Driving a Kaizen Culture
using regular Operations Reviews
What brought us to Kanban is described in this first book.
And New Kanban Book

Detail information about Kanban can be found in this new book.
Like this...

Want to see more?

European Lean & Kanban Events

October 2011
Kanban Training

• With David J. Anderson
• http://www.trifork.com

• 30-31 May, 2011
Simplified enterprise org structure for a telecom-like technology business

- Product Strategy
- App Dev 1
- App Dev 2
- UI Design
- DBA
- Infrastructure
- Architecture

Shared Services
- Support

Customer Demand

Complex network of dependent parts

Platform Development

Service

Demand
Feedback Loops
I'm stuck.
I'm too busy.
I'm idle.
Let's do something about it!
Daily standup meeting becomes a central enabler of a Kaizen culture

In this example more than 40 people attend a standup for a large project with 6 concurrent development teams. The meeting is usually completed in approximately 10 minutes. Never more than 15.
Spontaneous Quality Circles form after the standup to focus on immediate process issues

- Kanban board gives visibility into process issues – ragged flow, transaction costs of releases or transfers through stages in process, bottlenecks
- Daily standup provides forum for spontaneous association to attack process issues affecting productivity and lead time
- For example, 3 day freeze on test environment was a transaction cost on release that caused a bottleneck at “build” state. This was reduced to 24 hours after a 3 person quality circle formed to investigate the policies behind the freeze. Result was improved smoother flow resulting in higher throughput and shorter lead time
Monthly Operations Review is used to reflect on quantitative objective performance measures.
Why monthly?

• More often is too much overhead
  – Preparing data
  – Expensive meeting (lots of people)
  – 2.5 hours is a lot of time
  – Need enough time & data to show trends

• Quarterly is not frequent enough
  – No one can remember events from 3 months ago
  – Learning value is undermined
  – Too much data
Lead off with finances – you are running a business
Guest speaker from another business unit worked well
Managers & team leads present department demand & capability
Discussion items scribed on a flip chart
Improvement opportunities assigned to managers as last agenda item
Managers are held accountable for kaizen opportunities. Team learns how managers can add value for them.
Ops Review & Metrics
Metrics to start off with

Report Capability

• Quality (defect/rate)
• WIP (work-in-progress)
• Cycle Time (day deployed – day ready = cycle time)
• Throughput (velocity)
• Issues & Blocked Work

Across these:
  • Trend
  • Variation
Issue Management Cumulative Flow

Issues and Blocked Work Items

How many issues and blocked work items do we have?
Executive Dashboard

### Lead Time and Due Date Percentages

<table>
<thead>
<tr>
<th>Interval</th>
<th>Lead Time (Average # of Days)</th>
<th>Due Date Performance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead Time, Engineering Ready to Release (CRs &amp; Bug Fixes)</td>
<td>30</td>
<td>32.5</td>
</tr>
<tr>
<td>Lead Time, Engineering Ready to Release (CRs Only)</td>
<td>30</td>
<td>32.6</td>
</tr>
<tr>
<td>Lead Time, Engineering Ready to Release (Bugs Only)</td>
<td>30</td>
<td>32.5</td>
</tr>
</tbody>
</table>

### Change Request Backlog:

- **Month**
  - Dec 2006
  - Jan 2007
  - Feb 2007
  - Mar 2007
  - Apr 2007
  - May 2007

### Throughput And Production Rate:

- **Month**
  - Dec 2006
  - Jan 2007
  - Feb 2007
  - Mar 2007
  - Apr 2007
  - May 2007

Legend:
- **Running 3-Month Average**
- **Deployed: Missed SLA**
- **Deployed: On Time**
Due Date Performance Detail

**MARCH**

Lead Time Distribution

Days vs. # CRs

**APRIL**

Lead Time Distribution

Days vs. # CRs

Majority of CRs range 30 - 55

Outliers
Control Charts supported natively in Silver Catalyst
And also in LeanKit Kanban
BBC Worldwide Bug Rates
BBC Worldwide Days Blocked
DBA Team Velocity

Total Velocity
Small support tasks (not included in total velocity)
Velocity Control Charts

Completion Velocity Chart

UCL 29.2
CL 7.206896552
LCL -14.8
-20
-10
0
10
20
30
40
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Completion Velocity
Date
Completion Velocity Chart
Completion Velocity
UCL
+2 Sigma
+1 Sigma
CL
LCL
29.2
7.2068
-14.8
-20
-10
0
10
20
30

Date
Iteration 1 Cumulative Flow
Automated reporting out of TFS
Outliers caused by design and code errors
Data center outage
SQL Server services errors
SAN disk failures
Configuration Management: Environment availability increased.

Added SQA3
Insufficient disk space on sql servers.

DEV2 Insufficient disk space on sql server.

SQA1 – SQL server issues with failed replication and DBs not installed.

TFS – bad switch port caused connection issues for 90 min.

Build box – insufficient disk space
Configuration Management: Build Quality is improving but Release quality is not.

- **Production release error:**
  - ExternalUI step missing in base install doc causing website to not run http compressn.

- **Merge issues**
  - Shelvesets in wrong codeline, missing shelvesets unresolved conflicts
Configuration Management: The number of environment incidents increased.

Increased incidents due to capturing data from sqa3 and the team actually logging issues in TFS.

SQA3 – Server issues with disk space

SQA2 – Environment issues with pools, permissions and config settings.

Configuration issue in web.config
Automated testing was seen as too expensive.

Demonstrate vs. rant
Continuous Integration reporting
Configuration Management: Build Duration

Build Duration

Max Duration (seconds)  
Average Duration (seconds)
Configuration Management: Build Quality Reporting available thru Cruise Control

Build Report

- Successful Builds
- Failed Builds
So why is hardly anyone doing Operations Reviews?
Let’s make a list
Here is one I prepared earlier...

• Requires management support
• Spans across teams and requires middle-management participation
• Some middle-managers fear transparency
• Fear of showing “bad” results / lack of capability
• Requires management discipline to collect data
• Expensive meeting
Thank you!

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He has 25+ years experience in the software industry starting with computer games in the early 1980’s. He has led software teams delivering superior productivity and quality using innovative agile methods. He developed **MSF for CMMI Process Improvement** for Microsoft. He is a co-author of the SEI Technical Note, CMMI and Agile: Why not embrace both!


David is Vice President of the **Lean Software & Systems Consortium**, a not for profit dedicated to promoting greater professionalism and better economic outcomes in our industry. Email…

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