Building High Performance Teams with Scrum

by Scrum.org – Improving the Profession of Software Development

“Eat a live frog first thing in the morning and nothing worse will happen to you the rest of the day.”

DAVE WEST
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-Mark Twain
Who Am I?

- **Product Owner (CEO) Scrum.org**
- **Former**
  - CPO Tasktop
  - VP RD Forrester Research
  - Product Mgr RUP

- **Contact Me**
  - dave.west@scrum.org
  - @DavidJWest, twitter
  - DavidJustinWest, linkedin
Our Genesis…

The New New Product Development Game

Experimentation

Manifesto for Agile Software Development

Founded 2001

Founded 2009

Founded 2004
Improving the profession of software development
<table>
<thead>
<tr>
<th><strong>The Home of Scrum</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>90%</strong> Agile Teams Use Scrum</td>
</tr>
<tr>
<td><strong>150</strong> Professional Scrum Trainers</td>
</tr>
<tr>
<td>Over 50,000 Taught</td>
</tr>
<tr>
<td>Americas, Europe, Africa, Oceania &amp; Asia</td>
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</table>
Taking you back in time…
The Spectrum of Process Complexity

- Opportunities for business innovation through software grew
- Innovation led to less agreement on requirements and less certainty on technology
- And techniques, tools, attention and focus could not solve this problem
But there is a better way...

- Built in instability – clear goal but nothing else
- Self-organizing teams – Autonomy, pushing the limits, cross-functional
- Overlapping development phases – iterations
- Multi-learning – learn by doing
- Subtle control – minor process controls
- Organizational transfer of learning
Scrum is defined completely in the Scrum Guide by Ken Schwaber and Jeff Sutherland, the originators of Scrum.

- www.scrumguides.org
- 42 Available Translations
Framework NOT Method
How does Scrum enable high performance teams?

Focus  Self Managed Teams  Technical Excellence

Spin pass on the run

1. Take the ball early.
2. Reposition hands.
3. Pull the ball back and open the hips.
4. Pass and follow through to target.
“It is not hard to make a decision once you know what your values are.”

-Roy E Disney

Focus

Knowing what you are trying to achieve and why
Knowing why you do it

• Might sound simple, but very hard to execute on
• Isn’t just about managers and leaders but applies to everyone
• Clarity, communication and feedback are more important than process, rules and hierarchy
• Simplicity outweighs completeness
We usually measure HOW we do work

<table>
<thead>
<tr>
<th>DEVELOPMENT</th>
<th>OPERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Velocity of team(s)</td>
<td>1. Infrastructure incidents/type across time</td>
</tr>
<tr>
<td>2. Test coverage</td>
<td>2. Average # if affected users/type</td>
</tr>
<tr>
<td>3. Scrum compliance</td>
<td>3. MTTR per incident type</td>
</tr>
<tr>
<td>4. Degree of cyclomatic complexity</td>
<td>4. % downtime</td>
</tr>
<tr>
<td>5. Amount of code that is “cold”</td>
<td>5. Average system downtime, peak hours</td>
</tr>
<tr>
<td>6. Daily inspection and re-planning rate</td>
<td>6. Average response time/type</td>
</tr>
<tr>
<td></td>
<td>7. MTTR by application</td>
</tr>
<tr>
<td></td>
<td>8. Infrastructure change success rate</td>
</tr>
</tbody>
</table>

Reference – Ken Schwaber Scrum.Org
## DELIVERY METRICS
- Pizzas delivered per trip
- Time taking an order
- Time for delivery
- Miles per delivery
- Gas used
- Order accuracy (Quality)
- Route efficiency
- Orders per driver

## OWNER METRICS
- Revenue
- Investments/costs
- Revenue per delivery
- Customer satisfaction
- Employee satisfaction
- Market drivers...
- Popular pizzas
- Ingredients
- events

blogs.versionone.com/agile_management/2014/04/29/pepperoni-metrics-and-software/
by Don Mcgreal
Scrum.org – Evidence Based Management (EBMgt)

Agility Index

65

Time to Market
- Release frequency
- Release Stabilization
- Cycle Time

Value
- Revenue per Employee
- Product Cost Ratio
- Employee Satisfaction
- Customer Satisfaction

Ability to Innovate
- Installed Version Index
- Usage Index
- Innovation Rate
- Defect Density
A change in focus...

Feedback & understanding is king

The Copernican Revolution in Management

Customer → The Firm → Customer

It is leading to vast economic, social and political change

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Self Managed Teams

Right people, great environment, manage them in the right way...

“...skilled teams are 224% more likely to be successful than unskilled teams.”

-Chaos Report 2015
Teams

- Get (and keep) the right players
- Create conditions for them to thrive and team
- Apply lean management techniques and selective measures

Teams are a key enabler for innovation and effectiveness
“Stars” are simply more productive...

Numerous studies show a 10-time difference in productivity and quality among software developers and teams.

You can spend A LOT less money and deliver much better software with smaller teams.
High performers are intrinsically motivated

- **Extrinsic Motivation**
  » If-then rewards
  » Short-term productivity
  » Algorithmic work

- **Intrinsic Motivation**
  » Unexpected rewards
  » Long-term productivity
  » Heuristic work

- **Biologic Motivation**
  » Put food on the table
  » Pay mortgage
  » Send kids to college

... but how can we do this?

... and this ...

Source: Daniel H. Pink, Drive: The Surprising Truth About What Motivates Us, Riverhead Hardcover, 2009
Creating a climate that attracts pros

Three cultural elements create space for (and attract) intrinsically motivated development team members:

1. Autonomy
2. Mastery
3. Purpose
Wastes that impede flow

MANUFACTURING SOURCES OF WASTE:

• Overproduction
• Waiting (time on hand)
• Unnecessary transport or conveyance
• Over-processing or incorrect processing
• Excess inventory
• Unnecessary movement
• Defects
• Unused employee creativity

APP DEV. EQUIVALENTS:

• Too many superfluous artifacts
• Broken builds
• Too many tool transitions
• Rigid architectures
• Analysis paralysis
• Late discovery of defects
• Rising downstream labor costs
• Polluted supply chain management (SCM) steams
• High null-release ratios
• Measures of effort, not results
Building your own expert community (with others)

- **Scrum Professional Experts**
  - Proven expert knowledge, references and peer review

- **Experienced Scrum Professional**
  - Proven situational knowledge and experience

- **Scrum Professionals**
  - Consistent vocabulary, base knowledge and shared values

- **Scrum Users**

External Consultants

• Proven expert knowledge, references and peer review
• Proven situational knowledge and experience
• Consistent vocabulary, base knowledge and shared values
Technical Excellence

Delivering high value working software for today and tomorrow

“Besides black art, there is only automation and mechanization.”

-Federico Garcia Lorca
Technical Excellence is not a nice-to-have...

- Great Scrum teams are disciplined and professional
- Done really is done
- Good design and architecture are the norm, not the exception
- Technical debt is measured and managed
- Automation, CI and DevOps is driven by the team
- Learning is a natural part of the job

Spin pass on the run

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Software Development Needs Professionalism

Would you trust your life to someone who was not a professional in their field?
Professionalism is increasingly important
Professional Scrum is MORE than knowledge

- **COMMITMENT**
  dedicated to delivering working software

- **FOCUS**
  on what is the most important

- **OPENNESS**
  frequently inspecting through delivering

- **RESPECT**
  cross-functioning, self-organizing team

- **COURAGE**
  we admit we do not know everything
Are we done yet?

DEVELOPMENT
- Analysis
- Development
- Test

OPERATIONS
- Release
- Deploy
- Manage

INSIGHT
- Instrument
- Learn
- Plan

TODAY

SOON...
And the future...

<table>
<thead>
<tr>
<th>DEVELOPMENT</th>
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<th>BUSINESS AGILITY</th>
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<tr>
<td>TODAY</td>
<td></td>
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<tr>
<td><strong>SCRUM + DEV OPS</strong></td>
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<tr>
<td><strong>SCRUM + DEV OPS + EBM</strong></td>
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Big Design Up Front (BDUF) is waste

• BDUF is when the design is to be completed \textit{and perfected} before construction begins
  » This is unrealistic in software development

• Design is validated through functioning software
  » It makes sense to minimize the time between design creation and design implementation

\textit{“The cheapest thing to change should be the plan.”}
Architecture Emerges

• The opposite of Big Design Up Front
  » “Little design up front”
  » Architecture emerges as development progresses

• Some decisions will need to be made before you write your first line of code
  » Technologies, frameworks, languages, patterns, practices
  » These may be standardized at the enterprise or product level

• Most of these decisions will be hard to change later
Think in slices not layers

**LAYERS = DELAYED VALUE**

- Presentation Layer: Built 4th
- Business Logic Layer: Built 3rd
- Data Access Layer: Built 2nd
- Data Source: Built 1st

**SLICES = VALUE EVERY SPRINT**

- Sprint 1
  - Presentation Layer
  - Business Logic Layer
  - Data Access Layer
  - Data Source

- Sprint 2
  - Presentation Layer
  - Business Logic Layer
  - Data Access Layer
  - Data Source

- Sprint 3
  - Presentation Layer
  - Business Logic Layer
  - Data Access Layer
  - Data Source

- Sprint 4
  - Presentation Layer
  - Business Logic Layer
  - Data Access Layer
  - Data Source

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Enabling High Performance Teams

Focus
Self Managed Teams
Technical Excellence

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Summary... Doing Scrum Right Means High Performance Teams

A project team takes on a self-organizing character as it is driven to a state of “zero information” – where prior knowledge does not apply. Ambiguity and fluctuation abound in this state. Left to stew, the process begins to create its own dynamic order.¹ The project team begins to operate like a start-up company – it takes initiatives and risks, and develops an independent agenda. At some point, the team begins to create its own concept.

“Success in management requires learning as fast as the world is changing.”

-Warren Bennis

Closing
Thank You