Agenda

- Introduction

- Explanation of Approaches, Terminology, and Tools

- Charter Overview

- Process Mapping

CONTINUOUS
IMPROVEMENT

Our Team Environment

- Interactive and participative

- Ask questions for clarity – feel comfortable with concepts and supportive of approach

- Open to new ideas and experiences

- Learning for application – for this event and other areas of your work

- Ridiculous and cliché, but let's have a little fun!
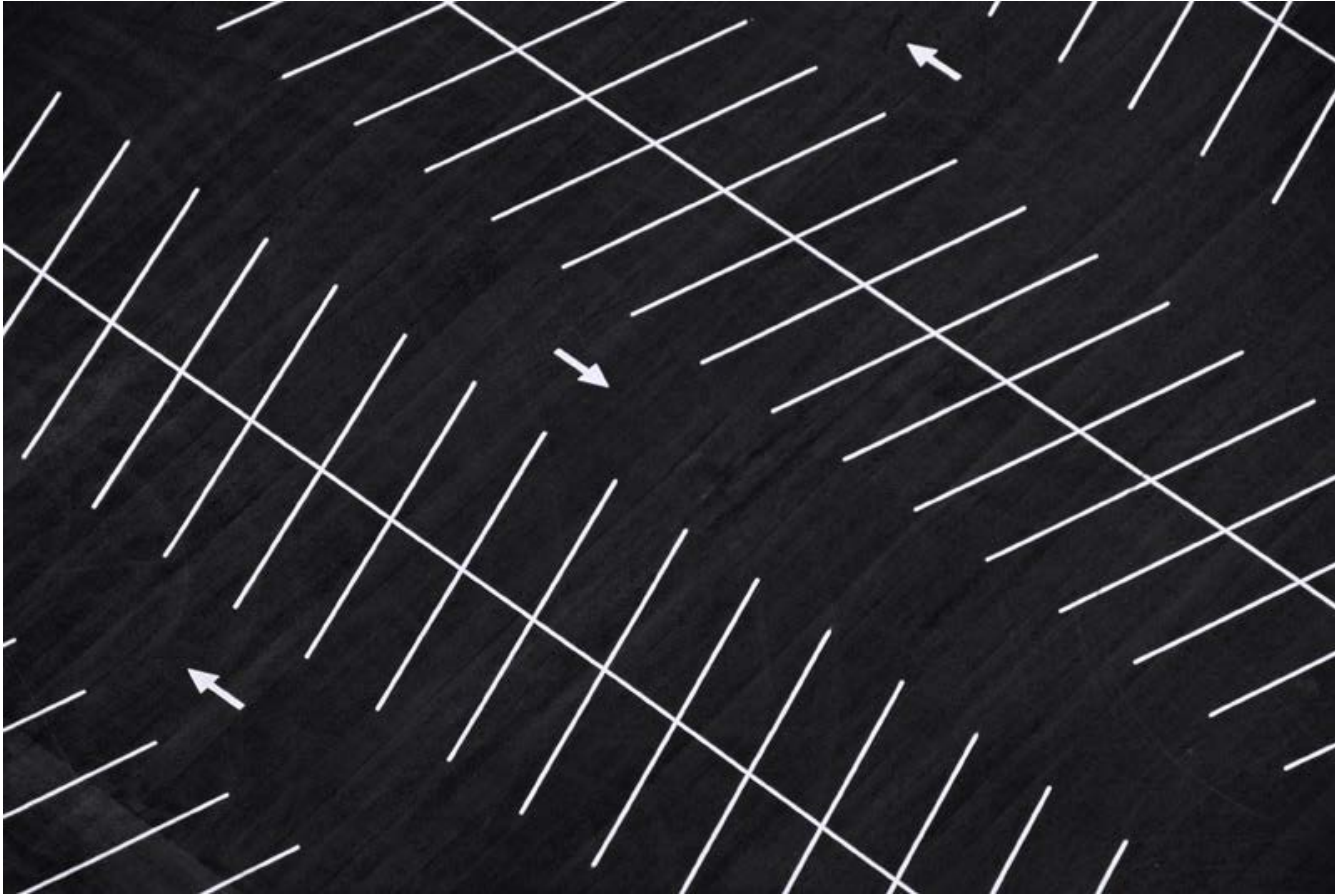
CONTINUOUS
IMPROVEMENT

Purpose

1. Prepare team members to actively participate in kaizen event

Next Steps:

1. Finalize the charter and partner with management
2. Identify any homework items that need to be completed

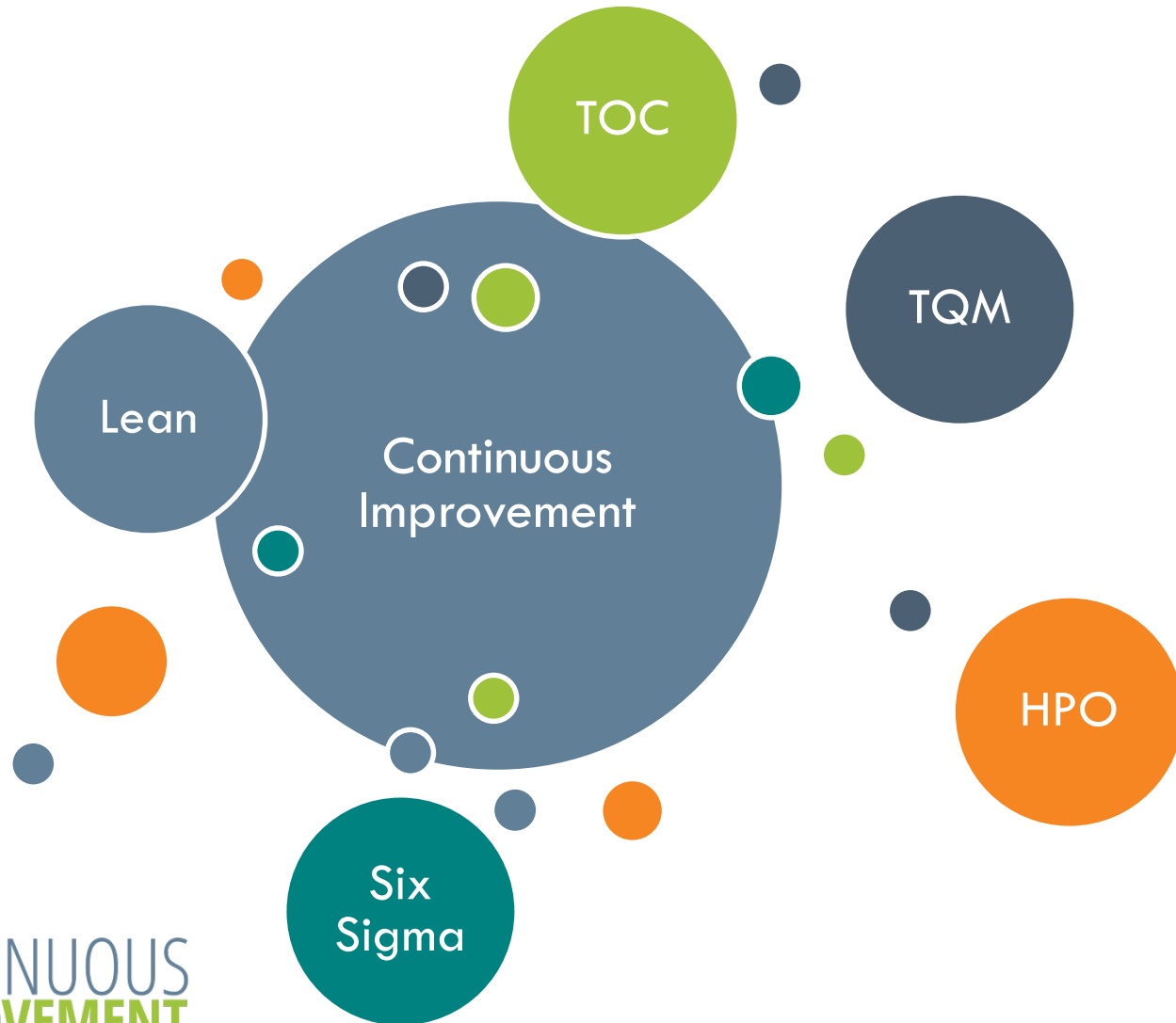CONTINUOUS
IMPROVEMENT

Parking Lot

CONTINUOUS
IMPROVEMENT

Continuous Improvement Initiative

Who We Are

We are a City Manager initiative focused on improving internal and external service delivery. Continuous Improvement uses data, process improvement frameworks, training, and other tools to maximize the value provided to both customers and the public.

CONTINUOUS
IMPROVEMENT

You may have heard about…

TOC

TQM

Lean

Continuous Improvement

HPO

Six Sigma

CONTINUOUS
IMPROVEMENT

Who's using Lean?

State of Washington

Port of Seattle

King County

Issaquah

Seattle Children's Hospital

70% of Manufacturers

Virginia Mason

Group Health

Redmond

University of Washington

Toyota

Boeing

CITY OF ISSAQUAH WASHINGTON

City of Redmond WASHINGTON

Seattle Children's Hospital

TOYOTA

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CONTINUOUS IMPROVEMENT

What Makes This Different?

Focus on rapid change and immediate implementation.

Trust and accountability.

Customer focus and active involvement.

Emphasis on doing over planning or reporting.

Dedicated resources.

Frontline workforce asked to improve processes.

Data driven decision making.

Focus on priority projects.
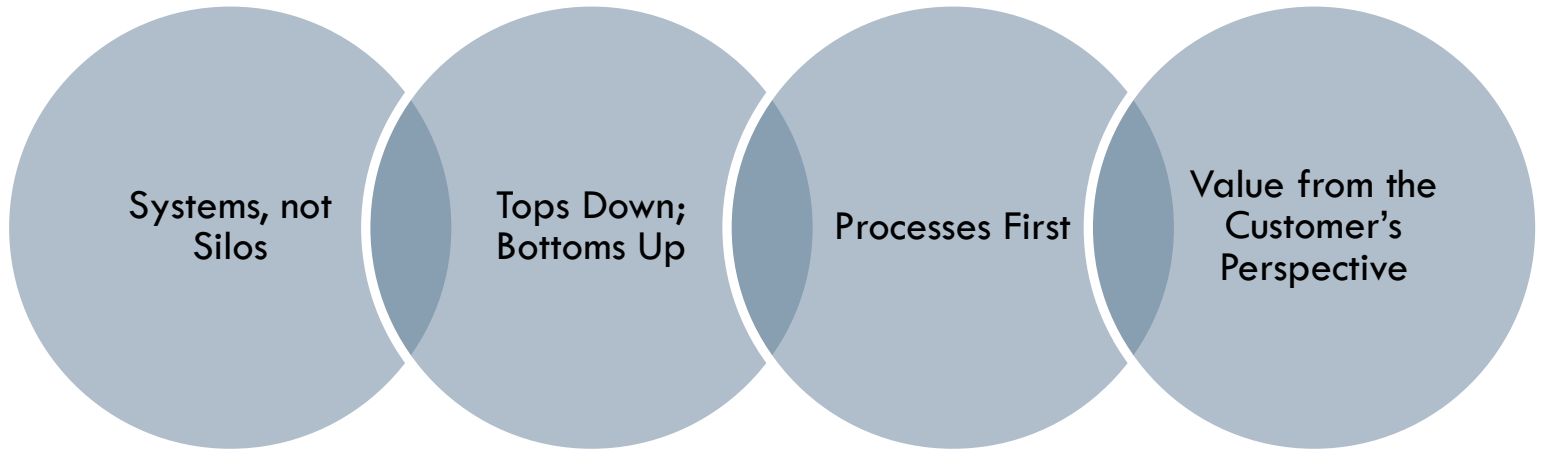
Citywide collaboration and perspective.

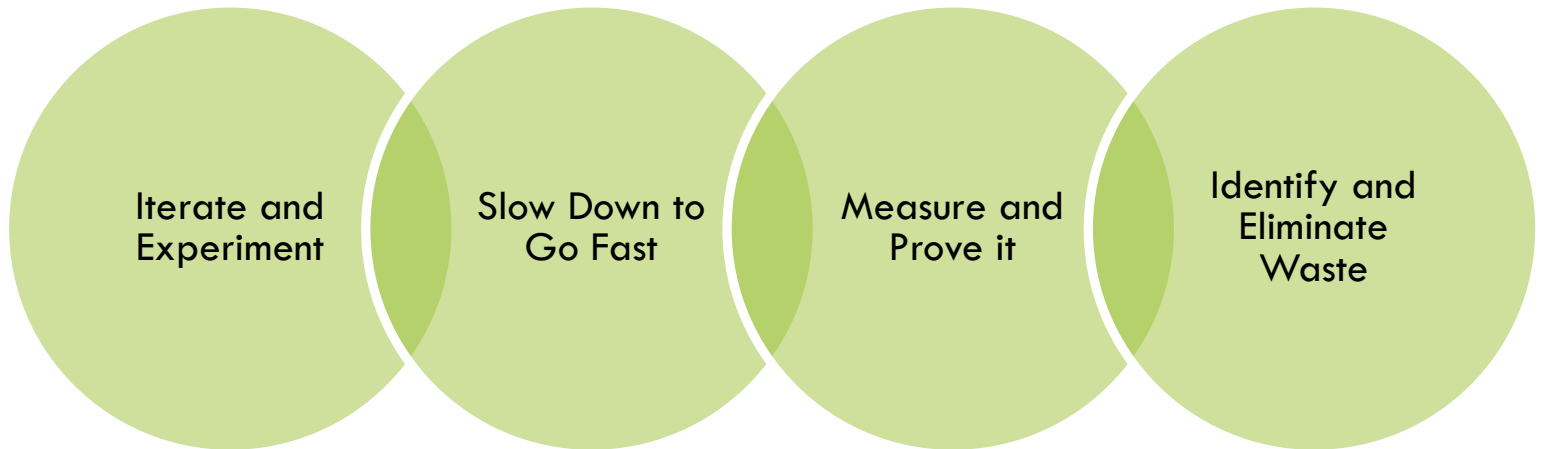9

CONTINUOUS
IMPROVEMENT

APPROACH

Key Beliefs

- Employees do the best they can in the system they work in – they want to do a good job!

- There is waste in every process so there is room for improvement in the way we do our work.

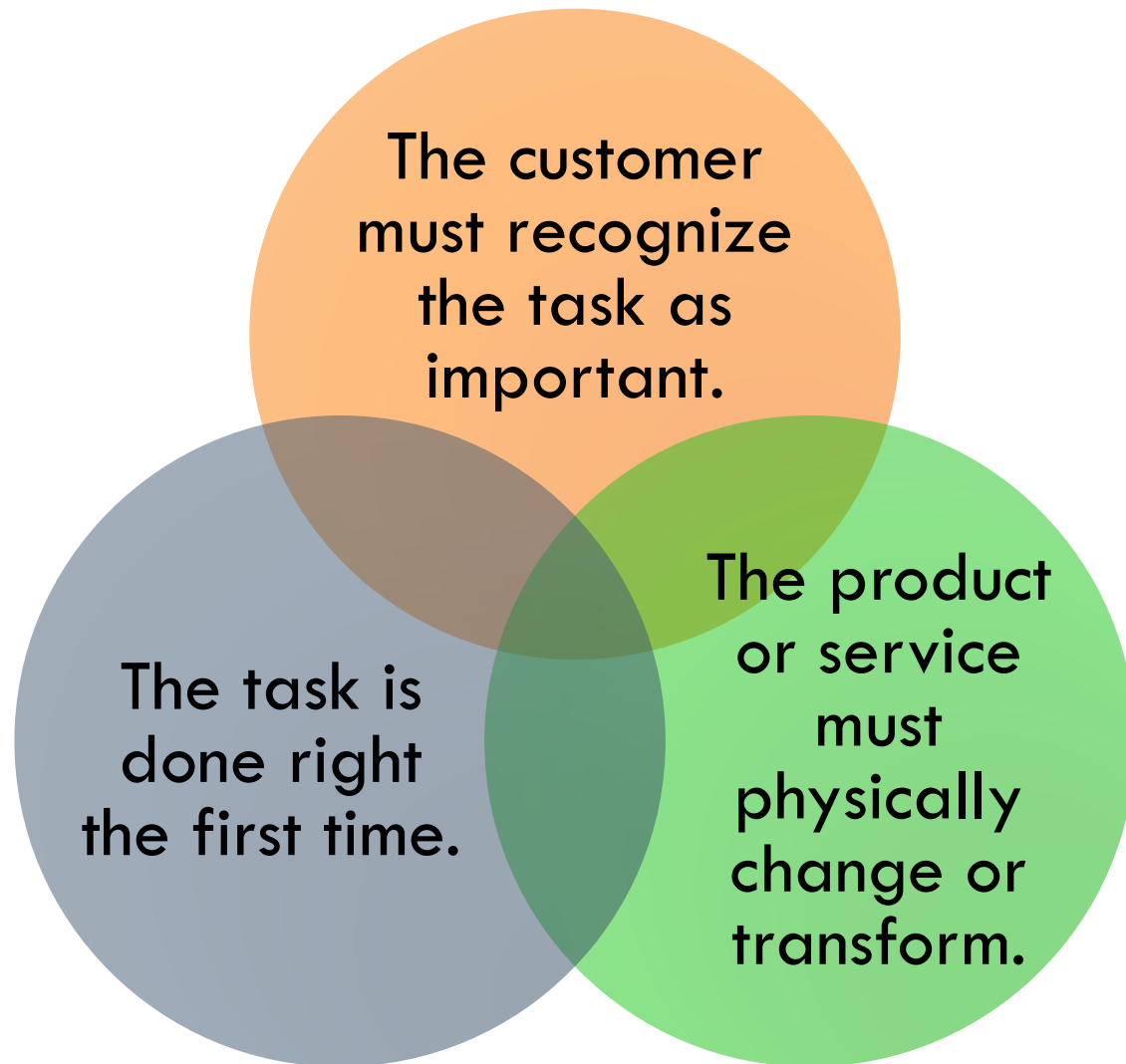- In order to improve we must look at **what** we do and **how** we do it.

CONTINUOUS
IMPROVEMENT

Value for the Customer

The customer must recognize the task as important.

The task is done right the first time.

The product or service must physically change or transform.

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DEFINITIONS

Lean

The systematic elimination of waste.

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Waste

Any action, process or product that adds cost, without adding value as perceived by the customer.

CONTINUOUS
IMPROVEMENT

Customer

The internal or external recipient of any output (or final product) throughout the process.

CONTINUOUS
IMPROVEMENT

Output

Information or materials after a task is performed in a process; input for the next task (unless a final product).

CONTINUOUS
IMPROVEMENT

Process

Any step or series of steps that transforms an input into an output by adding value.

CONTINUOUS
IMPROVEMENT

Value

An action has value if:

1. The customer considers the task important (they would be willing to pay for that action)
2. The input physically changes
3. The task is done right the first time

CONTINUOUS
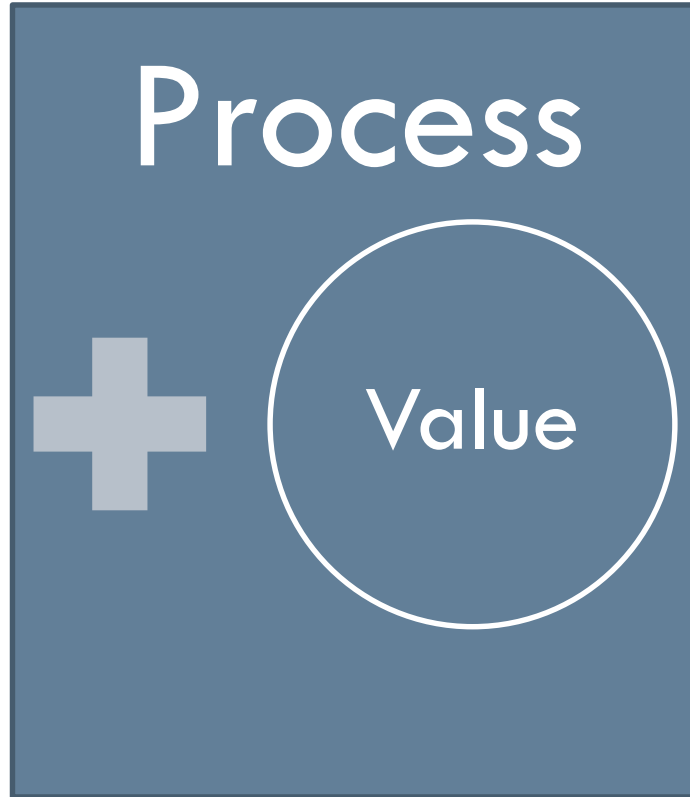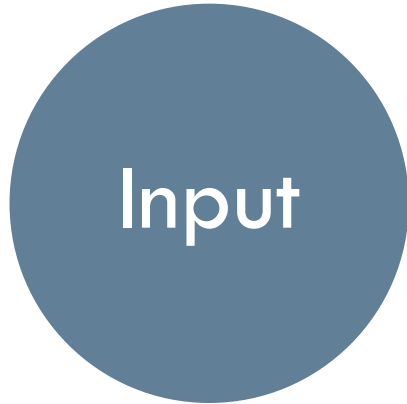IMPROVEMENT

Input

Information or materials required to perform the next task in a process. Provided by a supplier.
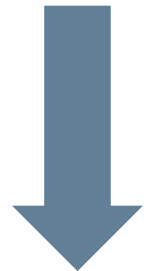
CONTINUOUS
IMPROVEMENT

Supplier

The internal or external provider of any input (or final product) throughout the process.

CONTINUOUS
IMPROVEMENT
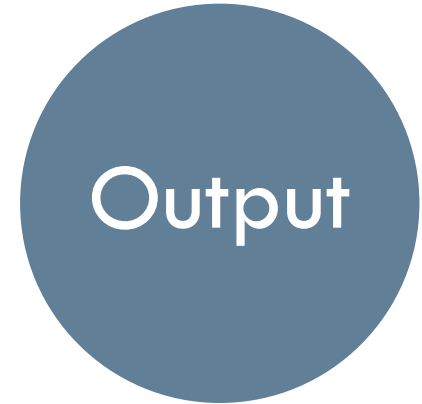
Stakeholders versus Customers

Stakeholders

- Internal or external to the City
- Vested interest in the outcomes (not the output) of a process

Customers

- Internal or external to the City
- Direct recipients of an output
- Determine whether or not a step in a process has value

CONTINUOUS **IMPROVEMENT**
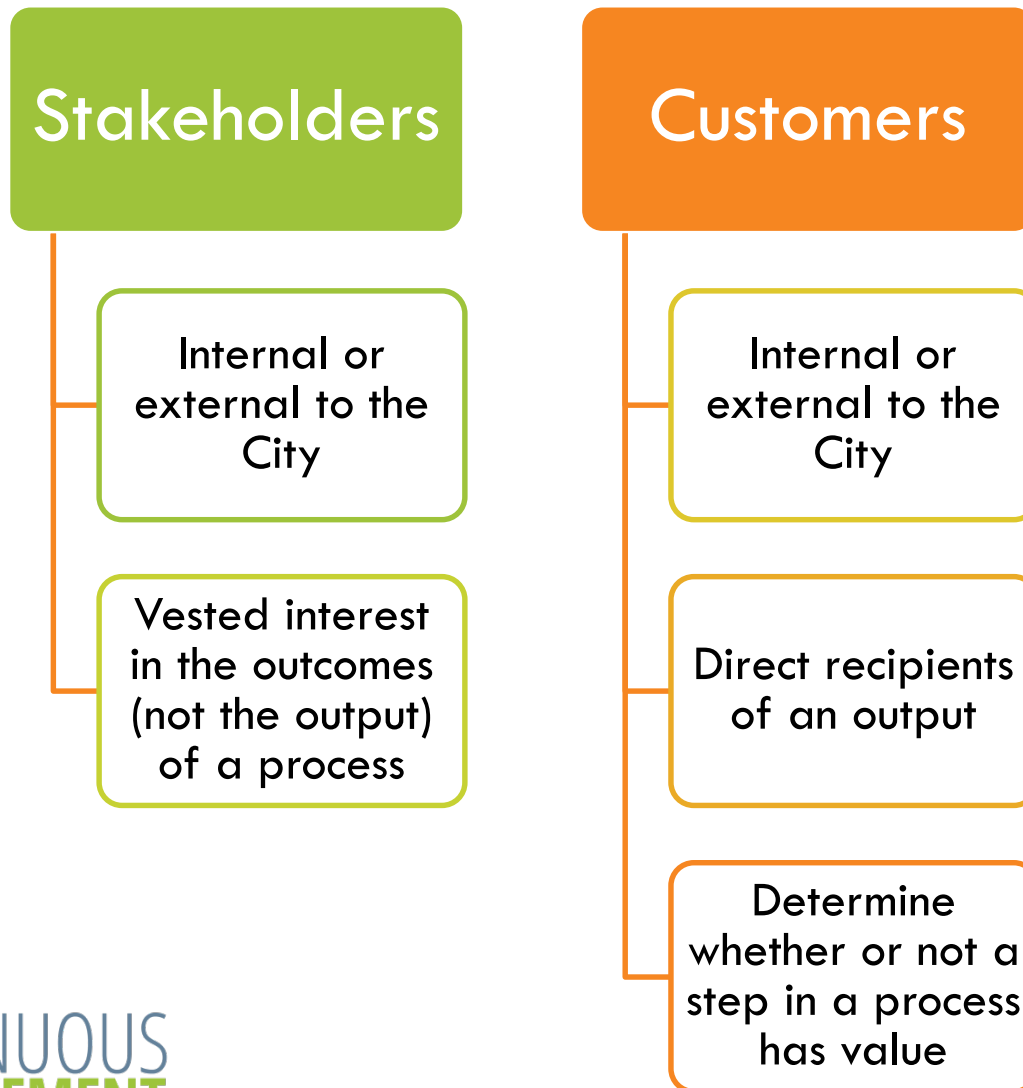
Exercise – Stakeholders, Customers, Suppliers

Think about one processes: Identify the stakeholders, customers, and suppliers
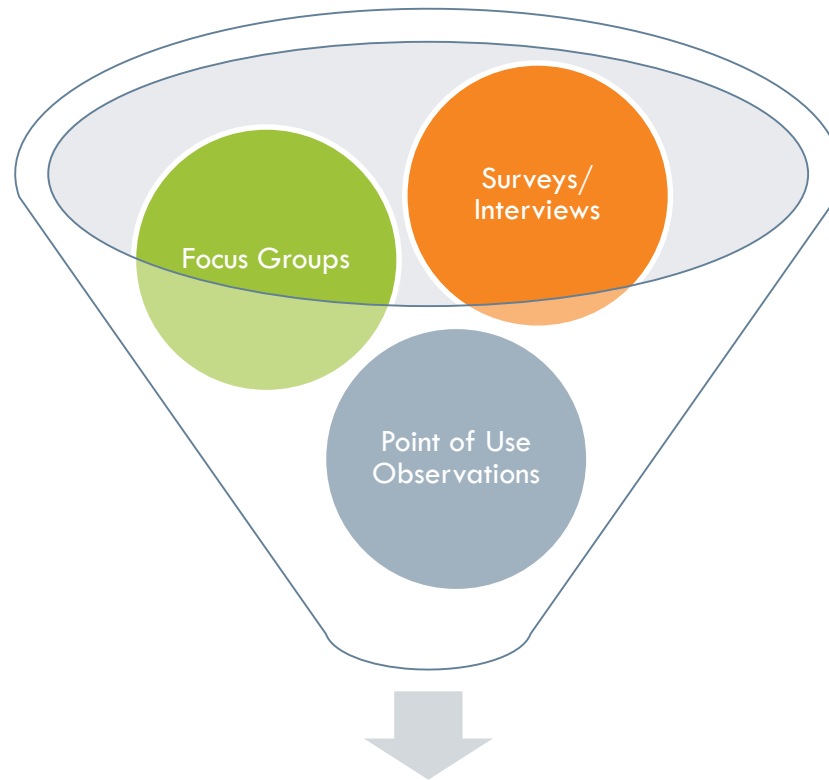
Ask yourself the following:

- What do they need from the process?

- Who gives it to them?

- Where are the gaps?

CONTINUOUS
IMPROVEMENT

TOOLS

Voice of Customer Tools

Focus Groups

Surveys/Interviews

Point of Use Observations

Voice of the Customer

CONTINUOUS
IMPROVEMENT

8 Wastes

Process Maps

Core Tools

Value Analysis

Root Cause Analysis

CONTINUOUS
IMPROVEMENT

8 Wastes

- Waiting

- Overproduction

- Over processing

- Defects

- Motion

- Inventory

- Transportation

- Unused Employee Creativity (fun)

CONTINUOUS
IMPROVEMENT

Waiting

Idle time created when material, information, people, or equipment is not ready; time when no value is added to the product or service

CONTINUOUS
IMPROVEMENT

Waiting (30 second video)

Overproduction

Producing more than is required at that time by your customers. Leads to other forms of waste. Also, consider useless-production: choosing or continuing to produce products, reports, or services that do not add value.

CONTINUOUS
IMPROVEMENT

Overproduction (2 minute video)

Over processing

Performing non-value added activities to change products or services beyond what the customer expects and is willing to pay for. Often the result of inefficient attempts to mitigate risks or forgetting what the customer values.

CONTINUOUS
IMPROVEMENT

Over processing (2 minute video)

Defects

Mistakes; unusable products that result from variations in the process; errors in documents or reports; activities that must be reworked before the product or service meets the customer's requirements.

CONTINUOUS
IMPROVEMENT

Defects (52 second video)

Motion

Unnecessary movement of people to complete the task. This may include travelling or motions such as bending, reaching, and lifting.

CONTINUOUS
IMPROVEMENT

Motion (1:22 minute video)

Inventory

Money and resources tied up in supplies, raw materials, work in progress, or finished products beyond what is necessary for short term operations.

CONTINUOUS
IMPROVEMENT

Inventory (cartoon)

Transportation

Unnecessary movement of materials (compared to motion which is the unnecessary movement of people). Moving supplies more often or further than should be necessary to complete the job.

CONTINUOUS
IMPROVEMENT

Transportation (57 second video)

Unused Employee Creativity

Underutilization of employees' knowledge, energy, or talent. Lost time, ideas, productivity and improvements - often as a result of not empowering employees or asking them to be creative.

CONTINUOUS
IMPROVEMENT

Unused Employee Creativity (cartoon)

Waste Activity

What process would you like to streamline/improve in your department?

Customers
- Requirements:
- Gaps:
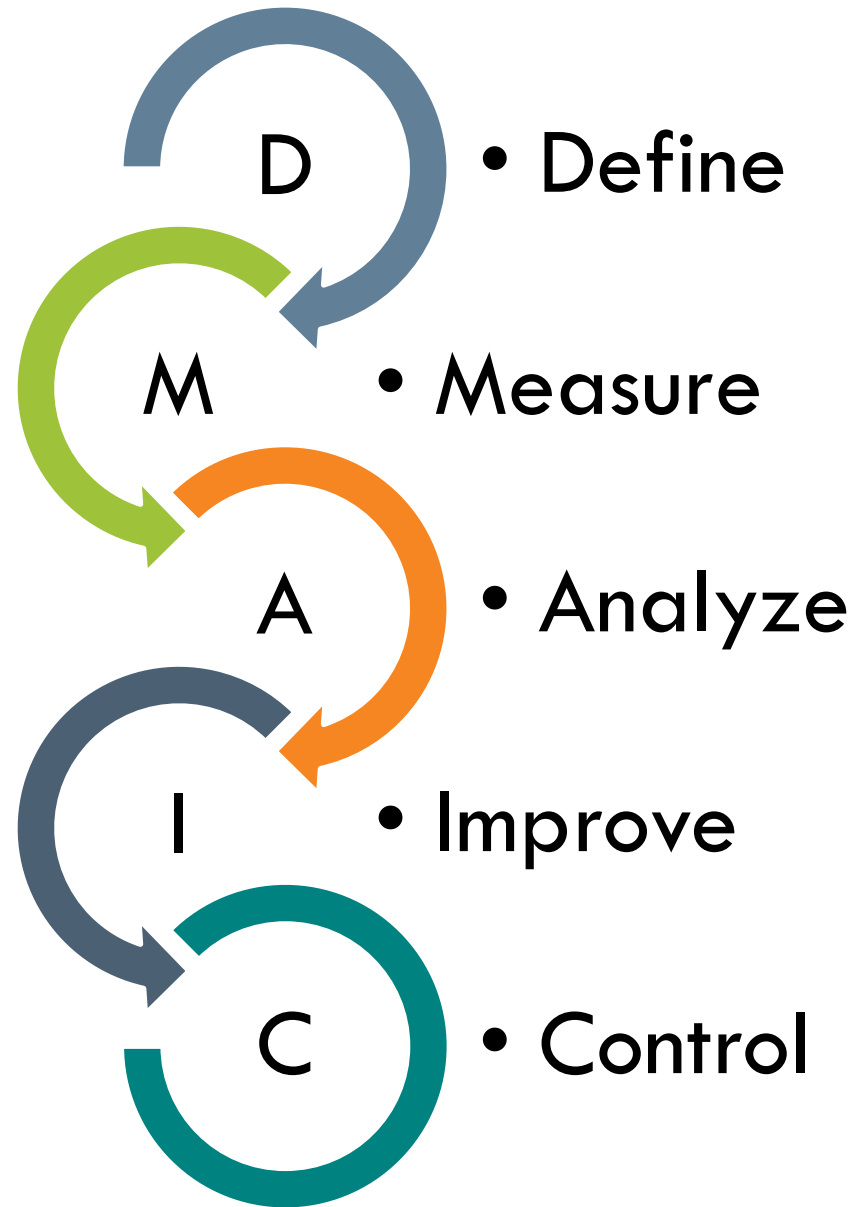
Suppliers
- Requirements:
- Gaps:

W		M	
O		I	
O		T	
D		E	

CONTINUOUS IMPROVEMENT

PROCESS

- Define
- Measure
- Analyze
- Improve
- Control

Continuous IMPROVEMENT

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"duh – may – ick"

Process Mapping

Time

Varies based on scale of project

Requires 3 Meetings:

1. **Map current state**
2. **Analyze current state**
3. **Map future state**

Purpose

To understand all of the steps involved in a process and to analyze each step for value according to the customer's perspective. Directly attacks and eliminates waste to free up capacity in an organization.

Execution

- Hands on process requiring executive support and commitment
- Begin with understanding of customer needs
- Require input from those closest to the work

CONTINUOUS
IMPROVEMENT

10X NPD PROCESS (CURRENT STATE)

Detailed Process Map

"FLOOR COLLECTED"

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CONTINUOUS
IMPROVEMENT

Value Added Analysis

Value Added

- The customer must recognize the task as important.
- The product or service must physically change or transform.
- The task is done right the first time.

Non Value Added

- Waste. A process step that adds no value to the product or service.
- Does the customer want to pay for this?

Non Value Added, but Required

- A process step that adds no value to the product but is currently required to produce the product or service. A required law, regulation, rule etc. Internal or external.

CONTINUOUS
IMPROVEMENT

Tools

SIPOC

Purpose

Identifies the key supplier and customer relationships within the organization. Focuses on understanding the purpose of a process rather than the process itself.

Execution

- Excellent starting place for lean thinking
- Require coordination between departments
- Identify gaps between inputs/outputs that are received/produced versus what's needed

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CONTINUOUS IMPROVEMENT

What is a SIPOC?

A SIPOC is a high-level view of a process.
It stands for Suppliers, Inputs, Process, Outputs, and Customers:

SUPPLIER	INPUT	PROCESS	OUTPUT	CUSTOMER
Person/Organization that provides Input to a Process.	Resource that is added to a Process by a Supplier.	Series of steps where an Input converts to an Output.	Resource that is the result of a Process.	Person/Organization that receives products or services.

go LEANSIXSIGMA   http://GoLeanSixSigma.com

SUPPLIERS	INPUTS	PROCESS	OUTPUTS	CUSTOMERS
• Staff • Citizens • Elected Officials • Financial Professionals • Vendors • Government Entities • Stakeholders • Businesses	• Internal Data • External Data • Historical Data • Demographic Data • Legislative Info • Regulatory Info • Performance Data • Resident Input • Funding for Studies • 2/17 Draft Financial Plan • Computations • Assumptions	• COMPLETE RESERVE POLICY (DEFINE USES OF EXCESS RESERVES) • REVIEW AND DECIDE ON QUICK OPERATIONAL DECISIONS • REVIEW DISCUSSION ITEMS • UNDERSTAND CHANGES IN REVISED OPERATIONS PLAN • REVIEW/PRIORITIZE CAPITAL AND EXPLORE ALTERNATIVES	• 2015 Appropriations • Sustainable Budget • Reserve Policy • Reliable forecast model • Capital Improvement Plan • Know "what is spendable" • List of Risks • Communication Plan • Look at what is Bondable • List of 'must haves' • Consensus – Something to Adopt • Validation of City Services • Quick Operational Answers • Timeline of Deliverables • Desired Level of Services • Website Status Tracker • 5 year Plan	• Citizens • Elected Officials • Staff • Media • Lending Institutions • Businesses • Developers • Future Citizens • Other Communities • Stakeholders/Services Users • Community Groups • State/Federal Govt. • County • Schools • MORPC

CONTINUOUS IMPROVEMENT

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http://www.gahanna.gov/Uploads/Images/Finance/SIPOC.png

Root Cause Analysis

Time

Varies based on scale of project

Half day for a simple event

Complex problems with high risk may require significant investigation
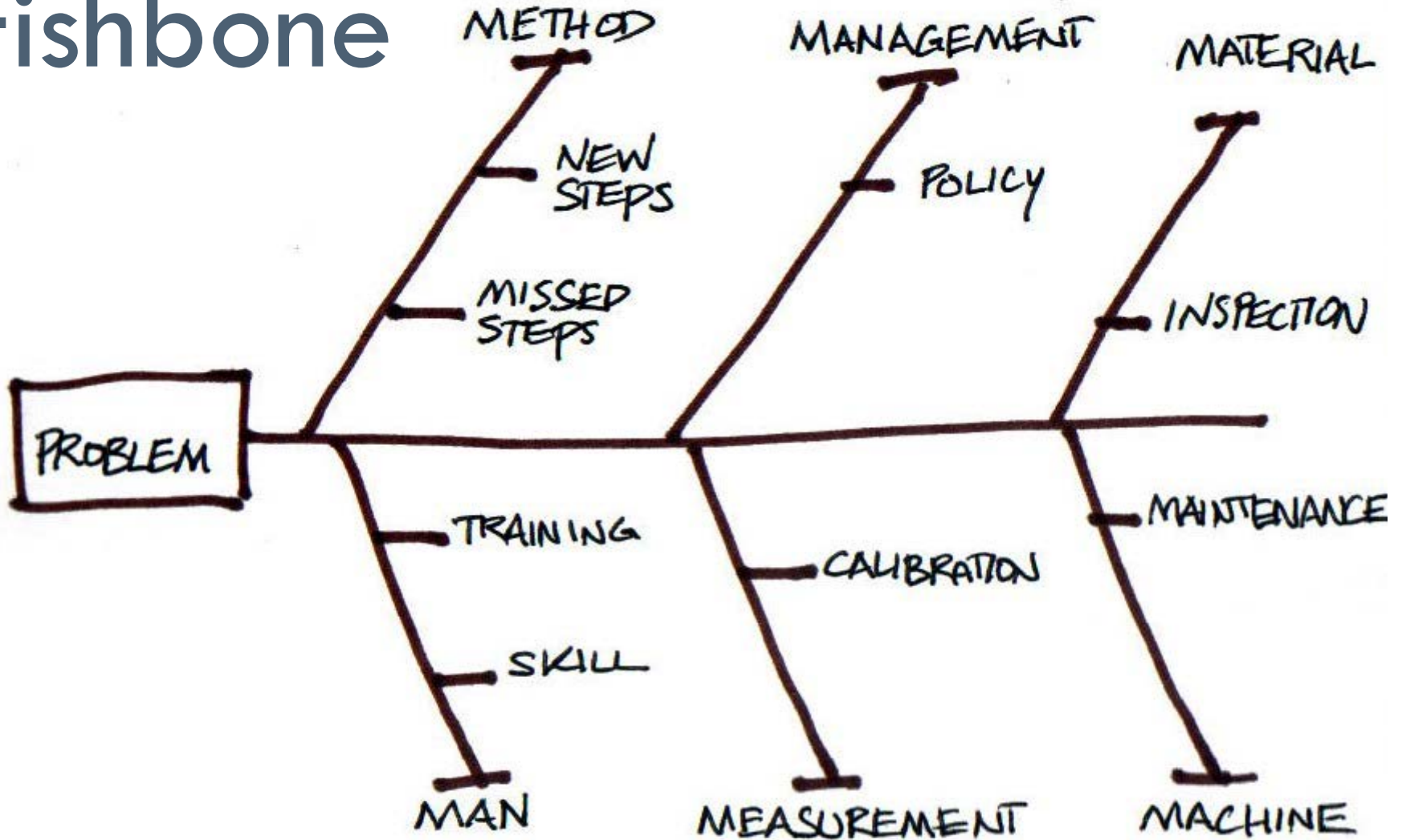
Purpose

To explore the major contributing factors to a specific breakdown or failure. Focuses on one actual occurrence rather than a type or pattern of failure.
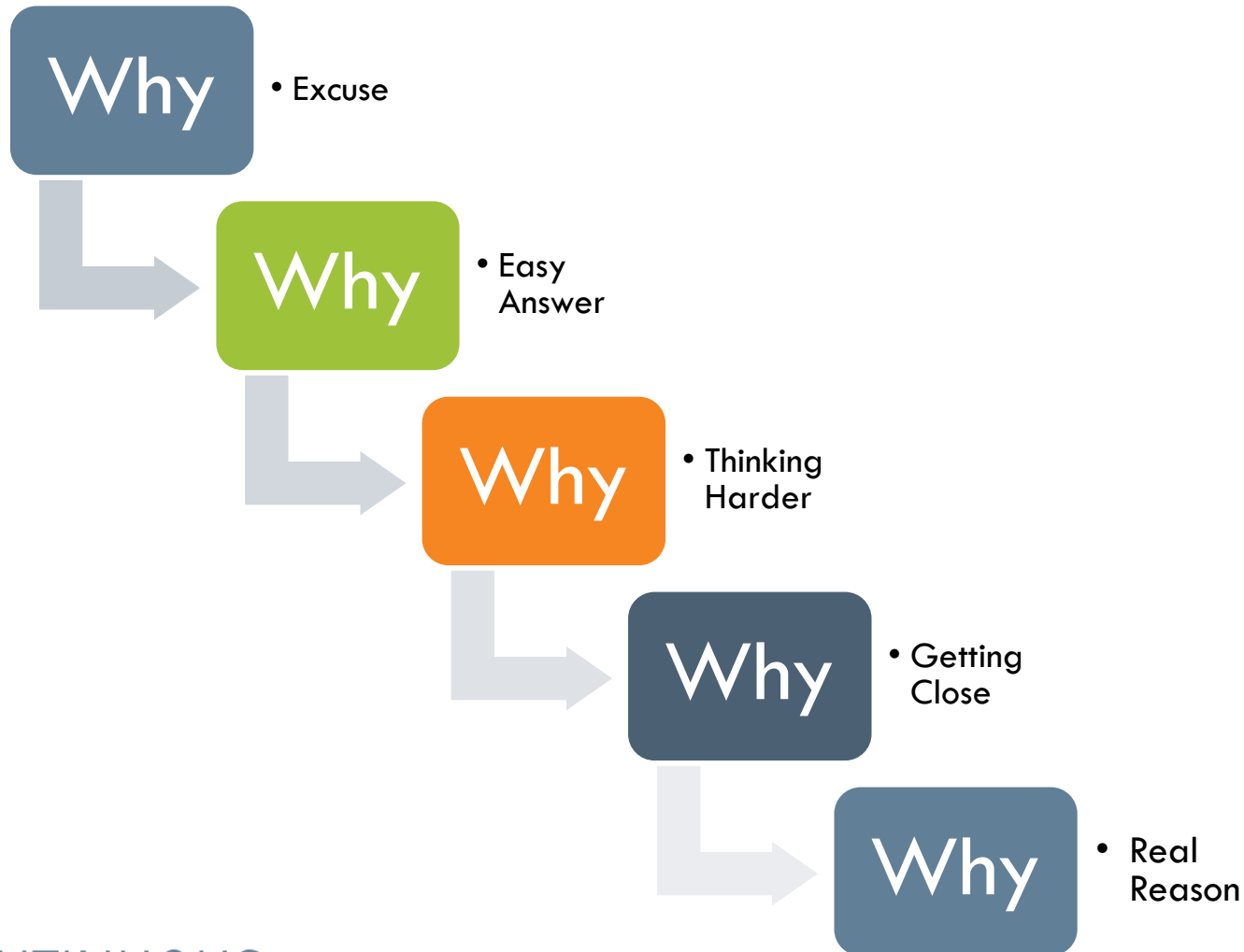
Execution

- Focus on impacted goals
- Rely on facts about what happened
- Require input from those closest to the work
- Deliver several possible solutions

CONTINUOUS
IMPROVEMENT

Fishbone

CONTINUOUS
IMPROVEMENT

5 Whys

Why • Excuse

Why • Easy Answer

Why • Thinking Harder

Why • Getting Close

Why • Real Reason
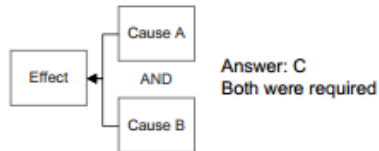
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HOT COFFEE BURN
Cause Map

Cause-and-Effect Quiz
What is the cause of a burn by hot coffee?

(A) Coffee was 180 degrees F
(B) Person spilled the coffee
(C) Both A and B

```
         Cause A
Effect            AND        Answer: C
                             Both were required
         Cause B
```

Debate the Solutions, Not the Cause

When a 79-year-old woman spilled a cup of McDonald's coffee in her lap and sued McDonald's, the case quickly became famous. More than 15 years later, it's still presented by some as a case for legal reform to stop frivolous lawsuits and defended by others as an important victory for victims of powerful corporations. But regardless of the legal implications, this famous case teaches a lesson about how to effectively solve problems.

The Basic Facts

The injured woman was the passenger in a car at a McDonald's drive-thru. She received a cup of hot coffee, sealed by a lid, with an estimated temperature of 180 degrees F.
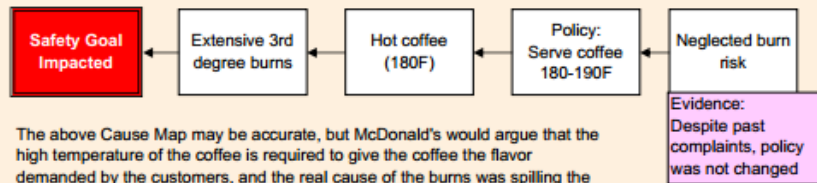
While attempting to remove the lid and add cream and sugar, she spilled the contents of the cup into her lap. She was wearing sweat pants that reportedly held the hot liquid against her skin for over 90 seconds.

She suffered severe, third-degree burns on her thighs, hips, and groin that required extensive hospital treatment, including skin grafts.

McDonald's defended its policy of serving coffee at a temperature of 180 degrees or greater by arguing that both coffee experts and market research showed that coffee should be served at this temperature. However, McDonald's had received 700 complaints of coffee burns (of varying severity) over the past 10 years.

Placing the Blame

A common approach to solving a serious injury or other problem is to first look for what bears the responsibility for causing the problem. In other words, what is to blame? When the injured woman sued McDonald's, the lawsuit claimed that McDonald's defective (unsafe) coffee was the cause of her injuries. A root cause analysis showing why the injury occurred might look like this:

```
Safety Goal
Impacted  <- Extensive 3rd degree burns <- Hot coffee (180F) <- Policy: Serve coffee 180-190F <- Neglected burn risk
                                                                                                  Evidence: Despite past complaints, policy was not changed
```

The above Cause Map may be accurate, but McDonald's would argue that the high temperature of the coffee is required to give the coffee the flavor demanded by the customers, and the real cause of the burns was spilling the coffee into the lap. Who is right?

An Accurate Root Cause Analysis

```
Safety Goal Impacted <- Extensive 3rd degree burns <- Scalded by hot water
```
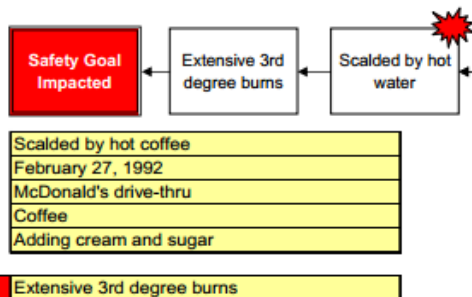
What	Problem(s)	Scalded by hot coffee
When	Date	February 27, 1992
Where	Physical Location	McDonald's drive-thru
	Unit, Process, Equipment	Coffee
	Work Being Done	Adding cream and sugar

Impact to the Goals

Safety	Extensive 3rd degree burns

In an effective root cause analysis, the question is not, "Who's right?" but rather, "What were all of the causes?" Hot water must remain in contact with the skin for a certain amount of time to cause third-degree burns. The analysis should explain exactly how the hot water came in contact with the skin, not so that the blame can be directed away from McDonald's policies, but in order to expand the analysis and reveal the most effective ways of preventing the injury in the future.
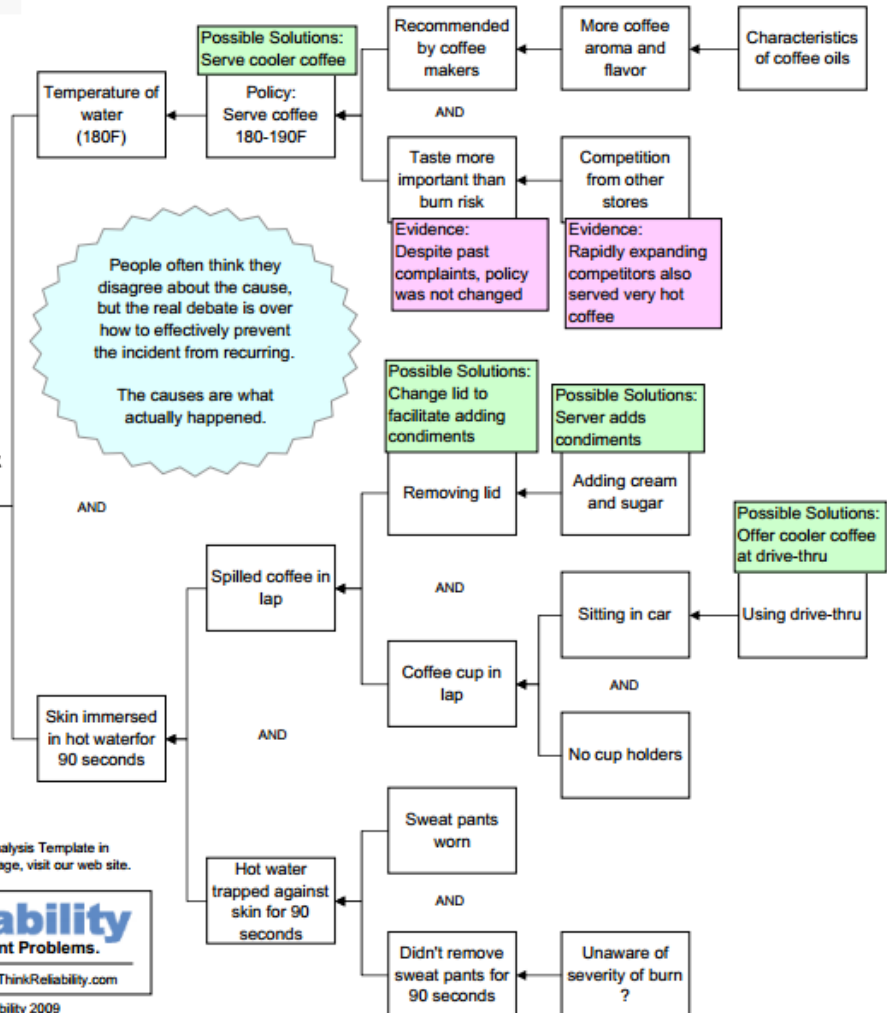
Every cause presents the possibility of a new set of solutions that might mitigate the risk better, or more cheaply, or more easily. What possible solutions can you find?

For a free copy of our Root Cause Analysis Template in Microsoft Excel, used to create this page, visit our web site.

ThinkReliability
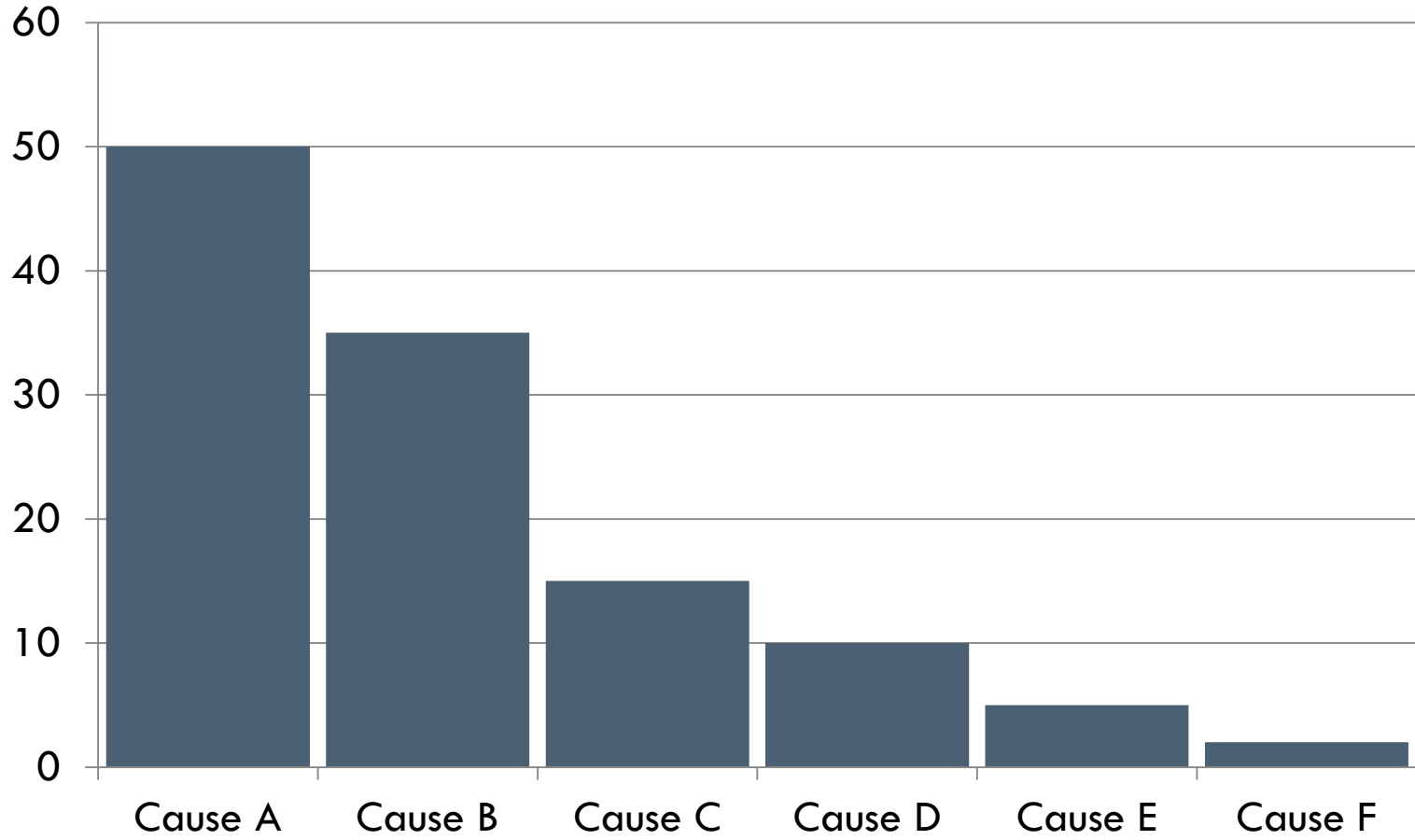Investigate Problems. Prevent Problems.
Houston, Texas   281-412-7766   ThinkReliability.com

Copyright ThinkReliability 2009

Cause Map (right side):

- Characteristics of coffee oils -> More coffee aroma and flavor
- AND
- Competition from other stores -> Taste more important than burn risk
- Recommended by coffee makers -> Policy: Serve coffee 180-190F -> Temperature of water (180F)
- Possible Solutions: Serve cooler coffee
- Evidence: Despite past complaints, policy was not changed
- Evidence: Rapidly expanding competitors also served very hot coffee

People often think they disagree about the cause, but the real debate is over how to effectively prevent the incident from recurring.

The causes are what actually happened.

- Possible Solutions: Change lid to facilitate adding condiments
- Possible Solutions: Server adds condiments
- Possible Solutions: Offer cooler coffee at drive-thru
- Removing lid -> Adding cream and sugar
- Spilled coffee in lap
- Sitting in car <- Using drive-thru
- Coffee cup in lap <- No cup holders
- AND
- Skin immersed in hot water for 90 seconds
- Sweat pants worn
- Hot water trapped against skin for 90 seconds
- Didn't remove sweat pants for 90 seconds <- Unaware of severity of burn ?

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Example from www.thinkreliability.com

Pareto Chart

Count of Occurrences

Pick Chart

Difficulty		Impact	
Easy	Implement	Possible	
Hard	Challenge	Kill	
	High	**Low**	

Continuous IMPROVEMENT

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Measures

"You can achieve incredible progress if you set a clear goal and find a measure that will drive progress toward that goal"

Bill Gates: My Plan to Fix The World's Biggest Problems

"From the fight against polio to fixing education, what's missing is often good measurement and a **commitment to follow the data**. We can do better. We have the tools at hand."

CONTINUOUS
IMPROVEMENT

Measures: Points to Consider

The difference between the time it takes to do it and the time it takes to get done.

What the customer values as well as key management indicators

The difference between stakeholders in the organization and the customer for a particular activity

Metrics form the baseline for improvement

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CONTINUOUS
IMPROVEMENT

Standard Work

Kai   Zen

変 善

Change   Good

CONTINUOUS
IMPROVEMENT
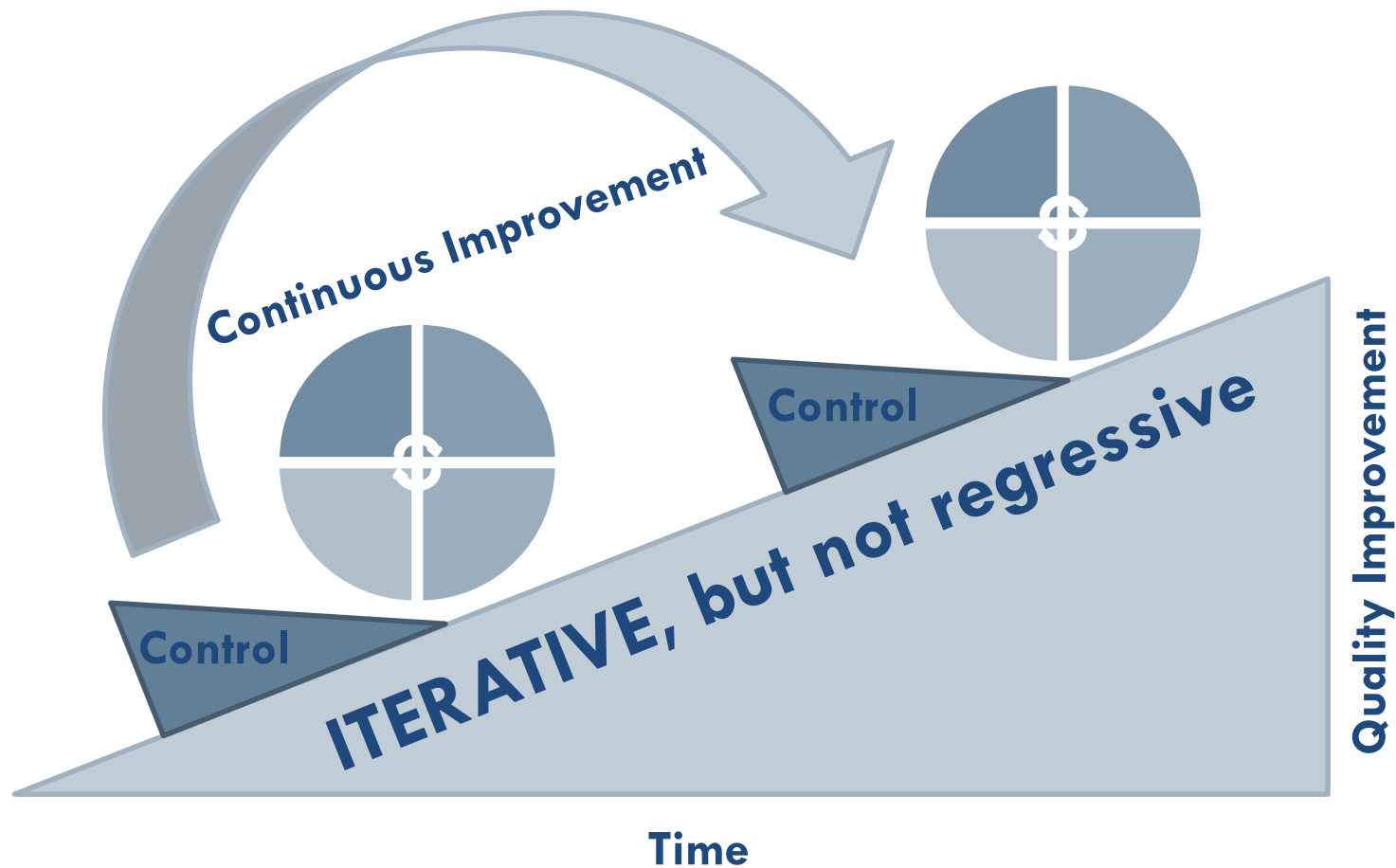
Kaizen FAQ

- What is a kaizen?

- Is it really a full time commitment?

- What will that week be like?

- What can I expect coming out of the event?

CONTINUOUS
IMPROVEMENT
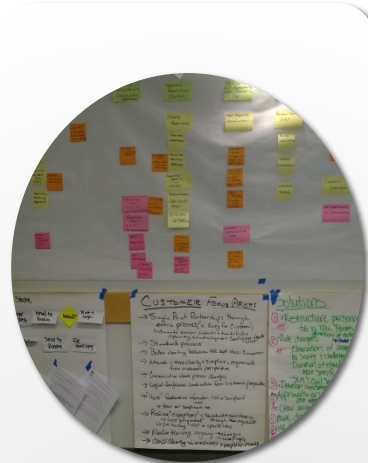
- Create process map
- Define metrics and set baseline

- Conduct value, waste, and flow analysis
- Conduct root cause analysis
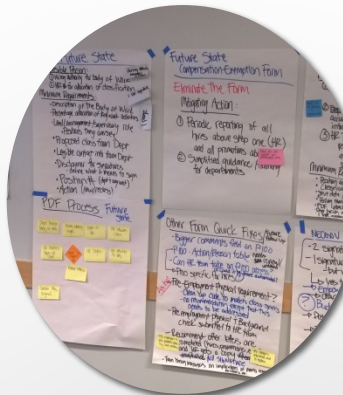
- Brainstorm possible solutions
- PICK solutions
- Create future state map

- Implement recommendations or create plan
- Verify changes with process co-owners

- Establish communications plan
- Present findings to key stakeholders

Define > **Measure** > **Analyze** > **Improve** > **Control**

CONTINUOUS IMPROVEMENT

SPONSORSHIP AND CHARTER

| Date: 05/11/2015 | Project: Derelict Building Process |

Team

Executive Support: Nadia Chandler Hardy
Sponsor: Lisa Wojtanowicz
Team Lead: Christina Tate

CII Facilitator: Katie Johnston
Team:
Dan McConaughy
IT – Sally Pomerville
Code Enforcement Staff (1-2)
Customer Support Staff (1-2)

Stakeholders

Finance
Code Enforcement
Property Owners
Collections Agency
Bank Representatives
Property Preservation

Problem Statement

Derelict buildings are buildings which are not safe for people to live in. Derelict building pose a safety and human health impact for the community. The City wants to reduce the number of buildings that become derelict and return derelict buildings to productive use. The longer the building is derelict the higher the chance of community impacts and possible demolition. The property owner is responsible for securing derelict buildings. When the property is left unsecured, the City boards up the property (approximately 350 annually). These board ups are costly for the City and property owners. As long as the property remains derelict, the City continues reinspecting the property which means the City incurs additional staff time and costs and the property owner continues to incur penalties.

Currently, the process to board up, issue penalties ,and bill property owners is time intensive for staff and there are delays for the property owners from when the work is done to the time that property owners receive bills. Time delays in billing may be impacting cost recovery because property owners do not see the full impact of their inaction and trigger additional work and costs. Time delays early in the process delay all later stages and may impact the length of time the property remains in derelict status (non-productive use).

Scope

- From case creation to when the City receives payment.

Targeted Outcomes

What is the general intent for this situation in the future? How would we know if the project was a success?
- Increased cost recovery
- Eliminate waste in the process (including financial costs and staff time)
- Reduce the time from when work is completed/fine issued to billing of property owners
- Decrease the number of derelict buildings that are demolished
- Decrease the time it takes to return building to productive use

Boundaries

- No new technology investments (OK to request changes to current SAP system)

CONTINUOUS IMPROVEMENT

Timeline

April	May	June	July
Prep/Draft Charter	Approve Charter Current State Analysis	Improvement Activity Recommendations	Implementation

The Team

Sponsor

Team Lead and Members

CII Facilitators

Resources

CONTINUOUS
IMPROVEMENT

CII Facilitators

We are

- Focused on the **process** of problem solving
- Equipped with tools for exploring tough issues
- Invested in the team's success
- Dependent on you for subject matter expertise and participation
- Working for the whole team (not just for the CMO, OMB, or management)
- Going to ask a lot of (obvious) questions

We are not

- A **BLANK** expert (I don't have "the answer")
- Invested in a **particular** outcome
- Going to let the team "fail"

CONTINUOUS **IMPROVEMENT**

CONTINUOUS
IMPROVEMENT