Project Portfolio Management with AgileEVM

Brent Barton
CTO, SolutionsIQ
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Who is Brent Barton?

- CTO at SolutionsIQ; also an Agile Coach & Mentor for SolutionsIQ
- Certified ScrumMaster (Practitioner & Trainer)
- More than 15 years software development in many roles as both employee and consultant for organizations from small start ups to multinational corporations
- Actively involved in Agile Rollouts from small Product companies to very large IT organizations

Scrum Articles

- “AgileEVM – Earned Value Management in Scrum Projects”, IEEE
- “Implementing a Professional Services Organization Using Type C Scrum”, IEEE
- “Establishing and Maintaining Top to Bottom Transparency Using the Meta-Scrum”, AgileJournal
- “All-Out Organizational Scrum as an Innovation Value Chain”, IEEE

bbarton@solutionsiq.com
In the next hour, we will

Explore Project Portfolio Management from various perspectives so we can apply context to decide where AgileEVM can help capitalize on Agile methods in a scaled environment.
Meet Robert, CIO

- $110 Million annual budget
- Has to fulfill on existing projects already underway
- Has a stream of new business initiatives
- Needs to make the business units happy
Meet Janet, Director of Projects

☐ Reports to CIO

☐ Must prioritize and rank projects

☐ Responsible for overall project delivery

☐ Must be flexible since applying more controls seems to have an opposite effect and even more things seem to change
One day Robert asks,

How are the projects in the portfolio doing?

☐ a simple, direct question...
Janet points Robert to “The Dashboard”

What am I supposed to make of this?

☐ Are project statuses the most important thing?
Project Portfolio Management (PPM)

- We want to measure outcomes, not outputs
  - YES: Business Value
  - not so much: Completed Projects
What can Janet Do?

HELP!
Effective Project Portfolio Management Requires:

- Prioritization to maximize Business Value
- Effective delivery to minimize costs
- Re-allocation of resources when costs are too high or the benefit is too low
Effective Scrum Project Management Requires:

- Prioritization to maximize Business Value
- Effective delivery to minimize costs
- Re-allocation of resources when costs are too high or the benefit is too low*

*Provided the organization is equipped to do this.
**Scrum**

- **Daily Scrum Meetings**
  - Done since last meeting
  - Plan for today
  - Obstacles?

- **Sprint Planning Meetings**
  - Review product backlog
  - Estimate sprint backlog
  - Commit to sprint timebox
  - Establish sprint goal

- **Sprint**
  - Timeboxed: 2-4 weeks in duration

- **Sprint Review Meetings**
  - Demo features to all
  - Retrospective on the sprint

- **Backlog Tasks**
  - Expanded by team

- **Product Backlog**
  - Prioritized features desired by customer

- **Sprint Backlog**
  - Features selected into sprint
  - Estimated by team

- **Potentially Shippable Product Increment**
Key Scrum Concepts

- Stack Ranked Prioritization based on Business Value and risk
- Self organizing, cross-functional teams
- Definition of Done
- Potentially Shippable Increments
- Velocity
Scrum Supports Two PPM Features at the Release Level

- Prioritization to maximize Business Value
- Effective delivery to minimize costs
- Re-allocation of resources when costs are too high or the benefit is too low
Key Earned Value Management (EVM) Concepts

- Integrates Cost and Schedule Performance
- Forecasts in Financial Units based on units used for Actual Cost
  - Burdened Cost, Burn Rate, Allocated Time, etc.
- Unlike team velocity, actual cost is additive across teams
- ANSI standard (ANSI/EIA-748)
EVM Supports One PPM Feature at the Release Level

- Prioritization to maximize Business Value
- Effective delivery to minimize costs
- Re-allocation of resources when costs are too high or the benefit is too low

- ✔ Scrum
- ✔ EVM
What can Janet Do?

Agile + EVM = AgileEVM
AgileEVM Background

- Mathematically proven that Release Dates based on average velocity (story points) ≡ estimate at complete (dollars)

- Key Assumption: The ratio of (story points completed)/(total story points in a release) is a good measure of Actual Percent Complete

http://www.solutionsiq.com
Meet Katie, Project Manager

- Reports to Director of Projects
- Uses Scrum well...good servant leader
- Team exhibits technical craftsmanship
- Date is fixed (it always seems to be...)
- Requirements “nuance” with every Sprint Review, thus changing scope*
*‘Tis Sad, but True...

- It is not possible to completely specify an interactive system.
  - Wegner’s Lemma, 1995

- Uncertainty is inherent and inevitable in software development processes and products.
  - Ziv’s Uncertainty Principle, 1996

- For a new software system the requirements will not be completely known until after the users have used it.
  - Humphrey’s Requirements Uncertainty Principle
Katie is using AgileEVM

☐ Katie has a half-million dollar government project with a single release

☐ Katie helps the team plan and re-plan

☐ Let's take a look...
### Katie’s Project Worksheet

**AgileEVM (Worksheet version 0.99)**

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<th>PROJECT:</th>
<th>ProjectX</th>
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<th>INITIAL PARAMETERS (BASELINE)</th>
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<td>Story Points Left</td>
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Notes About Extending AgileEVM to the Portfolio

- AgileEVM can co-exist with EVM at the Portfolio Level - with caution
- Helps manage delivery by integrating the best of Agile, Scrum and EVM
- We can compare productivity without bastardizing Velocity
☐ We want to measure outcomes, not outputs

☐ Prioritize to maximize Business Value

☐ Effectively deliver to minimize costs

☐ Re-allocate resources when costs are too high or the benefit is too low

Scrum

EVM
Brent’s philosophy: Creating Software should be fun. It is both creative and technically challenging. If it is not fun, something is terribly wrong...
Thank you!

☐ Questions?

☐ For more information or help, agileevm@solutionsiq.com

☐ bbarton@solutionsiq.com

☐ solutionsiq.com