Charting safe passage of your improvement project via A3

Eight Steps, One Page

Chris Holmes
Senior Process Improvement
Office of Transformation and Innovation
Chris.Holmes@HHS.Texas.gov

1

Class Agenda

Who's your customer?

Value add, Business value add, Non-value add related to processes

Theatre Exercise

Plan, Do, Check, Act (PDCA) Cycle and A3 Problem-Solving

Gemba Walks

Introduction to the CIA Case Study (Inspector X)

2

Objectives

In this training you will,

- Understand the importance of the Voice of the Customer
- The importance of the Gemba
- 8 steps of an A3 using Lean PDCA framework
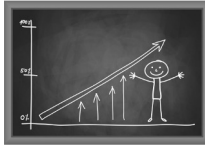- Demonstrate some proven tools that help you develop an A3

3

Lean Six Sigma 101 Continuous Improvement via Operational Excellence

To do these things, we use Lean Six Sigma

We reduce waste

We reduce inconsistencies/ variances

Better
Product and Service
Quality
Processes
User experience
Value

Faster
Service
Response
Processing
Delivery

Cheaper
To Operate
To Process
To Purchase (clients)

We talk to each other

4

4

LEAN 101

- Aim your improvement at the customer
- How are you currently measuring your customer's satisfaction
- Make the waste visible and eliminate
- Ask questions through Gemba
- Problem solve TOGETHER

5

Who is your customer?

6

What customers value in their experience
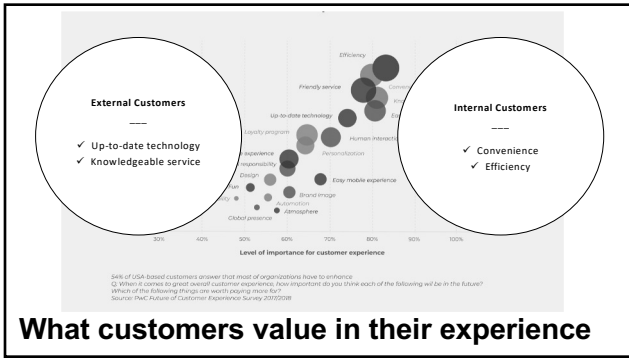
7

Voice of Customer (VoC) - Internal

5 keys to serve INTERNAL customers

1. Understand the results desired.

2. Determine the key success factors.

3. Identify the hurdles.

4. Establish a collaborative relationship.

5. Repeat often for continuous improvement!

Ensure you have clear and efficient communication channels in place to serve your customers.

8

Failing to understand VoC results in…

- **Dissatisfaction**
- **Frustration**
- **Rework**

9

CUSTOMER VALUE - VA, BVA, NVA

Value Add	Business Value Add	Non-Value Add
Effort the customer is expecting from a product or service	Must be performed for legal or regulatory purposes	Valueless Effort Obvious Waste
Costs Time Costs Money Adds Value	Costs Time Costs Money Adds No Value	Costs Time Costs Money Adds No Value
Optimize (VALUABLE)	Necessary (MINIMIZE)	Eliminate (WASTE)
Example: Web Tool for Provider Lookup	Example: Legislative Reports	Example: Excessive data entry and paperwork

10

CUSTOMER VALUE - TIMWOODS

Unnecessarily moving products and materials	Excess materials that aren't processed	Unnecessary movements by people	Time spent waiting for the next process step
Transportation	Inventory	Motion	Waiting
Making more product than customer demand	More work or higher quality than is required	Variation - fails to meet customer expectation	Underutilization of skills and knowledge
Overproduction	Overprocessing	Defect	Skills

11

11

Tools for Gathering the VoC

- Step 1 – Understand your customer needs

  - What are users trying to achieve by using your product/service?
  - What are users expecting your product/service to do?
  - What do users like about your product/service?
  - What negatively impacts customer satisfaction?

- Step 2 – Tools

  - Surveys
  - Interviews
  - Focus Groups

12

12

PDCA

CONTINUOUS
IMPROVEMENT
ACADEMY
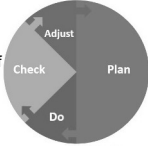
13

13

What is the PDCA Cycle?

• **PDCA** Cycle is an acronym for **Plan-Do-Check-Act**.

• An **iterative four-step process for improvement** used in organizations to focus on **Continuous Improvement (CI)** of processes, products, or services and to resolve problems

• Also referred to by the following:
  • **Plan-Do-Study-Act (PDSA)**
  • **Plan-Do-Check-Adjust (PDCA)**

Adjust
Check
Plan
Do
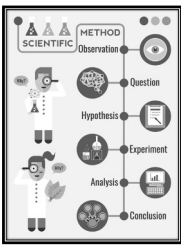
14

14

History & Evolution of PDCA

PDCA:

• **PDCA is based on the scientific method** written as "hypothesis-experiment-evaluation"

• PDCA was made popular by **Dr. William Edwards Deming,** a pioneering statistician who promoted PDCA Cycle beginning in the 1950s

• Dr. Deming is credited with modifying the PDCA Cycle to **PDSA Cycle**, i.e., the **Plan-Do-Study-Act Cycle**

• **Dr. Shewhart & Dr. Deming** independently originated the concept of **Continuous Improvement (CI)**

SCIENTIFIC METHOD
Observation
Question
Hypothesis
Experiment
Analysis
Conclusion

15

15

Why use PDCA?

Human Nature

Jump straight to solution

Continuously putting out fires

No common understanding of the real issue

No real measure if the solution is a real success

VS

Process Driven

Allow time to plan

A structured approach to identifying the problem

Involve the right people

No — Achieved Goal

Yes

Test and monitor to ensure goals are being met

16

16

Prior to A3

I believe that 80% of your process problems can be solved by the staff who are involved. However, the essential ingredient to any high-performing team is psychological safety where people feel safe enough to speak up and challenge each other. Without it, your % success rate lowers dramatically.

This Photo by Unknown Author is lic

17

Prior to A3
Standards of Work

Think about the process you want to improve…

Where is your team / process?

1. No process, "tribal knowledge"
2. Process exists but is not documented
3. Documented process
4. Documented, standardized and controlled
5. Continuously improved

18

18

So what an A3 and where does it come from?

- Standard Size
- Template
- Clear direction
- Storyboard
- Report
- Problem-based
- Lean
- Analysis

If the problem was too complex to fit it needed to be broken down into smaller pieces

19

20

- Standard Size
- Template
- Clear direction
- Storyboard
- Report
- Problem-based
- Lean
- Analysis

21

A3 Example

PROBLEM STATEMENT: Increasing Numbers of Hemolyzed Samples from ED

- Standard Size
- Template
- Clear direction
- Storyboard
- Report
- Problem-based
- Lean
- Analysis

22

A3: Insert Title Here

CHECK/ACT

DO

PLAN

CHECK/ACT

23

1 PLAN
A3 Detail
Steps 1, 2a, 2b

1. Background: What are you talking about and why?

What is the business reason for this issue?

What specific performance measure needs to be improved?

What is the operational context?

2. Current Conditions: Where do things stand now?

What is the problem or need – the gap in performance?

Have you been to the **Gemba**?

What facts or data indicate there is a problem or need? (Facts, process maps, charts, etc.)

Where and how much? Break down the problem.

Step 2 must include an As-Is Process Map…

24

25

26

27

What Where When **Extent / Magnitude** _____	**Deficient Problem Statements** We don't have enough staff to keep up with our permits. **Good Problem Statement** We are not meeting our permit deadlines *(what)*, since the COVID work-from-home policy was implemented *(when)*, which now causes the third review step to take much longer (*where*). This is now leading to a longer waiting time for our clients and increased cost per permit. (*extent/magnitude*)

28

28

BEFORE writing a problem statement

Questions
What is the pain or issue experienced in the process?
When does the problem occur?
Where does the problem occur?
Magnitude: How often does this issue occur in the process?
Impact: What will happen if this issue continues to occur?

BONUS

The wordsmith these into no more than 2 statements that contain some validating data.

29

Trail Map Problem

Trails # 1 = reason why people came to a Texas State Park
Nearly all the trail maps and trailheads are outdated.
Per policy, only the SP Exhibit Shop is qualified to develop ADA-required standard permanent signage for the public.
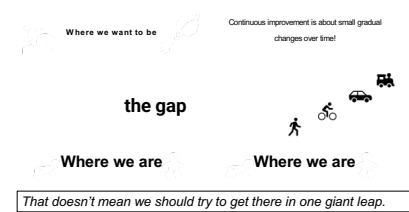
In the past 5 years, the **SP Exhibit Shop** produced 15 **State Park Trailheads and Maps (3 per year)**, costing approximately $130,000 in fabrication and materials each year. With **95 Texas State Parks** in operation, it would take over **31 years** to update every trailhead/map leading to a failure to serve park operations as well as to continued complaints, resource damage, and public safety concerns.

What	State Park Trailheads
Where	SP Exhibit shop and 95 Texas State Parks
When	In the past 5 years, (3 per year), 31 years
Extent /Magnitude	Failure to serve park operations, continued complaints, resource damage, and public safety concerns.

30

1 PLAN
A3 Detail
Step 3

Goals and Targets

3. Goal: What specific outcome is required?

What specific improvements in performance do you need to achieve?

Document how much, by when, and with what impact.

Where we want to be

Continuous improvement is about small gradual changes over time!

the gap

Where we are   **Where we are**

That doesn't mean we should try to get there in one giant leap.
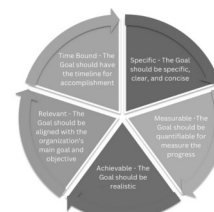
31

SMART goal example: "Improve our first-call resolution rate by 6% over the next quarter, measured by the number of issues resolved on the first interaction."

Breakdown:

•**Specific:** Improve the first-call resolution rate by 6%.
•**Measurable**: Measure success by the number of issues resolved on the first interaction.
•**Achievable**: Aim for a practical 6% increase spread out over three months.
•**Relevant**: Improving first-call resolution is important for customer satisfaction and efficient service delivery.
•**Time-bound**: Achieve the goal over the next quarter.
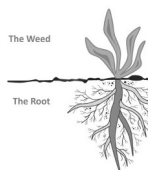
Critical to Customer (CTC) through Drivers = Critical to Quality CTQ

Hard to Measure   *Easier to measure*

Time Bound - The Goal should have the timeline for accomplishment

Specific - The Goal should be specific, clear, and concise

Relevant - The Goal should be aligned with the organization's main goal and objective

Measurable - The Goal should be quantifiable for measure the progress

Achievable - The Goal should be realistic

32

---

2 Do
A3 Detail
Step 4

4. Root Cause Analysis: **Why does the problem** or need exist?

What do the specifics of the issues in work processes (location, patterns, trends, factors) indicate about why the issue exists?

What conditions are preventing you from achieving the goals?

Why do they exist? What is (are) their cause(s)?

(Use Root Cause Analysis tools to show cause-and-effect (Fishbone, 5 Why's Pareto Charts, etc.)

The Weed

The Root

33

Treating Symptoms: RCA

Common Diseases

Depression — Migrane

Anxiety

Arthritis — Chronic Fatigue

Obesity

Underlying Causes

Hormone Imbalance — Low Physical Activity

Stress — Poor Sleep

Immune System Deficiency — Nutrient Deficient Diet

All too often RCA is avoided because it requires effort, persistence, skill…

34

Five Whys

- Why do we have this problem state
- Its because:

- Why is that
- Its because

- Why is that
- Its because

- Why is that
- Its because

- Why is that
- It's because 1
- It's because 2

- Why are 22% of certification applications Illegible?
  Answer: Staff cannot read handwriting.

- Why can't staff read handwriting?
  Answer: The space provided for handwriting is too small.

- Why is the space provided for handwriting is too small?
  Answer: The font size is 6pt.

- Why is the font size 6pt?
  Answer: It was not formatted correctly.

- Why was it not formatted correctly?
  Answer: Unknown – no one tested it.

35

Cause and Effect Analysis – Fishbone Chart

Causes — Effect

Main Categories

Other — Policy — People

No report to track apps — App in English only — Limited staff

DB missing Help Screens — No cross-training — 1 person assigned

Missing POC on website — No cross-training

Schedule changes

Only 1 Fax machine — Apps illegible

Incomplete FAQs

No QA testing

No printed P&P

Place — Process

Applications are processed late

Additional causal factors might be identified during root cause analysis

36

2 Do

A3 Detail
Step 5
Countermeasures

5. Countermeasures: What do you propose and why?

What are the current options for addressing the gaps? (Always start with two or three alternatives to evaluate.)

How do they compare in effectiveness, disruption, costs, benefits?

Preparing the Ground – Nemanwashi .

37

List all Solution / Ideas
Affinity Diagram
Boil down into countermeasures that are…

| Topic 1 | Topic 2 | Topic 3 | Topic 4 | Topic 5 |

- Preventative
- Detective
- Corrective

To keep in scope they must relate to
Problem statement
Goals / Gap in Performance
Prioritize Via Pick Chart or Countermeasure Matrix

38

Countermeasures Matrix				5 = High, 1 = Low		(E x F = O)	
Problem Statement	Root Cause	Countermeasure	Practical Methods	Effectiveness	Feasibility	Overall	Action
						0	
						0	
						0	
						0	
						0	

39

Simple Action Item Registry

3 X Process improvement Project

Insert Problem Statement: 42% of Inspector X applications are currently denied. Of these denials 79% were caused by three primary defects: 39% Not signed, 18% Illegibility, and 22% Missing information for standard 2. Repeated errors will result in customer dissatisfaction and additional expense via rework.

Countermeasure	Which Root Cause?	Action Item/Tasks	Lead	Start Date	End Date	Status %	Issues
IM1. Develop and validate and process map for standard 2	A. We relied on institutional knowledge and experienced a high turn over	1.0 Andrew is responsible for CM1	AW	10/1/2024	12/23/2024	100%	
		1.1 Locate source requirements of standard 2 (legislative, SOP, Requirement etc	CH	10/1/2024	11/1/2024	100%	
		1.2 Facilitate a meeting with staff involved in standard 2	CH	11/1/2024	11/15/2024	100%	
	B. There is no process documentation	1.3 Develop new current as is process map and gain agreement to the standard	AW	11/15/2024	12/23/2024	100%	
		1.4 Perform a future state map that achieves the efficiency options of the step	AW	TBA			Wait until Standards
		1.5 Pilot new future steps for one month	AW	TBA			
		1.6 If successful write up and document new standards and document / archive	AW	TBA			
		1.6 Ensure new process step is included in onboarding of new staff	BT	TBA			
		1.7 Determine if new steps need to be added to public domain	AW	TBA			
		1.8 Public domain awareness strategies will be developed if needed	AW	TBA			
IM2. Develop staff training program for Standard 2	A. We relied on institutional knowledge and experienced a high turn over	2.0 Chris is responsible for CM1	CH	9/10/2024	3/1/2024	25%	
		2.1 Assign Out subtasks in needed	CH	9/10/2024	9/17/2024	20%	
		2.2 Survey to staff to understand their needs requirements	GG	9/17/2024	9/25/2024	10%	
		2.3 Locate source requirements of step 2 (legislative, SOP, Requirement etc.) 2.1 also	CH	9/17/2024	1/30/2024	10%	
		2.4 Create training plan to include learning objects and customer requirements	CH	1/30/2024	2/28/2024	10%	
		2.5 Training to have a presentation outline and reviewed and approved by management	CH	1/30/2024	2/28/2024	10%	
		2.6 Slide deck be developed and test out training with project team	BT	2/28/2024	3/12/2024	0%	
		2.7 Deliver training and monitor metrics to evaluate goals	BT	3/15/2024	5/15/2024	0%	
		2.8 Assess training to ensure this becomes an annual training / update / onboarding	AW	3/15/2024	ongoing	0%	
IM3 Review and adjust Inspector x application form	C. Reviewing and adjusting our application was not a management priority and or option	3.0 Beth is responsible for CM3	BT	10/1/2024	11/1/2024	100%	
		3.1 Deliver a Poke Yoke error analysis of inspector x application form	BT	10/1/2024	10/15/2024	100%	

40

---

3 **Check/Act**

A3 Detail

6. Implementation: How will you plan this?

What will be the main **actions** and outcomes (include support and resources)?

How are you going to test this?

Do you have the authority?

Who will be responsible for what, when, and how much?

How will you measure effectiveness?

Who reviews progress?

Use a Gantt or similar to display actions, timelines, roles.

41

Implementation Techniques: Kanban Board

This month we have

Completed:
1.
2.
3

In Progress:
1.
2.
3.

Testing:
1.
2.
3.

To Do:
1.
2.
3.

42

4 **Check/Act**

A3 Detail

7. Monitor: How will you ensure ongoing PDCA?
How and when will you know if plans have been followed and the actions had the impact intended?
How will you know if you meet your targets?
What related issues or unintended consequences do you anticipate?
What contingencies can you anticipate?
What processes will you use to sustain success?
How will you share learnings with other areas?

43

4 **Check/Act**

A3 Detail

8. Sustain, Celebrate, and Continue!!
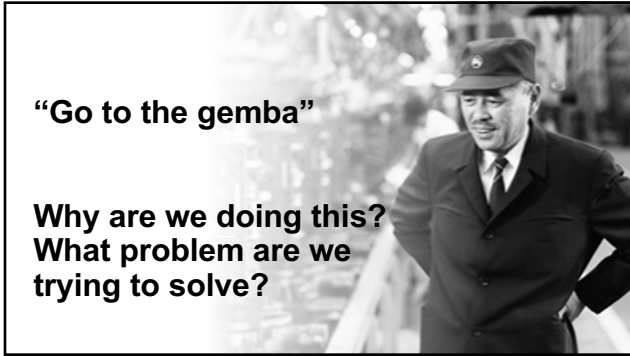

44

A3 Best Practices

- Prepare
    1. Allow time to plan
    2. Take a structured approach
    3. Involve the right people
    4. Test and monitor

- Start with pencil and paper

- Engage others, ask questions, go to Gemba

- Validate findings with team

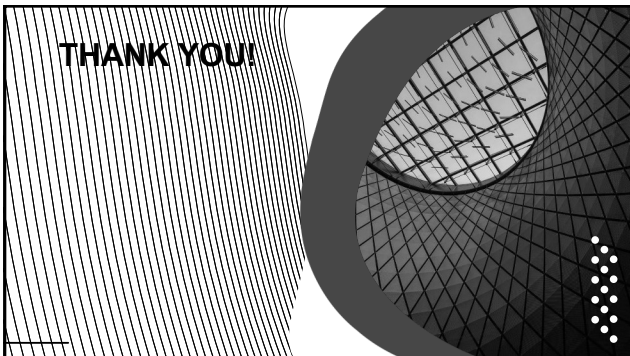- Do not make assumptions

Gemba Walk

45

45

"Go to the gemba"

Why are we doing this? What problem are we trying to solve?

46

Gemba Walk – Document the process

47

THANK YOU!

48