

# Accelerate Learning for Individuals, Teams and Organizations with Agile Feedback Systems

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**Atlanta, GA**  
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**3:45 PM to 5:00 PM**

# About the Presenter



## Satish Thatte

- **Agile/Lean Coach for 7 years**
  - VersionOne for 4 years
  - New Synergy Group for 3 years (CEO and Founder)
- **30+ years of technology and management experience**
  - Director at large, multinational companies: Texas Instruments, Bellcore, LG Electronics
  - VP of Engineering at start-up companies coaching and managing agile development teams
- Certified ScrumMaster (CSM), Certified Scrum Product Owner (CSPO), Certified Scrum Practitioner (CSP)
- SAFe 4.0 Program Consultant (SPC4)
- Over 70 client companies trained and coached
- M.S. and Ph.D. in Electrical Engineering from the University of Illinois at Urbana-Champaign
- 14 patents (13 US and one International)
- Location: Princeton, NJ



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# Popular Agile Methods



## AGILE METHODS AND PRACTICES

### Agile Techniques Employed

Continued...



### 1. Making Daily Scrums Really Effective and Efficient:

<http://bit.ly/ODMybj>

The Blog template downloaded over 1,000 times

### 4. Making Sprint Retrospectives Really Effective: <http://bit.ly/R0Kyfa>

The blog template downloaded over 300 times

### 4. Making Release Retrospective Strategic and Effective:

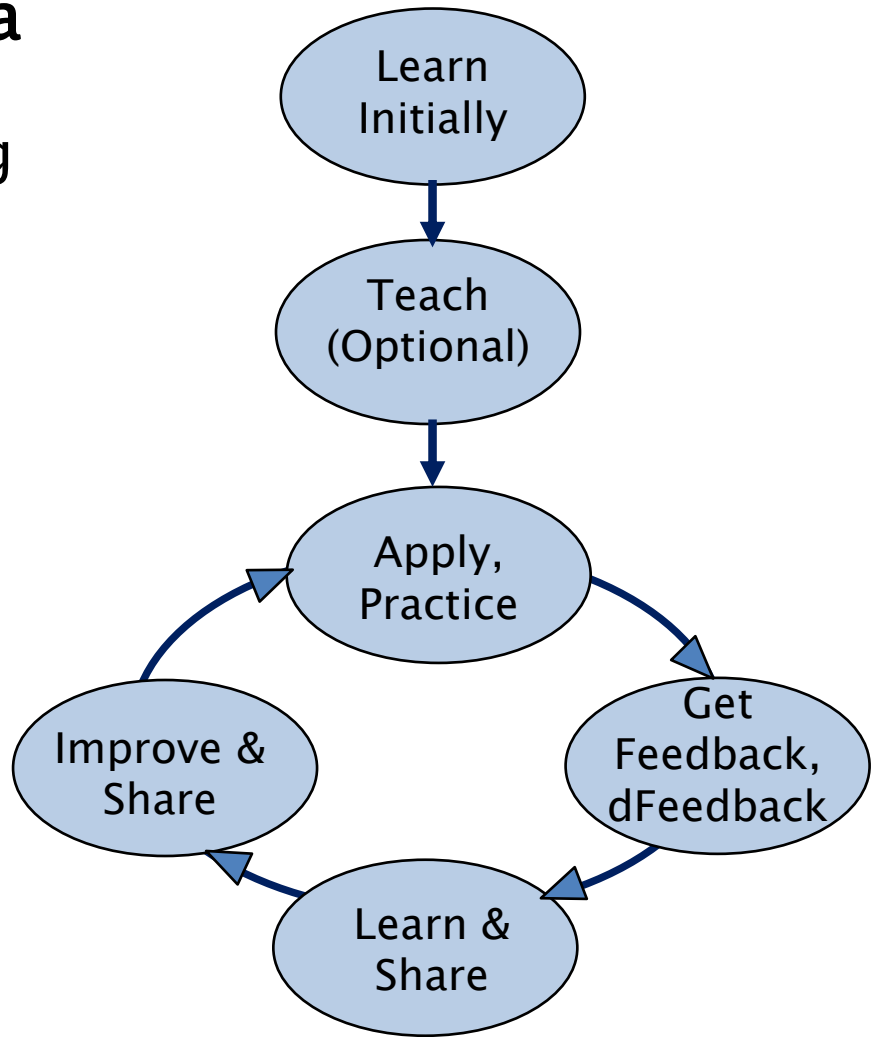
<http://bit.ly/GYGePS>

The blog template downloaded over 100 times

I will explain many techniques to support these three popular methods for accelerated learning and relentless improvements based on experience with 70 clients over 7 years, and blog feedback.

# Relentless Improvements Require Accelerated Learning

- **Relentless improvements is a journey**
  - Requires Accelerated Learning based on feedback
- **Daily feedback system**
  - For team members and teams
- **Sprint feedback system**
  - For teams and projects
- **Release feedback system**
  - For projects, programs and organization
- **Double feedback loops**
  - Primary feedback =  $f$
  - Derivative feedback =  $d\text{Feedback} = df/dt$



# Feedback Framework: Evidence, Context, Consequence, Action

## Feedback Loop in Action: An Example that Works Real Well

**4. Action:** Drivers slow down 10% - usually for several miles

**1. Evidence:** Car speed

Driver  
Feedback

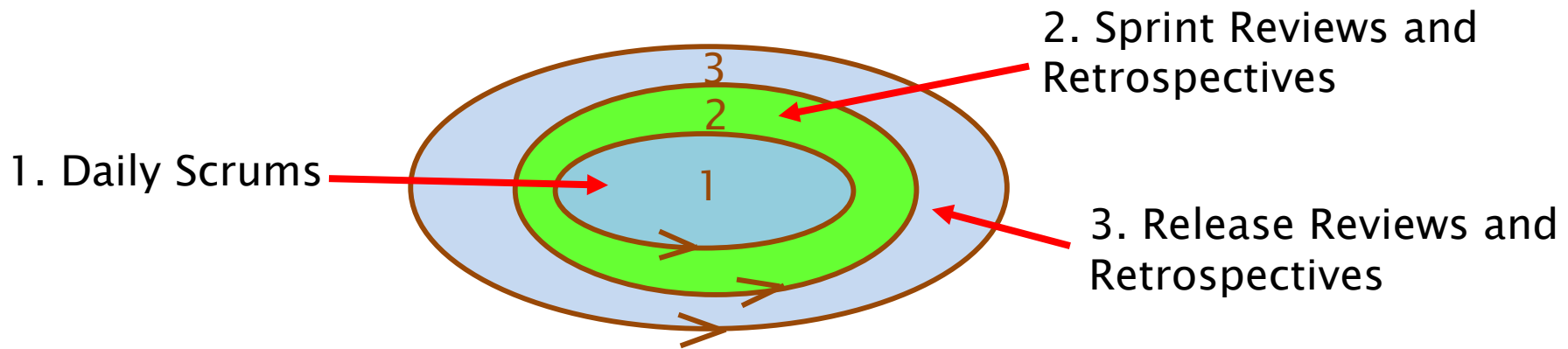
**3. Consequence:** Cops, traffic tickets, potential accidents

**2. Context:** Legal speed limit



Adapted from: "The feedback loop" by Thomas Goetz, *Wired* magazine, July 2011

# Framework for Effective Agile Feedback Systems



# Many Agile Teams, Program and Projects have Dysfunctional Feedback Systems

- No feedback (open loop system)
- Delayed feedback
- ***Gray Light*** feedback: Blurred or noisy or weak or mixed feedback signal
- Feedback system **without** relevant context, clear consequences or clear actions for improvements
- Cost of feedback system is too high (not cost-effective)
- No derivate feedback
- The key to improving feedback systems
  - ***Full-Spectrum*** strong feedback
  - **Visual double feedback loops**
  - **Time-Flow machine**: Unfolding of Storyboard along the time dimension, and showing the flow as well as flow interruptions

# Simple Taskboard

Backlog Items	Tasks Not Started	Tasks in Progress	Tasks Completed
<div>Backlog Item 1</div>	<div>Task 1</div> <div>Task 2</div> <div>Task 3</div> <div>Task 4</div> <div>Task 5</div> <div>Task 6</div>		
<div>More Backlog Items</div>			



# Simple Taskboard

Backlog Items	Tasks Not Started	Tasks in Progress	Tasks Completed
<p>Backlog Item 1</p>	<p>Task 2</p> <p>Task 3</p> <p>Task 4</p> <p>Task 5</p> <p>Task 6</p>	<p>Task 1</p>	
<p>More Backlog Items</p>			

# Simple Taskboard

Backlog Items	Tasks Not Started	Tasks in Progress	Tasks Completed
<div>Backlog Item 1</div>		<div>Task 6</div>	<div>Task 1</div> <div>Task 2</div> <div>Task 3</div> <div>Task 4</div> <div>Task 5</div>
<div>More Backlog Items</div>	<div>Task k</div>	<div>Task j</div>	<div>Task m</div>

# Simple Taskboard Issues:

## *Gray Light Weak Feedback, Not Very Effective*

- “Tasks in Progress” column does not differentiate between tasks that will be completed by the next business day vs. tasks in progress for more than one day.
- “Tasks Completed” column does not differentiate between tasks completed as committed vs. tasks that took longer.
- **Weak** feedback between the **tasks** planned and presented **in the last Daily Scrum** and the **tasks actually completed a day later**.
- Weak in Evidence, Context, Consequence, and Actions for tasks planning, tracking and completing.
- Opportunities for learning and improvement are lost.
- Supports an “Activity” culture, and not a “Commitment and Accountability” culture.

# Daily Scrums: Effective as well as Efficient

## Since the last Daily Scrum

- Variance in my work against my commitment, and the reasons for it
  - Task 1: Completed
  - Test 2: Not Completed; Reason

## Until the next Daily Scrum

- My **commitment (context)**:
  - Be specific, and result-oriented
  - **Complete** Task 3  
**Run** Test 4
  - My needs from others in the next few days
  - My impediments on the horizon

- **Primary feedback loop**: must indicate if the daily **commitment** of work was **completed** in that day.
- **Derivative feedback loop**: must identify systemic issues and dysfunctions, and enable learning and relentless improvements.

# Full-Spectrum Taskboard

Backlog Items	Tasks Not Started	Tasks Committed to Complete In Next Two Business Days	Tasks Committed to Complete In Next One Business Day	Tasks Completed as Committed	Tasks did not Complete as Committed (Work Remains)	Tasks Completed but Late
<div style="border: 1px solid black; border-radius: 10px; padding: 5px; background-color: #e6f2ff;">Backlog Item 1</div>	<div style="border: 1px solid black; padding: 5px; background-color: #ffe4c4; margin-bottom: 10px;">Task 1</div> <div style="border: 1px solid black; padding: 5px; background-color: #ffe4c4; margin-bottom: 10px;">Task 2</div> <div style="border: 1px solid black; padding: 5px; background-color: #ffe4c4; margin-bottom: 10px;">Task 3</div> <div style="border: 1px solid black; padding: 5px; background-color: #ffe4c4; margin-bottom: 10px;">Task 4</div> <div style="border: 1px solid black; padding: 5px; background-color: #ffe4c4; margin-bottom: 10px;">Task 5</div> <div style="border: 1px solid black; padding: 5px; background-color: #ffe4c4; margin-bottom: 10px;">Task 6</div>					
<div style="border: 1px solid black; border-radius: 10px; padding: 5px; background-color: #e6f2ff;">More Backlog Items</div>						

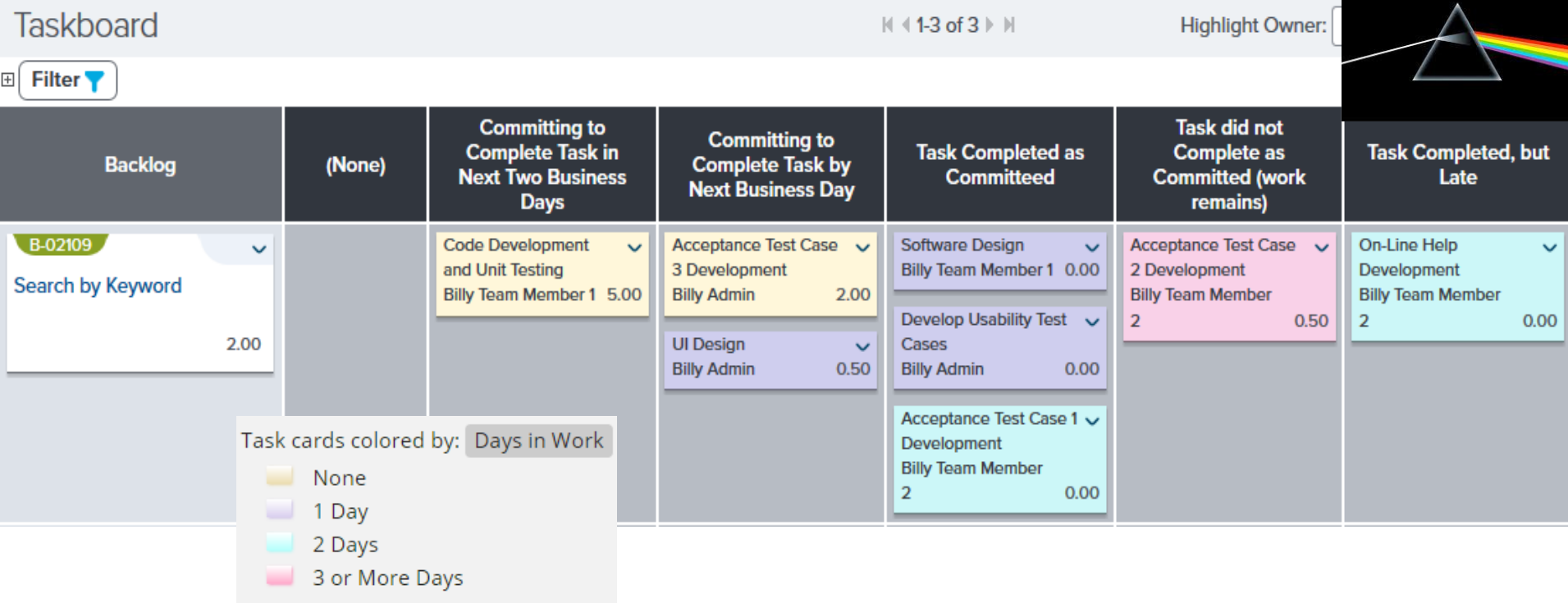
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<div>Backlog Item 1</div>	<div>Task 3</div> <div>Task 4</div> <div>Task 5</div> <div>Task 6</div>	<div>Task 2</div>	<div>Task 1</div>			
<div>More Backlog Items</div>						

# Full-Spectrum Taskboard

Backlog Items	Tasks Not Started	Tasks Committed to Complete In Next Two Business Days	Tasks Committed to Complete In Next One Business Day	Tasks Completed as Committed	Tasks did not Complete as Committed (Work Remains)	Tasks Completed but Late
<div style="border: 1px solid black; border-radius: 10px; padding: 5px; background-color: #e6f2ff;">Backlog Item 1</div>				<div style="border: 1px solid black; border-radius: 5px; padding: 5px; background-color: #ffe4c4;">Task 1</div> <div style="border: 1px solid black; border-radius: 5px; padding: 5px; background-color: #ffe4c4;">Task 3</div> <div style="border: 1px solid black; border-radius: 5px; padding: 5px; background-color: #ffe4c4;">Task 4</div> <div style="border: 1px solid black; border-radius: 5px; padding: 5px; background-color: #ffe4c4;">Task 5</div>	<div style="border: 1px solid black; border-radius: 5px; padding: 5px; background-color: #ffe4c4;">Task 6</div>	<div style="border: 1px solid black; border-radius: 5px; padding: 5px; background-color: #ffe4c4;">Task 2</div>
<div style="border: 1px solid black; border-radius: 10px; padding: 5px; background-color: #e6f2ff;">More Backlog Items</div>						

# Full-Spectrum Taskboard with Strong Feedback: Highly Effective and Efficient Daily Scrums



Using Colored Task Cards (to indicate the number of days a task is in progress: 1, 2, or 3 or more) gives insightful and actionable feedback.



# Full-Spectrum Taskboard: Strong Feedback

- “Tasks Completed as Committed” column clearly shows specific tasks completed as committed (in 1 or 2 days).
- “Tasks did not Complete as Committed (Work Remains)” column clearly shows overdue tasks.
- “Tasks Completed Late” column clearly shows tasks completed after commitment date, and differentiates them from the tasks completed as committed.
- Strong in Evidence, Context, Consequence, and Actions on tasks for planning, tracking and completing.
- Full-Spectrum taskboard at the end of a sprint represents the derivative feedback at no extra cost.
- Identifies and presents actionable opportunities for accelerated learning and relentless improvements.
- Supports a “Commitment and Accountability” culture, without which Self-Organized Agile Teams cannot work well.



# Full-Spectrum Testboard with Strong Feedback: Highly Effective and Efficient Daily Scrums



Testboard								
Filter		1-3 of 3			Highlight Owner:			
Backlog	(None)	Committing to Run Test in Next Two Business Days	Committing to Run Test by the Next Business Day	Test Passed without issues and as committed	Test didn't Complete as committed (testing remains)	Test Passed without issues, but Late	Test Failed	Test Passed after Fixing Issue(s)
B-02109 Search by Keyword 2.00		Run Acceptance Test Case 3 Billy Admin 6.00			Run Acceptance Test Case 2 Billy Team Member 2 1.00	Verify that On-Line Help Matches with Software Functionality Billy Team Member 2 0.00	Run Usability Tests Billy Admin 1.00	Run Acceptance Test Case 1 Billy Team Member 2 0.00
Test cards colored by: Days in Work None (Yellow) 1 Day (Purple) 2 Days (Cyan) 3 or More Days (Pink)								

**Strong** feedback between the **tests committed** to run in the last Daily Scrum and the tests actually run and completed (passed or failed) since the last Daily Scrum. **Feedback is very contextual.**

**Tests committed to run** in today's Daily Scrum will drive the tests that will be actually run until the next Daily Scrum (they may pass or fail). **Work on Tests is driven by commitments made.**

**Strong** in Evidence, Context, Consequence, and Actions on tests for planning, tracking and completing.

Using Colored Test Cards to indicate the number of days a test is in progress: 1, 2, or 3 or more) gives insightful and actionable feedback.

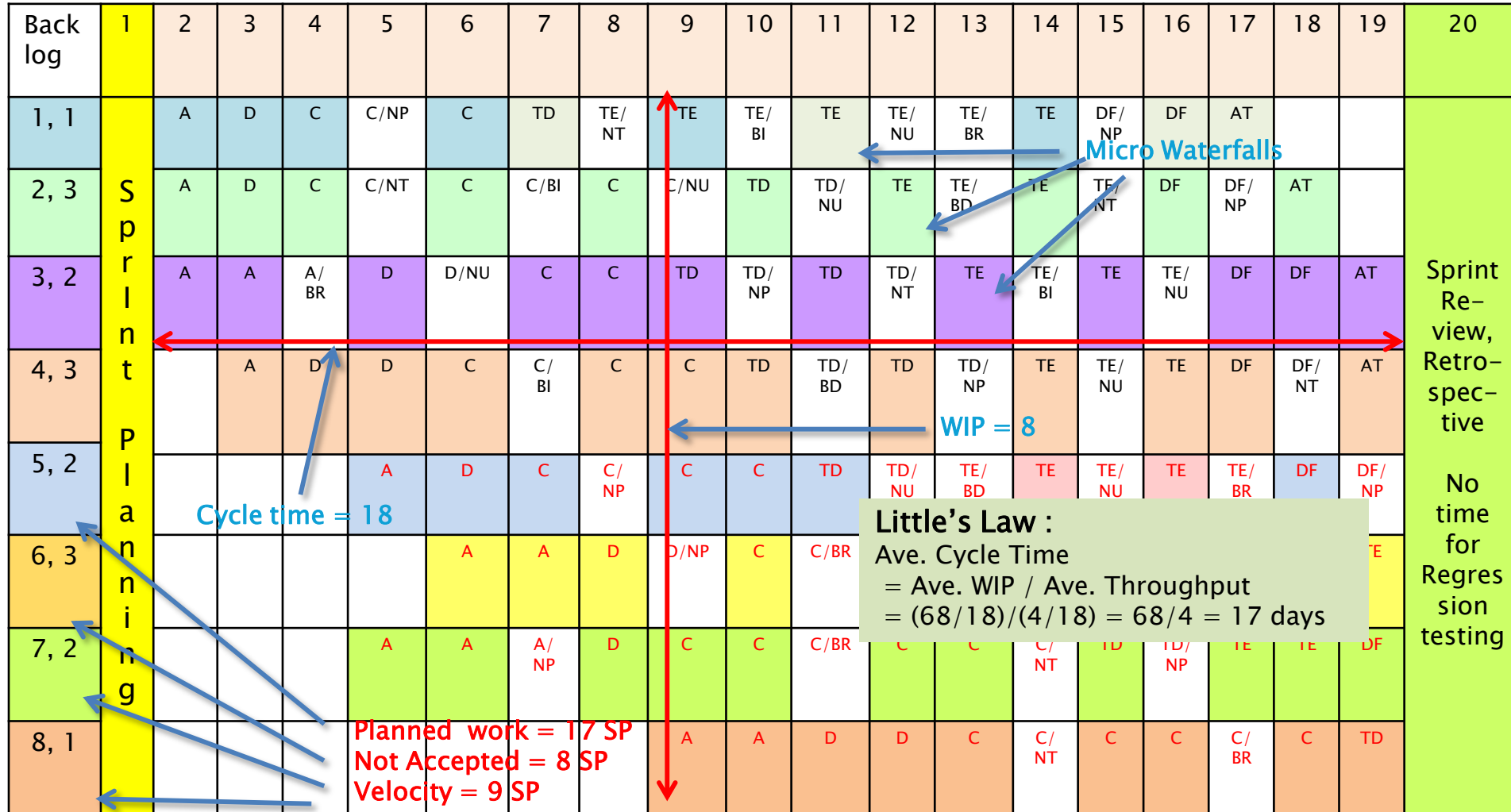
# Storyboard

Backlog	In Progress	Done	Accepted
BI 5 BI 6 BI 7 BI 8	BI 3 BI 4	BI 2	BI 1

- Define and manage workflow of stories across the *status* columns.
- May use WIP control, measure time threshold for each card, avg. cycle time, etc.
- May use Swim lanes for different classes of services.
- **However, the story board cannot capture *when, why, and how long* the flow is interrupted (*Gray-light* weak feedback) because the time dimension is suppressed.**

# Time-Flow Machine: Strong Full-Spectrum Story-Level Feedback

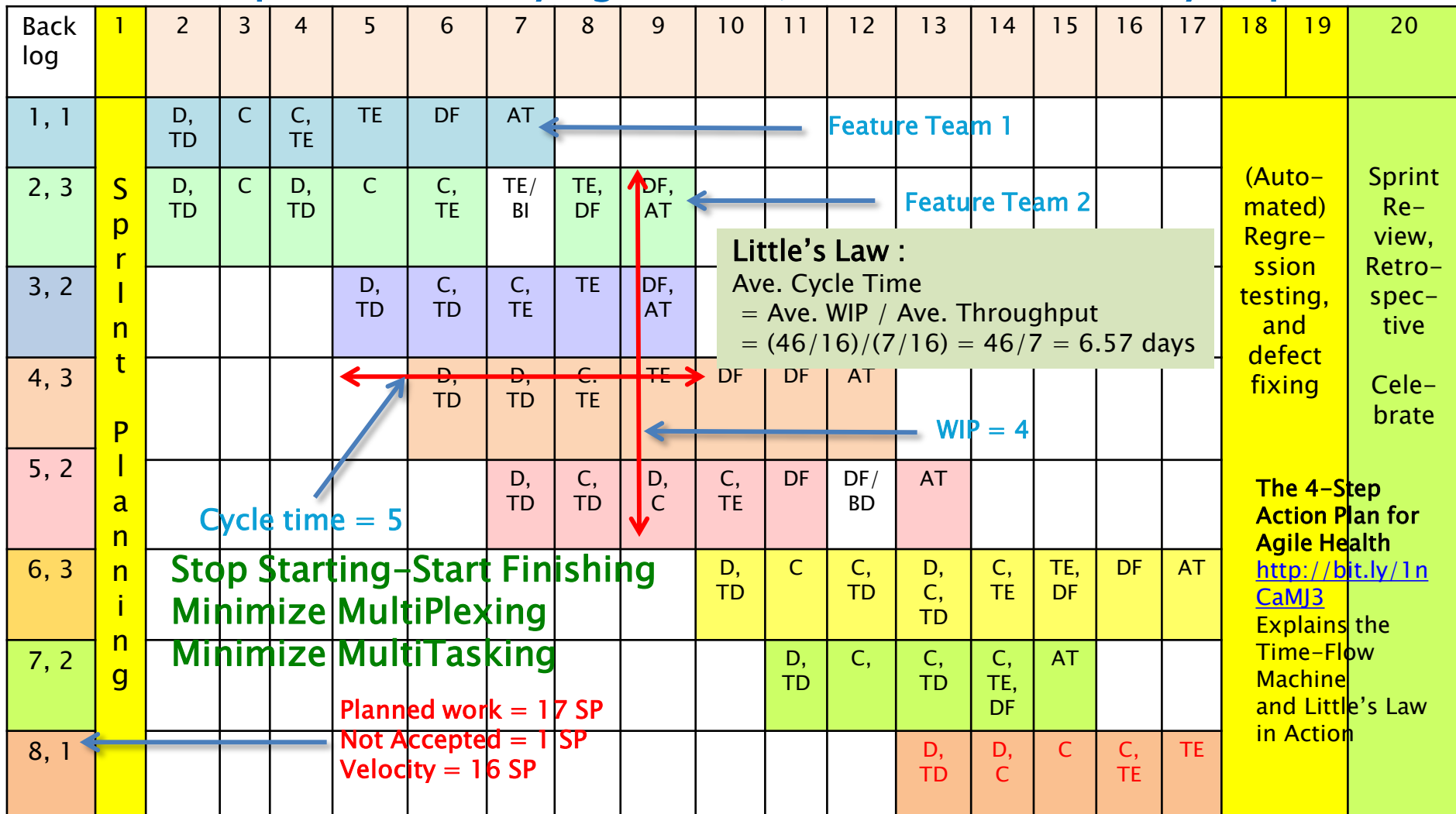
## Example of a Struggling Agile Team, 4-Week (20 Workdays) Sprint



A: Analysis, D: Design, TD: Test Dev, C: Coding, TE: Test Exe, DF: Defect Fix, AT: Acceptance Test, /X: Qualifier  
**D, C, TD, TE, DF form Micro Waterfalls. Rampant Multiplexing/Multitasking, High WIP, Low Throughput → High Cycle Time**

# Time-Flow Machine: Strong Full-Spectrum Story-Level Feedback

## Example of a Healthy Agile Team, 4-Week (20 Workdays) Sprint



D: Design, TD: Test Dev, C: Coding, TE: Test Exe, DF: Defect Fix, AT: Acceptance Test, /X: Qualifier  
 D, TD, C, TE, DF concurrently by swarming feature teams; Low WIP, High Throughput → Low Cycle Time

# Time-Flow Machine: Information Guidelines

If the work flows – Action: Initials

If the work is interrupted – Action: Initials/Qualifier

## Actions

- D: Design, TD: Test Dev, C: Coding, TE: Test Execution, DF: Defect Fixing
- AT: Acceptance Testing, ... More, if needed

Initials of the team member: ST, JW, RK, VR, ...

Qualifier (used when the flow is interrupted)

- BI: **B**locked (impediment) for lack of **I**nformation
- BR: **B**locked (impediment) for lack of **R**esource
- BD: **B**locked (impediment) due to **D**ependency
- NP: Team member **N**ot available due to multi**P**lexing
- NT: Team member **N**ot available due to multi**T**asking
- NU: Team member **N**ot available due to **U**nplanned work

Backlog Item	Day 1	Day 2	Day 3		Day N
Backlog Item 1	D:ST, TD:JW/BI	C:ST, TD:JW	C:ST/NP, TD:JW		C:ST, TE:JW

# *Time-Flow* Machine

- Shows the time dimension fully (status information is implicit)
- Defines and helps manage detail flow of work in each story; logs story tasks and test details, and why flow is interrupted
- Visualizes flow and interruptions, and helps harness Little's Law
- *Time-Flow* machine can be implemented with Google Drive or MS One Drive or a cloud-based spreadsheet tool
  - Strong in Evidence, Context, Consequence, and Actions on Stories for tracking and completing
  - On an average 3 minutes per day for each team member to enter information
  - Time-Flow Machine at the end of each sprint provides story-level derivative feedback **at no extra cost.**
- Storyboard and Time-Flow Machine are complementary; Use both.

# Sprint Feedback System: Experienced through Sprint Reviews and Retrospectives

- **Sprint Review:** Review the Sprint accomplishments against the Sprint Objectives
  - Sprint demo(s) by the team to different stakeholders
  - Demonstrate fully tested, potentially shippable sprint release and get feedback from
    - Company management, Marketing, Sales, Customer support, any other Stakeholders
    - Selected customers
  - Effective Sprint Demo needs planning effort at Sprint Planning and engineering effort during sprint
    - Otherwise, sprint review will not be effective
- **Sprint Retrospective**
  - For Team Members, ScrumMaster and Product Owner only
  - Review feedback from the Sprint just completed
  - Draw lessons learned, and make commitment to improve the process



# Effective and Efficient Sprint Retrospectives

Product Name:

Release ID

Sprint ID

## A) Did we meet the Sprint Objectives?

- Yes/No
- If No, analyze the reasons (10 min)

## C) Discuss Key Metrics: 30 min

- Planned vs. accepted story points (i.e., velocity) for the sprint
- Estimated effort vs. Actual effort spent in the Sprint
- Scope change, and any additional key statistics.
- Top up to 3 root causes for impediments and flow interruptions
- Prepare inputs to revise the Release Plan, if needed

### Review Derivative Feedback on Daily Feedback

- Review Full-Spectrum Taskboard and Testboard
- Review Time-Flow Machine at the end of sprint

## B) What Worked Well and will be Continued, and What was problematic & will be changed: 20 min

- Team consensus on up to top 3 factors in each category

## D) Develop SMART Action plan to improve agile process: 45 min

- Specific
- Measurable
- Achievable
- Realistic
- Time-bound

## E) Capture the results of Sprint Retrospective in the agile tool, including SMART stories in the next sprint backlog: 15 min

# Additional SMART Actions from Sprint Retrospective: Make SMART Stories for the Next Sprint Backlog

SMART Action Plan mapped on SMART Epics and SMART Stories	
We had too many stories accepted in the last week of the sprint	<ul style="list-style-type: none"><li>• SMART Story: Apply rigorous WIP controls to Kanban storyboard to reduce the cycle time.</li><li>• SMART Story: Implement Time-Flow Machine to observe flow daily, watch flow stoppage to take action, and use Time-Flow machine for derivative feedback during Sprint Retrospectives</li></ul>
Build process was slow, which often caused delays waiting for build to complete	<p>Epic: Invest in Continuous Integration infrastructure for future sprints.</p> <ul style="list-style-type: none"><li>• SMART Story: Evaluate open-source options (such as Hudson)</li><li>• SMART Story: Trial and experiment with Continuous Integration platform</li><li>• SMART Story: Complete training of the team members for the selected Continuous Integration platform</li><li>• SMART Story: Implement and deploy the Continuous Integration server</li></ul>

# Sprint Retrospective: Review Sprint Derivative Feedback from Full-Spectrum Taskboard and Testboard at the Sprint End

Review Key Metric and Goals
% of tasks and tests completed in 1 business day as committed: 48%   Goal: 85% or more
% of tasks and tests completed in 2 business days as committed: 22%   Goal: 10% or less
% of tasks and tests completed late; took 3 or more business days: 17%   Goal: 5% or less Dominant types of those tasks <ul style="list-style-type: none"> <li>• Design, Code Development, UI, Test Case Development, <b>Test Case Execution</b>, Tech Writing, etc.</li> </ul>
% of tasks and tests not completed by end of a sprint: 13%   Goal: 1% Max Dominant type of those tasks <ul style="list-style-type: none"> <li>• Design, Code Development, UI, Test Case Development, Test Case Execution, <b>Tech Writing</b>, etc.</li> </ul>

Root Cause Analysis
Weak “Daily Commitment and Accountability” Culture
Tasks are too big, and stories are big too.
Test Case Execution is mostly manual and not enough testers
No dedicated tech writer

SMART Action Plan (SMART stories)
10% improvement per sprint on the key metric towards the goals.
Gradually increase the % of automated test cases with proper training and growth of skill sets
Get at least 30% technical writer bandwidth (management authorization needed)

# Sprint Retrospective: Review Sprint Derivative Feedback from Time-Flow Machine and Storyboard at the Sprint End

## Review key Metric and Goals

Number and % of flow interruptions caused by blocking of work (impediments): 8, 12% | Goal: 3, 5% or less.

Top reason

- BI: **B**locked for lack of **I**nformation
- BR: **B**locked for lack of **R**esource
- **BD: B**locked due to **D**ependency

Number and % of flow interruptions caused by Non-Availability of team members: 13, 19% |

Goal: 5, 10% or less

Top reason

- **NP: TM N**ot available due to **multiP**lexing
- NT: TM **N**ot available due to **multiT**asking
- NU TM: **N**ot available due to **U**nplanned work

Flow Efficiency =  $100 - \% \text{ Flow Interruptions} = 69\%$  | Goal: 85% or more

Average Cycle Time for Stories: 7 days | Goal: 4 days

- Average WIP for stories in Progress per team member: 2.5 | Goal: 1.5
- Average size of stories in staff-hours: 31 hours | Goal: N/4 staff-hours where N is the number of weeks in a sprint. 20 staff-hours for 2-week sprints
- Slack per person: 0% | Goal: 5% to 10%

## Root Cause Analysis

Poorly managed dependencies within as well as across teams

Rampant multiplexing : members work on 2 to 3 concurrent projects

Large WIP  
Large stories

Everyone is fully loaded without slack

## SMART Action Plan (SMART stories)

Better INVESTment in sprint backlog, and cross-team sync meetings twice a week

Reduce multiplexing over the next 4 months with more cross-functional training, and dedicated team members

Reduce avg WIP gradually each sprint over several sprints (2.5 to 2 to 1.5).

Stories to follow N/4 rule

**Management/HR hasn't yet agreed to give "slack"**

# Release Feedback System: Experienced through Release Reviews and Release Retrospectives

- **Effective release reviews and retrospectives:** essential for strategic improvements at the program or organizational level
  - Time-to-market reduction, productivity improvements, quality improvements, release cost reductions, etc.
- **Review Primary feedback**
  - Primary feedback must indicate whether and how well the release-level objectives are achieved
- **Review Derivative feedback** on the feedback on a sequence of Sprint Retrospectives
  - Derivative feedback must identify any systemic issues coming from a sequence of sprint retrospectives to enable learning and process improvements by a program or the organization

# Effective and Efficient Release Retrospectives

Product Name: Release ID

## A) Did we meet the Release Objectives?

- Yes/No
- If No, analyze the reasons (10 min)

## C) Discuss Strategic Metric: 30 min

- Field data on product feature usage
- Concept to customer value cycle time
- Release cost
- Release productivity
- Quality

### Review Derivative Feedback on Sprint Feedback

- Analyze Sprint Retrospective Summary over a sequence of all sprints in the release cycle

## B) What Worked Well and will be Continued, and What was problematic & will be changed: 20 min




- Team consensus on up to top 3 factors in each category

## D) Develop **SMART** Strategic Action plan to Improve: 45 min

- Product feature usage
- Concept to customer value cycle time
- Release cost
- Release productivity
- Quality
- Identify organizational causes for Sprint Derivative Feedback
- Prepare inputs to revise the Strategic Plan, if needed

## E) Capture the results of Release Retrospective in the agile tool, including **SMART** Epics in the next release backlog: 15 min

# Derivative Feedback on Sprint Feedbacks: Discuss during Release Retrospective

<input type="checkbox"/> Title	Sprint	Summary
<input type="checkbox"/>  Sprint 1 Retrospective	Sprint 1	<p><b>Worked well:</b> Use of VersionOne as the agile tool provided us an integrated project database with good transparency</p> <p><b>Top Problem:</b> Too many stories accepted in the last few days of the sprint</p> <p><b>SMART 1:</b> Learn how to Apply rigorous WIP controls to Kanban storyboard.</p>
<input type="checkbox"/>  Sprint 2 Retrospective	Sprint 2	<p><b>Worked Well:</b> Vertically split small features improved estimation and planning</p> <p><b>Top Problem:</b> Daily Scrum meetings were not very effective as people usually weren't prepared for the meeting</p> <p><b>SMART 1:</b> Implement the Kanban board with WIP control in VersionOne platform production environment</p> <p><b>SMART 2:</b> Use the Recommended Taskboard for planning, tracking and reporting in Daily Scrums</p>
<input type="checkbox"/>  Sprint 3 Retrospective	Sprint 3	<p><b>Worked Well:</b> Coordination among team members facilitated by Daily Scrum meetings</p> <p><b>Top Problem:</b> Some stories were too big; we should have split them into smaller stories</p> <p><b>SMART 1:</b> Evaluate open-source continuous Integration platform, such as Hudson</p> <p><b>SMART 2:</b> Engage Satish Thatte (our Agile Coach) to coach us on writing well INVESTED stories</p>

## Review Derivative Feedback on Sprint Retrospectives:

- Over a sequence of sprints in a release, are the trends in the right direction?
- Are we actually improving as planned? Do we see expected benefits?
- Are there organizational impediments? If so, what are their root causes?
- What actions are needed to fix those root causes?

# Strategic Action Plan following Release Retrospectives

Strategic Metric	Measurement Approaches	Action Plan to Address Issues
A. Field data on product feature usage	Customer surveys for feature usage <ul style="list-style-type: none"> <li>• Feature usage distribution and frequency</li> <li>• Features that are missing</li> <li>• Features that need to be improved or simplified</li> </ul>	<ul style="list-style-type: none"> <li>• Discontinue rarely used features</li> <li>• Add important missing features or epics</li> <li>• Improve, simplify or streamline features with poor user experience</li> </ul>
B. Concept to Customer value cycle time	<ul style="list-style-type: none"> <li>• End-to-end cycle time</li> <li>• End-to-end process bottlenecks</li> <li>• (Value producing time / Total cycle time)</li> </ul>	Reduce end-to-end cycle time by simplifying and streamlining the process, reduce delays, and remove bottlenecks
C. Release cost	Fully loaded development and delivery costs: people, material, equipment, licenses, shared IT service charges, etc.	<ul style="list-style-type: none"> <li>• Reduce development and delivery costs               <ul style="list-style-type: none"> <li>○ Eliminate rarely used features (see Measure A )</li> <li>○ Improve teamwork</li> <li>○ Increase automation</li> </ul> </li> </ul>
D. Release productivity = (Release velocity / Release cost)	Normalize the velocity numbers across sprints and teams to account because story points across sprints and teams may represent different amounts of work.	<ul style="list-style-type: none"> <li>• Improve team work, cross-functional team training</li> <li>• Reduce release cost (see Measure C)</li> </ul>
E. Quality	Number of customer-reported new issues: Typically reported on a quarterly basis or for the entire release cycle.	<ul style="list-style-type: none"> <li>• Improve quality with reviews for feature specification, design, code</li> <li>• Offer training and resources for test-driven development, refactoring, test automation, and technical debt reduction</li> </ul>



# Summary

	Daily Feedback System	Sprint Feedback System	Release Feedback System
Experienced with	Daily Scrums, Story Board, Burn-Down, Burn-up	Sprint Reviews and Retrospectives	Release Reviews and Retrospectives
Focused on	Individual team members & team	Agile teams and projects	Projects, Programs, Portfolios, and Organization
Primary Feedback	Feedback loop between daily commitment and its fulfillment: Enabled by Full-Spectrum Taskboard, Testboard, Time-Flow Machine	Feedback loop between Sprint goals and accomplishments; SMART action plan drives SMART stories in the next sprint, and SMART epics over next several sprints	Feedback loop between Release goals and accomplishments, captured with Strategic Metrics: Time-to-market reduction, productivity improvements, quality improvements, release cost reductions, etc.
Derivative Feedback	Feedback necessary to allow Relentless improvements to deliver on daily commitments	Are SMART actions giving the expected results? Is the team regressing from or building upon prior improvements?	Is the program or organization regressing from or building upon prior improvements?
Tools	Daily Scrum with Full-Spectrum Taskboard, Testboard, and Time-Flow Machine	SMART Stories SMART Epics Sprint retro reports	Strategic metrics system, and implement action plan to improve strategically

**Nurtures a Learning Organization Striving for Relentless Improvements**

# Summary and More Information

- Accelerated learning and improvements using effective feedback systems for **Daily Scrums, Sprint and Release Reviews and Retrospectives**
  - Strong in Evidence, Context, Consequence, and Actions
- **Full Spectrum** Taskboard and Testboard
- **Time-Flow** Machine at the story level
- Derivative feedback at no extra cost

Making Daily Scrums Really Effective and Efficient:

<http://bit.ly/ODMybj>

Making Sprint Retrospectives really Effective:

<http://bit.ly/R0Kyfa>

Making Release Retrospective Strategic and Effective:

<http://bit.ly/GYGePS>

The 4-Step Action Plan for Agile Health:

<http://bit.ly/1nCaMJ3>

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