

# 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

Light	Heavy
agile	beautiful
• • •	• • •
	<b>serious</b>

Light Agile	Serious Agile
Agile [normal assumptions? ] C6 - D12	Plan-driven Moving up and/or? to right

## Methodology per Alistair Cockburn

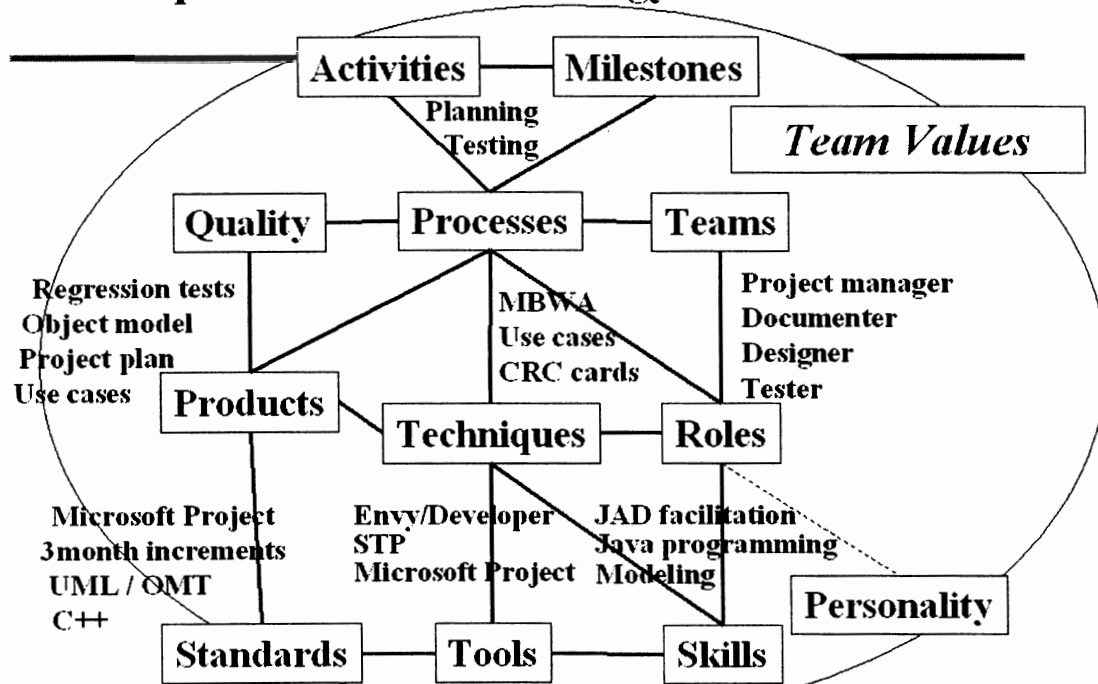
**"The methodology changes to fit the people."**

**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



## 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

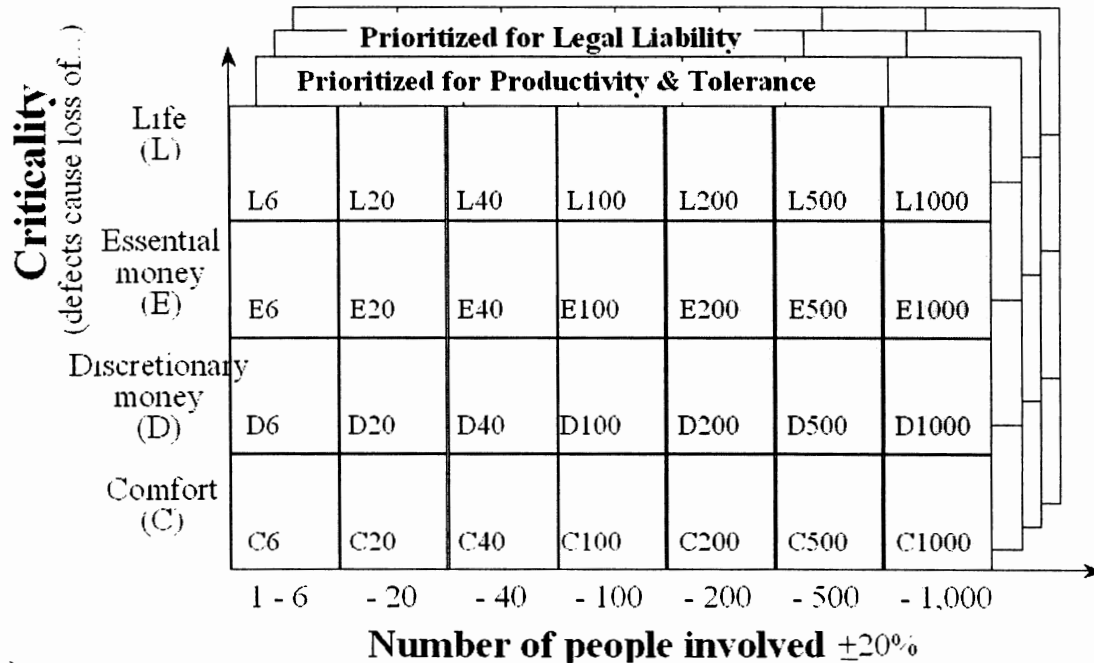
### Criticality vs. "Team" size

- 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

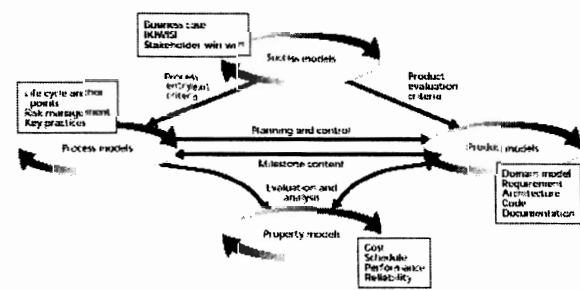
### Prioritized for Legal Liability

## Different Projects need Different Methodologies (cont.)



## 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.

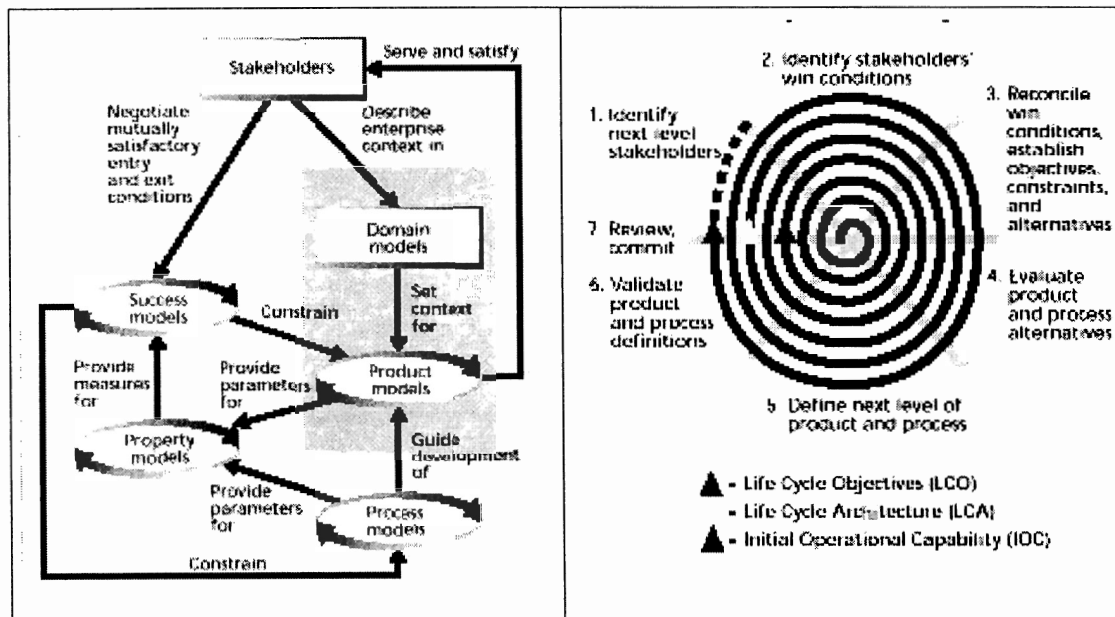


3. Using the MBASE Process Integration Framework.
4. Using the LCO, LCA, and IOC Anchor Point milestones [Inception-Elaboration-Construction-Transition phases]
5. Ensuring that the content of MBASE artifacts and activities is risk-driven

**Model [classes]: Product – Process – Property – Success**

# MBASE [Boehm] Five Invariants (cont.)

## MBASE Process Integration Framework

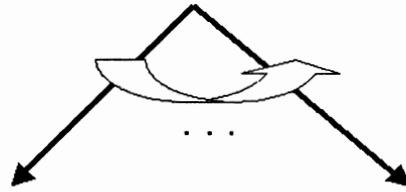


## MBASE Variants

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
5. Mapping of activities onto Inception-Elaboration-Construction-Transition phases.

# "Spectrum" [Basili]

Empirical Software Engineering Research



Techniques

Lifecycle models

**Techniques – Methods – Life Cycle Models**