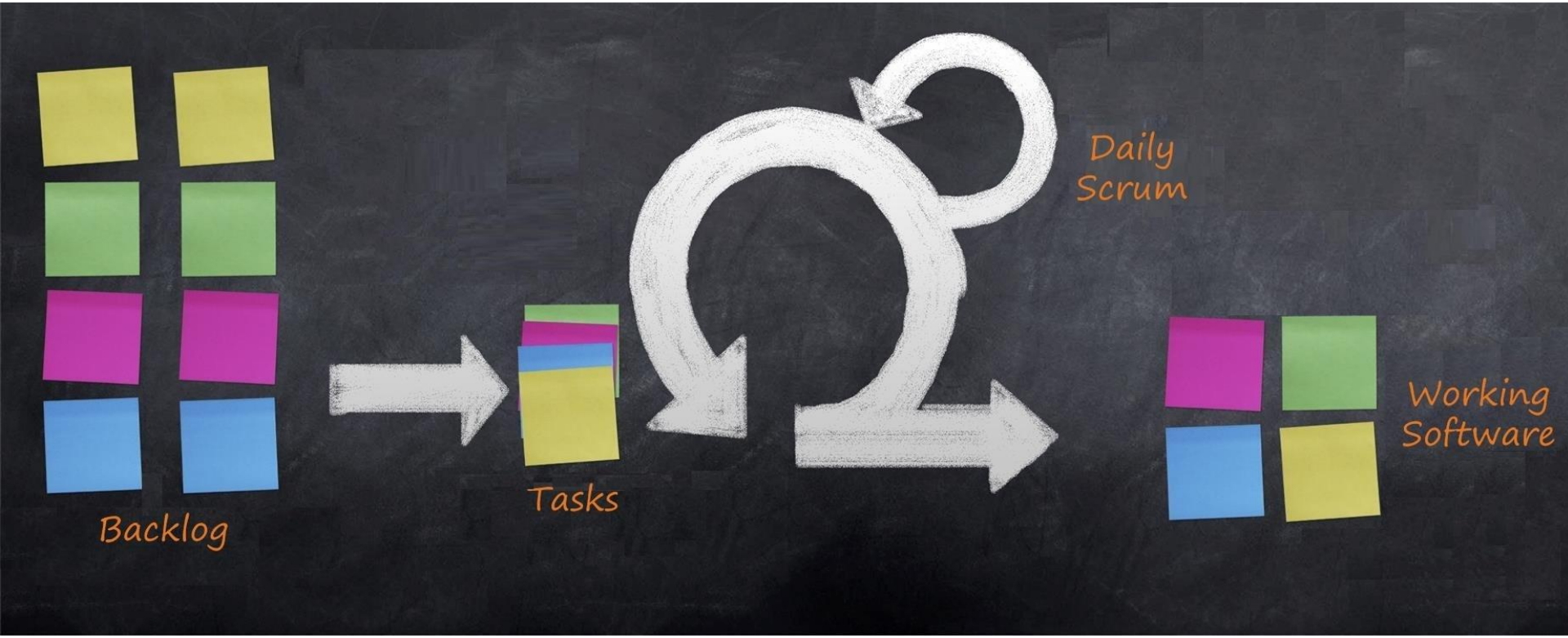
Agile Metrics



Optum
Scalable
Agile
Method

Learning Objectives

After completing Agile Metrics

- You will understand Optum's Agile Metrics Strategy
- You will know how to navigate to the Optum Metrics and Dashboard pages to dig more deeply into Agile Components and Dashboards
- You will understand how to read Burndown, Burnup, and Cumulative Flow diagrams
- You will understand the Feature Cycle Time metric and how Feature Cycle Time is measured at Optum
- You will know how to access and read the OSAM PI Health dashboard
- You will know how to access and take the OSAM Capability Assessment and create an Action Plan

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Agenda

- Agile Metrics – Strategy and Resources
- Burndown and Burnup Charts
- Cumulative Flow Diagrams
- Feature Cycle Time
- OSAM PI Health Assessment Dashboard
- OSAM Capability Assessment

Agile Metrics – Strategy and Resources

Agile Metrics

Working software is the
primary measure of progress.

We should strive to show transparency with respect to:

- Our commitments
- Our delivery against those commitments

An understanding of the metrics will allow for teams and programs to inspect and adapt to improve.

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Key Responsibilities for Agile Leaders

- Regularly monitor the metrics within the agile tool for accuracy, trends, areas for concern, and general release health.
- Utilize the metrics to help make informed decisions to benefit the program, team, and processes.
- Coach program leadership and team members to understand the metrics and to encourage appropriate agile behaviors

Agile Metrics → Agile Behaviors → Agile Mindset

True agile metrics are key to transforming our organization to agile

Tracking Metrics

Metrics that we want to drive to a certain target or range for all teams across the organization

Example: Feature Cycle Time

Execution Metrics

Metrics that inform on program and project execution

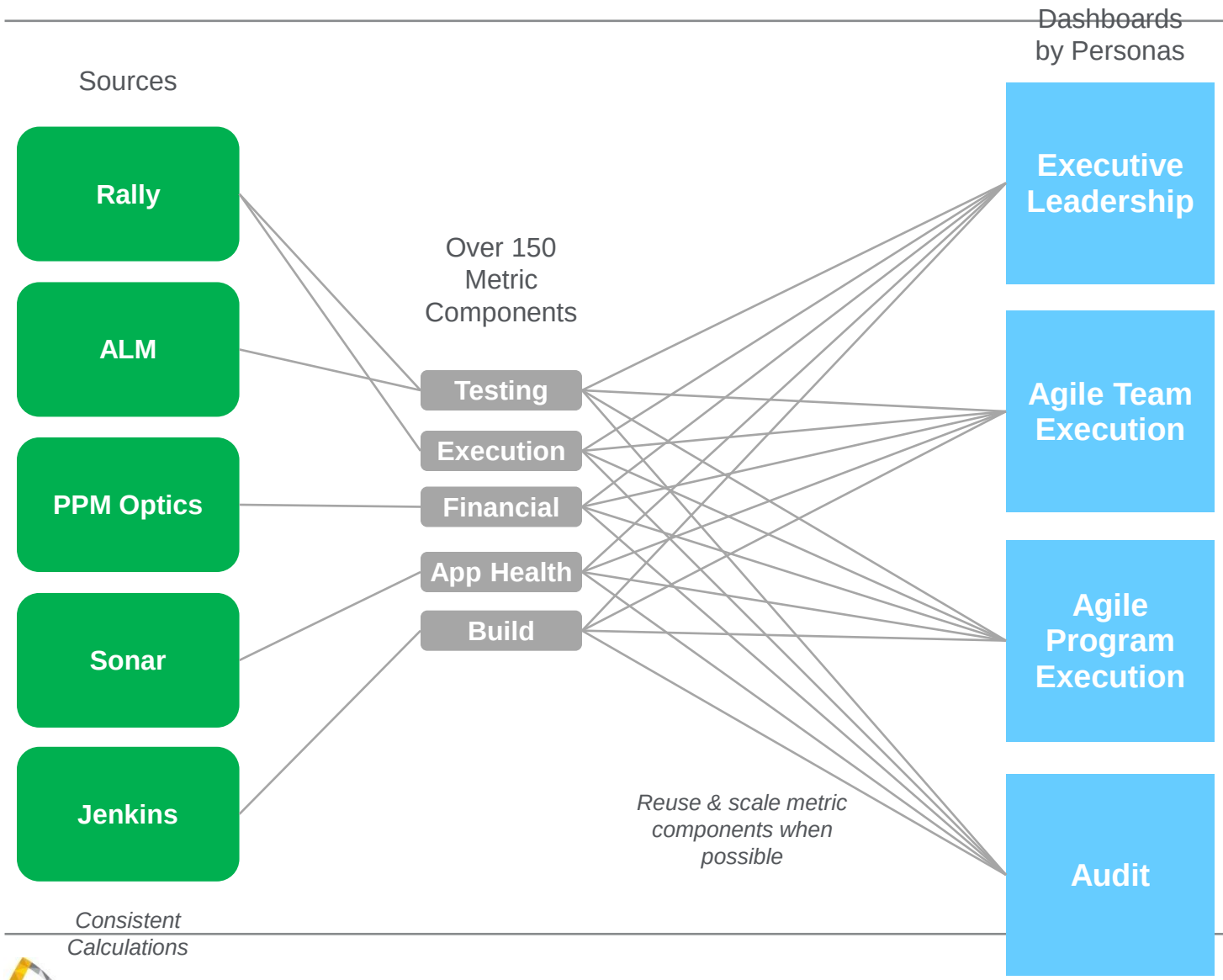
Example: OSAM PI Health Assessment

Inspect & Adapt Metrics

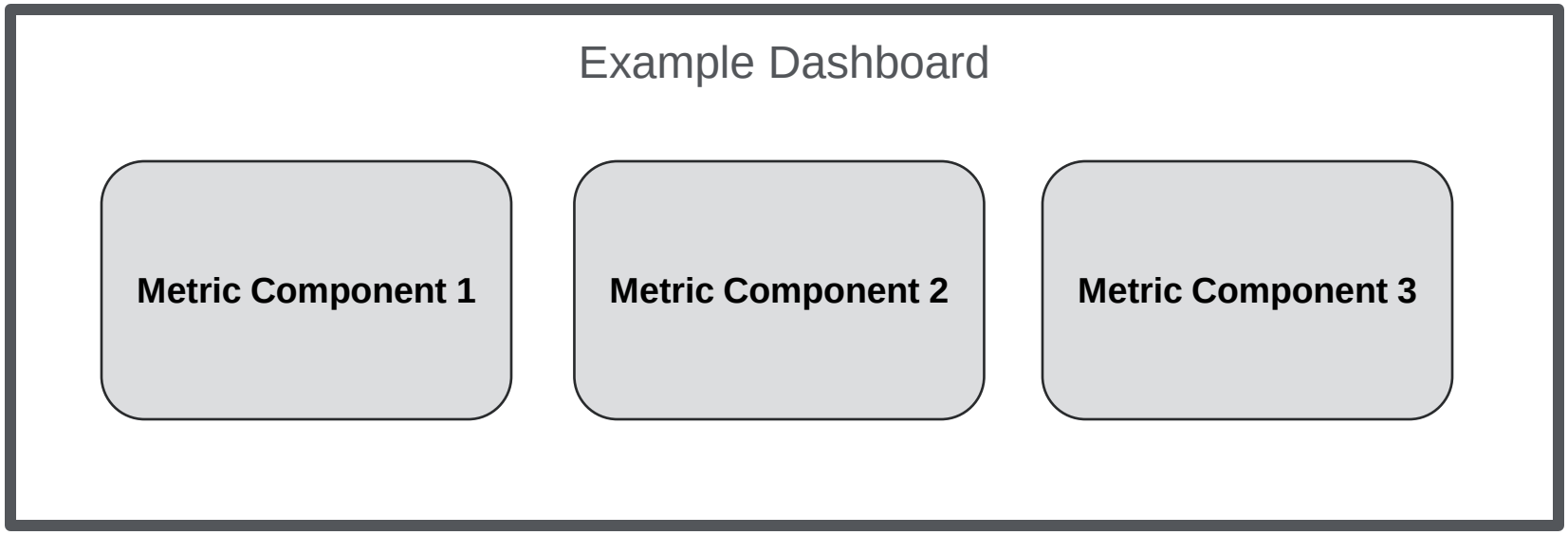
Metrics that allow teams to learn more about how they are doing and where they might have opportunity to improve

Example: OSAM Capability Assessment

Dashboard Creation going forward



Metric Components vs Dashboards



- Data Definitions accompany a Metric Component
- A Metric Component can be on more than one dashboard (example: Burndown)

Agile Dashboards

Agile Portfolio | **Agile Program** | **Agile Team** | **Coaches** | **OSAM** | **All**

- Agile Analytics
- Data Quality - Feature
- Data Quality - Team
- Feature Cycle Time
- Feature Dependencies
- OSAM Capability Report
- OSAM PI Health Assessment
- PI Scope Changes
- PI Status
- Recently Added
- Sprint Status
- User Story Dependencies

Dashboard Title Agile Analytics

Definition

Metrics, artifacts, and guidance for coaches and practitioners that will help identify areas for improvement. The information below is intended to be a guide to then have a conversation with the team; no action plans should be made without the scrum team having a conversation and coming to an agreed approach for changes they would like to make. The area for concern are just a few of the things that may be causing the problem but there may be many others, discuss more of the day to day detail with the team to get to the root cause.

Link

In CA Agile (Rally): Reports --> Report - Agile Analytics (S)

Diagram

Test Your Understanding – Metrics Strategy and Resources

2 minutes

1. Three types of metrics are: Tracking, Execution, and _____.

2. Dashboards are comprised of Metric _____.

3. True or False: Data for Metrics can come from a variety of sources

4. True or False: Measuring team velocity will allow us to compare team productivity leading to positive behaviors.

5. The Capacity vs Demand metric compares Planned Velocity vs. _____. (Look up this Metrics Component)

Metrics Strategy and Resources - Answers

1. Three types of metrics are: Tracking, Execution, and **Inspect and Adapt**.

2. Dashboards are comprised of Metric **Components**.

3. **True** or False: Data for Metrics can come from a variety of sources

4. True or **False**: Measuring team velocity will allow us to compare team productivity leading to positive behaviors.

5. The Capacity vs Demand compares Planned Velocity vs **Planned work**

Burnups and Burndowns

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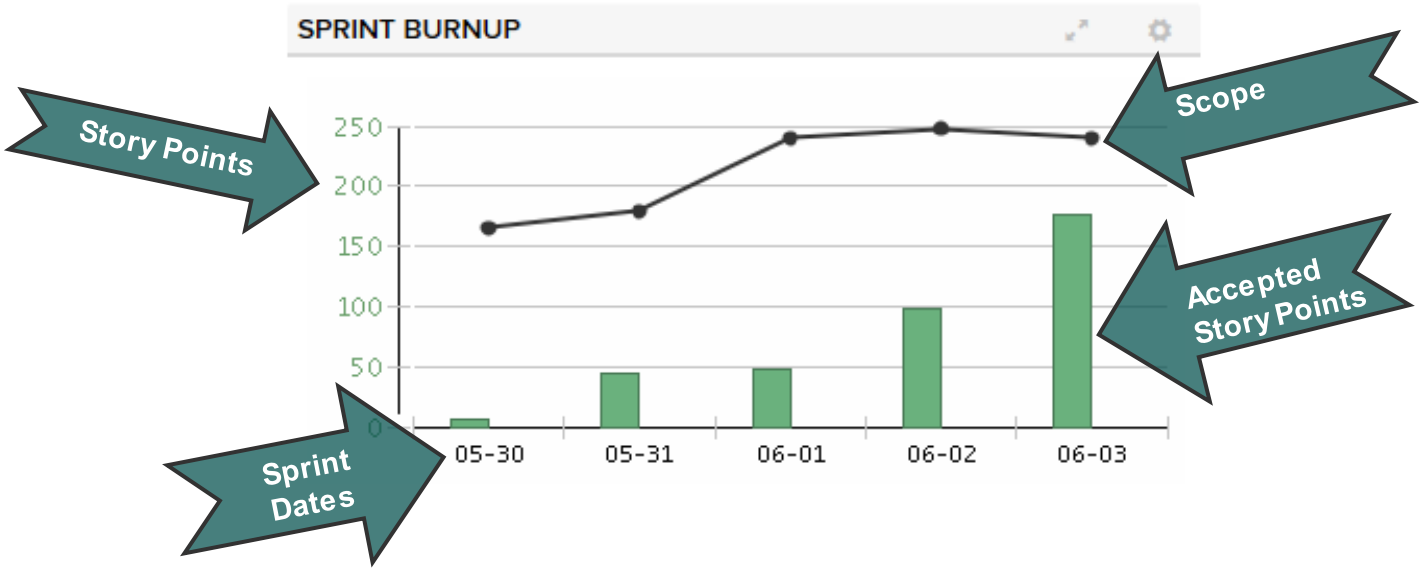
Ask questions to help understand anomalies or trends

- If there are areas of concern in the data:
  - Don’t assume root cause without conversation and analysis
  - Don’t apply modifications to processes or procedure without team input and understanding
  - Inspect and Adapt on how to improve
  - Seek assistance within the agile community if you need help understanding trends
- But everything looks perfect!
  - Do more digging

Sprint Burnup



Sprint burnup displays work delivered so far in the sprint to anticipate whether the sprint scope will be delivered.

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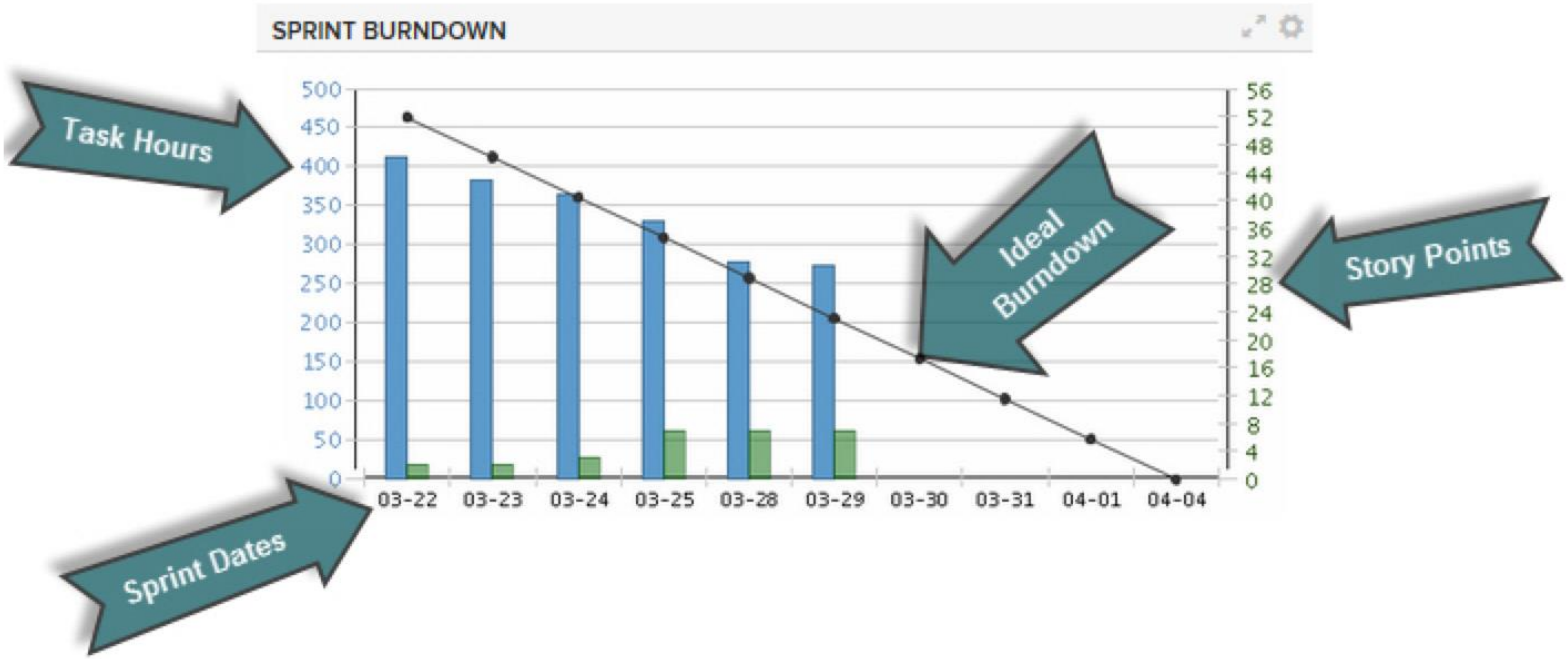
Sprint Burndown



The Sprint burndown displays work remaining and completed in the sprint to proactively anticipate whether the committed work will be delivered by the sprint end date.

Test Your Understanding

For each of the next four reports:

What observations do you have?

What questions would you ask?

5 minutes

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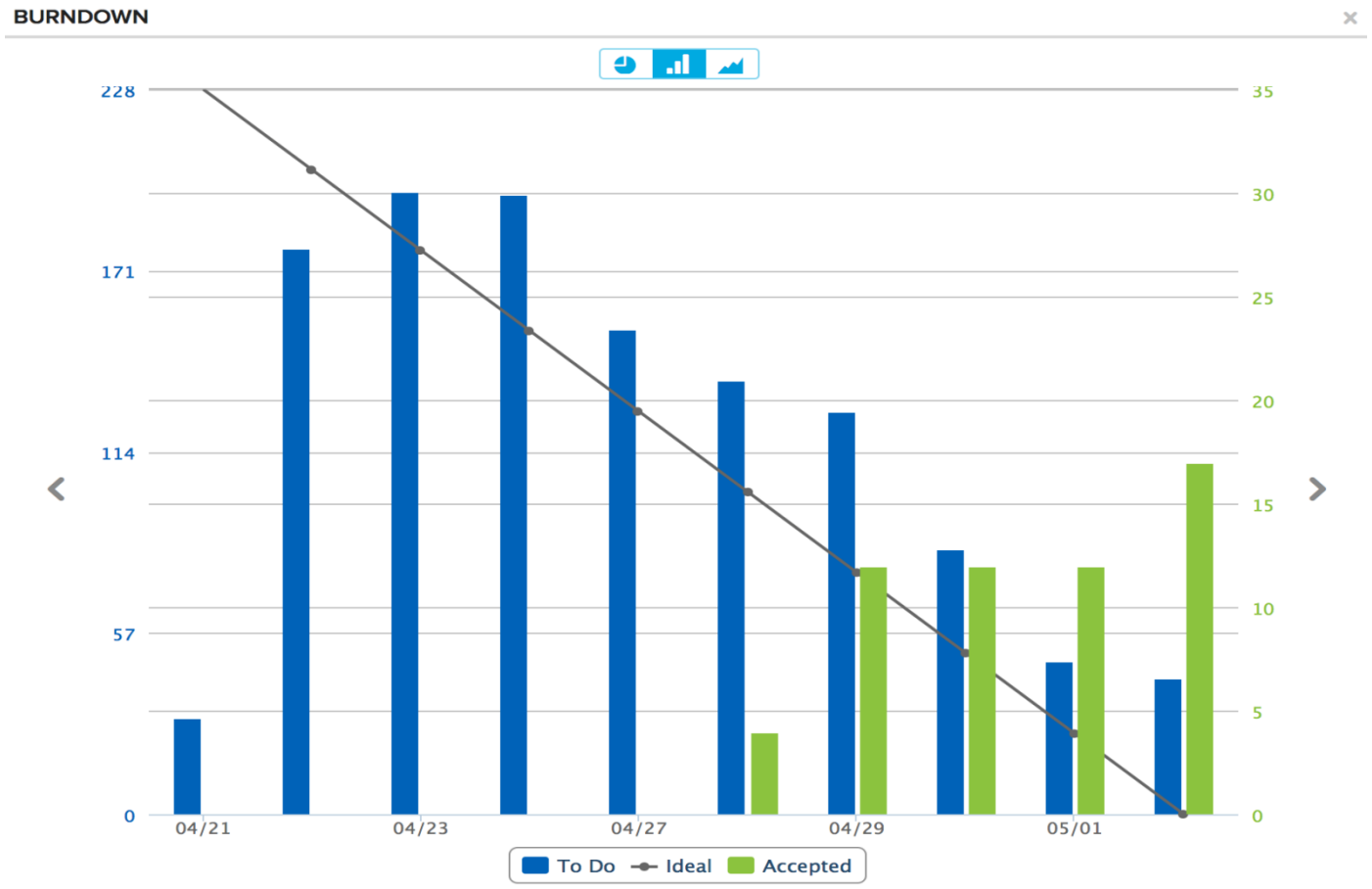
Sample Metrics



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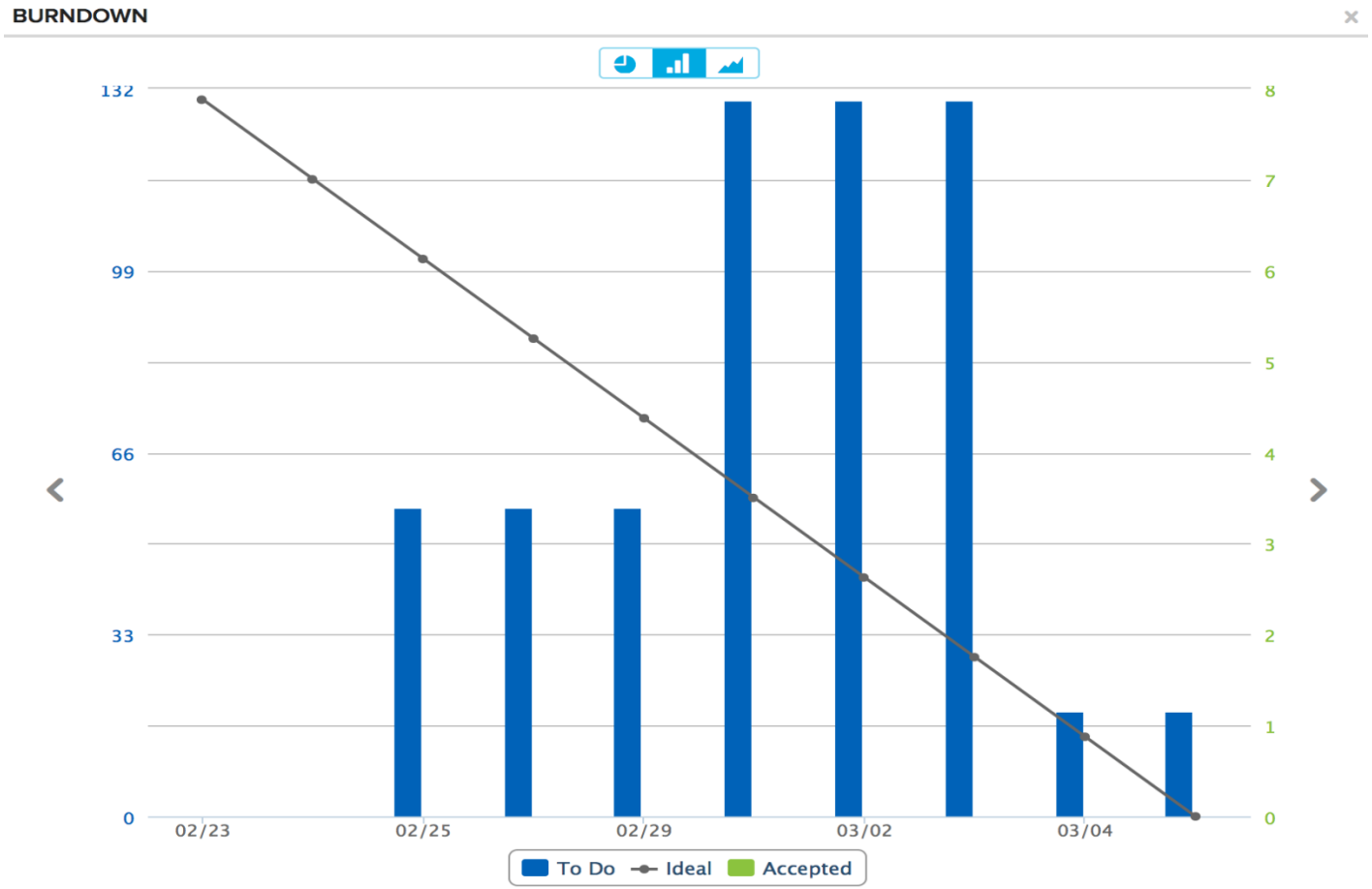
Sample Metrics



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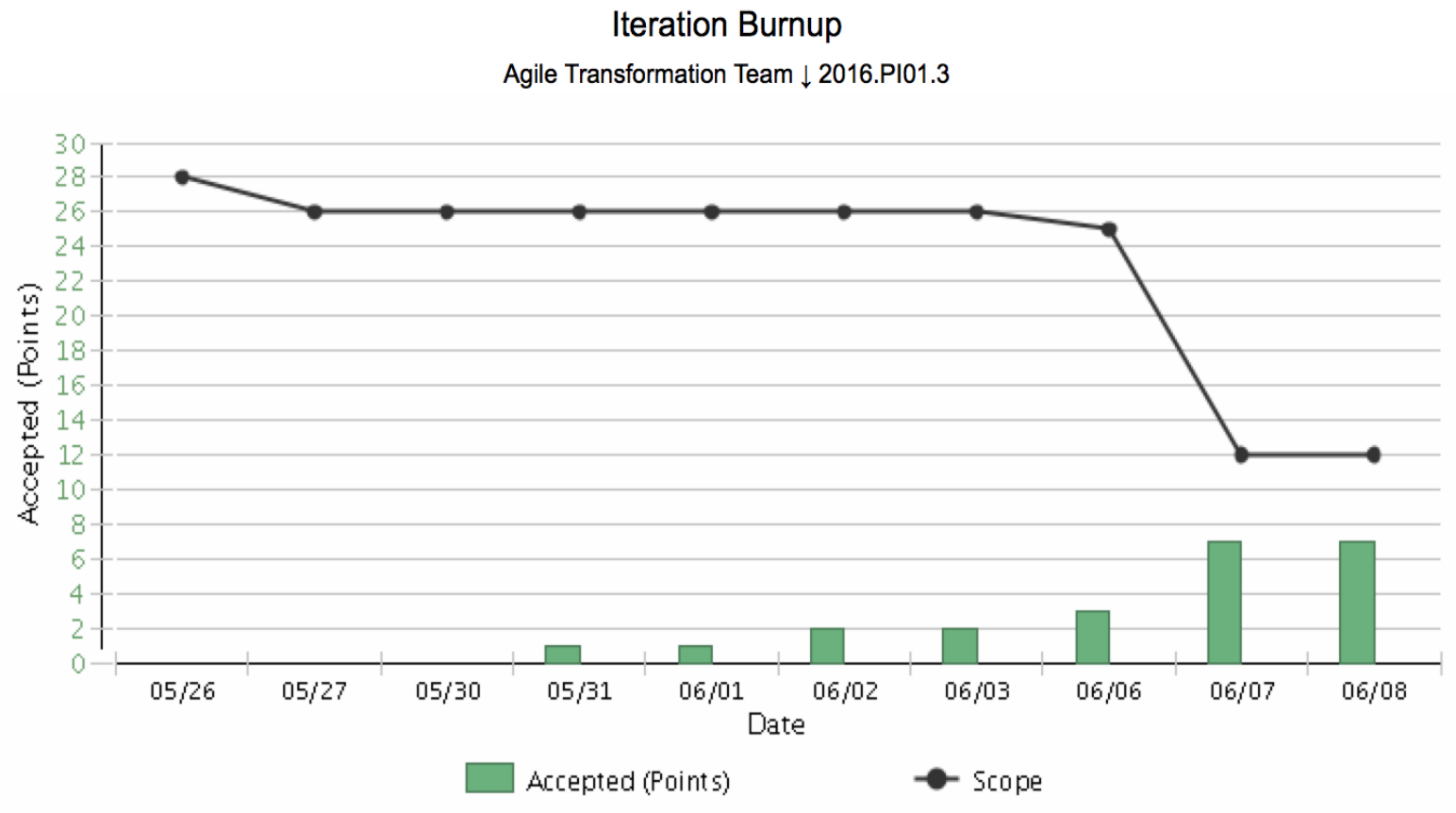
Sample Metrics



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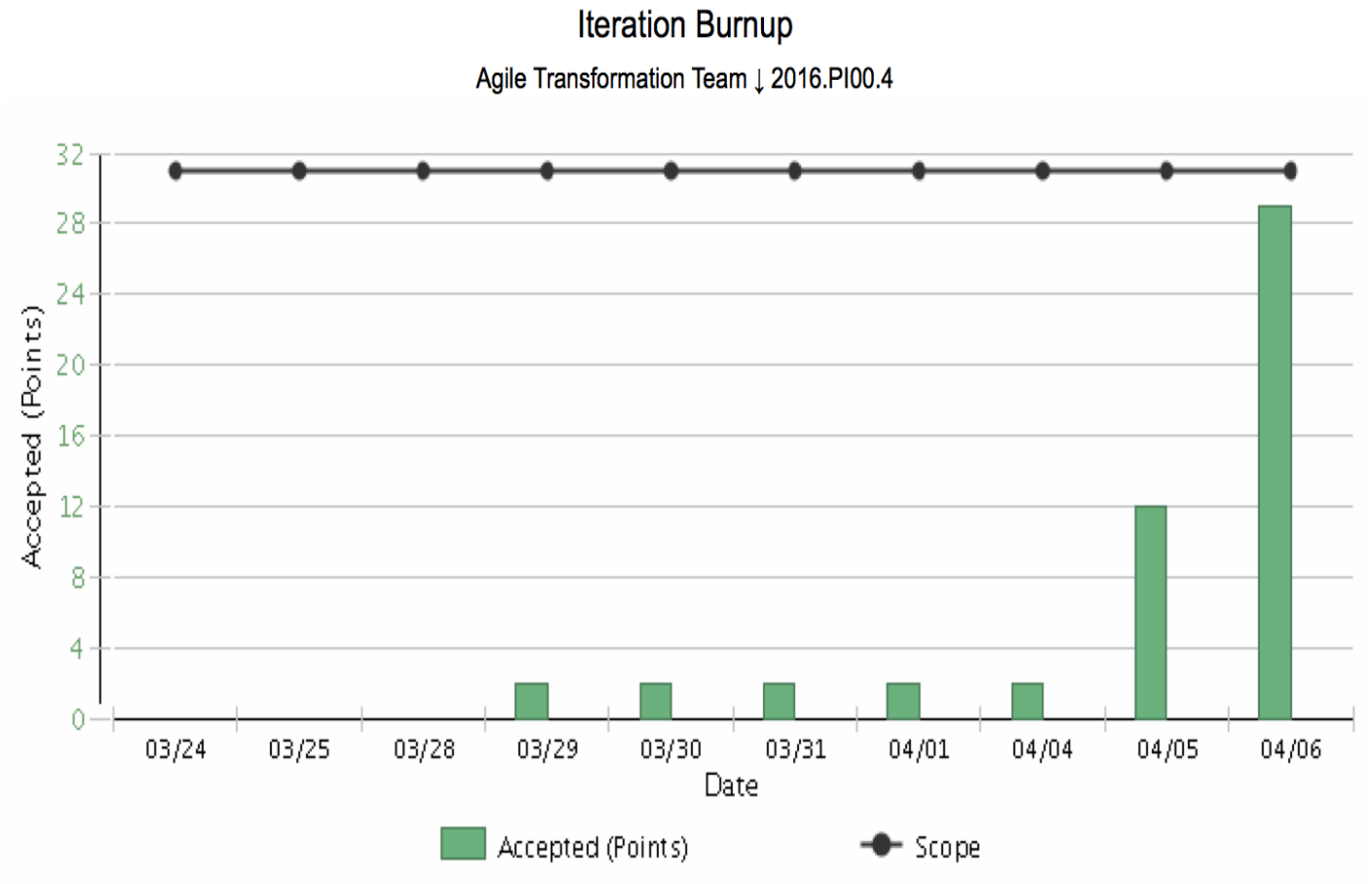
Sample Metrics



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Cumulative Flow Diagrams

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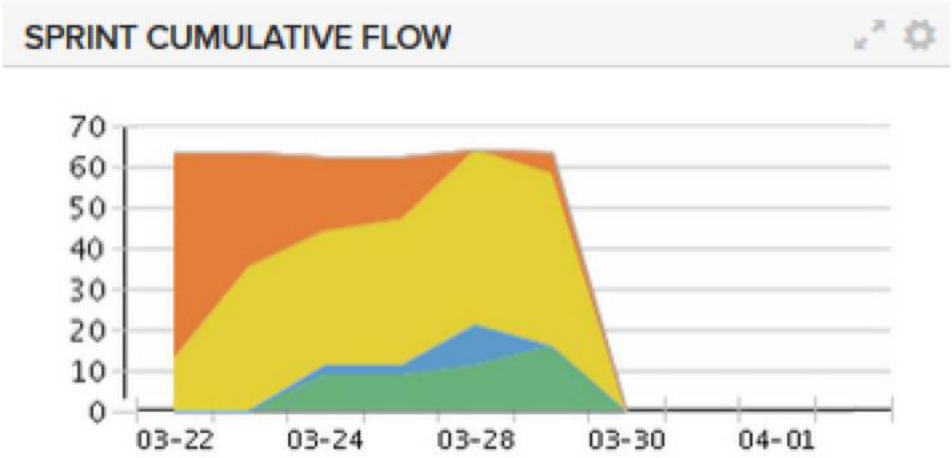
Sprint Cumulative Flow



Cumulative Flow allows you to view the states of work in the sprint to analyze the trend in lead time for delivery of working code.

Test Your Understanding

For each of the following Cumulative Flow Diagrams:
What observations do you have?

What questions would you ask?

3 minutes

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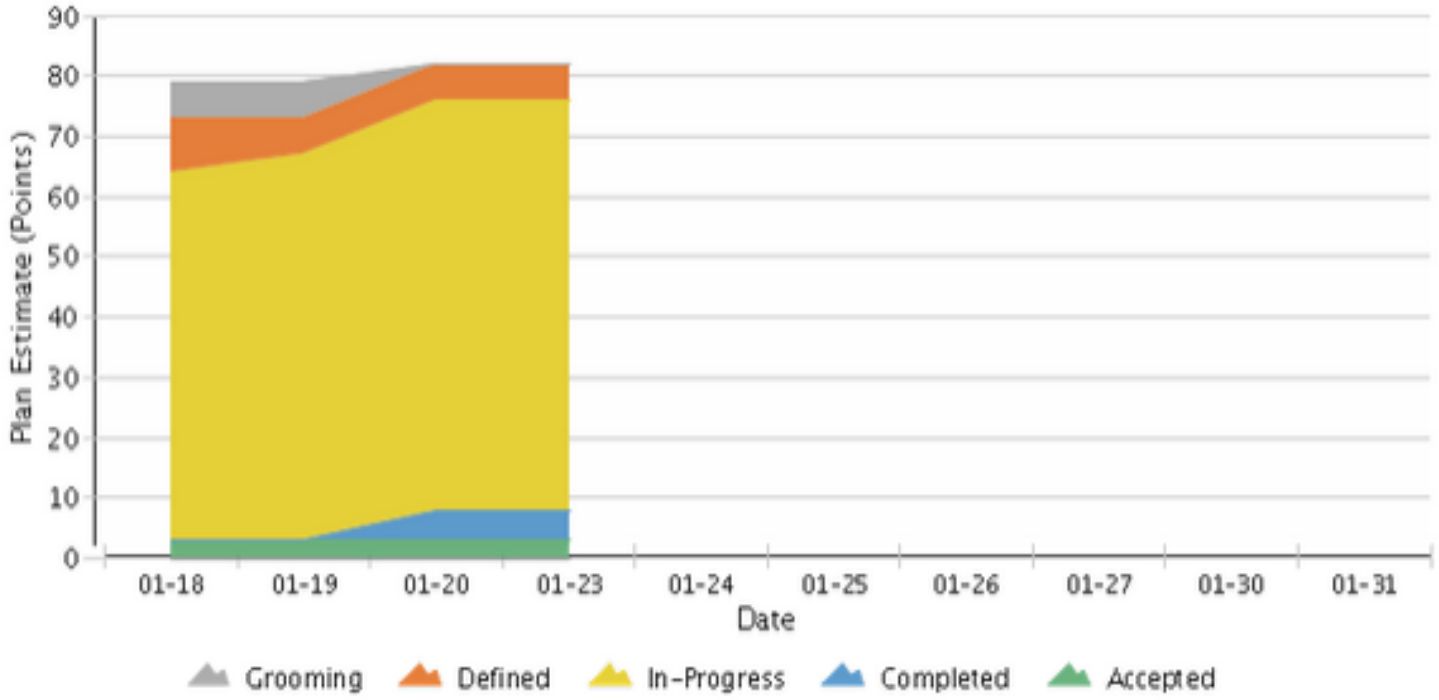
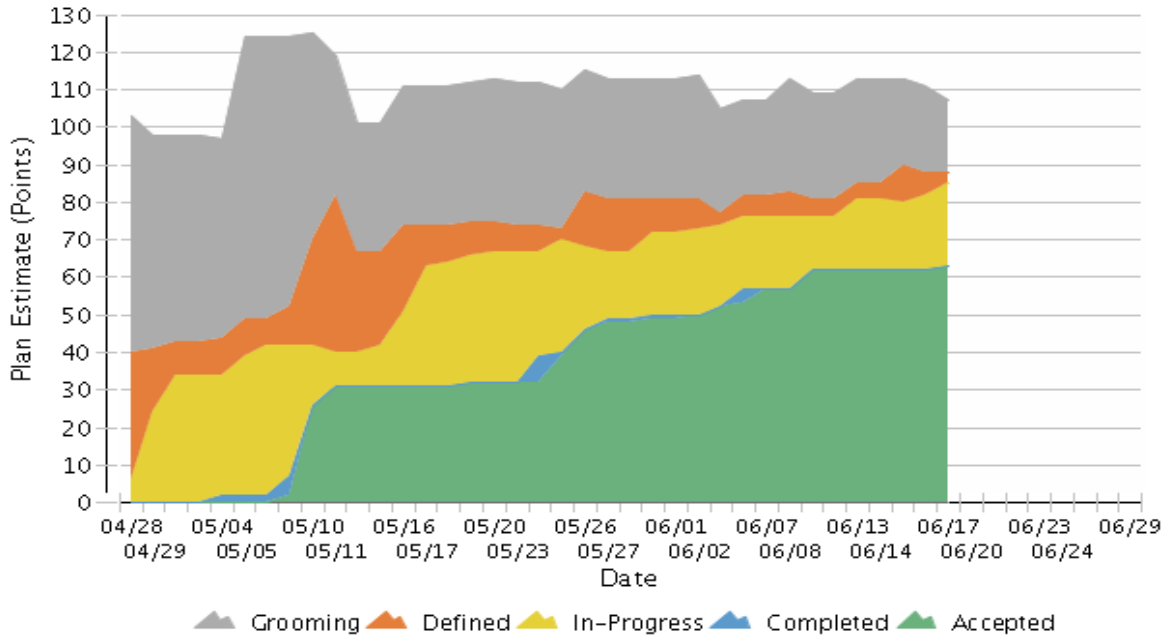
Sample Metrics



Optum Scalable Agile Method

Sample Metrics



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Feature Cycle Time

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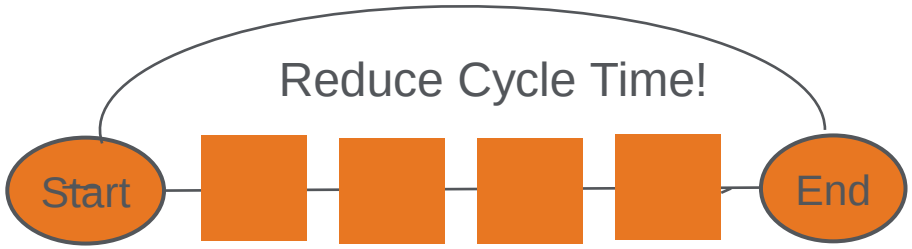
Feature Cycle Time Definition

Feature cycle time is a metric that provides a **graphical representation** of **how long it takes to get features from a starting point to an ending point**.

Evaluation of cycle time is a productive and adaptable approach to enhance a team's processes, the aim is to have a smaller cycle time allowing us to go from **idea to in production quicker** and matching the demands of our fast pace environment.



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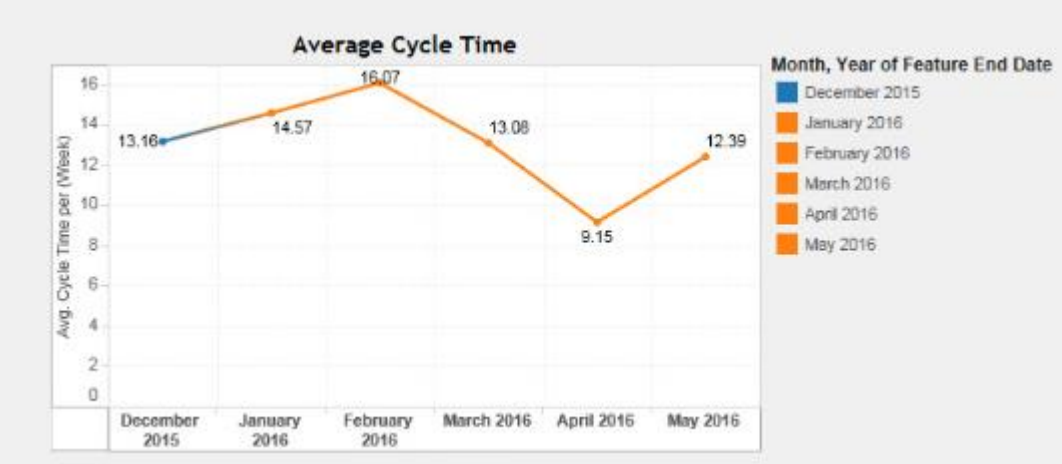
Feature Cycle Time Metric

- Feature Cycle Time = Feature end date – Feature start date (measured in weeks)
- Aim for an average of 4-8 weeks and below 10 weeks (to fit within a PI)
- Aim to reduce cycle time allowing ideas to go into production more quickly.
- Average Cycle Time: Line chart providing the feature's end date for the last 6 months on X-axis and average cycle time in weeks on Y-axis.



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Min/Max Cycle Time

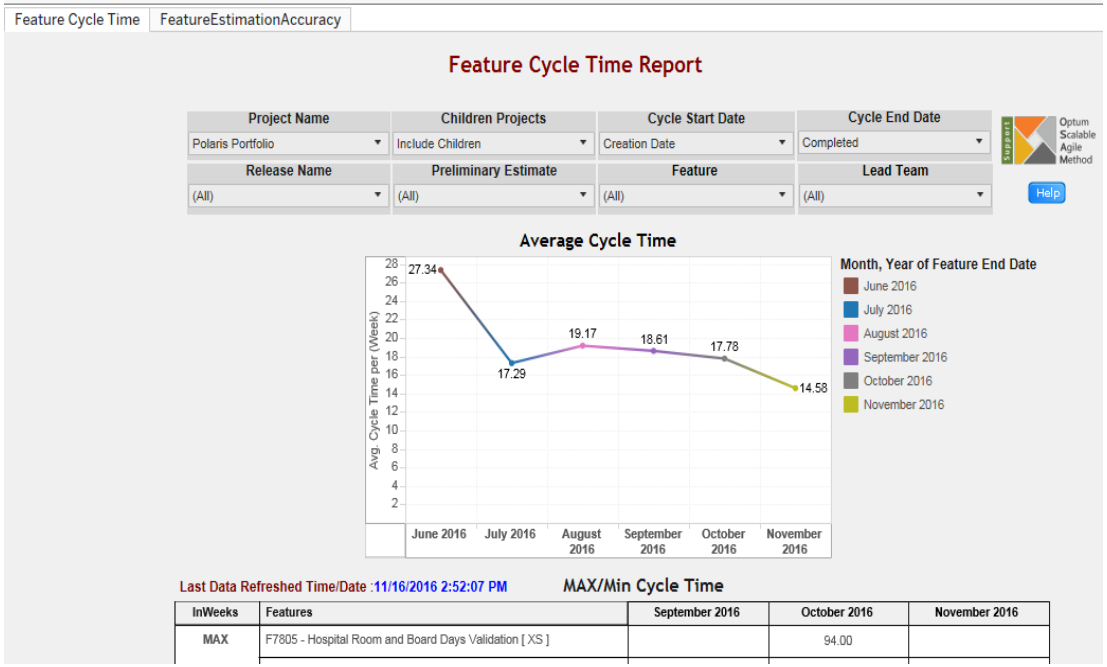
- Table providing the feature with the minimum and maximum cycle time in weeks for the last 3 months, based on the filter selections.
- Minimum excludes any features that had a cycle time of zero

MAX/Min Cycle Time

InWeeks	Features	March 2016	April 2016	May 2016
MAX	F2556 - Rally/QOS [M]	90.57		
	F7779 - Reference Data [M]			71.29
	F8401 - Provider View - REST Service Integration Work [ ]		64.00	
MIN	F33636 - EBC 2016 R2 - 28 FEB [ ]	0.14		
	F36826 - AppStore for Developers fix for Windows 10 and Edge browser compatibility [S]		0.14	
	F37950 - BI POM Metrics Enhancements R17: Support: Missing CI [M]			0.14

Feature Analytics Dashboard

- http://tableau.uhc.com/views/CAAgileCentral_Public/FeatureCycleTime
- Multiple tabs that contain information on Features.
  - Feature Cycle Time
  - Feature Estimation Accuracy



Test Your Understanding – Feature Cycle Time

1. Feature Cycle Time measures _____.

2. The ideal Feature Cycle Time is _____.

3. True or False: Hovering over the data points on the Average Cycle Time chart will show the count of stories in that month.

4. The _____ is a line chart providing the feature's end date for the last 6 month on X-axis and average cycle time in weeks on Y-axis.

5. True or False: The Min/Max Table minimum includes any features that had a cycle time of zero

Feature Cycle Time - Answers

1. Feature Cycle Time measures
   The time it takes to complete a feature.

2. The ideal Feature Cycle Time is **4-8 weeks**.

3. True or **False**: Hovering over the data points on the Average Cycle Time chart will show the count of stories in that month.

4. The **Average Cycle Time** is a line chart providing the feature's end date for the last 6 month on X-axis and average cycle time in weeks on Y-axis.

5. True or **False**: The Min/Max Table minimum includes any features that had a cycle time of zero

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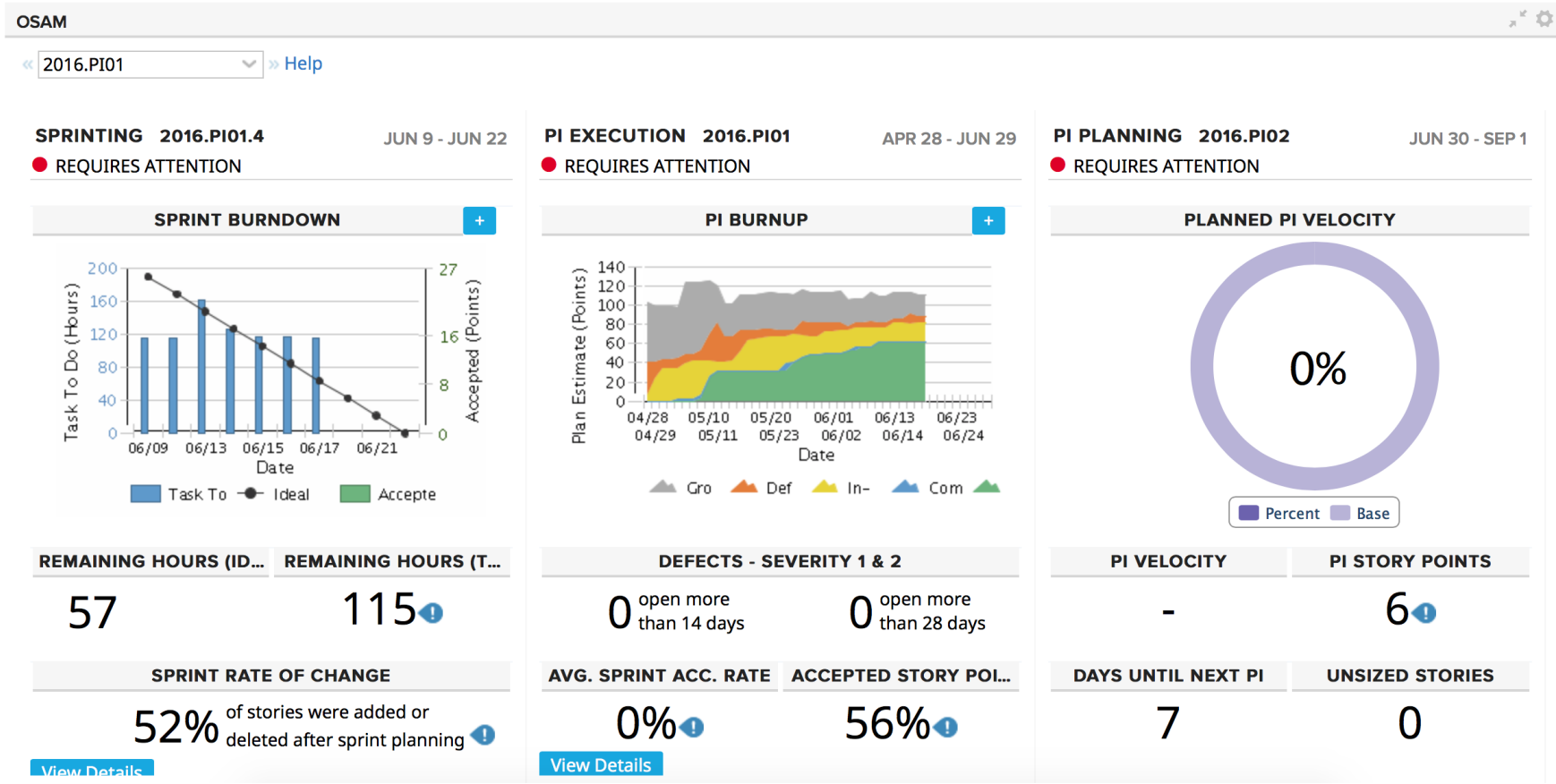
OSAM PI Health Assessment Dashboard

OSAM PI Health Assessment Dashboard



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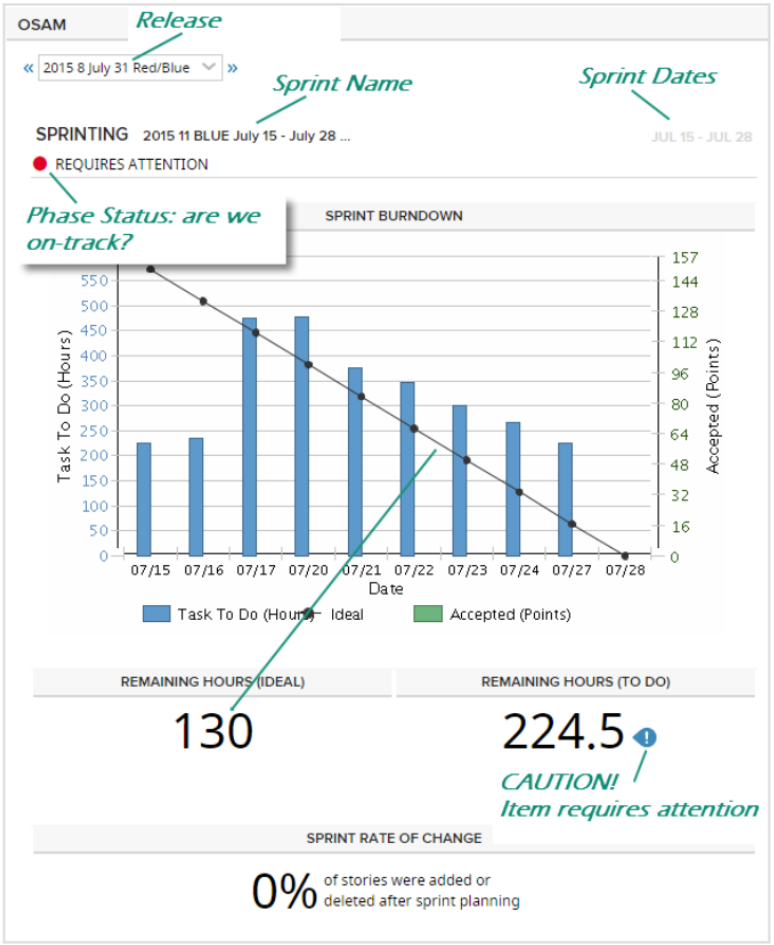
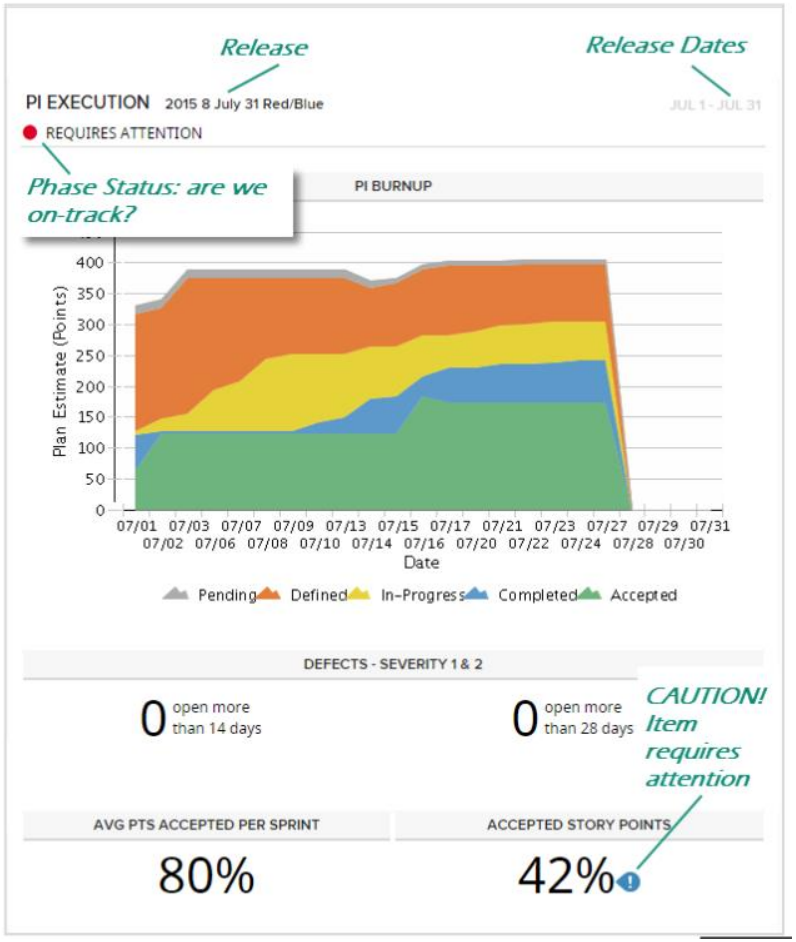
OSAM PI Health Dashboard – Sprinting



- Provides measures on effectiveness of sprint delivery.
- Steady burn down of work.
- Steady acceptance rate of stories.

OSAM PI Health Dashboard – PI Execution



- Provides measures on effectiveness of PI delivery.
- Work should be accepted through the PI.
- Work in progress should be limited.

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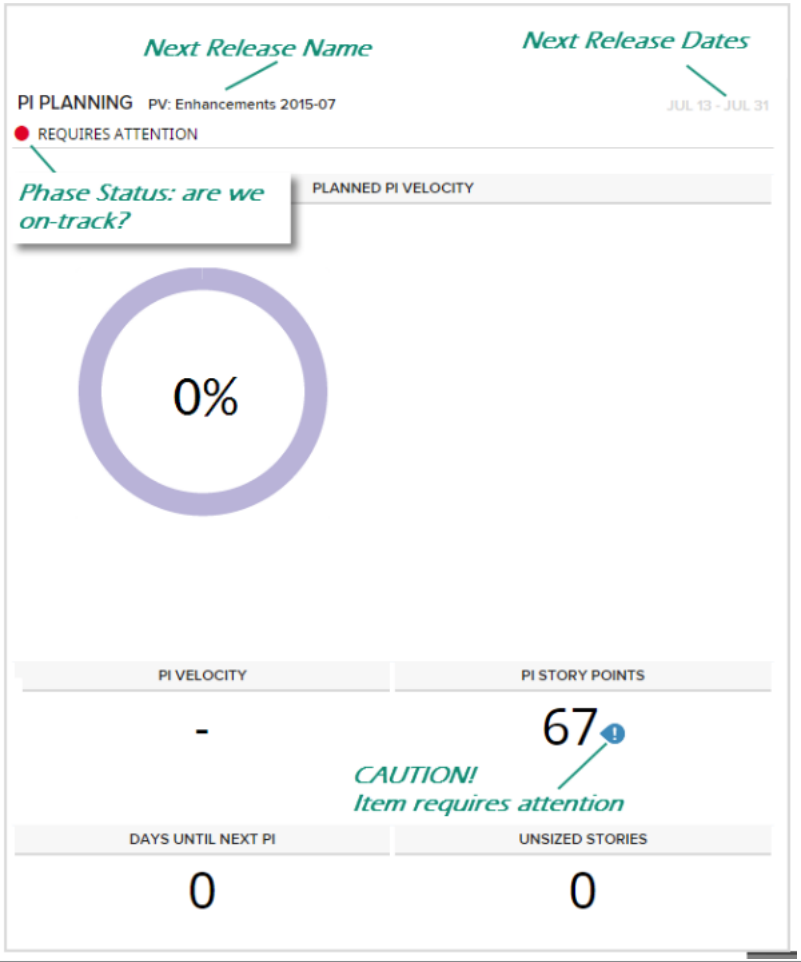
OSAM PI Health Dashboard – PI Planning



- Provides measures on PI Planning session readiness.
- Provides measures on subsequent PI.
- Backlog should have sufficient story points to satisfy planned velocity.

Test Your Understanding – OSAM PI Health Assessment

1. The three sections of the OSAM PI Health Assessment Dashboard are: _____, _____, and _____.

2. True or False: An Iteration Burndown Chart will help the team know if they are on track for the PI.

3. True or False: If the Burndown chart shows that stories are not getting accepted throughout the Sprint, the Scrum Master needs to alert the PO that he/she should be more available.

4. In the Cumulative Flow Diagram for the PI, which state do we want to limit?

5. The PI Planning portion of the OSAM PI Health Dashboard measures readiness for what event?

OSAM PI Health Assessment - Answers

1. The three sections of the OSAM PI Health Assessment Dashboard are: **Sprinting, PI Execution, and PI Planning.**

2. True or **False**: An Iteration Burndown Chart will help the team know if they are on track for the PI.

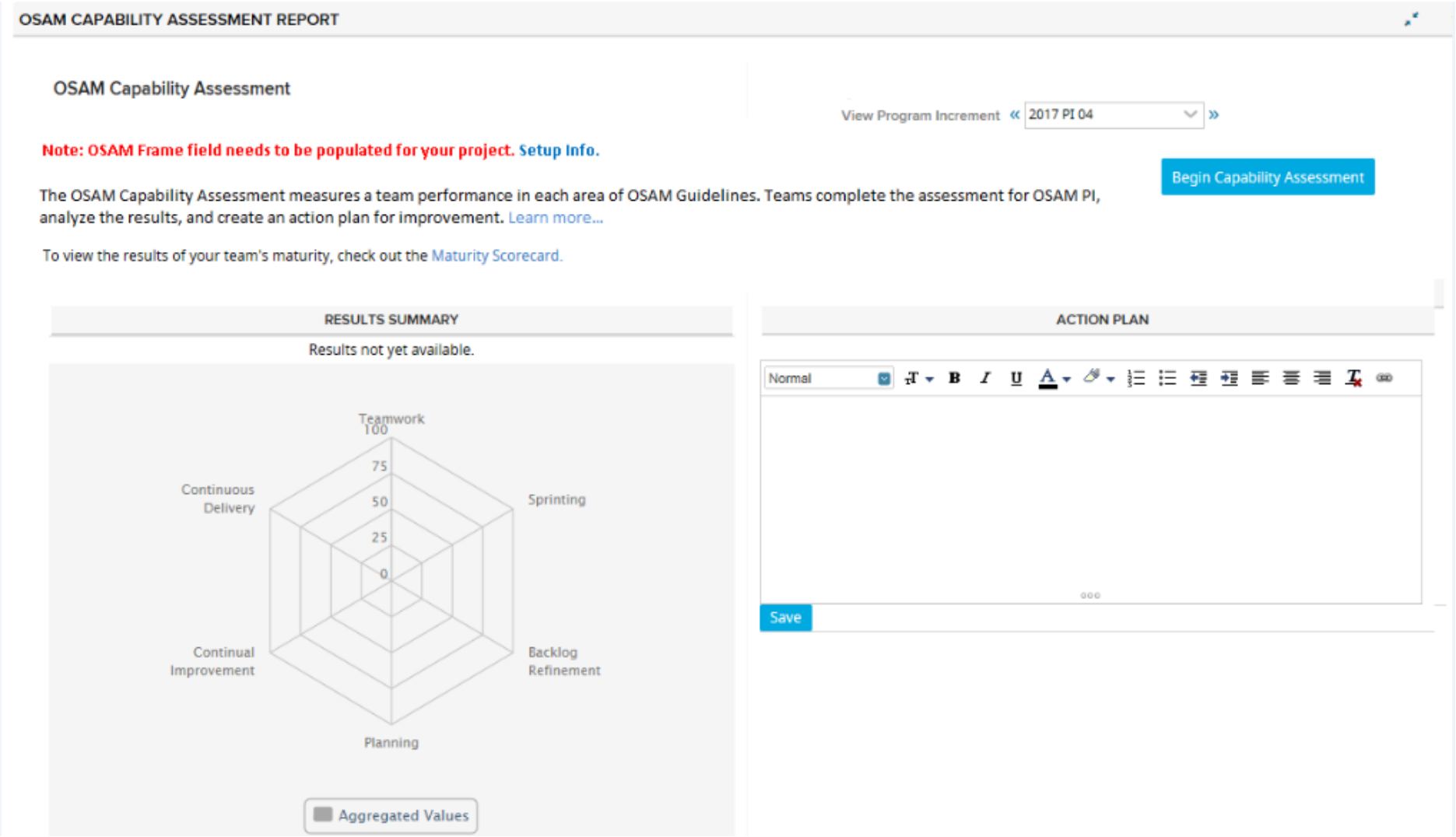
3. True or **False**: If the Burndown chart shows that stories are not getting accepted throughout the Sprint, the Scrum Master needs to alert the PO that he/she should be more available.

4. In the Cumulative Flow Diagram for the PI, which state do we want to limit? **In-Progress (WIP)**

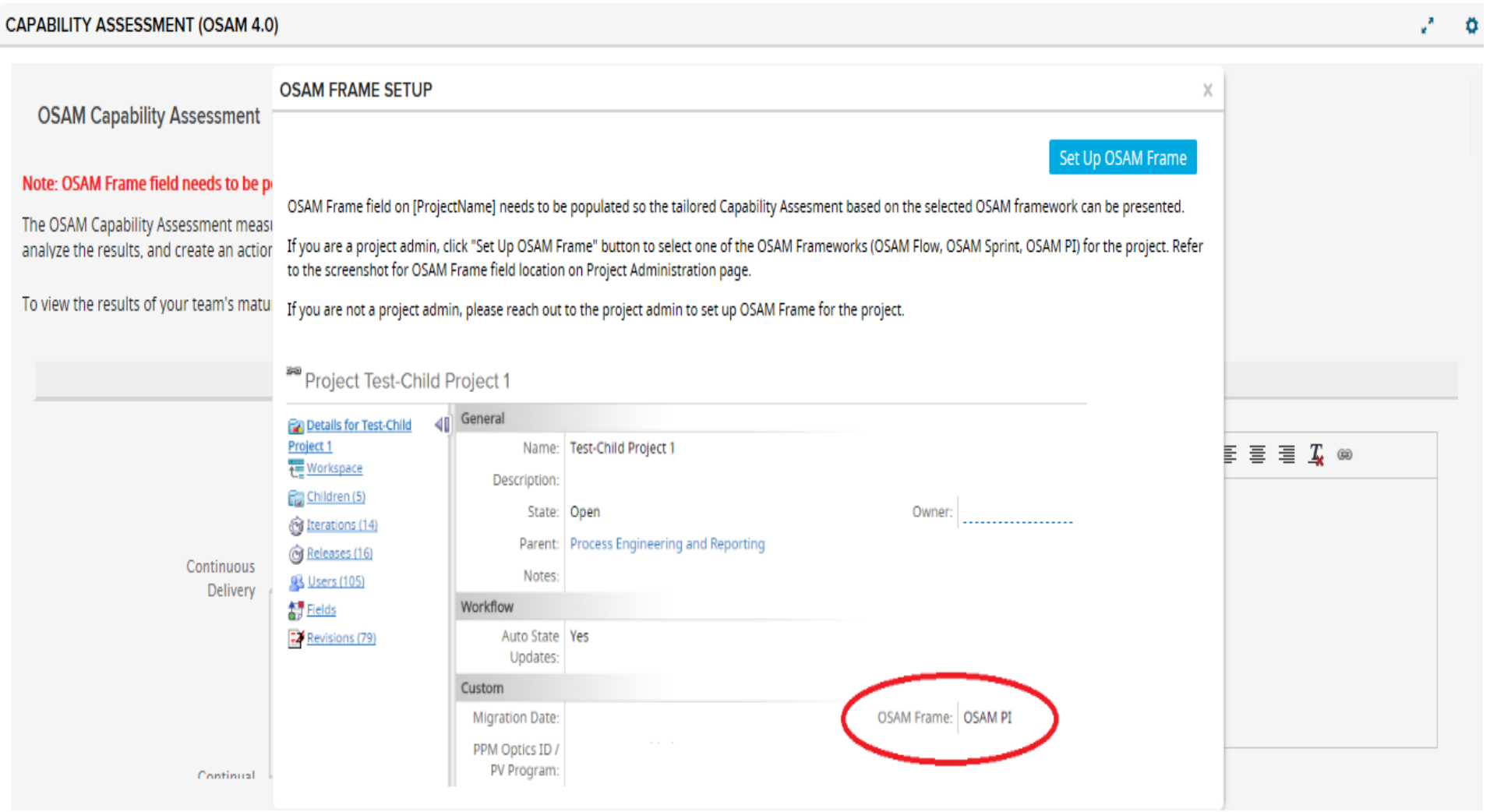
5. The PI Planning portion of the OSAM PI Health Dashboard measures readiness for what event? **PI Planning**

The OSAM Capability Assessment

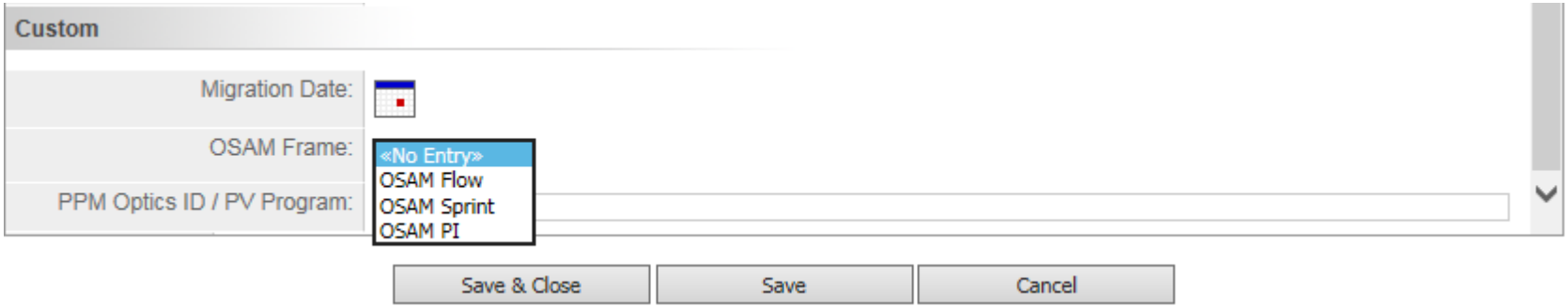
OSAM Reporting – Capability Assessment



OSAM Reporting – OSAM Frame Setup



OSAM Reporting – OSAM Frame Setting



		Flow	Sprint	PI
		42	51	55
I	**Backlog Refinement**			
1	Backlog refinement is performed by the agile team and appropriate stakeholders.	x	x	x
2	Backlog is detailed appropriately, emergent, estimated,and prioritized.	x	x	x
3	Backlog workitems are independent, negotiable, valuable, estimatable, small, testable, and meet definition of ready.	x	x	x
4	Backlog is the source of work for the team.	x	x	x
II	**Planning**			
1	PI planning event involves the agile teams and all relevent stakeholders.			x
3	Planning include identification and management of internal and external dependencies.		x	x
4	Planning result in realistic and achievable plans.		x	x
5	Planning cadence defined by team.		x	
6	Sprint planning occurs prior to sprint execution.		x	x
7	Sprint planning results in a shared commitment accepted by the team.		x	x
8	Workflows are visualized by team.	x		
9	Work in progress limits established for each workflow step.	x		
10	Minimum amount of prioritized backlog is maintained.	x		

OSAM Reporting – Capability Assessment Questions

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OSAM Capability Assessment (Program Increment)

1. Rate the following aspects of your backlog refinement efforts: *

	None or Never	Few or Seldom	Some or Sometimes	Many or Often	All or Always
The agile team and *relevant stakeholders* perform backlog refinement together.	○	○	○	○	○
The backlog has the *appropriate level of detail*, is *emergent*, has *estimates* for each item, and a *priority* assigned to each item.	○	○	○	○	○
The backlog work items are *independent*, *negotiable*, *valuable*, *estimable*, *small*, *testable*, and *meet definition of ready*.	○	○	○	○	○
Backlog is the source of work for the team. *[Details]*	○	○	○	○	○

2. Rate the following aspects of your planning activities: *

	None or Never	Few or Seldom	Some or Sometimes	Many or Often	All or Always
The PI planning event involves the agile teams and all *relevant stakeholders*.	○	○	○	○	○

OSAM Reporting – View Assessment Results

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CAPABILITY ASSESSMENT (OSAM 4.0)

OSAM Capability Assessment

View Program Increment « Q2 - OSAM Reporting »

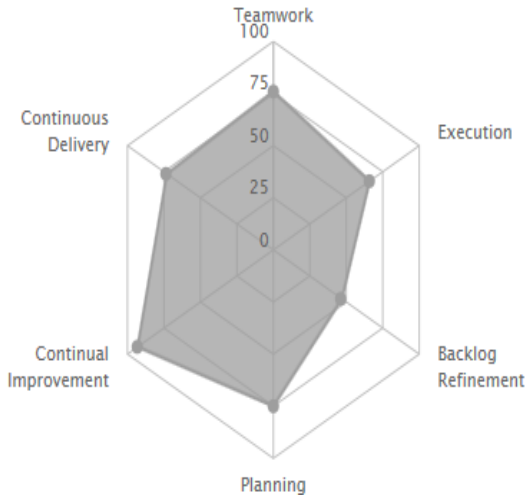
Note: OSAM Frame field needs to be populated for your project. Setup Info

The OSAM Capability Assessment measures a team performance in each area of OSAM Guidelines. Teams complete the assessment for OSAM PI , analyze the results, and create an action plan for improvement. Learn more..

Begin Capability Assessment

To view the results of your team's maturity, check out the Maturity Scorecard.

RESULTS SUMMARY View Detail



ACTION PLAN

Normal

The following action items will be worked on in the next PI:

- Are your sprint reviews:Held at the end of each sprint - ensure sprint reviews are held on each sprint
- Is your sprint planning:Occuring before the start of each sprint - Ensure planning is complete prior to sprint start.
- Is your sprint planning:2-4 hours - schedule time for planning to take place a head of time.

Save

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Test Your Understanding – OSAM Capability Assessment

1. The OSAM Capability Assessment has ___ scores.

2. True or False: The Scrum Master assesses the team using the OSAM Capability Assessment.

3. True or False: The OSAM Capability Assessment can be accessed in CA Agile Central.

4. True or False: The team must put an Action Plan in place for any areas in which they didn't score high.

5. True or False: The RTE must roll up the scores from the teams at the end of each iteration.

OSAM Capability Assessment: Answers

1. The OSAM Capability Assessment has **6** scores.

2. True or **False**: The Scrum Master assesses the team using the OSAM Capability Assessment.

3. **True** or False: The OSAM Capability Assessment can be accessed in CA Agile Central.

4. True or **False**: The team must put an Action Plan in place for all areas in which they didn't score high.

5. True or **False**: The RTE must roll up the scores from the teams at the end of each iteration.

Q&A

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Other Helpful Metrics

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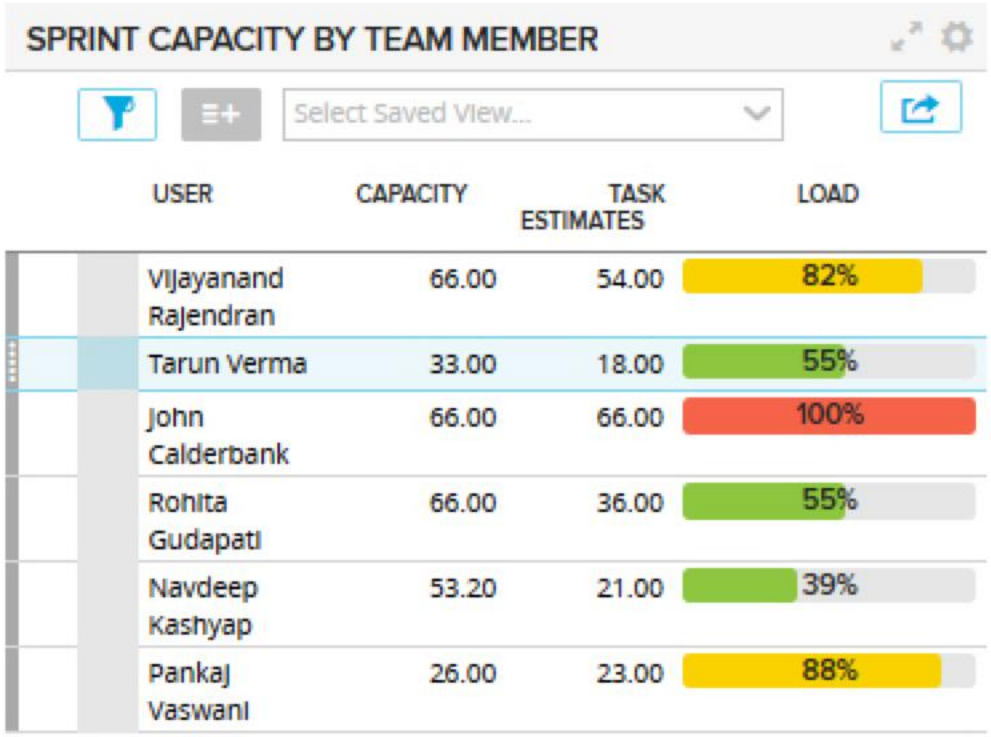
Sprint Capacity by Team Member



USER	CAPACITY	TASK ESTIMATES	LOAD
Vijayanand Rajendran	66.00	54.00	82%
Tarun Verma	33.00	18.00	55%
John Calderbank	66.00	66.00	100%
Rohita Gudapati	66.00	36.00	55%
Navdeep Kashyap	53.20	21.00	39%
Pankaj Vaswani	26.00	23.00	88%

The Sprint Capacity application displays each team member, capacity, task estimates and load for the sprint.

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Sprint Changes, Recently Changed and Dependencies

Managing sprint changes and dependencies available on dashboards

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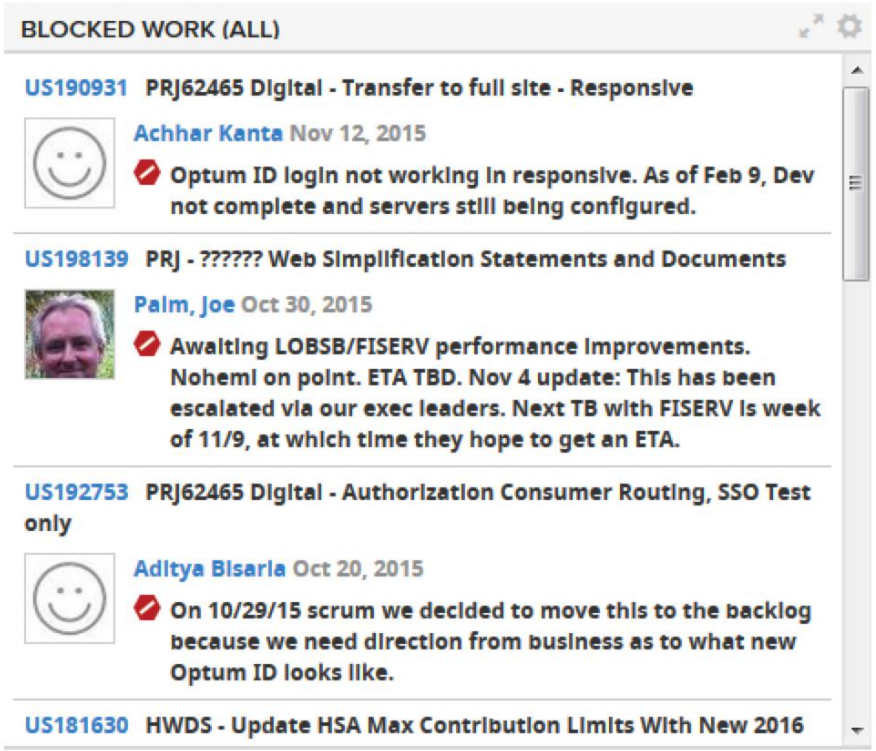
Blocked Work (All)



Blocked work displays which user stories and defects are currently blocked, the person who blocked each item, and the blocked reason (if provided).

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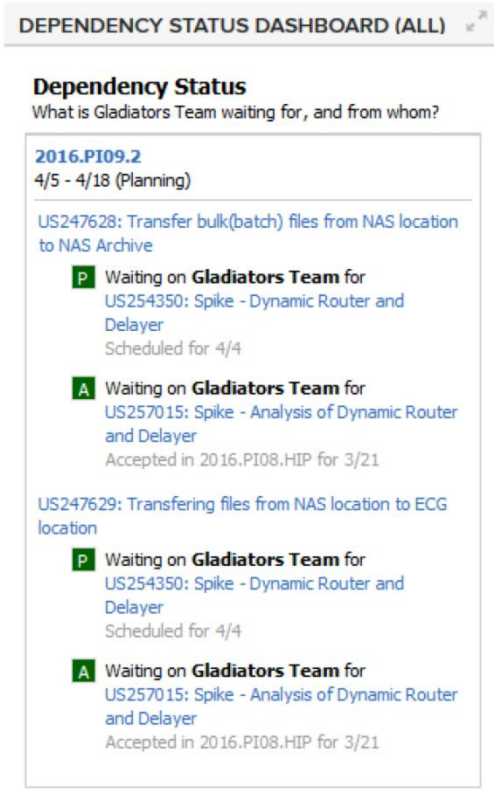
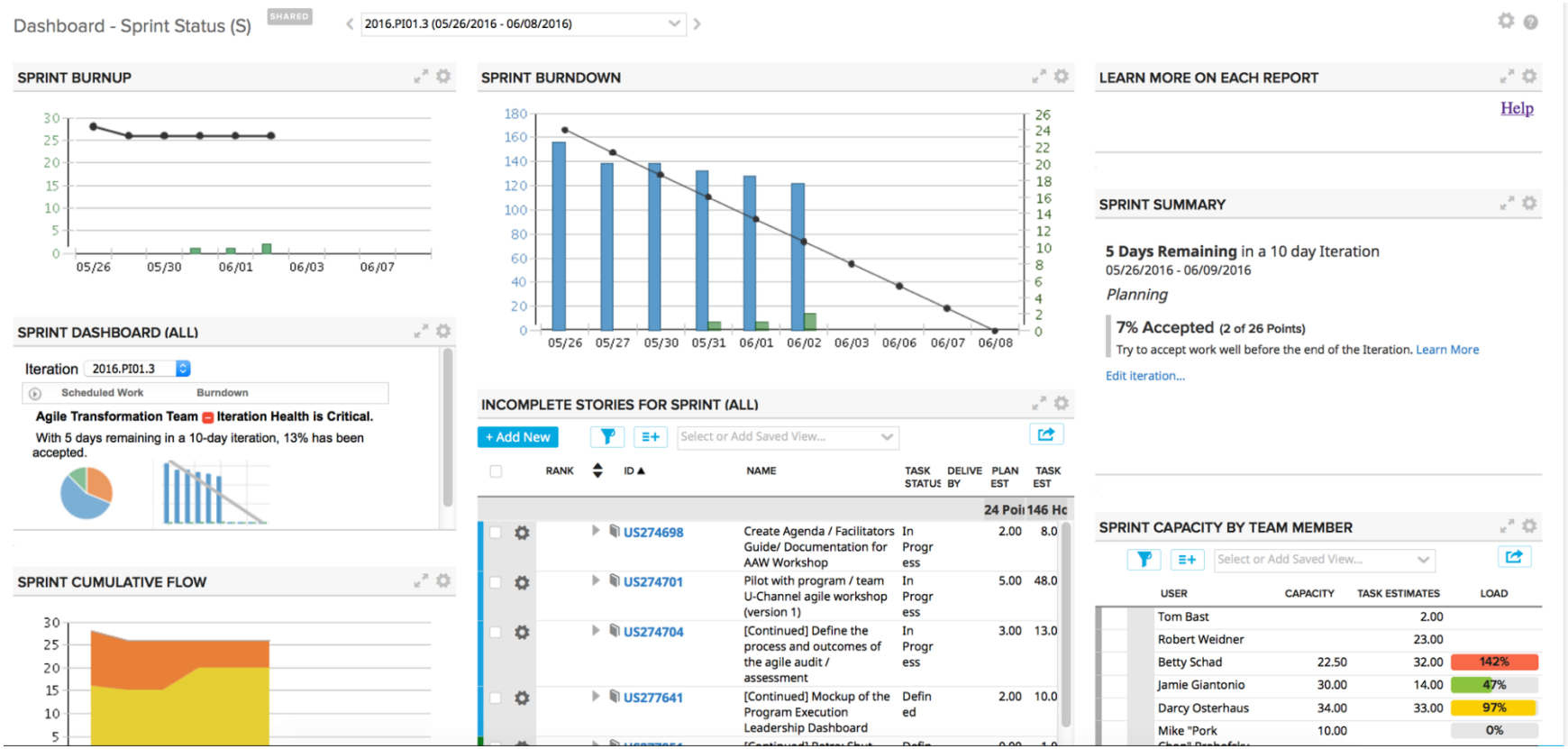
Dependency Status Dashboard (All)



The Dependency Status Dashboard shows dependencies between user stories for a series of upcoming iterations.

Dashboard – Sprint Status

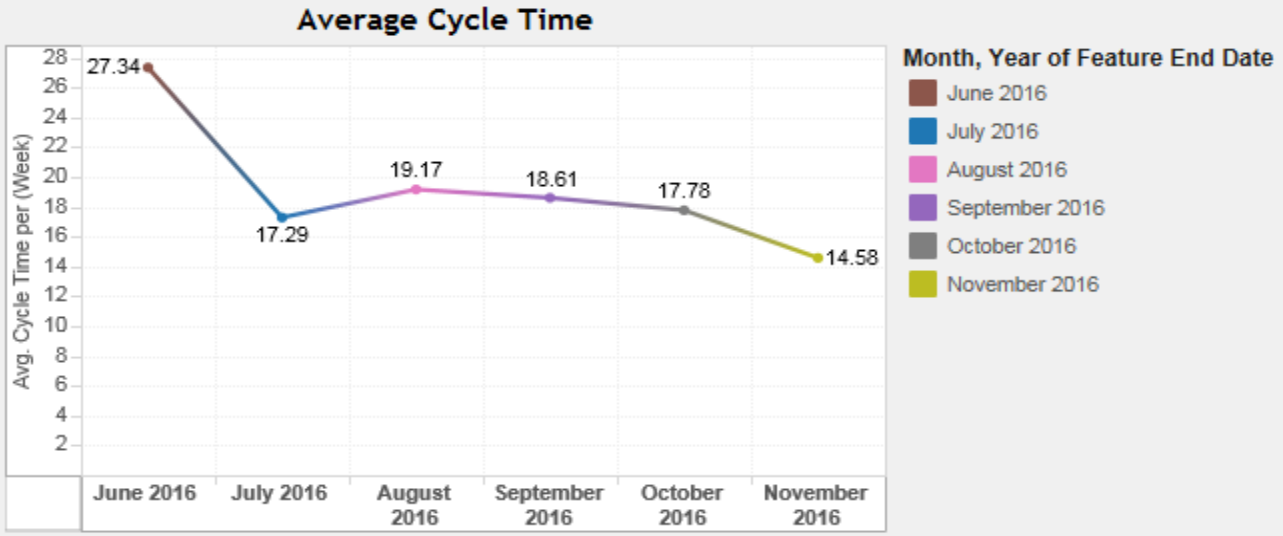


Optum Scalable Agile Method

Metric Logic – PI Planning

		The logic for determining the metric status is…		
Measure	Description	Green	Yellow	Red
Planned PI Velocity	The sized story points for the next PI divided by the PI velocity.	–	–	–
PI Velocity	The target story points for the next release.	–	–	–
PI Story Points	The sum of the sized story points in the next PI backlog. The goal is to size stories prior to the start of the next PI.	The sized story points are at least 90% of the ideal*	The sized story points are between 89% and 80% (inclusive) of the ideal*	The sized story points are ≤ 80% of the ideal*
Days Until Next PI	Business days remaining before the end of the next PI planning event. Planning ends five business days prior to the start of the PI.	–	–	–
Unsized Stories	The count of stories in the backlog of the next PI that are not yet sized.	The count of sized stories is at least 90% of the ideal*	The count of sized stories is between 89% and 80% (inclusive) of the ideal*	The count of sized stories is ≤ 80% of the ideal*

Feature Cycle Time



Last Data Refreshed Time/Date :11/16/2016 2:52:07 PM

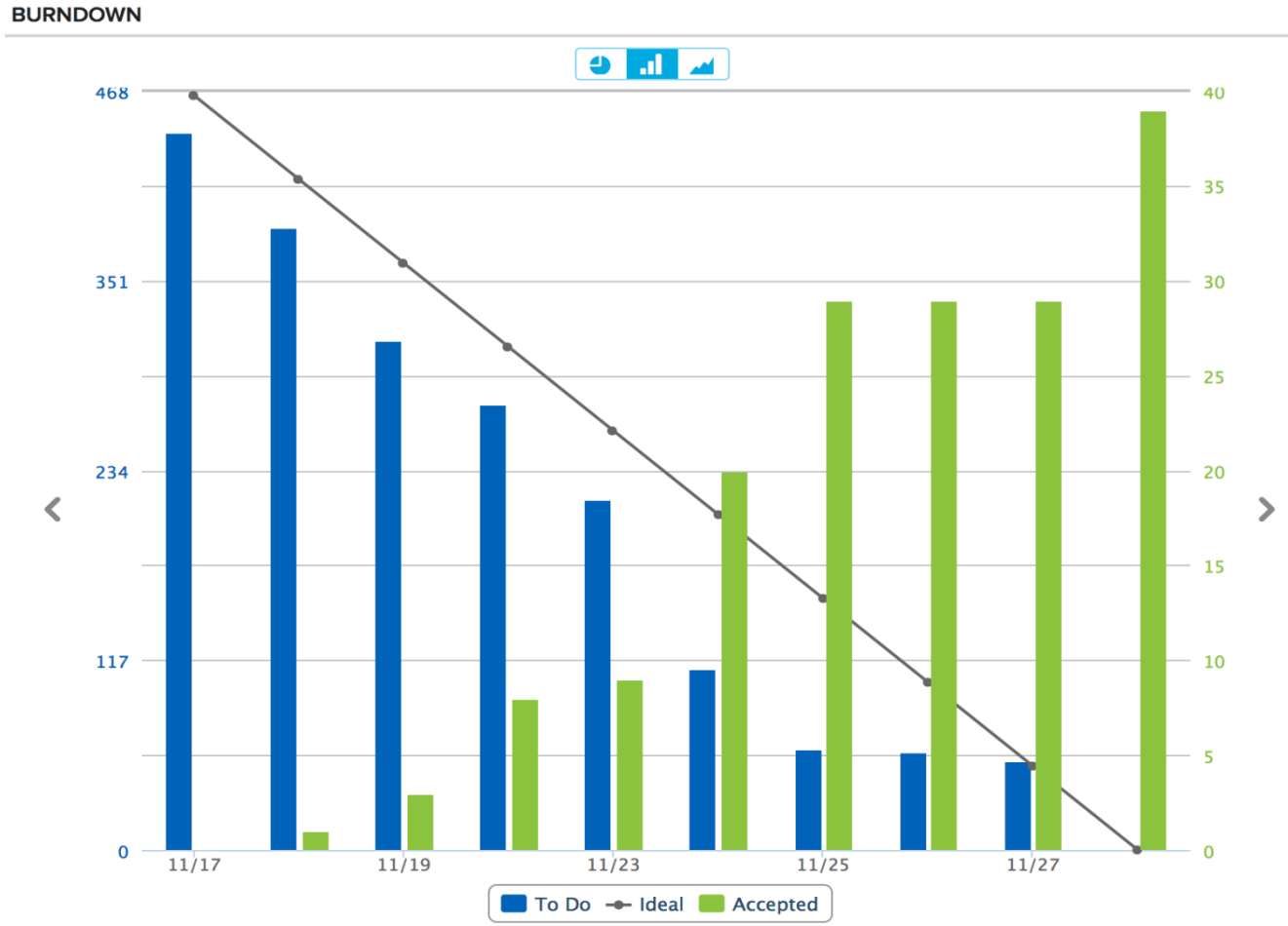
MAX/Min Cycle Time

InWeeks	Features	September 2016	October 2016	November 2016
MAX	F7805 - Hospital Room and Board Days Validation [XS]		94.00	
	F12700 - CI: Continuous Improvement [XS]			79.43
	F11516 - Pricing: Rule Service Engine Query [XS]	75.29		
MIN	F61696 - Int Ext: HPRO Map Existing Medmart elements for all domains [XS]		0.14	
	F56361 - C360 API - getClaim Base API Integrate with Cirrus Data - PI 11 Specific [S]	0.86		
	F62821 - Pulse Initial Extract DEV Work [ ]			1.71

Additional Exercises

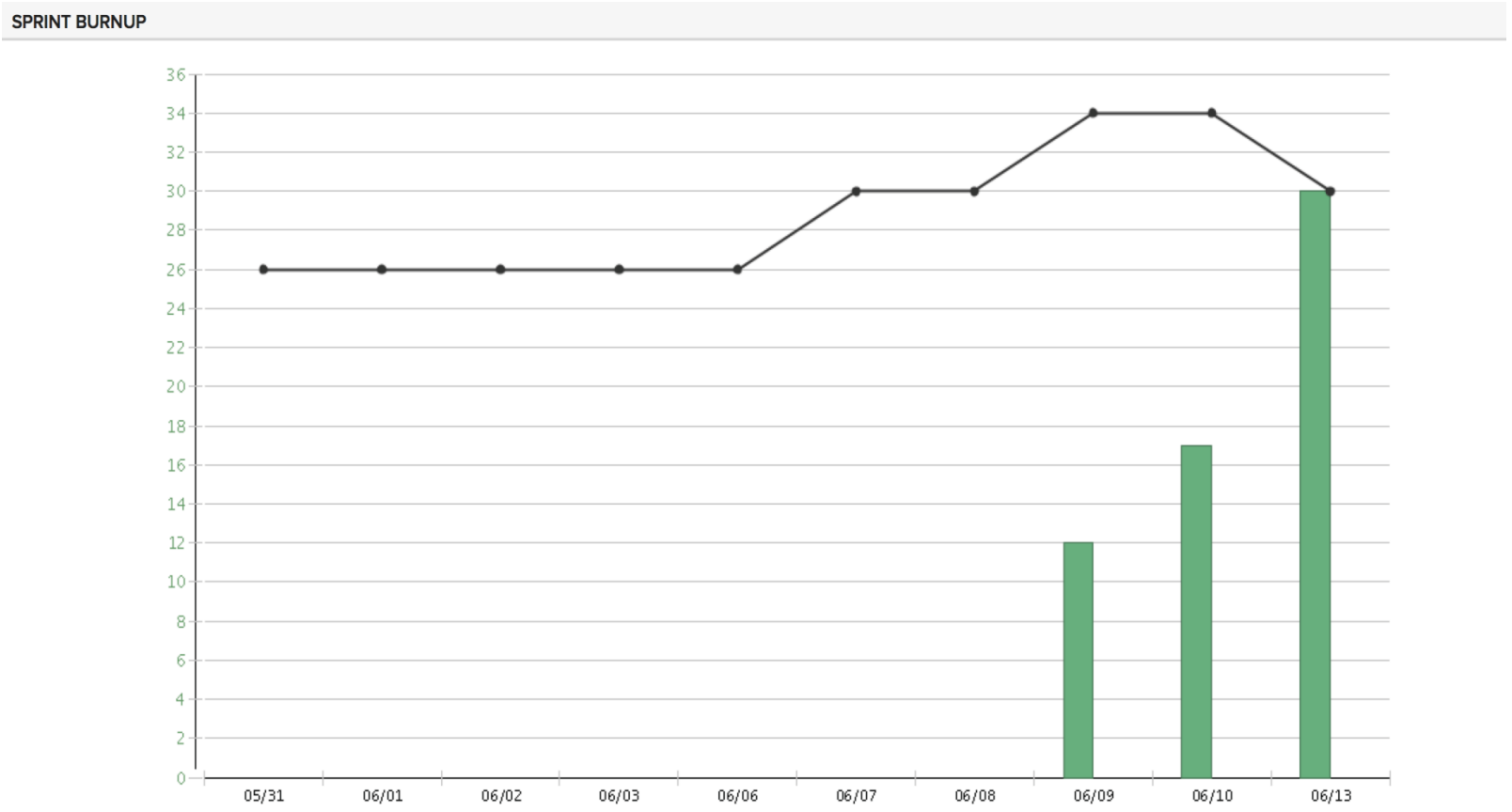
Optum Scalable Agile Method

Sample Metrics

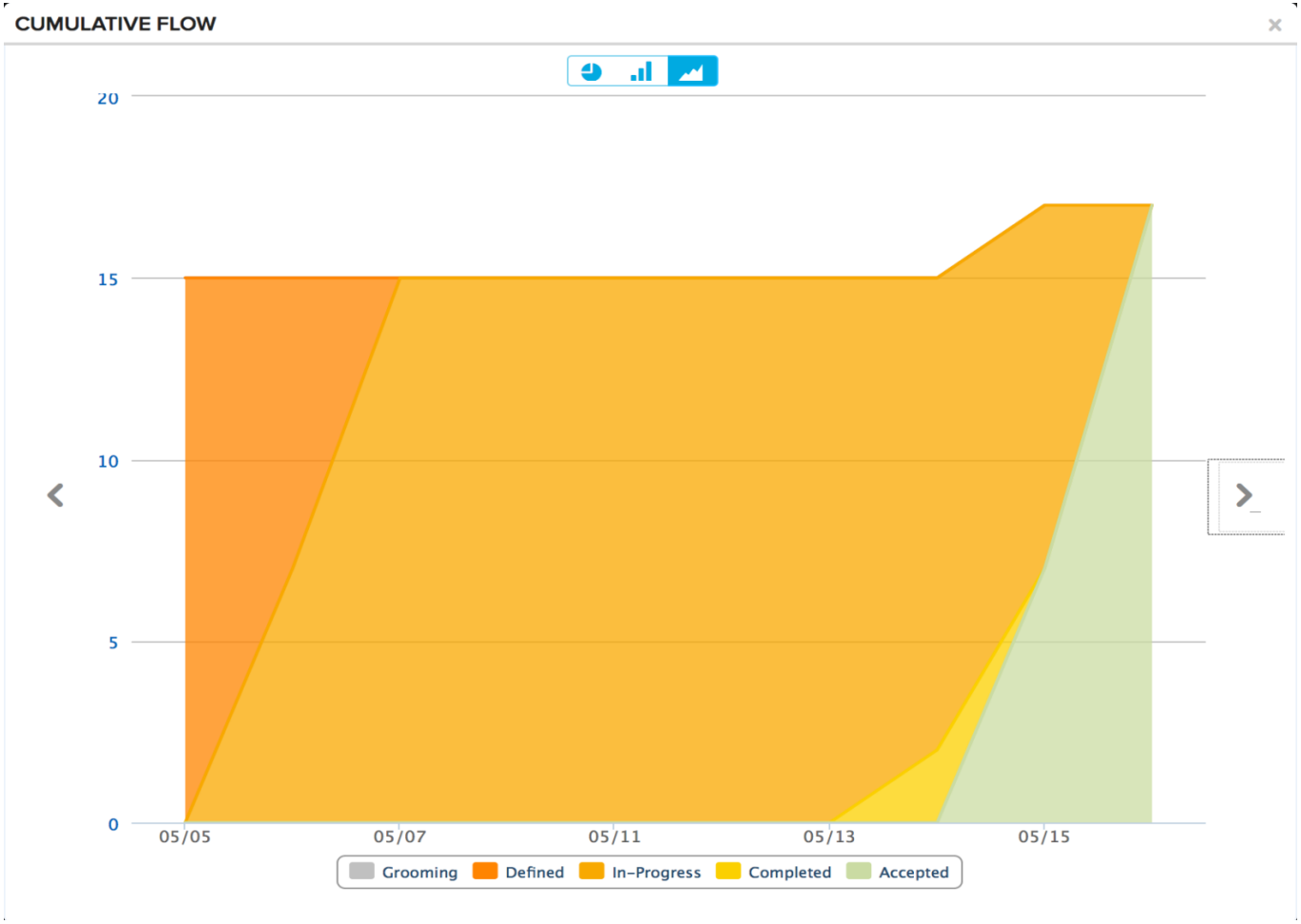


Optum Scalable Agile Method

Sample Metrics



Sample Metrics



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Additional Resources

Optum Scalable Agile Method

OSAM Assessment Video

Additional Resources

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Agile Learning Center : Your source for information about Agile, Architecture, Legacy UDP

Agile Metrics and Dashboards: A comprehensive resource for Agile metrics and dashboards

Agile Community of Practice: Provides a forum for Agile Software Development practitioners and those interested in Agile topics to interact and share knowledge, experience, ideas and information.

Agile Training Calendar: Sign up for additional training courses

Agile Forum: The Agile team offers an open forum session the first Wednesday of every month to answer general or specific Agile/Scrum questions. The sessions are an open forum format for 45 minutes and a brief 15 minute presentation on a rotating topic. Check the Agile Training Calendar

OneConnent OSAM Leaders Page: Guidance for RTEs and Scrum Masters. In the Upcoming Events (on the right side) is a link to the RTE Monthly Team Meeting.

Agile Coaching CA Flowdock: On-going chat room for the agile coaching community to have discussions related to agile coaching.

RTE Community AC Flowdock: On-going chat room for the RTE community to have discussions related to the RTE role.