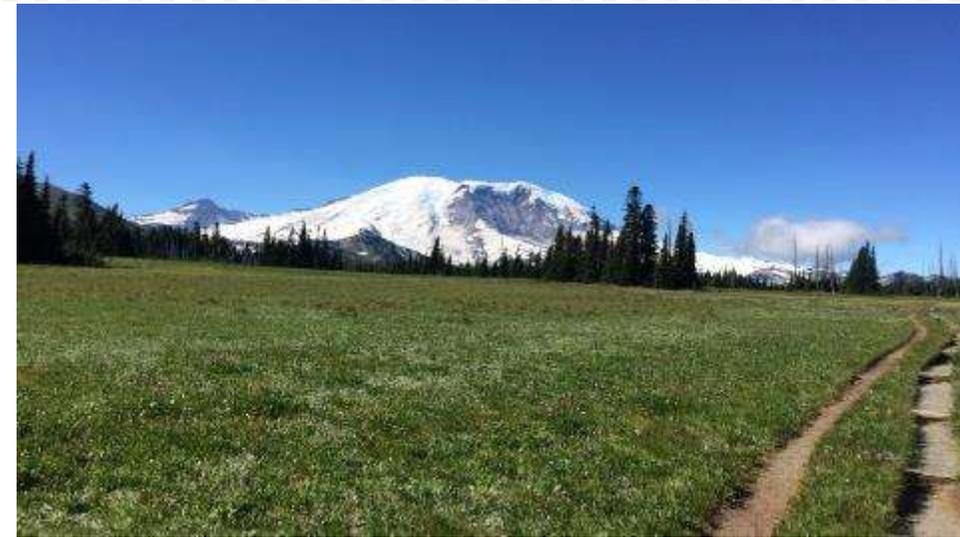


INFORMATION TECHNOLOGY

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



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Organize



Organize: Keep it up to date



Organize: Create a Staging Area

VERSIONS	> EIP - Sprint 78 9/19-10/2 34 issues	4 47 24
EPICS	> EIP - Version 1.2.0 8/8-10/2 43 issues	Start Sprint ...
	> EIP - Sprint 79 - 10/3-10/16 17 issues	Start Sprint ...
	> EIP-Version 1.3.0 10/3-11/27 25 issues	Start Sprint ...
	> EIP - Sprint 80 - 10/17-10/30 0 issues	Start Sprint ...
	> EIP - Sprint 81 - 10/31-11/13 0 issues	Start Sprint ...
	> EIP - Sprint 82 - 11/14-11/27 0 issues	Start Sprint ...
	> EIP - Waiting for 3rd Party 4 issues	Start Sprint ...

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



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Schedule: Understand the drivers

Feature Cut Line Forecaster and Explorer Only edit orange input cells like this

1. Start Date 2. Target Date 3. Likelihood 8. Month Throughput Adjustment (increase or decrease throughput by mult

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

Low guess Highest guess

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

Throughput/velocity data or estimate is for 14 days
(choose a time interval that throughput or 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:

Low guess Highest guess

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 Support	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

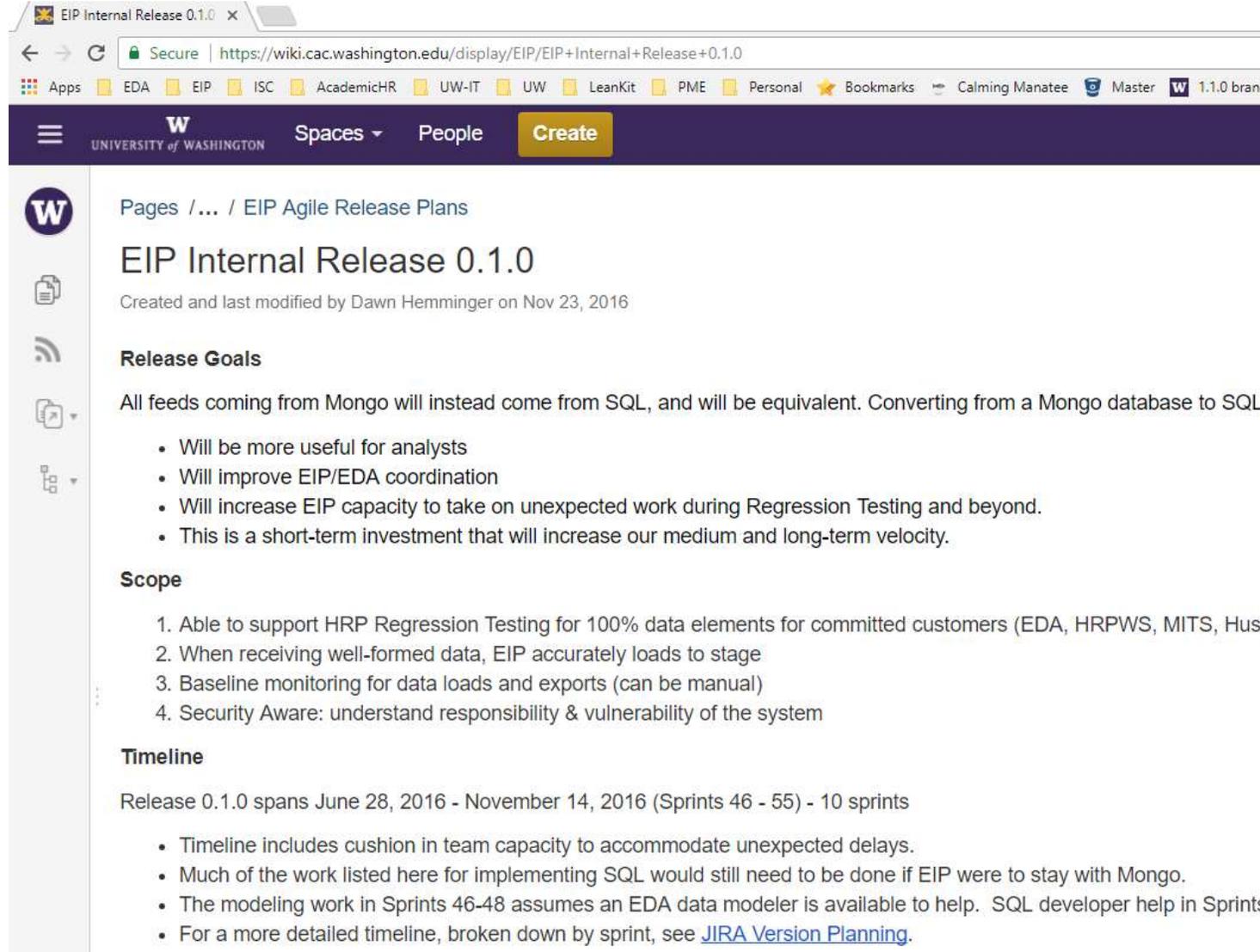
Month	Multiplier	Why? (add a comment with the assumptions)
January	1.0	
February	1.0	
March	1.0	
April	1.0	
May	1.0	
June	1.0	
July	1.0	
August	0.7	
September	0.9	
October	1.0	
November	1.0	
December	1.0	

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



The screenshot shows a Confluence page for 'EIP Internal Release 0.1.0'. The page header includes the University of Washington logo and navigation options like 'Spaces' and 'People'. The main content is organized into sections: 'Release Goals' and 'Scope'. The 'Release Goals' section lists four bullet points about data source changes and performance improvements. The 'Scope' section lists four numbered items regarding regression testing, data loading, monitoring, and security awareness. The 'Timeline' section states the release period from June 28 to November 14, 2016, and includes three bullet points about team capacity, work dependencies, and a reference to a JIRA version planning document.

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

JIRA Dashboards ▾ Projects ▾ Issues ▾ Boards ▾ Tests ▾ Portfolio ▾ **Create** Search ? ⚙️ 🧑

Version 1.2.0 **UNRELEASED** [Release](#)

📅 Start: 08/Aug/17 Release: 09/Oct/17 [Release Notes](#)

Redesign NRT/Post Production DRS Support/Workday Upgrade Support

9 days left

174 Issues in version **110** Issues done **19** Issues in progress **45** Issues to do [Enable warnings](#)

1-174 of 174 [View in Issue Navigator](#)

P	T	Key	Summary	Assignee	Status	Development
↑	🟢	EIP-4116	Change extension of DRS export files from PRD to TXT	Marc Brooks	DONE	
↑	🔴	EIP-4142	Restore parameters for ws.getOrganizationById	Kristina B Taylor	DONE	MERGED ✓
↑	🔴	EIP-4144	REQ1206531: MITS: DQ Error 2627 (IsOverlapped Position) should no...	Joanna Muench	DONE	MERGED ✓
↑	🔴	EIP-4150	Stored Procedure DQ locking Simple DQ from completing	Kristina B Taylor	DONE	MERGED ✓
⬆️	🟢	EIP-497	Need new eiaw-admins PGP keypair	Jerry Hoffmeister	DONE	
⬆️	🟢	EIP-3806	Integration tests that use the fake SFTP fail randomly	Joanna Muench	DONE	



Learn from History



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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 example, 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

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 Highest guess

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 Highest guess

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

Throughput/velocity data or estimate is for 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:

Low guess Highest guess

Can I use velocity rather than throughput?
 Yes. If you do have estimates in story points, then you can sum 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.

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?

Forecast Story Count Completion by Time Period

5. How long? 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

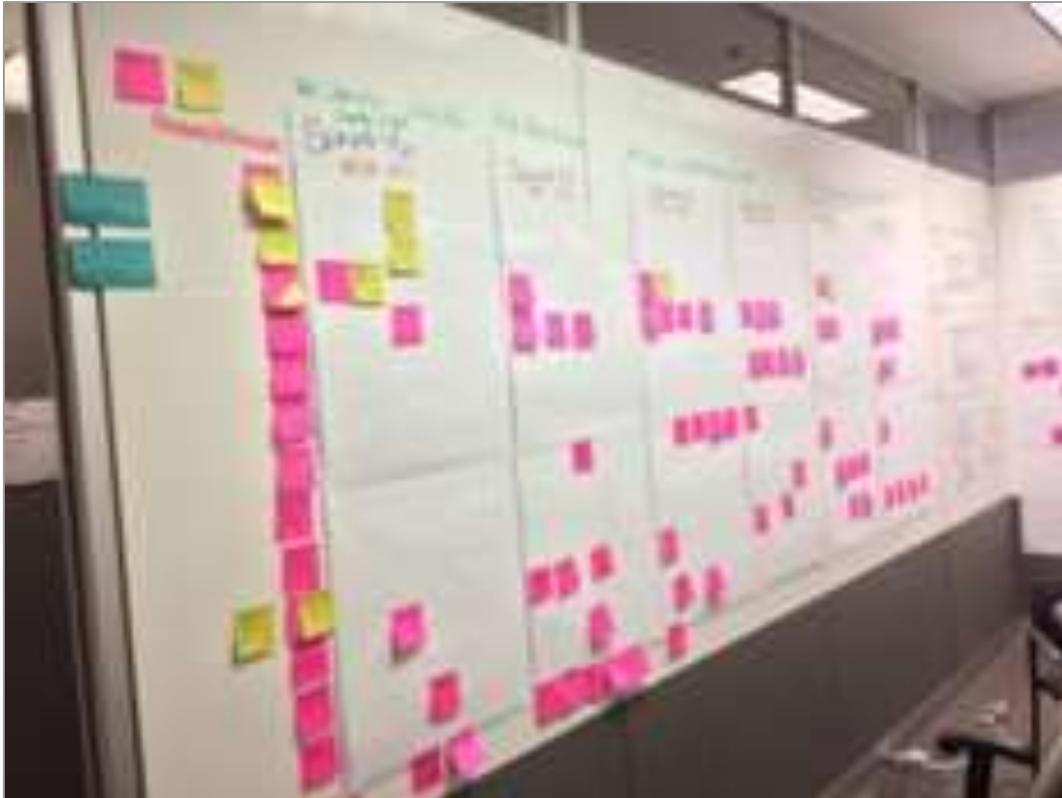
Normal View | Ready | **Instructions** | **Forecast** | Risks | Charts | Throughput Samples | Remaining Stories Actuals | Settings +

Sum=0

3



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 ...	5
	↔ 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...	0
	↔ 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...	0
	⚠ 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...	0
	↔ EIP-4304 Load DQ Errors into Event Tables - SQL Based DQ	1.3.0	On Demand DQ Re...	0
	↔ 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...	0

Go



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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 DKS 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-ERD 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)

In the Queue (10)

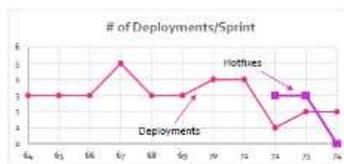
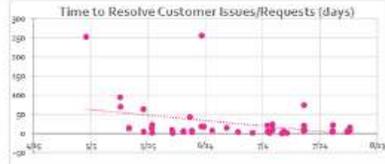
- Implement file level character set requirements for exported files (3)
- Enhance Monitoring Solution - v 1.2.0 (6)
- Refactor Compensation (1)
- Deliver DRS Support for Retroactive Payroll (1)
- Improve Supportability - v 1.2.0 (10)
- Reduce Technical Debt - v 1.2.0 (8)
- Redesign NRT (7)
- Support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

Customer Features Delivered (0)

Internal Work Completed (0)

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

Team Performance



ID	Summary	Description	Status
EIP-4310	WHT: Redesign - Phase 2	The Problem: Workday logs slow when trying to output high volumes of events to EIP. EIP calls multiple APIs in response to these events and that puts too big of a load on Workday. EIP processes events one at a time rather than in a batch. These reports that Workday doesn't have a stable real time solution. The feature will be able to do it in a periodic integration. The period is TBD. Workday is skeptical that anything could work on the traditional on-demand query framework. Phase 2: EIP to call existing APIs in response to events but with multiple identifiers in order to chunk data and reduce overall load. Coordinators: Paul Schum, Steven Layman, Andrea B Taylor	IN DEVELOPMENT
EIP-4173	Update T-ERD Save events table	EIP is dealing with T-ERD issues by not deleting them. This prevents backing downstream systems but it also results in a potential log lag in ingesting new facts in HRPWS. We have a series of steps to take to address this problem: 1) Short term fix to have Josh email us when he updates a T-ERD and then manually trigger a new DQ event. 2) Explore options for longer term fix - somehow get an event from Workday or DKS when a new ETD is assigned. 3) Implement the longer term fix	IN DEVELOPMENT
EIP-4107	On-Demand DQ Reporting	Purpose: We need to be able to provide one central on-demand vehicle to clearly report DQ errors, warnings and information to be used by ISC, Hs, and prod users EIP downstream customers. Coordinators: Steven Layman, David McCallister, Brian J Black Scope of work: <ul style="list-style-type: none"> Implemented new event log tables Implemented logic to put data into the new event log tables Repurpose IS DQ error report based on new tables - production-ready Create a role in for customers to access reports This needs to be implemented in a secure way - e.g. only accessible by people who can view sensitive data. Could be different levels of security and access. Definition of Done: Customers have access to DQ reporting in a central location	IN DEVELOPMENT
EIP-4340	Improve DRS Data File Processing	Purpose: This feature came from 9/14/17 meeting with Eric Swinnen, Marc Froese and Paul Schum. She is having to do a lot of manual processing of the DRS error file. The changes made in this epic will allow Eric to send the error report directly to DRS without having to manipulate the file. This will save hours of Eric's time for each period. Coordinators: Marc Swinnen (in the lead), David McCallister, Steven Layman Definition of Done: 1. The HCU benefits team receives a period error file whenever the DRS delivers a correction error file. The correction period error file should contain all the information that	IN DEVELOPMENT



Field Notes



Planning Your Own Release

> Your Turn!



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Planning Your Own Release: Recap



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."

