Agile & Lean: It's About Getting Results

November 2, 2021

Jared Thatcher
CPI Program Manager
Agile & Lean: It’s About Getting Results Respect for People
Tools are Essential to Perform the Task

Knowing How To Use Them Makes All The Difference!
AGENDA: Agile Tools Applied to the PDCA Cycle

GRASP THE SITUATION

DO

- Execute the plan, carry out activities, apply best practices, and manage improvement expectations with people & processes.

CHECK

- Work with the improvement team to monitor and measure the improvement efforts, make sure that you check results through an EDI lens.

ACT/ADJUST

- Standardize successful efforts through standard work and visual management, make adjustments when results don’t meet expectations, celebrate successes, sustain efforts, and repeat PDCA cycle.

TOOLS

- Work in Progress (WIP)
- Definition of Done
- Burn Down Charts
- EDI Lens
- Daily Stand Ups
- Word of the Day
- Retrospectives

PURPOSE

- Collaboratively work together to identify problems and goals, understand the current state especially from the customer’s perspective, formulate theories about root causes, develop solutions, define how to measure improvements, and plan improvements through CPI Workshop[s].

TOOLs

- Sprints
- Time Box
- User Stories
- Kanban Boards

GTS

Collaboratively work together to identify problems and goals, understand the current state especially from the customer’s perspective, formulate theories about root causes, develop solutions, define how to measure improvements, and plan improvements through CPI Workshop[s].
**AGILE**: It is a Mindset for Improving Teamwork and Performance While Adapting to Customer Changes

Essentially it is an iterative project management methodology initially used for software development:

- **Individuals and Interactions** OVER **Processes and Tools**
- **Working Software** OVER **Comprehensive Documentation**
- **Customer Collaboration** OVER **Contract Negotiation**
- **Responding to Change** OVER **Following a Plan**
AGILE TODAY

Project Management Institute – changed PMP Certification this year to include AGILE
Scrum  /skrəm/
noun
1. RUGBY
an ordered formation of players, used to restart play, in which the forwards of a team form up with arms interlocked and heads down, and push forward against a similar group from the opposing side. The ball is thrown into the scrum and the players try to gain possession of it by kicking it backward toward their own side.
2. BRITISH
a disorderly crowd of people or things.
"there was quite a scrum of people at the bar"
SCRUM = WORKING TOGETHER
PLAN, DO, CHECK, ACT(ADJUST) (PDCA)

PDCA is a framework that is at the heart of continuous improvement. The PDCA Cycle helps you in your efforts in continuous improvement.

Typically Shown Like This:

I Want You to Think of it Like This:

GTS = Grasp the Situation
GRASP THE SITUATION
TOOL: VOICE OF THE CUSTOMER
Voice of the Customer (VoC)

Creating Value for the Customer is at the heart of Agile and Lean.
A Voice of the Customer interview is both an Agile and a Lean tool.
This tool is about reaching out to the customers to understand what they see as value.
We could easily spend an entire day learning how to run a successful VoC.
Why Voice of the Customer?

- Understand and align with what the customer values
- Keep the focus on providing value to the customer
- Gain greater understanding of the process
- Gather information to tell a story
- Be able to QUANTIFY qualitative data
- Create baseline data for potential Key Performance Indicators (KPIs)
- You might discover other customers of the process
PLAN

Continuous process improvement
Planning is Key

Traditional Planning

Strategic Planning

TIME

SAVINGS
TOOL: SPRINTS
A Sprint is a sort race, but...

In Agile planning terms it is a predefined period of time to deliver some tangible result so that you can receive customer feedback and adjust where needed to increase value.
Traditional Project Delivery vs. **SPRINT** Delivery

*Traditional Project Delivery* work starts after getting direction and once the work is finished do you then check in to make sure the delivered results are what the customer is looking for.

Typical Project Path: Don’t come up for air until done, but you can miss what the customer needs when you do this way.
Traditional Project Delivery vs. **SPRINT** Delivery

An Agile Sprint Delivery starts after getting direction but with each sprint they deliver some element of the project, checking in with the customer to course correct, as necessary.

**Short Sprints:**
Allow you to check in, make sure you are on the right path (course correction) before you finish the project.
The SPRINT Cycle
SPRINTS: Project Management by Continuous Delivery of Value

- SPRINT 1
- SPRINT 2
- SPRINT 3
- SPRINT 4

Fixed length
(Timebox of up to a calendar month)
TOOL: TIME BOX
Time Boxing
Time Boxing
The Result
Advantages of the Time Box

Based on Parkinson’s Law: “Work expands so as to fill the time available for its completion.”

• It’s a powerful time management technique
• It helps manage time by creating a predefined time period for an activity
• It forces you to set the time and hold to the deadline
• It encourages better prioritization
• Great tool for procrastinators & perfectionist “I can do it later” or “It’s not good enough!”
• A set time forces action
TOOL: USER STORIES
User Stories

A User Story is a short and simple description of a feature (improvement) told from the perspective of the person (customer) who desires the product or service.

How do we do this?

Clarify *who* wants the feature

Describe *what* they want the feature to do

Understand *how* they will benefit from the feature
User Stories Can Improve Your Improvements

USER STORIES HELP US:

MAINTAIN OUR FOCUS
UNDERSTAND THE PURPOSE
RELATE/EMPATHIZE WITH CUSTOMERS
INFLUENCE OUR ACTIONS
ENABLE PEOPLE TO CREATE CUSTOMER VALUE
How to Write a User Story – A Simple Formula

“As a <role>
I want <some goal>
So that <some benefit>

The Acceptance Criteria (Definition of Done) is how you know when you’re done
INVEST* in the Characteristics of a Good Story

**Independent** The user story should be self-contained, in a way that there is no inherent dependency on another user story.

**Negotiable** User stories, up until they are part of an iteration can always be changed and rewritten.

**Valuable** A user story must deliver value to the end user.

**Estimatable** You must always be able to estimate the size of a user story.

**Scalable** User stories should not be so big as to become impossible to plan/task/prioritize with a certain level of certainty.

**Testable** The user story or its related description must provide the necessary information to make test development possible.

*The INVEST framework was developed by Bill Wake.*
Situation: My father had a stroke a number of years ago, and doesn’t move around as easily as he use to. He is coming over for a few day’s visit.

The kids tend to leave their things all over the house (especially the floor), and this could create a tripping hazard.

As a Your Grandfather <role>
I want to enjoy my stay without worrying about tripping <goal>,
I can enjoy playing with my grandkids and be safe. <benefit>
So that

Acceptance criteria:
- All tripping hazards are removed
- The guest bedroom & bath are cleaned
DO

PLAN

CHECK

ACT

GTS

DO

continous process improvement
TOOL: WORK IN PROGRESS (WIP)
Who Thinks They Are Good At Multitasking?
Multitasking Activity (1/2)

Get out a piece of paper and make three columns like this:

<table>
<thead>
<tr>
<th>Numbers</th>
<th>Roman Numerals</th>
<th>Alphabet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>i</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>ii</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>iii</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>iv</td>
<td>D</td>
</tr>
<tr>
<td>5</td>
<td>v</td>
<td>E</td>
</tr>
<tr>
<td>6</td>
<td>vi</td>
<td>F</td>
</tr>
<tr>
<td>7</td>
<td>vii</td>
<td>G</td>
</tr>
<tr>
<td>8</td>
<td>viii</td>
<td>H</td>
</tr>
<tr>
<td>9</td>
<td>ix</td>
<td>I</td>
</tr>
<tr>
<td>10</td>
<td>x</td>
<td>J</td>
</tr>
</tbody>
</table>
**Multitasking Activity (2/2)**

Get out a piece of paper and make three columns like this:

<table>
<thead>
<tr>
<th>Numbers</th>
<th>Roman Numerals</th>
<th>Alphabet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>i</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>ii</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>iii</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>iv</td>
<td>D</td>
</tr>
<tr>
<td>5</td>
<td>v</td>
<td>E</td>
</tr>
<tr>
<td>6</td>
<td>vi</td>
<td>F</td>
</tr>
<tr>
<td>7</td>
<td>vii</td>
<td>G</td>
</tr>
<tr>
<td>8</td>
<td>viii</td>
<td>H</td>
</tr>
<tr>
<td>9</td>
<td>ix</td>
<td>I</td>
</tr>
<tr>
<td>10</td>
<td>x</td>
<td>J</td>
</tr>
</tbody>
</table>
Loss of Time to Context Switching

A chart developed by Gerald Weinberg to show this concept:

<table>
<thead>
<tr>
<th>Number of Simultaneous Projects</th>
<th>Percent of Time Available per Project</th>
<th>Loss of Time to Context Switching</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>2</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>3</td>
<td>20%</td>
<td>40%</td>
</tr>
<tr>
<td>4</td>
<td>10%</td>
<td>60%</td>
</tr>
<tr>
<td>5</td>
<td>5%</td>
<td>75%</td>
</tr>
</tbody>
</table>

IT IS CRITICAL TO LIMIT THE **WORK IN PROGRESS** (WIP)
The Advantage of Limiting the Work in Progress

Project A: A1 A2 A3 = A
Project B: B1 B2 B3 = B
Project C: C1 C2 C3 = C

Traditional Strategy: “Everything is Important! Do it all at once!”
Agile Strategy: “Priorities & Focus!”
Flow vs. Batching

https://youtu.be/JoLHKSE8sfU
Work in Progress (WIP) – How Many Things?

More of a prerequisite than’ a cure-all, WIP helps you to maintain flow. It creates the Goldilock’s Zone – Not too much / Not too little – It’s “Just Right”

Establish the WIP that is right for you. How many tasks will you focus on? 1, 2, 3, 4, 5?

Remember the loss of time due to Context Switching – Most people focus on 2-3 items.

The idea is to complete your tasks:

TO DO > DOING > DONE

WIP
TOOL: KANBAN BOARDS
Kanban Boards – A Visual Management Tool

Kanban Boards are a simple, yet powerful visual management tool for performance.

At its Simplest, it is made up of three sections:

**TO DO**

**DOING**

**DONE**
Visual Management System’s Key Elements

- Highly visual and simple
- Compare target to actual performance
- Used for what’s important or critical
- Gaps are easily identified
- Can see Normal vs. Abnormal
- Helps to identify opportunities for improvement
How Many Items Can You Name?

3 Second Rule
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] 98 in. Professional Cutting Guide</td>
<td>[ ] 3/16 in. x 6 in. Regular Screwdriver</td>
</tr>
<tr>
<td>[ ] 72 in. Aluminum Straight Edge Ruler</td>
<td>[ ] 1/4 x 4 in. Regular Screwdriver</td>
</tr>
<tr>
<td>[ ] 16 in. Combination Square</td>
<td>[ ] 1/4 in. x 6 in. Regular Screwdriver</td>
</tr>
<tr>
<td>[ ] 5-3/8 in. Circular Saw Blade</td>
<td>[ ] 5/16 in. x 6 in. Regular Screwdriver</td>
</tr>
<tr>
<td>[ ] 7 in. Orbital Air Sander</td>
<td>[ ] #0 x 2-1/2 in. Philips Head Screwdriver</td>
</tr>
<tr>
<td>✗ 7-1/4 in. Circular Saw Blade</td>
<td>✗ #1 x 3 in. Philips Head Screwdriver</td>
</tr>
<tr>
<td>✗ Cordless Circular Saw</td>
<td>✗ #2 x 4 in. Philips Head Screwdriver</td>
</tr>
<tr>
<td>[ ] Variable Speed Orbital Jig Saw</td>
<td>[ ] #2 x 6 in. Philips Head Screwdriver</td>
</tr>
<tr>
<td>[ ] 1/2 in. Heavy Duty Variable Speed Reversible H</td>
<td>[ ] 3/16 in. nut driver</td>
</tr>
<tr>
<td>[ ] Sawzall Reciprocating Saw</td>
<td>[ ] 1/4 in. nut driver</td>
</tr>
<tr>
<td>✗ 20-Volt MAX Lithium-Ion Cordless 1/2 in. Drill/Driver</td>
<td>[ ] 5/16 in. nut driver</td>
</tr>
<tr>
<td>[ ] 3/8 in. Variable Speed Drill</td>
<td>[ ] 11/32 in. nut driver</td>
</tr>
<tr>
<td>[ ] 15 in. SharpTooth Hand Saw</td>
<td>[ ] 3/8 in. nut driver</td>
</tr>
<tr>
<td>✗ 26 in. Short-Cut Hand Saw</td>
<td>[ ] 7/16 in. nut driver</td>
</tr>
<tr>
<td>✗ 6' Two Man Crosscut Saw</td>
<td>[ ] 1/2 in. nut driver</td>
</tr>
<tr>
<td>[ ] 5' Two Man Crosscut Saw</td>
<td>[ ] Single-Speed Breast Drill</td>
</tr>
<tr>
<td>[ ] 4' Two Man Crosscut Saw</td>
<td>[ ] Two-Speed Breast Drill</td>
</tr>
<tr>
<td>[ ] Canoe Paddles</td>
<td>[ ] Variable Speed Breast Drill</td>
</tr>
</tbody>
</table>
How Many Items Can You Name?
Let’s Do It Again: 3 Seconds
How Many Items Can You Name This Time?
Kanban Boards Should be Simple

<table>
<thead>
<tr>
<th>TO DO</th>
<th>DOING</th>
<th>DONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task #1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Kanban Boards Should be Simple

<table>
<thead>
<tr>
<th>TO DO</th>
<th>DOING</th>
<th>DONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task #4</td>
<td>Task #1</td>
<td></td>
</tr>
<tr>
<td>Task #5</td>
<td>Task #2</td>
<td></td>
</tr>
<tr>
<td>Task #6</td>
<td>Task #3</td>
<td></td>
</tr>
<tr>
<td>Task #7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #8</td>
<td>Task #10</td>
<td></td>
</tr>
<tr>
<td>Task #9</td>
<td>Task #11</td>
<td></td>
</tr>
<tr>
<td>Task #11</td>
<td>Task #12</td>
<td></td>
</tr>
</tbody>
</table>
### Kanban Boards Should be Simple

<table>
<thead>
<tr>
<th>TO DO</th>
<th>DOING</th>
<th>DONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task #5</td>
<td>Task #2</td>
<td>Task #1</td>
</tr>
<tr>
<td>Task #6</td>
<td>Task #3</td>
<td></td>
</tr>
<tr>
<td>Task #7</td>
<td>Task #4</td>
<td></td>
</tr>
<tr>
<td>Task #8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task #12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Physical Idea Generation Boards a Type of Kanban
Virtual Idea Generation Boards on MURAL
How to Create a **Team Board/Kanban Board** Plan

**Plan**
- Brainstorm which processes, metrics, and information the team is involved in
- Identify the desired information that is important to communicate within the team
- Identify the cadence as to which the information must be refreshed/updated
- Assign responsibility for who should update the information
- Plan the desired location and format of the items on the board
- Set up the board according to brainstorming results
- Review with the team to give approval on the visual board
- Make necessary changes and set the cadence to review as agreed upon.

**Plan Do Check Adjust**
CHECK

GTS

PLAN

DO

ACT

CHECK
TOOL: DEFINITION OF DONE
Definition of Done is a Quality Check
Definition of Done (DoD) – Setting the Standard / Goal

While the DoD is created in the Plan phase, it is used in the Do & Check phase.

- This tool is used to define the standard for improvement deliverables.
- It creates transparency
- There is clarity around the expected results
- It helps to limit scope creep (stay focused on the target)
- It creates the greatest buy-in when the team working with the customer defines it
The Power of Defining the Definition of Done

When I asked the kids to “Do the dishes,” it never got done they way I wanted.
The Power of Defining the Definition of Done

The kids were frustrated by the changing definition of what “Doing the dishes” meant.
The Power of Defining the Definition of Done

By participating in defining the Definition of Done, they have an ownership in the work.
TOOL: BURN DOWN CHARTS
Burn Down Charts
I managed a project where we only had three weeks with the contractor. By clearly defining the work and creating a burn down chart we tracked our progress daily and quickly adjusted if any problems came up. By having a visual idea about how much work we had done and what we had left to do, we were able to ensure we completed the project on time and under budget.
Burn Down or Burn Up Charts

**How to Build**

- Calculate the effort for the Sprint. This could be time or tasks, however the team wants to define effort for the Sprint.
  - Place that on the Y-Axis
- Take the number of days left before the project is due.
  - Place that on the X-Axis
- Every day, mark down (or up) the number of hours or tasks you completed for the Sprint and connect the line to the previous day’s efforts.
- There is a little bit more flexibility with a burn up chart to add or remove work
TOOL: EDI LENS

(Equity, Diversity, and Inclusion)
Equity, Diversity, and Inclusion is Respect for People

When my mother-in-law first arrived in the US, she went to see a doctor who basically ignored her, perhaps assuming that she was uneducated. He looked at his chart, spoke to my wife who was interpreting, and spoke loudly to my mother-in-law (like that would help her understand English better), but rarely even looked in her direction.
When my wife interpreted some technical medical explanation from her mom, the doctor asked, “How does she know that?” “She’s a doctor” my wife explained. Instantly the way the doctor was treating my mother-in-law changed, because his perceptions changed. He sat up straight, looked her in the eye and spoke directly to her.
Perspective Plays an Important Role in Solutions

Just because you develop a solution, doesn’t mean that it is the “Right” solution. Because we **Value the Individual**, we need to make sure that we are inclusive in both the development of solutions and in understanding possible unintended consequences of a solution.

- What we think we see is not always a complete picture.
- Always assume the best intention.
- How do we make sure we are seeing a complete picture?
Perspective Plays an Important Role in Solutions

Just because you develop a solution, doesn’t mean that it is the “Right” solution. Because we **Value the Individual**, we need to make sure that we are inclusive in both the development of solutions and in understanding possible unintended consequences of a solution.

- What we think we see is not always a complete picture.
- Always assume the best intention.
- How do we make sure we are seeing a complete picture?
The Port of Seattle Applies an EDI Lens to Our CPI Work

Respect for People means everything. We want to make sure that we are not unintentionally excluding anyone (think power dynamics), both as stakeholders to develop solutions, as well as being sure that there are not any unintended consequences to any of our solutions that might leave someone out.

It Only Takes A Minute
To Ensure That Solutions
Are Fair And Equitable
TOOL: DAILY STANDUP
Why Hold Daily Stand Up Meetings?

• It improves the focus on customer service
• It is a tool to rapidly communicate information and implement changes
• It creates accountability between team members
• It builds trust, understanding, and strengthens the morale of the team
• It is a tool for improving performance
• It is a visual tool for communicating team targets and results
• It is a planning and scheduling tool
• It is a concise meeting ideally taking no more than 15 minutes
Daily Stand Ups Answer 3 Things:

What I did… “Yesterday I accomplished….”

What I’m doing… “Today I’m going to do…”

What I need help with… “I could use some help with…” or “I have some bandwidth to help someone from 2-4pm today”
TOOL: WORD OF THE DAY
Word of the Day

This element of a team board can be used as an educational tool

OR

It can be a tool to create respect & understanding among team members
Word of the Day – Example of What Not to Do

Busy

Stressed

Uber-Overwhelmed

Llanfairpwllgwyngyllgogerychwyndrobwlllantysiliogogogoch

Taumtawhatanghangakoaauatuamateaturipukakapikimaungaoronukupokaiwhenuakitanatahu
“A Successful Team Board is One that is Consistently Used and People Care About Each Other.”
TRUST & RESPECT
TOOL: RETROSPECTIVE
The Retrospective – Continuous Improvement

Takes place after a Sprint is over but before the next Sprint starts. Take time (every time) to improve!

• As a team reflect on what went well,
• What didn’t go so well,
• How you can do it better next time,
  (Collaborate on improvement ideas)
• What will you do different next time.

“Baseline Agile Retrospective”

1. What was Fabulous?
2. What could be more Fabulous?
3. Identify possible actions or experiments → Target 1 and 2!!
4. Of these possible ideas—Are there any we want to act on? (Focus on the next sprint)
5. Fist of Five Vote—Will the team commit or not?
6. What can we improve or try for our next retrospective?
Sailboat Retrospective

What Barriers Did We Encounter?
What risks did we need to navigate around? What impacts did we have?

What Drag Did We Overcome?
What slowed us down? Did we see this or was it hidden from view?

What Accelerated Us?
What helped us move forward? What did we do right?

What Did We Learn?
What were our big takeaways? How can we improve the next time?

Our Crew?
Did we have the right team? Were we set for success?

What Did We Learn?
What goals did we have? What was our destination? Did what we achieve align?

What Drag Did We Overcome?
What slowed us down? Did we see this or was it hidden from view?
Retrospectives Are a Powerful Team Improvement Tool
PDCA
12 Agile Tools Used in Lean Improvements

**PLAN**
Collaboratively work together to identify problems and goals, understand the current state especially from the customer’s perspective, formulate theories about root causes, develop solutions, define how to measure improvements, and plan improvements through CPI Workshop[s].

- Sprints
- Time Box
- User Stories

**DO**
Execute the plan, carry out activities, apply best practices, and manage improvement expectations with people & processes.

<table>
<thead>
<tr>
<th>TO DO</th>
<th>DOING</th>
<th>DONE</th>
</tr>
</thead>
</table>

- Work in Progress (WIP)

**CHECK**
Work with the improvement team to monitor and measure the improvement efforts, make sure that you check results through an EDI lens.

- Definition of Done
- Work in Progress (WIP)

**ACT/ADJUST**
Standardize successful efforts through standard work and visual management, make adjustments when results don’t meet expectations, celebrate successes, sustain efforts, and repeat PDCA cycle.

- Daily Stand Ups
- Word of the Day
- Retrospectives

**PURPOSE**
- Voice of the Customer

**TOOLS**
- GRASP THE SITUATION
- PLAN
- DO
- CHECK
- ACT/ADJUST
It’s About the People
CONCLUSION

Agile & Lean: It’s About Getting Results Respect for People
CONCLUSION

Agile & Lean: It’s All About Respect for People Which Leads to Results
Thank You!

Contact:

Jared Thatcher
CPI Program Manager
Port of Seattle
thatcher.j@portseattle.org
206-519-9785