Making Better Decisions with Flow Metrics

Mik Kersten, Tasktop CEO
Dominica DeGrandis, Director Digital Transformation
WHAT’s THE POINT?

- Flow metrics are tied to business value
- Flow metrics are based on outcomes
- Flow metrics provide a feedback loop to improve decisions
5 FLOW METRICS:

Why, How, + considerations

- Flow Distribution: A measure to see tradeoffs
- Flow Velocity: A measure of throughput/productivity
- Flow Load: Amount of Work-in-Progress (WIP)
- Flow Time: A measure of speed
- Flow Efficiency: Work vs. wait ratio
Why Flow Distribution: Visualize the tradeoffs

Provoke necessary discussion on priorities. Balance work types based on biz strategy.

A decision to do one thing is a decision to delay something else.
Flow Distribution - How

<table>
<thead>
<tr>
<th>WIP limit</th>
<th>Next</th>
<th>Design</th>
<th>Build</th>
<th>Feedback</th>
<th>Deliver</th>
<th>Verify</th>
<th>Value</th>
<th>Delivered</th>
</tr>
</thead>
<tbody>
<tr>
<td>(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Features</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hub launch story
Why Flow Velocity: Improve estimates & forecasting

Flow Velocity:
The number of items completed during a given time frame.
Unplanned work delays planned work, disrupts TP
Flow Velocity Story

Top Priority: New Features
Why Flow Load: WIP is a leading indicator

Flow Load:
All the partially completed work. All the work-in-progress (WIP) in the value stream

Benefit: Provokes convo’s on WIP limits that act as enabling constraint.
High WIP means that other items sit waiting for service longer.

The single most important factor that affects queue size is capacity utilization.
Queuing Theory: Applied statistics that studies waiting lines

Queuing Theory allows us to quantify the relationship between wait times and capacity utilization.

Wait times increase exponentially as utilization approaches 100%.

If the goal is speed, consider managing work by queues.

\[
N = \frac{\rho^2}{1 - \rho^2}
\]

\(\rho\) = Capacity Utilization

\(N\) = Number of Items in a Queue

http://reinertsenassociates.com/books
Feature/crosscutting feature story
Why Flow Time: Improve predictability

Benefit:
Answer the Q: “What’s the probability of completing work in x days?”

90th percentile filtered on features

Be approx. right instead of exactly wrong.
Flow Time – How

Flow Time: The duration from when work enters the value stream to its completion.
Flow Efficiency:
The percentage of time where work is in an active state vs. a wait state.

\[
\text{Flow Efficiency} = \frac{\text{Work}}{\text{Wait} + \text{Work}} \cdot 100\%\]

Benefit: Learn how much wait time exists in Value Stream to drive discussion to improve decisions on prioritization, capacity & utilization.
"If you measure anything, measure wait time."
Teams within and across teams

Problem:
All the thieves across all these teams.
It's hard to see the big picture impact.
Kafka/Scala new stack story
Considerations

• Gaming metrics
• Balanced set of metrics
What we measure impacts people because people value what is measured.
Empowering your product value streams.

Top Priority: New Features

Result: Defects & Debt

Last year: Unhappiest team
This year: Happiest team
TAKEAWAYS & BENEFITS

• Flow metrics are tied to business value
• Flow metrics are based on outcomes
• Flow metrics provide a feedback loop to improve decisions
How to Get started with Flow Metrics

Start capturing 1 artifact, 1 VS and 1 metric (Flow Time)