Lean is...

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

Lean Enterprise Institute
“If you can't describe what you are doing as a process, you don't know what you're doing.”

W. Edwards Deming

“A bad process will beat a good person every time”

W. Edwards Deming
Processes Tend To Be Invisible

Point A: REQUEST

Point B: RESOLUTION
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

<table>
<thead>
<tr>
<th>Time Sheet</th>
<th>L</th>
<th>E</th>
<th>A</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round #1: Goal Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Round #2: Goal Time</td>
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<tr>
<td>Round #3: Goal Time</td>
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<tr>
<td>Round #4: Goal Time</td>
<td></td>
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</tbody>
</table>
PDCA (Deming/Shewart Cycle)
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

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

CHECK:
7. Check/Study Results of Test

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

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

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

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

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

PDCA – A3

lean.ohio.gov
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 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.

<table>
<thead>
<tr>
<th>Criteria for project selection</th>
<th>Project idea 1</th>
<th>Project idea 2</th>
<th>Project idea 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority area on our self-assessment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>(Others?)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1. Technical issues</th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Is it a process?</td>
<td></td>
<td></td>
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<tr>
<td>Is the scope manageable?</td>
<td></td>
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<tr>
<td>Can it be completed in the timeframe?</td>
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<tr>
<td>Can it be reliably measured?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What data are available?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Strategic issues</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Is it important? To whom?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is it a sacred cow?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Does it support the organization’s mission/ vision/ strategic priorities?</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Does it have a customer focus?</td>
<td></td>
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<tr>
<td>What is the probability of success?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Empowerment issues</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Is it within the team’s control?</td>
<td></td>
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</tr>
<tr>
<td>Can we devote adequate time to project?</td>
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<td></td>
</tr>
<tr>
<td>Do we already know the solution?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the organization prepared to implement change?</td>
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</tr>
</tbody>
</table>

### Step 3

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 **major steps** in the process: First step, last step, 4-5 steps in between

This will help you identify who needs to be on your team.
Step 5

If you need a team for this project, identify needed team members:

1. Inspector A
2. Inspector B
3. Supervisor
4. Clerk
5. Customer Service Representative
Steps 6-8

Identify data needed to measure improvement

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

Develop a project goal 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 Team Charter and/or start your A3
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

Act  | Plan
---|---
Check | Do
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
### 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.

<table>
<thead>
<tr>
<th>Title: Date Started:</th>
<th>Current Date:</th>
<th>Team: Executive Sponsor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1: Why change is needed</td>
<td>P4: Analysis</td>
<td>C7: Check Results</td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P2: Current State</td>
<td>P5: Potential Solutions</td>
<td>C7: Other Results</td>
</tr>
<tr>
<td>Cumbersome paper process. 4 divisions handle mail differently. Significant volume of paper documents with Juvenile Court.</td>
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</tr>
<tr>
<td>Clerical staff to have an additional 2 hours per day to serve counter customers, answer phones, and other administrative tasks.</td>
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</tr>
</tbody>
</table>
Plan

- Identify problem or opportunity
- Determine current state
- Establish future goals
- Determine solutions
P1: Why Change is Needed

P1: Why Change is Needed

P2: Current State

P3: Future State

P4: Analysis

P5: Potential Solutions

P6: Action Plan

C7: Check Results

C7: Other Results

A8: Follow-up Action

PDCA – A3
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

Current State

P3: Future State

P4: Analysis

P5: Potential Solutions

C7: Check Results

C7: Other Results

A8: Follow-up Action

PDCA – A3
P2: Define the Current State

- 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

Future State
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

P1: Why Change is Needed

P2: Current State

P3: Future State

P4: Analysis

P5: Potential Solutions

P6: Action Plan

C5: P5 30 days 60 days 90 days

C7: Other Results

A8: Follow-up Action
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

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

P1: Why Change is Needed

P2: Current State

P3: Future State

P4: Analysis

P5: Potential Solutions

Determine Best Improvements

D6: Action Plan

<table>
<thead>
<tr>
<th>Action item</th>
<th>Assigned to</th>
<th>Due Date</th>
</tr>
</thead>
</table>

C7: Check Results

<table>
<thead>
<tr>
<th>C5</th>
<th>P5</th>
<th>30 days</th>
<th>60 days</th>
<th>90 days</th>
</tr>
</thead>
</table>

C7: Other Results

A8: Follow-up Action

Title: Date started: 1 Current Date: Executive Sponsor:

PDCA – A3 lean.ohio.gov
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
DO

A3 Report

P1: Why Change is Needed

P4: Analysis

P5: Potential Solutions

P2: Current State

P3: Future State

DO

Test your improvement

D6: Action Plan

<table>
<thead>
<tr>
<th>Action item</th>
<th>Assigned to</th>
<th>Due Date</th>
</tr>
</thead>
</table>

C7: Check Results

<table>
<thead>
<tr>
<th>CS</th>
<th>PS</th>
<th>30 days</th>
<th>60 days</th>
<th>90 days</th>
</tr>
</thead>
</table>

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
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: 

C7: Check Results

C7: Other Results

A8: Follow-up Action

PDCA – A3
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**

*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
Defined Project Work Ends

30-Day

60-Day

90-Day
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:
Current Dates:

Team:
Executive Sponsor:

P1: Why Change is Needed

P4: Analysis

P2: Current State

P5: Potential Solutions

P3: Future State

A8: Follow-up Action

C7: Check Results

C7: Other Results

D6: Action Plan

Action Item | Assigned To | Due Date
--- | --- | ---

ACT

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Case Study

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?
<table>
<thead>
<tr>
<th>Why are we doing this?</th>
<th>Many Customer complaints about waiting too long to see a caseworker or clinician. Errors in case files and inaccurate denials of service.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why is it important?</td>
<td></td>
</tr>
<tr>
<td>What is the business case?</td>
<td></td>
</tr>
<tr>
<td>What is the chief complaint?</td>
<td></td>
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<tr>
<td>Pain point?</td>
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<tr>
<td>Customer issue?</td>
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<tr>
<td>What is the impact of the issue?</td>
<td></td>
</tr>
<tr>
<td>What is the scope - start and end points?</td>
<td></td>
</tr>
</tbody>
</table>
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?

Average (Mean) wait time: 17.5 minutes
Median: 18 minutes

<table>
<thead>
<tr>
<th>Ease of getting services</th>
<th>Great 5</th>
<th>Good 4</th>
<th>OK 3</th>
<th>Fair 2</th>
<th>Poor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to get in to be seen</td>
<td>37 (27%)</td>
<td>65 (48%)</td>
<td>33 (24%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hours office is open</td>
<td>62 (46%)</td>
<td>61 (45%)</td>
<td>10 (7%)</td>
<td>2 (1%)</td>
<td>0</td>
</tr>
<tr>
<td>Convenience of office location</td>
<td>83 (61%)</td>
<td>36 (27%)</td>
<td>14 (10%)</td>
<td>2 (2%)</td>
<td>0</td>
</tr>
<tr>
<td>Prompt return of calls</td>
<td>60 (44%)</td>
<td>43 (32%)</td>
<td>17 (14%)</td>
<td>10 (5%)</td>
<td>5 (4%)</td>
</tr>
<tr>
<td>Time in waiting room</td>
<td>19 (14%)</td>
<td>36 (27%)</td>
<td>47 (33%)</td>
<td>28 (21%)</td>
<td>5 (4%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendly and helpful</td>
</tr>
<tr>
<td>Takes enough time with you</td>
</tr>
<tr>
<td>Explains what you want to know</td>
</tr>
</tbody>
</table>
## Client Survey

Please circle how well you think we are doing in the following areas:

<table>
<thead>
<tr>
<th>Area</th>
<th>Great 5</th>
<th>Good 4</th>
<th>OK 3</th>
<th>Fair 2</th>
<th>Poor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ease of getting services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability to get in to be seen</td>
<td>37 (27%)</td>
<td>65 (48%)</td>
<td>33 (24%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hours office is open</td>
<td>62 (46%)</td>
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<td>10 (7%)</td>
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<tr>
<td>Convenience of office location</td>
<td>83 (61%)</td>
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<td>47 (35%)</td>
<td>28 (21%)</td>
<td>5 (4%)</td>
</tr>
<tr>
<td><strong>Staff</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friendly and helpful</td>
<td>96 (71%)</td>
<td>27 (20%)</td>
<td>10 (7%)</td>
<td>2 (2%)</td>
<td>0</td>
</tr>
<tr>
<td>Takes enough time with you</td>
<td>59 (44%)</td>
<td>57 (42%)</td>
<td>16 (12%)</td>
<td>2 (2%)</td>
<td>0</td>
</tr>
<tr>
<td>Explains what you want to know</td>
<td>71 (52%)</td>
<td>49 (36%)</td>
<td>13 (10%)</td>
<td>2 (2%)</td>
<td>0</td>
</tr>
</tbody>
</table>
Root Cause Analysis

Why?
   Why?
      Why?
         Why?
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

<table>
<thead>
<tr>
<th>Potential Solution</th>
<th>COST (1 = high cost, 5 = low cost)</th>
<th>IMPACT (1 = low impact, 5 = high impact)</th>
<th>SCORE (Cost X Impact)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have clients complete paper document</td>
<td>3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Have computer terminal for clients to complete paperwork</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>
## Evaluate Potential Solutions

<table>
<thead>
<tr>
<th>Potential Solution</th>
<th>COST 1 = high cost</th>
<th>IMPACT 1 = low impact</th>
<th>SCORE Cost X Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have clients complete paper document</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Move the copier</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Supervisor to check Jane’s files daily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
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<td>Pre-schedule more appointments</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Evaluate Potential Solutions

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<th>COST 1 = high cost</th>
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</tr>
<tr>
<td>Have computer terminal for clients to complete paperwork</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Have caseworker do the paperwork with client</td>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Get toy basket for kids</td>
<td>5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Move the copier</td>
<td>4</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Supervisor to check Jane’s files daily</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Poka Yoke the form</td>
<td>4</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Pre-schedule more appointments</td>
<td>5</td>
<td>4</td>
<td>20</td>
</tr>
</tbody>
</table>
# Do – D6: Action Plan

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Assigned to</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
### Check – C7 Check Results

<table>
<thead>
<tr>
<th>Measure</th>
<th>Current</th>
<th>Projected</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steps in process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead Time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># Defects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Check – C7 Check Results

What other Results do you have? Include charts, graphs, or pictures. Narrative too. Any $$ saved? Document how you calculated savings.
<table>
<thead>
<tr>
<th>ACT – A8. Follow-Up Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>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?</td>
</tr>
</tbody>
</table>
Tell Your Story
## A3 Report

<table>
<thead>
<tr>
<th>Title:</th>
<th>Date Started:</th>
<th>Current Date:</th>
<th>Team: Executive Sponsor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1: Why change is needed</td>
<td></td>
<td></td>
<td>C7: Check Results</td>
</tr>
<tr>
<td>P2: Current State</td>
<td></td>
<td></td>
<td>C7: Other Results</td>
</tr>
<tr>
<td>P4: Analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P5: Potential Solutions</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# A3 Report

<table>
<thead>
<tr>
<th>Title: Date Started:</th>
<th>Current Date:</th>
<th>Team: Executive Sponsor:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P1: Why change is needed</strong></td>
<td><strong>P4: Analysis</strong></td>
<td><strong>C7: Check Results</strong></td>
</tr>
<tr>
<td>Why are we working on this problem/opportunity? What is the business case? What is the pain point? What is the impact? Scope?</td>
<td>What is preventing achievement of the goal? What is the root cause or causes of the problem? Fishbone or 5 whys.</td>
<td>Collect data. Check the results of your improvement. Did you close the gap?</td>
</tr>
<tr>
<td><strong>P2: Current State</strong></td>
<td><strong>P5: Potential Solutions</strong></td>
<td><strong>C7: Other Results</strong></td>
</tr>
<tr>
<td>What is currently happening? Extent of the problem? Data. Statement of the problem. Graphically present a picture of the current state.</td>
<td>Brainstorm solutions. Analyze them. Select a solution to test.</td>
<td>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.</td>
</tr>
<tr>
<td><strong>P3: Future State</strong></td>
<td><strong>D6: Action Plan</strong></td>
<td><strong>A9: Monitoring</strong></td>
</tr>
<tr>
<td>What specific outcome is required? What is the goal? What is the gap? Specific improvements in performance needed? Pictures/graphics.</td>
<td>Develop an action plan for running your test (or pilot) and implement it.</td>
<td>What is the plan for ensuring that solution benefits are maintained? How will you monitor?</td>
</tr>
</tbody>
</table>
## A3 Report

<table>
<thead>
<tr>
<th>Title:</th>
<th>P: Why change is needed</th>
<th>P4: Analysis</th>
<th>Team: Executive Sponsor: C7: Check Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Started:</td>
<td>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.</td>
<td></td>
<td>Reduced steps in process by 86%.</td>
</tr>
<tr>
<td>Current Date:</td>
<td></td>
<td></td>
<td>C7: Other Results</td>
</tr>
<tr>
<td>Team: Executive Sponsor:</td>
<td></td>
<td></td>
<td>Reduced ½ FTE - Saved $30,000 in staff time (through attrition)</td>
</tr>
<tr>
<td>Executive Sponsor:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| P: Current State:     | Cumbersome paper process. 4 divisions handle mail differently. Significant volume of paper documents with Juvenile Court. | P5: Potential Solutions                                                                                   | C7: Other Results | Reduced ½ FTE - Saved $30,000 in staff time (through attrition) |
|                       |                                                                                       | Standardize mail processing requirements among all 4 divisions. Reorganize work space. Increase scanning capability. Coordinate electronic communication with other agencies. |               |                                                              |

| P: Future State:      | Clerical staff to have an additional 2 hours per day to serve counter customers, answer phones, and respond to mail. | D6: Action Plan                                                                                     | A9: Monitoring   |
|                       |                                                                                       | 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 scanning. |                |
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 consistently meeting the customer’s expectations

P2: Current State

P3: Future State
Plane consistently hits target, looks awesome, accepted by customer, consistently meets expectations, is predictable and in control

P4: Analysis
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

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Assigned to</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot assignment</td>
<td>Jim</td>
<td>Today</td>
</tr>
<tr>
<td>Data analysis</td>
<td>Lalita</td>
<td>by 10/4</td>
</tr>
<tr>
<td>Fishbone creation</td>
<td>Alan</td>
<td>by 10/5</td>
</tr>
<tr>
<td>Gather VOC</td>
<td>Khrista</td>
<td>by 10/6</td>
</tr>
<tr>
<td>Build plane</td>
<td>All</td>
<td>by 10/8</td>
</tr>
</tbody>
</table>
Theme: Improve PLL Expense

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.

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 maintaining/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.
- Nepali interpreters are needed
- Gaps in the on-boarding process informing nurses on IS.

III. 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.
- Hire "casual" Nepali interpreter to offset 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 control plans to sustain and improve Interpreting Services service (Rounding, Video Cart Maint, Info Classes monthly, Tier Accountability Board (completed)).

VI. Implementation Schedule

<table>
<thead>
<tr>
<th>Action</th>
<th>Start Date</th>
<th>Completion Date</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement phone tree w/ IR</td>
<td>1/2/14</td>
<td>1/30/14</td>
<td>Todd Huff</td>
</tr>
<tr>
<td>Implement video rollover</td>
<td>5/31/13</td>
<td>3/1/14</td>
<td>Kristen Ordille</td>
</tr>
<tr>
<td>Create/distribute new IS badges</td>
<td>1/6/14</td>
<td>3/1/14</td>
<td>Shannon Pinckney</td>
</tr>
<tr>
<td>Improve/update IS website</td>
<td>1/31/14</td>
<td>1/24/14</td>
<td>Todd Huff</td>
</tr>
<tr>
<td>Update IS Policy/Procedure</td>
<td>1/21/14</td>
<td>1/29/14</td>
<td>Todd Huff</td>
</tr>
<tr>
<td>Hire Nepali casual</td>
<td>11/13/13</td>
<td>2/24/14</td>
<td>Todd Huff</td>
</tr>
<tr>
<td>Lead info class at MCSA (top depts)</td>
<td>11/13/13</td>
<td>3/1/14, 4/1/14, 5/1/14</td>
<td>Todd Huff</td>
</tr>
<tr>
<td>Lead info class at MCW (top depts)</td>
<td>11/13/13</td>
<td>3/1/14, 4/1/14, 5/1/14</td>
<td>Todd Huff</td>
</tr>
<tr>
<td>Lead info class at MCE (top depts)</td>
<td>11/13/13</td>
<td>3/1/14, 4/1/14, 5/1/14</td>
<td>Todd Huff</td>
</tr>
<tr>
<td>Create SWIs (Video/Phone, etc)</td>
<td>12/12/13</td>
<td>2/14/14</td>
<td>Todd Huff</td>
</tr>
</tbody>
</table>

Items Completed:

- Distribute surveys to staff/depts
- All-staff rounding
- Daily maint on video carts
- Daily Tier Accountability Board
- Update Administrative IS Policy
- Information Sheets - Quick Reference for Department Common Areas

Date: 1/28/2013
# PDCA, A3, DMAIC

<table>
<thead>
<tr>
<th>PDCA</th>
<th>A3</th>
<th>DMAIC</th>
<th>TOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>Identify the problem or opportunity for improvement</td>
<td>Clarify the problem</td>
<td>Define</td>
</tr>
<tr>
<td></td>
<td>Understand the current situation (background &amp; measure)</td>
<td>Break down the problem</td>
<td>Measure</td>
</tr>
<tr>
<td></td>
<td>Identify the goal and the gap</td>
<td>Set a target</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Analyse the situation (determine root cause)</td>
<td>Root cause analysis</td>
<td>Analyze</td>
</tr>
<tr>
<td></td>
<td>Identify potential solution(s), select solution to test. If we do — then —- will happen</td>
<td>Develop counter measures</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>Plan and implement a test of the proposed solution</td>
<td>Implement counter measures</td>
<td>Improve</td>
</tr>
<tr>
<td>Check</td>
<td>Study the results of the test</td>
<td>Evaluate results</td>
<td></td>
</tr>
<tr>
<td>Act</td>
<td>Act on lessons learned, adjust as needed, Implement system-wide, Monitor</td>
<td>Standardize success, Monitor</td>
<td>Control</td>
</tr>
</tbody>
</table>