INFORMATION TECHNOLOGY
UNIVERSITY of WASHINGTON

Packing for an Agile Software Release: A Hiker's Guide

With your tour guide: Dawn Hemminger

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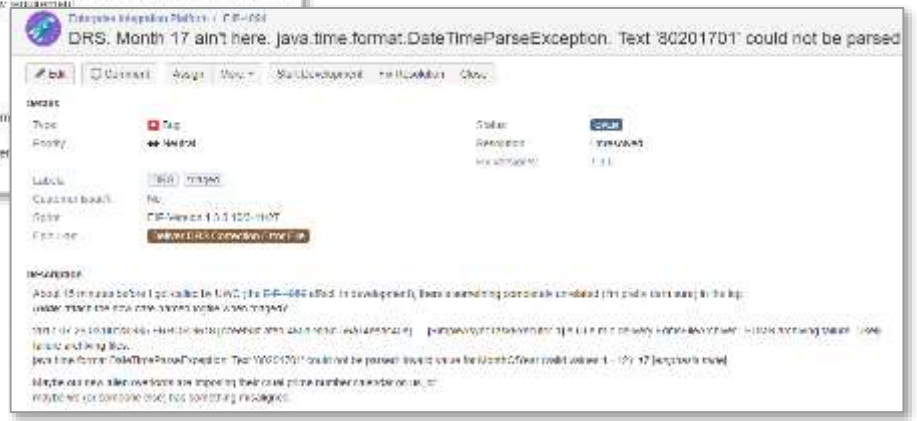
Follow the Steps of our Journey

1
2
3
4
5

Organize

Organize: Everything in its place

Epic – A deliverable with a Purpose and Definition of Done that will require multiple stories to complete. Goal is to complete an Epic within a Release. Could also just be a container for themed work committed to a release, e.g. Reduce Tech Debt for Release 0.1.0



Bug – Defects in the product that are either discovered by the customer (labeled as such) or found internally. Bugs can be standalone or linked to other stories and/or Epics.

Story – A discrete piece of work with a description and Definition of Done that can be standalone or support an Epic. Stories are sized to be completed within 1 sprint (2 weeks)

Organize: Keep it up to date

Organize: Create a Staging Area

What's a Release Plan? Why do it?

- What? A tool that communicates what features a team plans to deliver within a fixed amount of time
  - could be a time-driven or scope-driven plan)

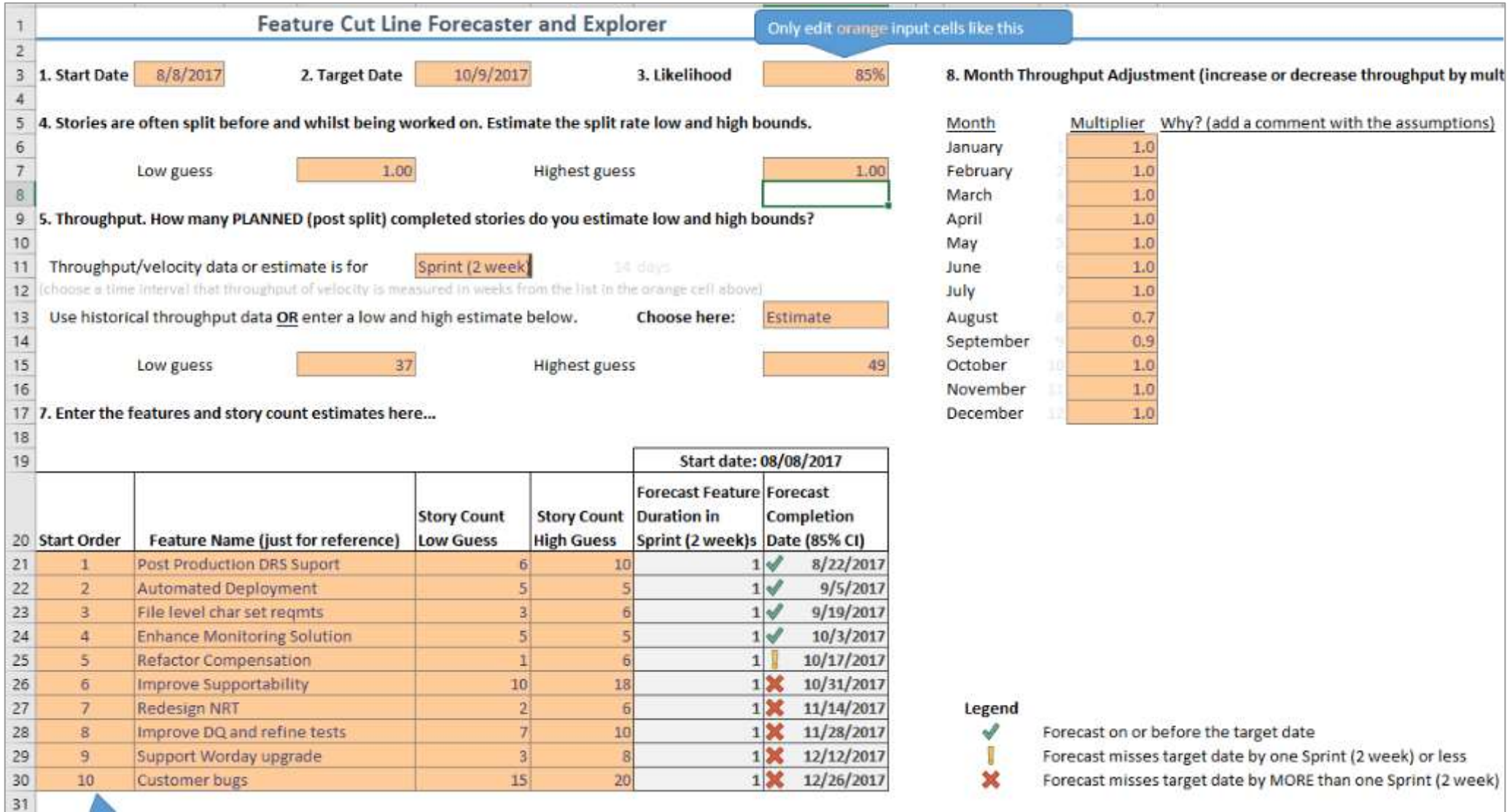
- Why?
  - Provides common vision about what needs to be achieved and when (Focus!)
  - Provides guidance in making decisions (Does this new work fit into our plan or can it wait?)
  - Helps prioritize work (Most important features are at the top of the plan)
  - If done well, ensures that we're delivering the highest value to our customers on schedule and within budget.

Schedule


Enchantments
Traverse
20 - miles
5,000 ft.
cumulative gain
Mountaineer Creek to
Snow Creek Trail heads
Enchantment Lakes
Central Cascades


2
8
VACATION
9
VACATION
10
VACATION
16
17

Schedule: Understand the drivers



Feature Cut Line Forecaster and Explorer

Only edit orange input cells like this

1. Start Date: 8/8/2017 — 2. Target Date: 10/9/2017 — 3. Likelihood: 85%

4. Stories are often split before and whilst being worked on. Estimate the split rate low and high bounds.

Low guess: 1.00 — Highest guess: 1.00

5. Throughput. How many PLANNED (post split) completed stories do you estimate low and high bounds?

Throughput/velocity data or estimate is for: Sprint (2 week)

(choose a time interval that throughput of velocity is measured in weeks from the list in the orange cell above)

Use historical throughput data OR enter a low and high estimate below. Choose here: Estimate

Low guess: 37 — Highest guess: 49

7. Enter the features and story count estimates here...

Start date: 08/08/2017

Start Order	Feature Name (just for reference)	Story Count Low Guess	Story Count High Guess	Forecast Feature Duration in Sprint (2 week)s	Forecast Completion Date (85% CI)
1	Post Production DRS Suport	6	10	1	✓ 8/22/2017
2	Automated Deployment	5	5	1	✓ 9/5/2017
3	File level char set reqmts	3	6	1	✓ 9/19/2017
4	Enhance Monitoring Solution	5	5	1	✓ 10/3/2017
5	Refactor Compensation	1	6	1	! 10/17/2017
6	Improve Supportability	10	18	1	✗ 10/31/2017
7	Redesign NRT	2	6	1	✗ 11/14/2017
8	Improve DQ and refine tests	7	10	1	✗ 11/28/2017
9	Support Worday upgrade	3	8	1	✗ 12/12/2017
10	Customer bugs	15	20	1	✗ 12/26/2017

8. Month Throughput Adjustment (increase or decrease throughput by mult

Month	Multiplier	Why? (add a comment with the assumptions)
January	1.0	
February	1.0	
March	1.0	
April	1.0	
May	1.0	
June	1.0	
July	1.0	
August	0.7	
September	0.9	
October	1.0	
November	1.0	
December	1.0	

Legend

✓ Forecast on or before the target date

! Forecast misses target date by one Sprint (2 week) or less

✗ Forecast misses target date by MORE than one Sprint (2 week)

Schedule: Set goals

EIP Internal Release 0.1.0

Secure | https://wiki.cac.washington.edu/display/EIP/EIP+Internal+Release+0.1.0

Apps | EDA | EIP | ISC | AcademicHR | UW-IT | UW | LeanKit | PME | Personal | Bookmarks | Calming Manatee | Master | 1.1.0 branc

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Pages / ... / EIP Agile Release Plans

EIP Internal Release 0.1.0

Created and last modified by Dawn Hemminger on Nov 23, 2016

Release Goals

All feeds coming from Mongo will instead come from SQL, and will be equivalent. Converting from a Mongo database to SQL

- Will be more useful for analysts
- Will improve EIP/EDA coordination
- Will increase EIP capacity to take on unexpected work during Regression Testing and beyond.
- This is a short-term investment that will increase our medium and long-term velocity.

Scope

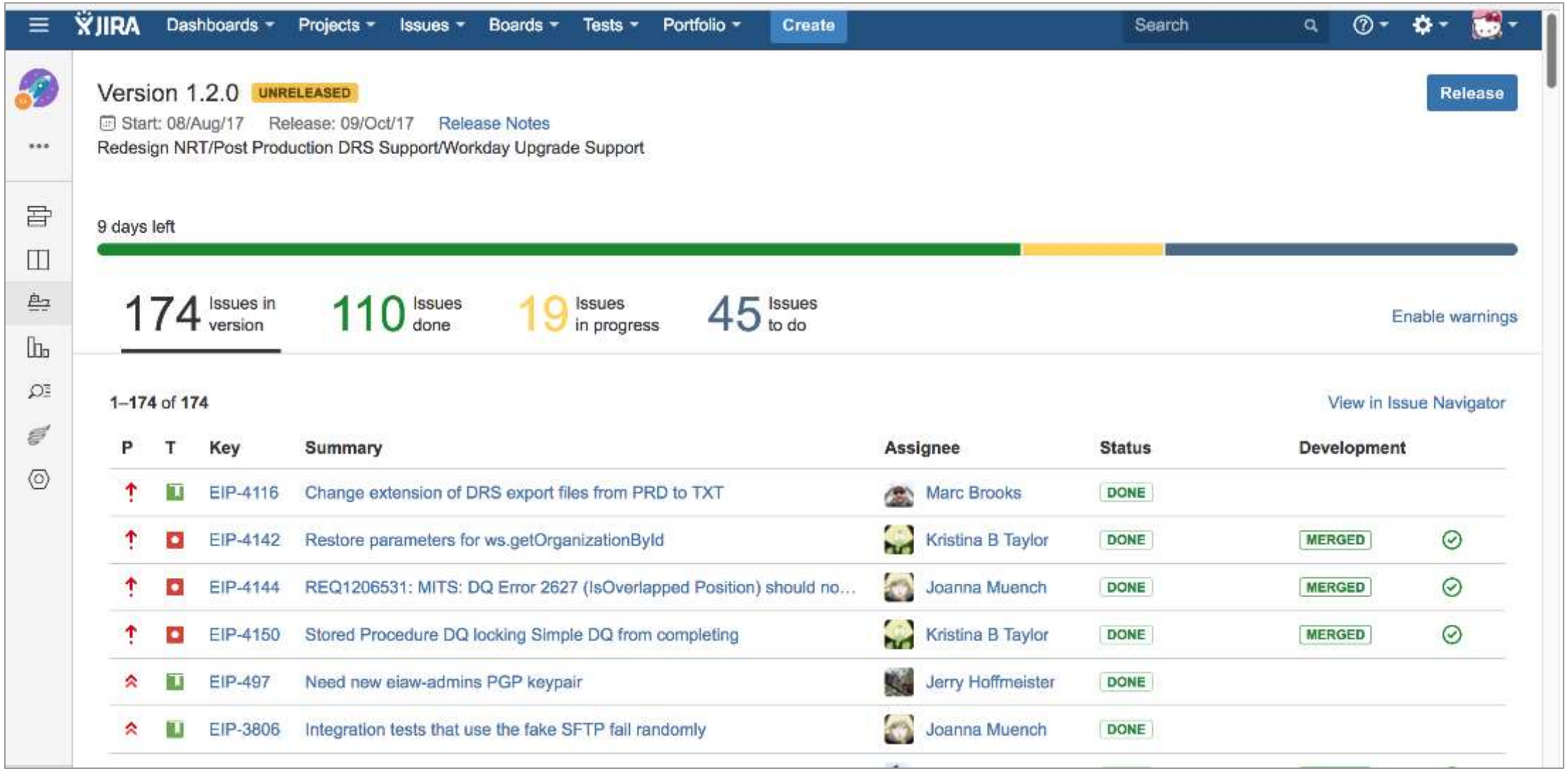
1. Able to support HRP Regression Testing for 100% data elements for committed customers (EDA, HRPWS, MITS, Husky Card, DRS (TBD)
2. When receiving well-formed data, EIP accurately loads to stage
3. Baseline monitoring for data loads and exports (can be manual)
4. Security Aware: understand responsibility & vulnerability of the system

Timeline

Release 0.1.0 spans June 28, 2016 - November 14, 2016 (Sprints 46 - 55) - 10 sprints

- Timeline includes cushion in team capacity to accommodate unexpected delays.
- Much of the work listed here for implementing SQL would still need to be done if EIP were to stay with Mongo.
- The modeling work in Sprints 46-48 assumes an EDA data modeler is available to help. SQL developer help in Sprints 50 and 51 could accelerate the release of deliverables.
- For a more detailed timeline, broken down by sprint, see JIRA Version Planning.

Schedule: Name the Release



Learn from History

Learn from History: Identify risks

Likelihood	Impact Low	Impact High	Description
100%	5	10	Refactor NRT Feature - Not fully scoped yet
75%	4	8	New Technical Debt
100%	5	10	Workday Upgrade
80%	6	15	New Feature work

Why would I use risks?
Risks allow you to put a probability on work being expanded because of something more than plan. For eample, there might be a chance that more work is needed to improve performance characteristics. If you think there is a 20% chance, put 20 in the likelihood column. Have the team estimate the low and high story count to rectify and add these to the low and high impact columns.

For example:

Likelihood	Impact Low	Impact High	Description
20%	10	20	Performance tuning if we fail load testing.

Learn from History: Know your capacity

Sprint 79

10/3-10/16

Sprint Days:	10
Sprint Hours:	80

Team Member	Max Hours	Hours Off	Holiday	Support / Administrivia	Available Hours	% Availability
Brian	80	0	0	0	80	100%
David	80	0	0	0	80	100%
Jerry	80	0	0	0	80	100%
Kristina	80	0	0	0	80	100%
Marc	80	0	0	0	80	100%
Paul	80	0	0	0	80	100%
Steven	80	0	0	0	80	100%
				TOTAL:	560	

Team Capacity:	1		
# stories to commit:	32	Actual:	
based on 32 story throughput			

Sprint 80

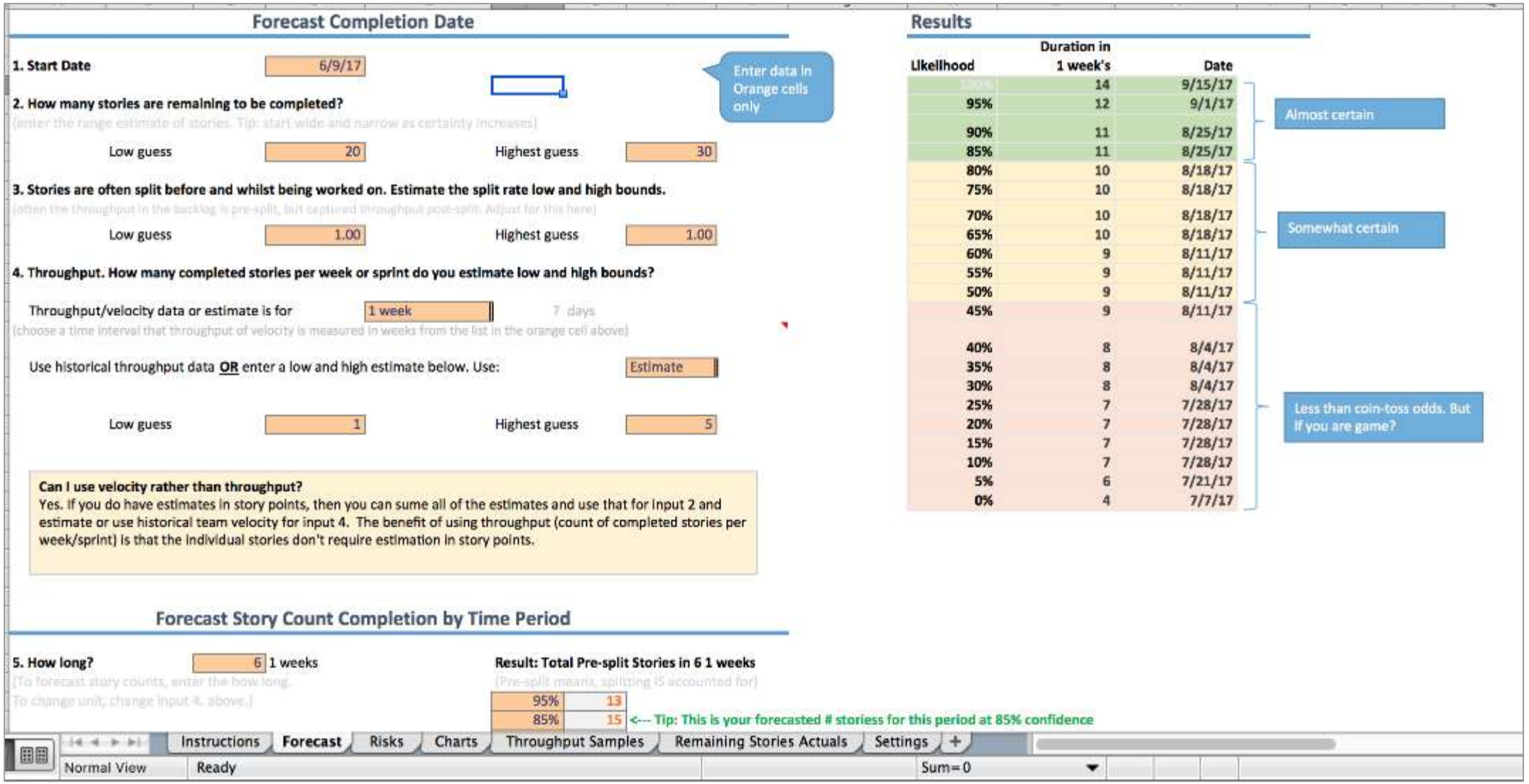
10/17-10/30

Sprint Days:	10
Sprint Hours:	80

Team Member	Max Hours	Hours Off	Holiday	Support / Administrivia	Available Hours	% Availability
Brian	80	0	0	0	80	100%
David	80	0	0	0	80	100%
Jerry	80	0	0	0	80	100%
Kristina	80	0	0	0	80	100%
Marc	80	48	0	0	32	40%
Paul	80	0	0	0	80	100%
Steven	80	0	0	0	80	100%
				TOTAL:	512	

Team Capacity:	0.914286		
# stories to commit:	29.25714	Actual:	
based on 32 story throughput			

Learn from History: Know your capabilities



Forecast Completion Date

1. Start Date: 6/9/17

Enter data in Orange cells only

2. How many stories are remaining to be completed?
(enter the range estimate of stories. Tip: start wide and narrow as certainty increases)

Low guess: 20 Highest guess: 30

3. Stories are often split before and whilst being worked on. Estimate the split rate low and high bounds.
(often the throughput in the backlog is pre-split, but captured throughput post-split. Adjust for this here)

Low guess: 1.00 Highest guess: 1.00

4. Throughput. How many completed stories per week or sprint do you estimate low and high bounds?

Throughput/velocity data or estimate is for: 1 week (7 days)
(choose a time interval that throughput of velocity is measured in weeks from the list in the orange cell above)

Use historical throughput data **OR** enter a low and high estimate below. Use: Estimate

Low guess: 1 Highest guess: 5

Can I use velocity rather than throughput?
Yes. If you do have estimates in story points, then you can sume all of the estimates and use that for input 2 and estimate or use historical team velocity for input 4. The benefit of using throughput (count of completed stories per week/sprint) is that the individual stories don't require estimation in story points.

Forecast Story Count Completion by Time Period

5. How long? 6 1 weeks
(To forecast story counts, enter the how long.
To change unit, change input 4. above.)

Result: Total Pre-split Stories in 6 1 weeks
(Pre-split means, splitting IS accounted for)

95%	13
85%	15

<--- Tip: This is your forecasted # stories for this period at 85% confidence

Results

Likelihood	Duration in 1 week's	Date
100%	14	9/15/17
95%	12	9/1/17
90%	11	8/25/17
85%	11	8/25/17
80%	10	8/18/17
75%	10	8/18/17
70%	10	8/18/17
65%	10	8/18/17
60%	9	8/11/17
55%	9	8/11/17
50%	9	8/11/17
45%	9	8/11/17
40%	8	8/4/17
35%	8	8/4/17
30%	8	8/4/17
25%	7	7/28/17
20%	7	7/28/17
15%	7	7/28/17
10%	7	7/28/17
5%	6	7/21/17
0%	4	7/7/17

Almost certain

Somewhat certain

Less than coin-toss odds. But If you are game?

Instructions | Forecast | Risks | Charts | Throughput Samples | Remaining Stories Actuals | Settings

Normal View | Ready | Sum=0

Pack

Pack: Load the release

VERSIONS
EPICS

EIP-Version 1.3.0 10/3-11/27 50 issues

Start Sprint ...

Linked pages

EIP-4247 Import new DRS SSN integration	1.3.0	Improve DRS Error ...	6
EIP-4195 DRS: Export SSNLookup View when Megatron creates DRS export files	1.3.0	Improve DRS Error ...	6
EIP-4239 DRS: Add column values to Parsed Error Export	1.3.0	Improve DRS Error ...	3
EIP-4226 Implement DQ tests for Worker tables per review	1.3.0	Refine DQ data test...	
EIP-3947 Implement DQ tests for AcademicAppointment++ per review	1.3.0	Refine DQ data test...	3
EIP-2288 Add logging to bumblebee for missing files	1.3.0	Improve Supportabil...	
EIP-4151 load tables have EmployeeID as not nullable	1.3.0	Improve Supportabil...	1
EIP-3665 Create DQ schema and associate appropriate objects	1.3.0	On Demand DQ Re...	1
EIP-4302 Load DQ Errors into Event Tables - Table Based DQ	1.3.0	On Demand DQ Re...	
EIP-4304 Load DQ Errors into Event Tables - SQL Based DQ	1.3.0	On Demand DQ Re...	
EIP-4017 Add XPath information to Extended Properties in the database	1.3.0	Automate Database...	6
EIP-4095 Analysis: Automate eipInboundMapping Documentation	1.3.0	Automate Database...	

Go

Go: Kickoff the release

EIP Version 1.2.0 Kickoff 8/8/17- 10/2/17

o sprints complete

o stories or internal bugs

o customer bugs fixed or requests addressed

o Technical Debt issues

Team Outings:

Work in Process (10)

Disaster Recovery Plan (2)
Post Production DRS Support (10)
Add DQ tests for all unique constraints in the model schema (4)
Refine DQ data tests for bulk ETL and NRT (3)
Fix T-EID problems (3)
Deliver DRS Financial Reconciliation Report (2)
DQ on NRT flow (2)
Deliver Data Services to HRPWS (2)
Redesign NRT (7)
No epic assigned (52)

Customer Features Delivered (0)

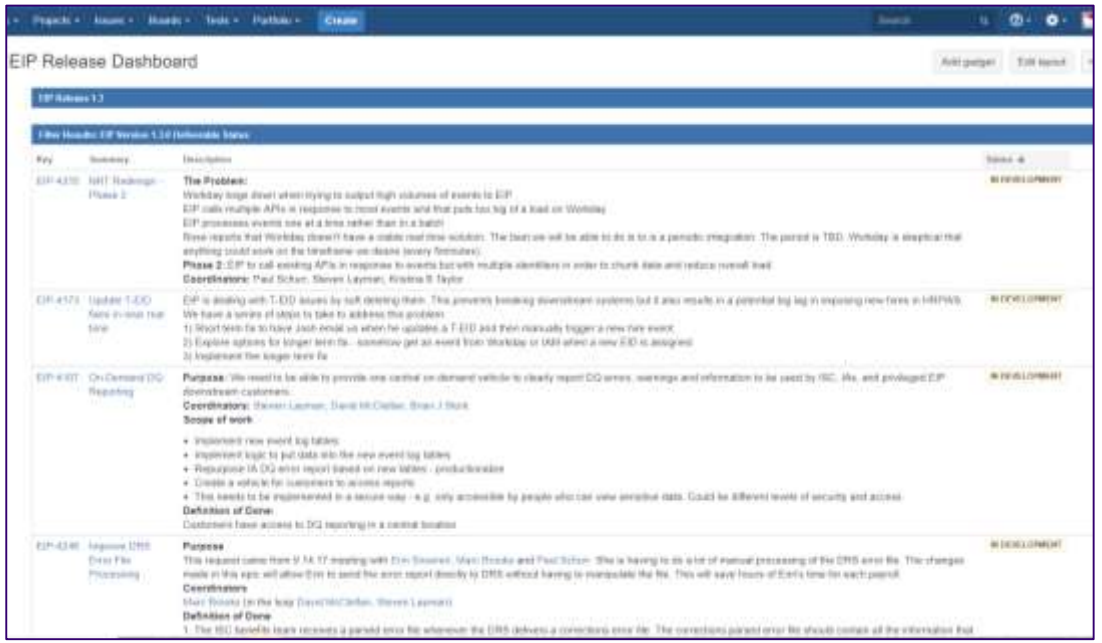
Internal Work Completed (0)

In the Queue (10)

Implement file level character set requirements for exported files (3)
Enhance Monitoring Solution - v 1.2.0 (6)
Refactor Compensation (1)
Deliver DRS Support for Retroactive Payroll (1)
Improve Supportability - v 1.2.0 (10)
Reduce Technical Debt - v 1.2.0 (8)
Redesign NRT (7)
Support Workday Version 29 Upgrade (2)
Develop DQ Logging & Monitoring System - v 1.2.0 (4)
Improve DQ - v 1.2.0 (10)

Work carried over from previous release
Work added outside of original scope
Removed from release
Changed state from previous sprint

Team Performance



Field Notes

Planning Your Own Release

> Your Turn!

Planning Your Own Release: Recap

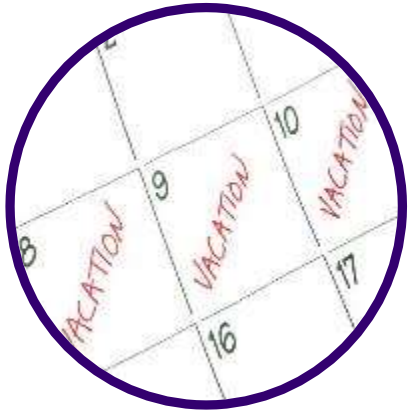
1 ORGANIZE

2 SCHEDULE

3 LEARN FROM HISTORY

4 PACK

5 GO



Planning Your Own Release: The Gear

- Atlassian Jira – Agile Software Project Management Tool
- Multi-feature Cut Line Forecast Spreadsheet - Focused Objective
- Atlassian Confluence – Wiki platform
- Throughput Forecaster Spreadsheet - Focused Objective
- Team Capacity Calculator Spreadsheet – Stephanie Davis
- Agile Software Requirements – Dean Leffingwell

Earl Shaffer

"Carry as little as possible, but choose that little with care."