



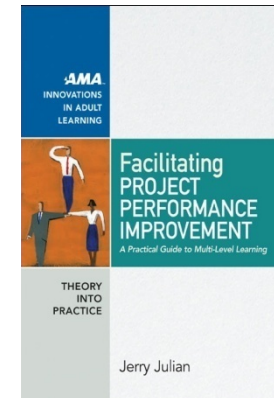
 Julian Advisory Group

Lean Program Management

Dr. Jerry Julian

Objective for the Session

- Introduce you to Lean Program Management principles, practices and tools
- Lean Program Management is a system for ***continuously accelerating the delivery of customer value*** at the project, process and portfolio levels in project-based organizations.



- Author: Jerry Julian
- Publisher: American Management Association (Amacom)
- Date: February, 2010
- ISBN: 0814415326
- Available at: Amazon, Barnes & Noble, Borders, McGraw-Hill, Startup-Books.com

What We're Going to Talk About Today

1. **Why** do we need to improve project performance?
2. **What** principles, practices and tools can we apply?
3. **How** can you put Lean Program Management to work in your team, group or organization?

Some Enduring Business Realities...

- **Big industry changes eventually shake out those who can't adapt and transform**
- **We must take action or face gradual erosion or sudden destruction**
- **Focus must be on adapting by eliminating waste and providing higher levels of value quickly**
- **Ultimately, its up to us to make a choice:**
 - **Are we going to play a leadership role in helping our team or group face these challenges?**

Software Development Projects Continue to Fail at an Unacceptable Rate

The Standish Group has studied over 40,000 projects in the last 20 years

IT project success rates:

1994: 15%

2004: 34% Avg. Cost overrun~70%

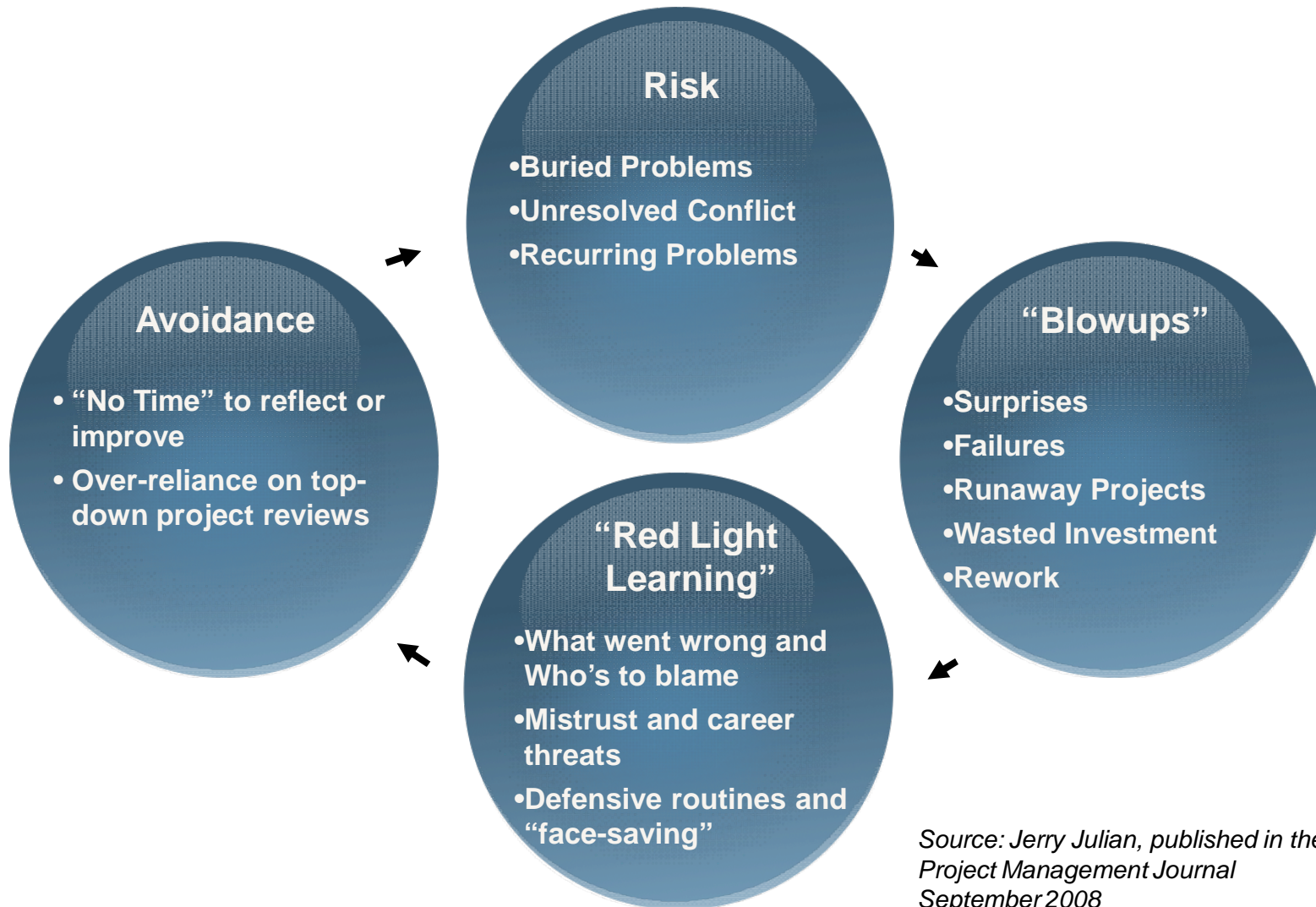
2009: 32%

Why the improvement?

- Customer / User Involvement
- Smaller Projects
- Agile / Lean Processes

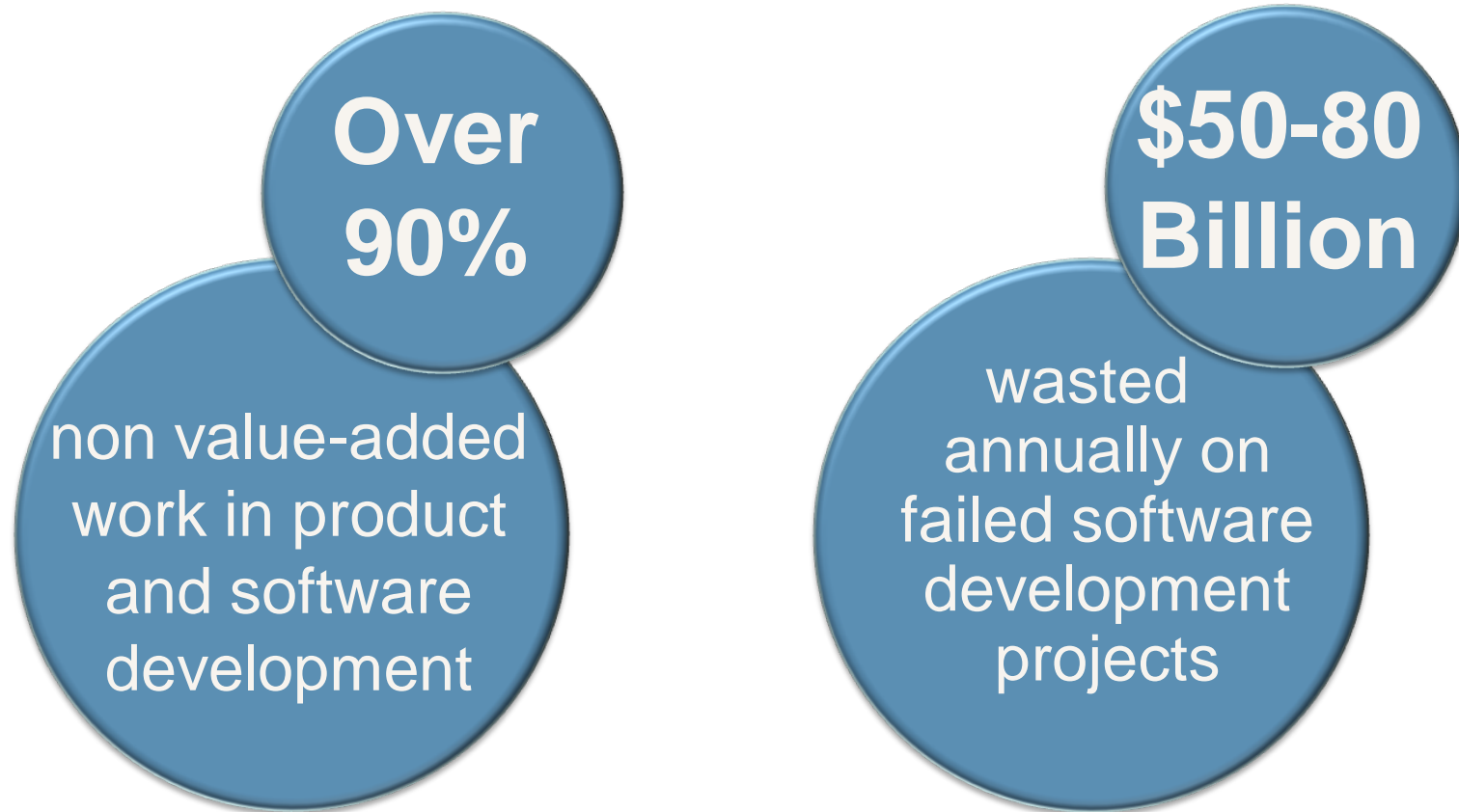
Source:
The Standish Group 2009 Chaos Report

The “Red Light Learning” Cycle



Source: Jerry Julian, published in the Project Management Journal September 2008

Buried Problems Create Waste



Agile with Scrum Provides A Platform for Learning & Continuous Improvement

- Retrospectives held at end of each sprint enable direct application of learning in the next iteration
- Short timeframes enable teams to readily remember project events when reflecting on the last iteration
- Emphasis is placed on trusting motivated individuals to get the job done in the way they think works best
- Value placed on self-organizing teams as the vehicle for continuous innovation

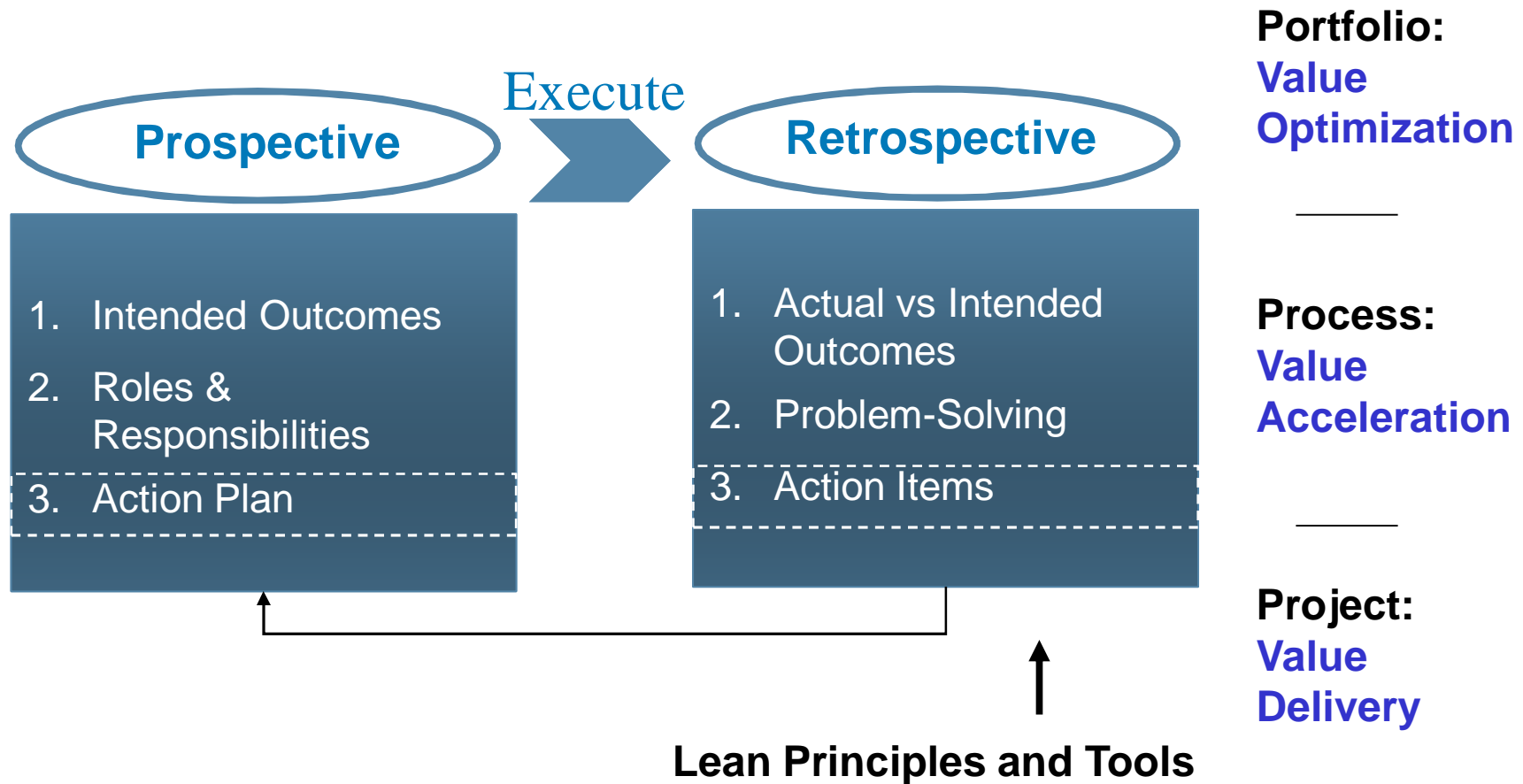
Taking Your Agile Organization from Good to Great

1. Establish compelling goals that provide focus for continuous improvement
2. Conduct retrospectives at multiple levels (not just the project level):
 - Project: Increase Team Velocity
 - Process: Accelerate Time to Market
 - Portfolio: Increase Customer Value
3. Focus on one problem area in each retrospective and vary the approach to keep it interesting
4. Use Lean Principles and Tools to systematically remove impediments, accelerate delivery and eliminate waste
5. Use a skilled, objective facilitator to push the envelope and challenge teams to continuously improve

BHAG for Application Development: One-One Delivery

- The “One-One Challenge”
- Create stimulus for moving beyond the agile status quo
- Business gets highest value items delivered faster (just-in time delivery)
- Intact teams expand skills in ways that lead to faster response time to a broader set of demands (increased agility)
- Eliminate waste associated with managing product backlogs that obsolesce or have less value relative to newer requests (reduction of work in progress)
- Create reliable and dependable rhythm across the development work in progress (continuous flow)

Lean Continuous Improvement for Project Organizations



Lean Principles

1. Specify value from the standpoint of the end customer
2. Identify steps in the value stream and strive to eliminate those that do not create value (waste)
3. Make the value-creating steps occur in tight sequence to achieve flow
4. Let customers pull value “just in time”
5. Continuously remove waste to accelerate value delivery

Scrum

Kanban

Agile

Lean Software Development

Scrum and Kanban Provide A Platform for Lean Continuous Improvement

- Deep dive on requirements on a just-in-time basis
- Features developed in small batches
- Bugs fixed right away before moving on
- Frequent team retrospectives to identify and apply improvements
- Work in Process is limited to the actual capacity of the team or group
- Emphasis is placed on a respect for software craftsmanship

Lean Continuous Improvement Tools

- The Seven Wastes
- A3 Problem Solving
- Value Stream Mapping
- Root cause analysis: “Five Whys”

Lean Thinking: The Seven Wastes

Production Economy

- Over-Production
- Work in Process
- Rework
- Transportation
- Motion
- Waiting
- Defects

Knowledge Economy

- **Extra Features**
- **Work in Process**
- **Rework**
- **Handoffs**
- **Task Switching**
- **Delays**
- **Defects**

Source: Adapted from the work of Tom Poppendieck

Small-Group Discussion: 5 minutes

1. Which one of the seven wastes creates the most problems in your organization?

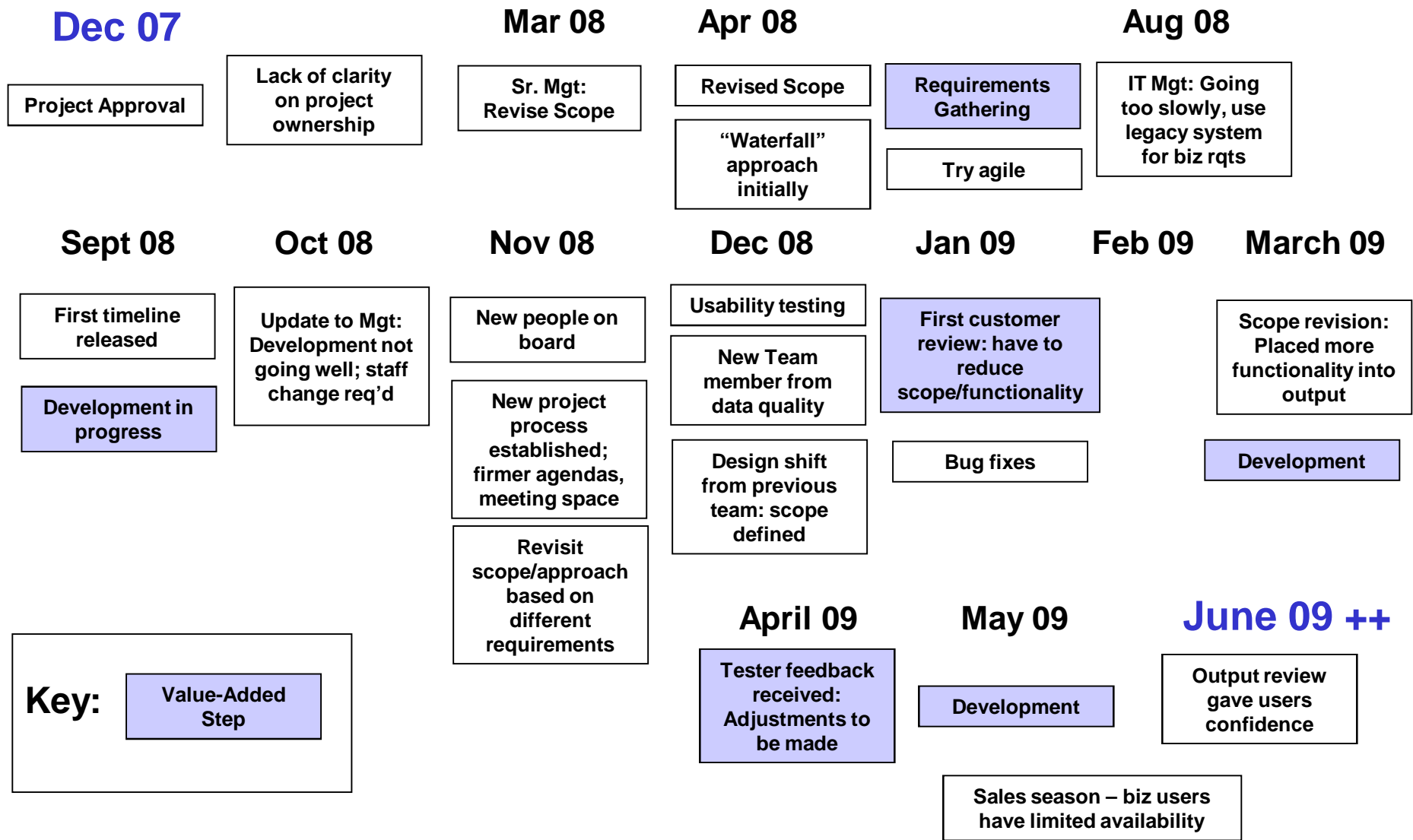
Lean Continuous Improvement Tools

- The Seven Wastes
- Value Stream Mapping
- Root cause analysis: “Five Whys”
- A3 Problem Solving

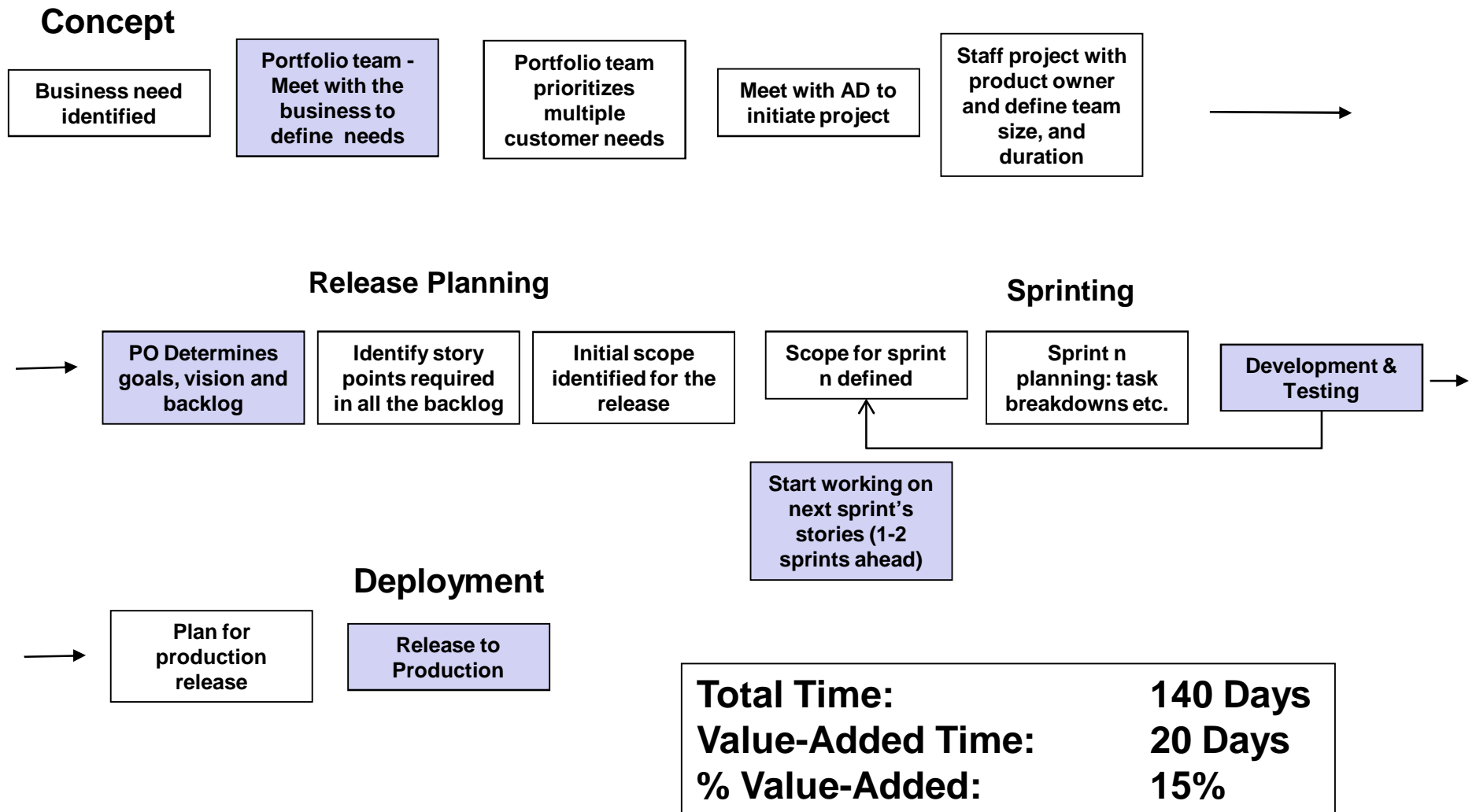
Value Stream Mapping

- **Purpose:** Identify opportunities for reducing cycle time by identifying non value-added activities
- **The Value Stream is the series of work steps performed to deliver the end product from concept to deployment**
- **Value-Added Work**
 - The discovery, creation and transformation of knowledge into working code, features and systems that customers use to achieve their goals
- **Non Value-Added Work (waste)**
 - Bottlenecks that create delays or add to calendar time
 - Activities that consume resources yet don't add value to the customer

Mapping the Value Stream at the Project Level



Mapping the Value Stream at the Process Level



Small-Group Discussion: 10 minutes

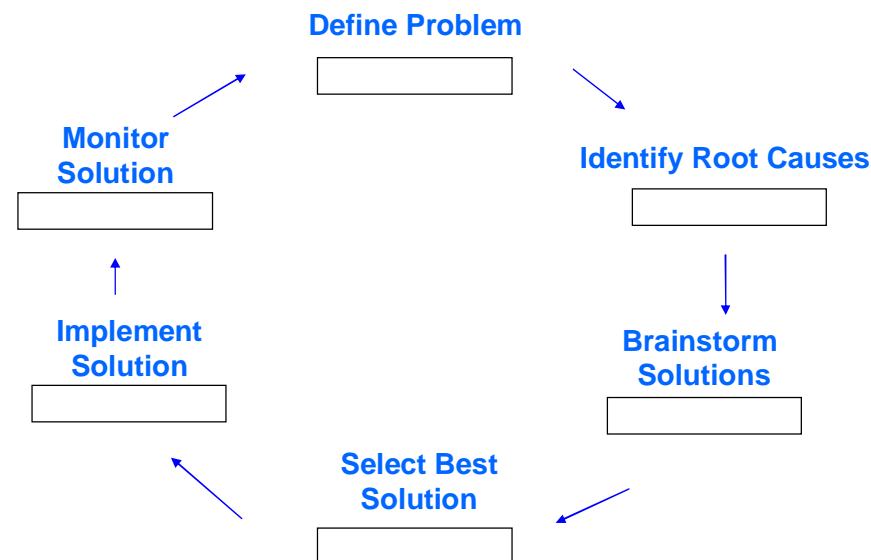
1. Pick a volunteer who identified one of the seven wastes in their organization
2. Discuss the high-level steps in the value stream from concept to deployment
3. Ballpark the percent of value-added time in the process

Lean Continuous Improvement Tools

- The Seven Wastes
- Value Stream Mapping
- **A3 Problem Solving**
- Root cause analysis: “Five Whys”

A3 Problem Solving

- **Purpose:** Solve a complex problem in the organization that, when resolved, will improve flow, quality and overall performance
- **A3 Problem Solving is a one-page overview of the problem-solving steps performed by a team to achieve a specific improvement goal**



Lean Problem-Solving: The A3 Analysis Tool

Background	Plan
<ul style="list-style-type: none"> • Why is this important? • Why should the reader care about this situation and be motivated to participate in improving? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is there a clear theme for the problem report that reflects the contents? 2. Is the topic relevant to the organization's objectives 3. Is there any other reason for working on this topic (e.g., learning purposes)? 	
Current Condition	Plan
<ul style="list-style-type: none"> • How do things work today? • What is the problem? • Baseline Metrics? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is the current condition clear and logically depicted in a visual manner? 2. How could the current condition be made clearer for the audience? 3. Is the current condition depiction framing a problem or situation to be resolved? 4. What is the actual problem in the current condition? 5. Are the facts of the situation clear, or are there just observations and opinions? 6. Is the problem quantified in some manner or is it too qualitative? 	
Goal / Target Condition	Plan
<ul style="list-style-type: none"> • What outcomes are expected for what reasons? • What changes in metrics can be plausibly expected? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is there a clear goal or target? 2. What, specifically, is to be accomplished? 3. How will this goal be measured or evaluated? 4. What will improve, by how much, and when? 	
Root Cause Analysis	Plan
<ul style="list-style-type: none"> • What is the root cause(s) of the problem? • Use a simple problem analysis tool (e.g., 5 why's, fishbone diagram, cause/effect network) to show cause-and-effect relationships. <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is the analysis comprehensive at a broad level? 2. Is the analysis detailed enough and did it probe deeply enough on the right issues? 3. Is there evidence of proper five-whys thinking about the true cause? 4. Has cause and effect been demonstrated or linked in some manner? 5. Are all the relevant factors considered (human, machine, material, method, environment, measurement, and so on)? 6. Do all those who will need to collaborate in implementing the countermeasures agree on the cause/effect model reasoning? 	

Owner: Author leading the problem solving
Mentor: Person guiding and assessing process
Date: Current version Date

Countermeasures (Experiments)	Do
<ul style="list-style-type: none"> • Proposed countermeasure(s) to address each candidate root cause. [This should be a series of quick experiments to validate causal model analysis.] • Predicted results for each countermeasure. <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Are there clear countermeasures steps identified? 2. Do the countermeasures link to the root cause of the problem? 3. Are the countermeasures focused on the right areas? 4. Who is responsible for doing what, by when (is 5Why-1How clear) 5. Will these action items prevent recurrence of the problem? 6. Is the implementation order clear and reasonable? 7. How will the effects of the countermeasures be verified? 	
Confirmation (Results)	Check
<ul style="list-style-type: none"> • Actual result of each countermeasure (experiment). • How does the system actually behave with the countermeasures that are being proposed for implementation in place? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. How will you measure the effectiveness of the countermeasures? 2. Does the check item align with the previous goal statement? 3. Has actual performance moved line with the goal statement? 4. If performance has not improved, then why? What was missed? 	
Follow-up (Actions)	Act
<ul style="list-style-type: none"> • What have we learned that does or does not improve the situation? • In the light of the learning, what should be done? • How should the way we work or our standards be adjusted to reflect what we learned? • What do we need to learn next? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. What is necessary to prevent recurrence of the problem? 2. What remains to be accomplished? 3. What other parts of the organization need to be informed of this result? 4. How will this be standardized and communicated? 	

Source:
Tom Poppendieck and Henrik Kniberg

A3 Analysis: Typical Sections

- | | |
|-----------------------------|--|
| 1. Background | Why does this matter? |
| 2. Current Condition | What is the problem? Visible symptoms? |
| 3. Goal | What would improvement look like? |
| 4. Root Cause(s) | What are the underlying drivers of the problem? |
| 5. Counter-Measures | What are solutions to address the root causes? |
| 6. Confirmation | What results should we expect from the solution? |
| 7. Action Plan | Who, What, and When |

Lean Continuous Improvement Tools

- The Seven Wastes
- Value Stream Mapping
- A3 Problem Solving
- Root cause analysis: “Five Whys”

Five Whys

- **Purpose:** Use with a team to identify the root causes of a problem
- **Continue to ask “why?” until you’ve identified the cause that, if eliminated, would make the problem go away**
- **Try to focus on things that are within the group’s control**
- **Where something is outside of the group’s control, use the A3 tool to “frame out” the problem in a way that can lead to constructive action**

The Five Whys

- **Goal:** Increase the percent of automated test coverage
- **Problem:** Coverage for automated testing of application only around 5%

Why?

It is difficult to mock the required code for automated testing.

Why?

Handling transactions requires an externally hosted server.

Why?

External server performs authentication.

Why?

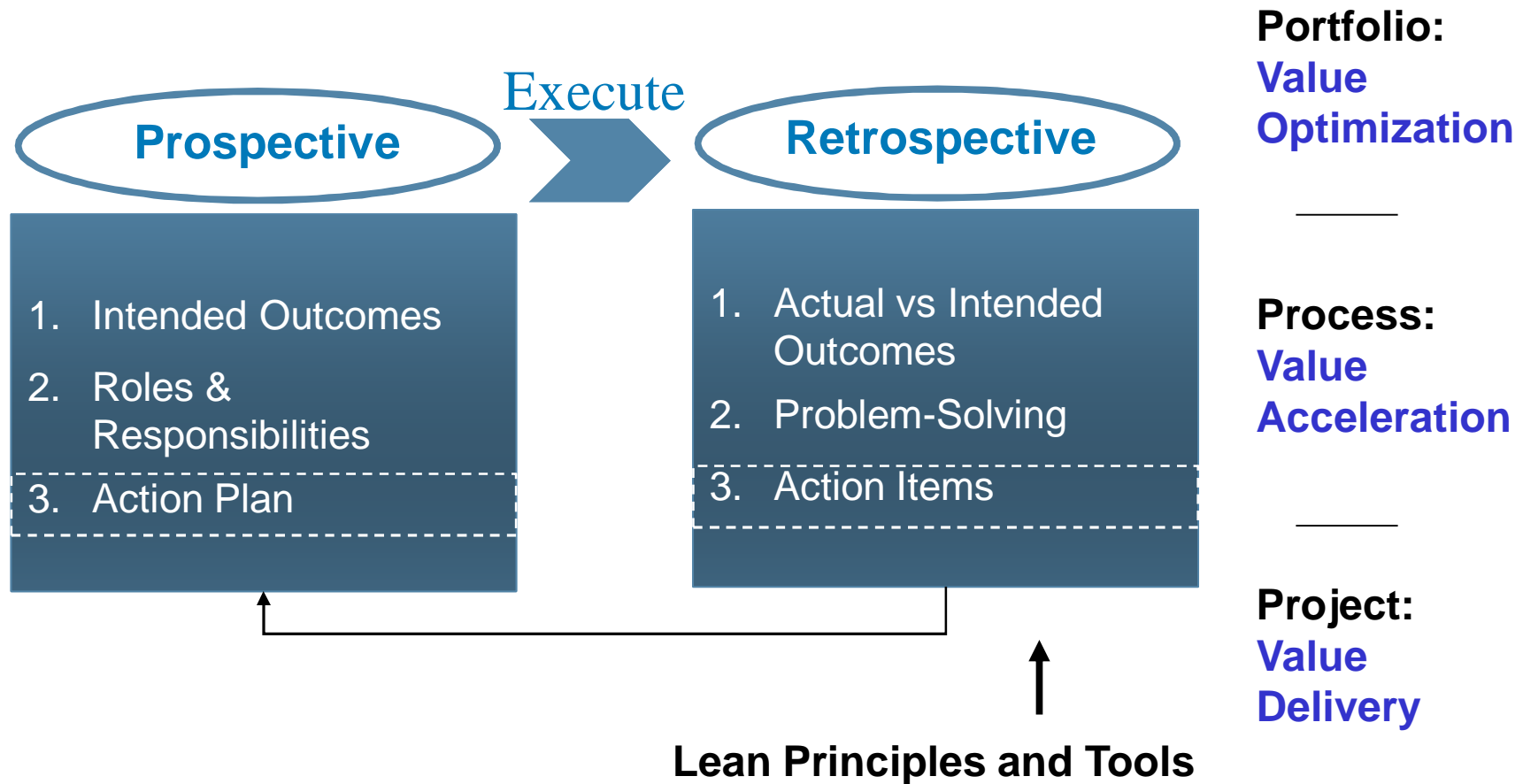
Mocking would take a lot of time because of the many different types of requests.

Why?

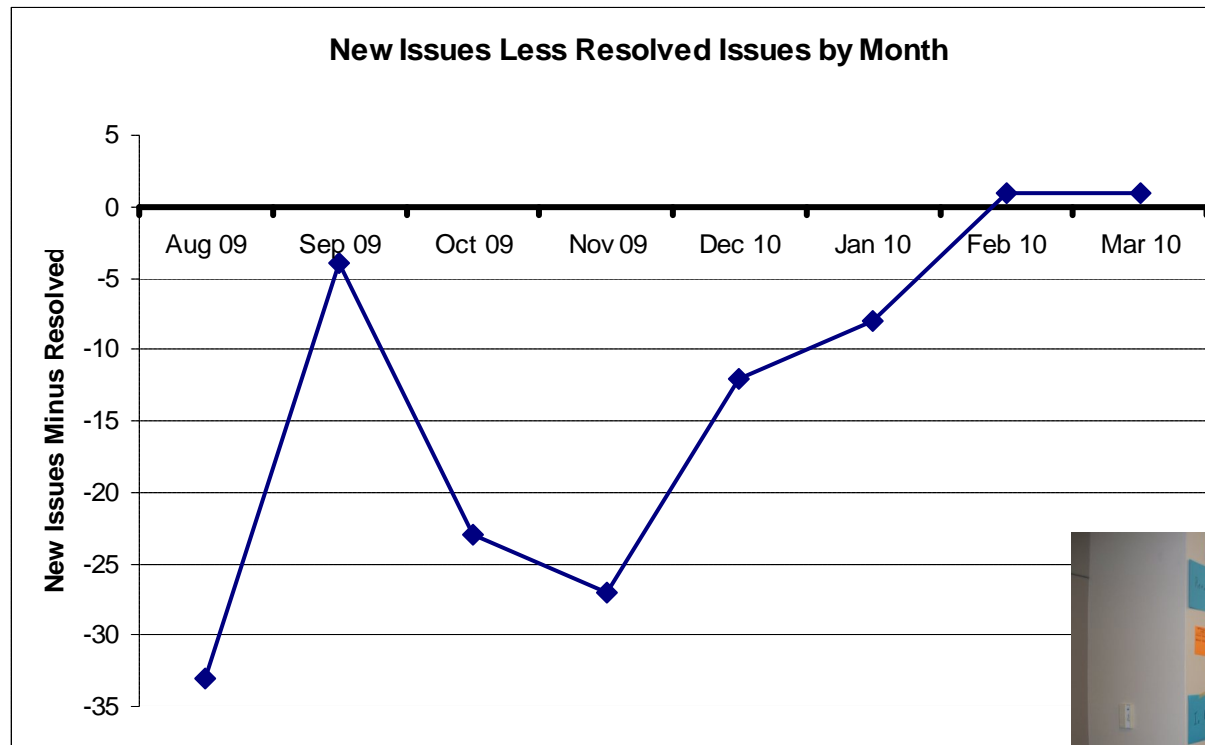
Logic in the filters is complex and requires mocking for both the incoming object as well as object in the filter.

Creation of automation tests does not directly impact goals of this release

Lean Continuous Improvement for Project Organizations



BankData, Inc: Value Acceleration



Tactics

- Implement Lean-Kanban Board
- Visible, Transparent Workflow
- Output Velocity Measurement
- Daily 15 min “Board” Meetings
- Attack Bottlenecks in the Process
- Work on Highest Priorities First

Lean Program Management

Principles

Lean Thinking

Organizational Learning

Tools

Practices

- Seven Wastes
- Value Stream Mapping
- A3 Problem Solving
- Root cause analysis: “Five Whys”
- Velocity and Burndown Charts

- Multi-Level Retrospectives
 - Project
 - Process
 - Strategy

SUBSCRIBE

Get Updates



Tools, Templates, and Research for Lean Software Development and Project Performance Improvement.

How to Improve Project Performance:



Learn about how to use lean concepts and multi-level learning to accelerate delivery, eliminate waste, and improve product and software development results.

Leading Great Project Retrospectives:



See what it takes to lead outstanding project team retrospectives. Get tips and techniques you can use to improve team performance.

Best Practices for the Lean PMO:



What PMOs can do to help their organizations make the transition to lean and agile software development and how they can become indispensable as a result.

Lean Software Development:



Find out how lean principles have revolutionized software development to deliver business value faster, reduce work in process and increase agility.

News

Julian Advisory Group has relaunched its website to include downloadable tools, templates, tips and research for improving project performance, conducting retrospectives, and deploying lean software development practices. [Click here](#) to learn more.

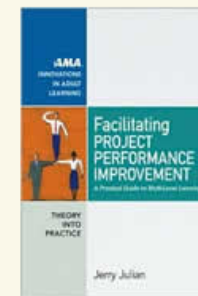
Recent Updates

Study of 20 PMOs: Barriers and Enablers to Facilitating Continuous Improvement

Project Team Retrospective Template

Welcome to our New Platform for Sharing Lean And Agile Software Development Best Practices and Tools

Resources & Tools Library



Get it Now at:
[BarnesandNoble.com](#)
[Amazon.com](#)

More Information

Additional Resources and Tools:

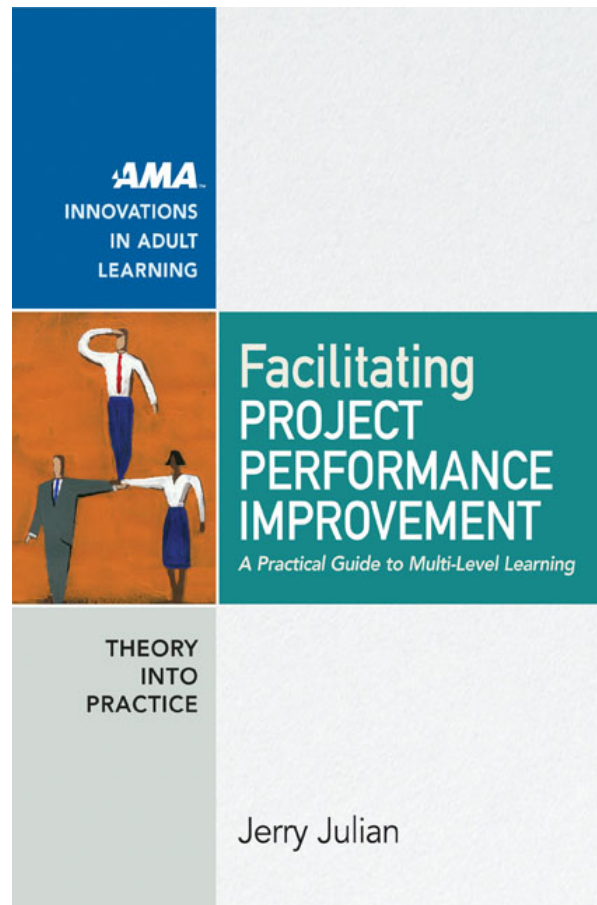
www.JulianAdvisory.com

Contact:

Dr. Jerry Julian

Jerry@JulianAdvisory.com

(212)842-2720



Amazon

Barnes&Noble