

# Introduction to Agile Software Development

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# Agenda



- ❑ What is Agile?
- ❑ Agile Manifesto for Software Development
- ❑ Iterative and Incremental Development
  - ▣ Planning
  - ▣ Requirements
  - ▣ Release
- ❑ Discussion
- ❑ Resources



# What is Agile?

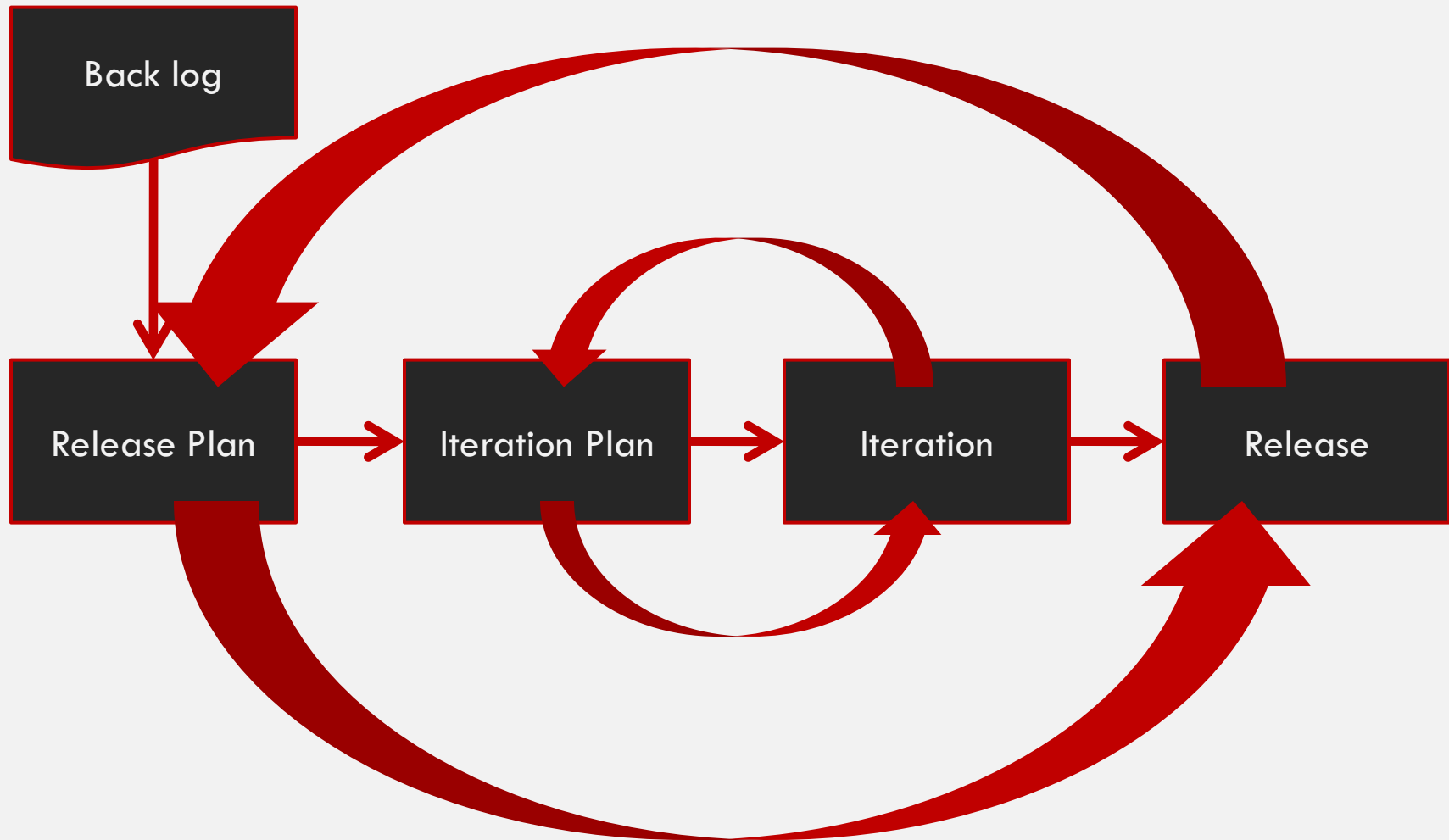
# Manifesto for Agile Software Development



- ***Individuals and interactions*** over process 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 on the items on the right,  
we value the items on the left more.

# Iterative and Incremental Development





# What is a Requirement?

# Requirements

A **requirement** is a statement that identifies a necessary attribute, capability, characteristic, or quality of a system in order for it to have value and utility to a user.<sup>1</sup>

A **user story** is a software system requirement formulated as one or two sentences in the everyday or business language of the user.

1. Young, Ralph R. *Effective Requirements Practices*. Boston: Addison-Wesley, 2001.

# User Stories

## Simple User Story

As a	[registered user]
I Want to	[log in]
So that	[I can access subscriber content]



# User Stories

#0001    **USER LOGIN**    Fibonacci Size # 3

As a [registered user], I want to [log in], so I can [access subscriber content].

*For new features, annotated wireframe. For bugs, steps to reproduce with screenshot. For non-functional stories, explain scope/standards.*

**User Login**

Username:

Password:

Remember me ☐

[\[message\]](#)

Login

[Forgot password?](#)

Store cookie if ticked and login successful.

User's email address. Validate format.

Authenticate against SRS using new web service.

Go to forgotten password page.

Display message here if not successful. (see confirmation scenarios over)

Front

*Further information is attached to this story on VSTS Product Backlog.*

# User Stories

## Confirmation

1. Success – valid user logged in and referred to home page.
  - a. 'Remember me' ticked – store cookie / automatic login next time.
  - b. 'Remember me' not ticked – force login next time.
2. Failure – display message:
  - a) "Email address in wrong format"
  - b) "Unrecognised user name, please try again"
  - c) "Incorrect password, please try again"
  - d) "Service unavailable, please try again"
  - e) Account has expired – refer to account renewal sales page.



**Back**

# Tools for Planning

- ❑ **Release Plan** - The release plan is a list of customer prioritized task from the backlog that must be in the next release of the software.
- ❑ **Iteration Plan** - The iteration plan is a list of customer prioritized task from the current release plan that should be completed in the current iteration.

# The Iteration

## □ Planning

The iteration plan is constructed to identify items that should be developed in this iteration

## □ Analysis

User Stories in this iteration are further detailed to a level required for the developers to work, acceptance criteria is defined

## □ Design

The design is also flushed out to identify any refactoring that may need to occur

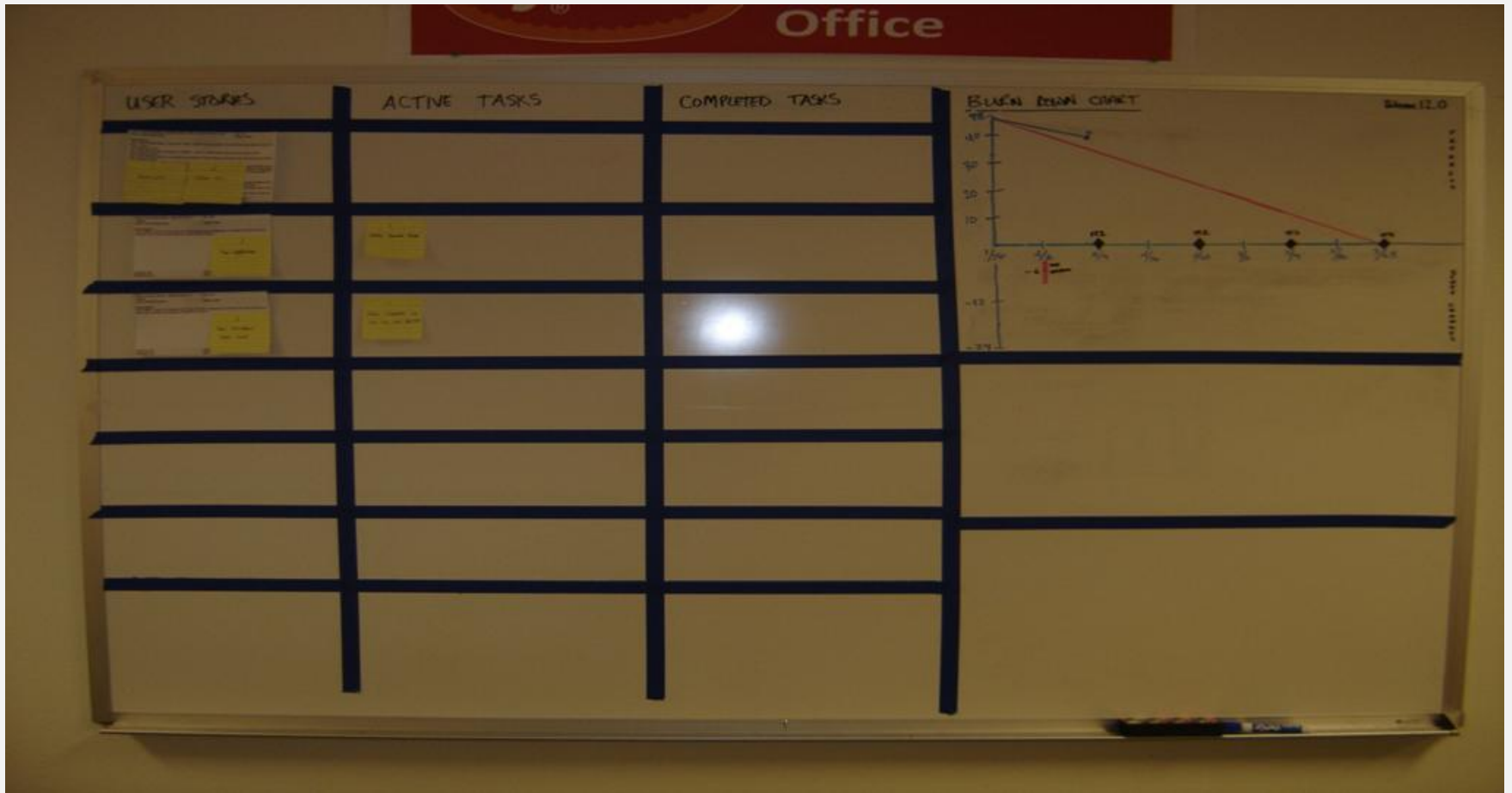
## □ Develop

Where the magic happens....

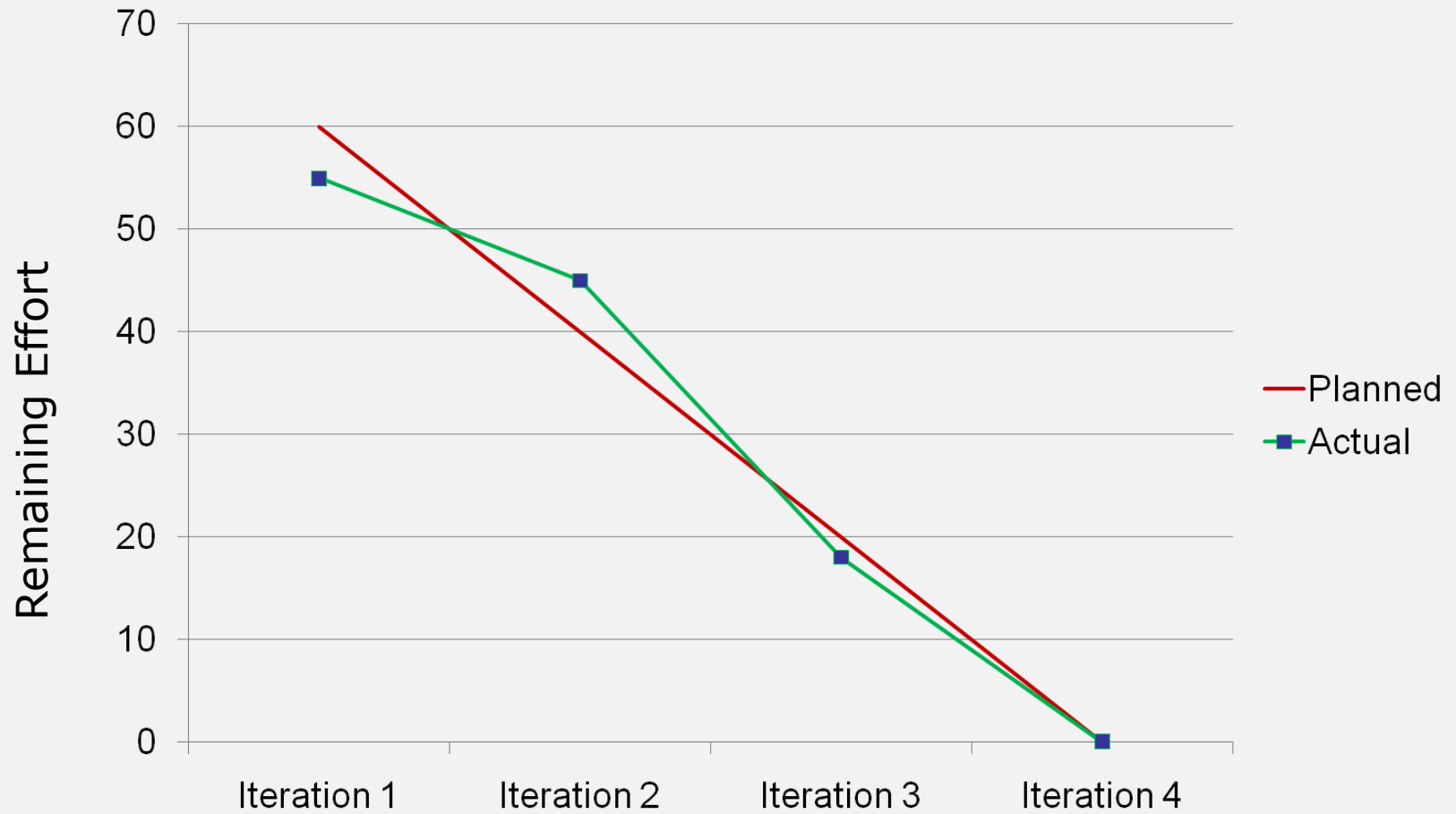
## □ Test

This includes, unit, integration, and user acceptance testing

# The Iteration Board



# Monitoring





Working Software Is Released!

# Review

- ❑ Requirements are collected at a high level, user story or use case brief are created and placed on the backlog
- ❑ The team and the customer collaborate on items on the backlog and organize them into releases
- ❑ Each release is further broken down into iterations
- ❑ Each iteration goes through a full life cycle; Planning, Analysis, Design, Develop, and Test
- ❑ Working software is release often on shorter cycles delivering value to the customer often



# Resources



## **Extreme Programming -**

<http://www.extremeprogramming.org/>

**Scrum** - <http://www.controlchaos.com/>

## **The Agile Manifesto for Software Development**

- The Manifesto - <http://agilemanifesto.org/>

- The History - <http://agilemanifesto.org/history.html>

## **Additional Resources -**

<http://delicious.com/jay.smith/agile>