Kanban returns: “Intro to Kanban, Part II”
Agenda (Session II)

- Review
- Designing a Kanban Board (cont.)
- Replenishment
- Kanban Team

- Agile and Kanban
- Scaling Kanban with Multi-level boards
- Kanban for Enterprise Portfolio Management
- 18F Case study
## How a Pull System works

<table>
<thead>
<tr>
<th>Empty</th>
<th>Ready</th>
<th>Estimate and Analysis</th>
<th>In Dev</th>
<th>Test</th>
<th>Done</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 post-it notes</td>
<td>2 post-it notes</td>
<td>3 post-it notes</td>
<td>2 post-it notes and 1 empty space</td>
<td>1 post-it note</td>
<td></td>
</tr>
<tr>
<td>Submitted</td>
<td>Outline</td>
<td>Draft</td>
<td>Ready for Graphics</td>
<td>Graphics</td>
<td>Approval</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>-------</td>
<td>--------------------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>1 post-it note</td>
<td>1 post-it note</td>
<td>1 post-it note</td>
<td>5 post-it notes</td>
<td>Empty</td>
<td>Empty</td>
</tr>
<tr>
<td>Swim Lanes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Featured Articles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 posts</td>
<td>75% in progress</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blog Posts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 posts</td>
<td>25% in progress</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concept and Pitch</th>
<th>Outline</th>
<th>Draft</th>
<th>Layout</th>
<th>Done</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 post-it</td>
<td>3 post-its</td>
<td>3 post-its</td>
<td>2 post-its</td>
<td>0 post-its</td>
</tr>
</tbody>
</table>

Swim Lane representation with post-it notes.
Designing a Kanban Board (cont)
### Expediting (1 of 2)

<table>
<thead>
<tr>
<th></th>
<th>Ready for Dev</th>
<th>Dev</th>
<th>Ready for Test</th>
<th>Test</th>
<th>Done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Features</td>
<td>4 post-its</td>
<td>3</td>
<td>3 post-its</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Change Requests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Already at WIP limits*

*Emergency!*
## Expediting (2 of 2)

<table>
<thead>
<tr>
<th></th>
<th>Ready for Dev</th>
<th>Dev</th>
<th>Ready for Test</th>
<th>Test</th>
<th>Done</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expedite</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0 post-its</td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0 post-its</td>
</tr>
<tr>
<td><strong>Change Requests</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0 post-its</td>
</tr>
</tbody>
</table>

*Only 1! Highest priority*
### Blocked – Simplest Approach

<table>
<thead>
<tr>
<th>Expedite</th>
<th>Ready for Dev 4 post-its</th>
<th>Dev 3 post-its</th>
<th>Ready for Test 3 post-its</th>
<th>Test 3 post-its</th>
<th>Done 0 post-its</th>
</tr>
</thead>
<tbody>
<tr>
<td>Features</td>
<td>0 post-its</td>
<td>0 post-its</td>
<td>0 post-its</td>
<td>0 post-its</td>
<td></td>
</tr>
<tr>
<td>Change Requests</td>
<td>0 post-its</td>
<td>0 post-its</td>
<td>0 post-its</td>
<td>0 post-its</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ready for Dev 4 post-its</td>
<td>Dev 3 post-its</td>
<td>Ready for Test 3 post-its</td>
<td>Test 3 post-its</td>
<td>Done 0 post-its</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------</td>
<td>---------------</td>
<td>---------------------------</td>
<td>-----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Blocked</td>
<td>BLOCKED!!!</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
More than the board
Replenishment
Daily Meeting

- Follow the flow of work...not the people
- Go from right to left - “walk the board” - to pull things.
- Free up WIP by pulling things.
- Identify/discuss Blocked items

Style differs depending on the team model
- Agile: Self-organized team
- Traditional: PM plus team
Agile Kanban
Q. Why care about whether your Kanban implementation is “Agile”? Because Agile methods offer features and benefits that aren’t otherwise realistically achievable.
Scaling Kanban
Portfolio (Enterprise) Level
Multi-level Kanban Boards Overview (2 of 2)

Portfolio (Enterprise) Level

Program, Project, or Team Level
An Enterprise Kanban Board
Non-Software Case Study

18F Agreements Team, 2016
In 2016, 18F’s Agreements team was drowning in work. The Operations team spent a little time playing with Kanban as a way to maybe impose some organizational order. If we’d known how important the experiment would be, we’d have taken more pictures.
Before

- Average processing time: 65 days
- Agreements in Process: 49
## Non-Software Case Study (4 of 6)

<table>
<thead>
<tr>
<th>Awaiting Kickoff</th>
<th>Agreements Build</th>
<th>18F Approval 1</th>
<th>OGC Initial Review</th>
<th>18F/PIF Edits</th>
<th>OGC Approval</th>
<th>Aaron Approval</th>
<th>External Signature</th>
<th>Internal Signature</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>→</td>
<td>→</td>
<td>→</td>
<td>→</td>
<td>→</td>
<td>→</td>
<td>→</td>
<td>→</td>
<td>→</td>
<td>→</td>
</tr>
</tbody>
</table>
After
- Average processing time: 37.5 days
- Agreements in Process: 20
Non-Software Case Study (6 of 6)

Learnings

● Decreased amount of work leads to increased quality of work.
● You won’t drown in work if you use a pull system.
Thank you!
Appendix
Recommended Reading
Cumulative Flow Diagram

- **Done**
- **Started**
- **Queued**

- **Backlog**
- **WIP**
- **Cycle Time**
- **Lead Time**
Bottleneck

![Bottleneck Chart](image-url)
Other Metrics

Cycle Time

Throughput (items completed per unit time)

Due Date Performance

Failure Load (How much work did we cause ourselves?)
Agile Portfolio Management Strategies

Scheduling
- Lifecycle profits
- Cost of delay
- Accuracy, not precision

Inflows
- Economic filter
- Arrival rate
- Emergent opportunities
- Smaller, more frequent releases

Portfolio backlog
- Product A
- Product B
- Product C
- Product D

Outflows
- Idle work, not idle workers
- WIP limit
- Complete engaged teams

In-process
Marginal economics

Copyright © 2012, Kenneth S. Rubin and Innolution, LLC. All Rights Reserved.
<table>
<thead>
<tr>
<th>Kanban Board</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Change Requests</strong></td>
</tr>
<tr>
<td>Change Requests</td>
</tr>
</tbody>
</table>

| Production Text Changes | Not Applicable | Not Applicable | Not Applicable | Not Applicable | 5 post-its | 1 post-it | 0 post-its | 0 post-its |
| Production Text Changes | Not Applicable | Not Applicable | Not Applicable | Not Applicable | 5 post-its | 1 post-it | 0 post-its | 0 post-its |
### Multi-level Kanban Boards (1 of 2)

<table>
<thead>
<tr>
<th>Concept</th>
<th>Proto-Budget</th>
<th>Dev</th>
<th>Trial</th>
<th>Scale</th>
<th>EOL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Portfolio (Enterprise) Level**
On the wall or online?

- On the wall = Information Radiator
  - Hard to miss
  - Naturally informs everybody
  - Can be made to work for distributed teams also

- Online = Information Refrigerator
  - People can (i.e., will) ignore it
  - Less convenient
  - Harder to see the big picture
  - Lots of extra features
  - Easier for distributed teams

- Unless you have no HQ, use a combo
Multi-level Kanban Boards (2 of 2)

Portfolio (Enterprise) Level

Program, Project, or Team Level
Questions?

- Slides in this presentation contain items from the Visual AGILExicon®, which is a trademark of Innolution, LLC and Kenneth S. Rubin.
- You can learn more about the Visual AGILExicon and permitted uses at http://innolution.com/resources/val-home-page