Introduction to Evidence-Based Management

How to Measure and Improve Your Ability to Deliver Value
Quick Guidelines

- Your microphones will be muted throughout
- We encourage questions and discussion!
  - Tweet your questions: @scrumdotorg, #ScrumPulse

- Type questions into the webinar questions box:

- Type comments into the webinar comments box:
Who Is Scrum.org?

Training

Certification

Founded by Ken Schwaber Co-creator of Scrum
Our goals for this webinar

• To help you understand why empiricism drives responsiveness
• To help you understand what EBM is and why we created it
• To help you understand how you can get started with EBM
Evidence Based Management Framework

- Unrealized Value (UV)
- Current Value (CV)
- Ability to Innovate (A2I)
- Time to Market (T2M)

Agility
Business Value

Market Value
Organizational Capability
What problem are we trying to solve?

“If you don’t know where you are going, you might end up somewhere else.”
- Yogi Berra
We want to do agile.

What should we measure to know we’re succeeding?
Why do you want to be agile?

• Happier customers
• Happier teams
• Happier investors
• Happier...
• Deliver more value to customers
• Be more efficient
• Be more responsive
• Be more...
• Go faster...
Speed is irrelevant if you are going in the wrong direction.

Mahatma Gandhi
Speed is irrelevant if you are going in the wrong direction.

Mahatma Gandhi
Agile

Speed is irrelevant if you are going in the wrong direction.

Mahatma Gandhi
2

What is Evidence-Based Management?
Why did we create EBM?
Evidence Based Management Framework

Unrealized Value (UV)

Ability to Innovate (A2I)

Current Value (CV)

Time to Market (T2M)

Agility

Business Value

Market Value

Organizational Capability

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Current Value (CV)

Questions

• How happy are customers today? Is their happiness improving or declining?
• How happy are your employees? Is their happiness improving or declining?
• How happy are your investors and other stakeholders? Is their happiness improving or declining?
### Example measures

#### Current Value (CV)

<table>
<thead>
<tr>
<th>KVM</th>
<th>Measuring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue per Employee</td>
<td>The ratio (gross revenue / # of employees) is a key competitive indicator within an industry. This varies significantly by industry.</td>
</tr>
<tr>
<td>Product Cost Ratio</td>
<td>Total expenses and costs for the product(s)/system(s) being measured, including operational costs compared to revenue.</td>
</tr>
<tr>
<td>Employee Satisfaction</td>
<td>Some form of sentiment analysis to help gauge employee engagement, energy, and enthusiasm.</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>Some form of sentiment analysis to help gauge customer engagement and happiness with the product.</td>
</tr>
<tr>
<td>Customer Usage Index</td>
<td>Measurement of usage, by feature, to help infer the degree to which customers find the product useful and whether actual usage meets expectations on how long users should be taking with a feature.</td>
</tr>
</tbody>
</table>
Time to Market (T2M)

Questions

• How fast can the organization learn from new experiments?
• How fast can you learn from new information and adapt?
• How fast can you deliver new value to customers?
### Example measures

#### Time-to-Market (T2M)

<table>
<thead>
<tr>
<th><strong>KVM</strong></th>
<th><strong>Measuring:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Build and integration frequency</td>
<td>The number of integrated and tested builds per time period. For a team that is releasing frequently or continuously, this measure is superseded by actual release measures.</td>
</tr>
<tr>
<td>Release Frequency</td>
<td>The number of releases per time period, e.g. continuously, daily, weekly, monthly, quarterly, etc. This helps reflect the time needed to satisfy the customer with new and competitive products.</td>
</tr>
<tr>
<td>Release Stabilization Period</td>
<td>The time spent correcting product problems between the point the developers say it is ready to release and the point where it is actually released to customers. This helps represent the impact of poor development practices and underlying design and code base.</td>
</tr>
<tr>
<td>Mean Time to Repair</td>
<td>The average amount of time it takes from when an error is detected and when it is fixed. This helps reveal the efficiency of an organization to fix an error.</td>
</tr>
<tr>
<td>Cycle Time</td>
<td>The amount of time from when work starts on a release until the point where it is actually released. This measure helps reflect an organization’s ability to reach its customer.</td>
</tr>
<tr>
<td>Lead Time</td>
<td>The amount of time from when an idea is proposed or a hypothesis is formed until a customer can benefit from that idea. This measure may vary based on customer and product. It is a contributing factor for customer satisfaction.</td>
</tr>
<tr>
<td>Time-to-Learn</td>
<td>The total time needed to sketch an idea or improvement, build it, deliver it to users, and learn from their usage.</td>
</tr>
</tbody>
</table>
Ability to Innovate (A2I)

Questions

• What prevents the organization from delivering new value?
• What prevents customers or users from benefiting from that innovation?
### Example measures

#### Ability to Innovate (A2I)

<table>
<thead>
<tr>
<th>KVM</th>
<th>Measuring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feature Usage Index</td>
<td>Measurement of features in the product that are frequently used. This helps capture features that are rarely or never used.</td>
</tr>
<tr>
<td>Innovation Rate</td>
<td>The percentage of effort or cost spent on new product capabilities, divided by total product effort or cost. This provides insight into the capacity of the organization to deliver new product capabilities.</td>
</tr>
<tr>
<td>Defect trends</td>
<td>Measurement of change in defects since last measurement. A defect is anything that reduces the value of the product to a customer, user, or to the organization itself. Defects are generally things that don’t work as intended.</td>
</tr>
<tr>
<td>On-Product Index</td>
<td>The percentage of time teams spend working on product and value.</td>
</tr>
<tr>
<td>Installed Version Index</td>
<td>The number of versions of a product that are currently being supported. This reflects the effort the organization spends supporting and maintaining older versions of software.</td>
</tr>
<tr>
<td>Technical Debt</td>
<td>A concept in programming that reflects the extra development and testing work that arises when “quick and dirty” solutions result in later remediation. It creates an undesirable impact on the delivery of value and an avoidable increase in waste and risk.</td>
</tr>
<tr>
<td>Production Incident Trends</td>
<td>The number of times the Development Team was interrupted to fix a problem in an installed product. The number and frequency of Production Incidents can help indicate the stability of the product.</td>
</tr>
<tr>
<td>Active code branches, time spent merging code between branches</td>
<td>These measures are like the Installed Version Index, since different deployed versions usually have separate code branches.</td>
</tr>
<tr>
<td>Time spent context-switching</td>
<td>Number of meetings per day per person, and the number of times a day team members are interrupted to help people outside the team can give simple insight into the magnitude of the problem.</td>
</tr>
</tbody>
</table>
Unrealized Value (UV)

Questions:

• Can any additional money be made in this market?
• Is it worth the effort and risk to pursue further returns in this market?
• Should further investments be made to capture additional Unrealized Value?
Example measures

Unrealized Value (UV)

<table>
<thead>
<tr>
<th>KVM</th>
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<tr>
<td>Market Share</td>
<td>The relative percentage of the market controlled by the product.</td>
</tr>
<tr>
<td>Customer or user satisfaction gap</td>
<td>The difference between a customer or user’s desired experience and their current experience.</td>
</tr>
</tbody>
</table>
“It is easy to sit-up and take notice. What is difficult is getting up and taking action.”

- Honoré de Balzac

Getting Started with EBM
What do you want to achieve?

Take a small step forward; experiment

Did that help? Continue in that direction, otherwise try something new

Keep going until you reach your goal (or find a better one)
Download Evidence-Based Management Guide

• Want to learn more about EBM? Download the guide at https://www.scrum.org/resources/evidence-based-management
Real Estate Software Provider Uses Evidence-Based Management to Drive Its Largest Revenue Growth in 10 Years

★★★★★ 5 from 2 ratings

A real-estate software company went through an Evidence-Based Management (EBM) workshop with Professional Scrum Trainer Ravi Verma. Upon implementing EBM they learned how to measure the value of their work and drove its largest revenue growth in 10 years.

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- Scrum.org now has learning paths on our website for Scrum Master, Product Owner, Leadership and Development Team Members

- Provide structured guides to help you understand the roles of the Scrum Master/Product Owner with a way to continue learning on your journey

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Thank you!