

Agile Software Development

Traditional Software Development

- Less communication between Customers and clients.
- Requirements process is sealed before Analysis and design process.
- Take more than estimated time and estimated budget.

Agile Modeling

- What is agility ?
- Where is it needed ?
- What are Agile Software Development models?
- Why do we choose Agile Software Development ?

What is Agile Modeling (AM)?

- A practice-based methodology for effective modeling and documentation of software-based systems. [1]

The Goals of AM:

- To put into practice, a collection of values, principles and practices pertaining to effective and light-weight modeling.

The Scope of AM:

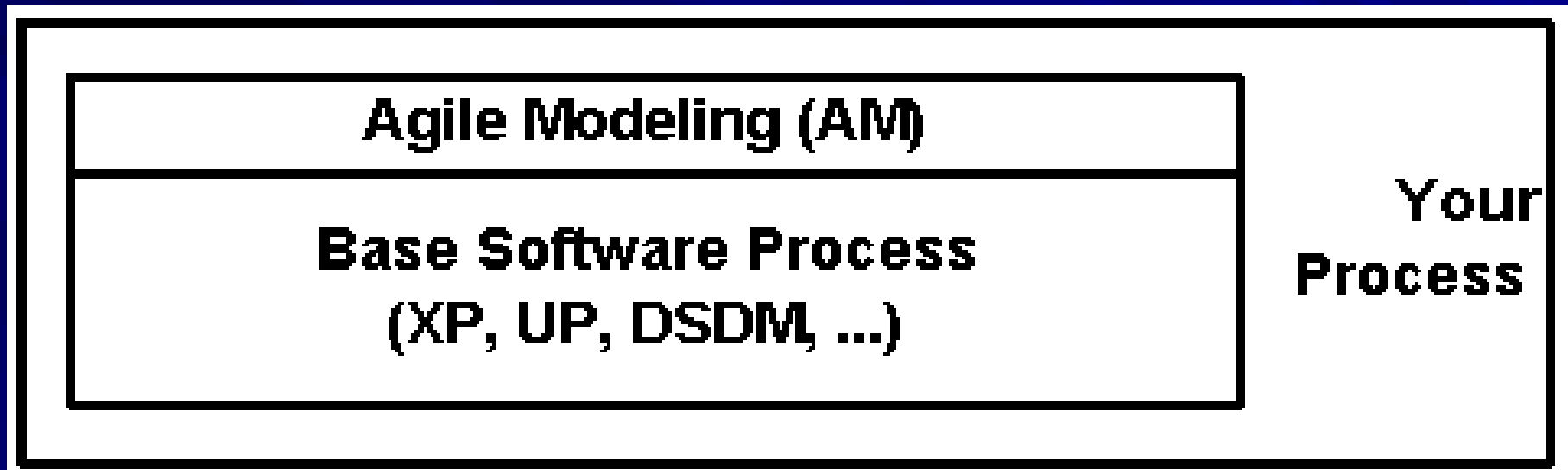


Figure : AM enhances other software processes.

AM Values:

➤ *Communication*

➤ *Simplicity*

➤ *Feedback*

➤ *Courage*

➤ *Humility.*

AM Principles:

- Assume Simplicity
- Embrace Change
- Incremental Change
- Rapid Feedback
- Model with a purpose and need multiple models
- Software is the primary goal.

AM Practices

- Active Stakeholder Participation
- Apply the Right Artifacts
- Consider ownership
- Consider Testability
- Models in small increments and working parallel

Agile process Philosophy

- Individuals and interactions over processes and tools.
- Working software over comprehensive documentation
- Customer collaboration over contract negotiations.
- Responding to change over following a plan.

When is a Model Agile?

- If there is a such thing as agile modeling, then there are also agile models.
- Agile models are good enough when they exhibit the following criteria:
 - They fulfill their purpose and no more.
 - They are understandable.
 - They are sufficient accurate.

Agile Software Development Methods (Processes)

- Incremental Small releases, rapid cycles
- Cooperative and communication
- Straightforward
- Adaptive

Agile Models

- XP(Extreme Programming)
- Scrum
- Feature Driven Development (FDD)
- Dynamic Systems Development methods

Conclusion: When go agile?

- Uncertain & volatile requirements.
- Responsible & motivated developers
- Customers who understand and willing to get involved.
- AM manage and optimize cost and time of the project.

References

- Manifesto for Agile software development;
<http://agilealliance.com>
- New methodology; Fowler; Martin;
<http://www.martinfowler.com/articles/newMethodology.html>
- Agile software development: Evidence from the field.
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