Agile Methods Hybrids

Light Agile and Plan-Driven

Goals of Presentation

Serious vs Light

Hybrid Agile/Plan-driven approaches to Software Development

Variants and Invariants

Differing world views

• Difference between Methodologist and Terrorist
## "Light" vs. "Heavy" Agile Methods

<table>
<thead>
<tr>
<th>Light Agile</th>
<th>Serious Agile</th>
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<tbody>
<tr>
<td>Agile [normal assumptions?]</td>
<td>Plan-driven Moving up and/or? to right</td>
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<tr>
<td>C6 - D12</td>
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### Methodology per Alistair Cockburn

"The methodology changes to fit the people."

**Methodology encompasses (AC Slide 7)**
- Activities - Milestones - Process - Activities
- Process - Products - Techniques - Roles - Teams - Process
- Process - Teams - Roles - Process
- Roles - People - Personality - Roles
- Roles - Techniques - Skills - Roles
- Roles - Techniques - Process - Roles
- Techniques - Tools - Skills - Techniques
- Techniques - Products - Process - Techniques
- Quality - Products
- Standards - Tools - Techniques - Products - Standards
Methodology per Alistair Cockburn

Components of a methodology

- Activities
  - Planning
  - Testing

- Processes
  - Regression tests
  - Object model
  - Project plan
  - Use cases

- Products
  - Microsoft Project
  - 3-month increments
  - UML / OMT
  - C++

- Techniques
  - MDIA
  - Use cases
  - CRC cards
  - Envy/Developer
  - STP
  - Microsoft Project
  - JAD facilitation
  - SQA programming
  - Modeling

- Standards
- Tools
- Skills

Team Values

What is "AGILITY" – Value on Maneuverability

(Value space, from the manifesto)

- **Individuals and interactions** over Processes and Tools.
- **Working software** over Comprehensive documentation.
- **Customer collaboration** over Contract negotiation.
- **Responding to change** over Following a plan.

Agile ～ Light

Different Techniques in Different Situations
AC On What is "AGILITY"  
- Value on Maneuverability

Maneuverability: aspect of a project (like a spice) which is a focus of attention

Alternative Focii:
- Predictability
- Accountability
- Repeatability
- Low cost
- Fun/laid-back: example SELF selection on where to work (increasing non-monetary WIIFM)

Different Projects need Different Methodologies

Criticality vs. "Team" size
- Life (L); Essential Money (E); Discretionary Money (D); Comfort (C)
- Number of people involved: 1-6; 6-20; -40; -100; -200; -500; -1,000

Prioritized for Productivity & Tolerance
Prioritized for Legal Liability
Different Projects need Different Methodologies (cont.)

Essential
money (E)

Discretionary
money (D)

Comfort (C)

Prioritized for Legal Liability

Prioritized for Productivity & Tolerance

<table>
<thead>
<tr>
<th>Criticality</th>
<th>L6</th>
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Number of people involved ≤ 20%

MBASE [Boehm] Five Invariants

1. Defining and sustaining a stakeholder win-win relationship throughout the system's life-cycle.
2. Using the MBASE Model Integration Framework.
4. Using the LCO, LCA, and IOC Anchor Point milestones [Inception-Elaboration-Construction-Transition phases]
5. Ensuring that the content of MBASE artifacts and activities is risk-driven

Model [classes]: Product – Process – Property – Success
MBASE [Boehm] Five Invariants (cont.)

MBASE Process Integration Framework

MBASE Variants

1. Use of particular success, process, product, or property models
2. Choice of process or product representation
3. Degree of detail of process, product, property, or success modeling
4. Number of spiral cycles or builds between anchor points
"Spectrum" [Basili]
Empirical Software Engineering Research

Techniques  Lifecycle models

Techniques – Methods – Life Cycle Models