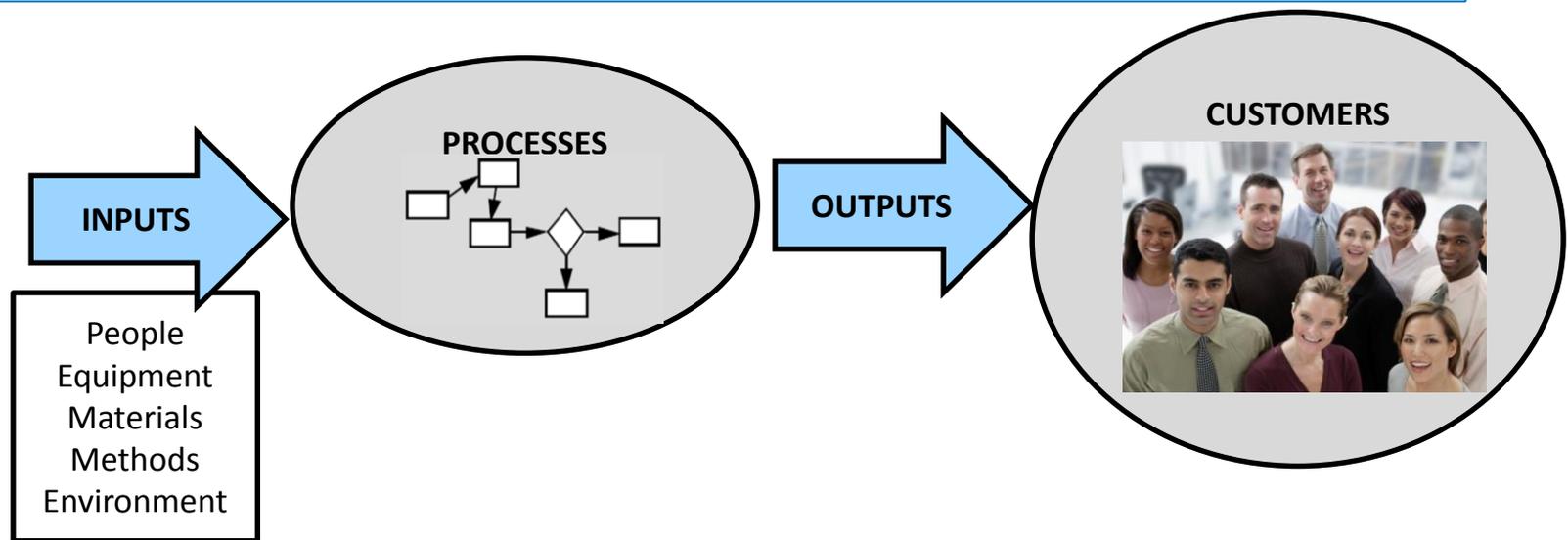# LEANOhio

PDCA – A3

Lean is…

… a way of working where everyone is maximizing customer value while minimizing waste everyday

Lean Enterprise Institute

Everything Is Process

"If you can't describe what you are doing as a process, you don't know what you're doing."
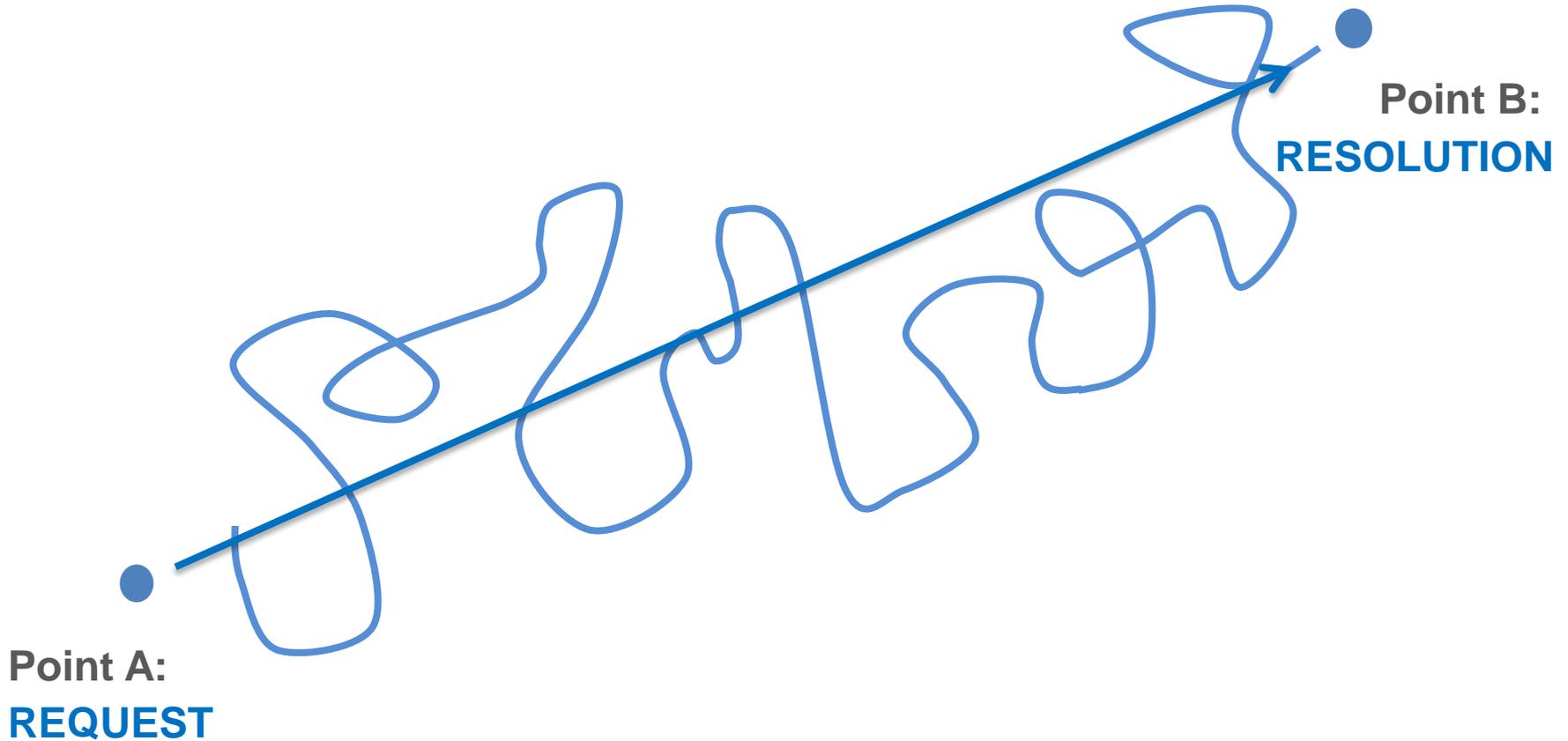W. Edwards Deming

INPUTS

People
Equipment
Materials
Methods
Environment

PROCESSES

OUTPUTS

CUSTOMERS

"A bad process will beat a good person every time"
W. Edwards Deming

Processes Tend To Be Invisible

Point B:
RESOLUTION

Point A:
REQUEST

In Manufacturing Or Government

whatever your results...

- Lead time

- Cycle time

- Errors

- Costs

- Rework

- Customer satisfaction or frustration

*…..your process is **perfectly** designed to achieve those results*

Process Improvement

Process Improvement Activity

- **Team Leader**
- **Time Keeper**
- **Recorder**

Activity: Scoring

Time Sheet	L	E	A	N
Round #1: Goal Time				
Round #2: Goal Time				
Round #3: Goal Time				
Round #4: Goal Time				

PDCA (Deming/Shewart Cycle)

PLAN   DO   CHECK   ACT

W. Edwards Deming
1900 - 1993

What is PDCA?

- The plan–do–check–act cycle is a four–step model for making improvements

- Simple standardized method of improvement

- Repeatable and consistent

- Serves as fundamental model for all other improvement methods

- Just as a circle has no end, the PDCA cycle should be repeated again and again for continuous improvement

When to Use PDCA

- As a model for continuous improvement

- When starting a new improvement project

- When developing a new or improved design of a process, product or service

- Evaluations/audits of programs or administrative functions

- Your customers are complaining

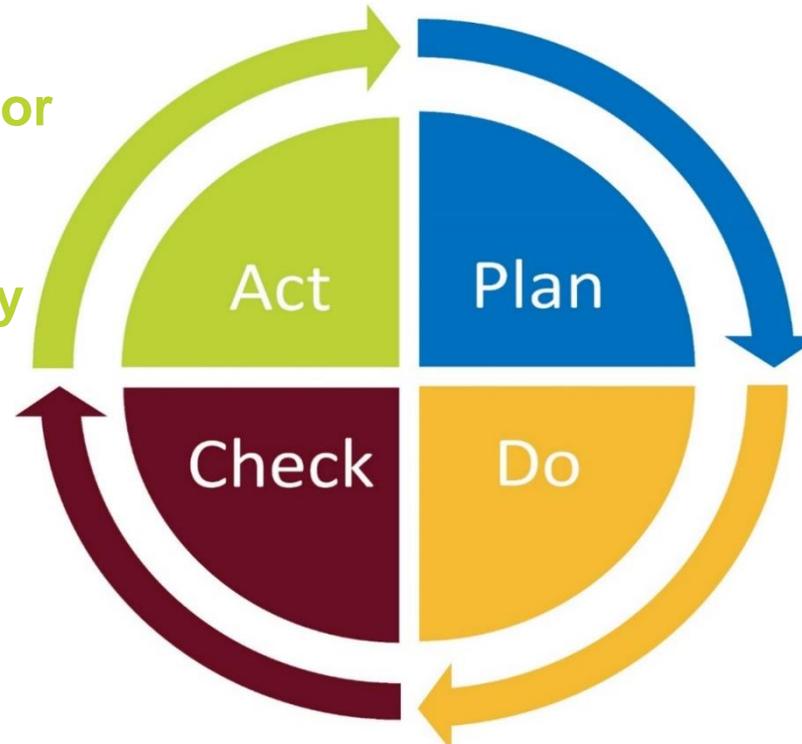- You find yourself saying, *there's got to be a better way!*

PDCA

ACT:
8. **Adopt, Adapt or Abandon**
9. **Monitor**
10. **Tell your Story**

CHECK:
7. Check/Study Results of Test

PLAN:
1. Identify and Select Problem
2. Define Current State
3. Define Desired State
4. Analyze
5. Select Solution to test

DO:
6. Plan and Test Solution

Act | Plan | Check | Do

PLAN | DO | CHECK | ACT

PDCA Method

PLAN

Plan Recognize an opportunity; understand the issue; plan a change

DO

Do Test the change. Carry out a small-scale pilot

CHECK

Check Review the test, analyze the results and identify what you've learned

ACT

Act Take action based on what you learned:

- If the change did not work, go through the cycle again with a different solution

- If you were successful, standardize and incorporate what you learned into wider changes

- Monitor results. Plan new improvements, begin the cycle again

PDCA

PLAN

DO

CHECK

ACT

PLAN				
P1	Identify Problem (problem selection guide)	Gather data and background (How do you know it is a problem?) What, When, Where, How much	Scope the issue: Develop SIPOC; Identify customer requirements (survey, focus group, interviews)	Develop charter/ start A3
P2	Determine current state	Develop Data Collection Plan and gather data	GEMBA – go observe the process in the workplace. Develop a Process Map	Identify waste (TIM U WOOD) and pain points
P3	Establish target goals/future/desired state	What measures will tell you if you are successful?	Make goals SMART	
P4	Analyze the problem	Examine the data, Understand the causes of problem	Fishbone diagram, Pareto diagram, Run chart, bar chart	Find the Root cause of the problem, 5 Whys
P5	Determine best improvement(s)	Brainstorm improvement ideas, Evaluate (Impact/ control matrix)	Select improvement (s) Use flow, poka yoke, standard work. Develop new process map	State a hypothesis: If we do XXXX, then we think YYYY will happen
DO	Test your Improvement(s)	Plan implementation of a test of the proposed solution	Implement test solution. Gather data to measure success	Action register, Gantt chart Data collection tools
CHECK/ STUDY	Check/study the results of your test	Evaluate results: Compare before and after measures	Seek feedback from customers	Determine if the actions taken were successful
ACT	Adopt, adapt or abandon. Monitor Tell your Story	Implement standard work OR test another solution	Monitor: Collect data & review periodically. Track results using visual management	*Tell your story Complete the A3*

Repeat For Continuous Improvement
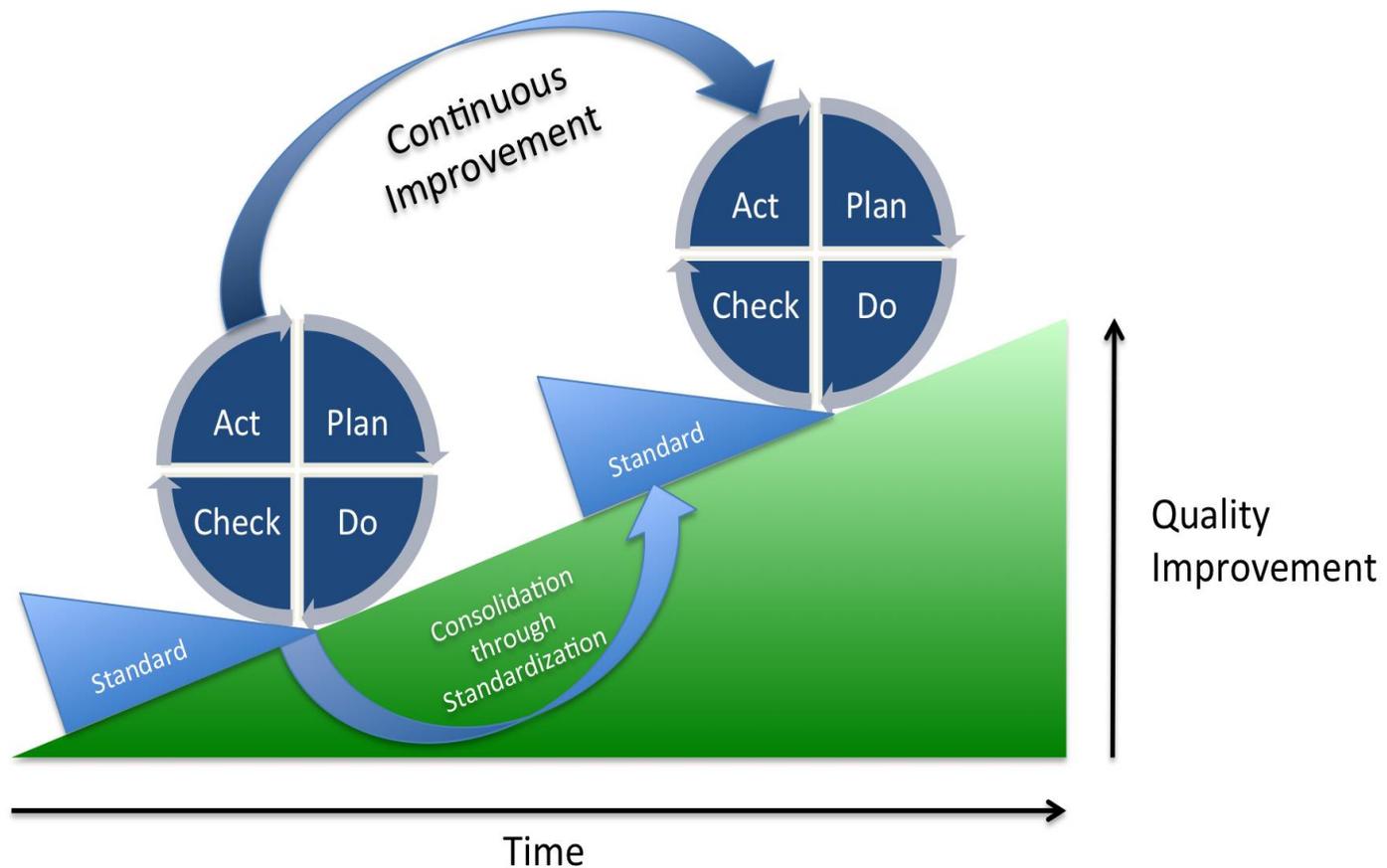
Process Improvement

Finding a PDCA Project

Finding PDCA Projects

- Performance or Strategic Plan measures

- Evaluations/audits of programs or administrative systems and functions

- Regular surveys of employees

- Customer service data

- Your customers are complaining

- When something bugs you

- You find yourself saying, there's got to be a better way!

Project Selection

1. Generate a list of ideas of improvement opportunities
2. Clarify those ideas
3. Reduce the list & prioritize

   - Importance to the organization
   - Capacity
   - Control or Influence
   - High volume
   - High risk
   - Cost/benefit

Project Selection "Pitfalls"

- Morale, communication, etc.

- Preconceived solutions

- Small or trivial – doesn't matter to anyone

- Other peoples' problems

- The boss' policy decisions

- You are the primary customer

- Something that is/will be undergoing major change

Step 1

List several ideas for process improvement projects

1.
2.
3.
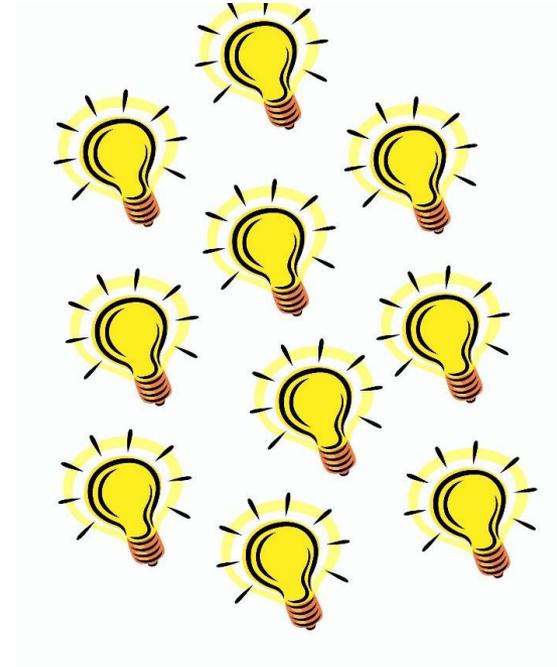
Step 2

Step 3

Step 2: Using the project selection criteria and 3-step reality check and choose the one idea that is most likely to be a successful first process improvement project

	Project idea 1	Project idea 2	Project idea 3
Criteria for project selection			
Priority area on our self-assessment			
(Others?)			
1. Technical issues			
Is it a process?			
Is the scope manageable?			
Can it be completed in the timeframe?			
Can it be reliably measured?			
What data are available?			
2. Strategic issues			
Is it important? To whom?			
Is it a sacred cow?			
Does it support the organization's mission/ vision/ strategic priorities?			
Does it have a customer focus?			
What is the probability of success?			
3. Empowerment issues			
Is it within the team's control?			
Can we devote adequate time to project?			
Do we already know the solution?			
Is the organization prepared to implement change?			

Review the criteria checklist against your project idea. Get someone to help you review and think critically about the projects. Select the most promising ideas and refine as needed.

Project Selection

Project idea:
Improve the water heater inspection process

Reality Check:
- ✓ *Process*
- ✓ *Measurable*
- ✓ *Important to customers and staff*
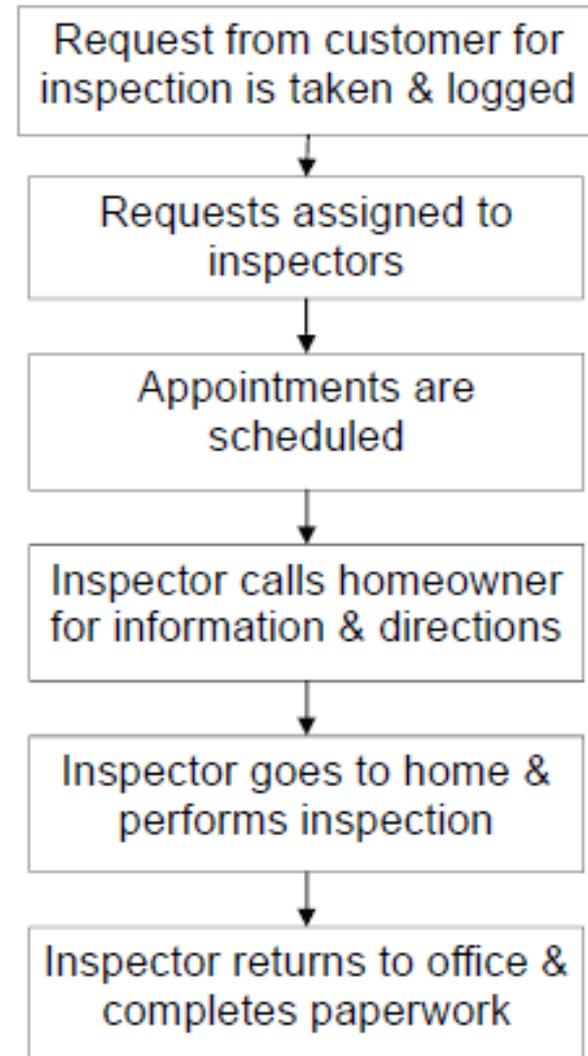- ✓ *We control the process*

Step 4

Identify the <u>major steps</u> in the process: First step, last step, 4-5 steps in between

This will help you identify who needs to be on your team.

Request from customer for inspection is taken & logged

↓

Requests assigned to inspectors

↓

Appointments are scheduled

↓

Inspector calls homeowner for information & directions

↓

Inspector goes to home & performs inspection

↓

Inspector returns to office & completes paperwork

Step 5

IF you need a team for this project, Identify needed <u>team members</u>:

1. *Inspector A*
2. *Inspector B*
3. *Supervisor*
4. *Clerk*
5. *Customer Service Representative*

Steps 6-8

Identify <u>data</u> needed to measure improvement

- *# times inspector has to call homeowner*
- *Amount of time from request to fulfillment*
- *# of customer complaints*

Develop a <u>project goal</u> statement

- *To improve the scheduling process, reducing the time from request to inspection and reducing the number of calls inspector must make to homeowner*

Develop a <u>Team Charter</u> and/or start your <u>A3</u>

Develop a Team Charter

A Team Charter provides authorization for your project

LEANOhio Project Charter

Project/Event Title _____
Project Facilitator _____
Agency/Organization _____
Project Mentor _____
Charter Last Updated Date: _____

Project Background

Problem/Opportunity Statement

SCOPE (DEFINE BOUNDARIES)	First step in the process:
	Last step in the process:

Project Goals

Project Boundaries

Performance Metrics: What measures will tell you if you are successful.	Performance Metrics			
	Current	Goal	Final	% Change

Projected Benefits

Project Team
Team Lead: _____
Team Champion/Sponsor: _____
Process Owner: _____
Team Members: _____
Subject Matter Experts: _____

Project Champion/Sponsor and Process Owner Sign-Off: I am committed to supporting this project and implementing the teams improvements.
Sponsor Signature: _____
Process Owner: _____

Process Improvement

A3

What is an A3?

a. A way of thinking

b. A report

c. An 11 x 17 piece of paper

d. An approach to continuous improvement

e. All of the above

A3 is based on the PDCA cycle and is used for day-to-day problem solving.

Can be used for a proposal for a project, to guide an improvement cycle, and as a report for the project.

Why A3?

- A3 provides a structured format for problem-solving

- Provides a method for addressing the things that "bug" you or frustrate you

- Reflects the philosophy of *don't blame the people, fix the process!*

- Promotes continuous improvement

- Aligns with PDCA cycle

- Promotes transparency – is visual!

- Tells the story

A3 Report

Title:

Date started: 1   **Current Date:**

Team:

Executive Sponsor:

P1: Why Change is Needed

P2: Current State

P3: Future State

P4: Analysis

P5: Potential Solutions

D6: Action Plan

Action item:	Assigned to:	Due Date

C7: Check Results

CS	FS	30 days	60 days	90 days

C7: Other Results

A8: Follow-up Action

Start your A3

The A3 can guide you on your project and is the tool to use to report your results and tell your story.

Title: Date Started:	Current Date:	Team: Executive Sponsor:
P1: Why change is needed	**P4: Analysis**	**C7: Check Results**
Clerical staff spending 2 ½ hours per day on mail. Organizational changes have impacted time available to respond to customers. Response to phone calls and customers not timely.		
P2: Current State	**P5: Potential Solutions**	**C7: Other Results**
Cumbersome paper process. 4 divisions handle mail differently. Significant volume of paper documents with Juvenile Court.		
P3: Future State	**D6: Action Plan**	**A9: Monitoring**
Clerical staff to have an additional 2 hours per day to serve counter customers, answer phones, and other administrative tasks.		

Plan

- Identify problem or opportunity

- Determine current state

- Establish future goals

- Determine solutions

Plan

P1: Why Change is Needed

Plan

Title:
Date started: 1   Current Date:

Team:
Executive Sponsor:

P1: Why Change is Needed
PLAN

P2: Current State

P3: Future State

P4: Analysis

P5: Potential Solutions

D6: Action Plan		
Action item:	Assigned to:	Due Date

C7: Check Results				
CS	FS	30 days	60 days	90 days

C7: Other Results

A8: Follow-up Action

P1: Why Change is Needed

- Gather background data/information
  - Why are we working on this problem/issue?
  - Why is this important?
  - What has been happening?
  - What is the impact on the customer?

- Why should anyone care about this situation and be motivated to participate in improving?

- What are the pain points? Impact on organization?

P2: Define the Current State

Title:

Date started: 1   Current Date:

Team:

Executive Sponsor:

P1: Why Change is Needed

P2: Current State
Current State   **PLAN**

P3: Future State

P4: Analysis

P5: Potential Solutions

D6: Action Plan		
Action item:	Assigned to:	Due Date

C7: Check Results

CS	FS	30 days	60 days	90 days

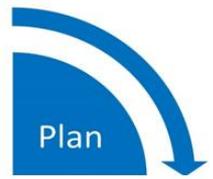| C7: Other Results |
| --- |
| |

A8: Follow-up Action

- What is the extent of the problem?

- Make the invisible visible

- What are the baseline metrics?

- Graphically present a picture of the current state

Eight Quality Control Tools
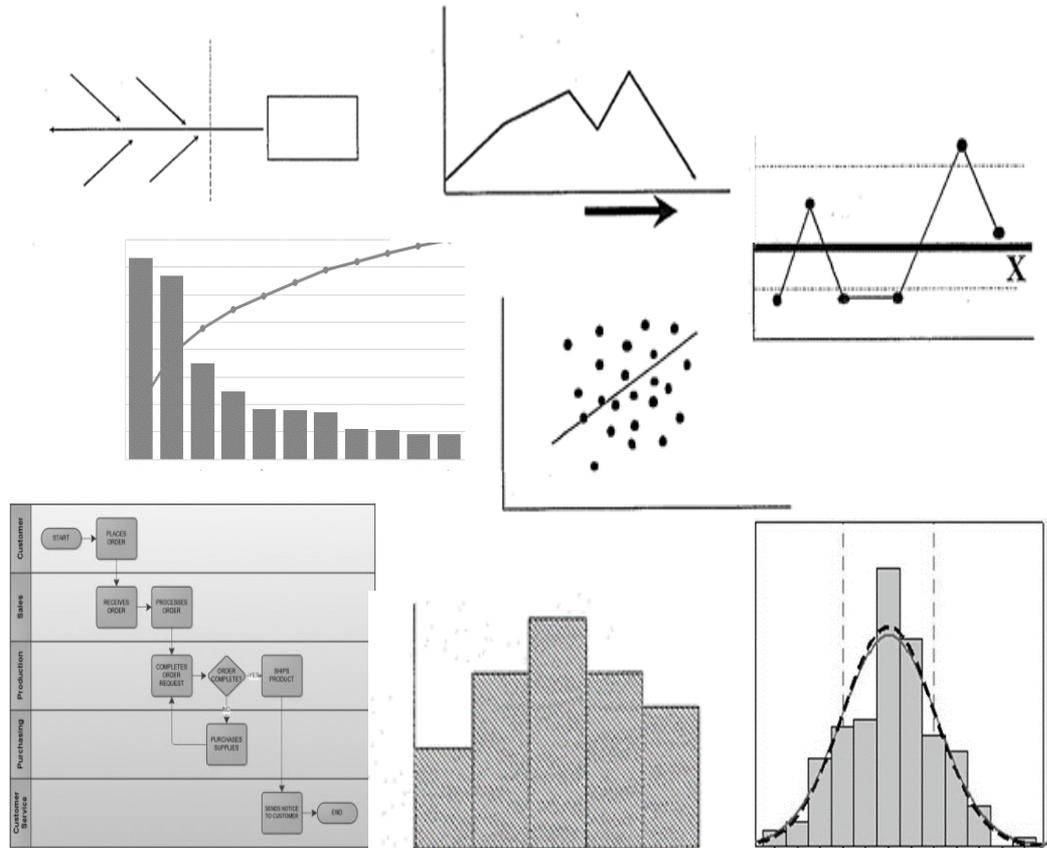
Two Critical Voices

- Voice of the Customer
  - Who is the customer?
  - What are their needs and requirements?

- Voice of the Process
  - What is the process currently producing?
  - How is it currently working?

Sources of Data on Current Condition

Customers	• Qualitative
Program and Process Metrics	• Quantitative
Process Map	• Visual

P3. Define Future State

Plan

P1: Why Change is Needed

P2: Current State

P3: Future State

PLAN

Future State

P4: Analysis

P5: Potential Solutions

D6: Action Plan

Action item:		Assigned to:	Due Date

C7: Check Results

CS	FS	30 days	60 days	90 days

C7: Other Results

A8: Follow-up Action

P3. Define Goals/Target Condition

- What measures will tell you if you are successful?

- What specific outcome is required?

- What is the goal?

- What is the gap?

- What are the important aspects of the future target condition?

- What specific improvements in performance are needed?

P4. Analyze the Problem
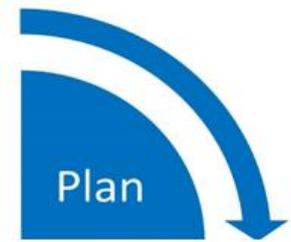
Title:
Date started: 1   **Current Date:**
Team:
Executive Sponsor:

P1: Why Change is Needed

P4: Analysis

PLAN

Analysis

CS	FS	30 days	60 days	90 days

C7: Other Results

P2: Current State

P5: Potential Solutions

A8: Follow-up Action

P3: Future State

D6: Action Plan		
Action item:	Assigned to:	Due Date

P4. Analyze the Problem

- What is causing the problem(s)?

- What factors account for the gap between the current state and the goal?

- What does the data say?

- What is the root cause or causes?
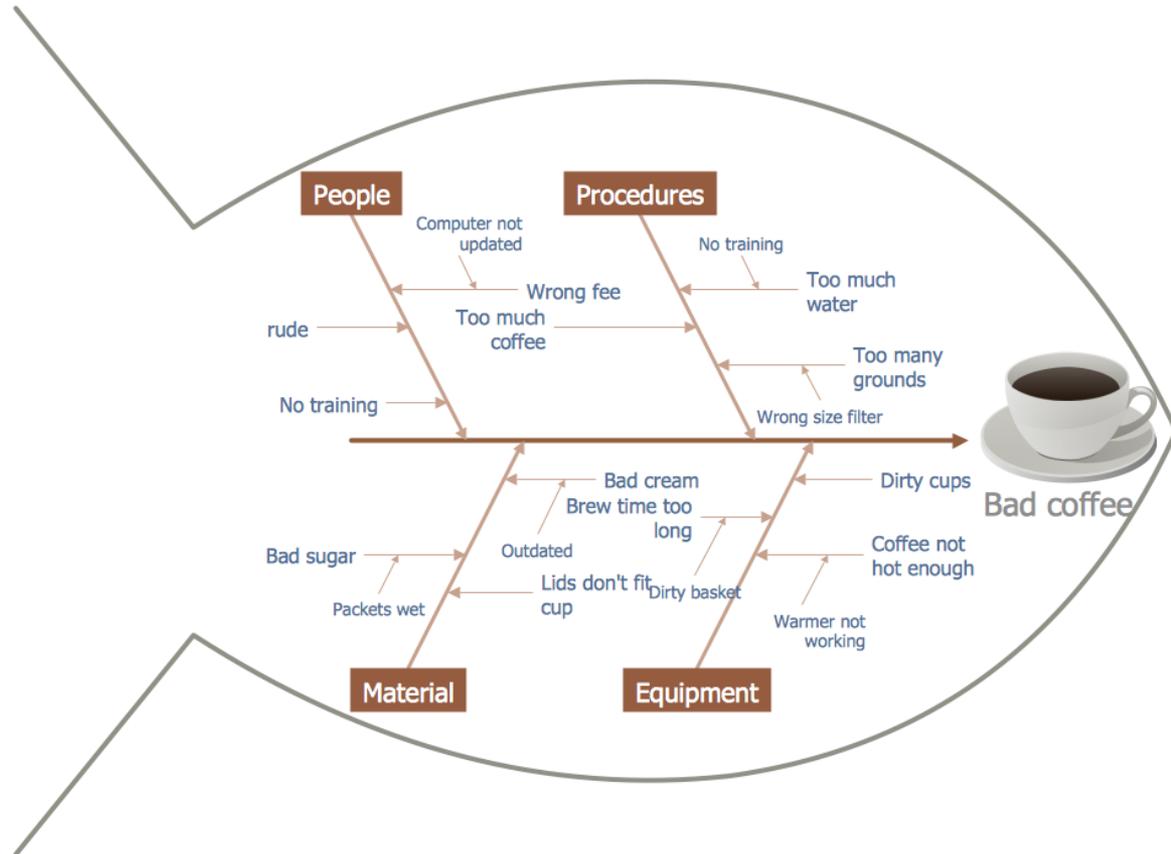
P4. Root Cause Analysis

Plan

Symptom:
You see it; people talk about it.

Root cause:
Often hidden…
you need to find it

Defining the "wrong" problem
wastes time. You end up looking
for a solution in the wrong place.

Why is the floor of the Jefferson Memorial disintegrating?

They have to clean bird droppings every week…

Why do the birds make a mess?

They go there to catch spiders…

Why are there spiders there?
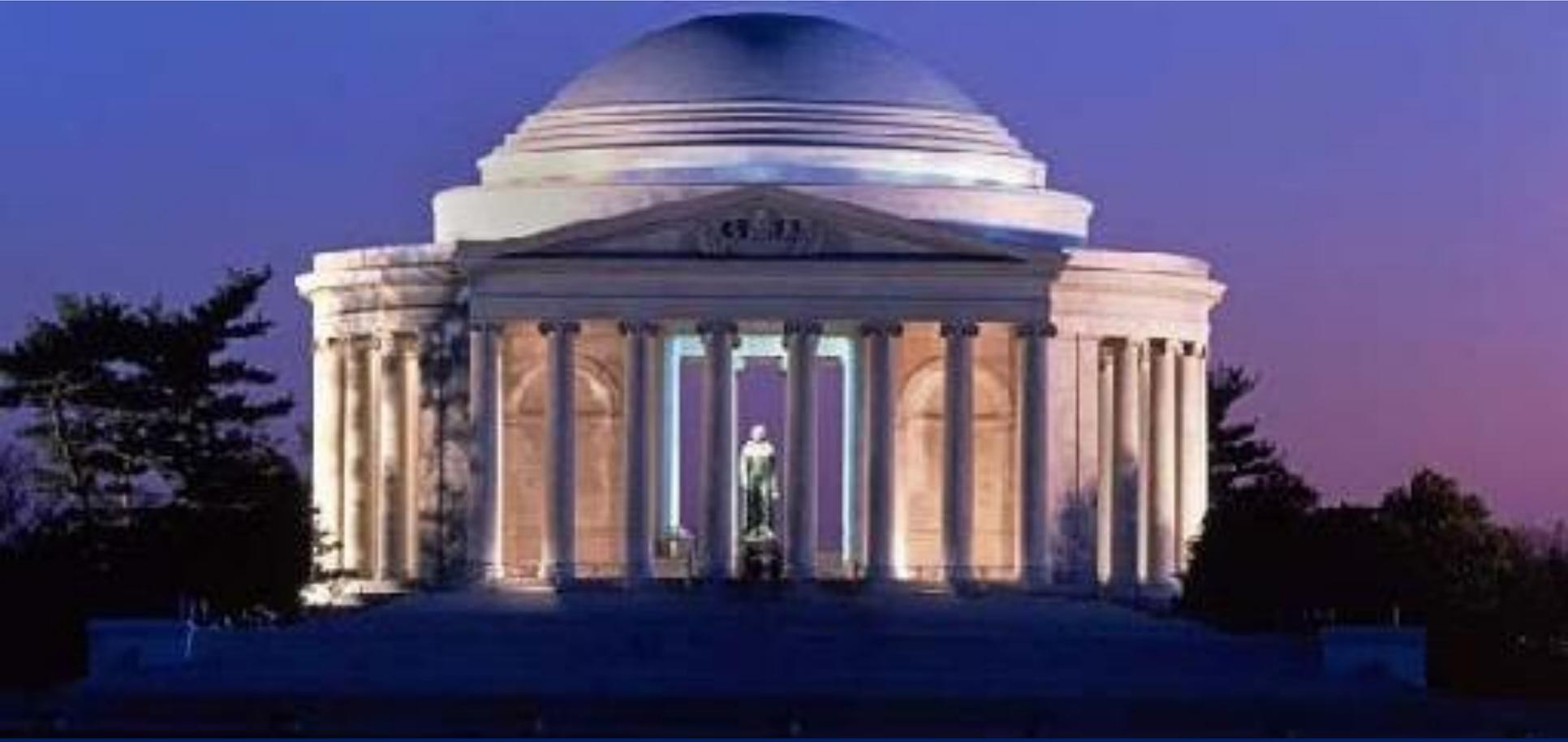
The spiders catch the tidewater nymphs that emerge at dusk

Why do the nymphs pick the memorial?

It's the only lighted object

Why is it Lighted?

The lights come on automatically for tourists

Solution: Delay the lights for two hours after dusk

**Solution…The nymphs don't go to the memorial –
The spiders and bird food supply ends –
Reduced or no cleaning needed!**

P5: Determine Best Improvements

Plan

Title:
Date started: 1   Current Date:

Team:
Executive Sponsor:

P1: Why Change is Needed

P4: Analysis

C7: Check Results

CS	FS	30 days	60 days	90 days

C7: Other Results

P2: Current State

P5: Potential Solutions

PLAN

Determine Best Improvements

A8: Follow-up Action

P3: Future State

D6: Action Plan

Action item:	Assigned to:	Due Date

P5. Determine Best Improvements

- Review information

- Ensure understanding of causes

- Brainstorm potential solutions

- Evaluate and select solution

- Develop an improvement hypothesis: If we do _____, then we think _____ will happen

A3 Report

Title:

Date started: 1   **Current Date:**

Team:

Executive Sponsor:

P1: Why Change is Needed

P2: Current State

P3: Future State

P4: Analysis

P5: Potential Solutions

D6: Action Plan

Action item:		Assigned to:	Due Date

DO

Test your improvement

C7: Check Results

CS	FS	30 days	60 days	90 days

A8: Follow-up Action

Plan for ensuring solution benefits are maintained

D6: Test Your Improvement(s)

- Develop an action plan to test your improvement theory (hypothesis)

- Implement your plan

- Collect data using key measures

action plan

Please rate the following aspects of the workshop.
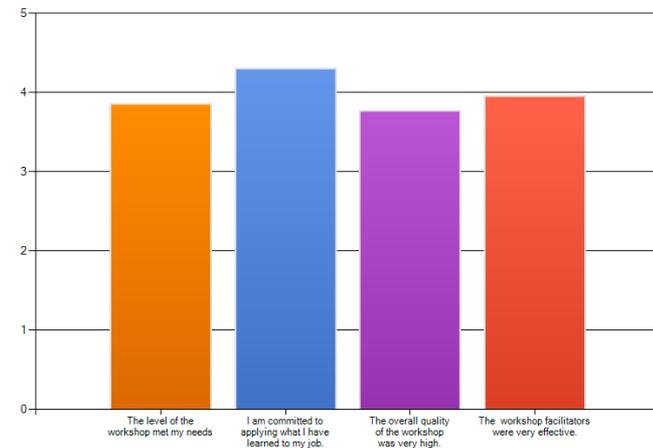
Implementation Plan

- A Project plan for full implementation

- Action Register: Task; Time; Who's responsible

- Look for critical pathways

- A communication plan is essential

- Pitfalls

  ➢ Allowing the sponsor/champion to rush the completion without establishing solid control methods

  ➢ Not engaging enough resources to facilitate the broader execution

C7. Check or Study Your Results

Title:

Date started: 1   **Current Date:**

Team:

Executive Sponsor:

P1: Why Change is Needed

P2: Current State

P3: Future State

P4: Analysis

P5: Potential Solutions

D6: Action Plan			
Action item:		Assigned to:	Due Date

C7: Check Results

CS	FS	30 days	60 days	90 days
CHECK				

C7: Other Results

CHECK

A8: Follow-up Action

C7: Check Results

- Evaluate your test data

- Compare before and after metrics; - Did your hypothesis produce the desired result?

- What went well? What didn't?

- Ask those affected by the change how it's working

- Refine your improvement as needed
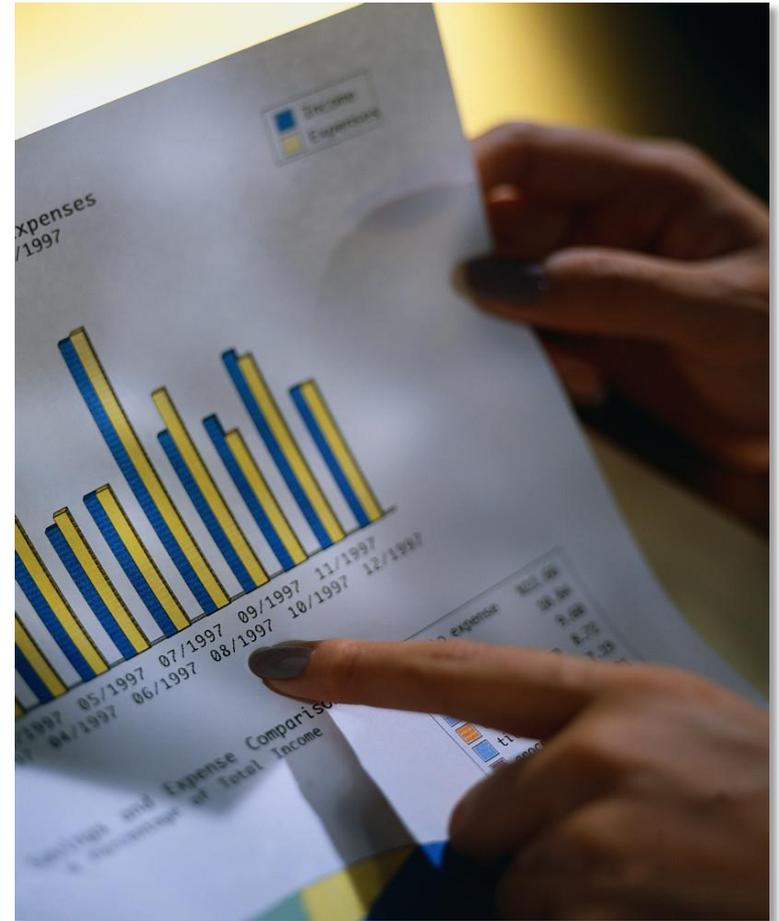
C7: Check Results

Title:
Date started: 1   **Current Date:**

Team:
Executive Sponsor:

Results can be measurable and not so measurable.

Other results might be $$ savings and how they were calculated, or reported improved customer or employee satisfaction, etc.

Check results: Measures

Check results: Other

C7: Check Results				
CS	FS	30 days	60 days	90 days

CHECK

C7: Other Results

CHECK

A8: Follow-up Action

30-Day   **60-Day**   **90-Day**

**Defined Project
Work Ends**

A8: ACT - Follow-up Action

Title:

Date started: 1   **Current Date:**

Team:

Executive Sponsor:

P1: Why Change is Needed

P2: Current State

P3: Future State

P4: Analysis

P5: Potential Solutions

D6: Action Plan

Action item:	Assigned to:	Due Date

C7: Check Results

CS	FS	30 days	60 days	90 days

C7: Other Results

A8: Follow-up Action

ACT

A8: ACT - Follow-up Action

- If successful: Implement system-wide, standardize
- If not successful: Try another test solution or
- Start the cycle again
- Repeat cycle as necessary
- Monitor and continuously measure
- Plan for the future
- Tell Your Story

Tell Your Story

Title:

Date started: 1   **Current Date:**

Team:

Executive Sponsor:

P1: Why Change is Needed

P2: Current State

P3: Future State

P4: Analysis

P5: Potential Solutions

D6: Action Plan

Action item:	Assigned to:	Due Date

C7: Check Results

CS	FS	30 days	60 days	90 days

C7: Other Results

A8: Follow-up Action

ACT

Case Study

Errors in Case Files?

Errors in Case Files?

- **Susie Supervisor** is concerned. She received a memo from her manager about the error rate of client cases in her unit, and complaints from customers about how long they have to wait to be seen by their caseworker, and about denials of service. The memo also indicates that the supervisor expects to see improvement over the next quarter. Susie mulls this over, pulls ten random files to review, determines that Jane has had quite a few errors and decides that she needs to talk with Jane about improving her performance.

Errors in Case Files?

Susie meets with Jane who is predictably defensive. "I didn't know there were errors, but it is so busy out there, it's easy to forget to check something. How can you expect me to do all these things perfectly when I've got children running around screaming, phones ringing, customers backing up in the waiting room? I can't do everything that needs to be done."

What should Susie Supervisor do?

Plan: Identify and select problem

- More people seeking services
- Health department is short staffed
- Walk-ins as well as pre-scheduled appointments
- Client complaints about:
  - *Takes too long to see someone*
  - *Whole process takes too long*
  - *Have to see 3 different people*
  - Services denied or billed

P1. Why change is needed

Why are we doing this? Why is it important? What is the business case? What is the chief complaint? Pain point? Customer issue? What is the impact of the issue? What is the scope - start and end points?

P1. Why change is needed

Why are we doing this? Why is it important? What is the business case? What is the chief complaint? Pain point? Customer issue? What is the impact of the issue? What is the scope - start and end points?

Many Customer complaints about waiting too long to see a caseworker or clinician. Errors in case files and inaccurate denials of service.

P2: Define Current State

- **What is happening now quantitatively? Qualitatively? What is the extent of the problem?**
- **Use facts data, dates, times. Be visual, use charts, graphs, process map.**
- **Make the problem clear. Write a concise problem statement.**

P2: Define Current State

- **What is happening now quantitatively? Qualitatively? What is the extent of the problem?**
- **Use facts data, dates, times. Be visual, use charts, graphs, process map.**
- **Make the problem clear. Write a concise problem statement.**

- **The average wait time to see a clinician or caseworker is 17.5 minutes.**
- **Client satisfaction survey indicates that while the staff is friendly and helpful, time spent in the waiting room is too long and the ability to be seen by a caseworker or clinician is inadequate.**
- **Eight of ten audited case files contained errors.**

P3: Define Future State

- **What specific outcome is required?**
- **What is the goal? The aim?**
- **State specific targets in measurable or definable terms.**

P3: Define Future State

- **What specific outcome is required?**
- **What is the goal? The aim?**
- **State specific targets in measurable or definable terms.**

1. Client wait time to see clinician or caseworker will be reduced by 50%.
2. Clients should wait no more than 10 minutes to be seen.
3. Errors in case files will be reduced by at least 50 % in the next quarter and by 90% in the next year.

P4: Analysis

What is the gap between the current state and future state? What is preventing achievement of the goal? What is the root cause of the problem?

Use problem analysis tools: fishbone diagram, 5 whys, problem analysis tree, Pareto diagram, etc . Present a picture of the problem.

P4: Analysis

What is the gap between the current state and future state?

What is preventing achievement of the goal?

What is the root cause of the problem?

Client Survey

Please circle how well you think we are doing in the following areas:	Great 5	Good 4	OK 3	Fair 2	Poor 1
Ease of getting services					
Ability to get in to be seen	37 (27%)	65 (48%)	33 (24%)	0	0
Hours office is open	62 (46%)	61 (45%)	10 (7%)	2 (1%)	0
Convenience of office location	83 (61%)	36 (27%)	14 (10%)	2 (2%)	0
Prompt return of calls	60 (44%)	43 (32%)	17 (14%)	10 (5%)	5 (4%)
Time in waiting room	19 (14%)	36 (27%)	47 (35%)	28 (21%)	5 (4%)
Staff					
Friendly and helpful	96 (71%)	27 (20%)	10 (7%)	2 (2%)	0
Takes enough time with you	59 (44%)	57 (42%)	16 (12%)	2 (2%)	0
Explains what you want to know	71 (52%)	49 (36%)	13 (10%)	2 (2%)	0

<u>**Average (Mean) wait time: 17.5 minutes**</u>
<u>**Median: 18 minutes**</u>

Wait times for week of XX/XX/XXXX

Client Survey

Please circle how well you think we are doing in the following areas:	Great 5	Good 4	OK 3	Fair 2	Poor 1
Ease of getting services					
Ability to get in to be seen	37 (27%)	65 (48%)	33 (24%)	0	0
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Takes enough time with you	59 (44%)	57 (42%)	16 (12%)	2 (2%)	0
Explains what you want to know	71 (52%)	49 (36%)	13 (10%)	2 (2%)	0

Root Cause Analysis

Why?

   Why?

      Why?

         Why?

            Why?

Cause | Effect

Equipment, Process, People

Materials, Environment, Management

Secondary cause

Primary cause

Problem

P5: Potential Solutions

Brainstorm potential solutions or countermeasures. Evaluate and select solution to test.

P5: Potential Solutions

Brainstorm potential solutions or countermeasures. Evaluate and select solution to test.

- **Have clients complete paper documents**
- **Have computer terminal for clients to complete paperwork**
- **Have caseworker do the paperwork**
- **Get toy basket for kids**
- **Move the copier**
- **Supervisor check Jane's files daily**
- **Poka Yoke the form**
- **Pre-schedule more appointments**

P5: Potential Solutions

Brainstorm potential solutions or countermeasures. Evaluate and select solution to test.

- **Have clients complete paper documents**
- **Have computer terminal for clients to complete paperwork**

-
-
-
-
-
-

Evaluate Potential Solutions

Potential Solution	COST 1 = high cost 5 = low cost	IMPACT 1 = low impact 5 = high impact	SCORE Cost X Impact
Have clients complete paper document	3	2	6
Have computer terminal for clients to complete paperwork	1	4	4

Evaluate Potential Solutions

Potential Solution	COST 1 = high cost 5 = low cost	IMPACT 1 = low impact 5 = high impact	SCORE Cost X Impact
Have clients complete paper document			
Have computer terminal for clients to complete paperwork			
Have caseworker do the paperwork with client			
Get toy basket for kids			
Move the copier			
Supervisor to check Jane's files daily			
Poka Yoke the form			
Pre-schedule more appointments			

Evaluate Potential Solutions

Potential Solution	COST 1 = high cost 5 = low cost	IMPACT 1 = low impact 5 = high impact	SCORE Cost X Impact
Have clients complete paper document	3	2	6
Have computer terminal for clients to complete paperwork	1	4	4
Have caseworker do the paperwork with client	?	?	?
Get toy basket for kids	5	1	5
Move the copier	4	2	8
Supervisor to check Jane's files daily	3	3	9
Poka Yoke the form	4	4	16
Pre-schedule more appointments	5	4	20

Do – D6: Action Plan

Action Item	Assigned to	Due Date

Check – C7 Check Results

Measure	Current	Projected	Actual
Steps in process			
Lead Time			
# Defects			
Customer Satisfaction			

Check – C7 Check Results

What other Results do you have? Include charts, graphs, or pictures. Narrative too. Any $$ saved? Document how you calculated savings.

ACT – A8. Follow-Up Actions

Evaluate the results of your improvement. What went well? What didn't go so well? Did you achieve your goal? If yes, how will you put into standard work? What remaining issues / problems can you anticipate? What's your plan for ensuring solution benefits are maintained? How will you monitor?

Tell Your Story

A3 Report

Title:	Team:	
Date Started:	**Current Date:**	**Executive Sponsor:**
P1: Why change is needed	P4: Analysis	C7: Check Results
P2: Current State	P5: Potential Solutions	C7: Other Results .
P3: Future State	D6: Action Plan	A9: Follow-up and Monitoring

A3 Report

Title: Date Started:	Current Date:	Team: Executive Sponsor:
P1: Why change is needed	**P4: Analysis**	**C7: Check Results**
Why are we working on this problem/opportunity? What is the business case? What is the pain point? What is the impact? Scope?	What is preventing achievement of the goal? What is the root cause or causes of the problem? Fishbone or 5 whys.	Collect data. Check the results of your improvement. Did you close the gap?
P2: Current State	**P5: Potential Solutions**	**C7: Other Results**
What is currently happening? Extent of the problem? Data. Statement of the problem. Graphically present a picture of the current state.	Brainstorm solutions. Analyze them. Select a solution to test.	What went well? What didn't? If you didn't achieve goal, then go back to test another solution. If goal is achieved, put into standard work.
P3: Future State	**D6: Action Plan**	**A9: Monitoring**
What specific outcome is required? What is the goal? What is the gap? Specific improvements in performance needed? Pictures/graphs	Develop an action plan for running your test (or pilot) and implement it.	What is the plan for ensuring that solution benefits are maintained? How will you monitor?

A3 Report

Title: Date Started:	Current Date:	Team: Executive Sponsor:
P1: Why change is needed	**P4: Analysis**	**C7: Check Results**
Clerical staff spending 2 ½ hours per day on mail. Organizational changes have impacted time available to respond to customers. Response to phone calls and counter customers not timely.		Reduced steps in process by 86%.
P2: Current State	**P5: Potential Solutions**	**C7: Other Results**
Cumbersome paper process. 4 divisions handle mail differently. Significant volume of paper documents with Juvenile Court.	Standardize mail processing requirements among all 4 divisions. Reorganize work space. Increase scanning capability. Coordinate electronic communication with other agencies.	Reduced ½ FTE - Saved $30,000 in staff time (through attrition)
P3: Future State	**D6: Action Plan**	**A9: Monitoring**
Clerical staff to have an additional 2 hours per day to serve counter customers, answer	Design & standardize new work flow by xx/xxxx. Reorganize work space xx/xxxx	Evaluate email volume, priorities, necessity. Begin importing court documents directly rather than

A3 Report

P1: Why Change is Needed

The plane does not fly correctly

The plane is not hitting the desired target

The plane is not capable of consitently meeting the customer's expectations

P2: Current State

Process Capability of Ending Distance (Feet)

I-MR Chart of Distance
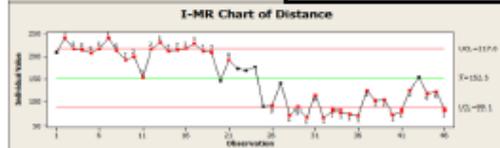
P3: Future State

Plane consistently hits target, looks awesome, accepted by customer, consistently meets expectations, is predicatable and in control

P4: Analysis

Software/Technique — Hard Position — Manual vs. Launch Pad Use — Left Direction of release

Users — Lack of Training — Misapplication of training — Sam had a misaling Et he left

Hardware — Wings too long — Body too light — Unstable Wings

Environment — After Lunch — Tired users — No wind

→ Plane Missing Target

Pareto Chart of the Standarded Effects

Boxplot of 12
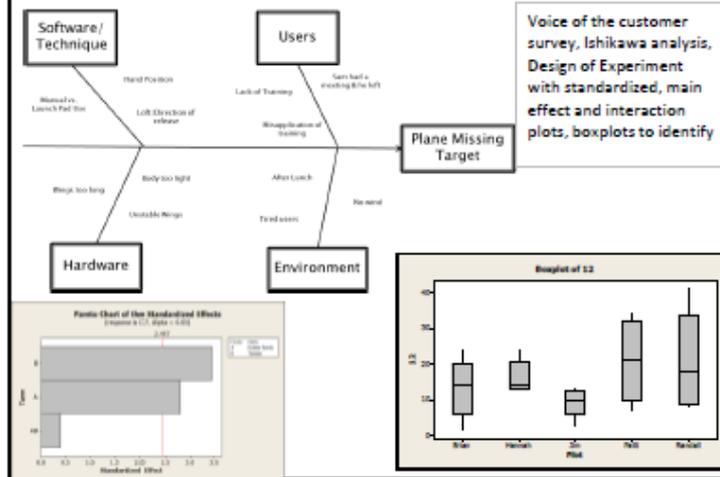
Voice of the customer survey, Ishikawa analysis, Design of Experiment with standardized, main effect and interaction plots, boxplots to identify

P5: Potential Solutions

Magnetize the target to draw the plane to it

Develop a launch pad

Shorten the wings

Increase the stability (tape the crap out of the plane)

Add landing stabilization mechanism

D6: Action Plan

Action item:	Assigned to:	Due Date
Pilot assignment	Jim	Today
Data analysis	Lalita	by 10/4
Fishbone creation	Alan	by 10/5
Gather VOC	Khrista	by 10/6
Build plane	All	by 10/8

C7: Check Results

CS	FS	30 days	60 days	90 days
17 steps	12	9	9	9
100% defects	50% defects	25% defects	15% defects	5% defects

A8: Follow-up Action

Contiunue to monitor flight times and distances to ensure that plane is performing in a controlled and capable manner. If it is not, engage in another continuout improvement initive to ensure plane is performing up to the customer's standards.

Plan for ensuring solution benefits are maintained

Continue to track flight times and distances and analyze with control charts, capability analysis and regression modeling. If any of these become off target, re-conveine the team to re-asses all variables and detiemine what has changed. Continue communicating wit hthe cusomet to ensure product is meeting thier expectations.

Date: 1/28/2013

MOUNT CARMEL

Approval:

I. Theme: Improve PLL Expense

PLL Expense FY14 YTD

Customers can call PLL directly for Interpreting Services by using a MCHS account number. PLL only offers phone service. PLL is normally used for off hours and lesser languages

Jul-Dec FY14

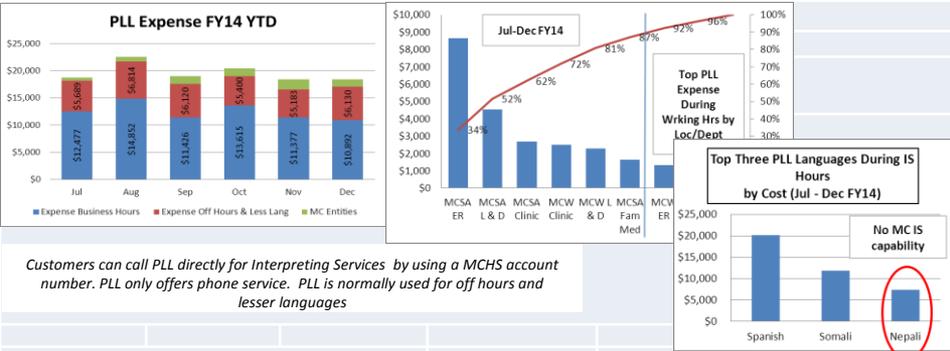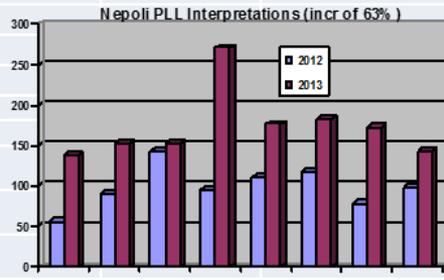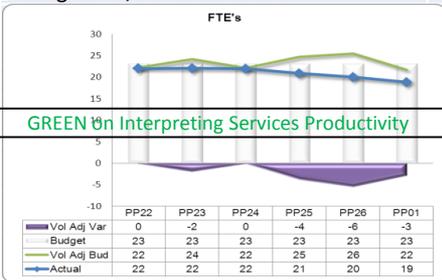Top PLL Expense During Wrking Hrs by Loc/Dept

Top Three PLL Languages During IS Hours by Cost (Jul - Dec FY14)

No MC IS capability

II. Background/Current Situation

FTE's

GREEN on Interpreting Services Productivity

	PP22	PP23	PP24	PP25	PP26	PP01
Vol Adj Var	0	-2	0	-4	-6	-3
Budget	23	23	23	23	23	23
Vol Adj Bud	22	24	22	25	26	22
Actual	22	22	22	21	20	19

Nepoli PLL Interpretations (incr of 63%)

■ 2012 ■ 2013

	Actuals Y-T-D	Budget Y-T-D	Budget Volume Adj.	$ Variance Y-T-D	% Variance Y-T-D	Prior Y-T-D
Controllable Expenses						
Other purch fees / services (PLL Expens	117,965	83,011	83,077	34,888	42.0%	80,994

III. Goal

In order to get back to budget (or more), the goal is to "decrease PLL expense (during business hours) from average ~$12,500 (from beginning FY14) to ~$8,500/month by 06-30-14 and to $6,500/month by 12-31-14 while maintinaing/improving productivity.

Gemba Walk / Interviews Themes through
MCSA (OB/GYN, Mother Infant, and Delivery)
****
* Users use PLL because its easier and less steps
* Users not aware of IS policies
* Website is not useful and many do not know about it.
* Neplai interpreters are needed
* Gaps in the on-boarding process informing nurses on IS.

PLL Reduction - Cause & Effect Diagram

PEOPLE   MATERIALS

Want real interpreters
Lack of training
High turnover rate
Too many steps for service
Don't like current pager system
Lack of IS policy knowledge

Lack of user knowlegge
No connection
Standard of practice for video cart placement
Website not up to date
Problems not reported
Missing IS instructions
Misplaced carts and phones

Software Issues
Missing Carts
Video equipment not working
Need Nepali interpreters

PLL Expense > Goal

V. Recommendations

* Implement a phone tree to reduce numbers and complexity on reaching an interpreter.
* Implement a video rollover where users can directly link into the next available interpreter using video carts.
* Create/distribute MC badges with one phone number for any IS and which numbers to push for a specific language.
* Hire "casual" Nepali interpreter to off set PLL Nepali expense - further reduces costs to PLL.
* Create/distribute new informational sheets to all departments and areas with contact info for quick reference to Staff
* Change MC Interpreting Services business hours to increase capacity to offset PLL volume coming back in.
* Distribute new language access plan
* Create <u>control plans</u> to sustain and improve Interpreting Services service (Rounding, Video Cart Maint, Info Classes monthly, Tier Accountability Board (completed))

VI. Implementation Schedule

Action	Start Date	Completion Date	Owner
Implement phone tree w/ IR	1/2/14	1/30/14	Todd Huff
Implement video rollover	5/31/13	3/1/14	Kristen Ordille
Create/distribute new IS badges	1/6/14	3/1/14	Shannon Pinckney
Improve/update IS website	1/31/14	1/24/14	Todd Huff
Update IS Policy/Procedure	1/21'14	1/29/14	Todd Huff
Hire Nepali casual	11/13/13	2/24/14	Todd Huff
Lead info class at MCSA (top depts)	11/13/13	3/1/14, 4/1/14, 5/1/14,	Todd Huff
Lead info class at MCW (top depts)	11/13/13	3/1/14, 4/1/14, 5/1/14	Todd Huff
Lead info class at MCE (top depts)	11/13/13	3/1/14, 4/1/14, 5/1/14	Todd Huff
Create SWIs (Video/Phone, etc)	12/12/13	2/14/14	Todd Huff
Items Completed:			
Distribute surveys to staff/depts	-	12/19/13	Todd Huff
All staff rounding	-	12/19/13	Todd Huff
Daily maint on video carts	-	12/19/13	Todd Huff
Daily Tier Accountability Board	-	12/10/13	Todd Huff
Update Administrative IS Policy	1/21/2014	1/29/2014	Todd Huff
Information Sheets - Quick Reference for Department Common Areas	1/20/2014	1/24/2014	Todd Huff

PLL Expense During Bus Hrs - FY14 YTD

Primary Measure

$10,500 $9,500 $9,500
$10,000 $8,500

■ Expense Business Hours — Goal Exp Bus Hrs

Top Two Loc/Dept - PLL Exp Dur Bus Hrs

Secondary Measure

■ MCSA ER $8,637 ■ MCSA L & D $4,537

PDCA, A3, DMAIC

PDCA		A3	DMAIC	TOOLS
Plan	Identify the problem or opportunity for improvement	Clarify the problem	Define	Project selection guide Charter, SIPOC, scoping
	Understand the current situation (background & measure)	Break down the problem	Measure	Gemba Walk, Process Mapping, Data Collection
	Identify the goal and the gap	Set a target		
	Analyse the situation (determine root cause)	Root cause analysis	Analyze	Waste - VA/NVA/ NVAN, Data analysis, Pareto diagram, Fishbone Diagram, 5 Whys, Statistical Process Control
	Identify potential solution(s), select solution to test. If we do — then —- will happen	Develop counter measures		Brainstorming, Affinity Diagram, Impact/ Control matrix, Flow (Batching, Push/Pull) Poka Yoke, 5S, Kan Ban,
Do	Plan and implement a test of the proposed solution	Implement counter measures	Improve	Action Register, Gantt Chart, Data collection
Check	Study the results of the test	Evaluate results		
Act	Act on lessons learned, adjust as needed, Implement system-wide, Monitor	Standardize success, Monitor	Control	Standard work, Visual Management

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