Running a Kanban Company – Kanban Style

Todd Little, Chief Executive Officer, Lean Kanban
Janice Linden-Reed, Chief Program Officer, Lean Kanban
Lean Kanban Inc. is the premier source of professional Kanban.

This is a Kanban business we run with a Kanban mindset.
Lean Kanban University: What we do

- **I want to teach LKU certified Kanban classes**
  - **AKT**
    - Accredited Kanban Trainer
    - Verified Kanban experience + Evaluated on ability to understand and present the LKU certified class material

- **I want to manage effectively with Kanban**
  - **KMP**
    - Kanban Management Professional
    - Standardized curriculum on Kanban System Design & Kanban Management Including scaling & improvement

- **I want to coach organizations to greater success with Kanban**
  - **KCP**
    - Kanban Coaching Professional
    - Verified knowledge and experience in coaching a Kanban initiative and all aspects of the Lean Kanban body of knowledge

**Materials – Curriculum – Promoting the Kanban Method**
A coach’s roadmap for an organizational improvement path using Kanban.

Applies 132 practices and 20 cultural values tracked against outcomes.

7 levels of organization maturity

Based on 10 years working with Kanban initiatives worldwide.
Growth
2016 (105%)
2017 (70%)
55 countries

Lean Kanban University Training Global Growth

Over 30,000 students have completed LKU certified Kanban training
What is Kanban?
This is what people think Kanban is
What is Kanban?

The Kanban Method teaches organizations how to understand, visualize and measure **systems of work** to continually improve and consistently deliver effective results.

The Kanban Method provides a set of proven practices and approaches that scale from individuals and teams to the enterprise.
How Most People see Kanban
How Lean Kanban sees Kanban

- Agile
- SAFe
- Scrum
- Scrumban
- Kanban
Kanban: The Great Unifier

- Chaos
- SAFe
- Scrum
- Waterfall
- CMMI
Kanban Method
Change Management Principles

1) Start with what you do now
   ▪ Understanding current processes, as actually practiced
   ▪ Respecting existing roles, responsibilities & job titles

2) Gain agreement to pursue improvement through evolutionary change

3) Encourage acts of leadership at all levels
Kanban Method

Practices

1) Visualize
2) Limit work-in-progress
3) Manage flow
4) Make policies explicit
5) Implement feedback loops
6) Improve collaboratively, evolve experimentally (using models & the scientific method)
1. Anticipating demand and balancing the allocation of capacity

Assessing market changes from the work you do
The Problem

We aren’t doing anything differently... why are we suddenly overwhelmed?
Applying the Kanban Mindset

Look at the work as a system you can model

Start where you are now...

Observe current conditions
  - **Demand** for work to be done: sources, patterns, expectations
  - **Capacity** to do work: performance
  - Data visualization

Review and adjust policies

Demand Shaping
Kanban Balances Demand and Capability

Customer Demand

Kanban System

Capability to Deliver
The Balance of Demand and Capability shifts over Time

**Demand**

**Capability**

Excess capability (starvation)

Lack of capability (overburdening)
Strategies for Improvement

Shape Demand

Capacity Allocation policies
Motivate change through visibility of explicit work types
Eliminate root causes of failure demand, disruptive demand, and speculative demand

Optimize Flow

Use WIP Limits, Flow Efficiency, Focus on disruptions and sources of delay

Customer Demand
Kanban System
Capability to Deliver
Strategies for Improvement

Shape Demand

- Capacity Allocation policies
- Motivate change through visibility of explicit work types
- Eliminate root causes of failure demand, disruptive demand, and speculative demand

Optimize Flow

- Use WIP Limits, Flow Efficiency, Focus on disruptions and sources of delay

Customer Demand

Kanban System

Capability to Deliver
Where is our capacity going?

- What are we working on?
- How much time and energy do we spend on each type?
- How much time and energy do we want to spend on each type?
- Are there consistent patterns of demand?
- Are there other options for getting the work done?
  - Automation
  - Outsourcing
  - Address quality issues
Allocate capacity with ticket limit (percentage) per type

<table>
<thead>
<tr>
<th>Allocation</th>
<th>Input Queue</th>
<th>Analysis</th>
<th>Development</th>
<th>Build Ready</th>
<th>Test</th>
<th>Release Ready</th>
<th>Released</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Req</td>
<td>12 (60%)</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Maintenance</td>
<td>2 (10%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production Defect</td>
<td>6 (30%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total = 20
What are we working on?

- AKT support
- Student support
- Class Support
- Misc
- Financial

Marketing
- Event support
  - venue + vendor mgmt
- LKV programs
- Class support
- AKT support
Inga

40% AKT support
10% Student support
10% Class Support
10% Misc
30% Financial

30% Marketing
20% Event support
  - venue + vendor mgmt
20% LKU programs
10% Class support
30% AKT support

Janice
How had AKT support gotten to 50% capacity?!
How much do we want to work on each?

30% AKT Support
30% Marketing
20% Event Support
- venue + vendor mgmt
20% LKU programs
10% Class Support
5-10% 30% AKT Support
10% Student Support
10% Class Support
10% Misc
30% Financial
How can we achieve these goals?

Goal

40% AKT support
30% Student support - design out
10% Class Support
10% Misc
30% Financial

30% Marketing
20% Event support - venue + vendor mgmt
20% KKV programs
10% Class support

Goal

5-10% 30% AKT support

Identify FAQ, offer solutions

Ticketing?
Sources of Work

**SOURCES**
- Federal Client
- Student Evals
- Agency Outreach
- Contractor Management

**6 MAJOR TYPES**
- New courses to be developed
- Regularly-scheduled class offerings
- Agency briefings
- Course content updates
- Regulatory/remote enhancements
- Unplanned work
LKI Capacity Allocation Results

- Implemented a ticketing system
- Shifted some responsibilities among staff
- Implemented a community collaboration system and knowledge base

- Happier staff
- Better customer service for AKTs and Students

**Lesson:** Many elements can change the balance of demand and capacity including shifts in the market
2. Improve accounts receivables predictability

Using lead time as a tool to improve accounts receivables predictability
What is the problem?

- What is our cash flow?
- When will they pay?
Applying the Kanban mindset

Look at the work as a system you can model

- Feedback loops
- Visualize
- Measure
Kanban system for Invoicing to Cash

Do stuff

Ready for Invoice

Invoice

AR

Cash
Kanban system for Invoicing to Cash

- **Do stuff**: Infinity
- **Ready for Invoice**: Infinity
- **Invoice**: 1
- **AR**: Infinity
- **Cash**: Infinity

**Lead Time**
Lead Time Histogram

Freq

60
50
40
30
20
10
0

Freq

0 100 200 300 400 500 600 700
Fit to Weibull Distribution

Beta = 1.08
Extracting the Probability of Collection within 30 days

\[ P(\text{collection}) = \text{CDF}(+30) - \text{CDF}(\text{today}) \]
Our Results

• Rules of Thumb
  • 50-60% of new invoices likely to be collected within 30 days
  • 25% of month old invoices likely to be paid
  • Don’t count on much of anything from aging receivables
3. Understanding system workflows and using tools to drive continuous improvements using SwiftKanban to manage KCP credential application process
What is the problem?

How can we best assist Kanban Coaching Professional (KCP) credential candidates? They keep getting lost in the system!
Applying the Kanban Mindset

Look at the work as a system you can model

- Make policies explicit
- Manage flow
- Visualize
- Identify bottlenecks
- Map service workflow
What the process is supposed to be
What is their status? Why aren’t they making it through?

OR
Added a program director/coordinator
What actually happened
What happened next...
What happened next...
COORDINATION & DEPENDENCIES!

- We may not know the interviewee is ready until the last minute
- Establish a date, time, and location for the interview
- Find KCP panelists who are interested and available
- They may all have to be at the same event
- The interview coordinator may or may not be at the event
- Distribute essay to panelists well ahead of interview
<table>
<thead>
<tr>
<th>Candidates</th>
<th>Application Sent (5) / Expecting Response</th>
<th>Reviewing Essay/Application (5)</th>
<th>Interview (5)</th>
<th>Interview Result</th>
<th>Activated - Done!</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Recruit Panelists</td>
<td>Scheduled Accepted</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Declined</td>
</tr>
</tbody>
</table>

KCP program in SwiftKanban
KCP credential process

SUCCESS!
What happened next...
KCP credential process

Challenge: Getting people through the KCP credential process successfully

Improvements:
- Demand vs Capacity
- Quality
- Visibility: Kanban board, meetings
- Policies

Results
- Fewer complaints from applicants
- More KCP credentials issued
Lessons

- If something isn’t working, don’t blame...investigate!
- Throwing more people at a problem can require more policies
- Policies have to be agreed and understood widely
- Quality issues can be a factor affecting flow
- Visualization includes metrics and communication

- Kanban system has to be adjusted as conditions change
4. Designing solutions that are fit for the purpose of solving specific business problems

The introduction of TKP
What is the Problem?

- Kanban is perceived as stickies on a wall
- To do, doing, done
- Big gap between that perception and our core Kanban System Design class
Fit for Purpose Solutions

- Know your customer segments!
- Understand their purpose(s) and the problems(s) those customer have
- If you want to serve that segment, your products and services should meet their needs and expectations

They expect team-level Kanban, primarily visualization
What did our customers want?

Give me 1-day basic Kanban training to start my team

Give me standard class material to teach a 1-day basic Team Kanban class
Also...

Agile training market willing to sell Kanban classes based on misinformation

“I’m going to take a Kanban class from this trainer instead!”
The 3 Agendas

## Senior Level
- Make promises they can keep
- Lead the business (strategy, positioning)

## Mid-level
- Up-managing – answer the hard questions with confidence
- Down-managing – make difficult decisions with confidence
- Reliable, predictable, faster service delivery

## Line-level & Individual Contributors
- Relief from overburdening
- Produce better quality
- Take a professional pride in their work & customer satisfaction
What we did

- Introduced team level Kanban with our 1-day Team Kanban Practitioner class

- Also covers:
  - fears
  - myths
  - core concepts in a friendly, relatable way
Students by Class
Applying the Kanban mindset
Fitness for Purpose – build the right thing

Fit for Purpose Solutions

- Know your customer segments!
- Understand their purpose(s) and the problems(s) those customer have
- If you want to serve that segment, your products and services should meet their needs and expectations
5. Managing risk through data driven scenario modeling

Event management risk model
What is the problem?

- Conferences have uncertainty. How to manage for the uncertainty?
- How much can we spend?
- Hard to predict the number of attendees
- Hard to predict counts for meals
What Kanban concepts could apply?

Look at the work as a system you can model

Risk Management
- Real Options
- Data driven decisions

Risk Mitigation
- Understanding variability
Typical event risk mitigation

- Announce event as early as possible
- Incentives to encourage early attendee registration
- Encourage speakers to book travel early
- Cancellation terms and other contractual terms
- Vendors (collateral) who can deliver as late as possible
- Flexible meeting room capacity
- Arrange for backup speakers
- Have enough volunteers
Event date: April 21-23, 2010

US conference has speakers and attendees from around the world
Do not fly through an ash cloud!
2010 eruption of Eyjafjallajökull

Starting April 15, 2010, most of the European airspace was closed. Flights to, from, and within Europe were cancelled. Daily status updates issued about any re-opening.

Contingency activity on April 18

- Invite some attendees to be speakers
- Offer to reschedule EU speakers
- Start rearranging program schedule
European speakers couldn’t fly to the USA

- 107,000 flights cancelled during an 8-day period, accounting for 48% of total air traffic

Speakers afraid of getting trapped in the USA

- Volcano is still erupting.

Some registered attendees stuck in Europe

- “Would it be possible for me to get a refund on the conference because of the circumstances?”

- “While hotels received fewer incoming tourists, some were able to raise prices to take advantage of stranded tourists.”
<table>
<thead>
<tr>
<th>SUN</th>
<th>MON</th>
<th>TUE</th>
<th>WED</th>
<th>THU</th>
<th>FRI</th>
<th>SAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td><strong>Ash Cloud – no flights</strong></td>
<td><strong>2nd eruption</strong></td>
<td><strong>Ash Cloud – no flights</strong></td>
<td><strong>Flights re-booked – no flights</strong></td>
<td><strong>Flights re-booked – no flights available</strong></td>
<td><strong>Declared over: October 2010</strong></td>
<td><strong>1st eruption: March 20</strong></td>
</tr>
</tbody>
</table>

*Flights re-booked – no flights available*
Impact on the 2010 conference

- 6 speakers had to be replaced
- Entire program had to be altered
- Program addendum on website and in print
- Refunds handled for impacted registered attendees

24 May 2011
“Aviation officials say up to half the cancellations seen last year would no longer be necessary, as understanding of the risks improves.”
Setting: April 2002

CUTTER CONSORTIUM
Access to the Experts
Which Logo do you like?
Fish Stories (Dan Reed)
You’re not just starting a conference, you’re building a community and changing the world of work

You’re Right!
Let’s do it!
Who says Agilists don’t Document
Conflict

This is my conference and I want to do it my way!
Path to Greatness

Integrity + Passion = Greatness

Integrity

Passion

Greatness

Conflict
Absence of Conflict
Collaborating with Non-Collaborators

- **Agreement**
  - **Collegial**
  - **Compliance**
- **Disagree**
  - **Creative**
  - **Combative**

**Drive to Purpose**

- **Common Practice**
- **More Useful**
- **Tension**
Uncertainty
The 1st Agile Development Conference 2003:
What was the problem?

- Conferences have uncertainty, especially new ones. How to manage for the uncertainty?
- How much can we spend?
- Hard to predict the number of attendees
- Hard to predict counts for meals
Real Options

CHRIS MATTSS & OLAV MAASSEN
Real Options

A right, but not an obligation to do something

- Options have value
- Options expire.
- Never commit early unless you know why.
Beyond Budgeting – Building a Conference Financial Model

Paid Attendees vs. Costs and Income

- **Fixed Cost**
- **Total Cost**
- **Fixed Income**
- **Total Income**
We had a blast!
Year 2.5 - Merge

XP Agile Universe

Agile Alliance®
How did we do?

Attendees at Agile20XX

- Todd hands over to Mary Lynn
- 10 yr. Manifesto
- 10x Growth
- XPAU Merge
Data driven decisions
### Percentages of Attendees at Events

<table>
<thead>
<tr>
<th></th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td>60%</td>
<td>70%</td>
<td>70%</td>
<td>70%</td>
<td>55%</td>
</tr>
<tr>
<td>AM Break</td>
<td>65%</td>
<td>65%</td>
<td>65%</td>
<td>65%</td>
<td>50%</td>
</tr>
<tr>
<td>Lunch</td>
<td>70%</td>
<td>90%</td>
<td>85%</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td>PM Break</td>
<td>65%</td>
<td>65%</td>
<td>70%</td>
<td>65%</td>
<td></td>
</tr>
<tr>
<td>Event</td>
<td>77%</td>
<td>65%</td>
<td>77%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What is Kanban?

The Kanban Method teaches organizations how to understand, visualize and measure **systems of work** to continually improve and consistently deliver effective results.

The Kanban Method provides a set of proven practices and approaches that scale from individuals and teams to the enterprise.
Lean Kanban University: What we do

**AKT**
ACCRREDITED KANBAN TRAINER
Verified Kanban experience + Evaluated on ability to understand and present the LKU certified class material

**KMP**
KANBAN MANAGEMENT PROFESSIONAL
Standardized curriculum on Kanban System Design & Kanban Management Including scaling & improvement

**KCP**
KANBAN COACHING PROFESSIONAL
Verified knowledge and experience in coaching a Kanban initiative and all aspects of the Lean Kanban body of knowledge

**Materials – Curriculum – Promoting the Kanban Method**