Taking the SAFe 4.0 Road to Hyper Speed and Quality; How High Performance Teams Disrupt Their Marketplace and Drive Change

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New Series

DEADLIEST JOB INTERVIEW

Fri Jan 29  10/9c

AIRPLANE

REPO

Discovery Channel™
Join MIKE KENNEDY for
AIRPLANE REPO
SEASON PREMIERE SEASON 3
Show airs at 9pm

Discovery Channel AIRPLANE REPO
WEDNESDAY, JULY 15TH • MILLERS ALE HOUSE, WINTER PARK
1251 Lee Rd, Winter Park, FL 32789
<table>
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<th>Flaps Position and Power Setting</th>
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<th>Actual Stall</th>
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<td>Indicated Airspeed</td>
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<td>80 / 75</td>
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<tr>
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<td>80</td>
<td>75</td>
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<td>Full Flap Power off</td>
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<td>65 / 64</td>
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<td>Full Flap and Full power</td>
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<td>70</td>
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<td>Optimum Take-Off Speed</td>
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<td>Minimum Controllable Slow Flight Speed – Full flap and power as required</td>
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<tr>
<td>Power Setting during Slow Flight</td>
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Whiteboard Sketch – Performance Mgr R2.3

- **Release 2.3**
- **STAFF:** 60
- **FTEs:** 50
- **TIME:** 4mos
- **EFFORT:** 32PMs
- **PROJECT:**
  - **CONSTRUCT/TEST**
    - **TIME:** 5.25
    - **EFFORT:** 488 PM
  - **6OLIVE**
  - **SIZE**
    - **11 ITERATIONS**
  - **ROUNTS**
    - **INFRASTRUCT**
    - **SOLUTIONS**
    - **STORYCARDS**
  - **DELECTS:** 635
- **JAVA:** 83,540
- **XML:** 2,835
**BMC SCRUM**

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<th>Industry Average</th>
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## Pair Programmers

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We Always Look for $1 Million
How Agile Projects Measure Up, and What This Means to You

by Michael Mah, Senior Consultant, Cutter Consortium; with contribution by Mike Lunt
BMC “Secret Sauce”
BMC “Secret Sauce” (con’t)

Buy-In
- VP-Level (or higher) Senior Executive Sponsorship
- Scrum Master Training
- Core Group Energized and Passionate

Staying “Releasable”
- Nightly Builds/Test
- 2-week Iteration Demos
- Frequent, Rigorous Peer Code Review

Dusk-to-Dawn Teamwork
- Communication Techniques for Information Flow
- Wikis, Video-conferencing, Periodic On-Site Meetings
- Co-Located Release Planning
- Scrum of Scrum Meetings (US Time)
Backlogs

- One Master Backlog AND Multiple Backlog Management
- One Setup for User Stories Across Teams
- Added “Requirements Architect” to Interface Product Mgt with R&D

“Holding Back the Waterfall”

- Test Driven Development
- Retrospective Meetings to Not Regress into old Waterfall Habits
- Outside Source to Audit the Process
# Pair Programmers

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<td>35</td>
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9 Years Later...
### 2015-2016: Follett vs. Industry Average

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* Average Code Size 163k SLOC
Succeeding with Agile
Software Development Using Scrum
MIKE COHN

Foreword by Tim Lister
The Columbus Agile Benchmark Study
(Columbus vs the World)
Comparing Columbus AGILE projects vs. Industry Averages*

-- 75% Fewer Defects, 30% Quicker Schedules --

*Industry Averages for Defects & Schedules come from the QSM, Inc. database of several thousand Business type applications.
Forecasting the Portfolio Backlog

Given knowledge of Epic sizes and ART velocities, applying “what if” capacity allocations informs decisions and forecasting..

Which trains can work on these, and what % of their capacity can be applied?
Predicting the Future
Portfolio/Release Estimation Process

**Inputs**

- Software Size:
  - SLOC
  - Function Points
  - Objects
  - Etc...
  - Uncertainty
- Process
- Productivity:
  - Methods/Tools
  - Tech. Complexity
  - Personnel Profile
- Management
- Constraints:
  - Max People
  - Max Budget
  - Max Schedule
  - Req. Reliability

**Outputs**

- How much total WORK to be done (features, stories, points)
- What productivity/velocity are we capable of achieving?
- When do we have to release? How many people do we have?
- Optimum Estimate (Maximum Probability of Meeting Constraints)
- Generate Plans
- Evaluate Practical Alternatives

**Graphs**

- Staffing
- Cost
- Probability
- Defects

**Questions**

- What productivity/velocity are we capable of achieving?
- How much total WORK to be done (features, stories, points)
- When do we have to release? How many people do we have?
Releasing Includes Other Activities

Figure 2. Building a releasable solution
Kanban System for Epics

**FUNNEL**
- All big ideas are welcome here!
- New business opportunities
- Cost savings
- Marketplace changes
- Mergers and acquisitions
- Problems with existing solutions

**REVIEW**
- Epic Value Statement
- Refine understanding
- Calculate WSJF
- WIP limited

**ANALYSIS**
- Solution alternatives
- Refine WSJF
- Cost estimate
- Lightweight business case
- WIP limited
- Go / no-go decision

**PORTFOLIO BACKLOG**
- Epics approved by PPM team
- Continuous prioritization of approved Epics using WSJF

**IMPLEMENTATION**
- Epics Owners and Product and Solution Management decompose Epics into Value Stream/Program Epics, Capabilities, and Features
- Ownership transitions to Value Streams and ARTs
- WIP limited by downstream capacity
- Teams begin implementing at PI Planning boundaries
- Epic tracking continues

**DONE**
- Success criteria has been met

Figure 1. Portfolio Kanban system and typical collaborators
Portfolio Backlog holds epics approved for implementation

- These epics have made it through the portfolio Kanban with go approval
- Low-cost holding pattern for upcoming implementation work
- Sizing estimates are in story points
- Avoid excess WIP, await implementation capacity

“Program Portfolio Management requires an understanding of the productive capacity of each ART, the velocity of each, and the availability of each for new developments and business-as-usual support activities.” – Portfolio Kanban Abstract
Roadmap Guides the Delivery of Features

Figure 1. An example PI Roadmap for a gaming company
A Top-Down Estimate Example

Visualize the Portfolio

- Perform early high level estimates of Portfolio Backlog Items to support Kanban process
- Assess risk areas

Visualize Velocity and Value Creation

- Model alternative scenarios for release of epics into the Value Stream
- Account for the reality of the rate at which work becomes available
- Use historical productivity measures that incorporate the non-linear behavior of software development
FAA Radar Flight Following
Radar Flight Following (Foreflight)
CREATE VALUE AND PROFIT WILL FOLLOW
Defining your Desired Business Outcomes
Desired Business Outcomes

ACTIVITIES
Change Activities
Deliver Outcomes,
Benefits & Value

OUTCOMES
Desired Outcomes
deliver or enable Benefits

BENEFITS
Some Benefits once realized,
deliver quantifiable $Value

VALUE
The $Value is calculated using the Value Drivers

DRIVERS

QSM
The Intelligence behind Successful Software Projects

(#42)
Your outcome statements are the basis for your benefits identification and change planning.
Your desired business outcomes define your overall scope

Your project outcomes define your project’s scope and measures of success

- **Finalized business outcomes**
  - Associated benefits
  - Outcomes roadmap
  - Master change plans
  - Subset project outcomes
  - Project change plans
  - Project delivery schedule

**Advantages**

- Every component is linked to the business outcomes
- Gap between business and project outcomes is known
- Non-project change activities known and can be actioned by the business
- Delivery of the project outcomes clearly and directly enables and supports subsequent delivery of the business outcomes

Your desired business outcomes define your overall scope.
Indexing Everything

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Value Driven Feature Development
“IRACIS” Index

IR – Increase or Improve Revenue
AC – Avoid Costs
IS – Improve Service

Scale of 1-5
Weighting Schema

... Market Share? Others?
Follett’s “GRIN” Index

G – Grow Revenue
R – Reduce Cost
I – Improve Service
N – Nurture Customers

Scale of 1-5
Weighting Schema

... Closure related to “Outcomes”
Did you ever wonder what your purpose in life is?
Self-Actualization
You are living to your highest potential

Esteem
You've acquired the skills that lead to honor and recognition

Love & Belonging
Achieving deeper, more meaningful relationships

Safety
Home, sweet home

Physiological Needs
Food, water, sleep
"The thought of the human species being wiped out, it's all consuming“ - Elon Musk
What’s Your Outcome?
How A Vegan Startup Is Pivoting To Create The 'Pandora of Food'
Hacking—Not Phishing—for Fish: Coders Worldwide Tackle Global Ocean Crisis

Laptops, coffee, and sleeping bags in tow, programmers gathered over the weekend to develop apps for sustainable fishing.

Georgia Tech coder team at Fishackathon. (Photo: Fishackathon/Twitter)
How software developers helped end the Ebola epidemic in Sierra Leone

A team of open source software developers solved the problem that most urgently needed solving: distributing wages to healthcare workers.

Little known to the rest of the world, a team of open source software developers played a small but integral part in helping to stop the spread of Ebola in Sierra Leone, solving a payroll crisis that was hindering the fight against the disease.

Emerson Tan from NetHope, a consortium of NGOs working in IT and development, told the tale at the Chaos Communications Congress in Hamburg, Germany.
Self-Actualization
You are living to your highest potential

Esteem
You've acquired the skills that lead to honor and recognition

Love & Belonging
Achieving deeper, more meaningful relationships

Safety
Home, sweet home

Physiological Needs
Food, water, sleep
HOPE CHANGES EVERYTHING.
Questions: Contact Us

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