

An illustration of a person in a white shirt and blue pants standing on a pink ledge, pointing towards the left. A small child in an orange shirt and dark pants stands next to them. The background is a light blue sky with a white sun partially visible behind the text.

Path to Zero Peer Learning Session: Quality Improvement Foundations

Part 3: Applying the Model For Improvement in your Work (and Daily Life)

July 12, 2023

An illustration of a light blue building with a red roof and a large green tree with a white light on its branch. The building has a white archway and a small white structure on the roof. The tree is positioned to the right of the building.

Who We Are



Ian Fletcher
Denver, CO



Rian Watt
Seattle, WA

Series Overview

Part 1: Mindsets & Frameworks for Improvement

4 “Lenses of Curiosity” (a.k.a. Deming’s System of Profound Knowledge)

Complex v. Technical Challenges

Key Mindsets & Behaviors for Improvement

Part 2: The ‘Model for Improvement’ (MFI)

The 3 MFI Questions

Aim statements

Types and purposes of measurement

Part 3: Applying MFI in Your Work (and Life)

Daily look of applying continuous improvement: P-D-S-A, Process mapping,

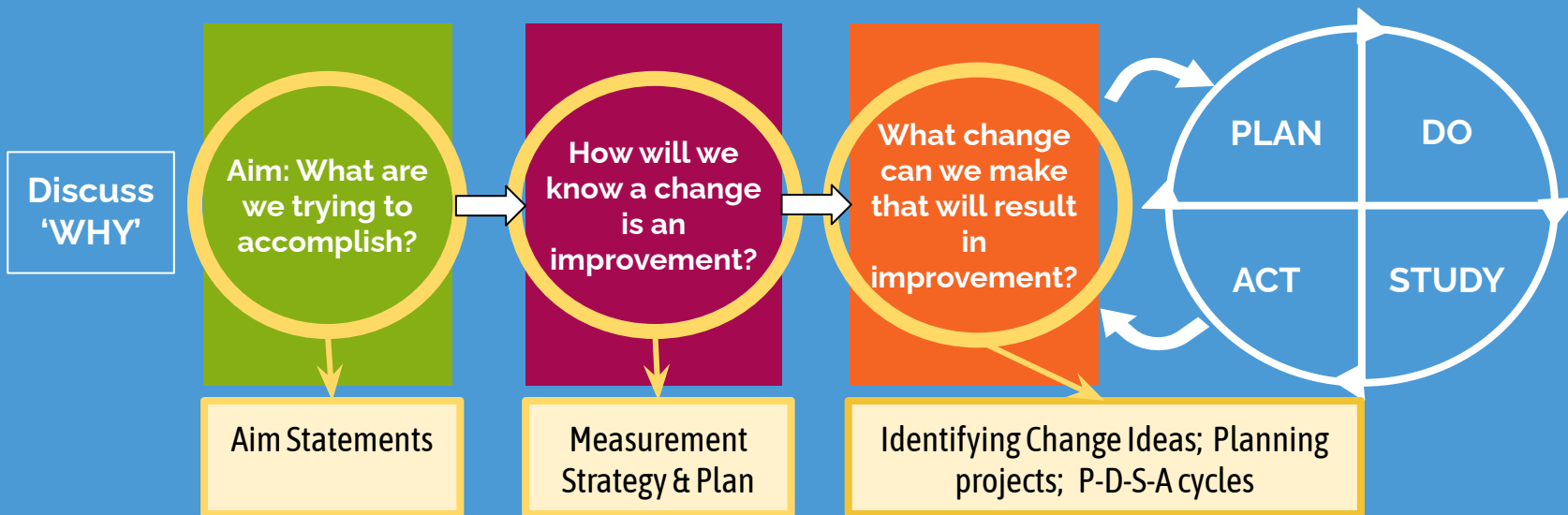
Process mapping example(s)

Today's Learning Objectives

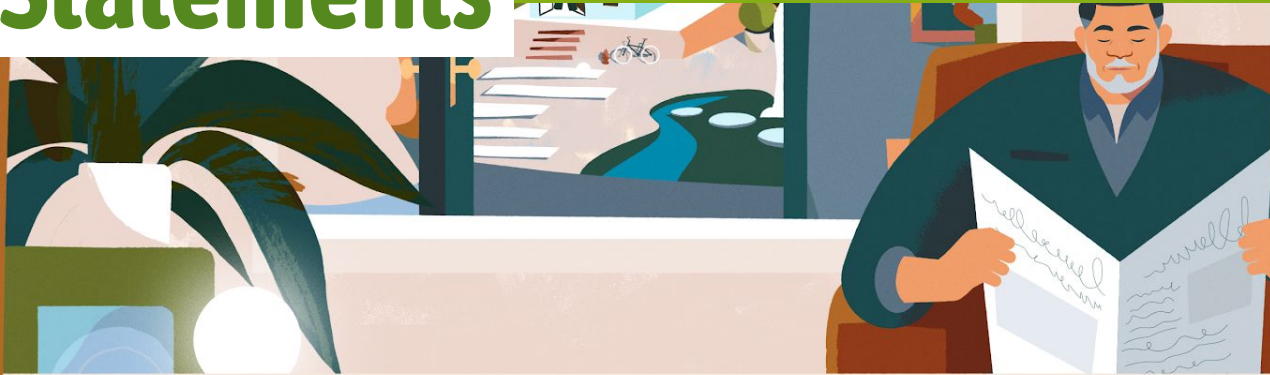
1. Review and assess components of the aim statement homework
2. Discuss characteristics of a good measurement system
3. Define change ideas and change concepts and how they relate to improvement design
4. Learn the basics of a PDSA (Plan - Do - Study - Act) Cycle
5. Tie it all together

The Model for Improvement

Solving complex problems starts with a **measurable end state and works backward**. Strategies and activity come last and shift repeatedly in service of the aim.



Aim Statements



Components of a Strong Aim Statement

WE
WILL...

ACTION VERB

(eg. reduce,
increase, solve,
provide, build)

+

SPECIFIC PROBLEM

(eg. **youth
homelessness**,
truancy, BNL)

+

NUMBER

(eg.
percentage or
number)

+

SPECIFIC UNIVERSE OR POPULATION

(eg. **your city**, kids
under 5, etc.)

+

DATE

(eg.
August 31st,
2019)

Other Examples

100,000 Lives (Institute for Healthcare Improvement): Prevent 100,000 unnecessary deaths in US hospitals in 18 months.

Global Polio Eradication Campaign: We will eradicate polio from every country on earth by the year 2000.

AWHA Grand Challenge: Help 10 communities end homelessness for LGBTQ youth and youth of color by December 31, 2020, setting the path of ending homelessness for all youth.

Waterfall Time



Ivan Kmit

Type your Aim Statement from the last session into the Zoom chat box but **DO NOT HIT ENTER** until we tell you to.

Key Purposes & Types of Measurement



What are Data for?

1 | **Data for judgment or accountability**

2 | **Data for research**

3 | **Data for improvement**
(Diagnosis and effectiveness of change)



Used with permission from the Institute for Healthcare Improvement

Solberg, L. I., Mosser, G., & McDonald, S. (1997). The three faces of performance measurement: Improvement, accountability and research. *Joint Commission Journal on Quality Improvement*, 23(3), 135-147.

What are Data for?

	Measurement for Research	Measurement for Learning and Process Improvement
Purpose	To discover new knowledge	To bring new knowledge into daily practice
Tests	One large "blind" test	Many sequential, observable tests
Biases	Control for as many biases as possible	Stabilize the biases from test to test
Breadth of Data	Gather as much data as possible, "just in case"	Gather "just enough" data to learn and complete another cycle
Duration	Can take long periods of time to obtain results	"Small tests of significant changes" accelerates the rate of improvement



Used with permission from the Institute for Healthcare Improvement

Solberg, L. I., Mosser, G., & McDonald, S. (1997). The three faces of performance measurement: Improvement, accountability and research. *Joint Commission Journal on Quality Improvement*, 23(3), 135-147.

Purpose of Measurement for Improvement

- To provide usable information for improving the processes represented in your working theory.
- Therefore, we need to consider:

What is measured:

Needs to be closely aligned to the actual work

How & when it is measured:

Needs to be embedded in the daily workflow

Social processes shaping use:

Requires transparency, low stakes, and the safety to take risks



What Should We Measure?

Three Types of Measurement

Three General Types of Measures

Outcomes

- Align with system purpose, and stakeholder values!
- Is this system meeting the needs of those it is responsible to?
- Is our improvement work making a meaningful impact?

Process

- Are the parts of the system performing as planned?
- Are we doing what we are supposed to do? Does our work conform to requirements?
- Are we on track to improve?

Balancing

- In solving one problem, are we making others worse???

Outcome Measures:

Is all our activity adding up to improvement?

- We might measure **HEALTH/WELLNESS** by...
 - Energy level
 - Cholesterol
 - Weight
- We might measure **OUR WORK TO END HOMELESSNESS** by...
 - Actively Homeless #
- Ends vs. Means: The “what do I really care about” test

Process Measures:

Are the parts of our strategy performing as planned?

- We might track HEALTH/WELLNESS process measures like...
 - Daily calorie count
 - Sodas per week
 - Number of workouts per week
- We might track ENDING HOMELESSNESS process measures like...
 - # of people newly experiencing homelessness (inflow)
 - System Accountability Scorecard results
 - # of Case Conferencing meetings
 - % young people on Ride or Die teams

Process Measures: System vs Project level

System-Level Process Measures:

- Health Example: calories in/calories out
- How we measure Systems-Level improvement: looking at inflow/outflow

Project-Level Process Measures:

- Health Example: drinks per week, days since last workout etc.
- The actions we think will improve one of the inflow/outflow measures
- This will usually correspond to Improvement Projects

Balancing Measures: In solving one problem, are we making others worse?

- What are some potential side-effects/trade-offs from our plan? How could we reach our aim but still feel unsuccessful? What other considerations do we need to BALANCE?
- Common examples:
 - Staff satisfaction
 - Financial cost
 - Opportunity costs (what are we *not* paying attention to?)

Example Set of Measures for a Community Working to End Homelessness

Aim	Outcome Measure	Process Measures	Balancing Measures
Reach Functional Zero for Chronically Homeless Individuals by [DATE]	Active # chronically homeless households	<i>System Level:</i> # of newly identified or aging into chronic inflow (per mo.) <i>Project Level:</i> # of individuals housed from a chronic "at-risk" list (per mo.)	Actively homeless # single adults (non-chronic) Staff satisfaction

4 key issues to resolve with measures

- **Define:** Creating operational definitions – what will you include/exclude, etc.
- **Collect:** Decide how to collect the data, what tool to use, how often, who will do it, etc.
- **Analyze:** Identify which tools will give you the best insight into where improvement can help (run chart, stratified run chart, pareto diagram, scatter plot, etc.)
- **Apply:** Describe what process your team will use to review data and apply its lessons (frequency, location, etc.)



Operational Definition

Operational definitions are used to put communicable meaning to a concept. To develop an operational definition, consideration needs to be given to a method of measurement.



Nothing is implicit! Definitions matter...

Type	Name of Measure	Definition
Outcome Measure	Housing placement rate	# of people placed into permanent housing per month. # is averaged.
	# of actively homeless on by-name list	# of individuals we believe are experiencing homelessness as defined by HUD at any given point in time. This excludes those who are "inactive" – those not in our community, or who are no longer homeless.
Process Measure	Days in process	The average time it takes from day of assessment to day of housing in supportive housing.
	# of complete housing packets	Complete: all essential paperwork related to housing eligibility has been obtained.
	% of clients with a target move-in date	Each client's case manager has predicted a date by when the client will complete requisite steps and move in



Aim of an Airline:

Increase on-time arrivals to 90% by October 2023

Chat In: What does “on-time arrival” mean to you?



'On-time arrival' example

- An arrival will be '*on-time*' if the arrival time is not more than five minutes after the scheduled arrival time.
- The *arrival time* of a flight is defined as the time the plane docks at the gate and the chime rings notifying passengers they can unbuckle their seatbelts.



Waterfalls...again!?



Ivan Kmit

Review the aim statement you made during our waterfall activity.

What needs defining?

Final Words on Measures

- The purpose of measurement in improvement work is for learning not judgment
- All measures have limitations, but the limitations do not negate their value for learning
- You need a balanced set of measures reported daily, weekly, or monthly to determine if the process has improved, stayed the same, or become worse
- Measures should be:
 - Linked to your aim
 - Used to guide improvement and test changes
 - Integrated into your daily routine
- Data should be plotted over time on annotated graphs
- Focus on the vital few!

Change 'Concepts' & Change 'Ideas'



Change concepts to help develop ideas for change

What is a change concept? A general notion found to be useful in developing ideas for change that result in improvement

Which change concepts might be helpful to eliminate waste, Improve workflow, and improve the relationship with the customer:

1. Eliminate things that don't add value for the client
2. Minimize handoffs
3. Find and remove bottlenecks
4. Do tasks in parallel
5. Coach clients to use the service
6. Create a formal process (standardization)
7. Implement cross training



Change Concept

Give people access to information

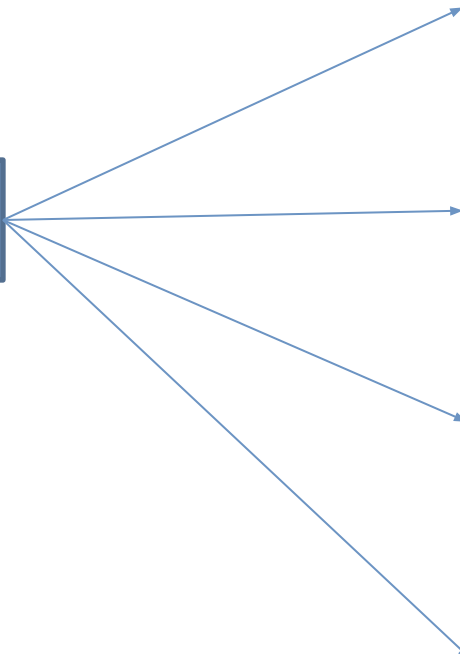
Change Idea

Provide two-way
“Open Notes” access

Patients own their
own medical record

Use teachback for
patients that are going
to be discharged

Communicate what
you are doing each
step of the way



Change Concepts

Eliminate Waste

1. Eliminate things that are not used
2. Eliminate multiple entry
3. Reduce or eliminate overkill
4. Reduce controls on the system
5. Recycle or reuse
6. Use substitution
7. Reduce classifications
8. Remove intermediaries
9. Match the amount to the need
10. Use Sampling
11. Change targets or set points

Improve Work Flow

12. Synchronize
13. Schedule into multiple processes
14. Minimize handoffs
15. Move steps in the process close together
16. Find and remove bottlenecks
17. Use automation
18. Smooth workflow
19. Do tasks in parallel
20. Consider people as in the same system
21. Use multiple processing units
22. Adjust to peak demand

Optimize Inventory

23. Match inventory to predicted demand
24. Use pull systems
25. Reduce choice of features
26. Reduce multiple brands of the same item

Change the Work Environment

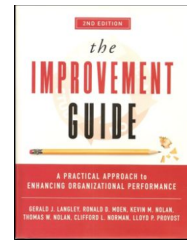
27. Give people access to information
28. Use proper measurements
29. Take care of basics
30. Reduce de-motivating aspects of pay system
31. Conduct training
32. Implement cross-training
33. Invest more resources in improvement
34. Focus on core process and purpose
35. Share risks
36. Emphasize natural and logical consequences
37. Develop alliances/cooperative relationships

Enhance the Producer/customer relationship

38. Listen to customers
39. Coach customer to use product/service
40. Focus on the outcome to a customer
41. Use a coordinator
42. Reach agreement on expectations
43. Outsource for “Free”
44. Optimize level of inspection
45. Work with suppliers

Manage Time

46. Reduce setup or startup time
47. Set up timing to use discounts
48. Optimize maintenance
49. Extend specialist's time
50. Reduce wait time



Manage Variation

51. Standardization (Create a Formal Process)
52. Stop tampering
53. Develop operational definitions
54. Improve predictions
55. Develop contingency plans
56. Sort product into grades
57. Desensitize
58. Exploit variation

Design Systems to avoid mistakes

59. Use reminders
60. Use differentiation
61. Use constraints
62. Use affordances

Focus on the product or service

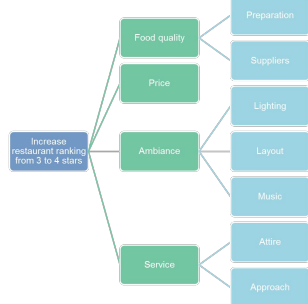
63. Mass customize
64. Offer product/service anytime
65. Offer product/service anyplace
66. Emphasize intangibles
67. Influence or take advantage of fashion trends
68. Reduce the number of components
69. Disguise defects or problems
70. Differentiate product using quality dimensions
71. Change the order of process steps
72. Manage uncertainty, not tasks

What changes can we make that will result in improvement?

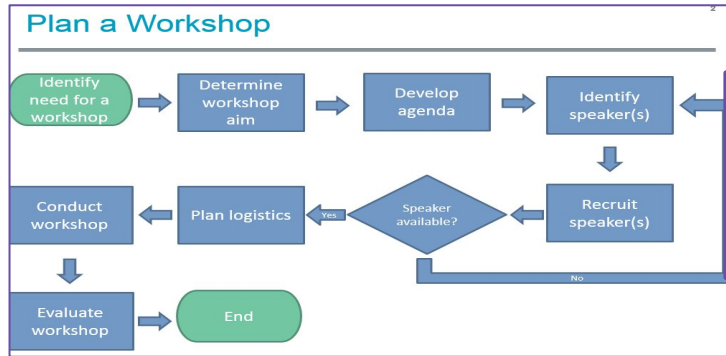
Methods to develop fundamental change:

1. Logical thinking about the current system
 - Observation (e.g. Gemba walks)
 - Describe a process
2. Using change concepts
3. Benchmarking or learning from others - Bright Spots
4. Learn from those with lived experience
5. Creative thinking
6. Refer (and then refer back) to your Driver Diagram, change package





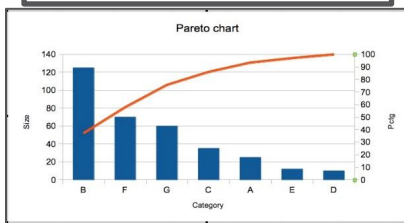
Develop your theory for change (driver diagram)



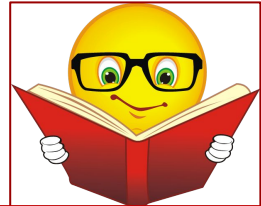
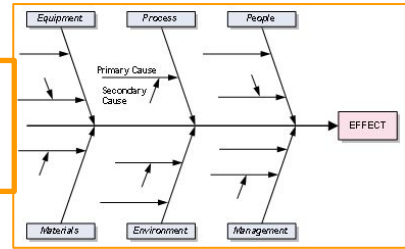
Observe/ diagram the process (direct observation, flow diagram)



Use your data



Do a root cause analysis

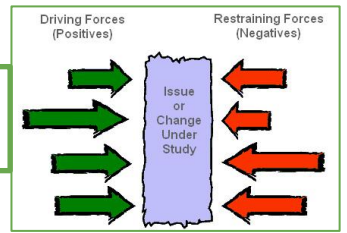


Check out the literature/ best practices, benchmarking



Talk to Experts (esp. People with lived experience)

Use other helpful tools



How BFZ Communities Identify Change Ideas

- Work with your Improvement Advisor
- Data System Mapping
- Coordinated Entry/Housing Navigation Mapping
- Dive into your data
- Tap into the wisdom of the BFZ Network

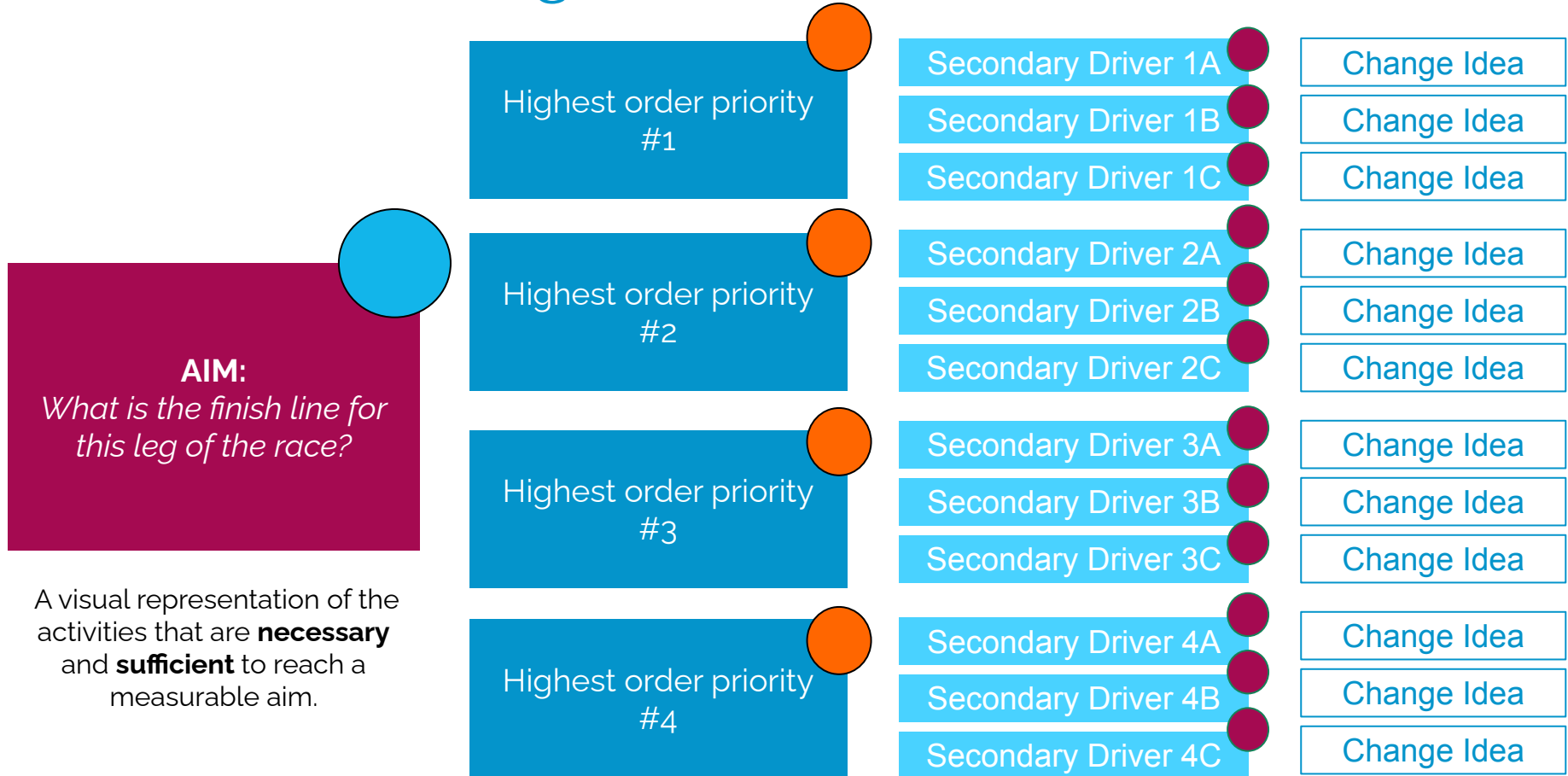


Driver Diagrams: Beyond an Aspirational Goal

- Effective change requires a theory of how you will achieve the goal
- There are endless pathways to improvement...but how does your team/community think you'll get there?
- Driver diagrams are one way to make the theory explicit and allow others to buy-in or share their theory



Basic Driver Diagram



By January 1, 2025:

Metropolis will achieve Functional Zero for Veterans

Primary Drivers

Optimize VHA Homeless Programs
Lead: VA/Vet Workgroup

Leadership & Management
Lead: Vet Workgroup

Increase Outflow
Lead: VA and CES

Decrease Inflow
Lead: SSVF/Built for Zero Workgroup

Secondary Drivers

- Reduce length of stay in GPD
- Increase utilization rate of HUD-VASH
- Mitigate SSVF returns to homelessness

- Adjust agenda in Vet workgroup:
- Change idea teams
- Political leadership with new Mayor

- Leveraging Flex Funds
- Decrease length of time from ID to enrollment
- Community Prioritization

- Diversion/Rapid Resolution
- Inflow Workgroup: case study to find trends in returns to system
- Targeted eviction prevention

Built for Zero Cohort Example

Aim: By the end of the cohort, 80% of I.S.S. 2.0 community teams will develop and practice new data, leadership, and improvement skills to achieve 'quality' BNL data.

**Establish Reliable
Data System
Infrastructure**

**Enhance
Implementation of
Coordinated Entry (CE)**

**Strengthen
Leadership &
Team-Building for
Improvement**

Data Literacy & Reporting

HMIS management/setup

By-Name List outputs from database

Review/Create Essential Policies & Procedures

Expand & Coordinate Outreach (unsheltered)

Evaluate CE System Quality

Establish an Effective Improvement Team

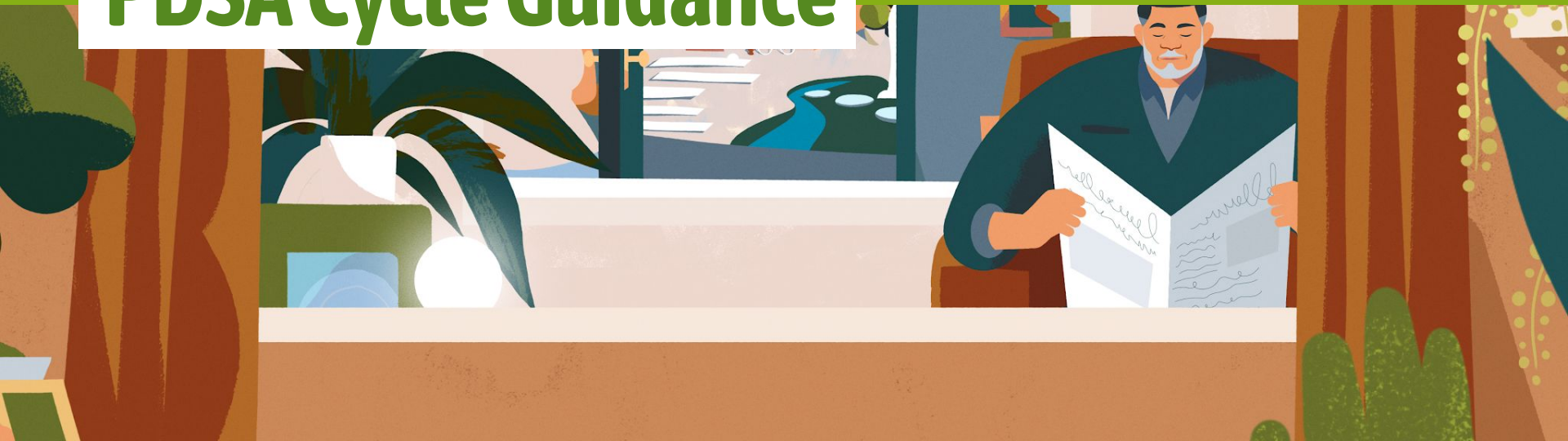
Lead Stakeholder Engagement & Will-building

Center Racial Equity in Strategies & Structures

Foster a Culture of Improvement

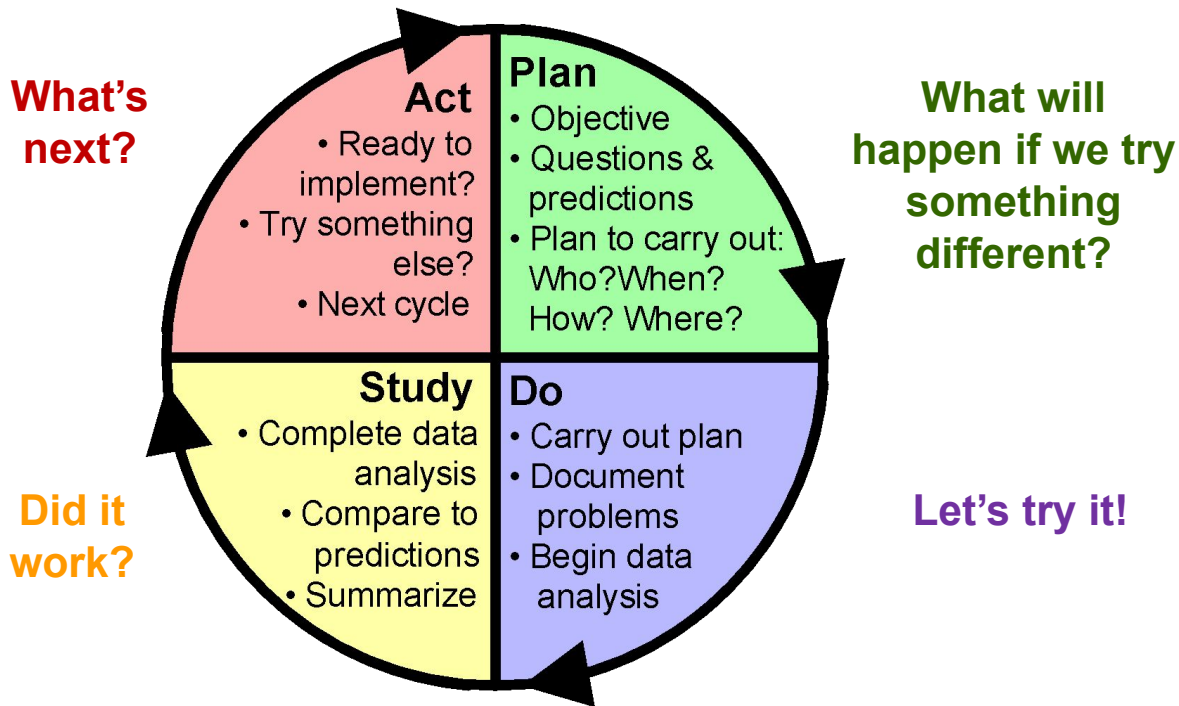
Listen to and strengthen 'agency' among people with lived experience and front-line staff

PDSA Cycle Guidance



The PDSA Cycle for Learning and Improvement

(a practical application of the scientific method)



A Change vs. a Test of Change

- Change: Placing a salad bar in a cafeteria



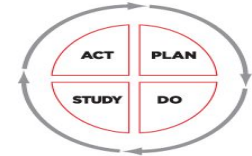
Placement of bar
near entrance



Plan a classroom
competition of
salad consumption



Recruiting students
to be initial testers



Awareness signs
around school

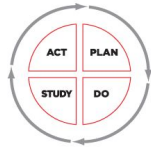


Placement of salad
bar in front of less
healthy foods

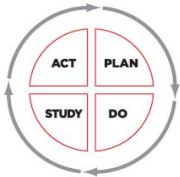


A Change vs. a Test of Change

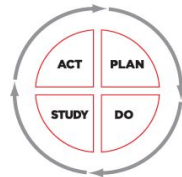
Change: Use a standard common assessment tool



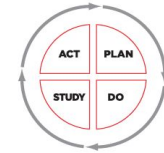
Test with One Agency



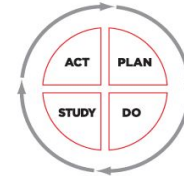
Use with Outreach Teams



Implementing with Shelter programs



Scale to All CES Access Sites



Public-funded Programs and Services i.e. Mental Health

The Structure of the VI-SPDAT

The VI-SPDAT is organized across four domains. Each domain is directly aligned with the domains of inquiry used in the SPDAT.

1. History of Housing
2. Risks
3. Socialization and Daily Functions
4. Wellness

Each question within the VI-SPDAT is directly related to one or more components within the SPDAT. The "components" are the subsections of each domain area.

Domain Area	Components within the SPDAT
History of Housing	<ul style="list-style-type: none">• History of Housing and Homelessness
Risks	<ul style="list-style-type: none">• Risk of Harm to Self or Others• Involvement in High-Risk and/or Explosive Situations• Interactions with Emergency Services• Legal Issues• Managing Tenancy
Socialization and Daily Functions	<ul style="list-style-type: none">• Self-Care and Daily Living Skills• Personal Administration and Money Management• Meaningful Daily Activities• Social Relations and Networks
Wellness	<ul style="list-style-type: none">• Mental Health and Wellness and Cognitive Functioning• Physical Health and Wellness• Medication• Substance Use• Experience of Abuse and/or Trauma



A Testing Mindset: What's the Point?

- **Don't get ahead of your knowledge!**
 - Testing will illuminate your system long before it improves it
- **Use scarce resources wisely**
 - Don't heavily resource a change before you know whether it will result in an improvement
- **Mitigate unintended consequences**
 - Cost
 - Side effects
 - Balancing measures
- **Reduce resistance to change**



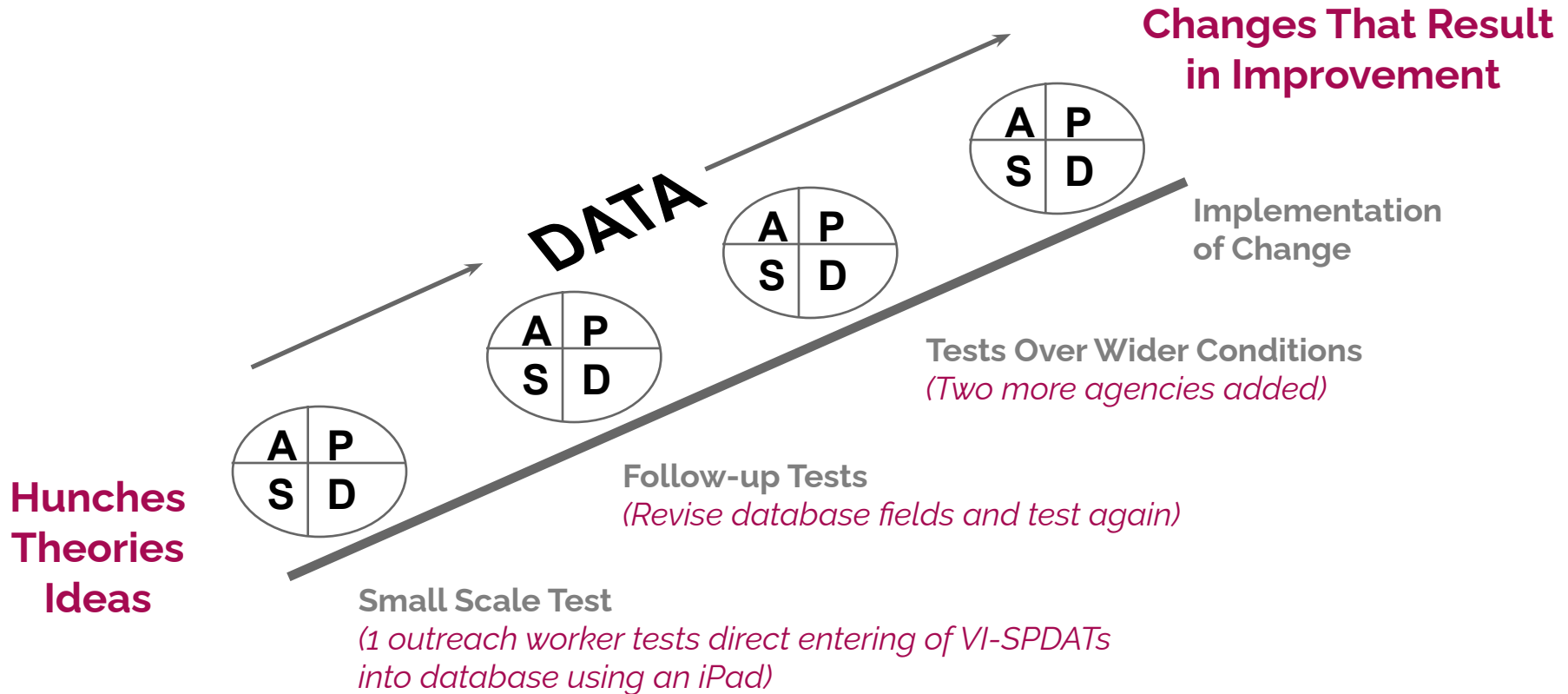
Spotting a Good Test

A good test must satisfy a few key criteria:

- Directed by the data
- Applies to a repeating system, not a one-time event
- Specific, actionable, measurable, time limited
- Quick to implement, rapidly confirms or disrupts your thinking
- Helps your team get and/or stay unstuck



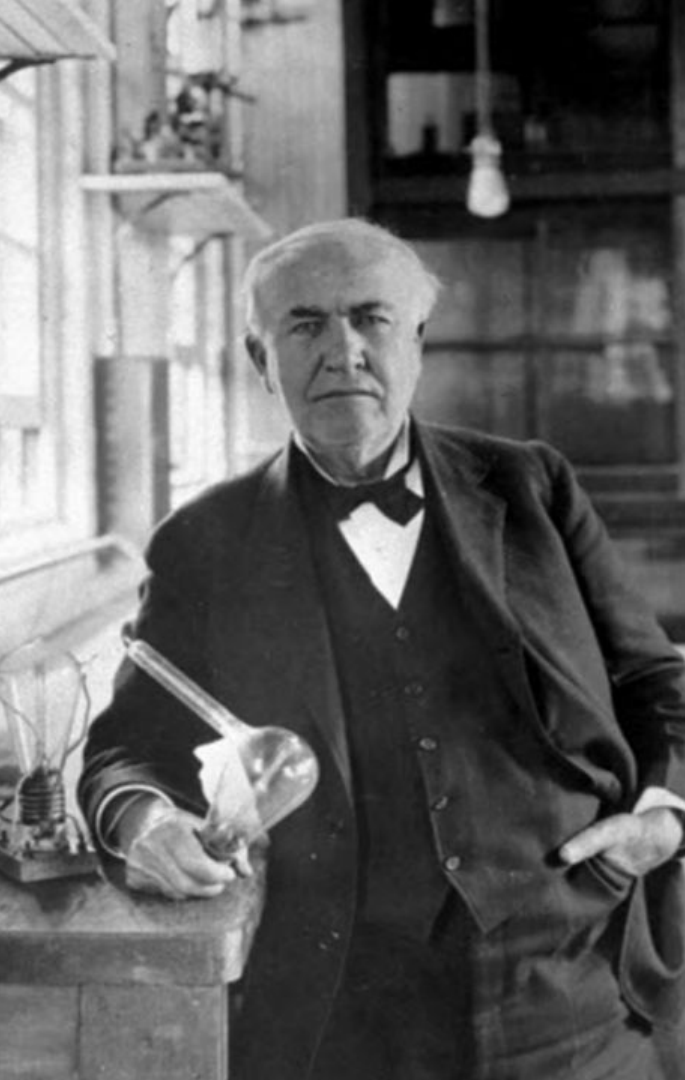
Sequence of Improvement



Guidance for Testing a Change

- A test of change should answer a specific question!
- A test of change requires a **theory** and a **prediction!**
- Test on a small scale and collect **data over time.**
- Build knowledge **sequentially** with multiple PDSA cycles for each change idea.
- Include a **wide range of conditions** in the sequence of tests.
- Don't confuse a **task** with a **test!**





“I did not fail one thousand times; I have found one thousand ways that won’t work.”

Thomas Edison

Squeaky Wheels?



The 40th time was the charm for the blue canister that boasts more than 2,000 uses. In 1953, chemist Norm Larsen finally created on his 40th try, a formula to stop corrosion by displacing moisture (hence the name “Water Displacement , 40th attempt).

Failed Test...Now What?

- **Be sure to distinguish the reason:**
 - Change was not executed
 - Change was executed, but not effective
- **If the prediction was wrong – not a failure!**
 - Change was executed but did not result in improvement
 - Local improvement did not impact the secondary driver or outcome
 - In either case, we've improved our understanding of the system!



Failure is an option

In breakouts, share a time when a project, process or experience ‘failed’.

What did you expect would happen?

What actually happened?

What did you learn from it?

How might a PDSA framework have changed the approach?



THAT'S ALL FOLKS

Let's end on success

In the chat, share one takeaway from our series of three sessions that you hope to implement in your work to end homelessness!



Links to Additional Resources

- [The Improvement Guide, 2nd Edition](#)
- [System of Profound Knowledge Overview \(book chapter\)](#)
- Red Bead Experiment: [Video](#), [Explainer video \(Don Berwick\)](#), [Explainer article \(Deming\)](#)
- New Yorker article, [The Truth Wears Off \(2010\)](#)
- Blog: ['5 Core Components for Learning from QI Projects'](#)
- IHI Psychology of Change Framework: [white paper & related resources](#)
- Improvement Project Charter [Template](#)
- P-D-S-A Cycle [Template](#)
- [Reference List](#) of Improvement Methods-Tools for Various Situations

Tell us about your experience!

<http://s.alchemer.com/s3/601c1e06dc48>



THANK YOU