A Journey to Systemic Improvement

David Joyce
BBC Worldwide
Kanban

Kanban is a transparent, work-limited, value pulling system.
Kanban began in one product team in mid 2008
The Kanban “flu” soon spread to other teams
No Single Solution

Based on a set of principles
Better practice NOT best practice
Present data differently

Days

100

50

Cases

What's important is knowing the extent of this variation and why – the causes

UCL

mean

LCL
Lead Time

Mean reduced from 74 to 12 days (84%)
71% drop in the spread in variation.

Data split from financial year end and in September
Development Time

Mean reduced from 4 to 2 days (50%)
69% drop in the spread in variation.
The major reduction factor has been to limit work in process.
# Days Blocked
Mean reduced from 30 to 10 days (67%)
Large drop in the spread in variation.
Recent outliers have proved to be special cause, waiting for a 3rd party.
Kanban

Summary
Systems Thinking

The means to obtain knowledge, and act with prediction and confidence of improvement.
Are we just building the wrong thing righter?

If we build an IT system around a wasteful process, then we are locking in that process for longer.

Kanban encourages a whole "system" view rather than a locally optimised IT view.

Often IT develop solutions based on sub optimised status quo.

Projects often focus on the needs of a single business unit.

If we build an IT system around a wasteful process, then we are locking in that process for longer.

David Anderson & Dr. Peter Middleton
Typical Organisation Hierarchy

Senior Leaders

Upper Mgt
Middle Mgt
Line Mgt
Workers

Customer View

Customers

Workers

Line Mgt
Middle Mgt
Senior Leaders

Sales
Marketing
Finance
HR
IT
Since IT “can” should it?

There is little merit in a well executed project that no one wants the output from.

When we focus on customer needs, and the organisation as a system

Many of the previous problems, that apparently required software projects, may well have been ‘dissolved’

The improvement effort can be targeted to where it has most benefit.
The thing that makes technology work is **not** the technology

Does this mean the **end of IT**?

There is a better way to approach the use of IT.

**Understand** and **improve**, then ask if IT can further improve.

Larger gains can be achieved through better thinking around the design and management of work.

Then pulling IT into the work as needed.
Understand

Purpose – look outside in

Learn about

- nature of demands (in customer terms)
- response to demand
- causes of failure demand
- capability and predictability
- flow - end to end
Improve

If the current work uses IT then leave it in place, work with it, or treat it as a constraint.

Improve performance without using IT

Don’t do anything to change the IT.

Value demand
- Design System around these

Clean flow
- Set work clean

Failure demand
- Eliminate Causes

Act on the system conditions impeding flow

John Seddon
Can IT further improve this process or system?

Now we can see potential benefits, from a position of knowledge, about the work.

We can therefore predict the benefits IT solutions will bring.

The result is always less investment in IT, and much more value from it.

IT is pulled into the work, rather than dictating the way work works.
Measure improvement results

Use operational performance data

Split data after a change

Process Changed

IT System Deployed
A better method for IT

Measure

Understand System

Pull IT

Improve the work
Case Studies
Case Study 1

Study of query management
Customer query end to end times in days – provides a different perspective.

3rd Party reported following against SLAs:

- Majority of queries resolved in 1 working day
- 100% in 1 working week
Total customer experience involves multiple silos and hand-offs between 3rd party call centre and BBC Divisions.
Analysing Demand

60% Failure Demand
Current **IVR Query Routing** vs **Top 5 Query Reasons**

IVR questions did not match customer demand
Recommendations

1. Total system visibility - map end to end experience, identifying improvements
2. Call handling analysis - establish end to end times and value/failure demand
3. Align IVR route options with customer needs
4. Supplement SLAs with end to end times and value/failure demand metrics
5. Website for customer to easily update their details
Case Study 1

Results
Case Study 2

IT is THE bottleneck
Value Stream Mapping

Mapped the value stream from idea to completion
Case Study 2

Results
Case Study 3

IT Help Desk
Variation reducing, but average # calls not by much

Low # calls is xmas period
Jun 08 - Sep 08
UCL: 76 Mean: 16 Longest: 500

Oct 08 - Dec 08
UCL: 66 Mean: 14 Longest: 360

Jan 09 - Mar 09
UCL: 63 Mean: 14 Longest: 300

Apr 09 - Jun 09
UCL: 59 Mean: 13 Longest: 210
Before

- 17% One Stop
- 83% Passed on

No. pass ons
- Avg: 3.6
- UCL: 8.9
End-to-end
- Avg: 11 days
- UCL: 50

After

- 80% One Stop
- 20% Passed on

End-to-end
- Avg: 2 days
- UCL: 10
Thinking → System → Performance
Case Study 3

Results
Case Study 4

Measures
Measures should be in the hands of those doing the work that are useful in respect to purpose.

When people have clarity of purpose, measures in their hands that relate to that purpose, then they help people understand what is happening where they work, and they are able to contribute more in improving the work.

This results in greater control and flexibility.
How do you study purpose? **Go out into the system and study demand, what matters to your customer.** Look at Value Demand vs Failure Demand, go and talk to your customers!
If you find that despite lots of measures you don’t really know much about that matters to customers, then it can be a powerful starting place for change.

Clarity of purpose and measures that relate to purpose are prerequisites to learning and improvement.
Case Study 4

Results
Case Study 5

Analysing support demand into a product team
### Value Demand

<table>
<thead>
<tr>
<th>Classification</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancellation of Order</td>
<td>36</td>
</tr>
<tr>
<td>Downtime Notification</td>
<td>3</td>
</tr>
<tr>
<td>File Download Request</td>
<td>4</td>
</tr>
<tr>
<td>Information request</td>
<td>7</td>
</tr>
<tr>
<td>Investigation of order</td>
<td>8</td>
</tr>
<tr>
<td>Removal from system</td>
<td>1</td>
</tr>
<tr>
<td>Want to use system</td>
<td>93</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>152</strong></td>
</tr>
</tbody>
</table>

### Failure Demand

<table>
<thead>
<tr>
<th>Classification</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorrect data</td>
<td>20</td>
</tr>
<tr>
<td>Messaging</td>
<td>53</td>
</tr>
<tr>
<td>Missing data</td>
<td>30</td>
</tr>
<tr>
<td>Problem with reports</td>
<td>9</td>
</tr>
<tr>
<td>System Unusable</td>
<td>91</td>
</tr>
<tr>
<td>Unexpected</td>
<td></td>
</tr>
<tr>
<td>Behaviour</td>
<td>63</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>266</strong></td>
</tr>
</tbody>
</table>

### Demand

<table>
<thead>
<tr>
<th>Demand</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure</td>
<td>266</td>
<td><strong>64%</strong></td>
</tr>
<tr>
<td>Value</td>
<td>152</td>
<td><strong>36%</strong></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>418</strong></td>
<td></td>
</tr>
</tbody>
</table>
Case Study 5

Results
Systems Thinking

Conclusion
Any Questions?

I must understand the system, improve the work, THEN pull IT
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More information on Kanban

My blog http://leanandkanban.wordpress.com/

Kanban community site http://www.limitedwipsociety.org


More information on Systems Thinking


Freedom from Command and Control http://bit.ly/10UCnS