

KANBAN: WHAT IS IT AND HOW CAN I IMPLEMENT IT?

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1.0 INTRODUCTION

Are you trying to implement an Agile/Scrum methodology and it is just not a good fit? Potential problems might be because 1) your team is too small; 2) your deliverables are not conducive to incremental release; or 3) you perhaps you have a continuous flow of work such as IT trouble ticket or customer support services. If any of these scenarios



apply, you should consider Kanban, an alternative Agile approach. Kanban literally means “**signboard**”, “**billboard**”, or “**signal card**” in Japanese. It is a system that balances demands for work with available capacity using Work in Process (WIP) limits and a “pull” system, similar to just in time (JIT) inventory methods. It provides a simple method for visualizing, measuring, and optimizing the flow of work. Most importantly, at the crux of Kanban, is ongoing improvement of your existing process.

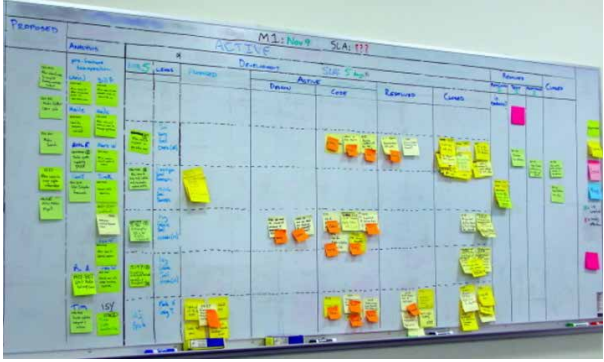
2.0 KANBAN DEFINITION

Kanban is a visual system for managing work as it moves through a process. Kanban visualizes both the process (the workflow) and the actual work passing through that process, with the goal being to identify potential bottlenecks in your process and fix them. The goal is to have work flow through cost-effectively and at optimal speed or throughput

Kanban is an Agile framework, derived using Lean thinking, which identifies opportunities for improvement and seeks to limit waste. The implementation of Kanban lets you quickly identify Leads and Lag Timming and waste and encourages:

- Frequent **inspection** and **adaptation**
- A leadership philosophy that encourages **teamwork** and **accountability**
- Use of engineering best practices that allow for **rapid delivery** of high-quality applications
- A business approach that **aligns development with customer needs** and company goals

One of the Kanban principles is to Start with what you do now, so unlike, for example, the Scrum methodology you don't have to change roles to Product Owner, Scrum Master and Development Team. Initially, the existing process and system also don't have to be modified.



The other 3 principles include:

- Agree to pursue evolutionary change
- Initially, respect current processes, roles, responsibilities and job titles
- Encourage acts of leadership at all levels

In addition to these 4 principles Kanban has 5 core Practices:

- Visualize the Work and Workflow
- Limit Work-in-Progress
- Manage Flow
- Make Policies Explicit
- Implement Feedback Loops
- Improve Collaboratively, evolve experimentally

2.0 SCRUM VS. KANBAN

AGILE	VS	TRADITIONAL
CUSTOMER COLLABORATION		CONTRACT NEGOTIATION
RESPONDING TO CHANGE		FOLLOWING A PLAN
WORKING SOLUTIONS		DOCUMENTATION
HIGHEST BUSINESS VALUE IN THE SHORTEST TIME		DEFERRED BUSINESS VALUE VIA LONGER DELIVERY TIME

The Agile manifesto and 12 associated principles are applicable to all forms of Agile including Scrum and Kanban. (see <https://www.agilealliance.org/agile101/the-agile-manifesto/>). Scrum is focused on creating a Minimal Viable Product (MVP) before funds run out. It is more prescriptive than Kanban, which might be helpful for new teams. It is about releasing value in the shortest time possible. Alternatively, Kanban is great at processing a continuous flow of tickets/work. It is less prescriptive, which enables established teams to be flexible, and better at responding to change (tickets vs. sprints) than Scrum.

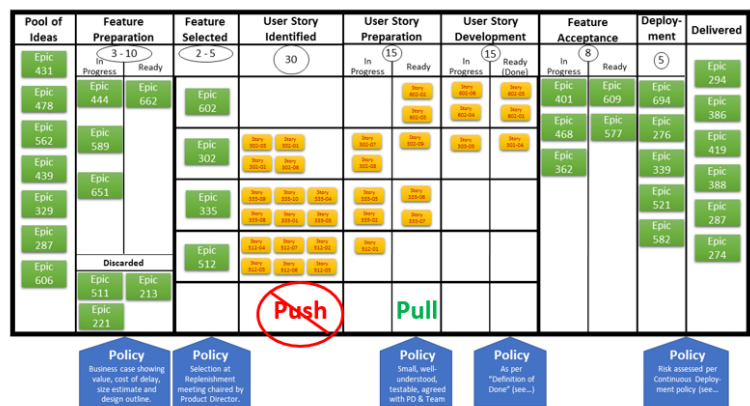


Method Parameters	Kanban	Scrum
Duration	No fixed-length sprints. Instead, Teams pull tasks from a prioritized backlog of things that need to be done	Work is done in 1-4-week sprints. The goal is to produce a shippable product at the end of each Sprint
Release criteria	Releases occur continuously or whenever there is a shippable product created.	The product is released on a cadence, which is determined by the sprints length. So, a team may release after each sprint or a series of sprints.
Team structure	Team members can specialize and pull tasks related to their area of expertise.	There is a heavy focus on cross-functionality. Teams have no specific roles; everyone is a Developer
Events	There is an emphasis on continually improving process. But no standard regular events are required	Events such a Daily Standup, Backlog Refinement, Sprint Planning, Sprint Review, and Sprint Retrospectives are important in Agile Scrum

3.0 WIP AND CLASSES OF SERVICE

“Kanban is based on a very simple idea which is that Work In Progress (WIP) should be limited and something new should be started only when an existing piece of work is delivered or ‘pulled’ by a downstream function.”

(Kniberg, Henrik, and Mattias Skarin. “Foreword by David Anderson.” *Kanban and Scrum: Making the Most of Both*. s. l.: Lulu.com, 2010. vii. Print.)



Some of the reasons to limit the WIP include:

- Increase Quality
- Increase Performance
- Decrease Lead Times
- Increase Predictability
- Increase Due Date Performance
- Increase Trust
- Increase Cultural Evolution
- Increase Customer Satisfaction

We can't treat all work in a homogenous fashion, so within Kanban, work is defined into to a Class of Service, which is a mechanism for categorizing work items. These categories are used to inform team decisions about prioritizing and swarming. Some Examples of different Classes of Service include:

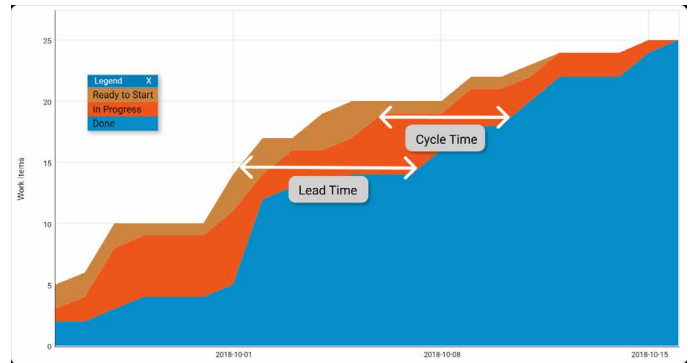
- **Normal or Standard**
 - Multi Service Level Agreements (SLAs)
 - Measurable Cost of Delay if had today
- **Fixed Budget / Fixed Date**
 - Needs delivery within a specific time
 - May need delivery within a set budget
 - Significant Cost of Delay
- **Expedited**
 - Critical value
 - May override the rest of the board
 - Essentially the "Ambulance Lane"
- **Intangible**
 - Valuable, but hard to measure CoD
 - Provides slack for the expedite class of service

	Pool of Ideas	Feature Preparation		Feature Selected	User Story Identified	User Story Preparation		User Story Development		Feature Acceptance		Deployment	Delivered
		In Progress	Ready	2 - 5	30	In Progress	Ready	In Progress	Ready (Done)	In Progress	Ready		
Expedited	Epic 431	3 - 10				15		15		8		5	Epic 294
	Epic 478	Epic 444	Epic 662	Epic 602						Epic 401	Epic 609	Epic 694	Epic 386
	Epic 562	Epic 589		Epic 302						Epic 468	Epic 577	Epic 276	Epic 419
Standard	Epic 478									Epic 362			Epic 339
	Epic 478												Epic 388
Fix Date	Epic 651			Epic 335									Epic 521
	Epic 329												Epic 287
Discarded	Epic 287			Epic 512									Epic 582
	Epic 606												Epic 274
	Epic 511												
	Epic 221												

4.0 KANBAN TOOL: CUMULATIVE FLOW DIAGRAM (CFD)

In order to improve work, it is essential to track the Cumulative Value of Delivered work. A key Kanban tool is the Cumulative Flow Diagram (CFD) which measures:

- Cycle time – the average time between the start and end of production of one unit
- Lead time – the latency between the start and end of the entire process

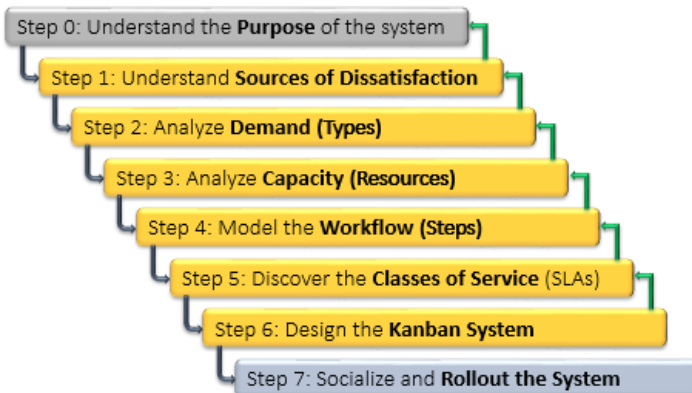
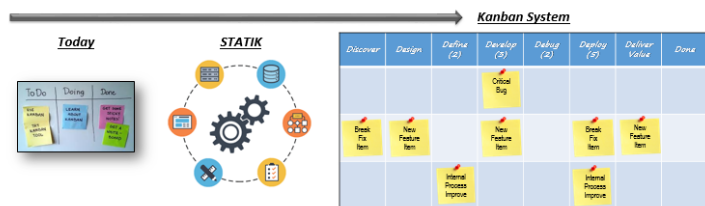


Reducing lead time is the hallmark of the LEAN discipline.

5.0 IMPLEMENTING KANBAN

Personal Kanban which is a simple flow of “To Do, Doing and Done” that you may be familiar with, is not detailed enough when implementing Kanban for your organization or Business Unit. The recommended approach is Using **STATIK** – **S**ystems **T**hinking **A**pproach **T**o **I**mplementing **K**anban following the 8-step process shown in the figure to the right.

A key to successful implementation of Kanban is to create a Kaizen Culture. This means Management will need to encourage innovation and welcome failure. In particular, the organization must enable Individuals to:



- Feel Free to Take Action and Do the Right Thing
- Swarm on Problems
- Act Without Fear
- Self-Organize on How to Do Work
- Feel Highly Trusted by Business, Development, Management
- Become System Level Thinkers

6.0 SUMMARY

Did you enjoy this white paper, “Kanban: What is it and how can I implement it”? I hope you did and that you have gained insight into Kanban and how it differs from Scrum and how to implement it using STATIK and 8 step processes.

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Keith Wilson is a Senior Consultant and Trainer with IIL. His background includes over 25 years of successful coaching, training, management, and consulting experience. He is well known for his public speaking skills and enthusiasm, and he has been a welcomed facilitator at numerous Fortune 500 corporations, universities, and associations worldwide. He has successfully consulted, developed courses, and coached and trained thousands of people worldwide virtually, in person and through on-demand recordings in the all the areas of Agile including introduction, implementation, Agile for PM and BAs, Project Management from introduction to PMP exam Preparation, Portfolio and Program Management, Strategic Management Business Analysis, , Kanban, Microsoft Project, Project Online/Server, SharePoint, Leadership and Interpersonal Skill, Emotional Intelligence, Presentation and Facilitation Skills. Keith is consistently rated as a top Coach, Trainer, and Facilitator with outstanding evaluations and comments that include: Very engaging, Energetic, Entertaining, Informative, Interesting, Great presenter, Very enthusiastic; Really humorous, Clear, Concise and Effective, Extremely knowledgeable, The best trainer I have had in 30 years.

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