The University as an Agile Organization

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Agile Project Management allows existing business processes to be modified and new business processes to be developed at the same pace as the user can articulate them.

Jim Highsmith, Signatory, Manifesto for Agile Software Development
Agile Project Management, 2004
Agile practices are based on the belief that neither the customers nor the developers have full knowledge in the beginning and that the important consideration is to have practices that will allow both to learn and evolve as that knowledge is gained---without ongoing recrimination.

Jim Highsmith,
Signatory, Manifesto for Agile Software Development
"Agile Software Development Ecosystems" 2002
Planning vs. Practice

http://www.youtube.com/watch?v=7xMDIcsUMmA
Pattern analysis that detects issues/insights that arise out of a convergence of discrete actions.

Analysis may be done by algorithms measuring facets of “interest” based on traffic, purchase habits, etc., or by humans observing patterns, such as popularity of blog entries by a simple count of the number of comments on an entry.

Enterprise 2.0: Agile, Emergent & Integrated

Market IQ, 2008, AIIM---The ECM Association
Incremental and iterative development strategy in which the various parts of the system are developed at different times or rates and integrated as they are completed.

Iterative rework scheduling strategy in which time is set aside to revise and improve parts of the system.

Allistair Cockburn
Signatory, Manifesto for Agile Software Development
http://alistair.cockburn.us/Incremental+versus+iterative+development
In the accompanying engravings we have, perhaps, given a plan that may seem advisable for some of our prairie readers to follow. There is hardly anyone settling on the prairies who could not produce lumber sufficient to build a small “shanty,” but is deterred from doing so, for he says, “I will be able in a few years,”—remember the corn-growing and pork-producing farmer of the West accumulates fast when once started—“to build a good and respectable house and I hate to waste material upon something that will be nearly useless then.” (pg. 105)
Continuous Delivery (and Value) of Working Services allows Continuous & Rapid Feedback the person who understands and fixes the problem is not necessarily or even usually the person who first characterizes it. "Somebody finds the problem, and somebody else understands it."
Self-Organization

Individuals that share an interest (discovered independently, driven by personal or professional affinity)

Individuals' behavior (displayed through participation: use, contribution, roles and activities specific to that interest)

A "users group" versus...

...the "individuals that use."
Self-organization is a process where order emerges without external control based on local interactions of constituent components.

New England Complex Systems Institute

Four conditions for wise crowds:

1. Diversity of opinion
2. Independence
3. Decentralization
4. Aggregation

James Surowiecki
Wisdom of Crowds

People here have to find their own way, negotiate for themselves, use their own brains."

Mondermann, H.
as quoted in Lyall, 2005
Collaboration *is not* Consensus

Collectively formed decisions
"Wisdom of Crowds"

General agreement: unanimity; the judgment arrived at by most of those concerned
The willingness to explain what you're doing, why and how...

...the willingness to let others define what you should do, why and how.
“Self-organizing networks that span the globe are the most notable feature of science today. These networks constitute an invisible college of researchers who collaborate not because they are told to but because they want to, who work together not because they share a laboratory or even a discipline but because they can offer each other complementary insight, knowledge, or skills.”

From a nationally-based “big science” paradigm to a global network of global science organized as a complex adaptive system

- Many different interacting elements
- Responds to shifts in the environment
- Participants and enter and exit while the whole retains its structure
- Self-organizing (no central administration)
- Emergent (unplanned) activities
- A scale-free network
A syllogism?

Agile principles best coordinate and guide networks and complex adaptive systems…

…the university (as a system of knowledge) is a complex adaptive system…

…we manage universities like hierarchical industrial organizations…

…is this incompatible with the realities of a network society?
“By making it easier for groups to self-assemble and for individuals to contribute to group effort without requiring formal management, [social networking tools] have radically altered the old limits on the size, sophistication, and scope of unsupervised effort.”
<table>
<thead>
<tr>
<th>Centralized</th>
<th>Decentralized</th>
</tr>
</thead>
<tbody>
<tr>
<td>There's someone in charge</td>
<td>There's no one in charge</td>
</tr>
<tr>
<td>There are headquarters</td>
<td>There are no headquarters</td>
</tr>
<tr>
<td>If you thump it on the head, it dies</td>
<td>If you thump it on the head, it survives</td>
</tr>
<tr>
<td>There's a clear division of roles</td>
<td>There's an amorphous division of</td>
</tr>
<tr>
<td>If you take out a unit, the organization is harmed</td>
<td>If you take out a unit, the organization is unharmed</td>
</tr>
<tr>
<td>Knowledge and power are concentrated</td>
<td>Knowledge and power are distributed</td>
</tr>
<tr>
<td>The organization is rigid</td>
<td>The organization is flexible</td>
</tr>
<tr>
<td>Units are funded by the organization</td>
<td>Units are self-funding</td>
</tr>
<tr>
<td>You can count on the participants</td>
<td>You cannot count the participants</td>
</tr>
<tr>
<td>Working groups communicate through intermediaries</td>
<td>Working groups communicate with each other directly</td>
</tr>
</tbody>
</table>
The university as a network complex adaptive system...
...is permeable (no formal admissions process)
...consists of voluntary and self-organizing associations of teachers and students
...consists of a self-organizing and intellectually fluid curriculum
…does not offer tenure to professors (longevity is determined by the community), who move fluidly between the “real world” and the university
...is governed by protocols based on community values and mores rather than on administrative rules and fiats.
…does not grant diplomas (but does grant certificates)
...encourages play (and even failure)
...is governed by “intellectual barter” and makes all knowledge created therein free to anyone
...has a fluid temporal structure: there are no “semesters”; teaching and learning are ongoing activities
“The 1,900 colleges and universities are the only important face-to-face self governing communities still active in our modern society... the community of scholars is anarchically self-regulating or at least self governed.”

Paul Goodman, The Community of Scholars (1962)

What if we organized the university according to agile principles…

allowing the university to perform like the complex adaptive system

it already is?
To what extent, and with what modifications, can the principles and practices applied in the management of technology focused organizations, be applied to the larger administrative and academic enterprise that defines the University?

*Agile methods are perfectly suited for addressing a wide range of complex social projects across the organization, extending beyond technology*

Vince Kellen, Cutter Consultant & CIO University of Kentucky
Description

• Founded 10 years ago by Board of Trustees
• Situated in the President's Office
• UMASS is a 5-campus system
• Campuses have academic authority
• UMassOnline delivers services supporting Online Learning
• Revenue model is a flat assessment on gross revenue
Insufficient evidence of:

• documented processes
• documented rationale for decisions that had been made
• shared decision making
• process transparency
• a strong culture of Collaboration
• a strong culture of Trust
• individuals understanding what other team members do and how their functions relate to each other
**Strong evidence of:**

- inward focus (very few referent others, external benchmarks, etc.)
- UMassOnline identify
- asymmetrical development of capacity among functional/service delivery groups
- stronger reputation outside of the University than inside
Approach to Agility

- Develop basic capacity
  - Understand current practice
  - Implement enabling infrastructure
  - Engage in educational processes (internal and external)
This happens over and over and over again...

• Develop basic capacity to reframe UMassOnline as a “platform”
  • Understand current practice
    • Humility (yep, we are not and never were perfect)
    • Transparency (the process must be accessible)
    • Emergence (learn from reflection on what we do)

Note: Understanding current practice implies learning (an educational process), and methods that need to be supported by tools.

The learning and tools we pursue support and reinforce agility and agile practice. In effect we are developing an agile pedagogy supported by agile educational technologies.
Approach to Agility

Examples

- Organizational Behavior
- Iterative prioritization and investment process
- Enhanced Openness and Transparency
Organizational Behavior

Adoption and use of a wiki environment

- **Values**: Courage, Participation
- **Principles**: Communication, Transparency, Self-Organizing Groups, Collaboration, Openness
- **Objectives**: Simplicity, Emergence, Rapid Feedback, Continuous Feedback
- **Practices**: Web 2.0, Decentralization
Organizational Behavior

- Adoption and use of a wiki environment
Organizational Behavior
- Adoption and use of a wiki environment

![Graph showing total edits from 2/1/10 to 9/1/10. The graph indicates a steady increase in edits until a sharp spike in August 2010.](image-url)
Organizational Behavior

- Adoption and use of a wiki environment

Nature of Users 09/2010

- UMassOnline has a staff of 12,
- The Confluence site has 148 registered users
- There were over 3000 unique visitors in September 2010
Organizational Behavior

Expectations about the use of IM & Communication Tools

- **Values**: Participation
- **Principles**: Communication, Transparency, Collaboration
- **Objectives**: Simplicity, Rapid Feedback, Continuous Feedback,
- **Practices**: Web 2.0, Decentralization
Organizational Behavior

- Expectations about the use of IM & Communication Tools

  - Be logged into and monitoring their communications accounts during their assigned hours and at the supervisor's request
    1. Instant Messaging
    2. Skype
    3. eMail
    4. Confluence
  - Ensure reliable telephone or Internet connection when engaging in all activities.
  - Ensure that they have the appropriate equipment to participate in activities.
  - Respond in a reasonable amount of time to a request to communicate.
  - Keep their status current and accurate in IM, Skype, and Confluence
  - Forward phones appropriately
  - Maintain a current and accurate calendar
  - Supervisors will include expectations and practices for telecommuting in the Annual Review
  - Maintain accurate time sheets
Organizational Behavior

Office Space

- **Values**: Maturity, Participation
- **Principles**: Communication, Transparency, Self-Organizing Groups, Evidence-based Decision Making
- **Objectives**: Simplicity, Emergence, Incremental Development
- **Practices**: Bottom-up Engagement
Organizational Behavior
• Office Space

UMassOnline is experimenting and demonstrating what it would be like operating in open office spaces rather than cubicles and private offices.

• Conceptual
  • Model and reinforce the benefits of a distributed staff and distributed resourcing
  • Everyone working as "Pair-Programmers"
• Practice
  • The discussion about open office space occurred only when we needed office space and to the extent that we needed space.
  • The transition occurred voluntarily, nobody was forced to come along.
Organizational Behavior

• Office Space
Organizational Behavior

- Office Space
Organizational Behavior

- Office Space

What's up with this space???

Check out Confluence for more info:

confluence.umassonline.net/umoltt
Organizational Behavior

- Office Space

GET BACK TO WORK
Iterative Prioritization & Investment Process

Examples

• Iterative prioritization and investment process
  • NIFTI for technology service adoption
  • The Observatory
Iterative Prioritization & Investment Process

NIFTI for technology service adoption

• **Values:** Courage, Participation Honesty, Maturity, Humility
• **Principles:** Communication, Transparency, Self-Organizing Groups, Collaboration, Evidence-based Decision Making, Openness
• **Objectives:** Simplicity, Emergence, Incremental Development, Rapid Feedback, Continuous Feedback
• **Practices:** Web 2.0, Decentralization, Bottom-up Engagement, Story Telling, Use Cases, Rubrics, Business Intelligence
Iterative prioritization and investment process

- NIFTI for technology service adoption
Iterative prioritization and investment process

- NIFTI for technology service adoption

The Needs Identification Framework for Technology Implementation process is part of our development lifecycle.

It...

- Provides a method allowing for areas of interest to emerge from the user community.
- Allows support levels to scale as interest in new systems and services rise,
- Supports development that is driven by community interest as illustrated by direct evidence, rather than status or “squeaky wheel” phenomena,
- Allows for roles and responsibilities that are determined by the participating community members.

Examples:

- Enterprise Wikis
- e-Portfolios
- Learning Activity Management System (LAMS)
- Identity management
- LMS Data Access and Analytics
Iterative Prioritization & Investment Process

The Observatory

- **Values:** Courage, Participation Honesty, Maturity, Humility
- **Principles:** Communication, Transparency, Self-Organizing Groups, Collaboration, Evidence-based Decision Making, Openness
- **Objectives:** Simplicity, Emergence, Incremental Development, Rapid Feedback, Continuous Feedback
- **Practices:** Web 2.0, Decentralization, Bottom-up Engagement, Rubrics, Business Intelligence
Iterative prioritization and investment process

- The observatory

The Observatory is intended to serve as a vehicle to help inform University of Massachusetts faculty, staff and students about what is happening in online learning. The topics we “observe” will be identified, investigated, and presented by participants in the community. Although started at UMass, The Observatory is open to sector-wide participation. The Observatory is open to a number of methods for informing and improving practice through developing and sharing better understandings of trends and policies.

- Delivering important information to UMass Campuses
- Enhancing opportunities for engagement in important practical issues
- Community formation
- Enhancing understanding of pertinent issues and their relationships in a high access low barrier environment
- Platform for the identification of emergent issues, community formation, and communication
Enhanced Openness and Transparency

Examples

• Enhanced Openness and Transparency
  • Participatory budgeting process
  • Collaborative (transparent) development of protocols
Enhanced Openness and Transparency

Participatory budgeting process

- **Values:** Courage, Participation, Maturity
- **Principles:** Communication, Transparency, Collaboration, Evidence-based Decision Making, Openness
- **Objectives:** Incremental Development
- **Practices:** Bottom-up Engagement, Rubrics, Business Intelligence
Enhanced Openness and Transparency

Participatory budgeting process

- **Values**: Courage, Participation, Maturity
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Enhanced Openness and Transparency

- Participatory budgeting process

The budgeting process is being recast as a way that we can all participate in determining how to invest our resources. For this to happen we need to:
  - Assess our current state
  - Assess what we would like to be
  - Identify and determine UMassOnline’s priorities
  - Weight or rank those priorities
  - Rationalize where and why we are making particular investments.

The process itself is educational in that it
  - illustrates some of the principles of agility,
  - exposes decisions making and promotes participation in those decisions,
  - provides practical professional development based on real organizational needs.
Enhanced Openness and Transparency

Collaborative (transparent) development of protocols

- Values: Honesty, Maturity, Participation, Courage
- Principles: Openness, Evidence-based Decision Making, Collaboration, Self Organizing Groups, Transparency, Communication
- Objectives: Emergence, Simplicity
- Practices: Decentralization, Web 2.0, Bottom-up Engagement
**Enhanced Openness and Transparency**

- Collaborative (transparent) development of protocols

As a matter of course, we are moving all of our development of protocols onto our Wiki. Of course protocols do not live in isolation, so the rest must follow along:
  - Problem/need identification,
  - Discussion and dialog,
  - Documentation of protocols

Our next steps include being more consciously aware of how we do all of this. For example, the use and documentation of users stories, use cases, and other evidence-based techniques will be essential, and should flow from experiences elsewhere in the organization and improve on other practices.
## Overview

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