ci4i

initiate | investigate | improve | implement
Agenda

DAY 3

✓ investigate Check
✓ Goal: improve
✓ Identifying Solutions
✓ Prioritizing Recommendations
✓ Goal: implement
✓ Project Charter - Back
✓ Plan for Implementation
✓ Manage the Change
✓ Reinforce the Change
Ground Rules

- Participate
- Listen
- Ask Questions
- Acknowledge Others
- ?
- ?
## investigate Check

Get feedback on your investigate phase resources.

<table>
<thead>
<tr>
<th>Process Map</th>
<th>Root Cause Analysis</th>
<th>Data</th>
</tr>
</thead>
</table>
| • Did your process map help you identify bottlenecks, repetition and waste in your process? | • Which factors or inputs did you identify?  
• What did you learn?  
• What challenges did the analysis present? | • What data points did you select to capture your baseline?  
• Do you need help measuring or retrieving data from specific sources? |
| • Did your stakeholders agree on the end result? | | |
### Improve: What is the goal?

<table>
<thead>
<tr>
<th>GOAL</th>
<th>DELIVERABLES</th>
<th>ADDITIONAL TOOLS</th>
</tr>
</thead>
</table>
| 1. Develop recommendations for improvement | 1. Brainstorming Tools  
2. PICK Chart  
2. 5s Analysis  
3. Mistake Proofing (Poke Yoke)  
4. Test Cards (Strategyzer) |
Icebreaker

Spend five minutes having a conversation where you only ask questions of each other.
Focus on Impact

Pareto Principle (80/20 Rule)

Also known as the law of the vital few, the idea is simply stated as 80% of the effects we observe come from only 20% of the causes.

Summary: Essentialism

- Long-term goals
- Executive direction
- Urgent requests
- Budget initiatives
- Competing priorities

- Short term goals
- Special opportunities
- Shiny stuff
Three Ways to Improve

stop
cchange
start
Questions to Consider

How will you improve?

1. What is the one thing you can focus your energy on to make the biggest impact?

2. What practices or processes will you stop, change or start?

3. Which non-value added steps will guide your improvement efforts?
Information 5s Exercise

How many of each color?
5 seconds - Go!

[Diagram of colored circles]
Lean Six Sigma: 5s

5s is a workplace organization technique composed of 5 phases.

SORT
Keep only necessary items in the workplace.

SET IN ORDER
Arrange items to promote efficient workflow.

SHINE
Clean the work area so it is neat and tidy.

STANDARDIZE
Set standards for a consistently organized workplace.

SYSTEMIZE
Maintain and review standards.
Brainstorming Guidelines

Forbes’ Brainstorming Rules

1. Don’t judge.
2. No comments or edits.
3. Don’t execute.
4. No looking backward.
5. Stay focused.
6. No sapping, only zapping.
7. Don’t compare.

ci4i Framework Adds

1. One idea per note.
2. Diverge and converge.
3. Use an analogous inspiration.
5. Have the group brainstorm independently, then share out with the group.
BREAK

Return in 15 minutes
Case Study: Louisville Fleet Maintenance

Practice brainstorming using the case study.

In small groups, practice brainstorming solutions for the City of Louisville maintenance yard staff.

- 5 mins to brainstorm in groups
- Assign 1 recorder to report out
- Use workbook to capture ideas
- 1-2 mins for each report out

Challenges:
- 30+ days wait time for vehicle servicing
- Paperwork everywhere
- Unsure of total number of vehicles in lot at a given time
- Processes in staff’s heads - nothing visual/written down
Case Study: Louisville Fleet Maintenance

Use an affinity analysis to organize the ideas into themes.

Together we will do an affinity analysis using a web based visual collaboration tool, Miro.

Goals:

- Condense/pare down ideas
- Place into themed groupings
- Remove duplicates
Case Study: Louisville Fleet Maintenance

Use an Impact vs. Effort Matrix (PICK) chart to prioritize your solutions.

We will practice using an Impact vs. Effort Matrix or (PICK) chart using a template in the web-based tool Miro.

- Discuss where to place your solutions
- Gauge impact L/R (high vs. low)
- Gauge effort T/B (easy vs. hard)
- Reveal PICK “categories”
Case Study: Louisville Fleet Maintenance

Impact vs. Effort (PICK) Example

High Impact  Low Impact

Implement
- Reader board
- Cars by WO#

Possible
- Tracking Software
- Magnet Tiles

Challenge
- All digital forms

Kibosh
- New Database
Define a Business Case

Critical Elements

Your business case should:

• Describe the strategy (Tacoma 2025, Department Strategic Plan, etc.)
• Include recommendations and alternative options
• Explain expected benefits
• Provide a list of estimated costs
• Include risks that could impact success (if there are any)

The 4Es

From a CI lens also consider:

- Effectiveness
- Efficiency
- Empowerment
- Equity
Identifying Quick Wins (Fast Tracking)
LUNCH BREAK

Return after Town Hall meeting
This is just bad design - The button that doomed us all - (From the Movie Home)
Questions to Consider

How would you solve the problem?

1. What made the error easy to make?
2. What could have been done to prevent it?
3. How would the customer respond if the error had not occurred?
Opportunities for Mistake Proofing

Mistake proofing a process makes it impossible for an error to occur or makes an error immediately obvious once it does occur.

Human Error

Hand-Offs

High Risk
Mistake Proofing Strategies

There are 3 strategies for mistake proofing your process.

**Elimination**
Remove the step that causes the error.

**Replacement**
Replace the step with an error-proof one.

**Facilitation**
Make the correct action easier than the error.
Prototyping

How can prototyping help you think about your improvements?

Prototyping Cycle

Questions to ask

- What worked well in this prototype?
- What could be improved?
- What should be considered moving forward? (questions and ideas)

Workbook Page: 39
Prototyping—Low Fidelity Designing

Wireframe

Storyboard

A family is signed up for a CSA program, but lack experience cooking all the veggies

The cooks need more help with making healthy and fun meals

But they are limited on time and need solutions that enable planning and multi-tasking

Log into virtual cookbook, learn from chefs and participate in workshops and forums
Prototyping Activity: Design the Assembly Line

Configure a prototype for the food bank box assembly line.

What were the issues with their process flow and how could people and resources be reconfigured?

- Breakout rooms—work in Miro
- Focus on the issues described
- Reconfigure the objects & arrows
- Create an efficient flow
Get Feedback on Your Proposed Improvements

Feedback Grid

Put yourself in the role of the staff:

- What worked well?
- What could be improved?
- What questions do you have?
- What ideas do you have to change or improve on the proposed solution?
Validate Your Ideas with the Test Card

**Test Card**

**Pricing #VPDesign Course**

**Natasha**

**STEP 1: HYPOTHESIS**

We believe that **people are willing to pay $500.─ for a self-service online #VPDesign course**

**Critical:**

**STEP 2: TEST**

To verify that, we will **simulate the sales of the online course on our website**

**STEP 3: METRIC**

And measure **how many of the visitors coming to the website will convert to buyers**

**Time Required:**

**STEP 4: CRITERIA**

We are right if

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Case Study: Design the Assembly Line

Use test cards to design an experiment for your assembly line

In groups, choose a hypothesis to test for Step 1. Then, fill in the details for Steps 2-4 to complete the test card.

- Assign a recorder (1 min)
- Choose a hypothesis (2 mins)
- Fill out test card (7 mins)
- Report out (5 mins)
## Text Card Examples

### Test Card by Strategizer

**Test Name:** Reduce Transportation (of objects)  
**Assigned to:** Matt

**Step 1:** Hypothesis  
**We believe that...**  
Adding a conveyor belt will reduce transportation and improve completion time per box by 50%

**Step 2:** Test  
**To verify that we will...**  
Set up a conveyor belt and count how many times a box is picked up

**Step 3:** Metric  
**We will measure...**  
Times each box is moved and cycle time to fill one box with all items

**Step 4:** Criteria  
**We are right if...**  
Cycle time and box transportation decrease compared to baseline measurement

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### Test Card by Strategizer

**Test Name:** More Food per Delivery  
**Assigned to:** Steve

**Step 1:** Hypothesis  
**We believe that...**  
Reducing box size will increase truck capacity by 20% or more (increasing # of families served)

**Step 2:** Test  
**To verify that we will...**  
Select a new box size and calculate how many boxes can fit in the truck

**Step 3:** Metric  
**We will measure...**  
Truck capacity (how many boxes can fit in one delivery for each proposed box size)

**Step 4:** Criteria  
**We are right if...**  
The selected box size fits all required items and the truck capacity is increased

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### Test Card by Strategizer

**Test Name:** Reduce Motion (of people)  
**Assigned to:** Diana

**Step 1:** Hypothesis  
**We believe that...**  
Supplying staff who fill boxes at a central table will reduce movement and reduce cycle time by 50%

**Step 2:** Test  
**To verify that we will...**  
Test process with staff who only supply items and staff who only fill boxes. Update floor layout.

**Step 3:** Metric  
**We will measure...**  
Cycle time to fill one box with all items. Number of steps taken by suppliers.

**Step 4:** Criteria  
**We are right if...**  
Cycle time and total steps decrease compared to baseline measurement
Meals Per Hour Part 2 (After Prototyping Activity)
Finalize the Business Case

Use insights from CI tools in your business case

Describe the strategy:
Charter, investigate tools

Provide options:
Pareto, PICK, prototyping

Benefits over time:
Value-add analysis

Costs and resources:
Data and analysis

Return on investment:
Cost benefit analysis*

Risks:
Risk log & mitigation plan*

*Let complexity and impact dictate rigor
Get Approval and Buy In

- Team
- Sponsor
- Partners
- Customers
- Stakeholders
BREAK

Return in 10 minutes
ci4i Project Journey - improve

Baseline Data → 5s Analysis → Brainstorming → Affinity Diagram

PICK Chart → Business Case → Mistake Proofing (Poka Yoke) → Test Cards

Baseline Data

5s Analysis

Brainstorming

Affinity Diagram

PICK Chart

Business Case

Mistake Proofing (Poka Yoke)

Test Cards
ci4i
initiate | investigate | improve | implement
### GOAL

1. Fully implemented solution

### DELIVERABLES

1. 30-60-90 Day Plans
2. Documented Results (Project Charter – Back)

### TOOLS

1. Project Charter - Back
2. Change Management (ADKAR)
3. Data Indicators
4. Feedback Grid
To complete the back of the charter reflect on the following:

- What was the problem?
- What was the impact?
- What were the recommendations?
- What were the barriers and lessons learned?
Revisit Ci4i tools to complete the back of your charter.

### Process Map
- What did your process map help you learn about your problem?
- What insights did you pursue solutions for?

### Root Cause Analysis
- Which factors had the largest impact?
- Where did the analysis lead you to focus your improvement efforts?

### Data
- How did your improvements affect your baseline data?
- Were you able to achieve your targeted outcomes?
Case Study: City of Louisville Fleet Maintenance

Project Charter – Back Example

What was the problem?
[talk about the analysis phase of the project. what did you learn about the root cause of the problem you were facing? what were the gaps identified?]
[focus on the data collected – this shouldn’t be a restatement of your original problem statement, but rather new knowledge gained through the investigation process]

Five City shop locations, involving 3,800 pieces of equipment and 1,500 repairs a month, had been consolidated into one.

- No methods to track vehicles dropped off for service
- No vehicle inventory records were kept
- Paperwork stored randomly
- Keys stored randomly
- SLA routinely not being achieved
- Mechanics all shared space and tools
- Shop tools were in disarray
- Different vehicles and equipment were serviced in one space at the same time

What was the impact? 💼 $ ⚙️
[discuss monetary, staff time, and/or resources savings. we targeted outcomes met? Did we increase the problem solving capacity of staff? What was the impact on the quality of services delivered and the impact on the customer (internal or external)? Did it improve equity outcomes for stakeholders?]

- Standardized workspaces enabled faster repair time and increased morale
  - Downtime for vehicles being serviced decreased by 75%
  - Service time per vehicle went from 1 month to less than 2 weeks
- $ savings from increased availability of vehicles
- $ savings from efficiency gains for mechanics and customers
- Community benefits from vehicles being in service doing the work they are meant to do
- KPI and Visual management boards enabled success tracking and transparency
  - Provide near real-time tracking of maintenance progress
  - Morale improvements among employees and customers
  - Enabled fleet management team to be accountable to customers

What were the recommendations?
[provide information on the timeline of implementation plan]

- Implement visual management boards to track service progress
- Create vehicle service packet
  - Contains work order, vehicle key, lot details
- Develop and establish KPI’s and lo-fi tracking methods to support them
- 5S vehicle maintenance yard, administration, and garage workstations

What were the barriers and lessons learned?
[did these barriers limit the impact? How did you mitigate the barriers. What could be done differently next time a similar project is engaged?]

- Budget constraints made the solutions very low-tech and rudimentary, however they yielded substantial improvements.
- Learned we could achieve success by focusing on what can be done with what we have.
Plan for Implementation

Strategies to Amplify Success
Consider Behavioral Insights

*Switch* by Chip and Dan Heath

**Key Ideas:**

**Direct the Rider:** Follow the bright spots, script the critical moves, point to the destination

**Motivate the Elephant:** Use a story, shrink the change (bite-sized pieces), growth mindset

**Shape the Path:** tweak the environment, build habits and action triggers, rally the herd
Questions to Consider

What behavioral insights did you observe?

1. The Rider
   What is one thing that caused frustration for customers?

2. The Elephant
   What solutions motivated the customer to encourage participation?

3. The Path
   What resources provided the customer a clear vision to follow?
Project Management Best Practices

- Communicate with all stakeholders from Day 1
- Consult sponsor as problems occur
- Always hold a project kick-off meeting & include everyone
- Ensure your charter is understood by all and approved by your sponsor
- Create a detailed work plan modeled off of previous projects if possible

- Document the current state using a process map
- Seek feedback and learn how you can help your project team
- When new requests are made, show stakeholders the impact of changes
- If new requests change the scope, START OVER with a new charter
- Hold a wrap up meeting to discuss and document lessons learned
Track the Work

Task Management

<table>
<thead>
<tr>
<th>Who?</th>
<th>Does What</th>
<th>By When</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Stakeholder: Customers, Team)</td>
<td>(Task/expectations)</td>
<td>(Deadlines, Milestones)</td>
</tr>
</tbody>
</table>

Visual Management (Kanban)
Targeted outcomes help us answer the question: How will we know we are successful?

- Now is the time to measure and compare the result from your improvements to the baseline data established in your process map.
- Use your data collection record to document how you will measure progress.
Manage the Change

How to Get Everyone On Board
Change Management

• Formulate a plan that identifies success, specifies implementation, and measures results

• Actively manage implementation, communicate deadlines and expectations, track performance, adapt and iterate

• Reinforce your change by monitoring performance, combating backsliding, celebrating and transferring ownership
Resistance to Change

I don’t get it
- Ask them questions
- Communicate very clearly
- Explain the impacts
- Make it visual

I don’t like it
- Explain the benefits
- Explore concerns – “Tell me more”
- Iterate and adjust
- Paint a bright vision of the future

I don’t like you
- Build empathy
- Be vulnerable
- Understand the customer’s perspective
Messaging and Communication

Key Components

**Timing and Distribution** - When does the message go out and to whom?

**Build the Message** - What questions or concerns will your stakeholders have? How will you address each of the factors influencing success?

**Strategies and Tactics** - How will you distribute the message? What channels or mediums will you take advantage of?

Communication Channels

Consider distributing your message via:

- Citywide emails through Media and Communications
- One-page documents
- Signature lines on emails
- Kickoff sessions and workshops
- TacomaHub (SharePoint)
Reinforce the Change

Show How You Made It Better
Focus on the Future State

The new process must be easier to run than the old.

- It must make the operator's job simpler, better, faster.
- It must make going back to the old way undesirable or hard to do.
- Think about how to make the new way pleasant and a joy.
How to Combat Backsliding

- Determine where the slide is occurring
- Ask your sponsor for support
- Re-engage customer groups
- Create open paths for feedback
- Determine ongoing ownership
- Clarify and manage accountability
## Standard Work and Standard Operating Procedures

<table>
<thead>
<tr>
<th>ELEMENTS</th>
<th>SCOPE</th>
<th>STANDARDS</th>
<th>ROLES</th>
<th>TERMINOLOGY</th>
<th>PROCESS</th>
<th>RISKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESCRIPTION</td>
<td>Purpose of the process, its limits</td>
<td>Standards, regulatory requirements</td>
<td>Who and what, responsibilities, inputs and outputs</td>
<td>Clarification of Acronyms abbreviations, process related terms</td>
<td>How, steps methods procedures</td>
<td>Preventative measures, contingency plans</td>
</tr>
<tr>
<td>RESOURCES</td>
<td>Scope statement on charter</td>
<td>City/state federal codes</td>
<td>Stakeholder Analysis, process maps</td>
<td>Project dictionary</td>
<td>Process map</td>
<td>Root Cause Analysis, contact lists</td>
</tr>
</tbody>
</table>
Management Open House

Workshop Session

11/17/22
10AM-12PM

• Sign up for a presentation slot

• Presentation format:
  o 10 mins per student/group
  o Finalize CI toolkit (minimum Charter + 1-2 additional CI tools you used)

Attendees

• Forward Mgmt Open House invitation onto your networks
  Scheduled for 12/1/22 @ 10am – 12pm.

Resources (on CIA SP)

• Day 4 presentation template (PPT file)

• Selection of past work samples presented by CI Advocates
Celebrate!

Remind your sponsor to acknowledge the project team, stakeholders and customers who made your improvements possible. Celebrate via:

- An email from the project sponsor
- A virtual happy hour/gathering
- A documented success story, shared broadly
Homework (Next Steps)

- Continue project work
- Participate in Workshop Session 11/17 (optional)
- Schedule office hours to discuss your project with CI staff
- Forward your Open House invite onto your stakeholders and leadership
Thank you!