Agile

Values, Principles, & Practices for Software Dev't

Agile Manifesto

We are uncovering better ways of developing

software by doing it and helping others do it.

Through this work we have come to value:

Individuals and interactions   over processes and tools

Working software   over comprehensive documentation

Customer collaboration   over contract negotiation

Responding to change   over following a plan

That is, while there is value in the items on

*the right, we value the items on the left **more**.*

Values & Mindset

The most important part of Agile is the **values**.

The values result or inform a **mindset**.

Frequently mentioned values are:

- Communication

- Customer Collaboration

- Incremental Development & Minimalism

- Sustainability

Different people express the values differently.

Values

James Newkirk's Values

XP Values

Minimalism

Simplicity

Feedback

Feedback

Transparency

Communication

Sustainability

Courage

Video presentation by James Newkirk
https://www.agilealliance.org/agile101/agile-basics/
introduction-to-agile/
Values start at time **40:00**

Practices Based on Values

The Agile **practices** come from the **values**.

Adopting practices without values often fails.

Example: Daily Meetings

A project manager wants to improve his team's ability to delivery good quality software on-time.
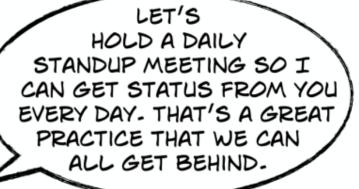
He/she reads about Agile and decides that the **daily stand-up meeting** sounds like a great place to start!
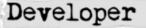
(Many organizations do this.)

So he tells his team...

Ref: example from Chapter 1 of *Learning Agile* by Stellman and Green. This is the best book I know about Agile.

Let's have a Daily Stand-up

What Went Wrong?

The development team <u>resents</u> the idea.

The team sees a stand-up meeting as:

- interrupting their work,

- lack of trust that they are using their time effectively,

- nagging

Lack of Mutual Understanding

What do they want to get from the meeting?

Manager:

- wants to know if progress is deviating from plan

- wants to know what developers are doing

Developer:

- wants the meeting to end as soon as possible

Change in Mindset

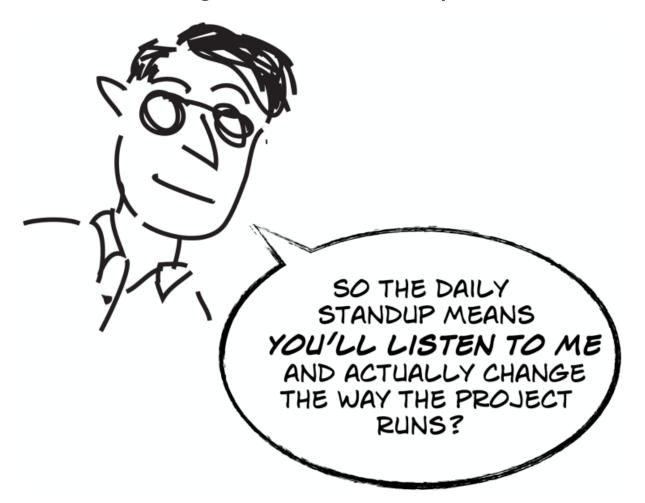Manager needs to **change his mindset** and communicate the purpose of the meeting...

- *Not* about deviating from his plan

- *Not a status report from developers*

Instead:

- *everyone on the team works together to create a plan*

- *involve whole team in discovering ways to work better*

- *help developers obtain time & resources they need*

Change in Mindset of Developers

When developers feel that they "own" the project plan and the meeting is about their input...

Agile Development Lifecycle

Iteration diagram adapted for Agile methodology

Produce / Revise 'To Do' list just for this iteration of project – development cycles until list is complete for this iteration

Analysis

Prioritized 'To Do' list for whole project

Integrate tested components in 'Live' version

Initial Idea

Development for Iteration N – 2 week cycle

Documentation Updated

Test   Develop

Project Cycle

Working Software and other deliverables deployed so available to use

Planning for next iteration

Work Procedures Review

Analysis Project Review

Public Presentation

Main cycle continues until Prioritized 'To Do' list is done

Agile Process Characteristics

- create customer "value" at each iteration

- welcome evolving requirements

- working software as primary measure of progress

- lack of up-front architecture design (YAGNI)

- simple design (XP: "*do the simplest thing that ...*")

- small, self-organizing teams at one site

- frequent customer feedback

- shared understanding instead of *comprehensive* documents … but *do* write documentation ...

Some Agile Processes

□ eXtreme Programming

- Kent Beck: Chrysler

□ Scrum - called "more a management technique"

- iterative development in "Sprints"

- daily stand-up meeting

- no advise about requirements

□ Crystal

- a family of methods to address different types of projects

□ Synchronize and Stabilize (Microsoft process)