



Kanban for Managers/Leaders

Abstract

Kanban is an emerging flow-based system for managing software engineering projects, which is based on Lean and Agile principles and rooted in the solid science of Queuing Theory.

In this course you will learn what Kanban is, how it operates and what advantages it offers compared to other approaches for managing product development. You will also gain an understanding of advanced subjects – how to apply kanban to various scenarios, advanced mechanics and aspects and will be exposed to case studies and existing best practices for using a kanban approach to improve the way you plan and execute projects/operations.

Target Audience

Development Managers, Release/Program/Project Managers, Scrum Masters.

Prerequisites

Some familiarity with Agile/Scrum is assumed.

Main Topics Covered

- Why Kanban
- What is Kanban
- Kanban Board Game Exercise
- A Recipe for Success in Product Development
- Scaling agile using Kanban
- CFD - Cumulative Flow Diagrams
- In-depth Case Study
- Kanban as a Change Management Approach
- Electronic Kanban Tools
- Demand Analysis
- Service versus Project Delivery
- Estimations and Commitments in Kanban
- Setting Work-in-Progress Limits
- Service Level Agreements
- Advanced Lean/Agile Metrics and Kanban
- Operations Review
- Tracking Project and work health in a Kanban system



Content

Why Kanban

- Agile – back to principles.
- History of limiting WIP (TOC DBR).
- Need for Lean/Kanban in product development.

What is Kanban

- Overview of the principles and practices of a Kanban system.

Running the Full version of the Kanban Board Game exercise

A Recipe for Success in Product Development

- Focus on Quality.
- Reduce Work-in-Progress, Deliver Often.
- Balance Demand and Commitment against Throughput/Capabilities.
- Prioritize.
- Reduce Variability and Continuously Improve.
- Why a Recipe.
- Why this Order – Why those elements.

Scaling Agile using Kanban

- Using kanban and flow thinking to scale Agile to end-to-end Product Development.
- How end-to-end flow can help deal with some common shortcomings of team level Agile.
- Managing/Monitoring releases and product life cycle using release burnups and Cumulative Flow Diagrams.
- Case studies of end-to-end kanban from the field.

CFD – Cumulative Flow Diagrams

- CFD - a key technique in monitoring flow – seeing queues and over time.
- What does it mean to create a CFD for your environment.
- How to understand patterns in a CFD.
- How to use a CFD to track a release/project.
- Size and Count-based CFDs.

In-depth Case Study

- Choice of Case Study according to group preference:
 - A Year of Agile – going thru Scrum and evolving to Scrumban.
 - Achieving agile at scale using E2E Kanban at a major Telco.

The Kanban Change Management Approach

- How Kanban catalyzes change and accelerates high maturity.



- Evolutionary vs. revolutionary change – the implications, when to use each approach.

Kanban Tools Demo

Demand Analysis

- Analyzing the demand from the system – identifying Work Types, Classes of Service, demand over time.
- Using Cost of Delay to better understand and assign semi-economic profiles to the demand.
- How to balance flexibility and ability to commit/forecast in a flow system.
- Visualizing Demand in a Kanban system.
- Understanding Demand via real-world examples in Software and Services.

Service versus Project Delivery

- What is Service Delivery.
- When to choose which mode.
- How to manage Service Delivery AND Project Delivery in the same kanban system.

Estimations and Commitments in Kanban

- Typical Types of commitment in Product Development.
- How to provide commitment using classic agile iterations.
- How to provide commitment using a kanban pull system – what changes?
- Internal and External Commitments – the purpose of each commitment as a source of conflict between predictability and aggressive delivery – How to create a win-win solution.
- "bility"-testing and aggressive delivery – how to create a win-win solution.

Setting Work-in-Progress Limits

- The factors for choosing a WIP limit.
- How to account for capacity in WIP limit.
- How to account for variability in WIP limit.
- Limiting number of work items vs. size of work.
- Metrics for WIP Limits – How to know whether the WIP limit is effective.

Service Level Agreements

- SLAs – a specific kind of commitment.
- How to choose SLAs.
- Real-time and Management-level SLA monitoring.

Lean/Agile Metrics and Kanban



- How to use Metrics to manage Product Development.
- What metrics should we use to manage Product Development in a flow system.
- Leading/Lagging metrics and why to use each.
- Towards a Lean/Agile Balanced Score Card.
- When and how to introduce Metrics.

Operations Review

- Why a Data-driven Operations Review.
- How to run an Operations Review.

Bottlenecks and Non-instant Availability

- How to see Bottlenecks in a Kanban board or CFD.
- Using TOC to Focus on a Bottleneck and relieve it.
- Flow-based techniques for working around bottlenecks – Classes of Service, alternative routes, etc.
- Difference between a bottleneck and non-instant availability.
- Dealing with non-instantly-available resources in a kanban system.

Tracking Project and work health in a Kanban system

- TOC buffer management – what it is, and how it compares to Agile iteration commitment approaches.
- Applying TOC buffer management in a kanban system for committed features.
- Applying buffer management for features/items without commitment.
- Questions asked by managers – how to answer them in a kanban world.

Operational Decision Filter

- The Agile Decision Filter.
- The Lean Decision Filter.

Course Duration

2 days (16 hours).