A Non-Software Scrum Experience: Scrum-But or Context-Sensitive?

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Plan of the Session

- Opening thoughts & questions
- Setting the scene of this case
- Challenges & adaptations
- Summary

Interaction throughout!
Adapting Scrum

• What’s different in a non-software project?
• What adaptations may be needed?
• Deviation = failure to apply what we know?
  Deviation = valuable creative adaptation?

Preserve known value

Create new value
Shu-Ha-Ri

守破離

Source: alistair.cockburn.us/Shu+Ha+Ri
...better ways of developing **software**...

...**Working software** over comprehensive documentation

*From the Principles:*

1. Our highest priority ... valuable **software**.
3. Deliver working **software** frequently...
7. Working **software** is the primary measure of progress.

Source: [www.agilemanifesto.org](http://www.agilemanifesto.org)
Manifesto Extended?

...better ways of developing business processes...

...Business processes over comprehensive documentation

1. Our highest priority ... valuable business processes.
3. Deliver working business processes frequently...
7. Working business processes are the primary measure of progress.

(Maybe we should think about our software this way, too…)

Adapted from: www.agilemanifesto.org
The Client

- Manufacturing firm: electromechanical durable goods
- Worldwide sales, parent company overseas
The Situation

- **Company developing a new product line**
  - Multiple models
  - Highly computerized
  - Custom boards, multiple processors
  - Optionally networked

- **Multiple teams**
  - In-house + subcontractors
  - Onshore & offshore
The Assignment

- **Customer Care (CC) preparing to handle**
  - New products
  - Increased workload
- **CC Scrum team**
- **Project backlog**
  - Business process changes
  - Training development & delivery
Customer Care

- Warranty Claims
- Inside Sales
- Parts Warehousing
- Shipping
- Call Center
- Installation
- Training
- Field Service
CC Team

• **Team members:**
  – 5 people full-time, 3 half-time
  – Senior techs & managers from sales, support, training

• **Product Owner**
  – Director-level manager, senior SME in all aspects of ops
  – Fulltime on this assignment
Transitioning Into Scrum—
Ceremonies & Artifacts

- **Daily Standup**
  - 24 hours

- **Sprint Planning**
  - Review backlog
  - Task and estimate
  - Commit

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

- **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**
  - Demos
  - Retrospectives

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<table>
<thead>
<tr>
<th>Backlog in Seven Swim Lanes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process &amp; Tools</strong></td>
</tr>
<tr>
<td>Install, Coordination, Dispatch</td>
</tr>
<tr>
<td>Support</td>
</tr>
<tr>
<td>Training</td>
</tr>
<tr>
<td>Quality</td>
</tr>
<tr>
<td>Call Center</td>
</tr>
<tr>
<td>Sales</td>
</tr>
</tbody>
</table>

Fragmented org, not prioritized: needs work!
“Nokia Test”

Are you doing Iterative Development?

✓ • Iterations must be timeboxed to less than 4 weeks
?
• Software features must be tested and working at the end of each iteration
✓✓ • The iteration must start before specification is complete

Are you doing Scrum?

✓ • You know who the product owner is
✗ • There is a product backlog prioritized by business value
✗ • The product backlog has estimates created by the team
✗ • The team generates burndown charts and knows their velocity
✗ • There are no project managers (or anyone else) disrupting the work of the team

✓✗ = improvements made!

Source: agileconsortium.blogspot.com/2007/12/nokia-test.html
Differences from typical software project

- Organizational setting
- PO was line manager of some team members
- Extreme specialization of team members
- High level of external interaction & dependency
- Deliverable types
Types of deliverables

- Courseware design standard
- Courseware module
- Design for call tree
- List of error codes
- Agreement about codes procedure
- Procedure diagram
- Procedure rollout
- Room installation
- QC check on equipment
- Review of another team's backlog
- Set of data defined & keyed into SAP
- Request for IT development
Typical Organization?

“The Business”

PO

Team

IT or Development

Stakeholders

Gatekeepers (Resources)
Actual Ecology Looks More Like This

- Customer
- Marketing
- Dealers
- Call Center
- Warehousing
- Shipping
- Sales
- Subs
- Field Ops
- Training
- Manufacturing
- PO
- Dev
- QA
- IT
- Warranty
- Claims
- Team
- Sales
- Dev
- QA
- IT
Being the Business

• Relative to the software teams, we were a stakeholder
  – Close to the customer, we often had to speak for them
  – Also speaking for ourselves relative to operations

• Relative to IT, we were a user
  – We needed functionality from SharePoint, SAP, and Web

Being on the business side is a learning experience — Everybody should try it some time!
Evolution of Practices

• Inspect & adapt
• What makes sense?
• Adapting to organizational "givens"
• What's a given?
• Picking your battles
Team

- Moved one half-timer off team
- Converted another to full-time
- Added part-time support from off-team trainers (could not get full-time)
Project Backlog — Front

- Support Ops
- Sales Ops
- Cross-Group
- Training
Project Backlog — Back

Targets
Projection Ranges
Pending PO Review
Next Release
Deferred
Candidate Stories
Team Velocity & Planning

- Pattern of taking too much and not finishing
- Keeping busy through delays: Multi-tasking
Individual Capacity & Planning

• Persistent specialization among team members led to many adaptations
  – Yesterday’s weather & next sprint’s capacity assessed at individual level
  – Capacity adjustments by person (available half-days)
  – Velocity & targets by person
  – Work allocation by person
Typical Software Story

Story 14

As a customer I want to check my order status online so that I can know when to expect my package

Acceptance Criteria

• View status as “waiting for pickup”, “en route” or “delivered”
• Date of each step in route
• Estimated time of delivery
Sample CC Story

ID#: CCUS0502
Author: Greg

Title: Module 2 - Setup/Configuration - Development

Story: As training, we need to develop the Setup/Configuration module so we can accurately train internal and external personnel and customers on the new product.

Criteria:
1. Develop courseware based on requirements
2. Place material in CBT and ILT formats
3. Get sign off from stakeholders on beta release

Tasks:
1. Develop core material in ILT format
2. Modify to CBT format
3. Present material to stakeholders
Title: Module 2 – Setup & Configuration – Develop

Story: As Training we need to develop the Setup & Configuration module so we can accurately train internal & external personnel and customers on the new product

AC1: Develop courseware based on requirements

AC2: Place material in CBT and ILT formats

AC3: Get signoff from stakeholders on beta release
Value Chain

Customer

Service Rep

I want good service

I want to know what I’m doing

Trainer

I want to teach well

Courseware

Dev
**INVEST Model**

- **Independent** — schedule and implement in any order
- **Negotiable** — describe the “what” not the “how”
- **Valuable** — must be valuable to the customer
- **Stimulable** — to help customer rank based on cost
- **ized Appropriately** — consumable by team for implementation
- **Testable** — shows story is clear and defines done state

Example Dependent Story Set

• **532 Network Partner Audit Process Creation**
  As CC we need to develop an audit process to evaluate potential network partners

• **533 Network Partner Audit Process Implementation**
  As CC we need to use the audit process to evaluate potential network partners

• **534 Network Partner Selection, Setup, and Handoff**
  As CC we need to choose a network partner, then ensure appropriate handoff to departments who will finalize the partnership so we can bring the partner on board
Story Architecture

• **Sashimi generally not an option for us**
  – Slice of business value threads through multiple teams

• **Partition at external boundaries**
  – a request story, then a continuation story after response

• **Partitioning in stages**
  – Develop a procedure, then roll it out
  – Develop an evaluation, conduct it, execute on chosen option

• **De facto partitioning**
  – Story 302a, b, c, d, e, f, g, h, i
Post-Facto Partitioning

- Partitioning stories at sprint end
- Partial velocity accepted:
  - Work partly completed? No points
  - *Part* of work *fully* completed? Partial points
    (Story could have been partitioned at start of sprint)
Sprint Demos

- Moved more to in-sprint acceptance
- Demo as PR activity
- Began to skip demos
Summary

• What did we do differently?
• Which practices did we decide not to use?
• Most valuable practices
Recap — What We Did Differently

- Backlog segmented by subteam
- Individual velocity
- Many tasks & stories in process at once
- Pattern of taking too much & not finishing
- Story architecture
Practices We Decided Not to Use

- Definition of done
- Formal testing
- Sprint demos
Most Valuable Practices

- Stories & conversations
- Daily standup
- Retrospectives
- Backlogs
- Task boards
Of Questionable Value on This Project

• **Iterations?**
  – Cadence of delivery good to encourage completion habits
  – But forced a lot of arbitrary boundaries
  – Overhead costs

• **Velocity?**
  – Good as guide in sprint planning
  – Good for giving some release-level predictability
  – But for us, not so much
Would We Do This Again?

• Better than waterfall or traditional management (what would those even look like for this?)

• Might give Kanban a try next time...
Resources

• Gary Morgan, 2009 Orlando Scrum Gathering: ScrumBut Research
• Arline and Jeff Sutherland, Agile 2009: Scrum in Church: Saving the World One Team at a Time
• Igor Altman, Agile 2009: Take No Prisoners: How a Venture Capital Group Does Scrum
• Tobias Mayer (Scrum Alliance), open space conference 25-26 Sep 2010 in Phoenix, AZ: Scrum Beyond Software

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Further conversation?