



Modern Project Management With Lean Kanban

PMI NYC

June 22, 2023, 06:00pm-7:00pm EST



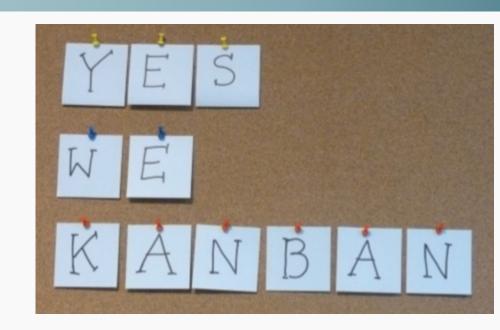
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Savant Financial Technologies, Inc.
d/b/a Ariel Partners



Agenda

- 1. About me
- 2. Why use Kanban to Manage a Large Project?
- 3. Scoping and Planning
- 4. Up-Front Forecasting
- 5. Getting to Ready with Upstream Kanban
- 6. Managing SLA and Timeboxes
- 7. Coordinating Teams & Managing Dependencies
- 8. Metrics & Continuous Re-Forecasting
- 9. Kanban & DevOps
- 10. Key Takeaways, Q&A

Kanban Tools / Kanban Classes





About Me



Craeg Strong



CTO, Ariel Partners AKT/AKC, FLG, CSM, CSP, CSPO, ITILv3, PMI-ACP, PMP, CLP, SPC, ICP-ACC, ICP-ATF, PSM-II, PSK

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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





Ariel Coaching/Training Courses

Agile Certifications

- 1. Team Kanban Practitioner
- 2. Kanban Management Professional
- 3. Value Stream Mgmt: Kanban Flight Level 2
- 4. Enterprise Strategy: Kanban Flight Level 3
- 5. SAFe Scrum Master / Adv SM
- 6. SAFe Product Owner
- 7. SAFe Release Train Engineer



Atlassian Suite

- 1. Jira Fundamentals /
- 2. Jira Intermediate
- 3. Jira Advanced
- 4. Jira Service Desk
- 5. Team Spaces in Confluence
- 6. Git and Bitbucket

Agile Transformation

- 1. Fundamentals of Agile
- 2. Agile for Leaders & Executives
- 3. Business Agility via Kanban Flight Levels
- 4. Human Centered Design
- 5. Agile Requirements: Story Mapping, Splitting & Discovery Kanban
- 6. Agile Forecasting & Metrics

Technical Practices

- 1. Specification By Example
- 2. BDD & Automated Acceptance Testing
- 3. Git and GitHub
- 4. Hands-On DevSecOps with Docker
- 5. Microservices Design Patterns
- 6. SRE: Site Reliability Engineering
- 7. AI/ML Bootcamp



Why Use Kanban to Manage a Large Project?



Benefits of Kanban-Based Project Management

- ☐ Flexibility: Escape tyranny of the (single) timebox
- ☐ Team Size: Works with teams from one to 30
- ☐ What if we don't have a single Product Owner? Work directly with multiple stakeholders
- ☐ Works equally well in IT or business setting: underwriting, finance, HR
- ☐ Uses metrics your customers will understand
- ☐ Facilitates accurate forecasting for key milestones and releases
- ☐ Helps highlight risks sooner



Visualize

Show work and its flow.

Visualize risks.

Build a visual model that reflects
how you actually work.



Make policies explicit

Have agreed policies, visible to everyone involved.

- Pull Criteria
- WIP Limits
- Classes of Service
- Dependencies and blocker handling



Limit Work in Progress

Stop starting, start finishing!

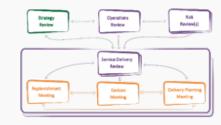
Left yields to right.

Limit work in

the system to available capacity.



Establish Feedback loops



Establish feedback loops at an appropriate cadence.
Foster collaboration, learning, and improvements.
Data-driven.

Manage Flow

Flow is the movement of work.

Manage flow to be smooth

and predictable.

Use data.



Improve collaboratively, evolve experimentally

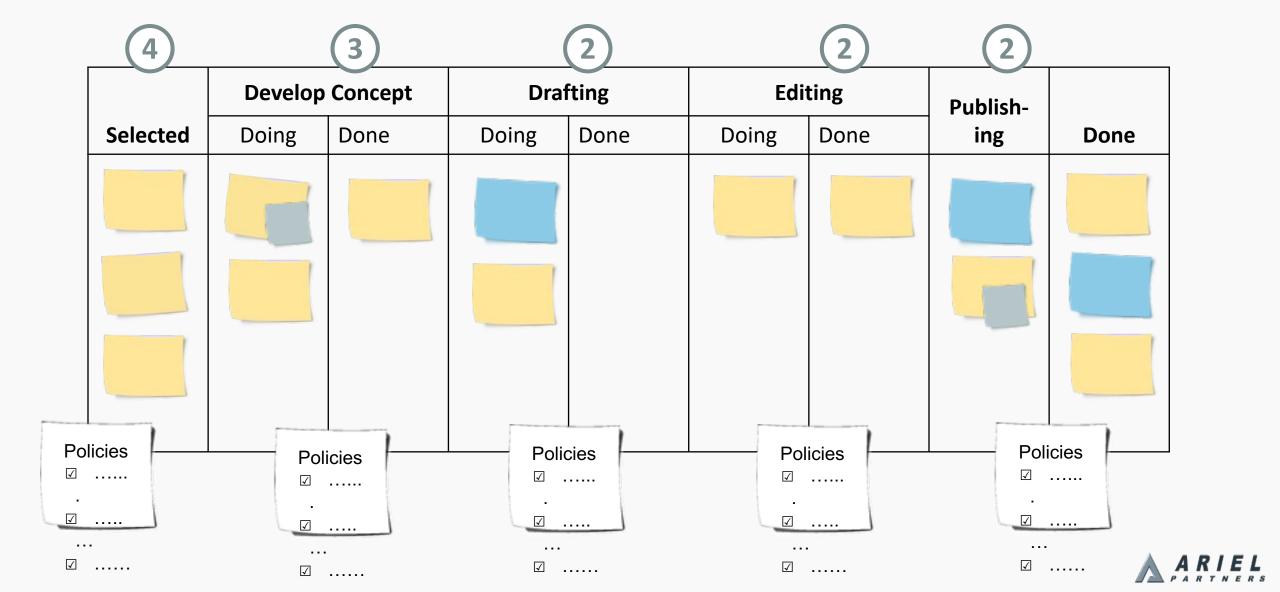
Using the scientific method. Hypothesis-driven change. Run safe-to-fail experiments.







A Kanban board



Scoping & Roadmapping

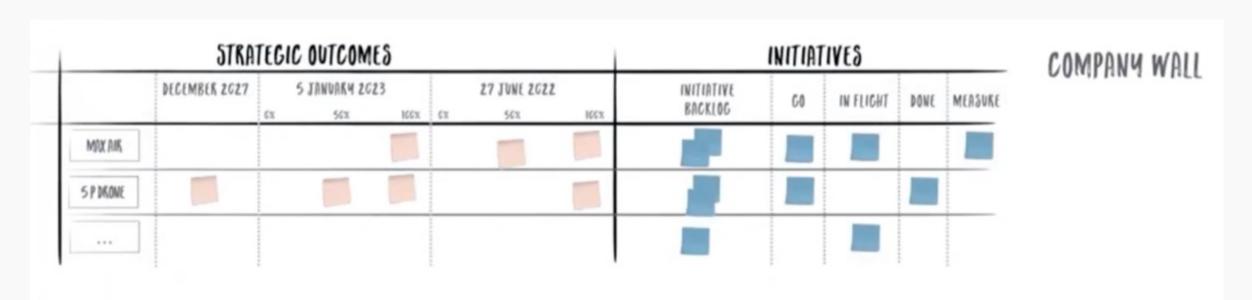


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Example: Strategy for Disability Case Processing System

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 produces JSON	Interface to State Financial Systems						

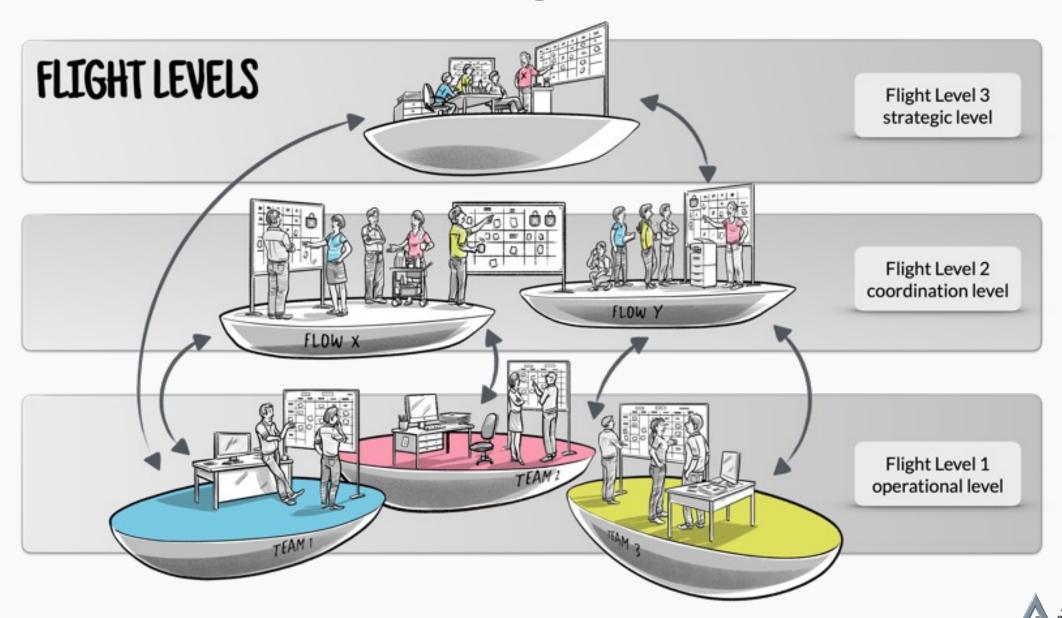
Linking Into Strategic Portfolio



DISCOVER & DEFINE		SP OUTCOMES	DESIGN & DELIVER								
IDEA CANVAS BACKLOG	IN Validation	VALIDATED IDEAS	ZI SEP ZZ Z7 JUN ZZ cx scx locx cx scx locx		INITIATIVE Backlog	EPIC BACKLOG	IN CONCEPT	G0	IMPLEMENTATION	DONE	MEASURE
	шш		5P B004								
	Ш		5P SOFTWORE								
Ш				PROP 2/3							



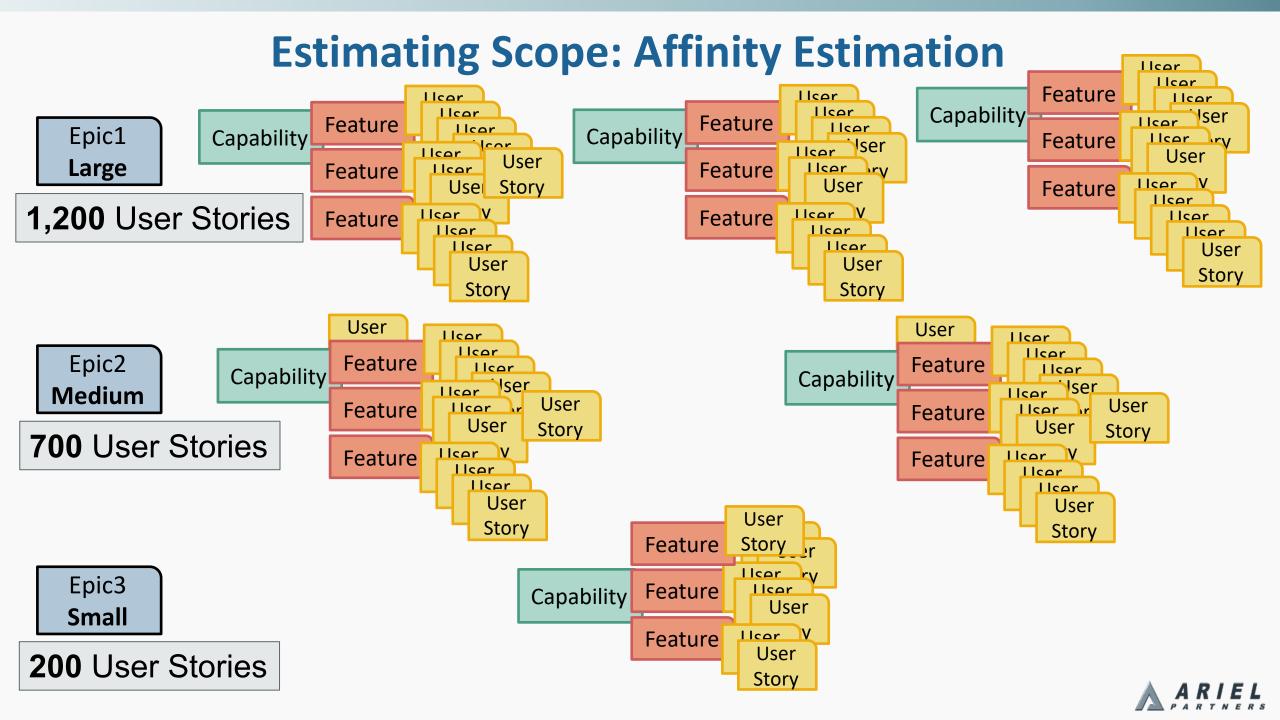
Kanban Flight Levels



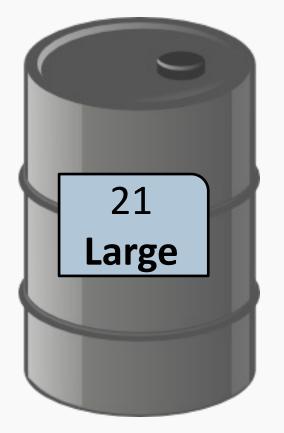
Up-Front Forecasting

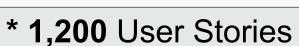


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Estimating Scope: Affinity Estimation







* 700 User Stories

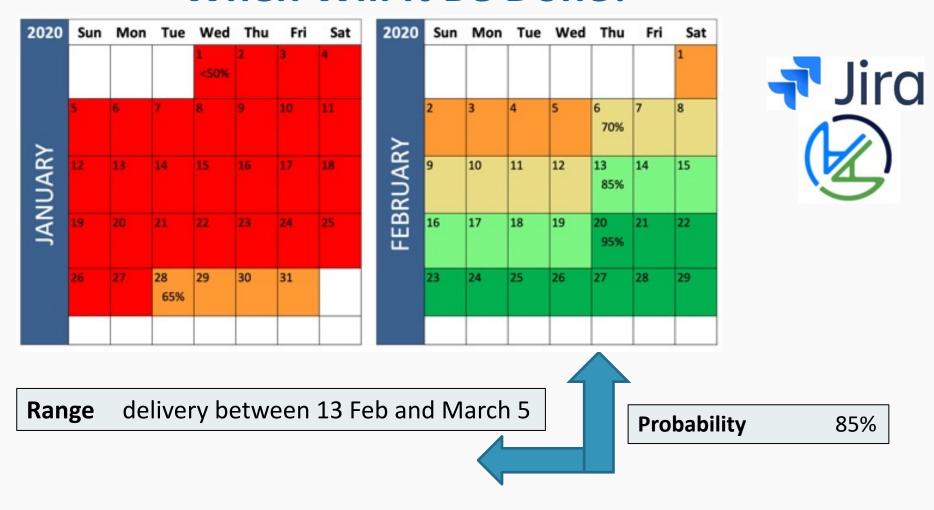


* 200 User Stories

77,400 User Stories



When Will It Be Done?



- Color coded by percentage confidence
- ☐ Calendar view easier to communicate



Model Testing

☐ Sanity Check Estimates Against Prior Efforts

No	Name	Sponsor	Start Date	End Date Cost		Max Resources Result
1	Disability Benefits Modernization, Phase One	Colleen Jefferson	4/6/11	8/7/16 \$	132,667,000	134 Failed Deployment, System Abandoned
2	Overpayment Recapture via Wage Garnishment	Max Powell	5/2/14	7/29/16 \$	13,500,000	62 System in production, rollout to field offices continues
3	Benefits Modernization NG	Niraj Gawal	11/14/16	6/2/19 \$	52,800,000	111 System running in parallel with legacy system

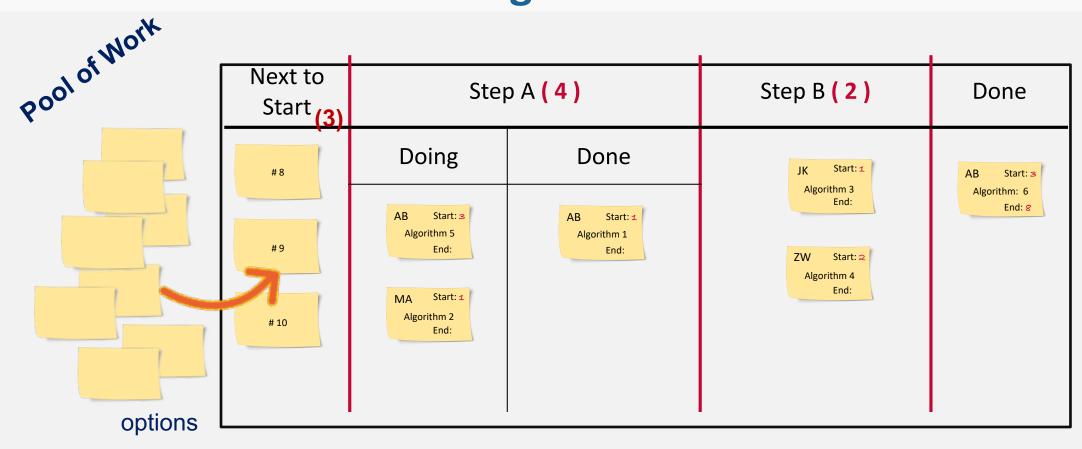
- ☐ Compare and Contrast Salient Features
 - Number of System Interfaces
 - Complexity of User Interface
 - Complexity of Calculations and Processing
 - Online Transactions versus Analytics and Reporting
 - Exotic or Legacy Technologies
 - Coordination with External Parties We Do Not Control



Getting to Ready with Upstream Kanban



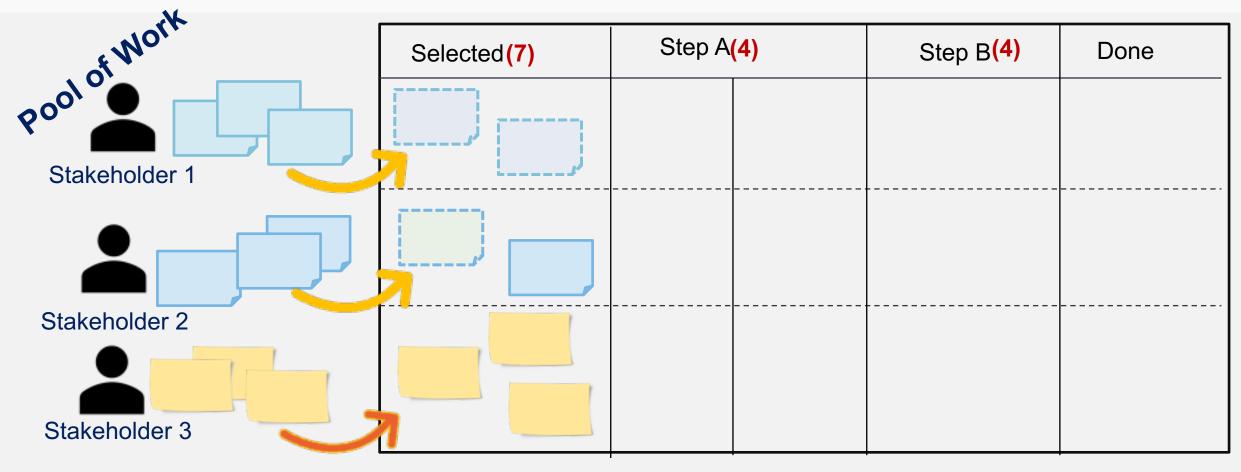
Committing to Work in Kanban



- ☐ A Kanban team is constantly moving tickets through the workflow in a continuous flow
- ☐ This means that they are constantly replenishing the tickets from a pool of work
- ☐ Team members "Pull" work when they have capacity
- ☐ Emphasis on collaboration to get work finished, before starting additional work

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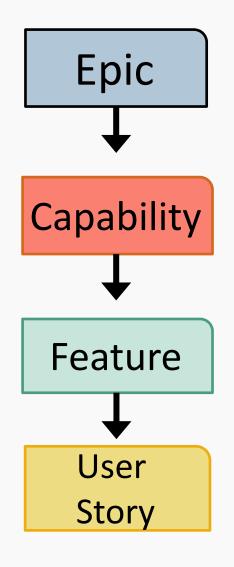
Kanban Teams Often Work with Multiple Stakeholders



- ☐ Each swimlane may represent a different type of work
- ☐ Each different type of work may represent a different stakeholder group
- The team works with each group separately to replenish



Fighting Scope Creep

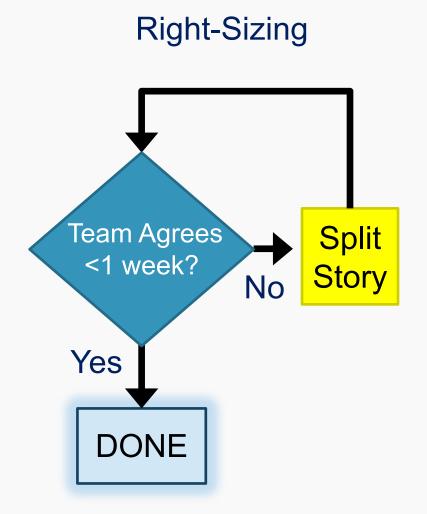


At Every Juncture

- ☐ Can this be deferred?
- ☐ Is there a simpler way to accomplish the goal?
- ☐ Can we streamline or simplify the interface?
- ☐ Can I generalize this, so the next four we have to build will go faster?
- ☐ Can we provide a D-I-Y API and a file instead of a full user interface?
- Extract to Excel rather than develop a fancy but little-used report?



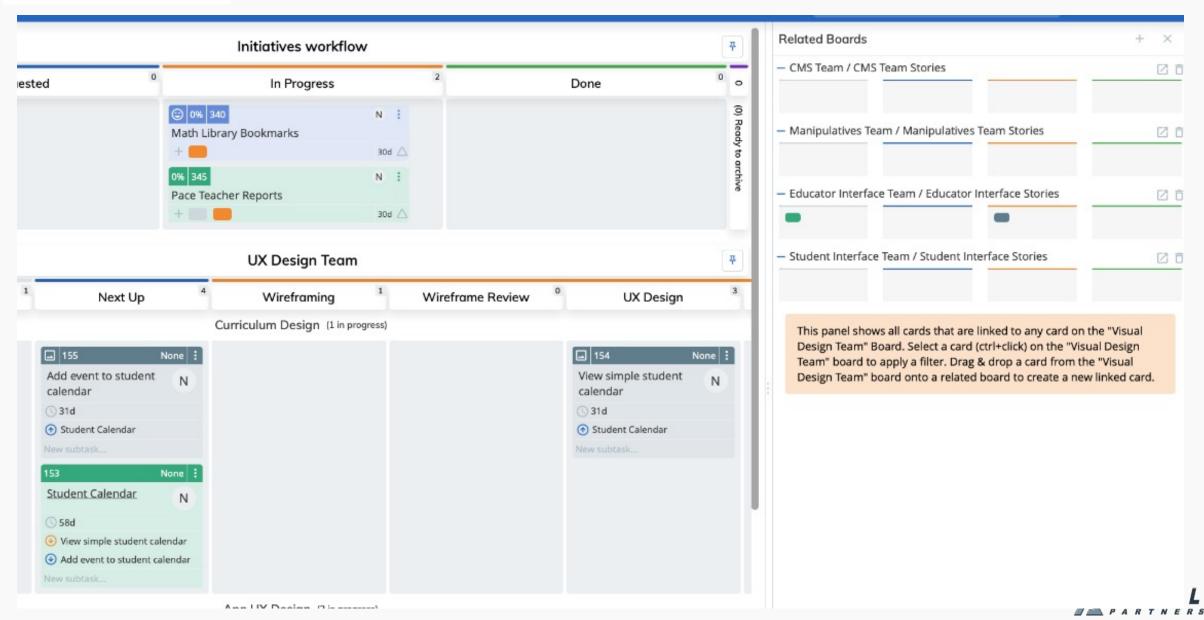
How do we get there? Rightsizing







Upstream Kanban Example



Managing SLA and Timeboxes

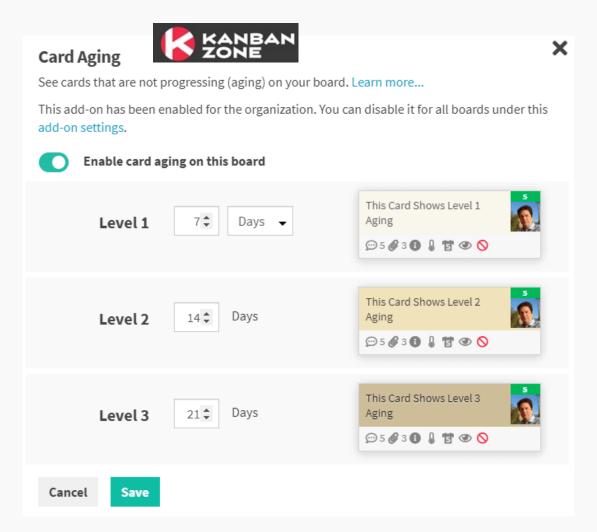


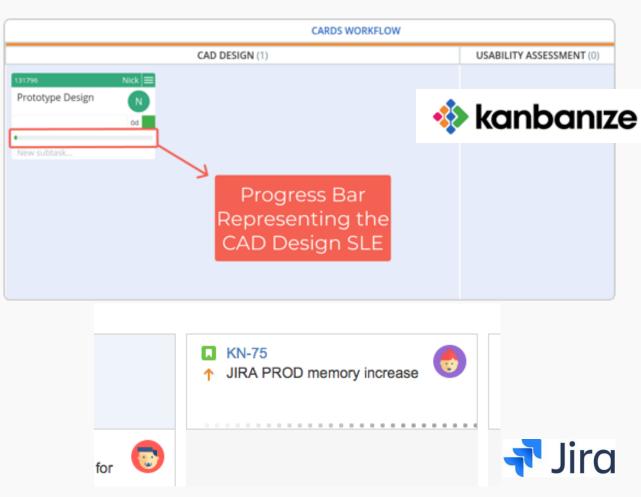
Fixed Date Class of Service

Options	Discover (3)		Impleme	ent (4)	Verify (2)	Done		
	Doing Done		Doing	Done	Automatically Becomes			
Expedite				Sep 27	en Date Gets ear			
VIP System	Oct 18		Sep 30					
(6)								
Maintenance (3)								



From Timeboxes to Service Level Expectations





No Card Should Be In Process more than 3 Weeks "WIP Aging" How much time do we have left to complete this card?



Coordinating Teams & Managing Dependencies



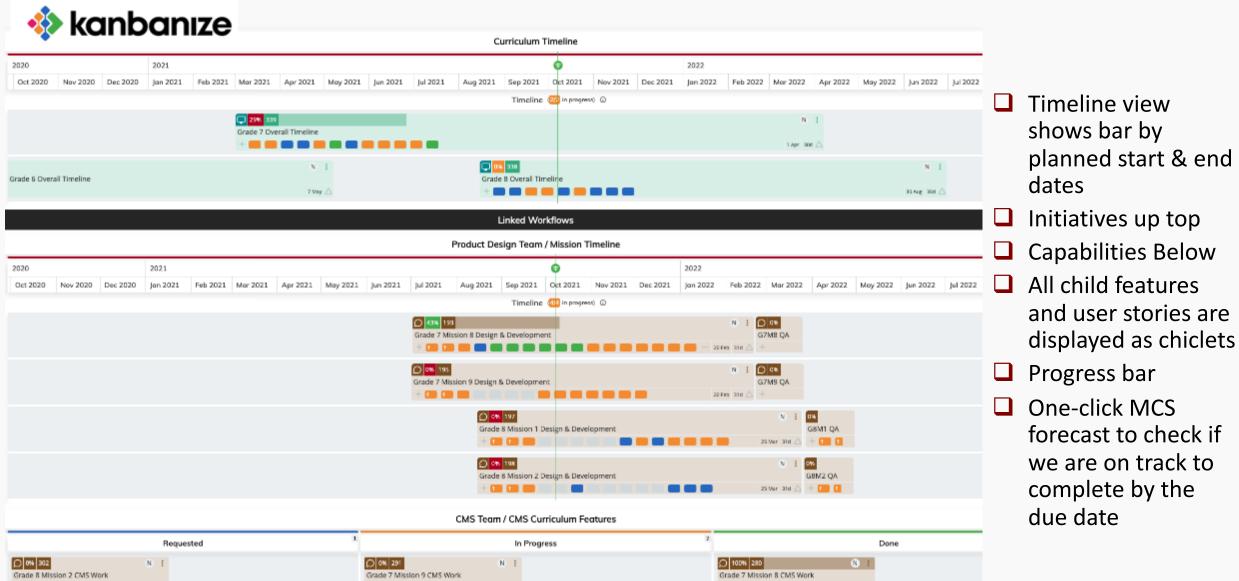
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End to End Board





Flight Level 2: Coordination Boards



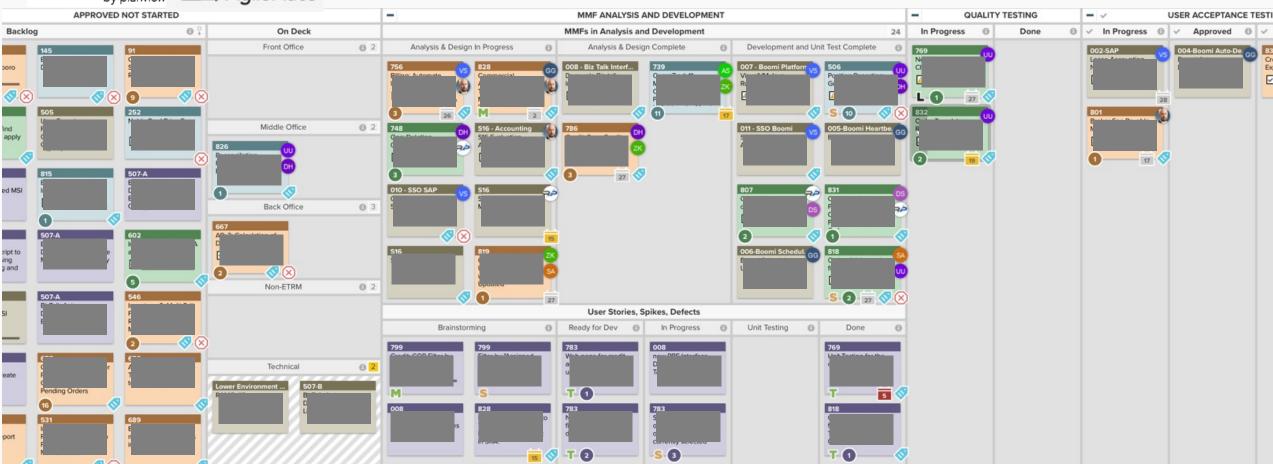
316 🛆

31d 🛆



Multi-Level End-to-End Board

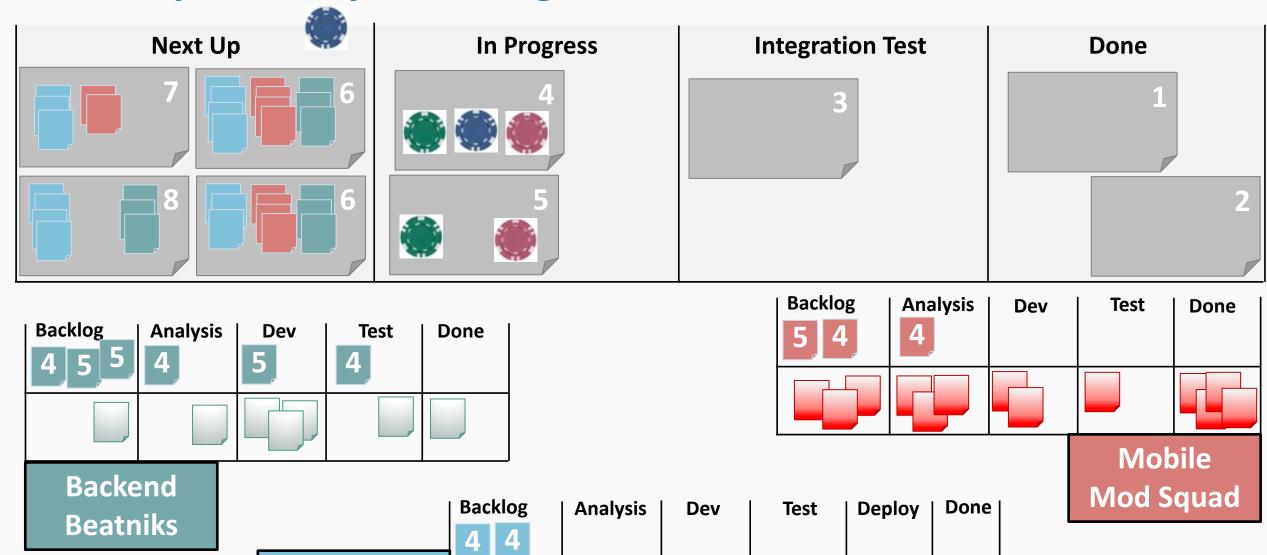




- ☐ Minimum Marketable Features (MMF) on top: each is 1-6 months of work
- Child user stories for the MMF tracked below
- ☐ MMF moved to Testing after all child stories are completed



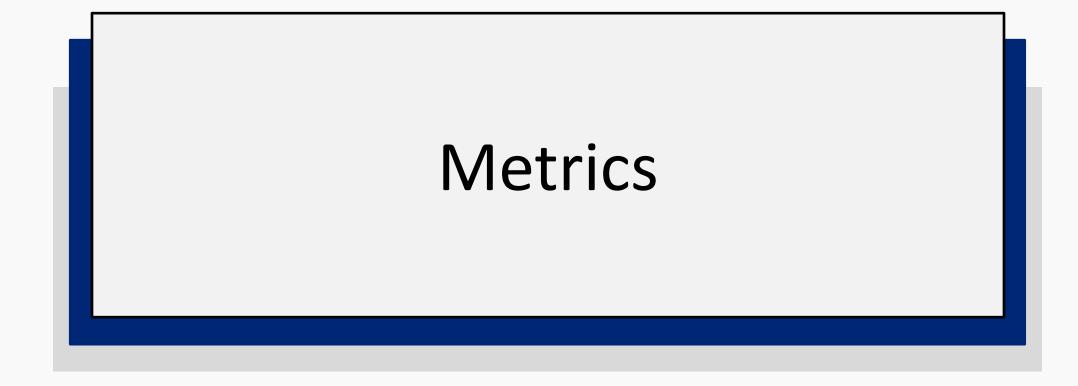
Dependency Handling: Kanban Coordination Board



Modern

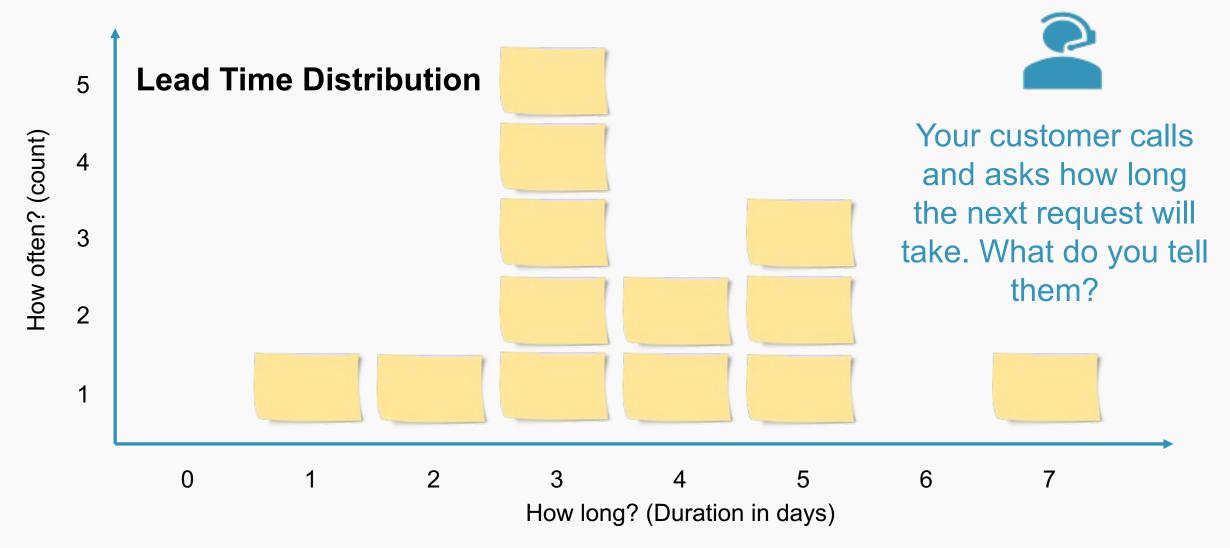
Mainframers







How are we doing overall?





Finding Bottlenecks: Time in Column

We need to move faster! Shall we hire more developers?

Much of our time is spent in Analysis and Design! Are we optimizing time with stakeholders? Do we need more analysts/UX?



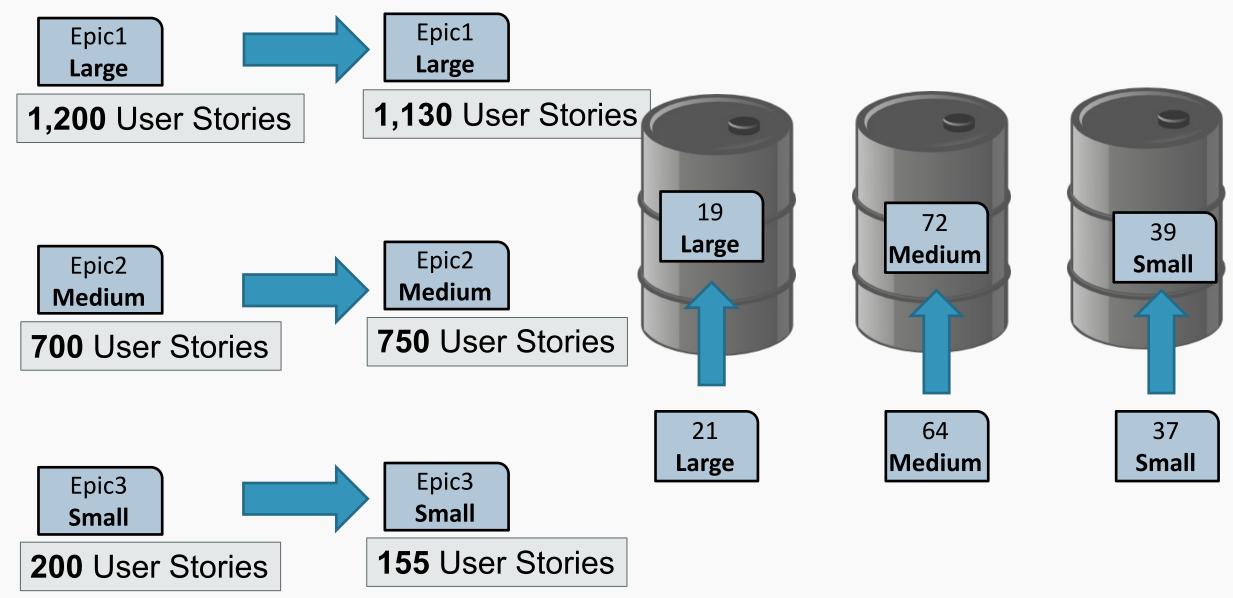
But look at the Elephant in the room!
Can we automate deployment?
Do we need to improve change management?



Continuous Reforecasting

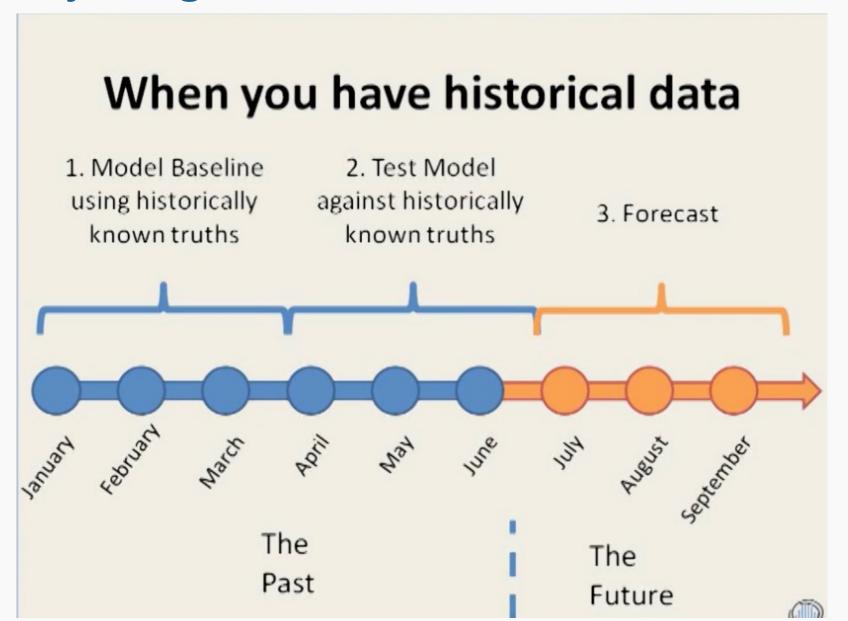


Updated Estimates At Least Monthly





Projecting Forward from Historical Data





Continuous Reforecasting



Portfolio Forecaster 29 epics found.
Change

943 issues found.
Change



The order has been changed. Do you want to discard or recalculate the completion certain	The order has been	changed. Do	you want to di	scard or recalcula	te the completion	certainty?
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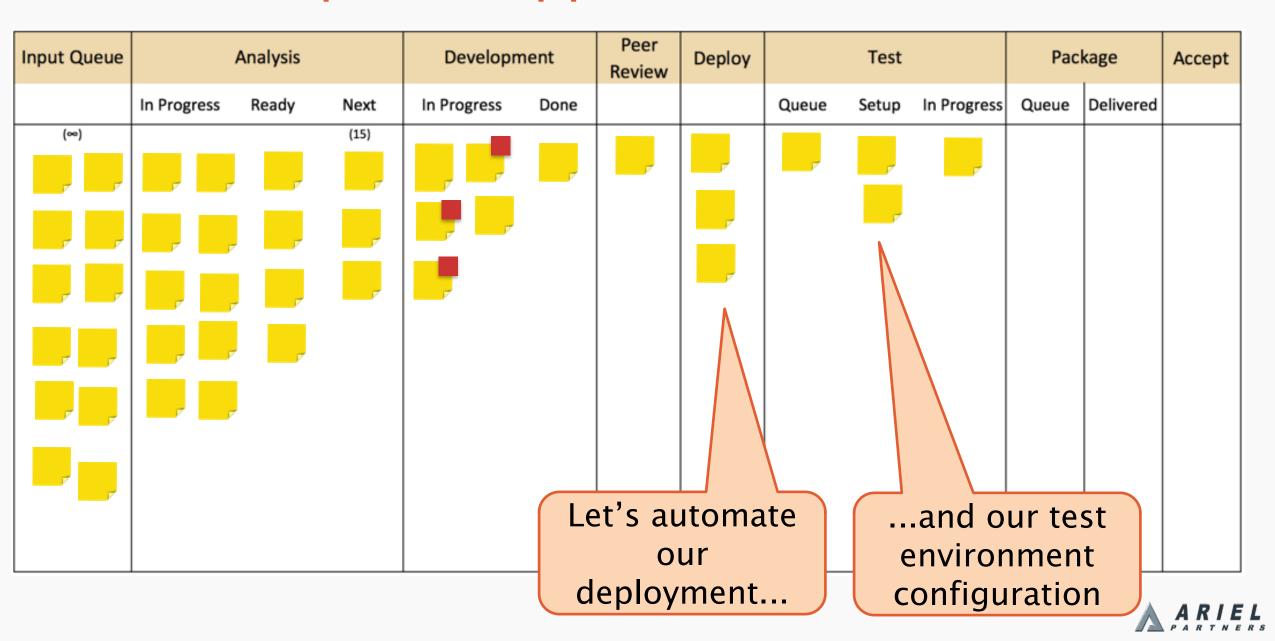
Epics	Due date O	Due date likelihood O	Items remaining	Forecasted date
Build out a local office on Mars	-	-	11	Jun 11, 2022
Grow things on Mars IN PROGRESS	Jul 28, 2022	>99%	13	Jun 7, 2022
GDPR 1.0 IN PROGRESS	Jun 2, 2022	62%	2	Jun 2, 2022
The revolutionary Afterburner reporting capability			2	Jun 8, 2022
Experiments framework for travel suggestions IN PROGRESS	Feb 24, 2022	0%	8	Jun 5, 2022
Plans for our Summer Saturn Sale	-	-	8	Jun 9, 2022
Plant food on Mars IN PROGRESS	Jun 10, 2022	>99%	3	Jun 2, 2022
Next Generation version of SeeSpaceEZ travel platform	-	-	5	Jun 4, 2022
Add support for teams larger than 20 people	-	-	12	Jun 8, 2022
Make working with our space travel partners easier	-	-	8	Jun 8, 2022
New launch platforms	-	-	2	Jun 9, 2022
Research and evaluate payment providers	Jul 11, 2020	0%	1	Jun 10, 2022
Partner Integration framework	Jun 17, 2022	>99%	3	Jun 11, 2022
Affeliate revenue processing	Sep 16, 2021	0%	2	Jun 11, 2022
automate dev sandbox accounts with portal	Apr 21, 2021	0%	1	Jun 11, 2022



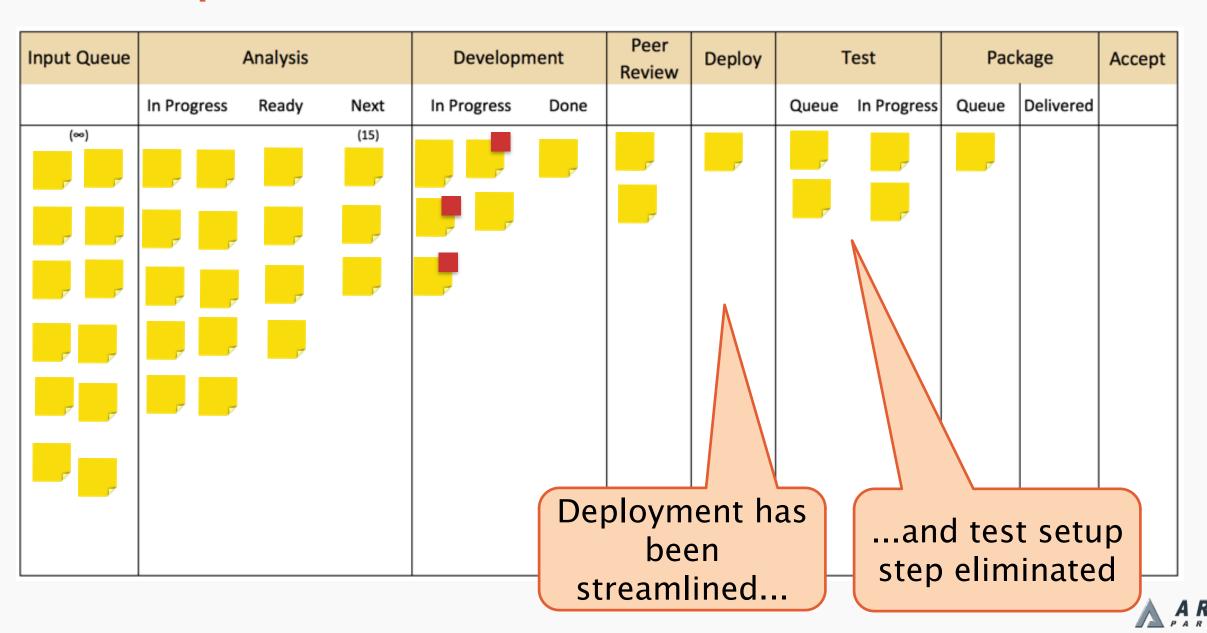
Kanban and DevOps



Kanban Pinpoints Opportunities for Automation



DevOps Automation Streamlines Workflow



Key Takeaways Q & A



Summary

- ☐ Kanban's Flexibility Makes it Ideal for Managing Projects of Any size
 - Lightweight
 - Easy to get Started
 - Good tool support
 - Co-exists happily with Agile frameworks (Scrum, LeSS, SAFe, etc.)
- ☐ Very active Community, Wealth of Adaptations
 - Wealth of Practices
 - Every Business and Mission Area: HR, Underwriting, IT Support, Development, etc.
 - Simple Practices to start with, Move into progressively more sophisticated
- Crossed the Chasm
 - Reached critical mass of mass awareness, availability of skilled professionals





Learn More







https://www.arielpartners.com/capabilities-statement

https://www.arielpartners.com/upcoming-courses

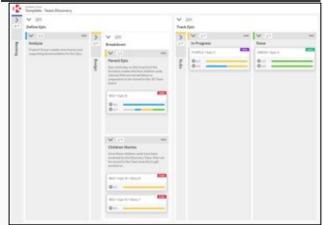
https://www.arielpartners.com/flight-levels



Lean / Kanban Tools



KANBAN

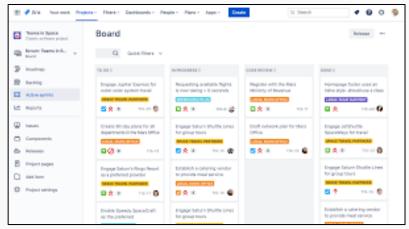


Swift Kanban



Short-Listed Tools







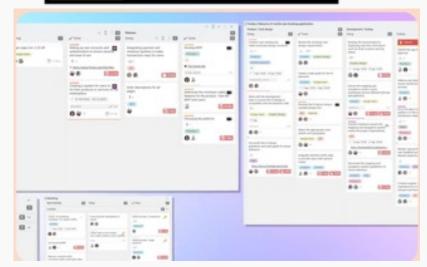








FF FLOWFAST



Unofficial Notes 1 of 2

kanbanıze

- Philosophy: Full Kanban support for organizations coordinating multiple teams, both IT and business
- ☐ Pro: Superb support for forecasting, planning, managing and coordinating large efforts
- Pro: Configurable, rich automation features, OKR support
- Con: Can be overkill for small groups, no Scrum support

KANBAN ZONE

- ☐ Philosophy: Lightweight and easy to use with particular emphasis on business teams: law, retail, manufacturing, etc.
- ☐ Pro: Excellent support for non-IT groups
- Pro: Inexpensive and easy to get started. Graphically rich
- ☐ Con: Missing some features for large enterprises

🕕 Jira

- Philosophy: By and for software developers and DevOps teams
- Pro: Excellent plugins available: Easy Agile, ActionableAgile, ScriptRunner, JXL, Structure
- Pro: Only platform with on-prem option available
- Con: By the time you add necessary plugins, cost is very high. Very complex administration



Unofficial Notes 2 of 2



- Philosophy: Excellent support for SAFe Kanban teams or stand-alone Kanban teams
- Pro: Support for SAFe PI planning, Program Board, OKRs, Roadmaps
- Pro: Beautiful user interface
- Con: Company strategy is confusing: many acquisitions, overlapping products, name changes



- ☐ Philosophy: Extremely feature-rich. Scales up to very large organizations
- Pro: Best support for advanced Kanban features
- Pro: Stable company and product with 12-year history
- Con: Some usability issues, complex administration

FF FLOWFAST

- Philosophy: Place multiple boards on a virtual canvas in flexible ways
- Pro: Innovative user interface
- Pro: Stable company and product with 12-year history
- Con: This is a reboot of a Russian company. It is not clear whether it has fully divested or not



Lean / Kanban Classes



Users and Practitioners "How to work in this environment?"

Team Kanban Practitioner

Understand what it is like to use Kanban to track and manage work

Learn the fundamentals of the Kanban Method and flow

Review a few simple charts and metrics to help us understand how things are going

Pinpoint the most effective levers where we can improve quality, efficiency, and speed of delivery

Understand how to set and adjust policies in order to deliver the highest possible business value, rather than the maximum possible output

Feel the difference between constant multitasking, task switching, and firefighting and a smooth, productive flow of valuable work items

Learn how to easily handle both planned and unplanned work, without disruption

Overcome obstacles such as staffing changes, product changes, technology changes, and

Understand how to use Kanban in all kinds of situations including insurance, banking, HR, finance, help desk, and sales

Enterprise Kanban Flight Levels Practitioner

Understand how to leverage the power of Kanban to identify and manage value streams

Learn how to work in a system that connects organizational strategy to execution, aligning the efforts of the operational teams

Experience working in small groups across management levels and divisions to analyze and adjust organizational strategy in real-time

Visualize cross-team dependencies and understand how to reserve capacity ahead of time in order to avoid delays

Explore lead and lag metrics to track the achievement of key business objectives

Pinpoint the areas of highest leverage, where to make small process changes that yield outsized results

Experience agile interactions across teams and silos to efficiently address issues

Understand how roles and responsibilities are enhanced and adjusted to optimize organizational agility

Lean/Kanban for Leaders & Executives

What is Agile and how is it different? What are the implications?

What leaders and executives can do to support their Agile organizations and lead a successful digital transformation

How does the role of leadership change in an Agile organization: modified and new responsibilities for supporting and guiding Aaile teams

What should leaders expect from their Agile teams? Transparency, visibility, estimates, forecasts

What will Agile teams expect from their leaders?

Changing mindsets and behaviors, culture "hacking," leading by example, encouraging innovation, blameless postmortems

Adapting existing recurring meetings to support an Aqile environment

Codifying and managing strategy (OKR, KPI, Roadmaps, portfolio Kanban boards, "decision filters"

Planning programs of work, analyzing alternatives and what-if scenarios, and understanding program and portfoliolevel risks



Change Agents, Coaches, Leaders "Where to learn more?"

Kanban System Design

Kanban Systems
Improvement

Kanban Maturity
Model

FL2D: Achieving Flow at Scale with Value Stream Management

FL3D: Organizational
Strategy & Lean
Portfolio Management

Flight Levels
System
Architecture

Learn the fundamentals
of the Kanban Method
and flow
Kanban helps individuals,
teams, and programs
to manage and
improve the delivery

of products or services to customers.
Learn how to use Kanban to reduce work delivery times, prioritize demand based on team capacity, reduce firefighting and minimize the negative

Kanban practices are used by Agile teams of all kinds from underwriters to sales to IT new systems development

effects of unplanned

work.

Take your knowledge of the Kanban method to the next level, understanding how to design Kanban boards that are richly informative

Learn ticket and board design. Review dozens of existing boards and useful patterns

Understand how to
leverage simple charts
and metrics to
understand our capacity
and what actions to take
in order to make
improvements

Implement organizational feedback loops with Kanban cadences Understand the Systems

Understand the Systems Thinking Approach to Implementing Kanban (STATIK) The Kanban method is dynamic and diverse with an extremely rich set of visualizations and patterns

This class teaches us how to understand the maturity level of our organization, and match a set of visualizations and practices that are useful, and which encourage improvement without overreach

Learn what benefits can be gained through further improvements, and how to get there in the most efficient way possible Learn how to identify the value streams in your organization, model them and manage them effectively

A value stream refers to the series of process steps and handoffs involved in delivering value to customers, from "concept to cash."

By visualizing the entire end-to-end process at a higher level, we can immediately see the bottlenecks and delays, which may be difficult to see from the team level.

Possibilities for improvement become evident, and a 50% reduction in average delivery time is not uncommon.

Setup a Portfolio Kanban system at the strategic level

Visualize outcomes at three different time horizons Link Outcomes to Key Results, actions, and indicators, linking

Link actions to value streams and operational teams

strategy to execution

Adding team interactions, metrics, and feedback loops transforms all of this into a dynamic control panel for the enterprise.

How can we begin our Agile transformation?

started? How many Agile systems do we need and at which

Where should we get

levels?

Which stakeholders should be involved and how frequently?

Learn how to model your entire organization as an interconnected system of systems.

The flight levels topology tracks the interactions between work systems within an organization.
Helps us put it all together

and figure out which systems at which levels are needed and how they can fit together.