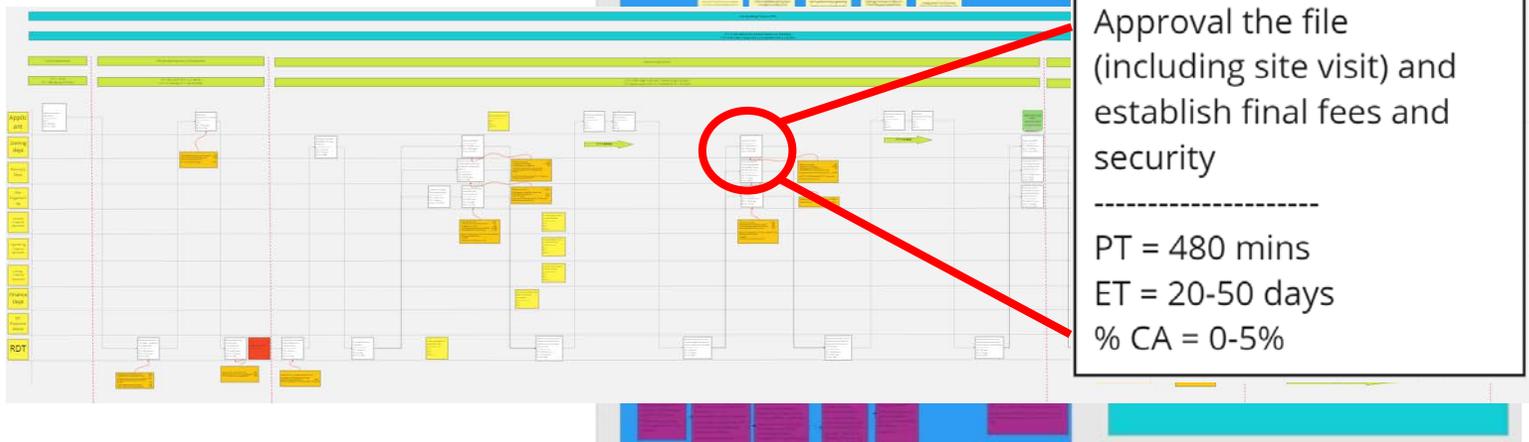
- Motivated and engaged sponsorship
- Diverse project team that brought different perspectives and a depth of knowledge and experience
- Active participation from all project team members
- Very engaged and motivated project team seeking improvements and change the current processes
- Trusted and learned the Lean methodology to find solutions to root causes, not symptoms
- Team members kept an open mind to change and improvement while embracing experimentation and shifting to no longer being nervous about failure

Environmental scan

- Conducted three interviews with Oakville, Markham and Brampton
 - Similar challenges observed:
 - Poor quality of submissions by applicants
 - Too many review cycles
 - Culture of applicants to complain to Council or Mayor, if file not moving fast enough.
“Whoever makes the most noise will jump the cue and become the next priority.”
 - Lessons learned:
 - From Markham: *“We started improving our process 5 years ago. On average, we had 4 review cycles. Now we are at 2 review cycles.”*
 - From Brampton: *“We work closely with Council to find change management strategies to deal with the culture of applicants.”*
 - From Oakville: *“Staff changed their culture/their approach from enforcement to dialogue and collaboration with applicants.”*
- * You can refer to “Environmental Scan - My notes” for full details of the interviews



MEASURE



Voice of Customers

Question	Response
What works well now?	<ul style="list-style-type: none">- Consolidated application - one stop application and fees, gets circulated to zoning, forestry and site engineering- The process precedes the building permit application, allowing the building department to strategically maintain their mandated review timeframes (because they are separate processes)- All submissions and resubmissions go through one staff contact (RDT). This ensures all reviewers (zoning, engineering, forestry) are reviewing same information- D/C - Knowing the development charges ahead of time, before submitting for my building permit application
What would perfect look like?	<ul style="list-style-type: none">- It would be so helpful to have a clear understanding of the status of a file by looking at notes or statuses in AMANDA for each review. This would ensure we don't have to bother PBP staff for separate status updates- Quicker reviews/turnaround time in PBP and Building would result in less illegal construction within the city- D/C- I want to be able to pay D/Cs whenever I want, using any method of payment I find most convenient

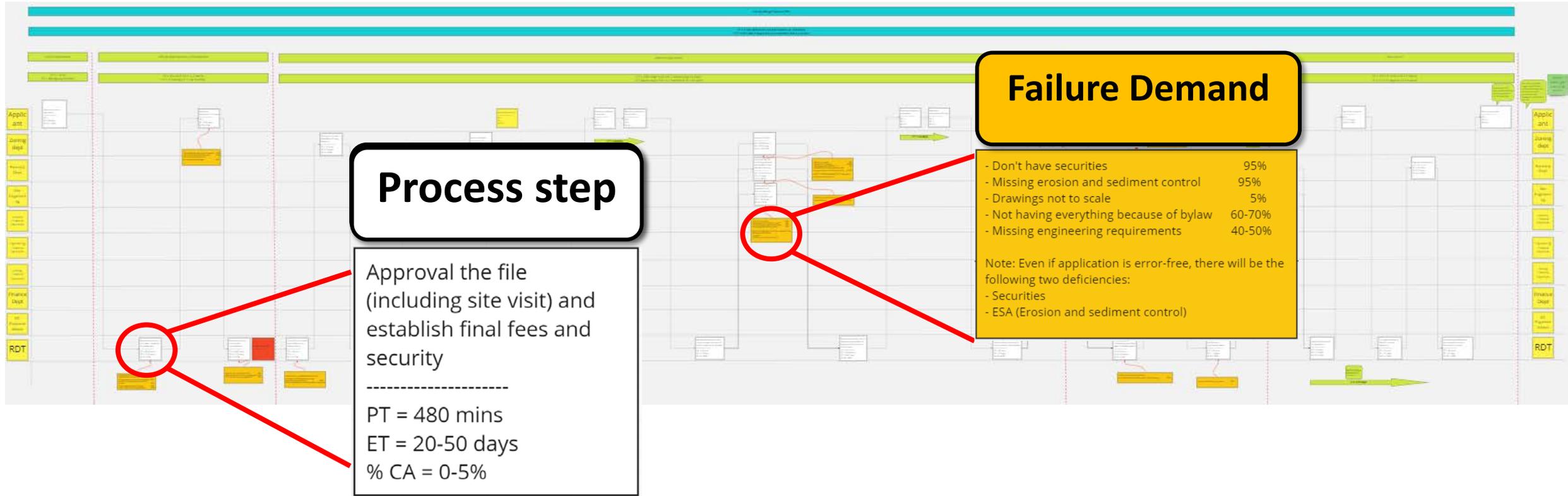
Voice of Customers

Question	Response
Current gaps	<ul style="list-style-type: none">- It is difficult to obtain information on the status of a PBP application (for internal purposes) without directly contacting a Planning Dept staff member- Delays in review and issuance of applicable law approvals cause customers to ask for early permit submissions (before applicable law) and customers are extremely frustrated when they get to building permit application stage- Three different service areas with staff experiencing varying workloads and lack of resources causes delays in final approvals and customer/client response which is delaying submission of the building permit application- No ability to track where the permit is in the process and emails/ phone calls are not responded to, so the frustration is escalated to Council offices- D/C - The timeframe between the original calculation and the time which D/Cs are payable is so long that fees are indexed multiple times

Voice of Customers

Question	Response
Ideal role of the recipient	<ul style="list-style-type: none">- Assist our partners in PBP by having the ability to help with their customers and provide accurate information or statuses, instead of using the common phrase of "I don't know"- The Building Department would like it so that the fee in AMANDA is always correct, so that no back and fourth is required when collecting the fee- D/C - I am told how much I am owed, one time, and I can pay easily

Value Stream Map – Current State



Key Data Measures

Measure

Definition

Processing/Effort Time (PT)

Amount of time to perform the task (“touch time”)

Elapsed Time (ET)

Amount of time needed for the piece of work to go from one step to the next (“inbox to inbox”)

Complete & Accurate % (C&A)

Percentage of work completed at this step without an interruption to flow (“first time through”)

Current State Metrics to manage one file

Step no. from VSM	Phase of the Process	Process Step, title of person performing the step	Actor	Low Processing Time (PT) minutes	High Processing Time (PT) minutes	Low Elapsed Time (ET) days	High Elapsed Time (ET) days	Complete & Accurate %
1	Submit application	Applicant submits application	Applicant	-	-	88	88	100%
2	Review application for completeness	Receive application, sort them, review for completeness	RTD	45	60	10	15	50%
3		Resubmit application 2nd time	Applicant	-	-	5	44	25%
4		Review application 2nd time for completeness	RTD	45	60	10	15	75%
5	Approve of application	Create file in Amanda and a folder in shared drive	RTD	30	30	-	-	75%
6		Zoning coordinator identifies a zoning examiner	Zoning Dept	15	15	1	3	98%
7		Circulate file to all reviewers	RTD	15	15	5	5	100%
8		Supervisor assigns file to technologist	Site Engineering Dept	15	30	10	10	90-100%
9		Approve the file (By Zoning Dept)	Zoning Dept	30	360	20	30	5-10%
10		Approve the file (including site visit) and establish final fees and security (By Forestry Dept)	Forestry Dept	480	480	20	50	5-10%
11		Approve the file (By Site Engineering Dept)	Site Engineering Dept	390	390	20	20	0-5%
12		Review comments from 3 Depts and send them to applicant with payment instructions	RTD	30	60	5	40	90%
13		Revise and address comments	Applicant	-	-	-	-	-
14		Resubmit application 3rd time	Applicant	-	-	3	44	-
15	Approve of application	Review application for 3rd time (compare comments) and circulate to all reviewers	RTD	60	60	1	5	80%
16		Approve the file (By Zoning Dept)	Zoning Dept	30	360	20	30	70-100%
17		Approve the file (including site visit) and establish final fees and security (By Forestry Dept)	Forestry Dept	480	480	20	50	5-10%

Summary per role

<p>Elapsed time when file is with applicant:</p> <ul style="list-style-type: none"> - ET = 103-335 days (4.7-15.22 months) - Touches the file 7 times
<p>For RTD :</p> <ul style="list-style-type: none"> - PT = 420-510 mins (7-8.5 hours) (1.2-1.4 days) - ET = 44-152 days - Touches the file 14 times
<p>For Zoning Dept:</p> <ul style="list-style-type: none"> - PT = 105-1095 mins (1.8-18.3 hours) (0.3-3.1 days) - ET = 42-78 days - Touches the file 4 times
<p>For Forestry Dept:</p> <ul style="list-style-type: none"> - PT = 930-1305 mins (15.5-21.8 hours) (2.6-3.6 days) - ET = 43-81 days - Touches the file 6 times
<p>For Site Engineering Dept:</p> <ul style="list-style-type: none"> - PT = 695-990 mins (11.6-16.5 hours) (1.9-2.8 days) - ET = 43-64 days - Touches the file 6 times
<p>PT for City of Burlington staff for one application:</p> <ul style="list-style-type: none"> - PT = 2150-3900 mins (35.8-65 hours) (6-10.8 days) - City ET = 107.5-270.5 days

Failure Demand

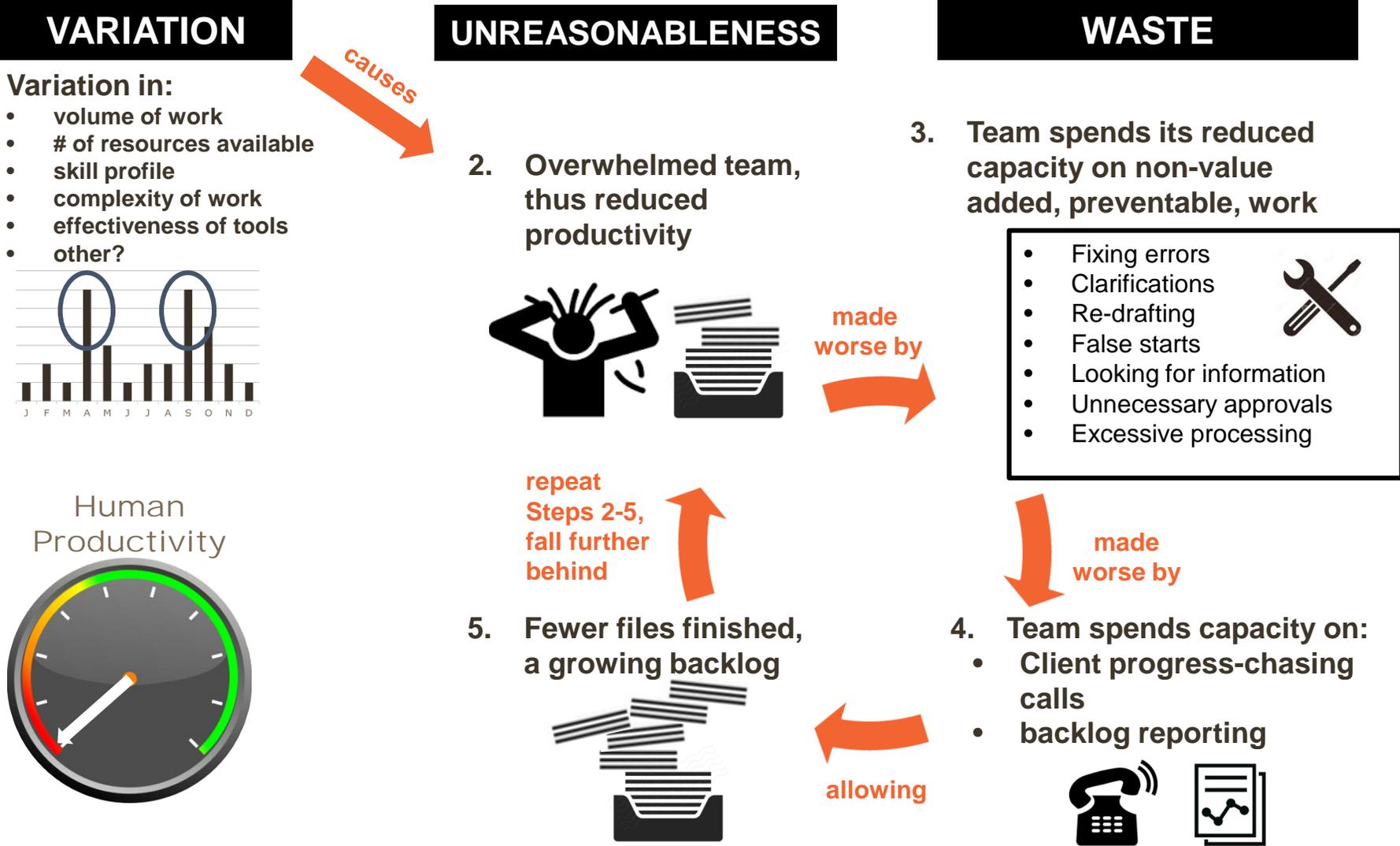
Following RDT reviewing application for completeness, on average the 3 Departments will complete 3 formal review cycles for compliance with same observations for 2nd and 3rd submissions

This process suffers from extensive rework.

Pre-Building Process - Failure Demand - Review Matrix													
Phase	Process Step	What is reviewed	%C&A	Applicant	RDT		Zoning Dept		Forestry Dept		Site Engineering		
					1st submission	2nd submission	2nd submission	3rd submission	2nd submission	3rd submission	2nd submission	3rd submission	
Review application for completeness	Receive applications, sort them, review for completeness	Application form (insufficient info)	50% (1st submission) - 75% (2nd submission)		80%	80%							
		Applicant doesn't understand the form		80%									
		Missing a key component (Ex. Grading plan)		90%	90%								
		Architectural drawing not dimensioned in metric		25%									
		Outside agency approvals missing		10%									
		Don't comply with zoning regulations		20%	20%								
	Resubmit application 2nd time	Don't believe the submitting requirements	25%	100%									
		Don't understand why those documents		60%									
		Don't know what the documents are (Ex. What is grading drainage?)		40%									
Approve of Application	Create a file in Amanda and a folder in our network drive	Application is incomplete, based on technical screening from Site Engineering Zoning (Ex. It needs a variance)	75%		100%								
	Approve the file (2nd submission) (By Zoning Dept)	Missing info on drawings	5-10% (2nd submission) - 70-100% (3rd submission)										
		Zoning regs not complied with											
		Additional info required or applicant need to answer questions from Zoning Examiner											
	Approve the file (including site visit) and establish final fees and security (2nd submission) (By Forestry Dept)	Deficiency comments (lack of compliance)	0-5% (2nd submission) - 50% (3rd submission)						75-80%	75-80%			
		Drawings not to scale (Ex. they missed trees, didn't identify the neighbors)						80%					
		Lack of hoarding						100%	100%				
	Approve the file and establish final security amount (2nd submission) (By Site Engineering)	Don't have securities	0-5% (2nd submission) - 50% (3rd submission)									95%	95%
		Missing erosion and sediment control										95%	95%
		Drawings not to scale										5%	
Not having everything because of bylaw											60-70%	30%	
Address outstanding items and approve evidences	Missing engineering requirements										40-50%	25%	
	Inform clients of what is missing (final outstanding items that need to be addressed)	Missing final outstanding items from any of the Departments (Forestry and/or Site Engineering)	50%		100%								
	Address final outstanding items and submit evidences	Applicant doesn't understand the evidences they have to provide	40%	100%									
	Review and circulate evidences to appropriate teams	Applicant didn't address it properly	80%		100%								
	Review and approve evidences (By Site Engineering)	Fence not installed properly (not buried properly)	2%								100%		

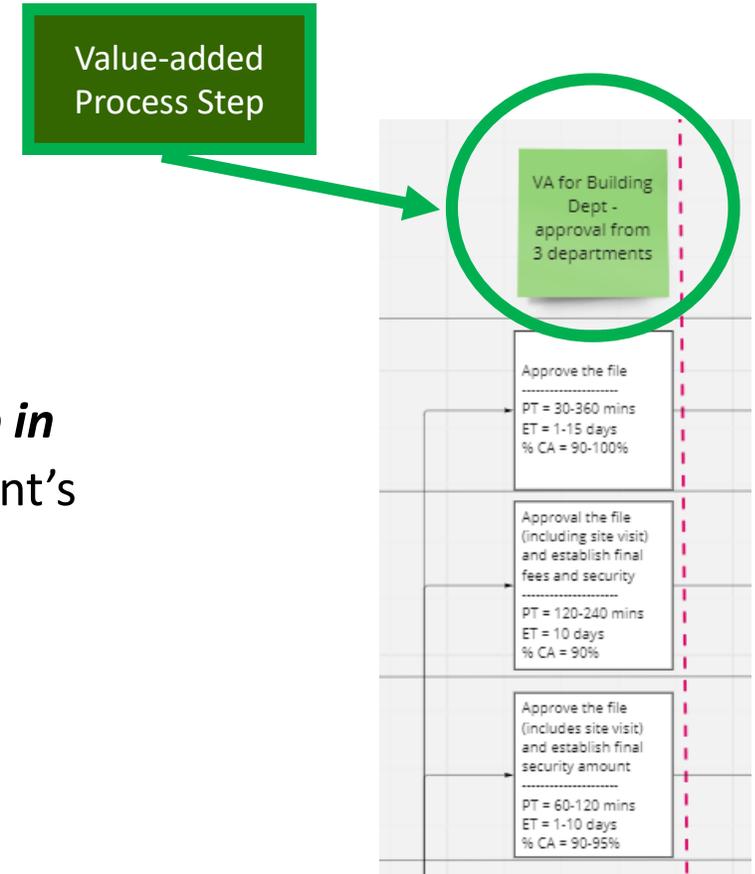
The "Approve of Application" phase is the most costly:
 PT = 28-54 hours
 ET = 3.8-12.2 months
 %C&A = 0-10% on 2nd submission

How Backlogs Develop



Value-Added vs Non-Value Added

- Two pure Value-Added process steps in the current process:
 - From Building Department: *“Approval of application for compliance from 3 departments”*
 - From Applicant: *“There are **no pure Value-Added process step in the PBP process**”* (from the eyes of the applicant). The applicant’s Value-Added process step is: *“Getting a building permit”*.



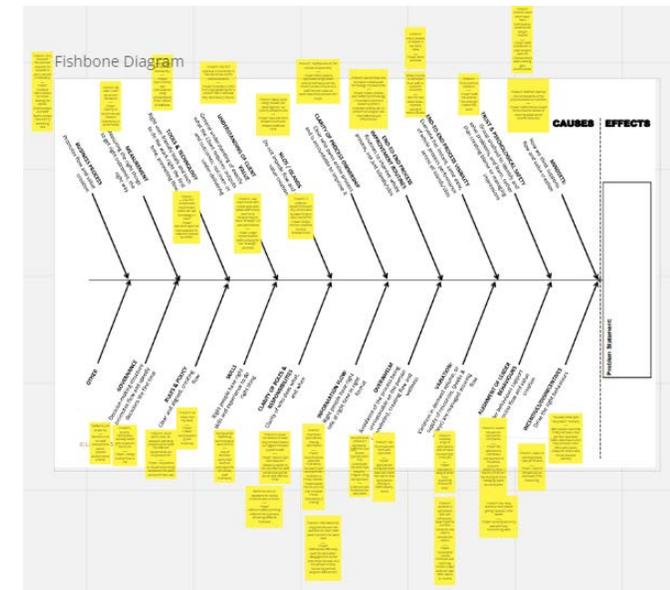


Top Wastes

- **Defect:** *“Because each municipality reviews things slightly differently, our bylaws and regulations differ which leads to incorrect revisions submitted. Sometimes this is a result of unclear commenting because it seems the City has been in a constant state of transition for process review”*
- **Overproduction:** *“Accepting incomplete submissions often increases the length of review by requiring additional, start, stop and re-starts”*
- **Not fully utilizing people:** *“Technically smart people doing administrative work (RDTs) when they could be reviewing applications”*
- **Inventory:** *“High volume of work and inability to process quickly enough”*
- **Excessive processing:** *“Staff double entering files into various spreadsheets and databases instead of fully utilizing AMANDA”*

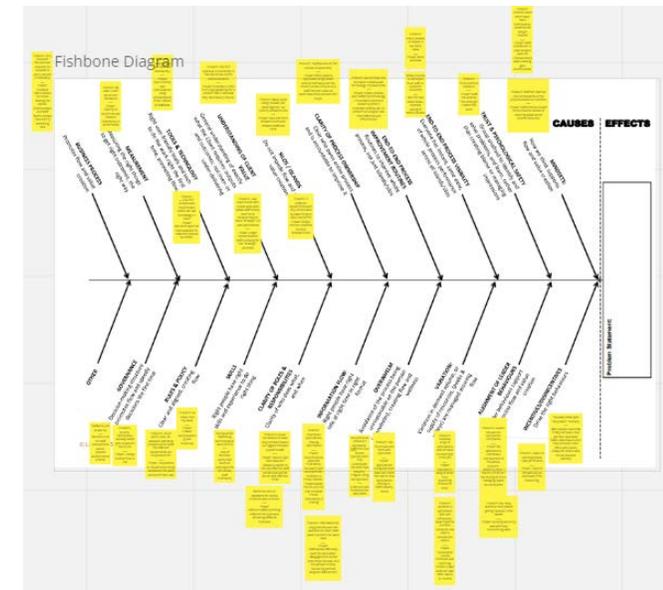
Fishbone Diagram

- **Cause: Rules and policy**
- PROBLEM: *“So many rules (bylaws)”*
 - IMPACT: *“Creates overprocessing, and bureaucracy”*
- **Cause: Alignment of Leader behaviors**
- PROBLEM: *“Leaders focused on symptoms/complaints”*
 - IMPACT: *“No attention to continuous improvement of the actual problem, which results in distrust / the feeling of micro-managing based on complaints”*
- PROBLEM: *“Too many executive level people getting involved in the weeds”*
 - IMPACT: *“Skipping hierarchy and artificially reprioritizing work”*



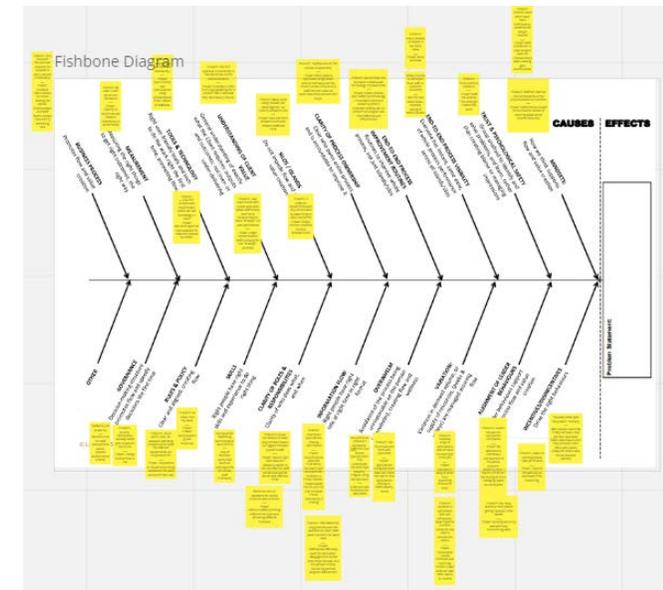
Fishbone Diagram

- **Cause: Incentives/disincentives**
- PROBLEM: *“Squeaky wheel gets the grease mentality”*
 - IMPACT: *“More people learn that if they complain, they get their approvals faster, which as a result they complain more often, and causes delays for others who do not and wait patiently”*
- **Cause: Mindset**
- PROBLEM: *“Process issues which have been continuously identified do not get resolved”*
 - IMPACT: *“Staff disinterest in continuing to work on improvements when nothing gets accomplished”*



Fishbone Diagram

- **Cause: Governance**
- PROBLEM: *“Priority, interference, squeaky wheel gets pushed to top of pile”*
 - IMPACT: *“Delays to other files in line”*
- **Cause: Mindset**
- PROBLEM: *“Staff feel that the core components of the process cannot be modified”*
 - IMPACT: *“Staff continue to add to the process instead of reducing waste as the process develops”*



Problem Identification



Voted top Issues in the Current Process (mix of symptoms and **root causes**)

- **Lack of process visibility**
- **Bad application form**
- Too much back and forth
- **AMANDA not utilized properly**
- **Complex requirements and bylaws**
- Overprocessing / manual process @ RDT
- Files get escalated
- Staff not utilized properly
- **End-to-End process (E2E) ineffectiveness, including 3 levels of approval**
- Lack staff capacity
- **No continuous improvement routines**
- Too long to process payments / not visible

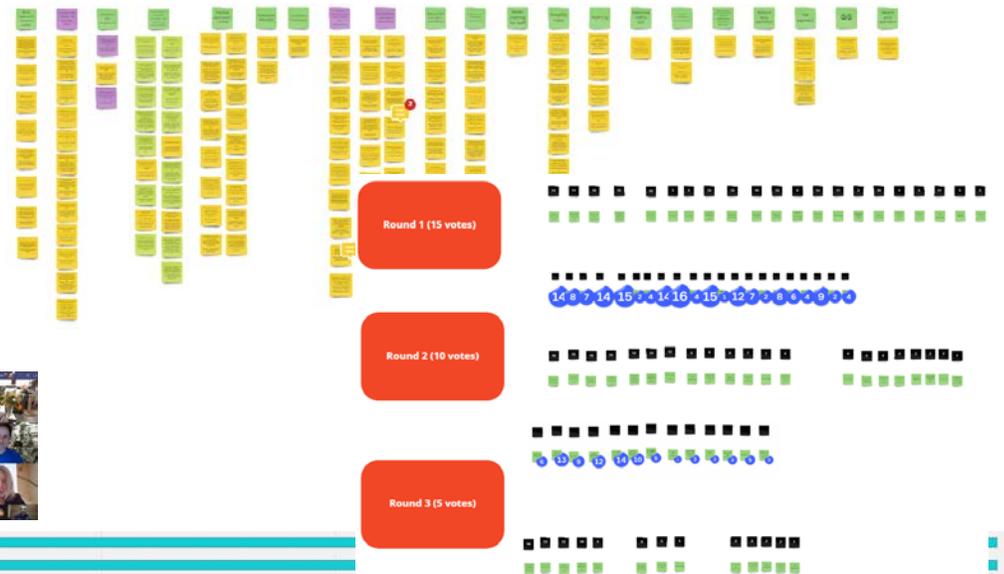
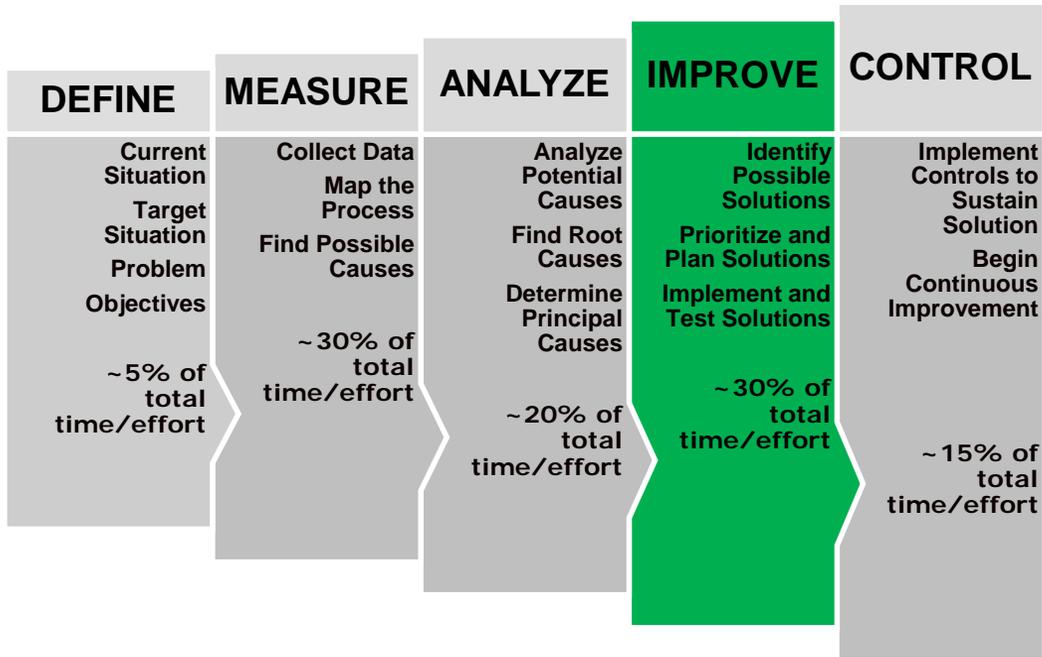
Interrelationship chart to get to the **root causes**

To what extent does the ROW cause the COLUMN? ↑ Major cause: 10 Minor cause: 5	Lack of process visibility	Bad Application form	Too much back and forth	AMANDA not utilized properly	Complex requirements and bylaws	Overprocessing/ manual process @ RDT	Files get escalated	Staff not utilized properly	E2E process ineffectiveness, including 3 levels of approval	Lack staff capacity	No continuous improvement routines	Too long to process payments / not visible	#REF!	#REF!	#REF!	ROWS: impact of this cause on all other
Lack of process visibility			10			5	10		5		5					35
Bad Application form			10			10	5	5		5		5				40
Too much back and forth							10	5		10						25
AMANDA not utilized properly	10		10			10		10	5	10		5				60
Complex requirements and bylaws		10	10			5	5		10	10						50
Overprocessing/ manual process @ RDT			10				10			5						25
Files get escalated								10								10
Staff not utilized properly												5				5
E2E process ineffectiveness, including 3 levels of approval		5	10			10	10	10		10						55
Lack staff capacity							10	10				5				25
No continuous improvement routines		5	5	10	5	10	10	10	10	5		10				80
Too long to process payments / not visible			5			5	5		5							20
COLUMNS: how many other causes impact this cause	1	3	8	1	1	7	9	7	5	7	1	5	0	0	0	

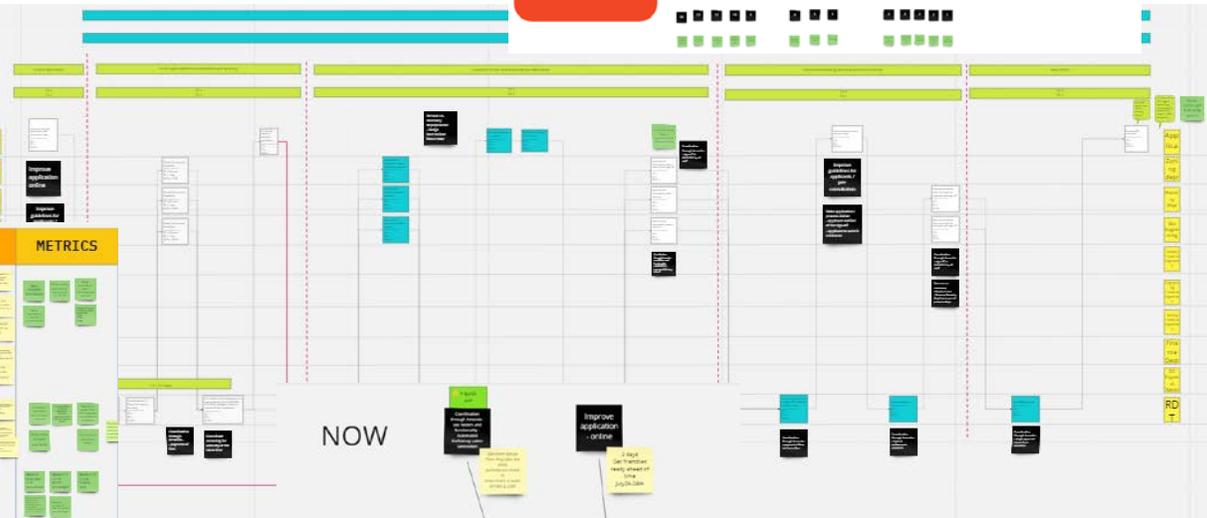
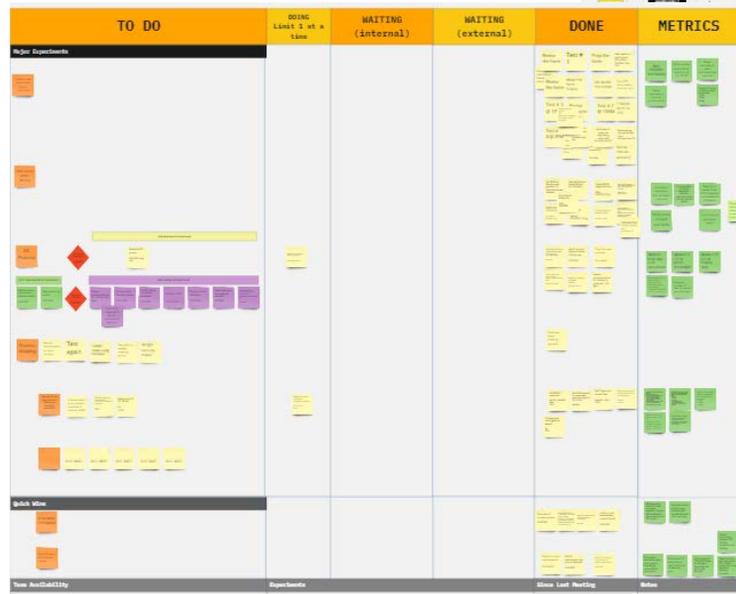
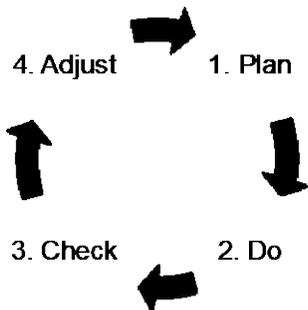
Top root causes in the Current Process

- No continuous improvement routines
- AMANDA not utilized properly
- End-to-End process ineffectiveness, including 3 levels of approval
- Complex requirements and bylaws
- Bad application form
- Lack of process visibility

To what extent does the ROW cause the COLUMN?	Lack of process visibility	Bad Application form	Too much back and forth	AMANDA not utilized properly	Complex requirements and bylaws	Overprocessing manual process @ RDT	Files get escalated	Staff not utilized properly	EZE process ineffectiveness, including 3 levels of approval	Lack staff capacity	No continuous improvement routines	Too long to process payments / not visible	AREF?	AREF?	AREF?	ROWS: Impact of this cause on all other rows
Major cases: 10 Minor cases: 5																
Lack of process visibility			10			5	10		5		5					35
Bad Application form		10						6	5		5					40
Too much back and forth								10	5							25
AMANDA not utilized properly	10		10					10	5							60
Complex requirements and bylaws		10	10					5	5		10					50
Overprocessing manual process @ RDT								10			5					25
Files get escalated								10								10
Staff not utilized properly															5	5
EZE process ineffectiveness, including 3 levels of approval		5	10					10	10	10						55
Lack staff capacity								10	10						5	25
No continuous improvement routines		5	5	10	5	10	10	10	10		5				10	80
Too long to process payments / not visible			5					5	5							20
COLUMNS: how many other causes impact this cause	1	3	8	1	1	7	9	7	5	7	1	5	0	0	0	



IMPROVE



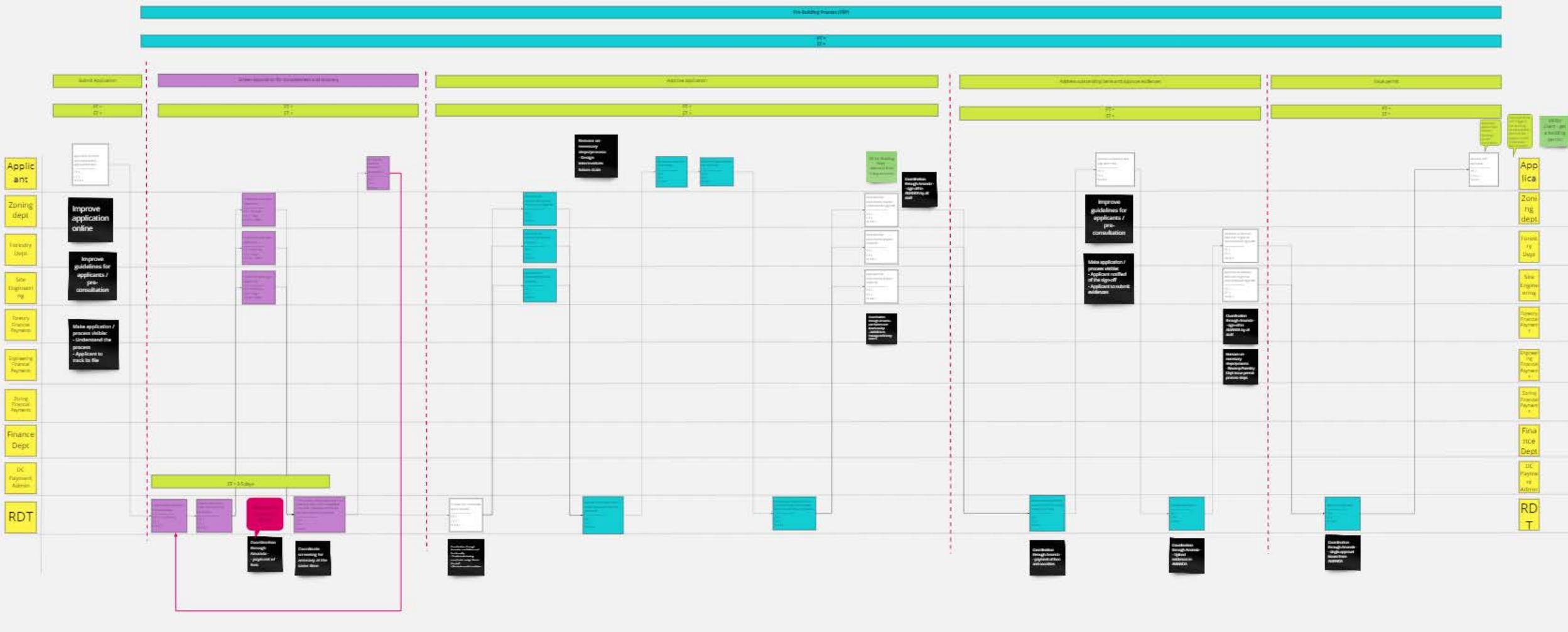
“Super-Stretch” Solutions Brainstorming

To find better solutions:

- Ask a tougher question
- Introduce constraints:
 - *How could we reduce the total elapsed time from start to end of process in 1 business day?**
 - *How could we reduce the total effort time in this process by 95%?**
 - *What could we do to make the process completely error-proofed – no rework due to errors, no delay in making informed decisions, no need to seek further clarification, no missing information?**

**without: working harder, adding people and/or budget, reducing quality, while increasing customer satisfaction*

- These ideas are then used to identify possible solutions and a future state process

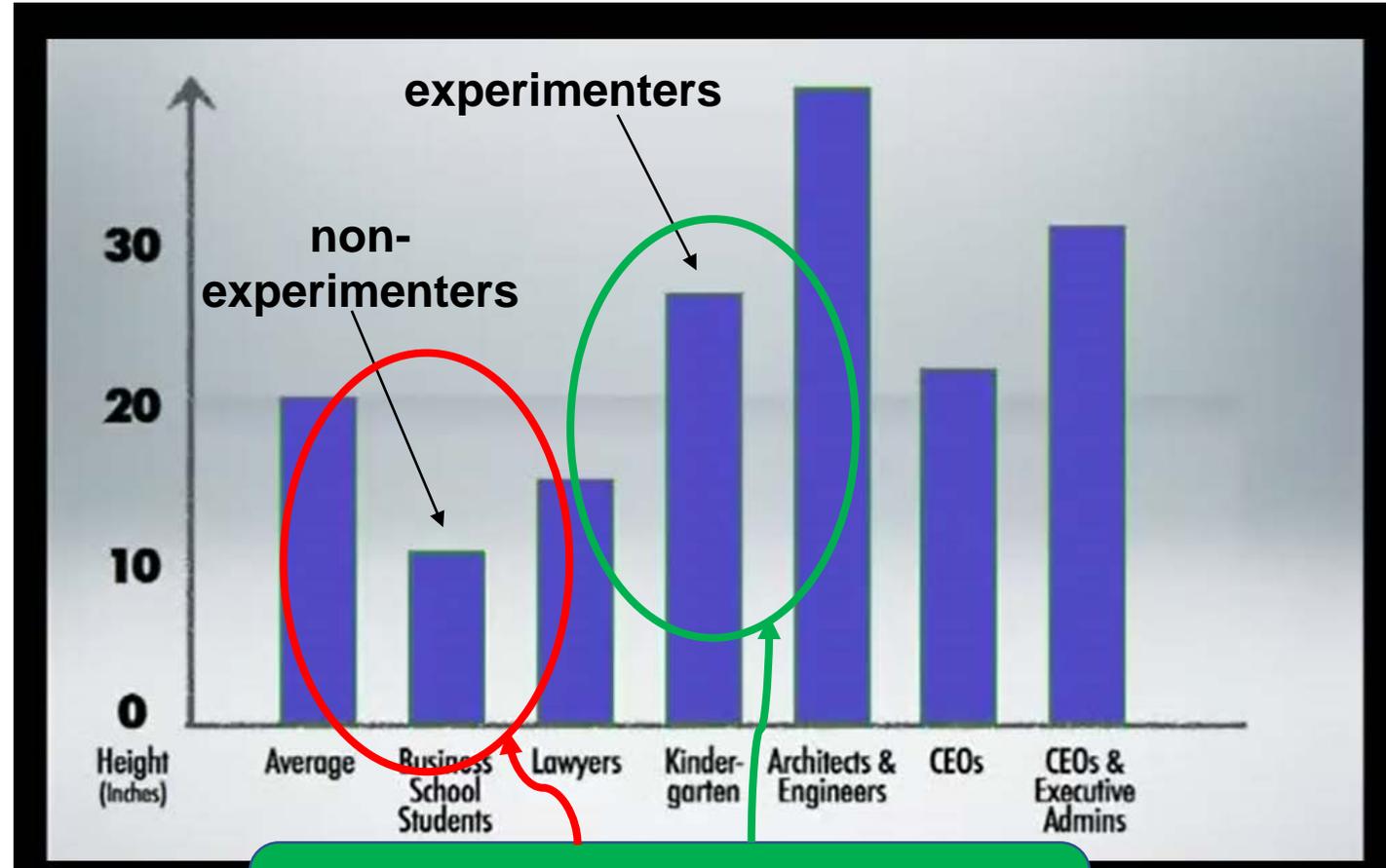


Experimentation

Proposed Future state process

Need to experiment. Why experiment?

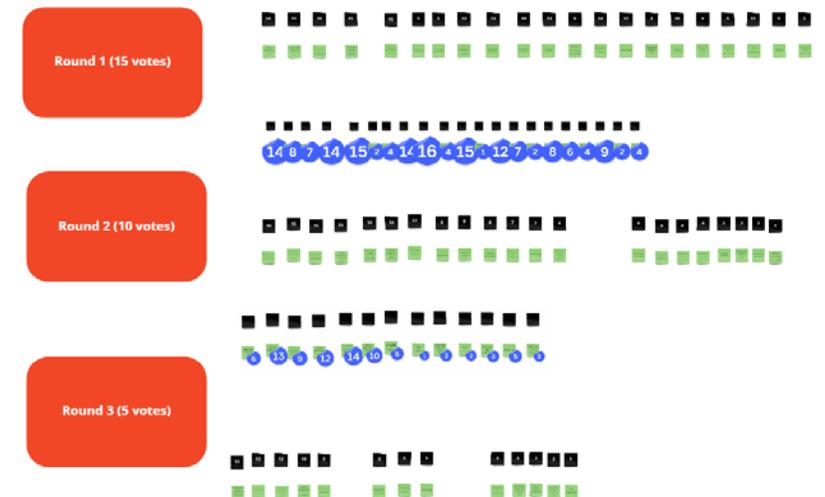
- Prove the concept
- Lower risk, relatively lower effort
- Agile enough to adjust in progress through quick re-prototyping
- Allow larger groups of staff and leaders to learn for themselves what works – greater buy-in
- Create a movement, make the idea “go viral”



Experimenters are more successful than non-experimenters!

Voted Top-5 High-Level Experiments

- Coordination through AMANDA – use folders and functionality
- Improve application online
- Make application / process visible
- Improve guidelines for applicants / pre-consultation
- Remove unnecessary steps / process



No experiment for one of the **root causes**

- “**Complex requirements and bylaws**” was one of the top **root causes**
- No experiments were identified by the Project Team to address this root cause, likely because the project team felt that they didn’t have the power and/or influence to challenge these bylaws and their raison d’être
- Why do we have all these bylaws in the first place?
 - Leadership not supporting staff on some decisions
 - Consequence: They introduce bylaws
- Negative impact of imposing bylaws on the staff:
 - Creates excessive processing and overproduction (very costly wastes)
 - Interrupts the flow and the ability to timely deliver the service
- Recommendation: Leaders to work with their staff and challenge these bylaws

Note: This is exactly like the scenario at slide #32 – “How backlog develop?”



**Human
Productivity**



Sequencing of experiments



Experiment Sequencing for PBP process

Approach: Continuous improvement way of working by completing short cycles of Plan-Do-Check-Adjust to small experiments and then implement

Objective: Be intentional with the sequencing of the experiments. Learn fast, eliminate non-value-added, failure demand and waste in order to free-up capacity, and for staff to do more value-added work

Quick win	Phase 1	Phase 2	Phase 3
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> 1st Quick Win: Circulation elimination <input checked="" type="checkbox"/> 2nd Quick Win: Simplification of site plan review 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Experiment #1: Automated deficiency letter generation <input checked="" type="checkbox"/> Experiment #2: Create a new application form 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Experiment #4: Shield Experiment Part 1 – Creating a formal prescreen with SME prior to accepting applications 	<ul style="list-style-type: none"> <input type="checkbox"/> Experiment #6: Shield Experiment Part 2 – 2 formal review cycles to approve application post-prescreen
<p>Legend:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Implemented <input type="checkbox"/> Currently implementing <input type="checkbox"/> Future experiment 	<ul style="list-style-type: none"> <input type="checkbox"/> Experiment # 3: DC Process 	<ul style="list-style-type: none"> <input type="checkbox"/> Experiment #5: Make application / process visible 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Continue improving on successful experiments that have been implemented



Quick Win #1 – Circulation elimination

Objectives:

- Remove a non-value-added step: "Zoning coordinator assigning files".
- Forestry Department to use AMANDA tasks instead of emails
- Combine RDT steps "Create folder in AMANDA" and "Circulate to reviewers"
- Eliminate circulation of emails by making better use of AMANDA

Results of experiment:

- Experiment was successfully completed on 30 June 2022
- Realized gains:
 - Reduced Processed Time (PT) by 15 mins
 - Reduced Elapsed Time (ET) by 5-10 days (on average)
 - Eliminated 2 handoffs
 - Improved internal visibility by using AMANDA tasks

Brought "pain relief" to the following top issues in the interrelationship chart:

- AMANDA not utilized properly
- Too much back and forth
- Overprocessing / manual process @ RDT
- Staff not utilized properly
- E2E process ineffectiveness, including 3 levels of approval



Quick Win #2 – Simplification of site engineering review

Objectives:

- Review current requirements for Site Engineering Department
- Identify requirements that are non-value-added
- Remove requirements from process
- Communicate changes

Results of experiment:

- Experiment was successfully completed on 15 September 2022
- Realized gains:
 - Eliminated 4 application types requiring Site Engineering review, which corresponds to 25% of applications
 - Eliminated (on average) 3 review cycles per application, saving PT = 20 hours of review per application for Site Engineering department
 - Eliminated 75 applications from review by Site Engineering department per year
 - Reduced Processed Time (PT) by 1500 hours (75 applications x 20-hour review per application)
 - Eliminated 7 touchpoints between RDT, Site Engineering Supervisor and Site Engineering Team

Brought “pain relief” to the following top issues in the interrelationship chart:

- Complex requirements and bylaws
- Files get escalated
- Lack staff capacity
- Staff not utilized properly
- Too much back and forth
- E2E process ineffectiveness, including 3 levels of approval



Experiment #1: Automated deficiency letter generation

Objectives:

- Have the template deficiency letter in AMANDA, a centralized record management location
- Improve format and simplify the form to help improve accuracy in resubmission by applicant
- Increase consistency across Departments
- Increase visibility across the organization, including management
- Create a definitive artifact in the submission or inquiries on what documents are required

Results of experiment:

- Experiment was successfully completed on 21 September 2022
 - Realized gains:
 - Minimized interruptions for staff who are asked by management to provide a copy of the deficiency letter
 - Reduced number of back and forth
 - Reduced number of emails between RDT and applicant
- * Team will continue tracking metrics to quantify the results

Brought “pain relief” to the following top issues in the interrelationship chart:

- Lack of process visibility
- AMANDA not utilized properly
- Overprocessing / manual process @ RDT
- Lack staff capacity
- Staff not utilized properly
- Too much back and forth



Experiment #2: Create a new application form

Objectives:

- Improve client experience
- Make application form less complex, less lengthy, and more user friendly
- Improve quality of submissions with ultimate objective to accelerate the issuance of permit
- Reduce back and forth between applicant and RDT

Results of experiment:

- After multiple iterations of the template application form, experiment was successfully completed on 26 September 2022
 - Realized gains:
 - Reduced failure demand (% Complete and Accurate (% C&A) improved from 50% to 80%)
 - 80% of submissions now meet the submission standards, i.e. documents are organized and named properly, and correct file format.
 - Reduced number of back and forth between applicants and RDT
- * Team will continue tracking metrics to quantify the results

Brought “pain relief” to the following top issues in the interrelationship chart:

- Bad application form
- Lack of process visibility
- Too much back and forth
- Overprocessing / manual process @ RDT
- Files get escalated
- Lack staff capacity
- Staff not utilized properly
- E2E process ineffectiveness, including 3 levels of approval



Experiment #3: DC Process

Objectives:

- Realign the timing of development charge calculations at a point in the process where changes to the design will no longer occur
- Prevent re-work driven by design changes that require re-calculation of charges

Results of experiment:

- A future state process has been developed to change the timing of charge calculation
- Calculations will now be completed by building department staff after the application for the building permit has been submitted
- The team is currently engaged in the implementation of the new process

Brought “pain relief” to the following top issues in the interrelationship chart:

- Provides an estimated 0.5 days of free capacity to zoning to apply to manage new Bill 109 requirements
- Estimated savings of 63 hours of re-calculation each year
- Improved process flow and less back and forth (handoffs) between staff



Experiment #4: Shield Experiment Part 1 – Creating a formal prescreen with SME prior to accepting applications

Objectives:

- Accelerate initial feedback from SME to client
- Improve quality of submissions for formal review
- Help reduce number of formal reviews from 3 to 2
- Eliminate RDT's backlog

Results of experiment:

- After multiple iterations of the template application form and testing with applicants, experiment was successfully completed on 2 November 2022
- Realized gains per file for initial feedback from SME to client and for one fewer formal review for compliance:
 - PT = 1.25-2 hours instead of 17.75-24 hours (saving 92%)
 - ET = 2-6 days instead of 41-108 days (saving 95%)
 - Significant improvement to client experience
 - Eliminated 3 handoffs

Brought “pain relief” to the following top issues in the interrelationship chart:

- E2E process ineffectiveness, including 3 levels of approval
- Bad application form
- Complex requirements and bylaws
- Lack of process visibility
- Too much back and forth
- Overprocessing / manual process @ RDT
- Files get escalated
- Lack staff capacity
- Staff not utilized properly



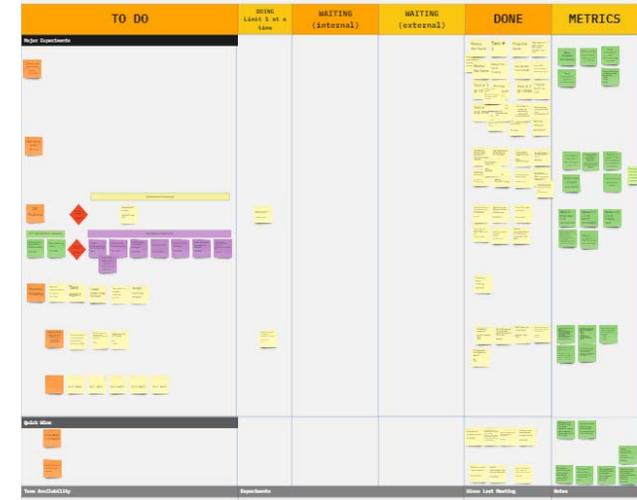
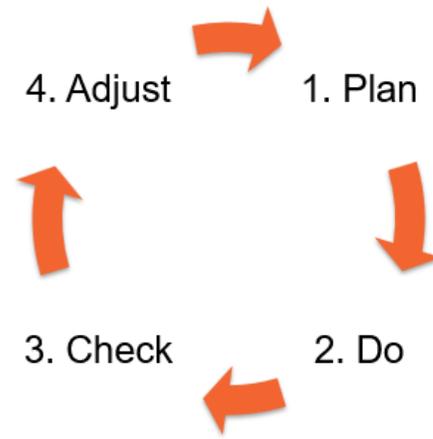
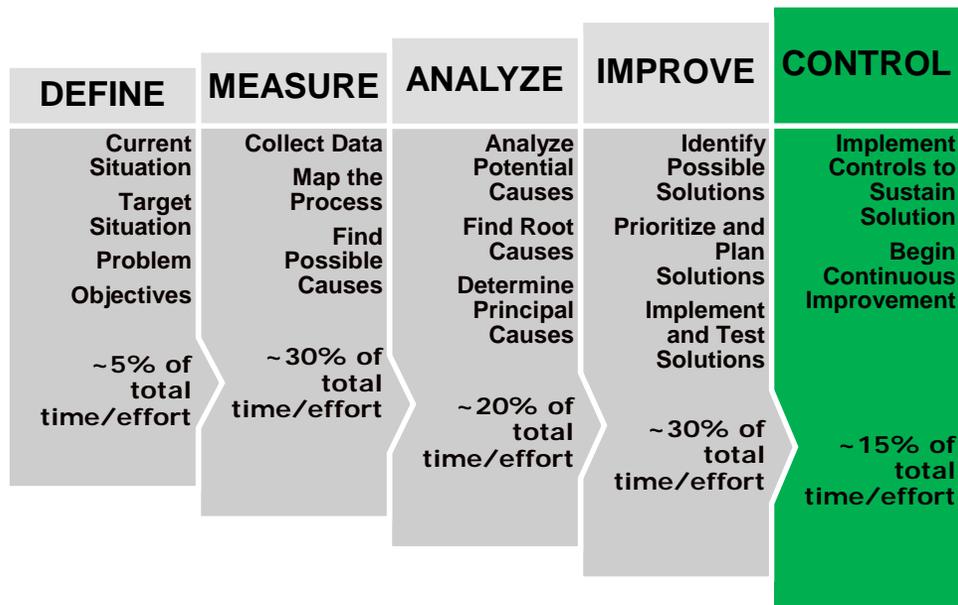
Experiment #5: Make application / process visible

Problem - Impact:	<p><u>PROBLEM - IMPACT:</u></p> <ul style="list-style-type: none">• Lack of transparency of the process to the public/applicant and to internal staff• Staff do not know the status of each other's review <p><u>IMPACT:</u></p> <ul style="list-style-type: none">• It results in lots of inquiries and wastes of staff time. This effect compounds when inquiries go up the chain and all the way to Council• It results in manual inquiries/wasted staff time/frustration/impacts to each other's review due to competing interests
Prediction:	<p><u>IF:</u> we make application / process visible, <u>THEN</u> we would expect to see potential gains:</p> <ul style="list-style-type: none">• Saving of PT = 60 hours per week for PBP process• Eliminate/reduce number of inquiries (internal/external), with large reductions in elapsed time. Staff will also have more time to do valuable work• Reduce number of touchpoints in managing a file by all staff members• Reduce number of complaints, reduce staff fatigue due to complaints. Less stress on staff
Cause of the problem:	<ul style="list-style-type: none">• AMANDA is not used properly by staff• Not enough IT support to configure AMANDA to support our needs• Expectations/milestones for the process are not provided to the public
Proposed experiment:	<ul style="list-style-type: none">• Introduce IT solution to give client and staff visibility on the files• Improve AMANDA



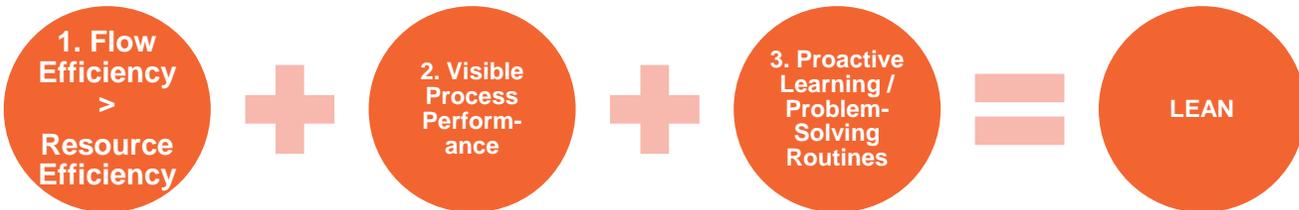
Experiment #6: Shield Experiment Part 2 – 2 formal review cycles to approve application post-prescreen

Problem - Impact:	<p><u>PROBLEM - IMPACT:</u></p> <ul style="list-style-type: none">• On average, each file requires 3 formal review cycles by 3 Departments• Each department has large inventory of files (backlogs)• File can wait 20-50 days before Departments can review it <p><u>IMPACT:</u></p> <ul style="list-style-type: none">• E2E process with 3 approvals requires 36 to 65 hours of effort for staff (PT) and will take 107 to 270 days to complete (ET)• Applicants are frustrated with long elapsed time. So they escalate to Mayor and/or Council• It results in manual inquiries/wasted staff time (30 handoffs)/frustration/impacts to each other's review due to competing interests
Prediction:	<p><u>IF:</u> we reduce the number of formal review cycles from 3 to 2, <u>THEN</u> we would expect to see these potential gains:</p> <ul style="list-style-type: none">• Reduce PT from 36-65 hours down to PT = 27-45 hours. A saving of 25-32%• Reduce ET from 107-270 days down to ET = 45-141 days. A saving of 48-58%• Reduce number of handoffs by staff from 30 down to 19. A saving of 37%• Improve client and staff experience
Cause of the problem:	<ul style="list-style-type: none">- E2E process ineffectiveness, including 3 levels of approval- Bad application form- Complex requirements and bylaws- Overprocessing / manual process @ RDT- Lack staff capacity- Staff not utilized properly- Too much back and forth- Files get escalated
Proposed experiment:	<ul style="list-style-type: none">• Build from Shield Experiment Part 1• Assess files that passed the formal prescreen with SME and measure number of formal review cycles required to approve application

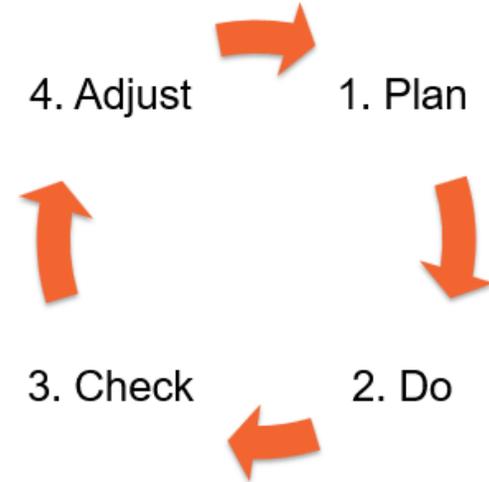
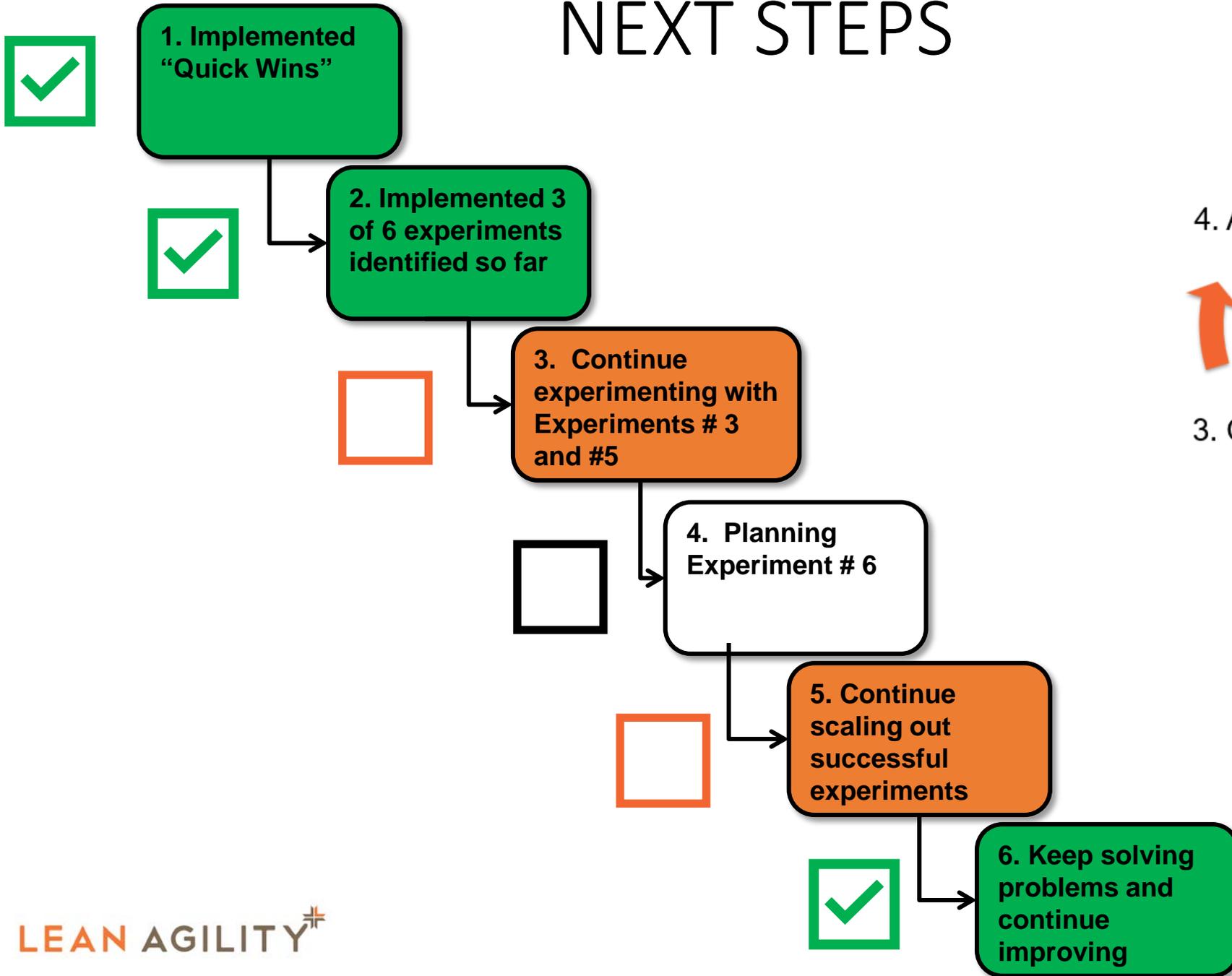


CONTROL & CONTINUE IMPROVING

3 Lean principles



NEXT STEPS



Control phase – the most challenging phase

- Let's not forget that from our analysis, the **top root cause** was: “**No continuous improvement routines**”
- So, it is important that moving forward “Continuous improvement routines” be part of our way of working
- Without continuous improvement, change won't stick, and old habits will resurface
- The three Lean principles are still applicable in this phase
- This phase has no end date. It's a new way of working
- Continue improving successful experiments that were implemented
- Continue experimenting and improving with new experiments

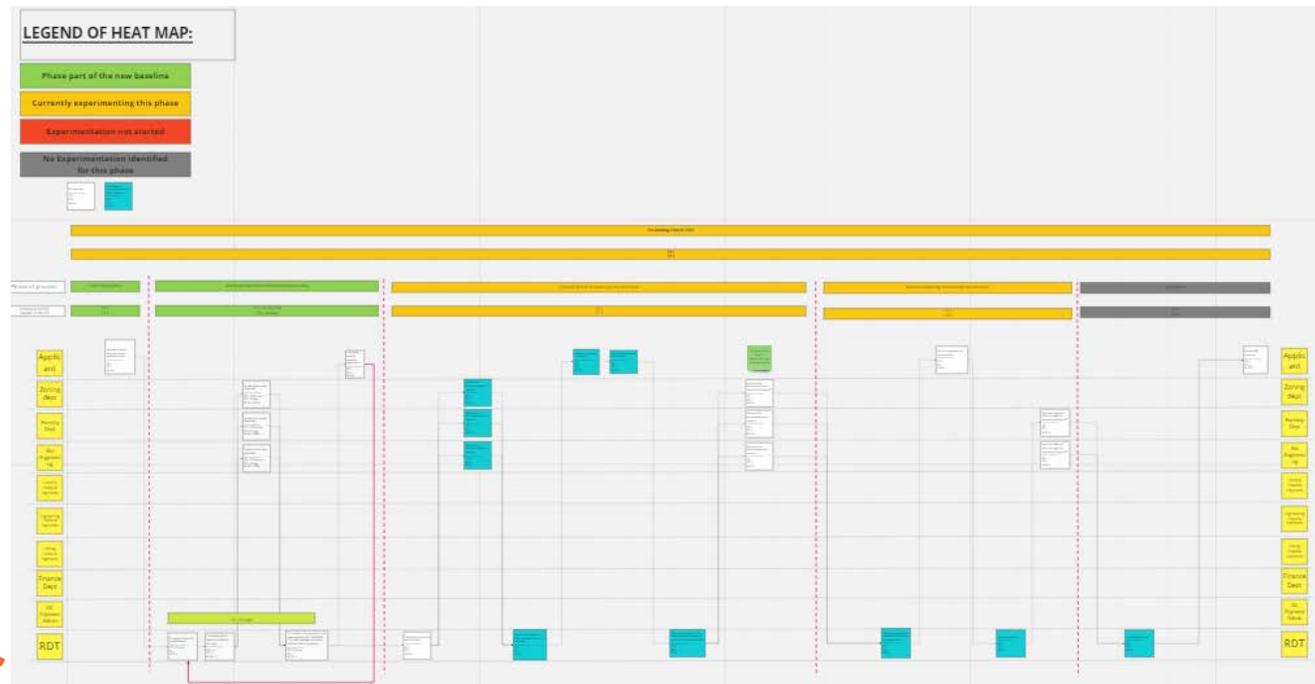
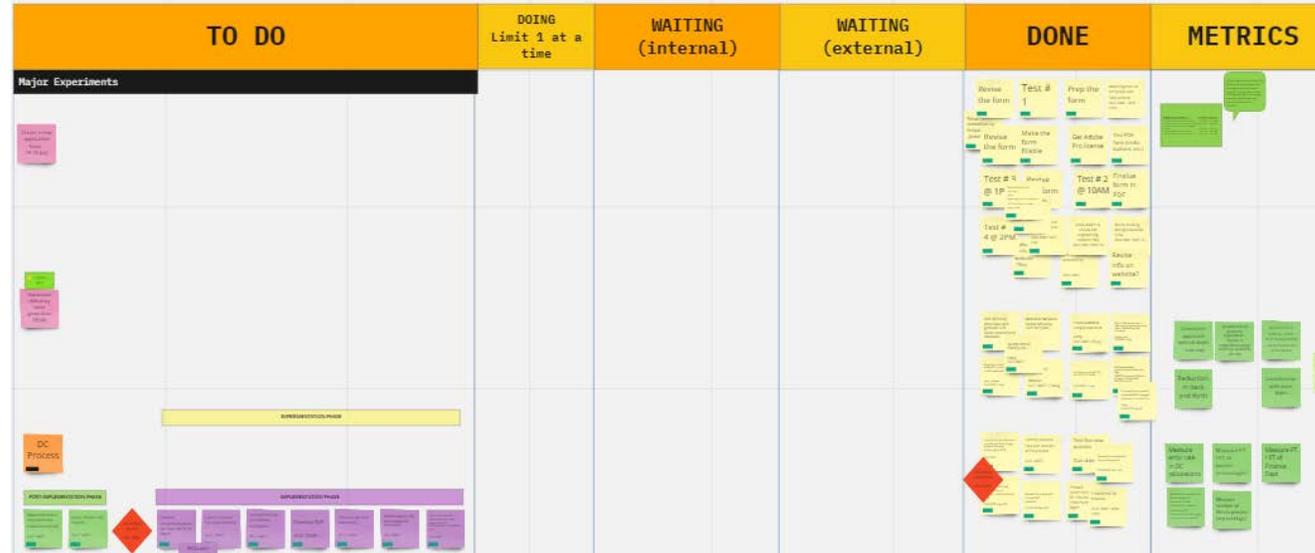
Continue improving **flow efficiency** with future experiments

- Continue innovating with shield experiments will produce the greatest results for all stakeholders (applicants, staff, Council)
- If Experiments # 5 and # 6 are successful, recommend the following 2 experiments:
 - **Shield Experiment Part 3 – 1 formal review cycle** to approve application post-prescreen
 - **Continue improving the IT solution** to automate process steps currently done by RDT
- **Prediction: IF** we reduce the number of formal review cycles for any application from 3 to 1, and automate process steps currently done by RDT, **THEN** we would expect to see additional gains:
 - Reduce PT from 27-45 hours down to PT = 20-29 hours. **An additional potential gain of PT = 19-24%**
 - Reduce ET from 45-141 days down to ET = 25-62 days. **An additional potential gain of ET = 19-29%**
 - Reduce number of handoffs by staff from 19 down to 11. **An additional potential gain of 26%**
 - **An additional “Free-up RDT capacity” by 47-52%** to do more value-added work

It's worth
experimenting!

2. Visible Process Performance

Make the Improvement Plan Visible



Use visual management tool, like the Kanban board and the heat map!

Stand-up Meetings: Tracking Progress

- 10 minutes daily
- Make team performance visible
- Create accountability
- Follow up on action items
- Get everyone on same page
- Identify problems and assign them – build team’s capability to solve own problems
- Health & Safety/wellness



Performance Measure: the 10 minutes spent in the meeting adds more value to each participant than what they would have been doing with that same time otherwise

Above and beyond - Untold stories of accomplishments

- 27 frontline staff and 7 leaders attended 3-day Lean Yellow Belt training
- 16 core Project team members and 7 extended staff actively participating in the workshop, experimenting and implementing
 - Getting hands-on experience using Lean tools
 - Co-creating solutions with other departments
 - Learning how to create a psychological safety zone and overcoming fear
 - Learning how to experiment and experimenting themselves
 - Learning how to improve a form in record time and implementing it
 - Learning People Change Management techniques and becoming first followers
- Engaging and collaborating with 6 leaders
 - Taking concrete actions to be change leaders and active listeners
 - Understanding the importance to be a shield for the staff
 - Having honest discussions amongst leaders on sustaining improvement

Recommendations for Staff

Based on what you demonstrated, and with your abilities, talent, experience and appetite for change, this could be incorporated in your daily routine:

1. Be a change leader
 - Bring up problems and tough issues
 - Get to the root cause
 - Focus on finding solutions to root causes, not symptoms
2. Understand the big picture, i.e. the End-to-End process
3. Make your own work visible – lead by example
4. Provide dedicated time to experiment
5. Be a team player. Don't be afraid to help others and ask others for help
6. Integrate the Lean principles in your daily routines

Recommendations for Senior Management

Based on what you demonstrated, this could be incorporated in your daily routine:

1. Be a change leader
 - Be an active listener
 - Make your own work visible – lead by example
2. Be a shield for your Team
 - Prioritize the work with them and minimize the changes to those priorities
 - Provide dedicated time to you and your staff to experiment
 - Minimize interruptions
3. Build and sustain psychological safety
4. Be a team player
 - Engage / build trust with executives from other islands so the initiative is co-owned
 - Ensure connections to big picture (End-to-End process) are clear
 - Work with other executives to prioritize the next processes to be improved
 - Challenge the bylaws. Do they help or hinder the staff and the process?
 - Identify and address root causes that you can influence
 - Identify which wastes you can eliminate yourself – and visibly act on them

Questions?



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Alain L'Abbé is a government and Lean Black Belt transformation specialist. He is also an accomplished and strategic change management and project management professional. He has over 27 years of diverse professional experience (military, public service and consulting) and a wide range of training. His expertise includes leading high visibility multi-stakeholder projects, managing teams, portfolio management, networking, effectively leading and guiding cross-functional staff, and successfully implementing strategic transformation plans and IT transformations. He has a proven ability to effectively mobilize and lead teams to meet deadlines, objectives and budget.