Increasing Software Quality: Agile Experiences in a Non-Technically-Focused Organization

Aaron Hockley
Multnomah County, Oregon
Multnomah County

- Population ~ 735,000 (2010)
- County staff ~ 4,700
- Software developers ~ 40
Waterfall Challenges

- Changing Requirements over Long Project Span
- Poor communication between customer/developer silos
- Extensive unbudgeted rework
Software in a Non-Technical Organization

- Software Supports Business Operations
- Software is Not the Business Operation
Defining Software Quality
Defining Software Quality

- Ease of Use
Defining Software Quality

• Ease of Use

• Consistency Amongst Applications
Defining Software Quality

- Ease of Use
- Consistency Amongst Applications
- Minimal Defects Post-Implementation
Defining Software Quality

• Ease of Use
• Consistency Amongst Applications
• Minimal Defects Post-Implementation
• Perceived Relationship Between Business and Development Staff
Business Staff Challenges for Software Development
Business Staff Challenges for Software Development

• Physical co-location often impossible
Business Staff Challenges for Software Development

- Physical co-location often impossible
- Software Competes w/ Core Business for Time
Business Staff Challenges for Software Development

- Physical co-location often impossible
- Software Competes w/ Core Business for Time
- "I am not really a computer person"
Business Staff Challenges for Software Development

• Physical co-location often impossible
• Software Competes w/ Core Business for Time
• “I am not really a computer person”
• Training Our Customers
Customer Involvement is the Key Quality Indicator
Customer Involvement is the Key Quality Indicator

- Perception is Reality
Customer Involvement is the Key Quality Indicator

- Perception is Reality
- Management Support Facilitates Involvement (which Facilitates Success)
Agile Tool Experiences
Post-It Notes

- Cheap and Easy
- Visible to those Nearby
- Archive and Search was Less Than Optimal
- Some Stories Lost Due to Gravity
Microsoft Team Foundation Server (TFS)

- Well Integrated with Developers’ Toolset
- Detailed Work Item Tracking
- Not Customer-Focused; Poor Customer Communication Tool
- Expensive Server & Licensing
Pivotal Tracker

• Built for Agile
• Easy to Understand Stories as Business Value
• Hosted Solution; Reasonable Licensing
• Pre-Built Burndown & Velocity Reporting
“TFS is a far superior project management tool because of the breadth of information it can capture.

Pivotal Tracker is the best ‘customer expectation management tool’.”

- Ed Chapel, Sr. Development Analyst, Multnomah County
Our Nimble Solution
Our Nimble Solution

• Prioritized Queue of Pending Work
Our Nimble Solution

- Prioritized Queue of Pending Work
- Every Other Week: Iteration Review & Kickoff
Our Nimble Solution

- Prioritized Queue of Pending Work
- Every Other Week: Iteration Review & Kickoff
- Work Can Span Iterations
Our Nimble Solution

• Prioritized Queue of Pending Work

• Every Other Week: Iteration Review & Kickoff

• Work Can Span Iterations
Our Nimble Solution

- Prioritized Queue of Pending Work
- Every Other Week: Iteration Review & Kickoff
- Work Can Span Iterations
- Automated Deployments
Our Nimble Solution

• Prioritized Queue of Pending Work

• Every Other Week: Iteration Review & Kickoff

• Work Can Span Iterations

• Automated Deployments

• Daily QA Deployments
Our Nimble Solution

- Prioritized Queue of Pending Work
- Every Other Week: Iteration Review & Kickoff
- Work Can Span Iterations
- Automated Deployments
- Daily QA Deployments
- Regular UAT Deployments
Our Nimble Solution

• Prioritized Queue of Pending Work

• Every Other Week: Iteration Review & Kickoff

• Work Can Span Iterations

• Automated Deployments

• Daily QA Deployments

• Regular UAT Deployments

• Continuous Feedback
Experience: Estimation

Estimation is Hard
Agile Doesn’t Change That
Experience: Estimation

Estimation is Hard
Agile Doesn’t Change That

- High-Level Sizing by Business System Analyst + Developers
Experience: Estimation

Estimation is Hard
Agile Doesn’t Change That

• High-Level Sizing by Business System Analyst + Developers

• Stories are Decomposed and Sized
Experience: Estimation

Estimation is Hard
Agile Doesn’t Change That

• High-Level Sizing by Business System Analyst + Developers

• Stories are Decomposed and Sized

• Iterative Construction Results in Projected End Date with Increasing Accuracy (GPS)
Experience: Life of a Work Item

- Definition and Prioritization
- Clarification
- Construction
- Testing
- Acceptance
Q & A

Aaron Hockley
aaron.b.hockley@multco.us