Now You See It! **Observing Flow Using Kanban Boards**

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- Software Development since 1988
- Large Commercial & Government Projects
- Kanban Coach / DevOps Engineer
- Kanban Trainer / SpecFlow Trainer
- Performance & Scalability Architect
- Certified Ethical Hacker
- New York & Washington DC Area

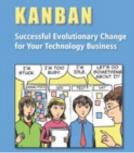








Learning Kanban





Change Leadership Masterclass









Kanban Coaching IT Department



Introduced Kanban Practices FBI Scrum Team



2014 2015

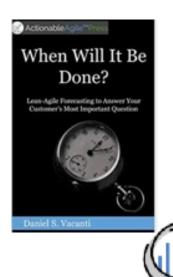
2016

2017

2018

2019

Learning More Kanban







Okaloa Masterclass Patrick Steyaert





rethinking

Klaus Leopold





KMM/KCP Class

Metrics & Forecasting Troy Magennis Focused Objective

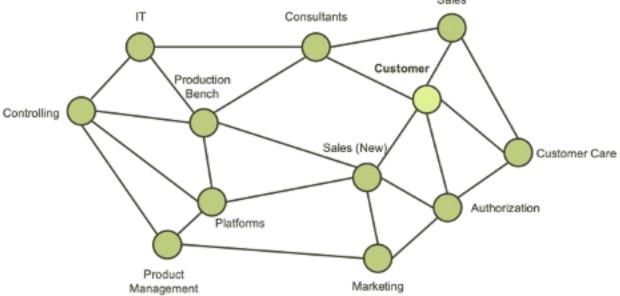


2020

A Network of Interdependent Services

Organizations are a network of interdependent services with polices that

determine their behavior

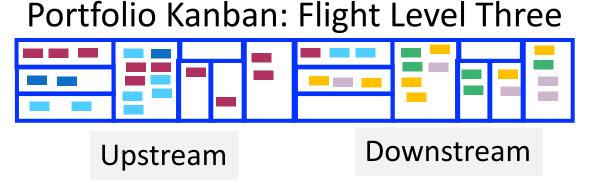


....but are there any common patterns?
Given these axioms, can we find any corollaries?
Can we derive theorems?



Does It All Fit Together? Yes Indeed



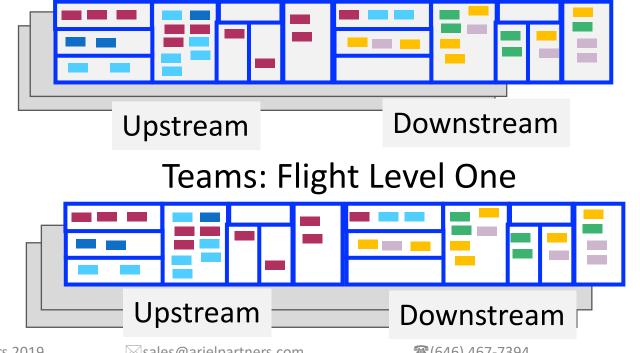




Value Stream Coordination: Flight Level Two

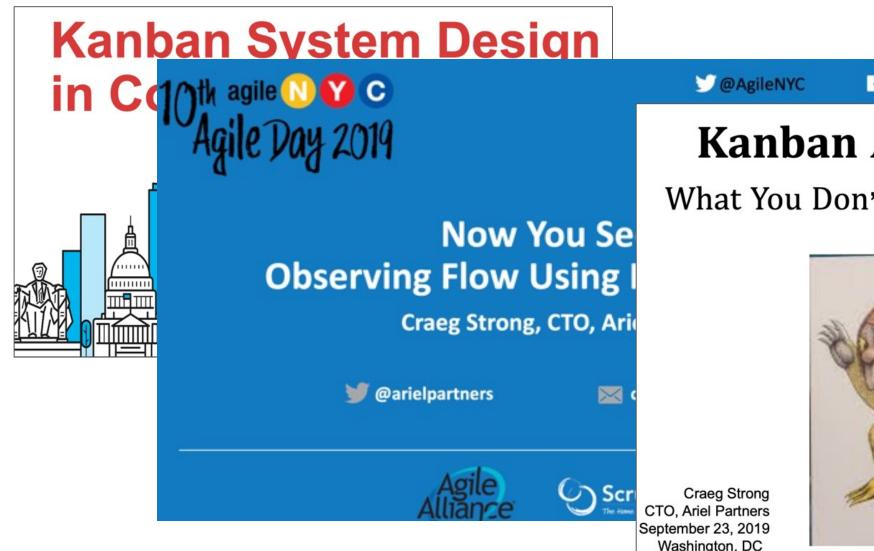








Agenda?





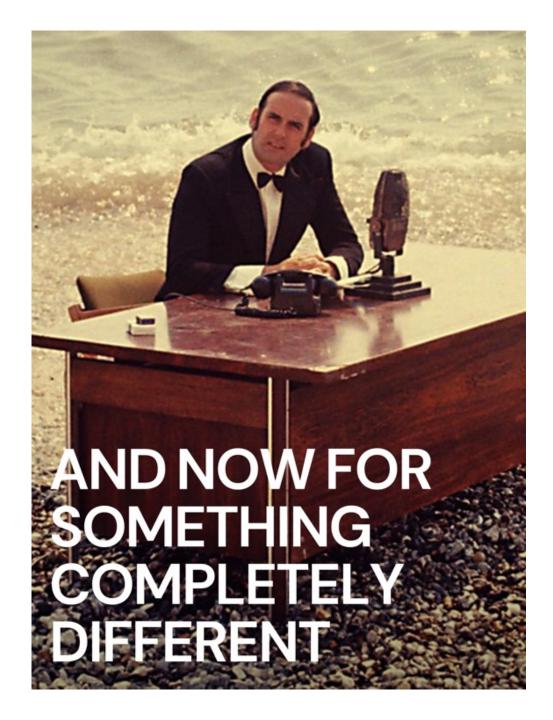
Kanban Antipatterns:

What You Don't Know Can Hurt You



Washington, DC







Agenda: 4 hours

Demonstrations

- 1. KanbanZone
- 2. EasyKAD / Jira Cloud
- 3. SwiftKanban
- 4. Kanbanize
- 5. Jira Data Center

Design Workshops

- 1. Multi-Level Team Board
- 2. Value Stream Board
- 3. Portfolio Board

Wrap Up

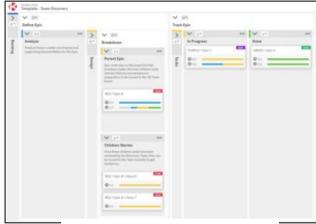
QnA



Demonstrations



KANBAN

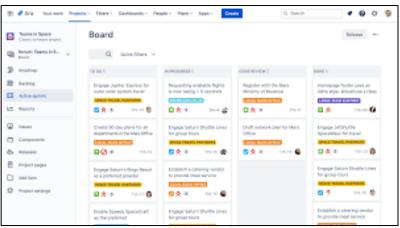


Swift Kanban



Short-Listed Tools





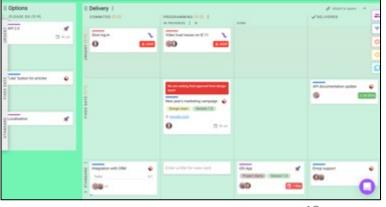














1. KanbanZone

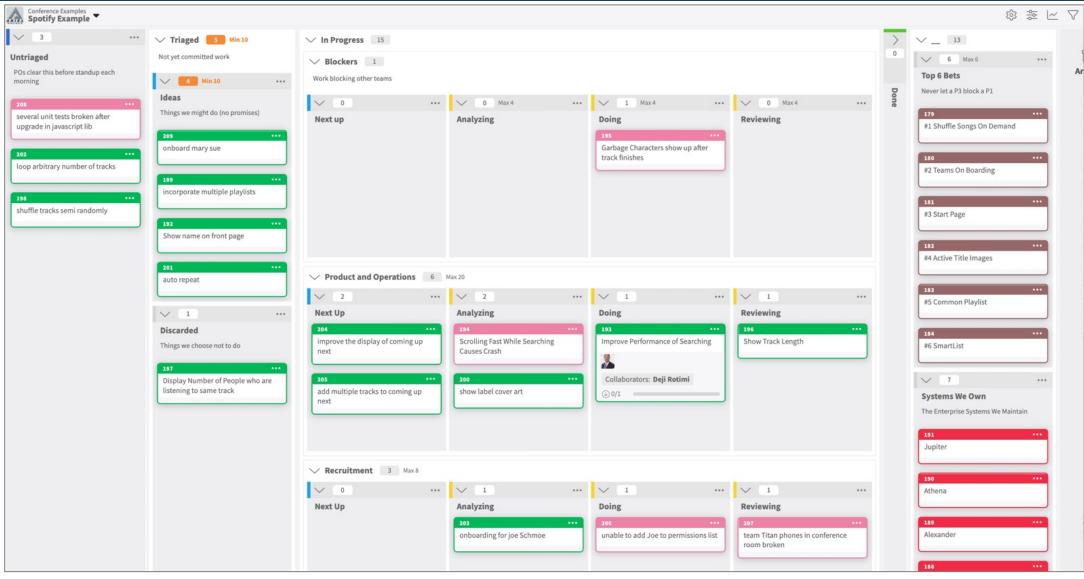


Spotify Example* Thanks to Cliff Hazell



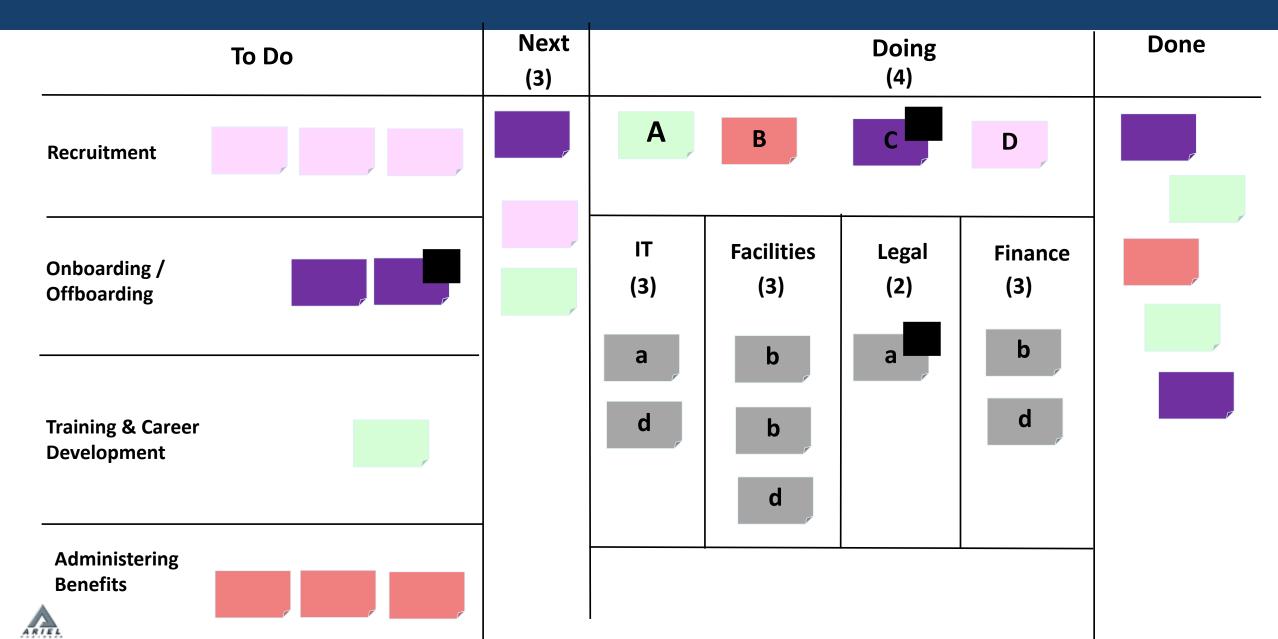


KanbanZone Version

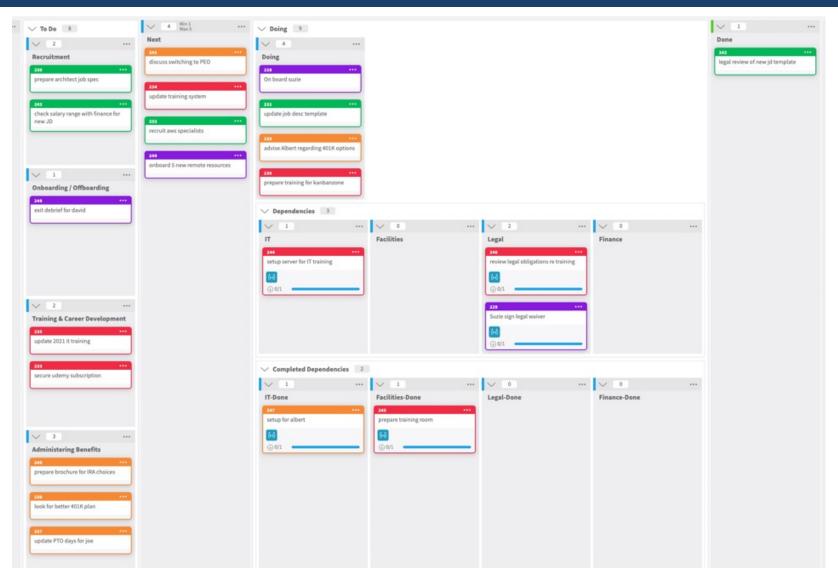




HR Example* Thanks to Ian Carroll

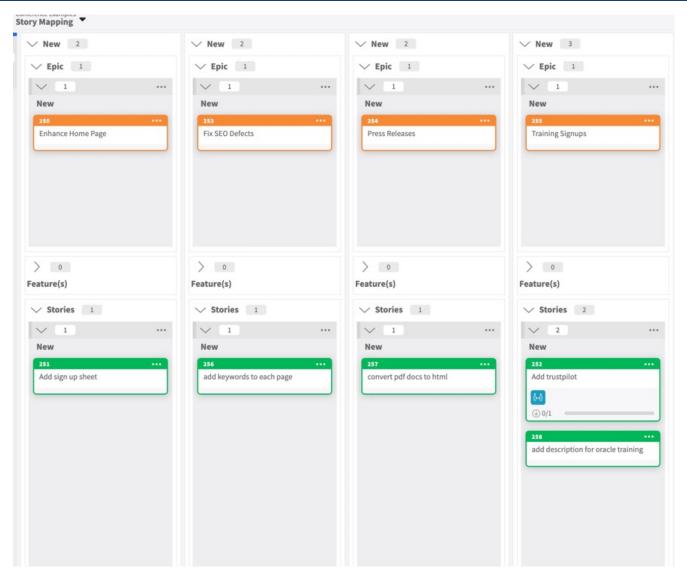


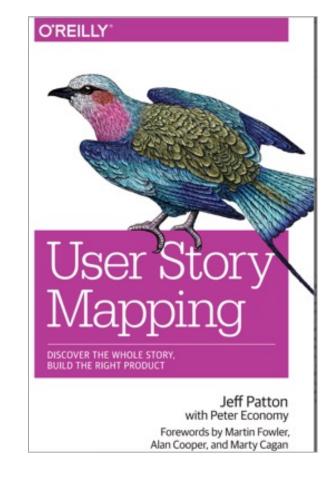
KanbanZone Version





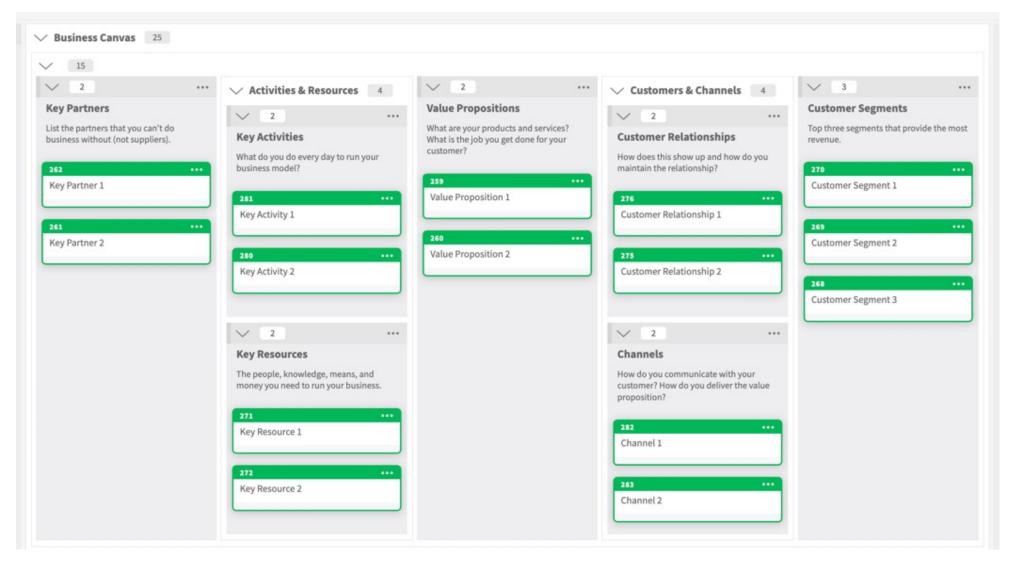
KanbanZone Example: StoryMap







KanbanZone Example: Lean Design Canvas





Kanban Zone Differentiators and Limitations

Differentiators

- Mirror Card
- None column
- Performance & Usability



Coming Soon

- Multi-Card width columns
- Stickers and Decorators
- Timeline view

Coming Later

- Metrics & Forecasting
- More than one Assignee
- Display Epic Name / Label in Card
- Swim Lane WIP for Capacity Allocation
- Per-Person WIP
- Calculated / Scripted Field

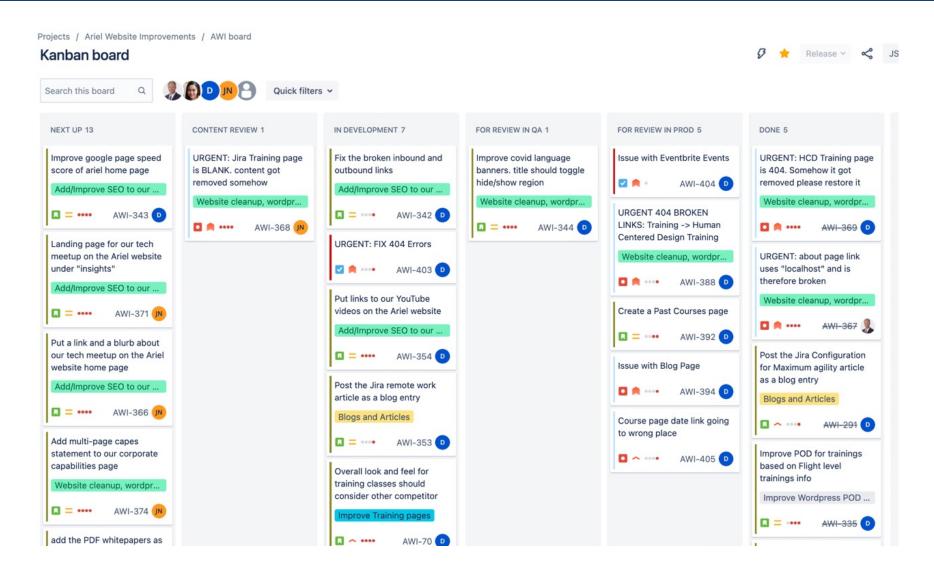




2. EasyKAD (Jira Cloud)

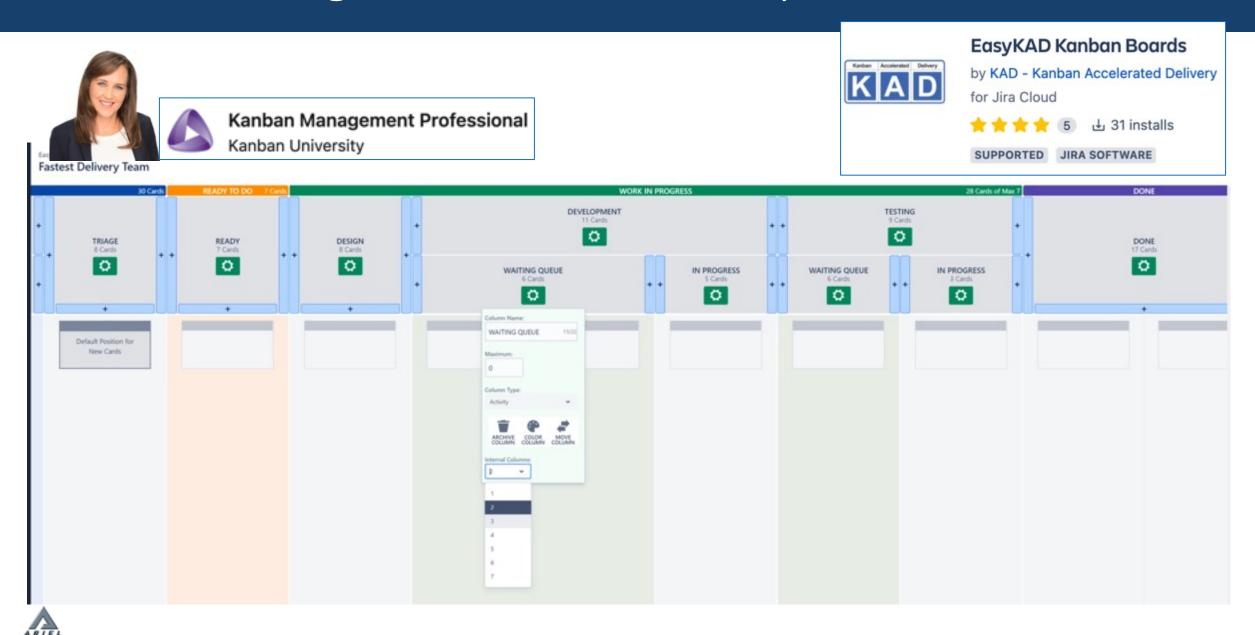


Jira Cloud Example

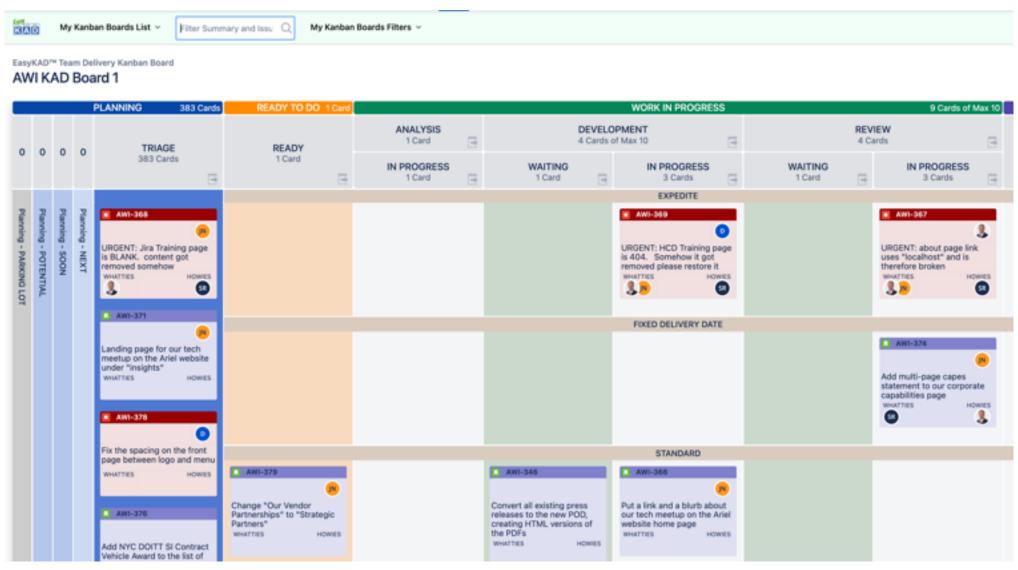




Kanban Plugin for Jira Cloud: EasyKAD



Jira Cloud + EasyKAD Example





Jira Cloud EasyKAD Differentiators and Limitations

Differentiators

- Column Background Colors
- Swimlane Background Colors
- Multiple Assignees
- Colorized Cards
- Blocker Signals
- Multiple Projects on One Board
- Smart Lanes
- Dynamic "Quick Filters" on top

Limitations

- Addl Fields In Cards (like Epic Name, Labels)
- Metrics & Forecasting
- Charts & Graphs
- Swim Lane WIP for Capacity Allocation
- Improved Filters
- Per-Person WIP



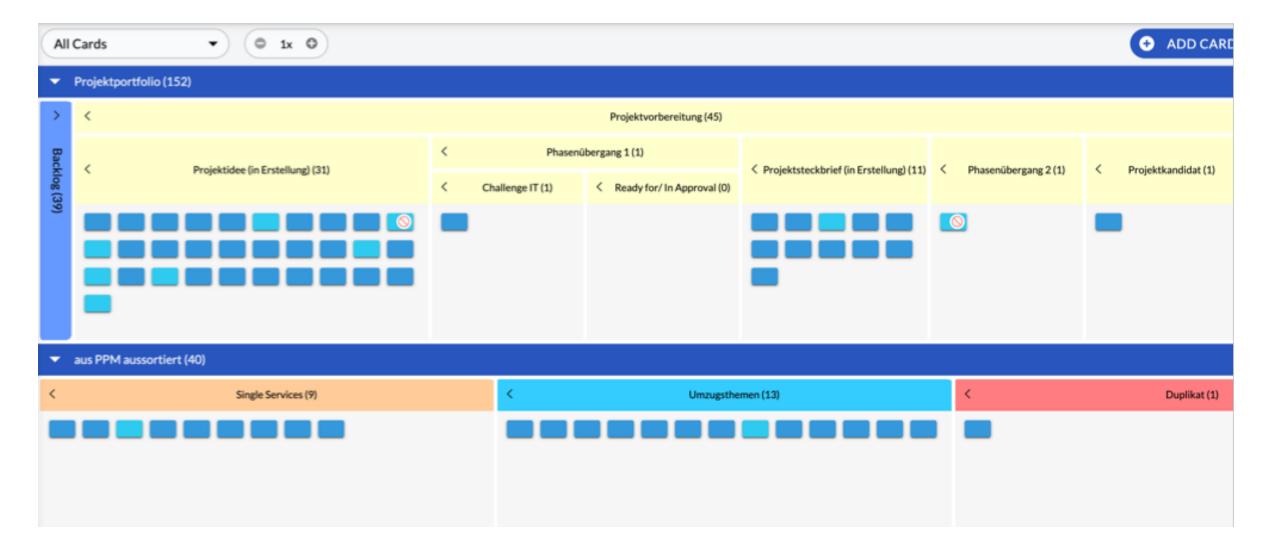




3. SwiftKanban



Swift Kanban Example





SwiftKanban Differentiators and Limitations

Differentiators

- Can be Installed On-Prem
- Multiple Assignees (only one visible)
- Column/SwimLane Background Colors
- Colorized Cards
- Stickers and Labels
- Zoom to Chiclet View
- Smart Lanes
- Blocker Clustering
- Metrics & Forecasting
- Charts & Graphs
- Risk Spider Charts
- Al recommenders
- Board Playback

Limitations

- No calculated/scripted fields
- No Quick filters
- Administration is Somewhat Complex



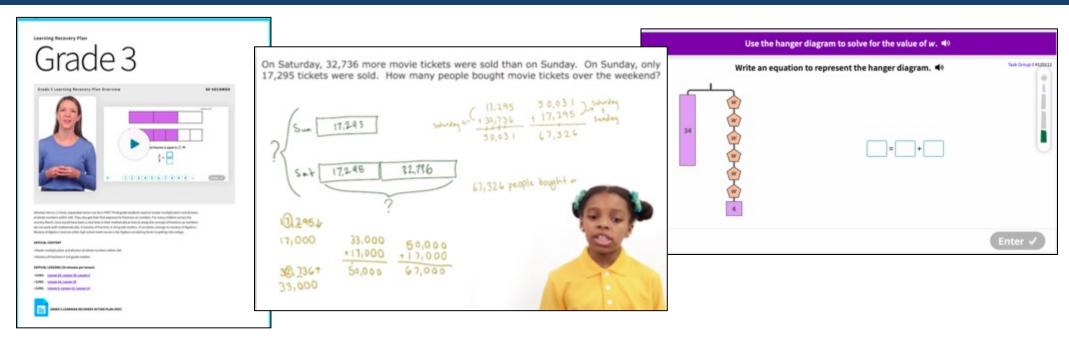




4. Kanbanize



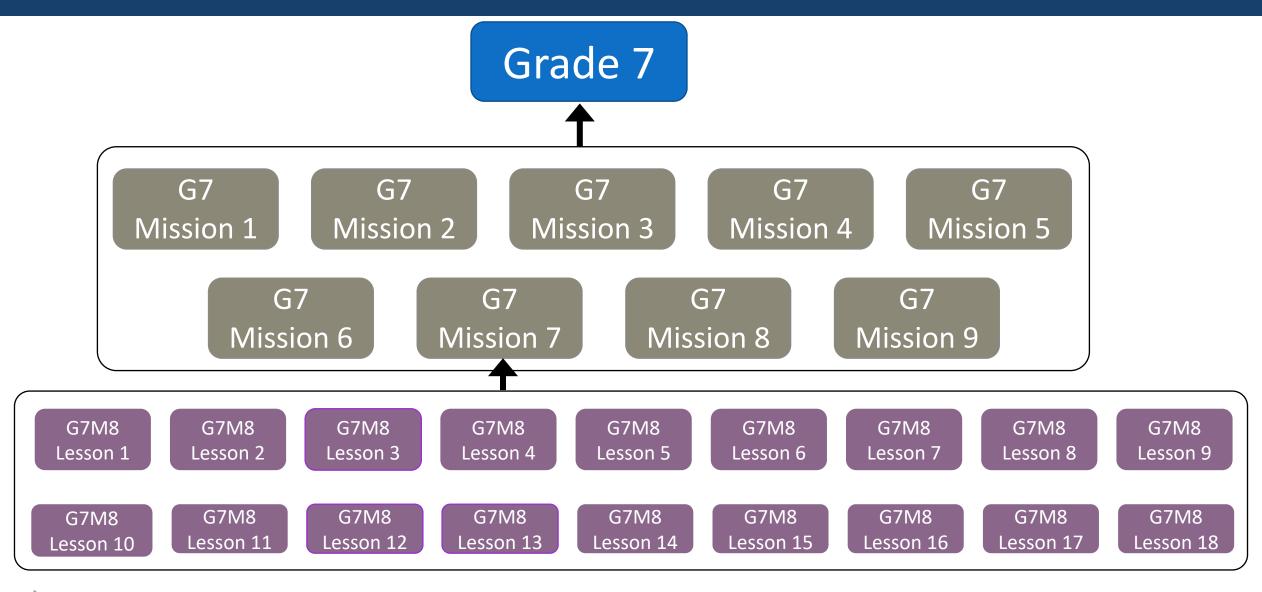
Kanbanize Use Case: Online Education Company



- Mission: Help K-8 Students to love and excel at Math
- Primary school lessons in production Now
- Users nearly 1/3 of all US Students
- Extending into Elementary and Secondary School Grades
- Delivery: Roughly one grade-worth of material per calendar year



Anatomy of Curriculum Work Items



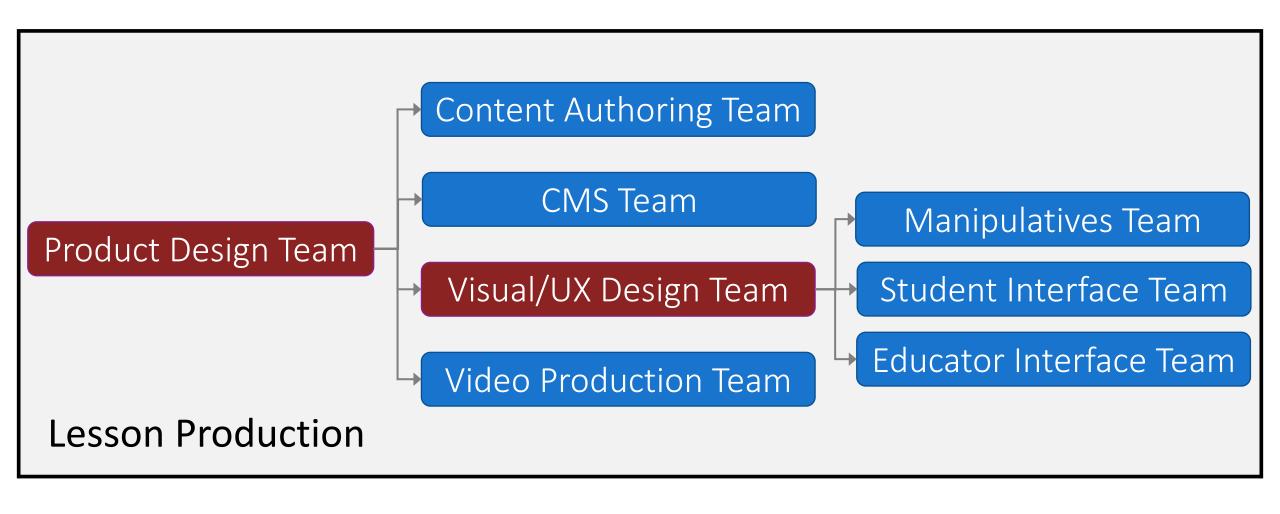


Summary of Challenges

- Regular weekly deployments to Production every Thursday
- Constant improvements throughout, especially for scalability
- Many dependencies for lessons: rescheduling is difficult
 - Scheduled video production date
 - Voice actors
 - Teachers
 - Script
 - Unique Interface features (e.g., mystery bag manipulative)
- New material cannot go "live" until entire grade is finished
- Interface is brand new- significant rework is expected
- Each grade is more difficult and time consuming than the last



Visualize Board Relationships On Dashboard



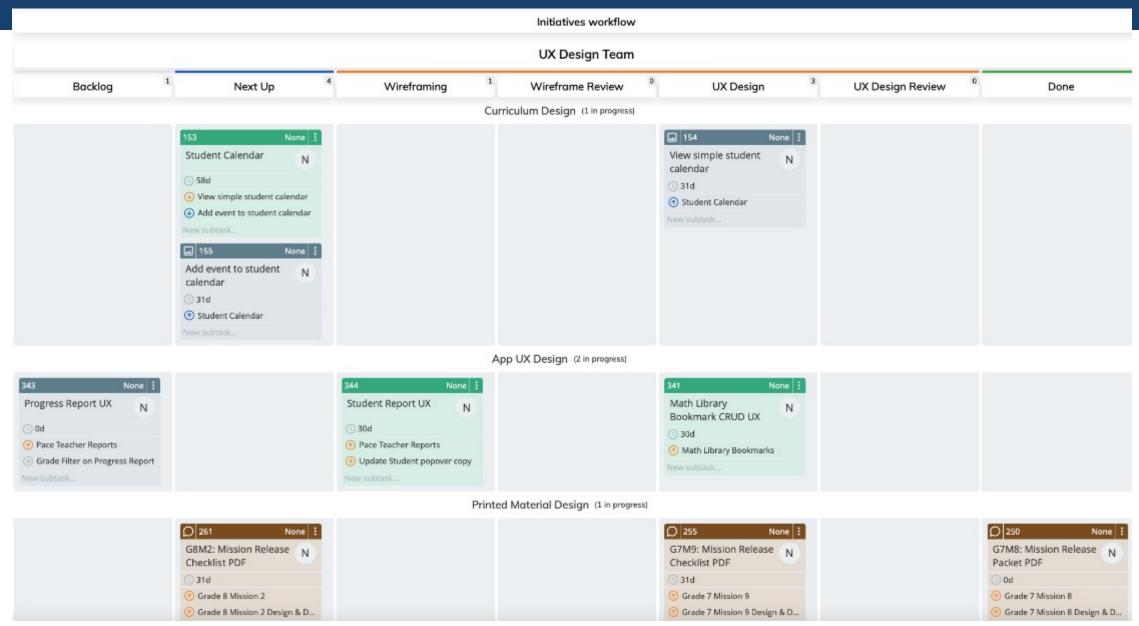
LEGEND:

Upstream Team (Discovery Kanban)

Downstream Team (Delivery Kanban)

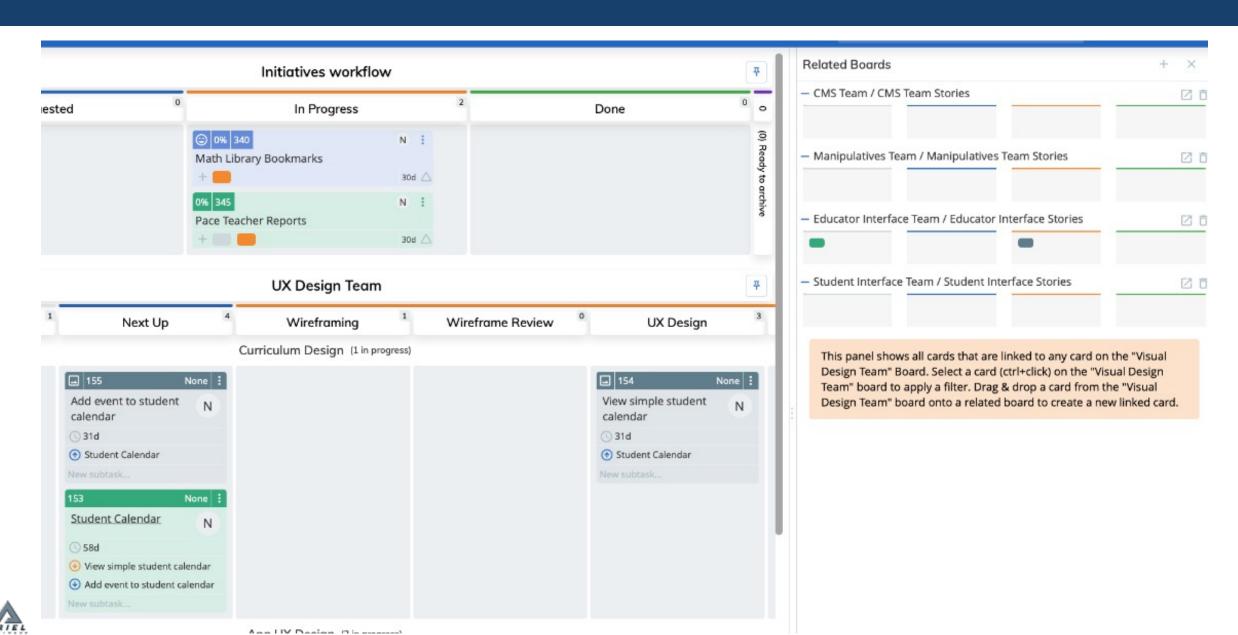


Discovery Kanban Board: UX Design Team

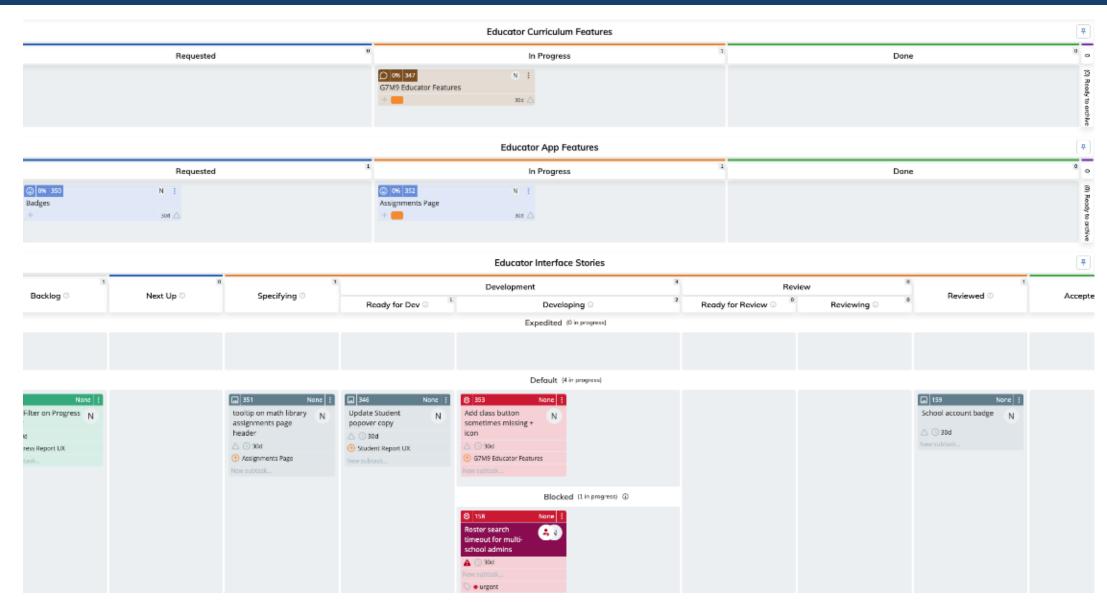




Generating a related card UX card $\leftarrow \rightarrow$ User story

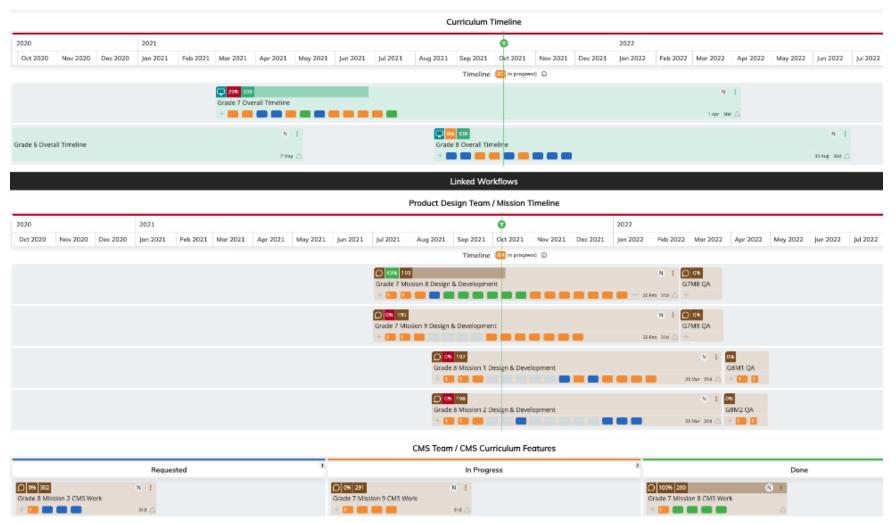


Educator Interface: Delivery Kanban Board





Flight Level 2: Coordination Boards



- Timeline view shows bar by planned start & end dates
- ☐ Grades up top
- Missions Below
- All child features and user stories are displayed
- Progress bar
- □ Run MCS to check if we are on track to complete by the due date



Kanbanize Differentiators and Limitations

Differentiators

- Column/Lane Background Colors
- Colorized Cards
- Stickers and Labels
- Blocker Clustering
- Metrics & Forecasting
- Charts & Graphs
- Timelines
- Convenient Aggregation Boards
- Convenient Drag and Drop UI

Limitations

- Single Assignee Only
- No calculated/scripted fields
- No Min WIP





Jira Software

5. Jira Data Center



Stuck with Jira Data Center?

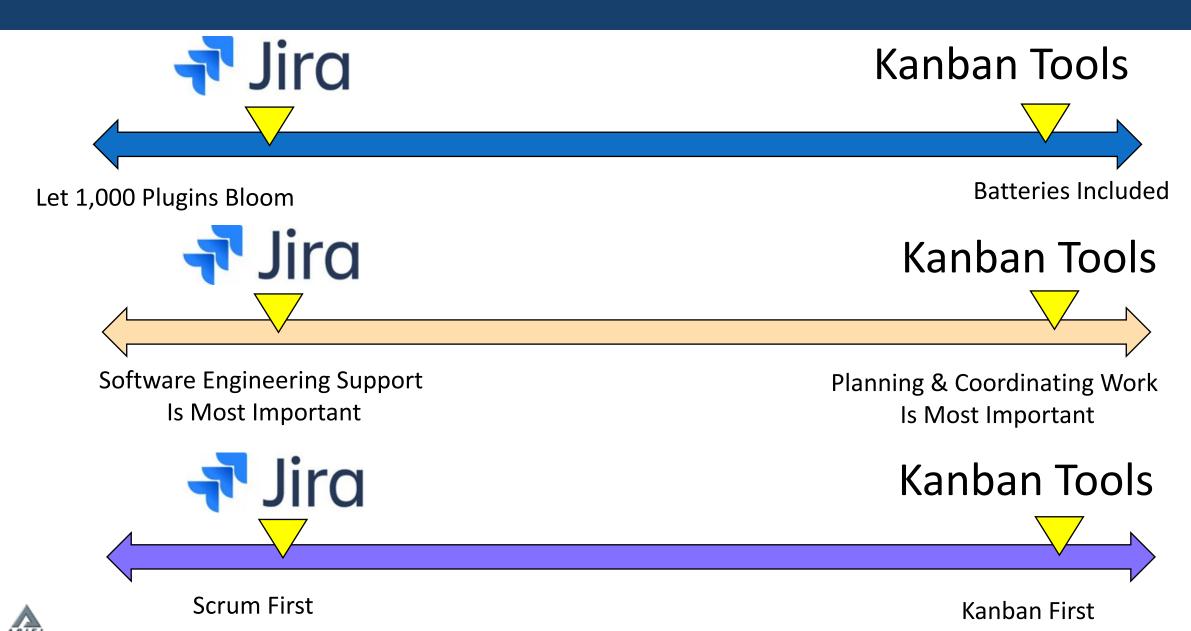
Here is what we did

- Scour the Jira Plugin Marketplace
- You will need ~10 Plugins
- ...It will be Expensive
- Master Jira Administration
- ...It will be time Consuming

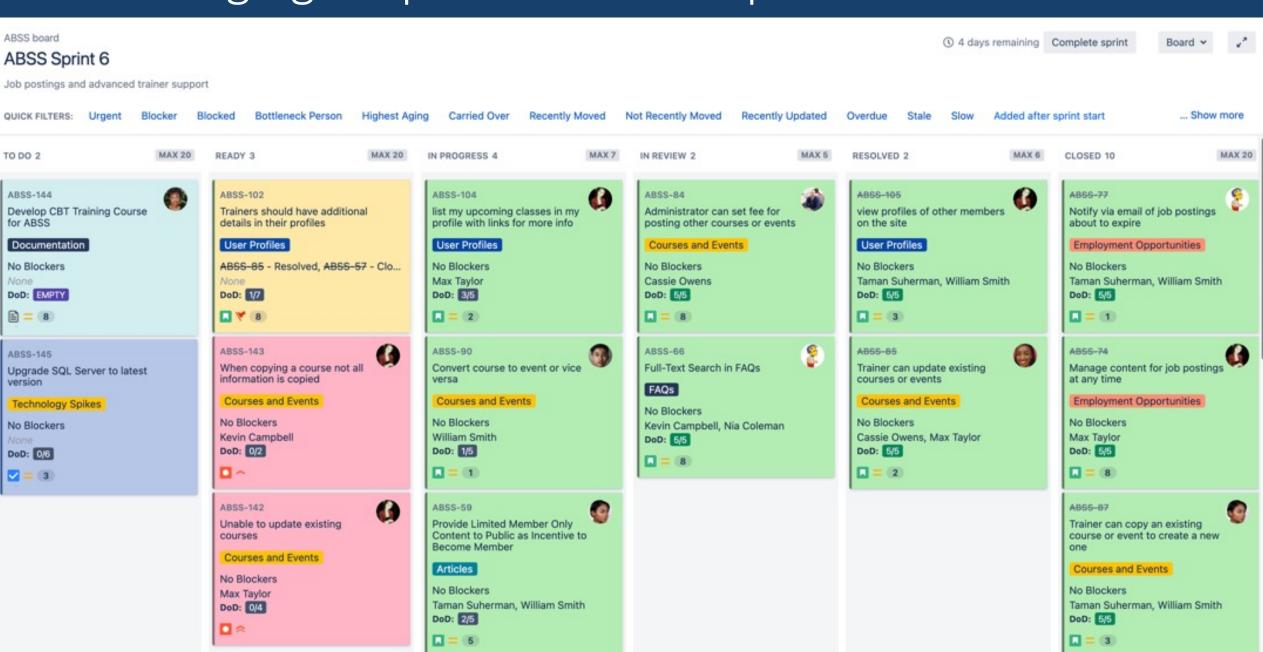




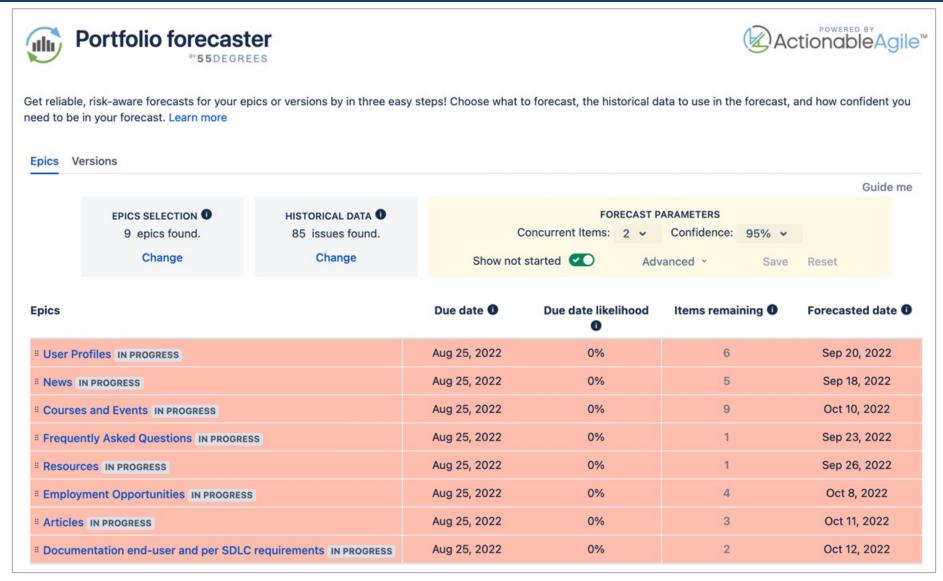
Different Philosophies



Leveraging scripted fields and quick filters



Cool New Plugin: Portfolio Forecaster





Jira Data Center Differentiators and Limitations

Differentiators

- Show Cards on Multiple Boards
- Calculated Fields
- Quick Filters
- Good Forecasting Plugin
- Good StoryMapping Plugin
- Good Scripting Plugin
- Good Charting Plugin

Limitations

- No Multi-card Width Columns
- Can't drag-and-drop between swim lanes
- Only One Assignee
- No Stickers
- No Blocker Clustering
- No Swim Lane WIP for Capacity Allocation
- No Per-Person WIP
- Clumsy & Painful Workflow Configuration



Next?



Next Steps: What I would like to See

1. Order Points & Capacity Reservation

- WIP limits spanning multiple boards
- Overlapping WIP limits
- Multi-Team Reservation of Capacity

2. Flight Levels Support

- System Architecture: Interactive Top-level visualization across multiple boards
- Big Picture Visualizations

3. Strategy Boards

• OKRs, KPIs

4. Program and Portfolio Management

- Budgeting, calculation of financial metrics
- Staffing/resource planning



Workshops



1. Multi-Level Team Board

A software development team wants to create a Kanban board to help visualize their workflow. The team receives requirements from the business in the form of Features.

Historically, Feature lead times (from starting to analyze to deploying to production) are between 2 weeks and 6 months, with some outliers of more than one year.

The business wants Features to be completed faster and with more predictability.

The team wants to break down Features into smaller chunks of one week of work or less (Stories). The team indicates they can develop and test each Story separately. The business has no problem with the way the team chooses to break down work internally but they want Features to be tested and deployed as a whole.

Here is the Feature workflow:

- 1) Backlog
- 2) Development
- 3) Integration Testing
- 4) UAT
- 5) Cutover
- 6) Done

How could you visualize Features and Stories in a single board?

How could the board help us with what we are trying to optimize?

What Kanban practices can we leverage?



Multi-Level Team Board Example

Backlog	In Progress	Specify	Ready	Imple Doing	ment B Done	Test	Done	Int Testing 3	UAT 2	Done
•	Maintena	nce								



2. Multi-Team Board

*With Thanks to Patrick Steyaert, Arlette Vercammen, and Klaus Leopold!

An IT Department has three teams: Team Red, Team Blue, and Team Green. The three teams mostly work independently, however, sometimes they have dependencies on each other.

Each team already has their own Team-Level board, and they are happy with their boards. If any item on a Team-level board can't move forward due to a dependency on another team, it gets blocked

They are seeing lots of these!

The teams would like to figure out a way to coordinate their dependencies, so they don't get blocked so often.

As their coach, you have recommended that they design a "coordination board:" a higher-level board that shows what each team is doing and enables a team to request work from another team.

Ideally, one team should be able to *reserve capacity in advance* so that their dependency is ready when they need it.

At this higher level, we only need this simplified workflow:

- 1) Dev
- 2) Test
- 3) UAT
- 4) Done

How could you visualize all three teams' work in progress in a single board?

How can one team reserve capacity in advance from another team?



Multi-Team Board Example

Team Blue	Next 3	Dev Doing Done	Test	UAT	Done
Team 5 Red					
Team Green					51



3. Portfolio Board

*With Thanks to Pawel Brodzinski and Guillaume Marceau!

You are working with a CIO of an organization who needs to manage a portfolio of 6 projects across 4 teams.

- The Teams are "Team A" through "Team D."
- The Projects are "Alpha" through "Theta"

Projects are either Strategic or Tactical.

A Team can work on:

- three small projects,
- one large project, or
- one medium + one small project at a time.

	Project Alpha	Project Beta	Project Gamma	Project Delta	Project Epsilon	Project Zeta	Project Eta	Project Theta
Tactical or Strategic	Strategic	Tactical	Tactical	Tactical	Strategic	Strategic	Tactical	Tactical
S/M/L	Small	Medium	Small	Medium	Large	Medium	Small	Small
Team	Team A	Team A	Team B	Team B	Team C	Team D	Team D	Team D
Start	Q1	Q1	Q2	Q1	Q1	½ way thru Q1	Q1	Q1
Projected Finish	Q4+	½ way thru Q2	Q4+	Q3	Q4	Q4	Q1	Q2

How might you go about helping the CIO visualize his portfolio over the next 4 quarters?



Portfolio Board Example

	Q1	Q2	Q3	Q4	Strategic
Team A	Alpha Beta	Alpha Beta	Alpha	Alpha	Tactical
Team B	Delta	Gamma Delta	Gamma Delta	Gamma	
Team C	Epsilon	Epsilon	Epsilon	Epsilon	
Team D	Zeta Eta Theta	Zeta Theta	Zeta	Zeta	



Strategy for Disability Case Processing System: US Govt

Strategy /		Business	Capabilities			
Objective	KR / KPI	Function	3-6 Months	0-3 Months	Active	
MVP: Support Initial Disability	Initial Adult disability claim	Manage User Profile	User Financial Info	Manage User Relationships	Basic User Info	
Claims for 1 medium MicroPact state	can be entered	Manage Organization	Assign Org Roles	Manage Org Users	Basic Org Info	
		Manage Authentication	Impersonate User	User Logout	User Login	
		Manage Disability Case				
		Manage Disability Claim				
		Manage Authorizations				
	Financial API Supports Quarterly Close	Interface to State Financial Systems				

Portfolio Board Example: Pharma company **ACTIVE UP NEXT** > 12 MONTH | 9-12 MONTH | 6-9 MONTH | 3-6 MONTH **INVESTMENTS** PRODUCTS **MISSION TEAM SAGAS** NAME PATIENTS **SAGA**

ARIEL

Portfolio Board Example: "Green Energy" company, NYC

	Q1	Q2	Q3	Q4	
Alpha					
Beta					
Gamma					
Delta					
Epsilon					Tactical
zeta					
Eta					
Theta					



Parting Thoughts

■Kanban Tools Can Now Support Rich, Real-World Workflows □ Cost of Change Is Low ☐ Multiple good options ☐ Different and Unique ☐ If you use Jira, plugins are available □So... Don't be afraid to use them! ☐ Constantly Tune and Improve Your Visualizations ☐ Make sure your board speaks to you ☐ If you encounter a bad situation and the board didn't telegraph it, time to review the board design □ Don't be afraid to try something! Revert later if it doesn't work ☐ Use swim lanes, colors, and card design ☐ Use higher-level boards for coordination, alignment, communication



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THANKYOU



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