Agile Testing

Embrace Uncertainty

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Objective

- ☑ Introduce Agile Testing Concepts
  - ☑ Some background about Agile
  - ☑ Compare with Traditional Testing practices
  - ☑ Highlight the fundamental shift in Thought Process
- ☑ Discuss some tools and techniques used
- ☑ Some pointers to help you try some of these techniques

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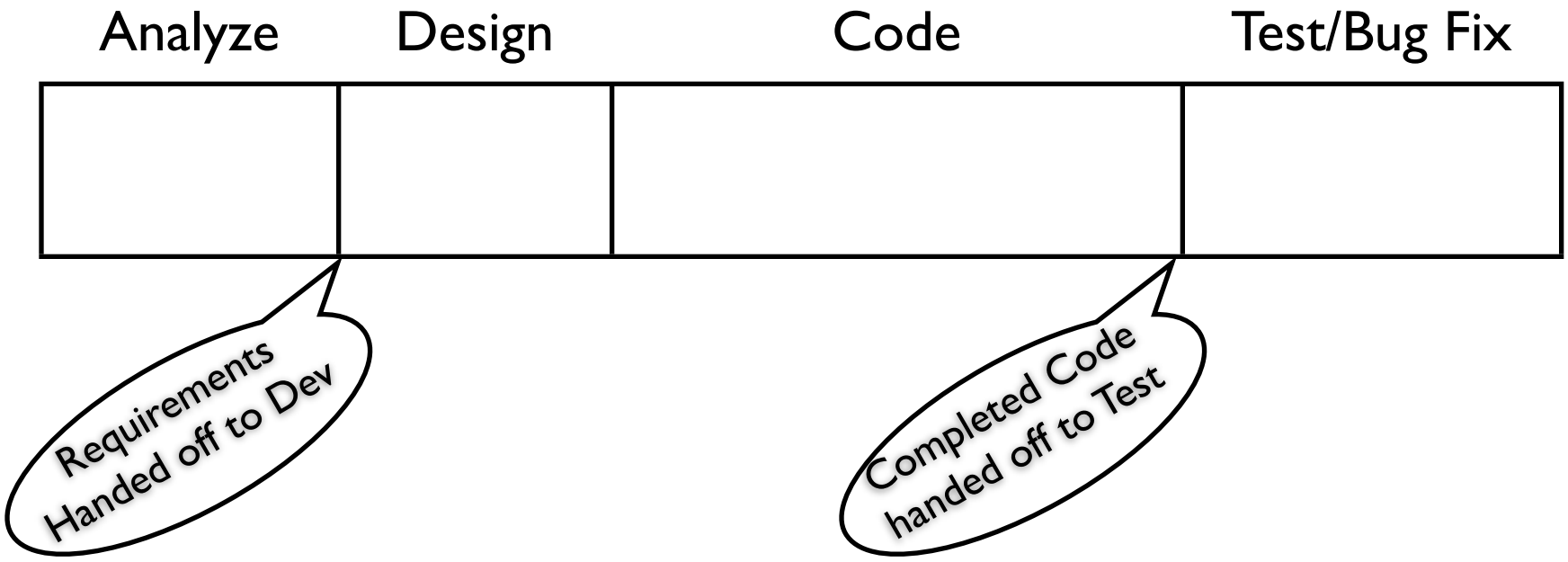
Traditional Software Development

With great optimism and the best of intentions, The Project Plan is announced



Source Agile/QA Testing - Elisabeth Hendrickson

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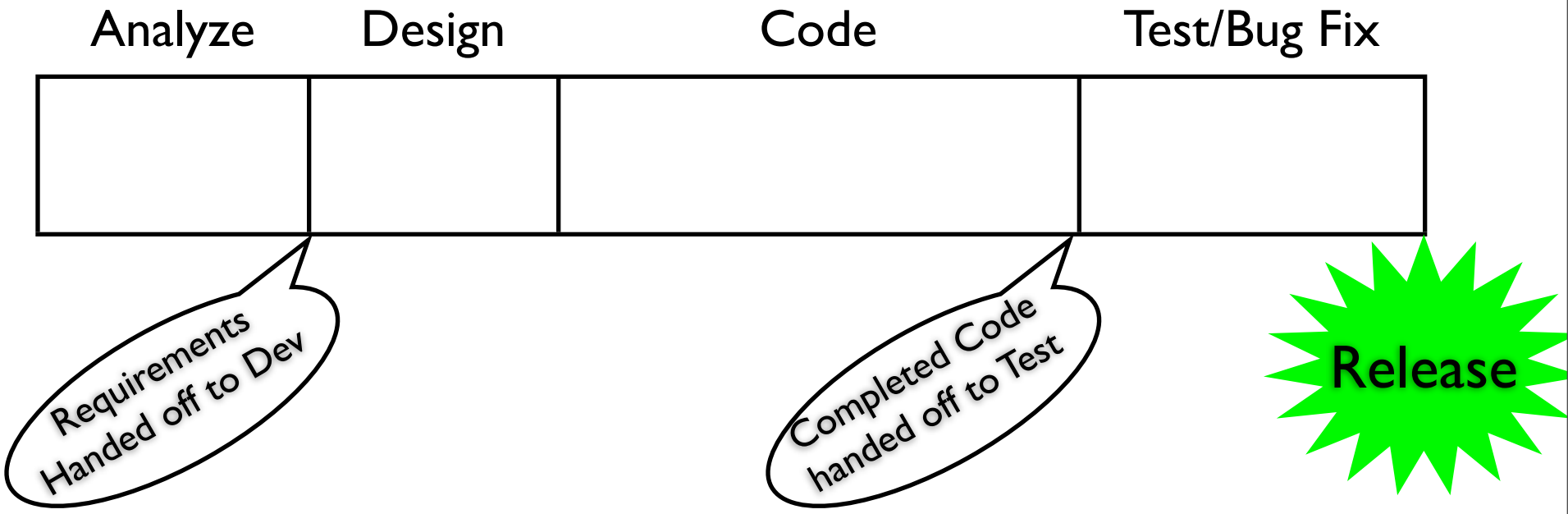

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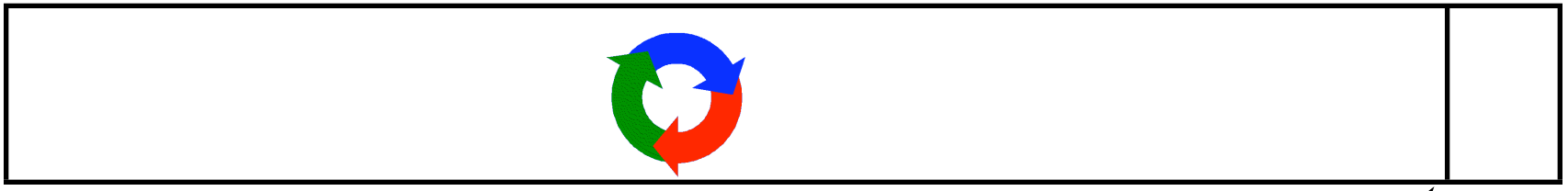
Reality

Inevitably, the project plan is revised

Analyze, Design and Code | Test/Bug Fix



Completed Code handed off to Test

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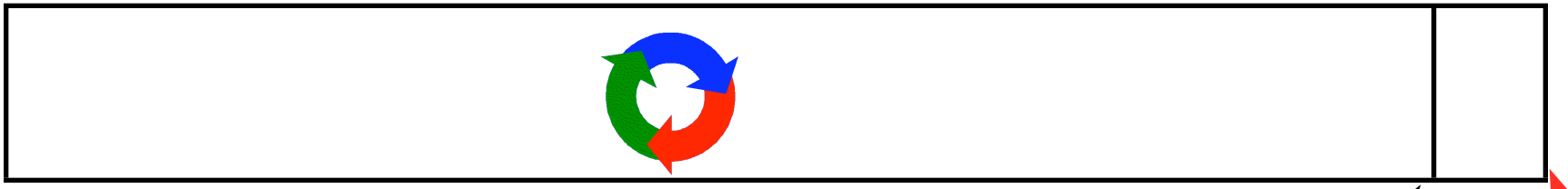

Completed Code handed off to Test

Release

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Controlling the Chaos

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- ☑ Detailed preparation and up front planning

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- ☑ Attempts at process enforcement

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Project Management Triangle

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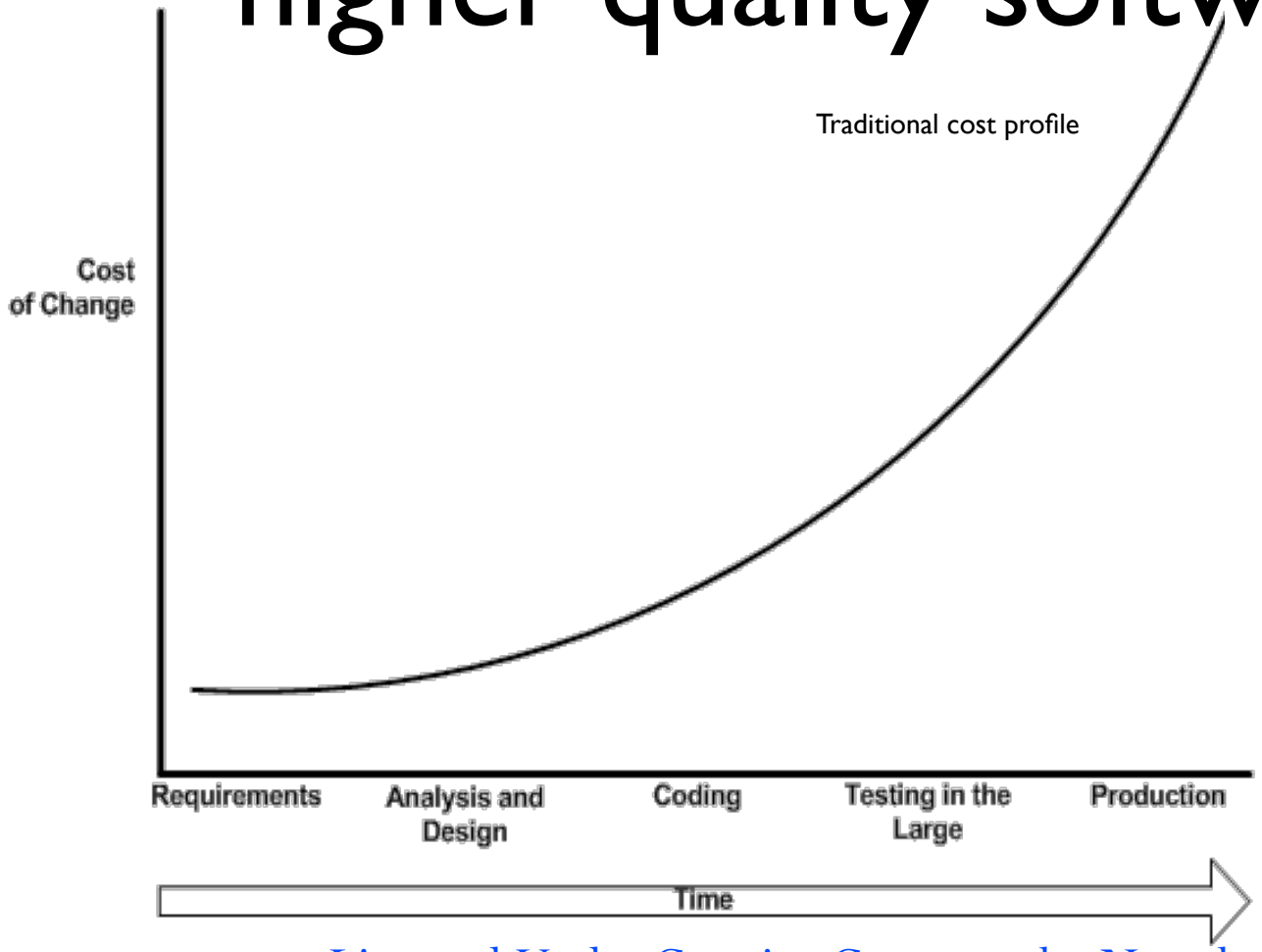
Lower cost of change through higher quality software



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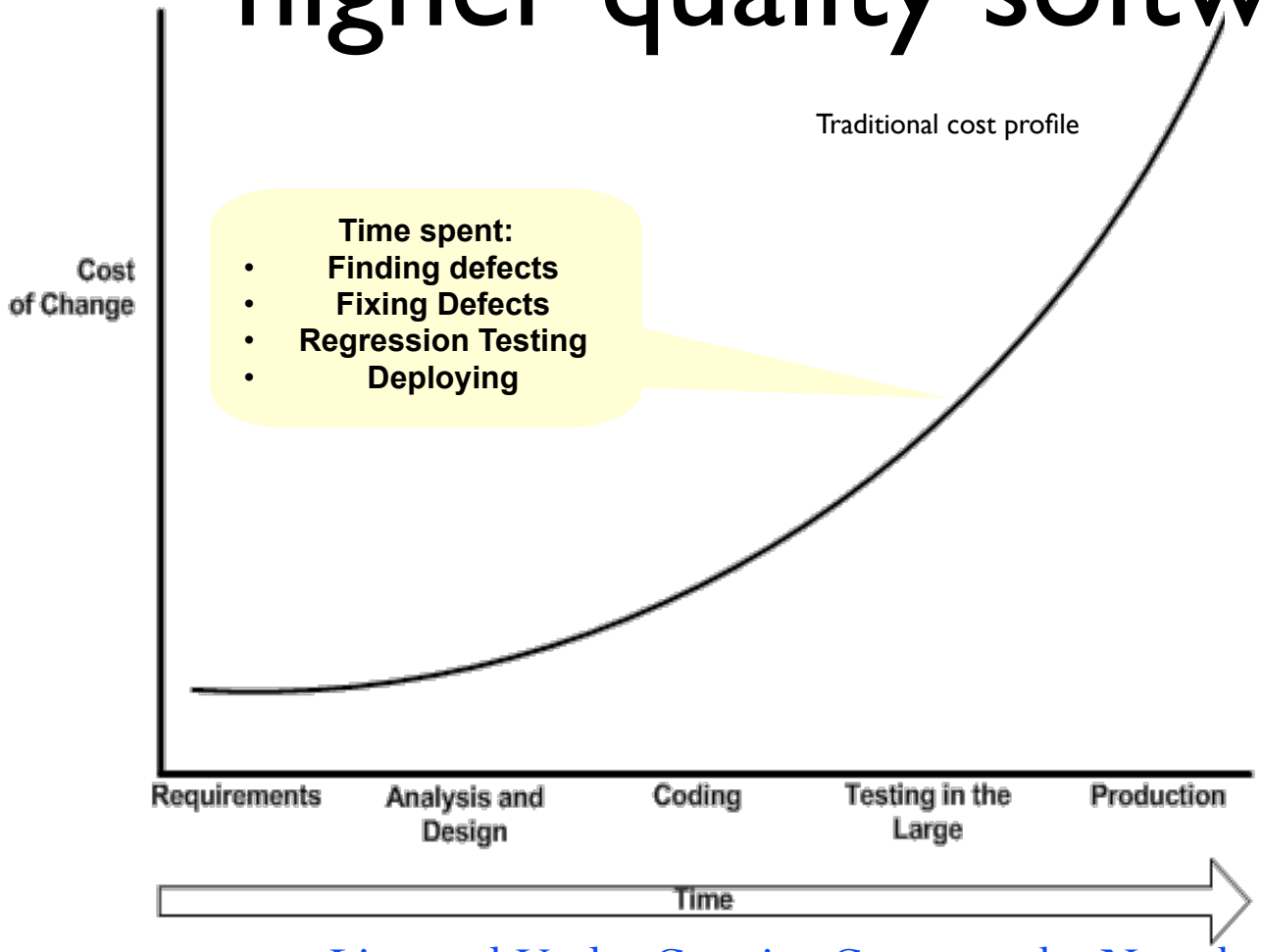

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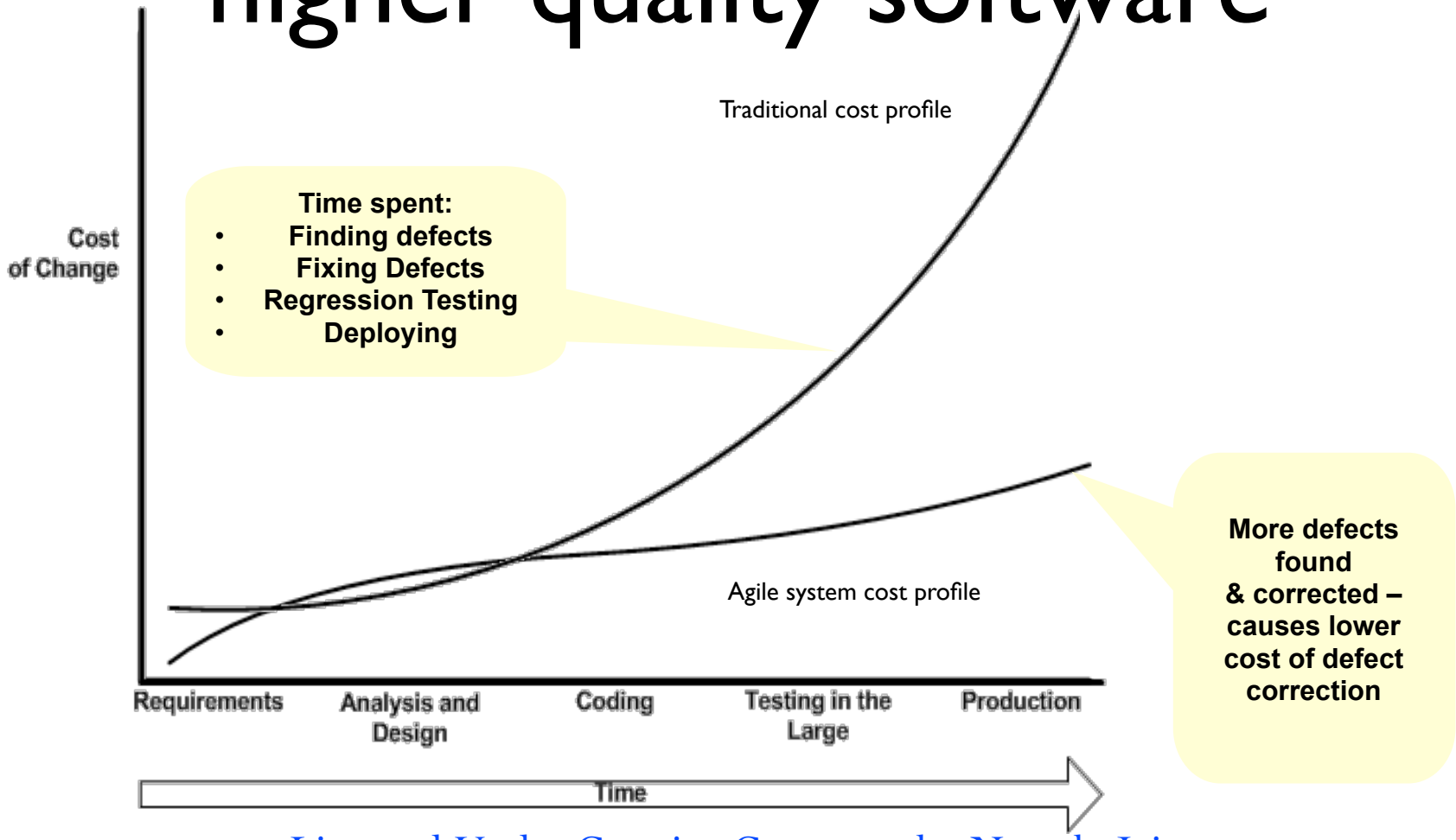
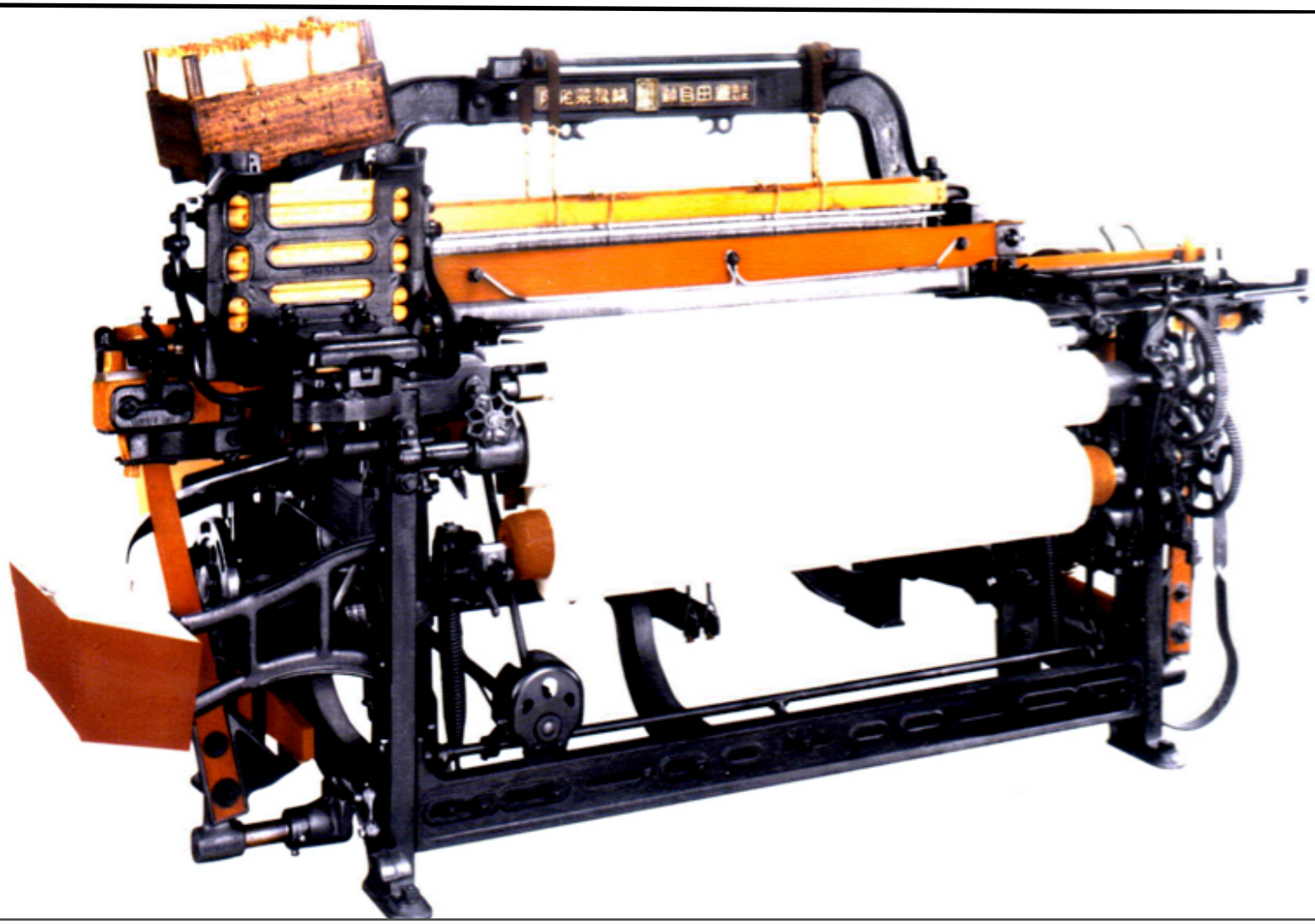


Building Quality into the Process



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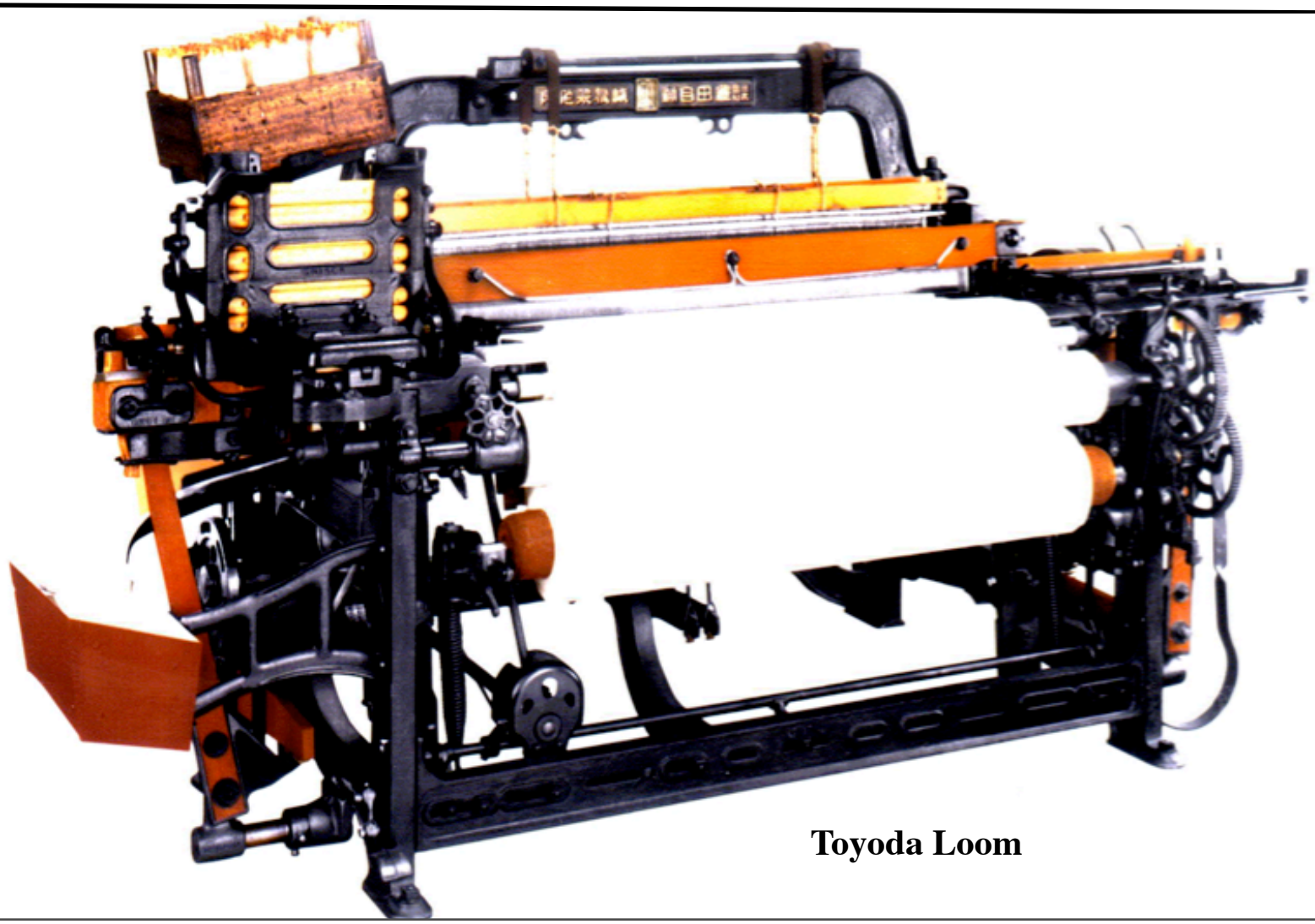
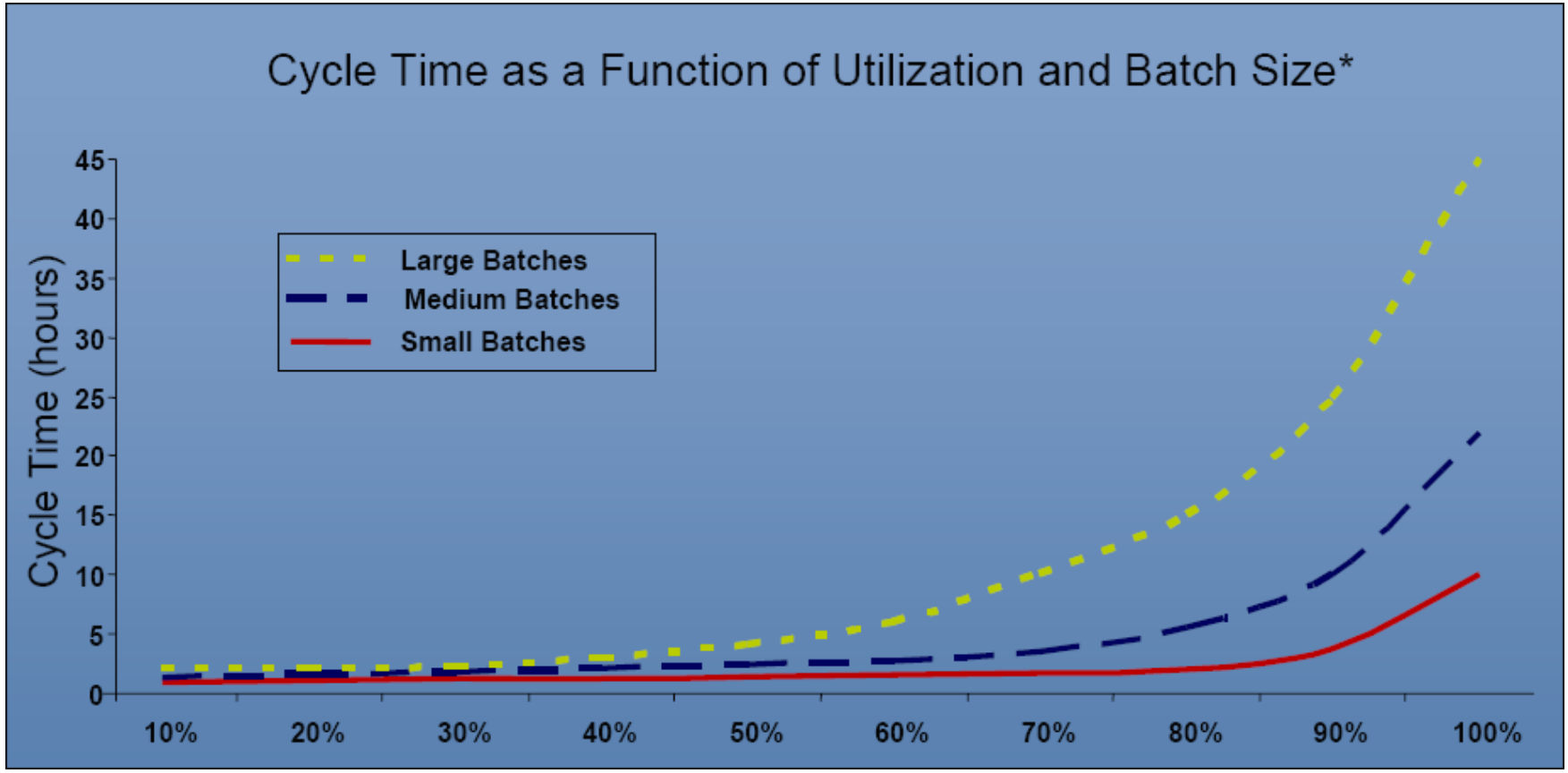


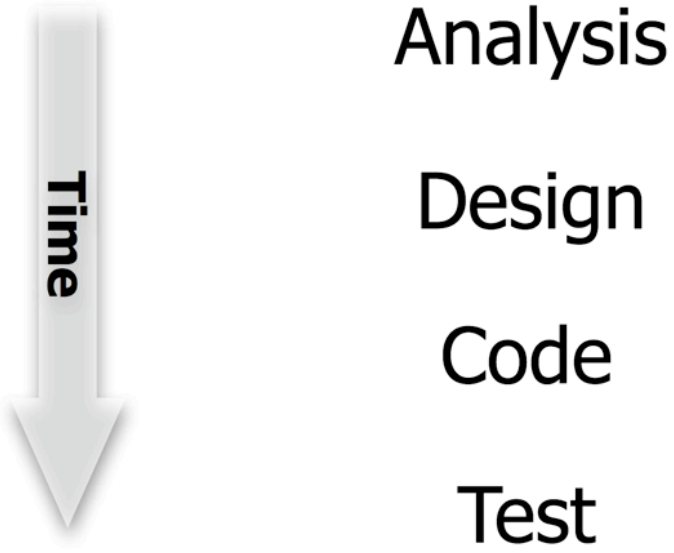
Toyoda Loom

Lessons from Queuing theory



Source: Beyond Agile Software Development Becoming Lean, Mary Poppendieck, Poppendieck.llc

Traditional Software Development



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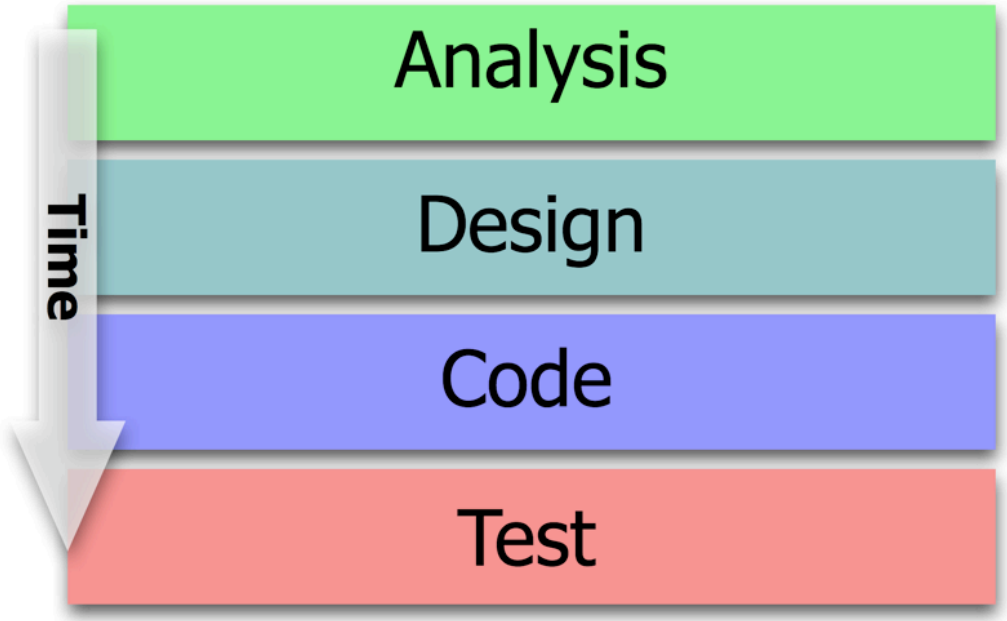

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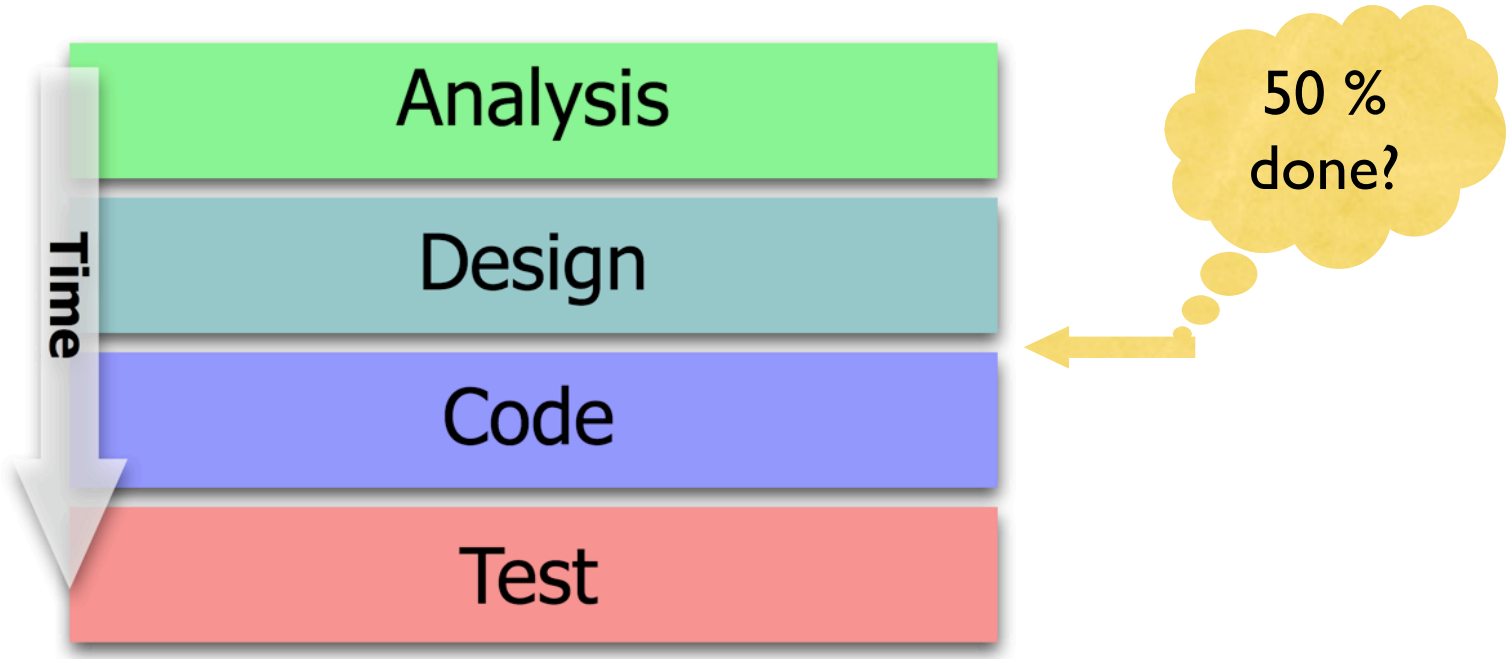


Applying Lean Principles to Software Development ...

A better way of doing the same

Analysis

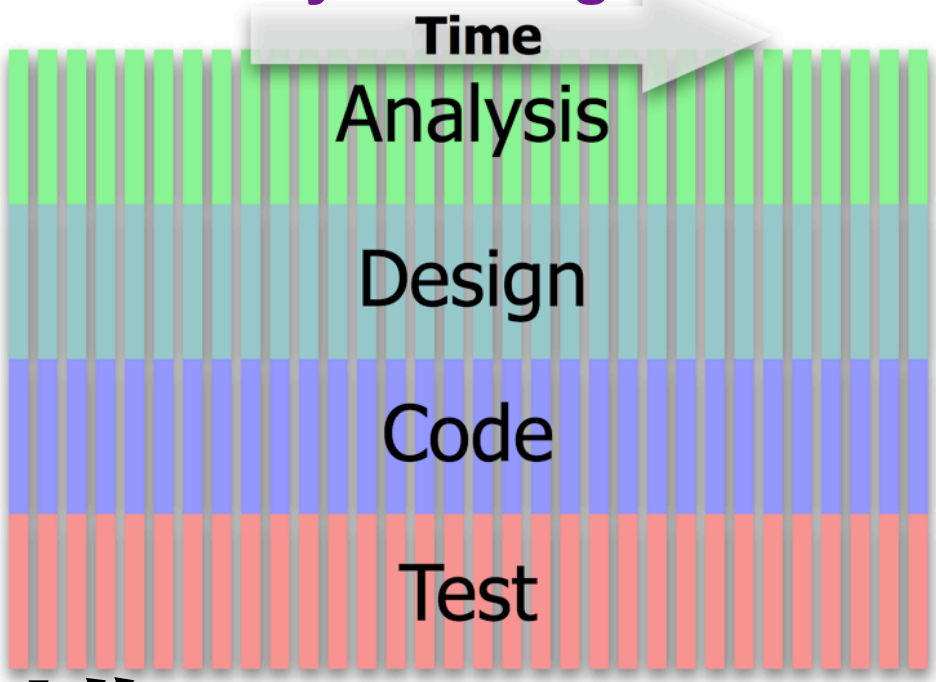
Design

Code

Test

Applying Lean Principles to Software Development ...

A better way of doing the same



End-to-End small slices of work

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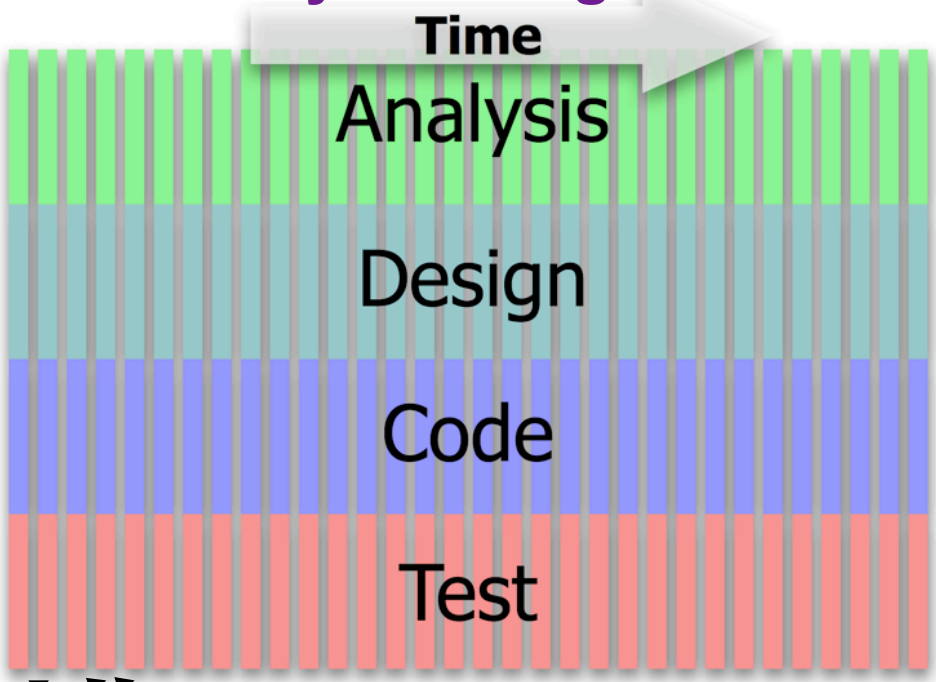
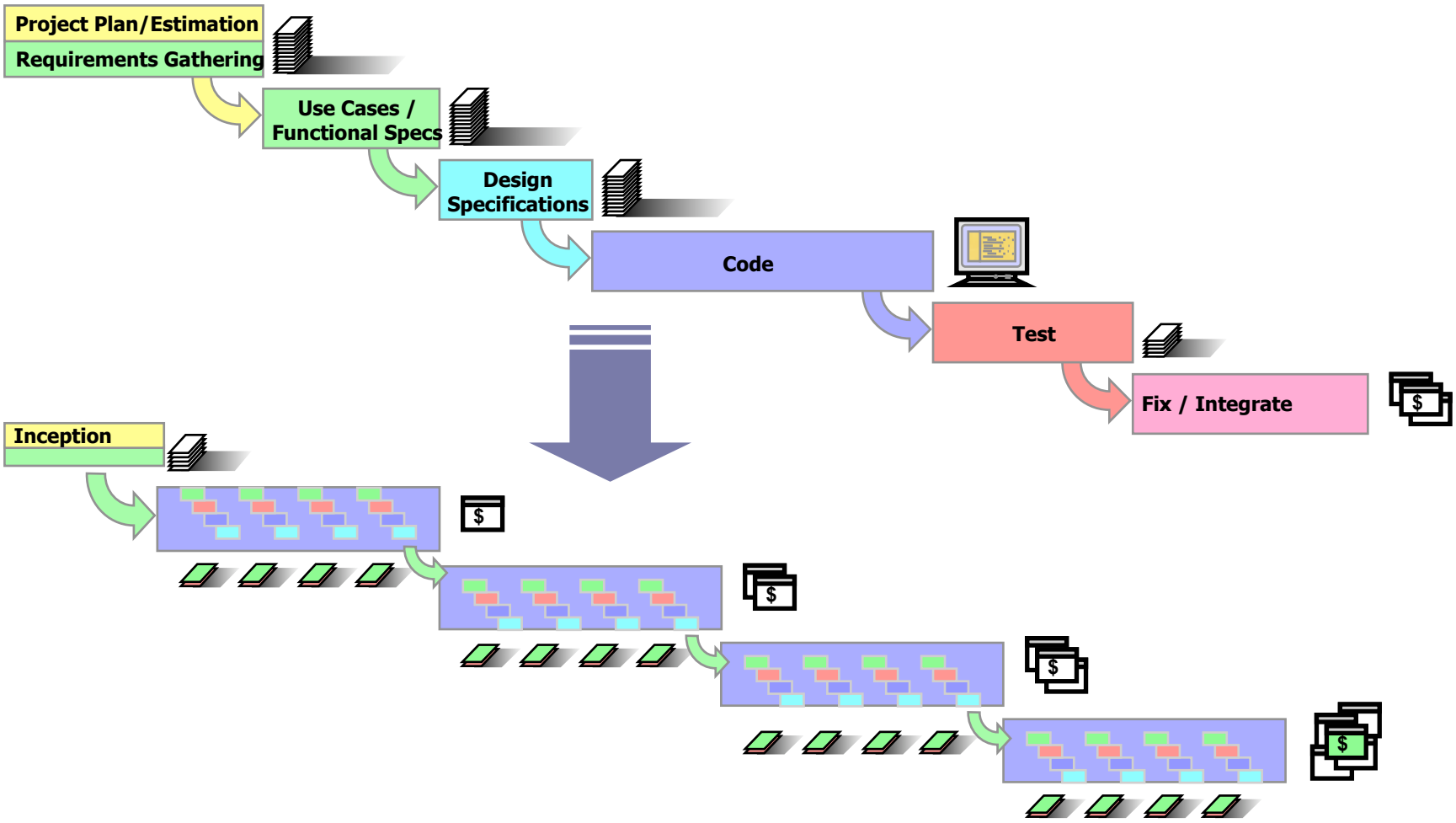


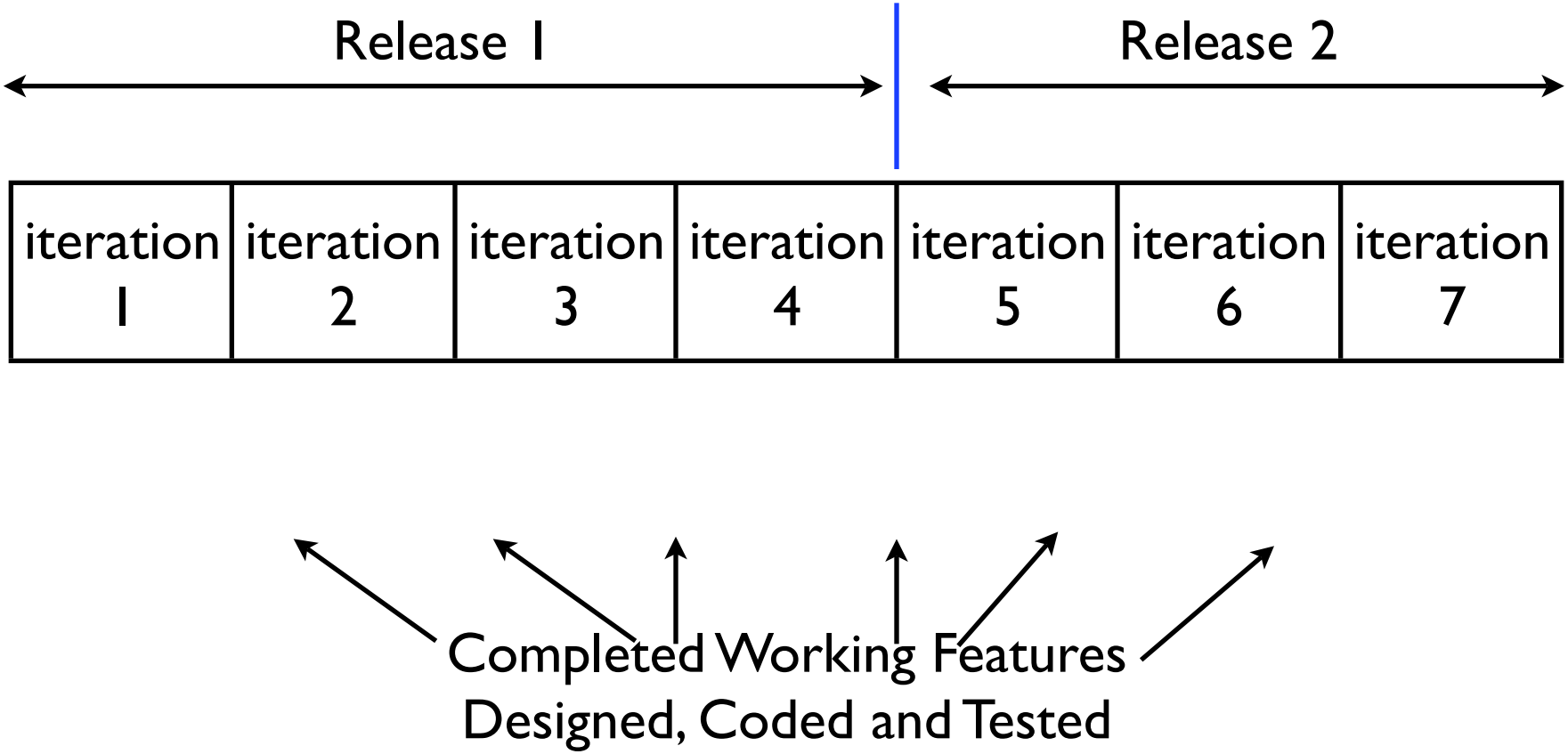
End-to-End small slices of work

20 % done = 100 % usable

Traditional vs Agile



Agile = Continuous Stream of Value



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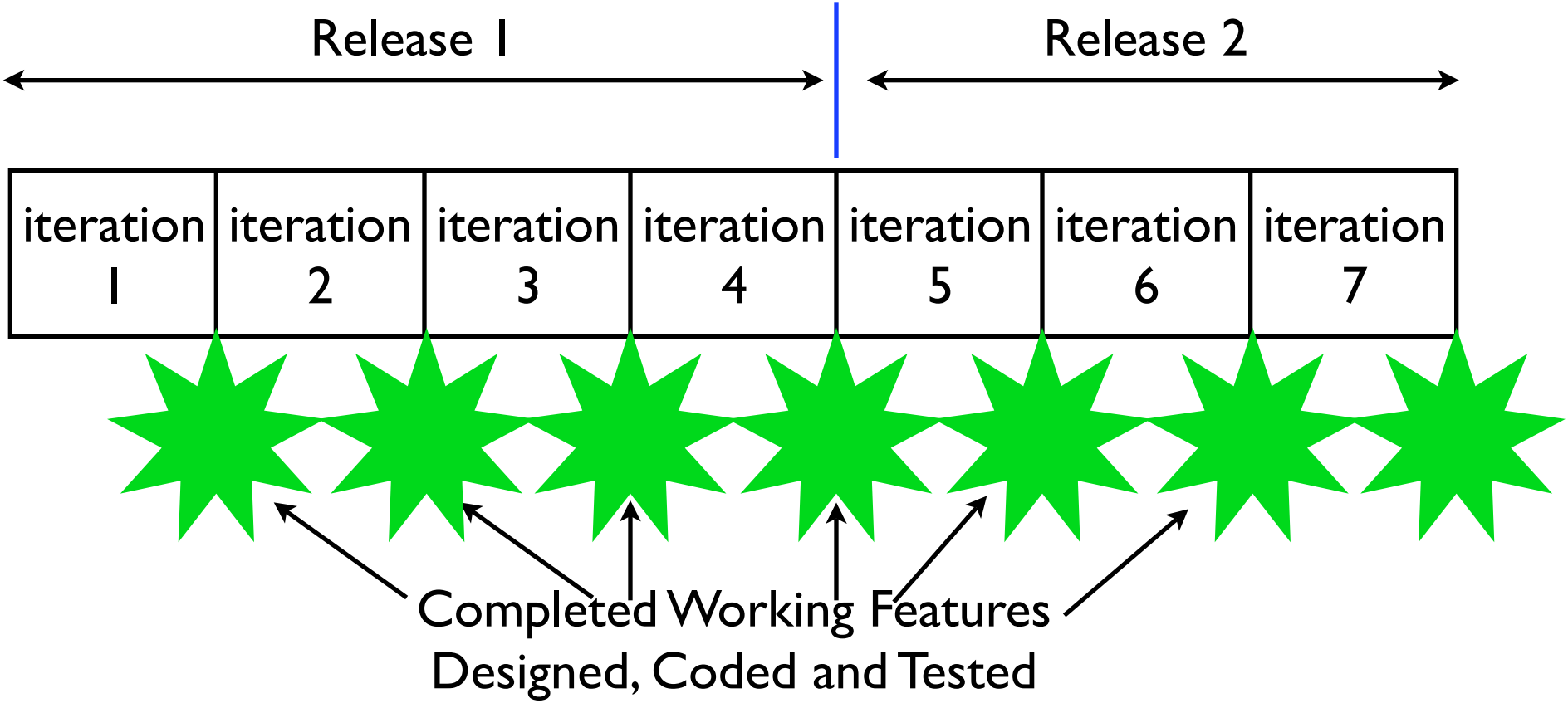

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Becoming Agile : Delivering Value

Increase the rate of
delivery
(usually with smaller increments)

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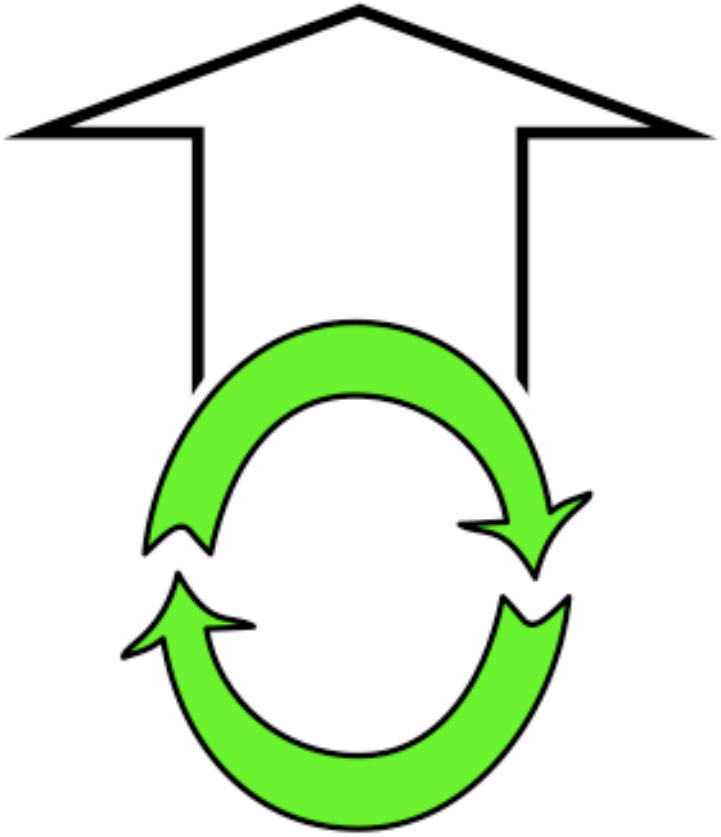
Becoming Agile : Increasing Feedback



Increase the rate
and quality
of ***feedback***

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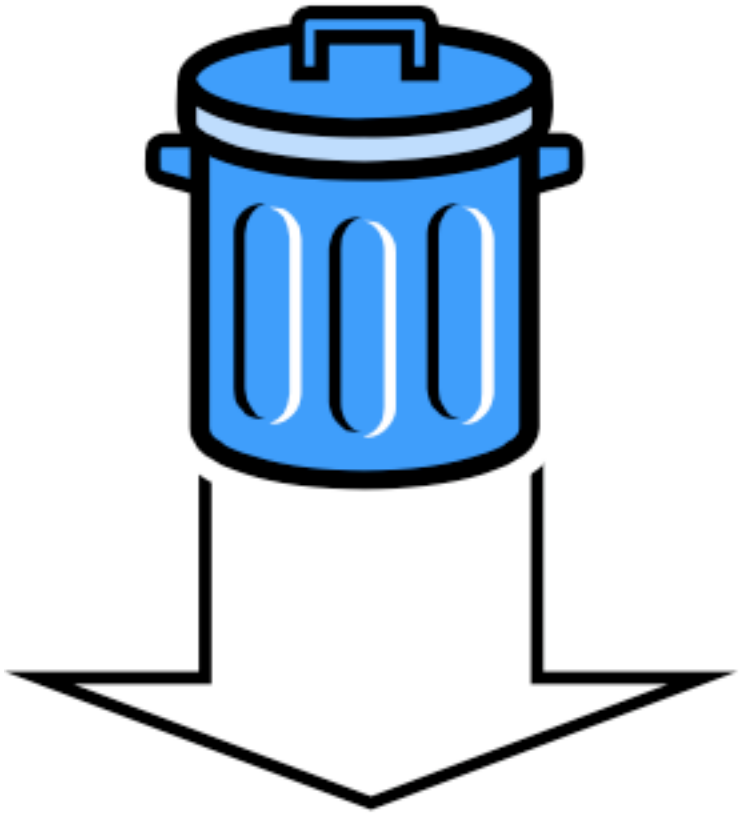
Becoming Agile : Reducing Waste



Reduce ***waste***

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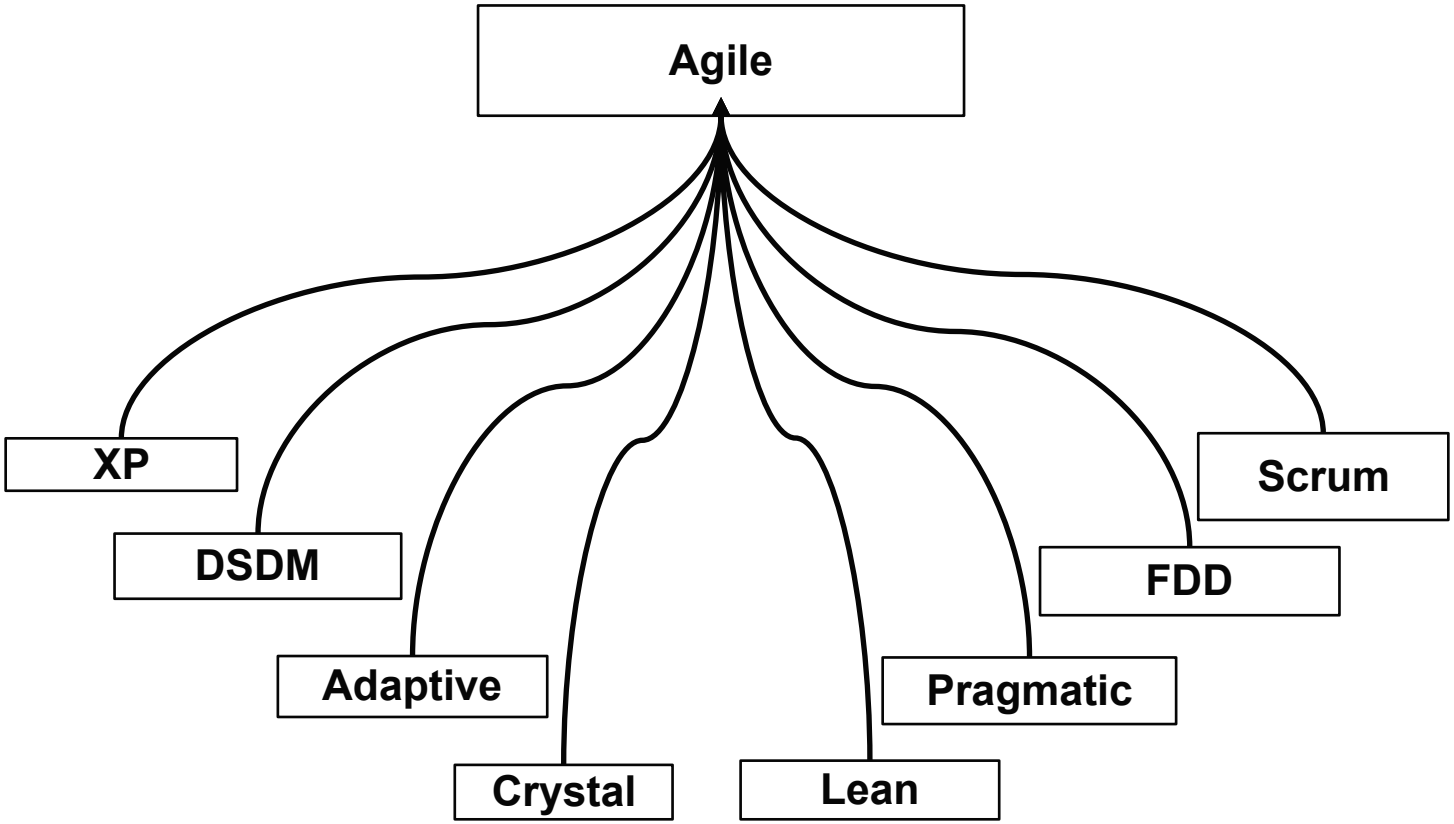
Agile Umbrella



A typical XP Project

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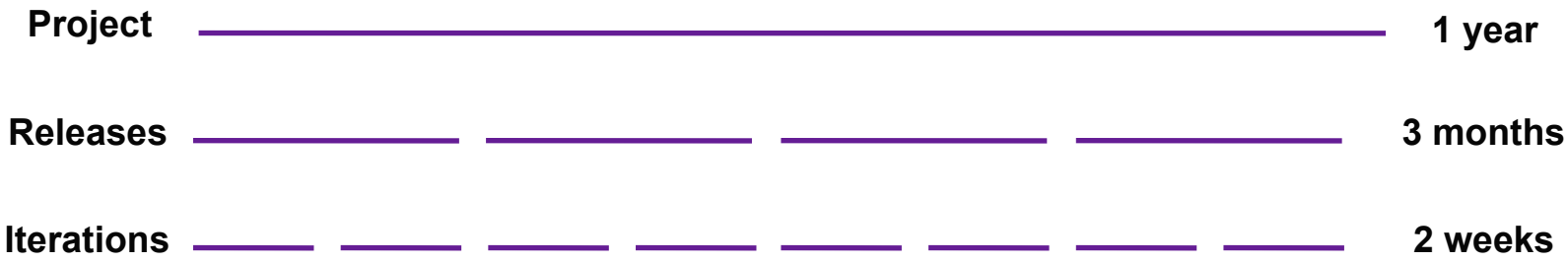

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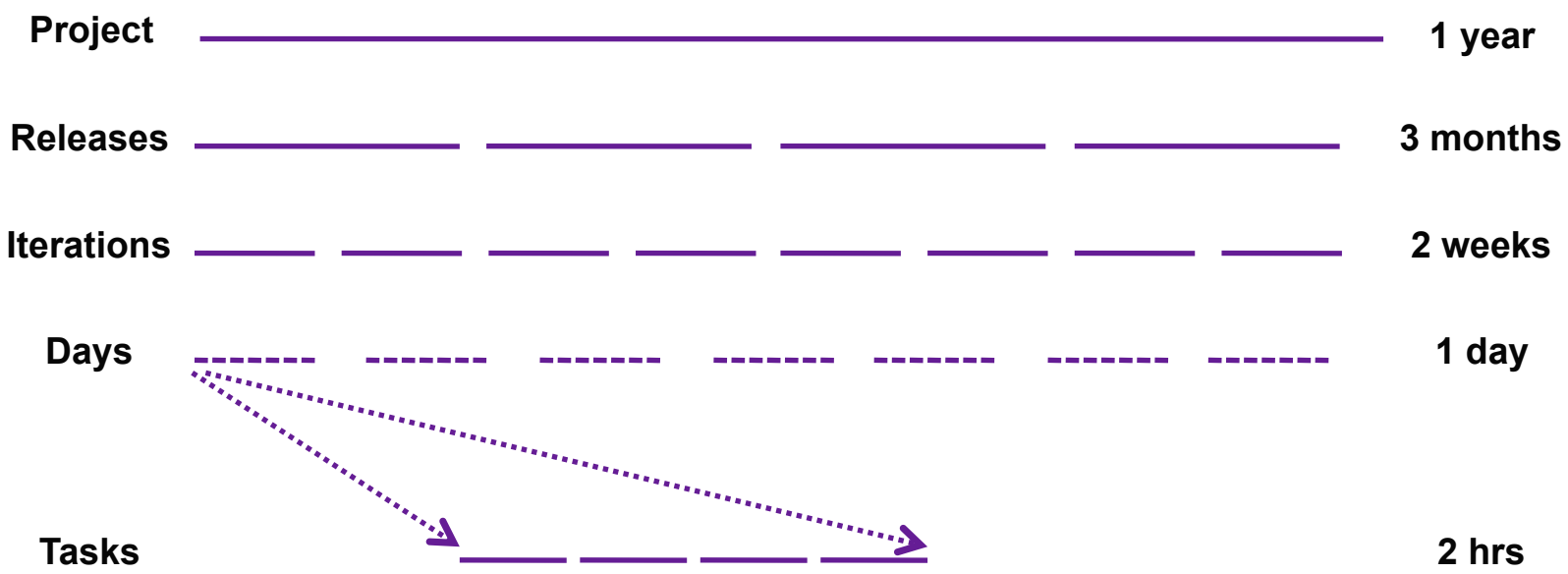

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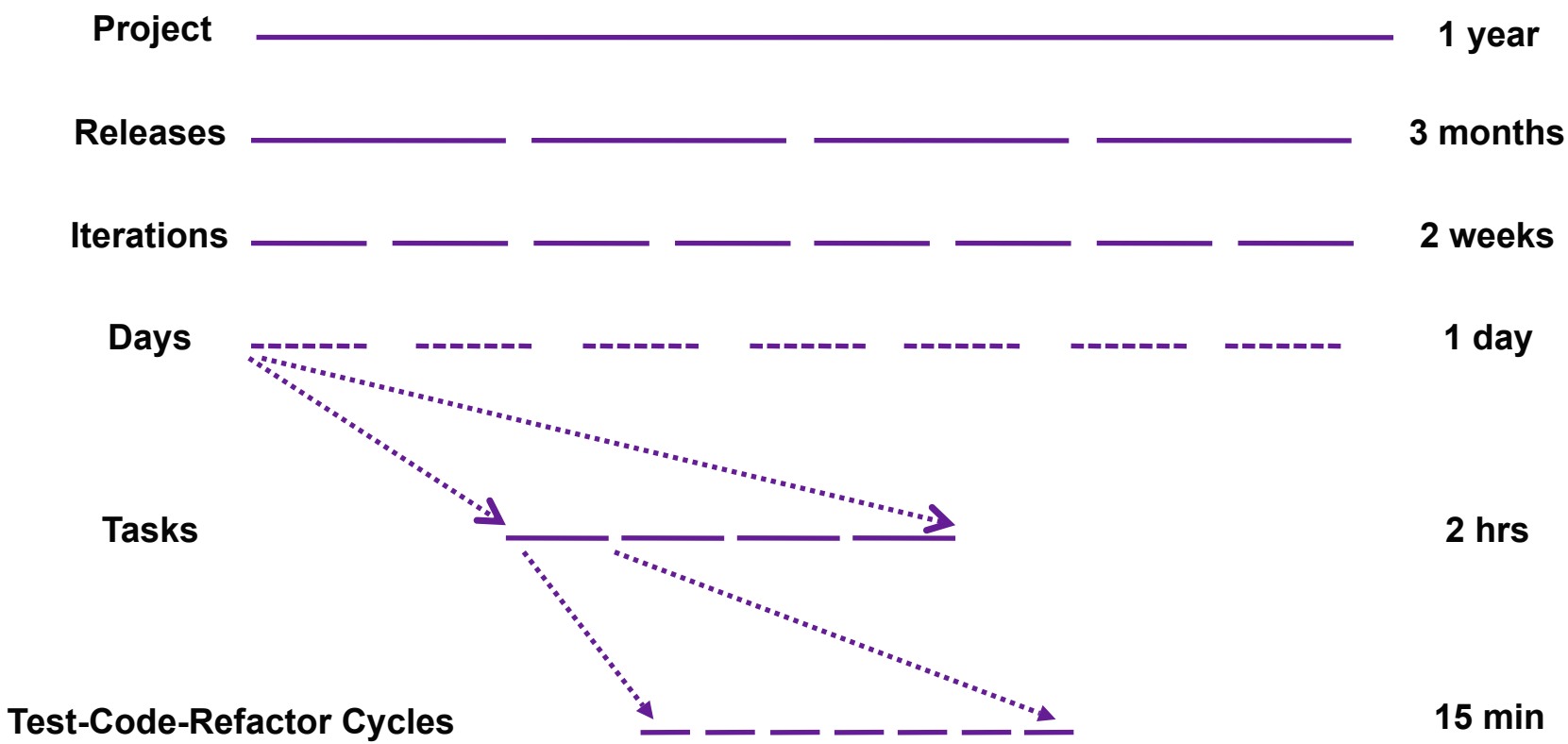
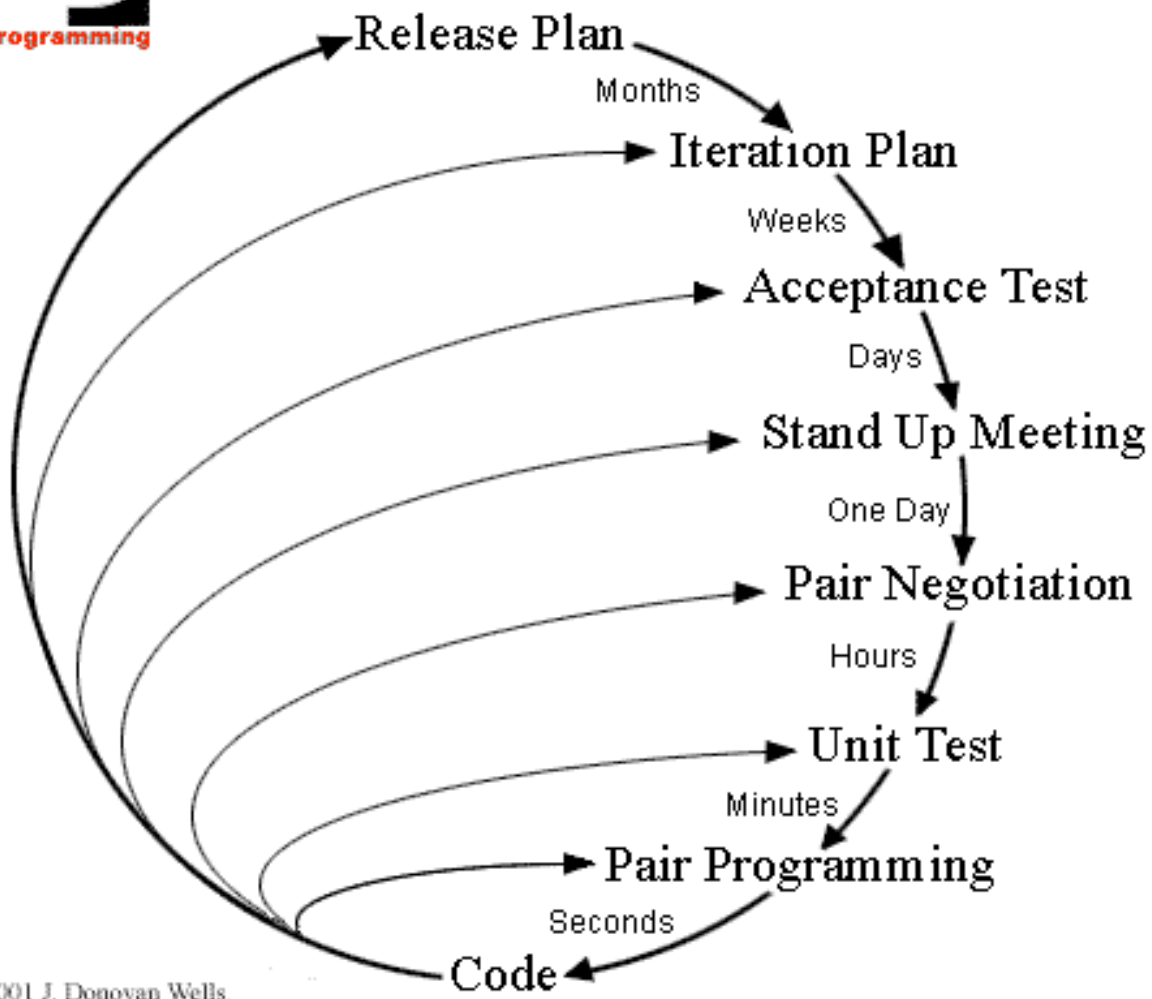


Planning/Feedback Loops

Zoom Out



Source : http://www.extremeprogramming.org

Key Questions

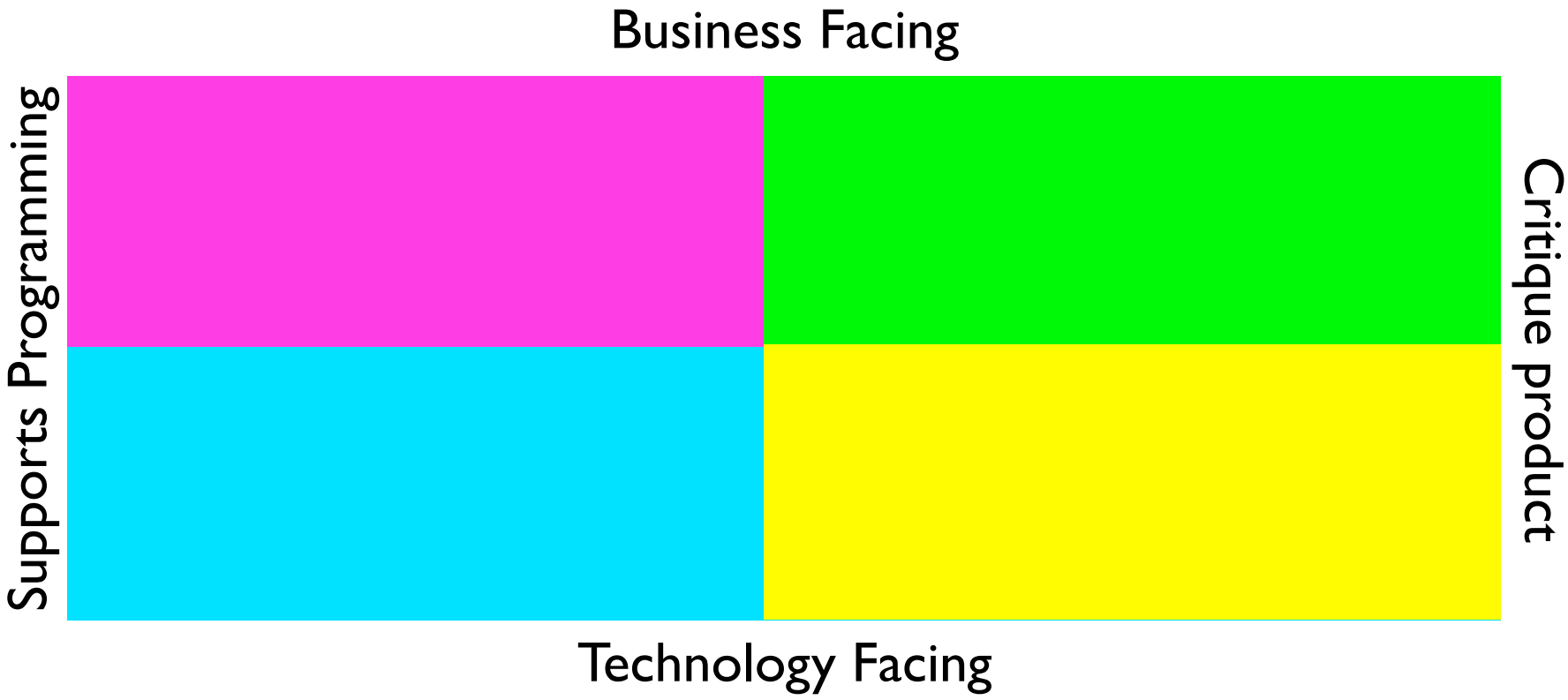
Business Facing

Are we building the right product?

Are we building the product right?

Technology Facing

Brian Marick's Test Categorization



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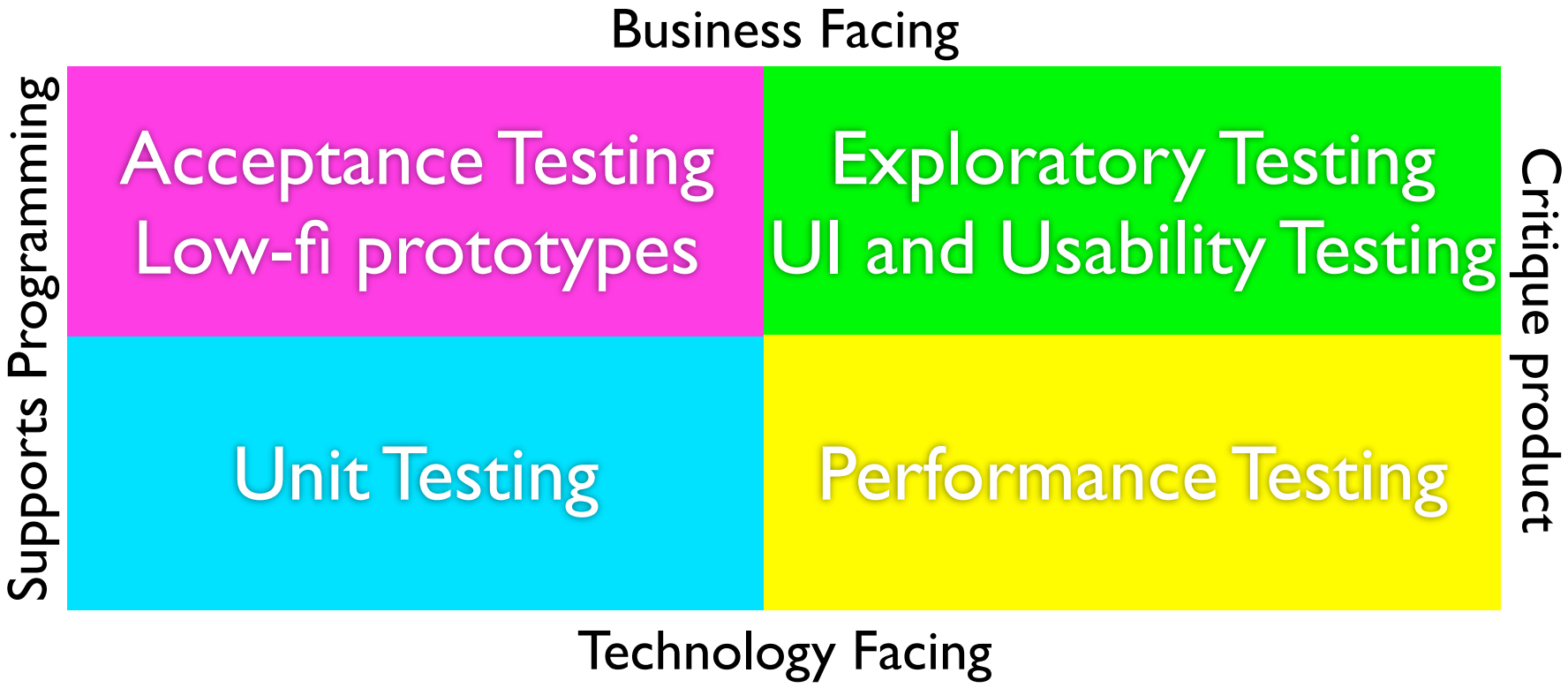

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Acceptance Test Driven Development

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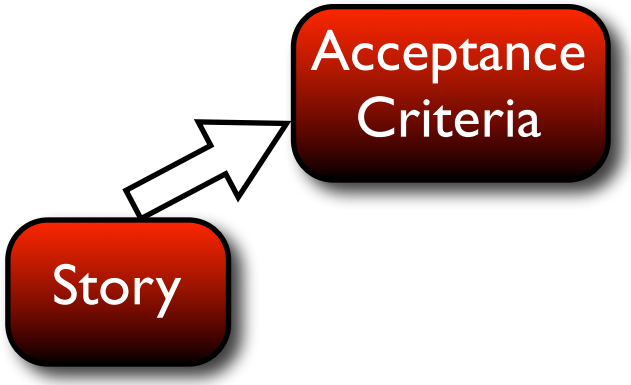

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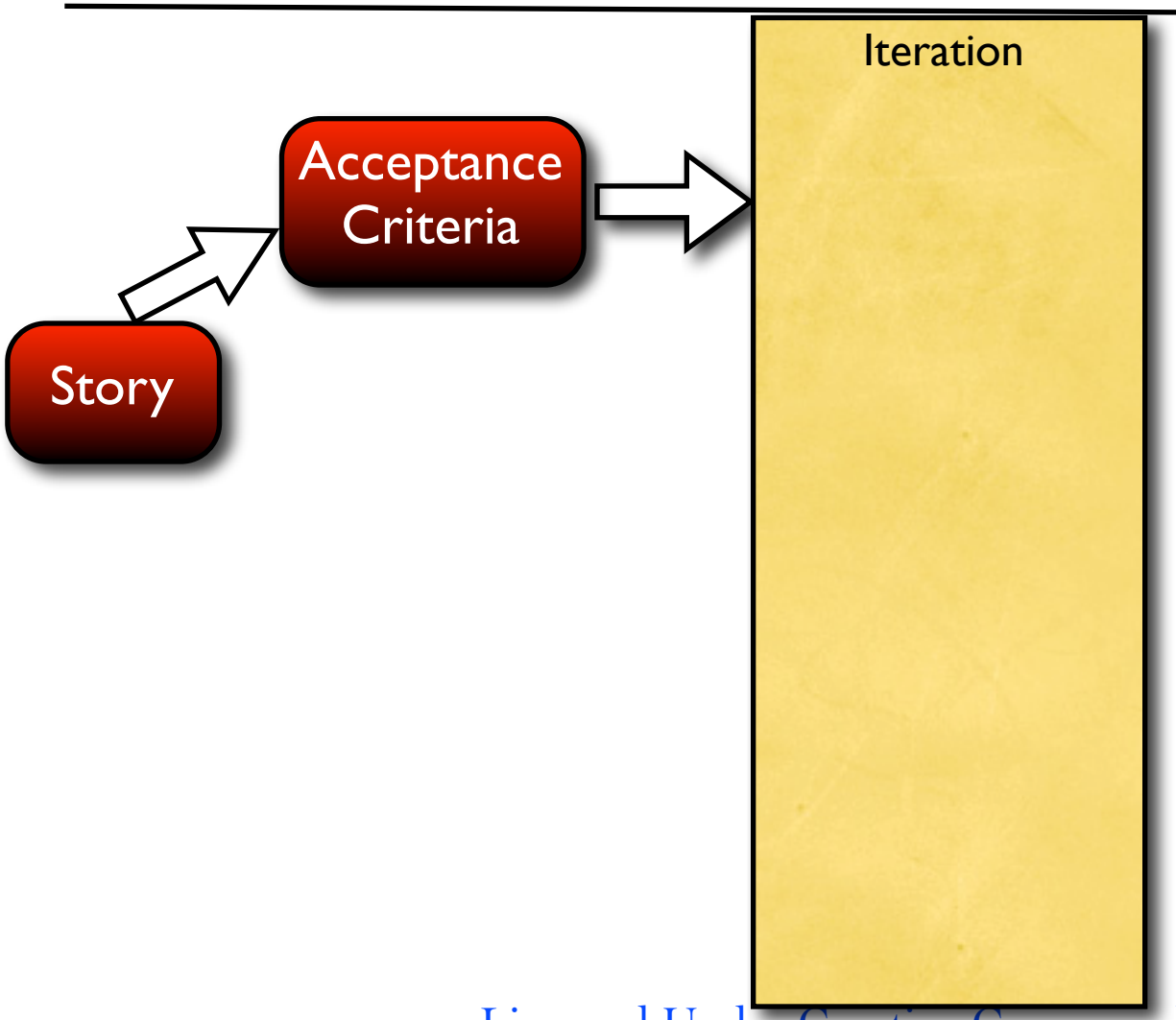

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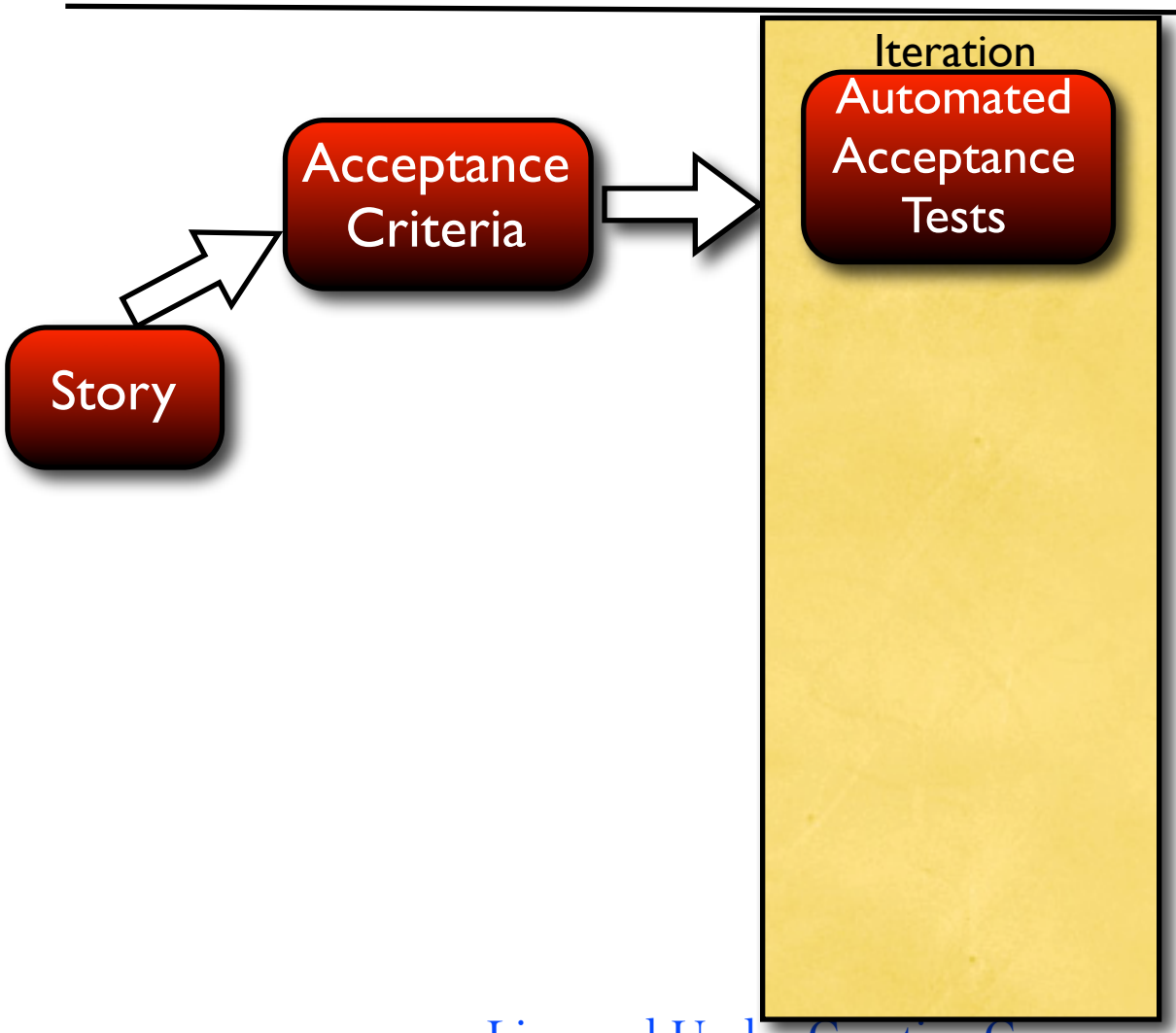

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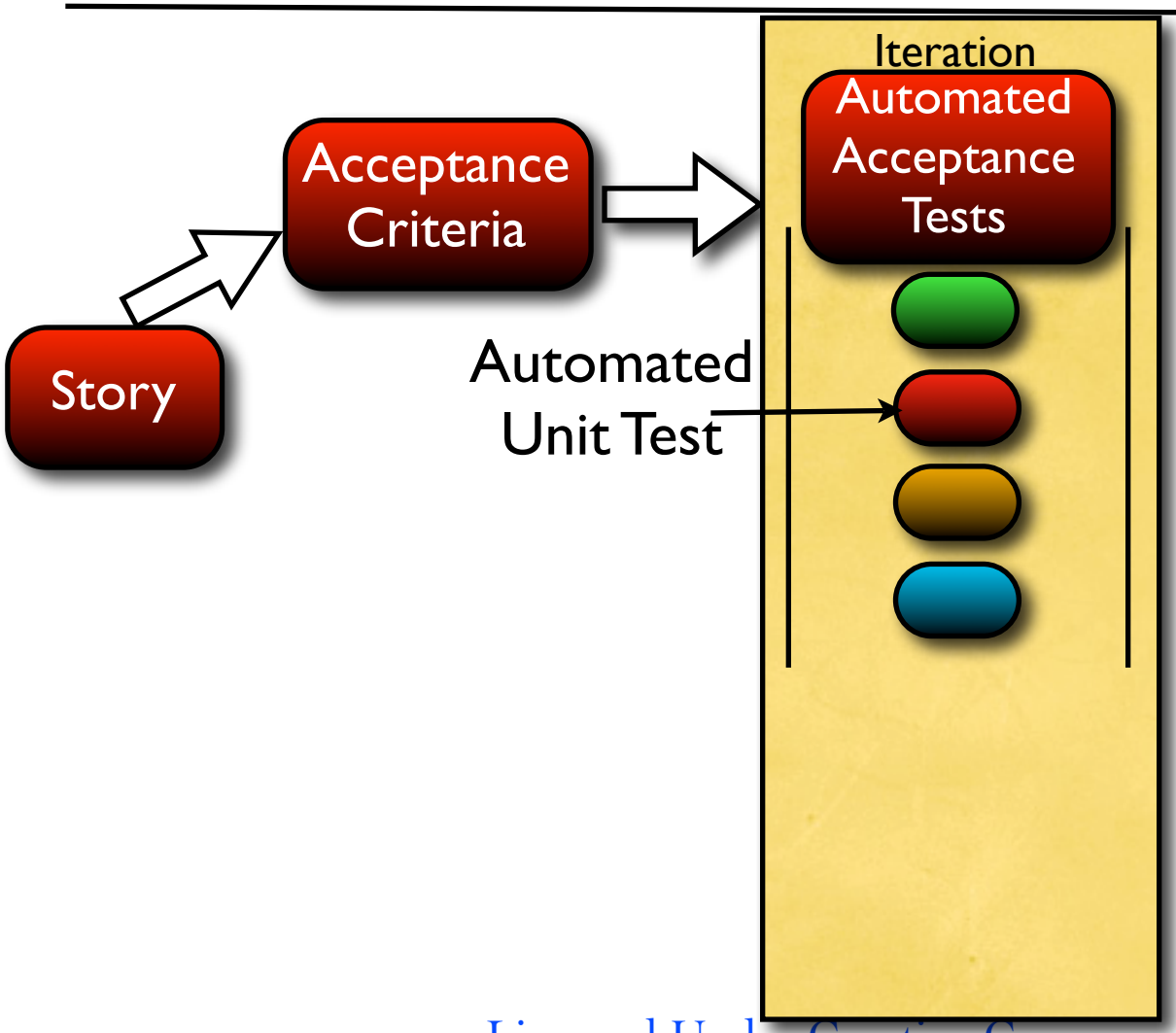

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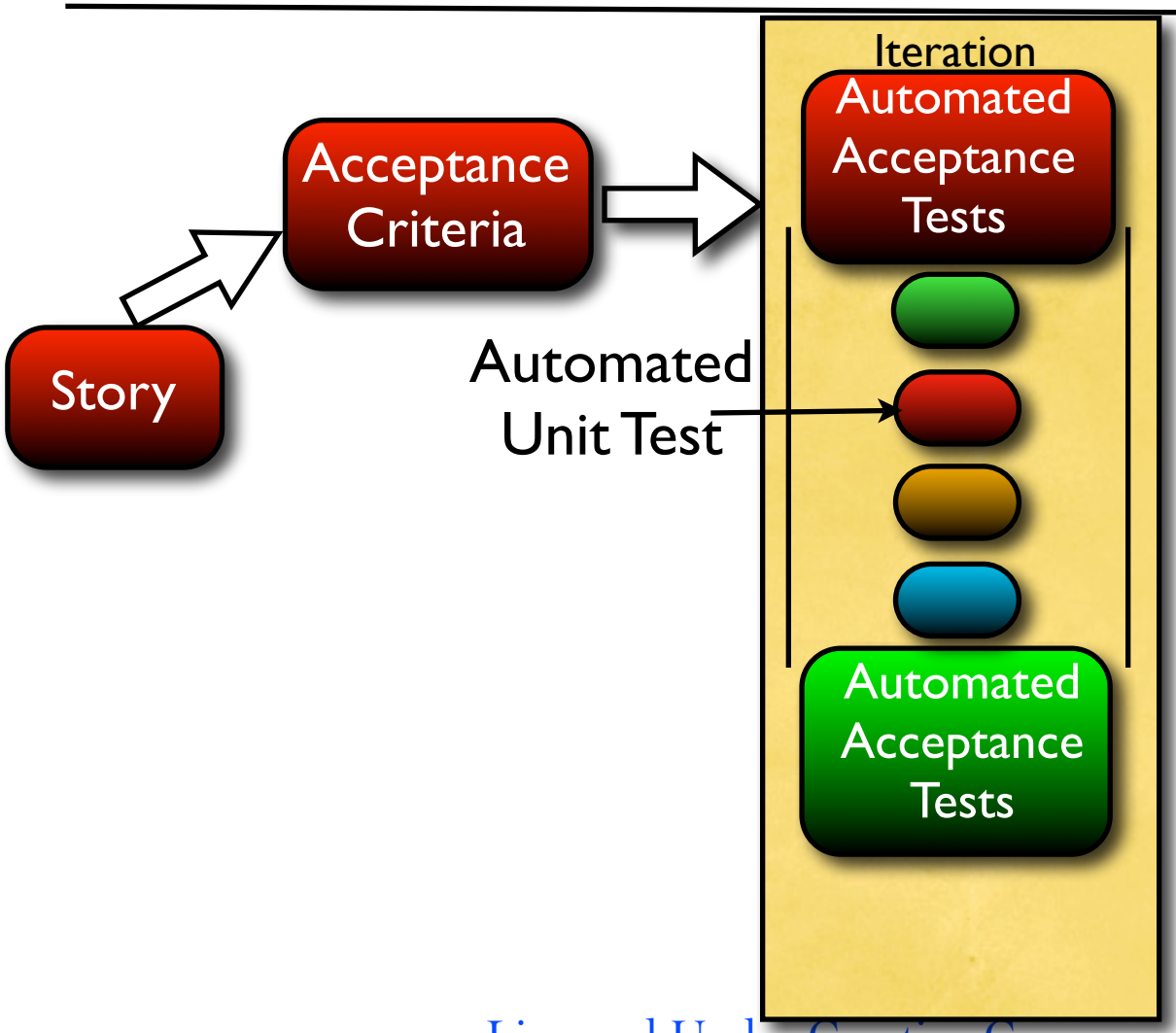

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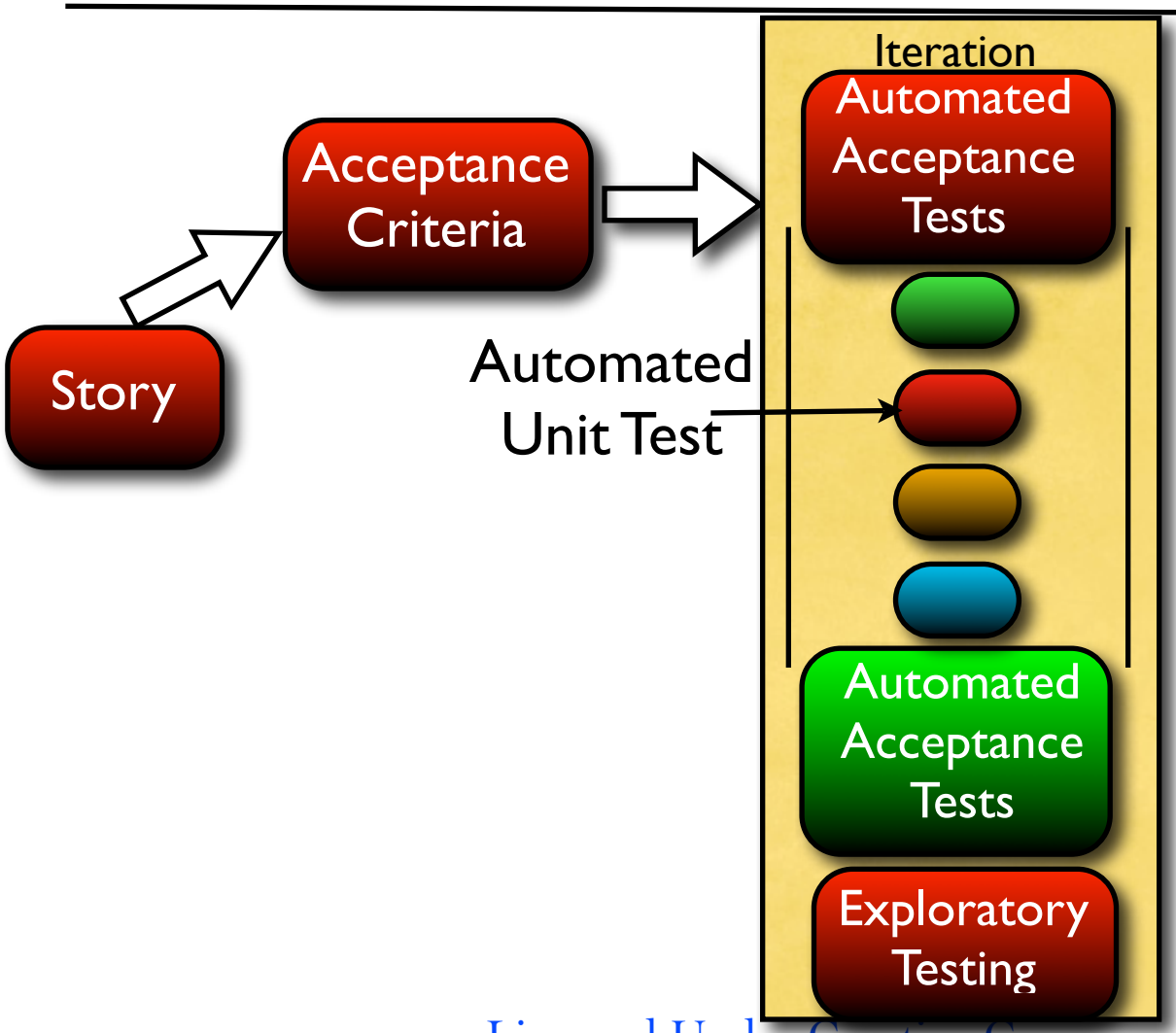

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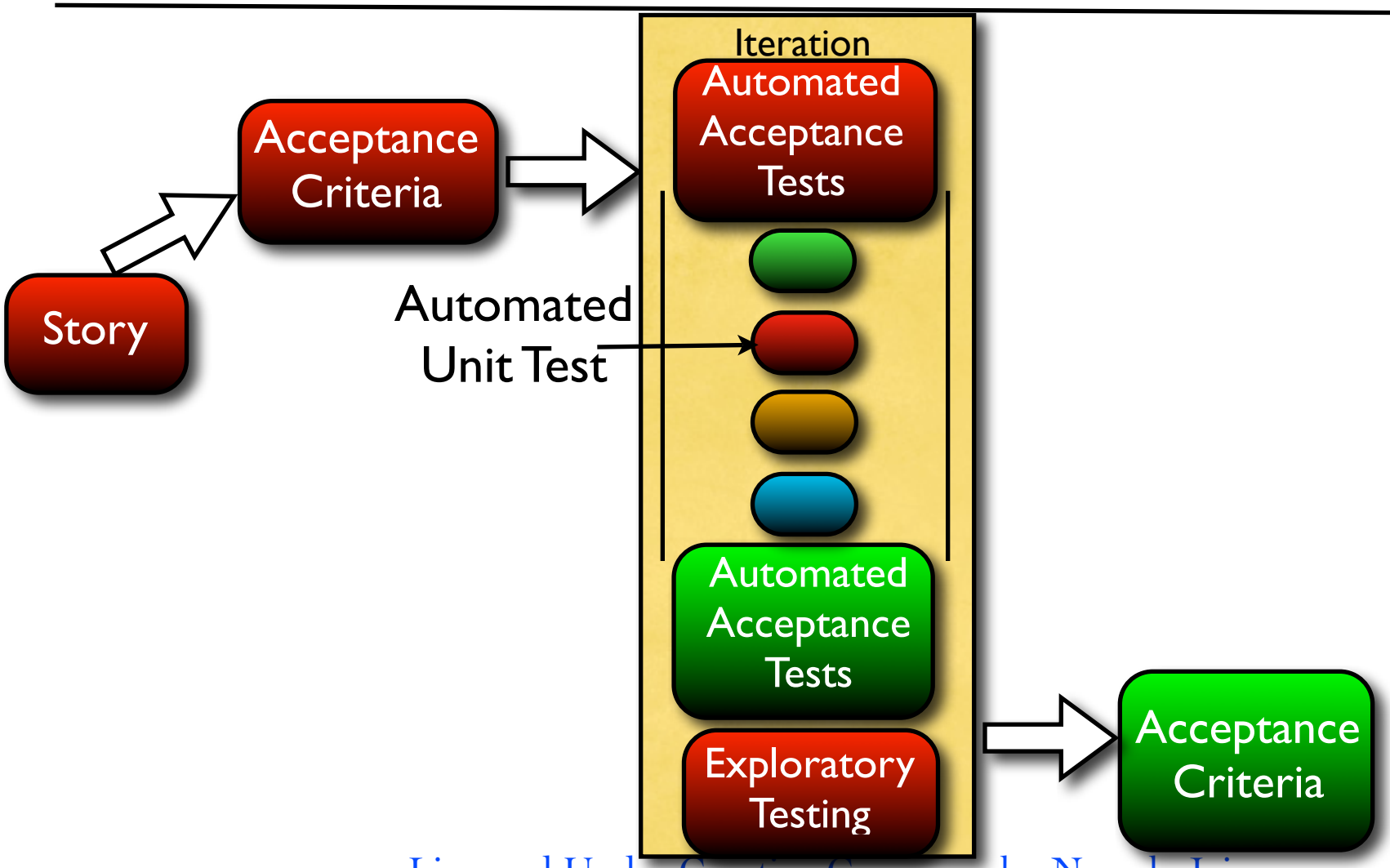

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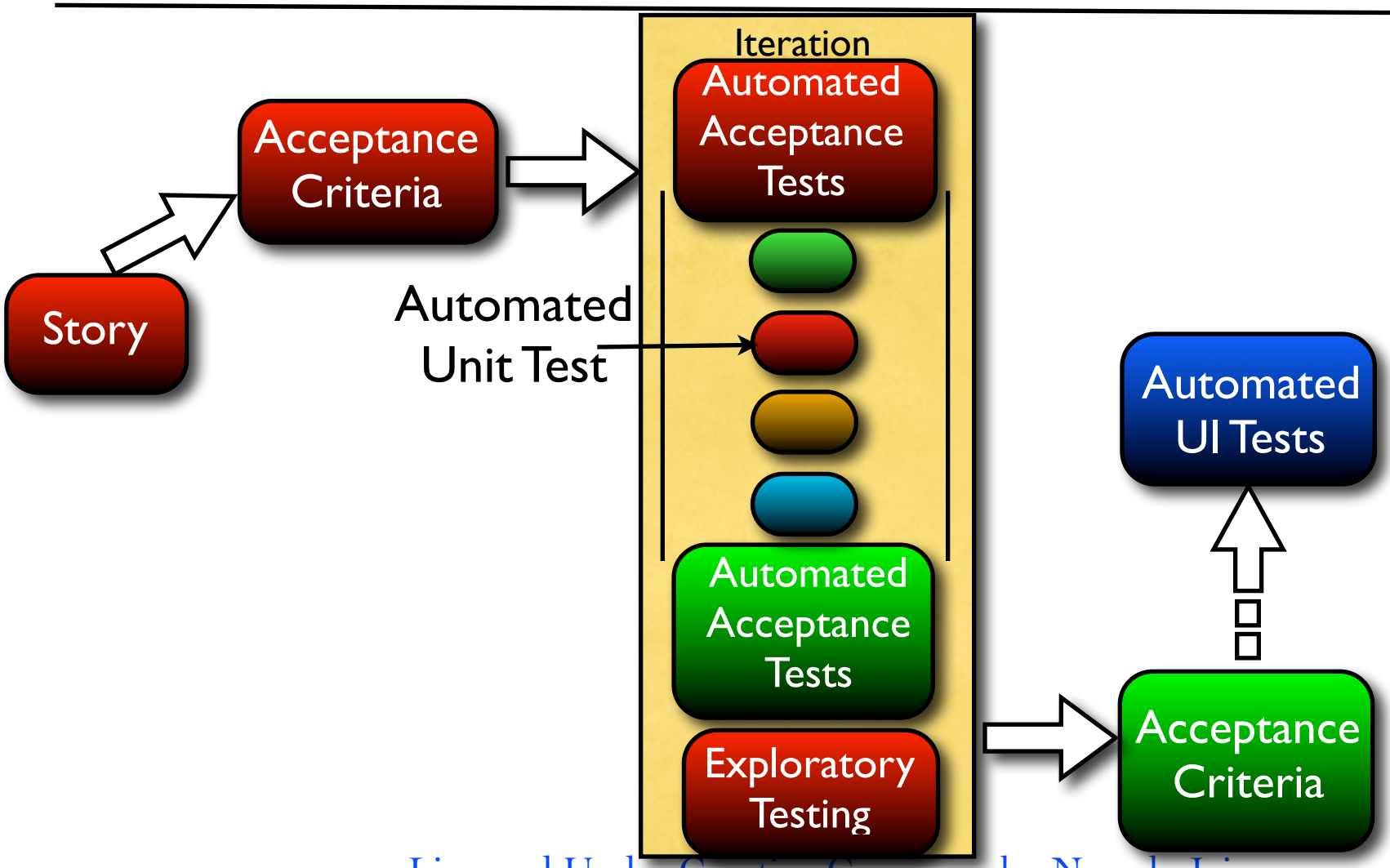

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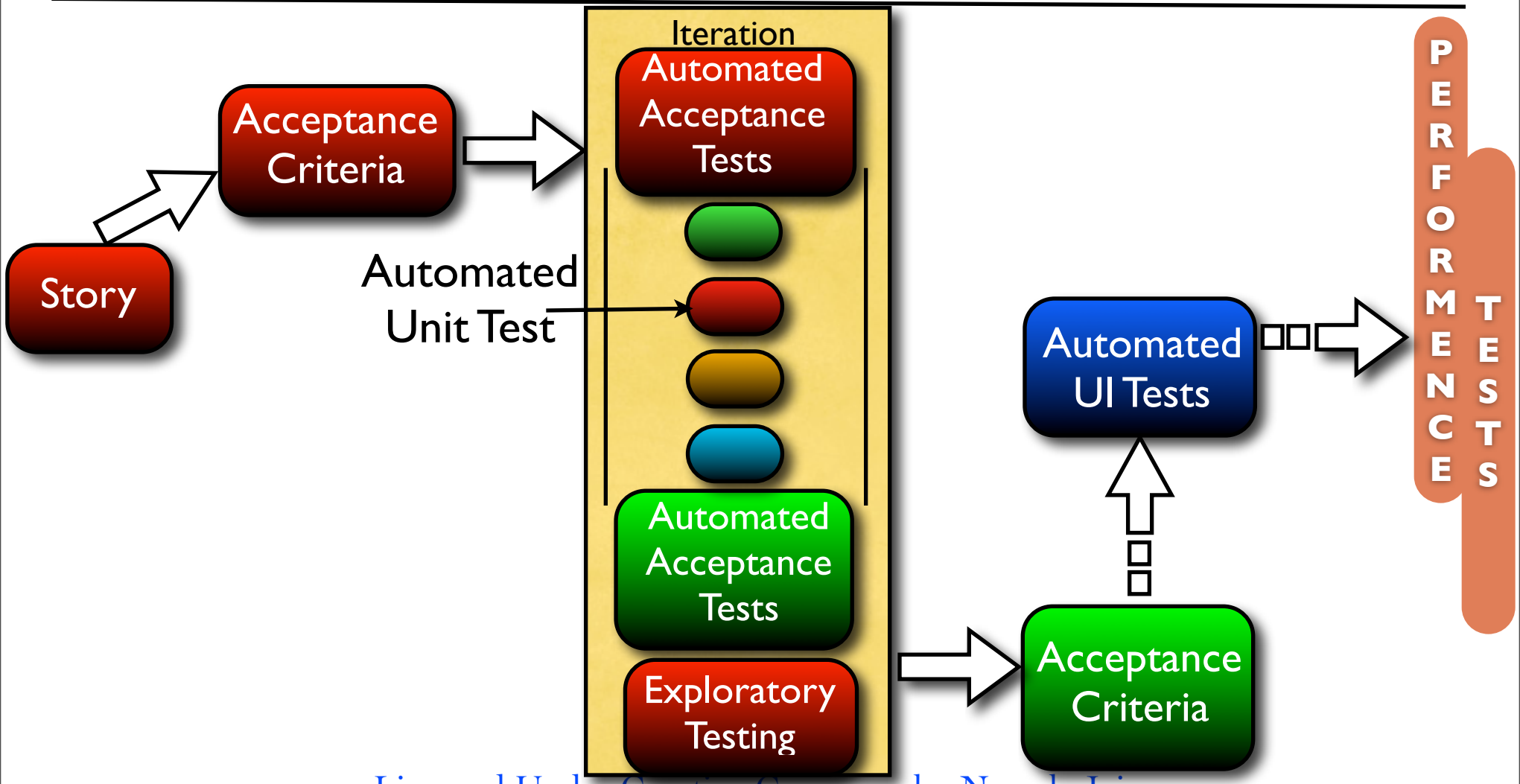

Test Driven Development

TDD Rhythm - Test, Code, Refactor

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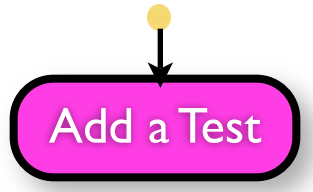

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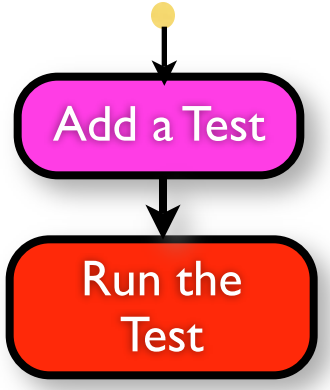

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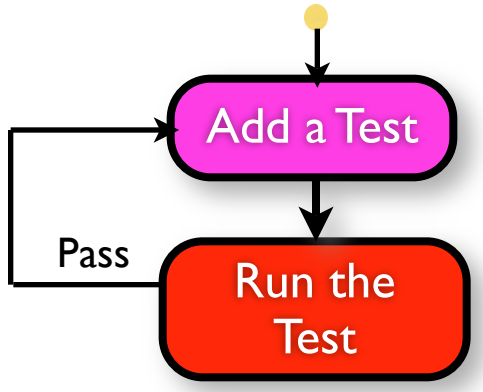

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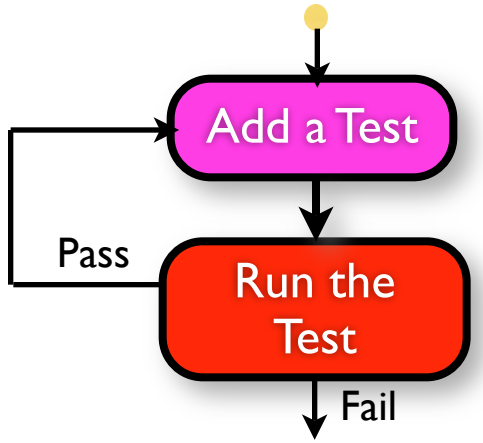

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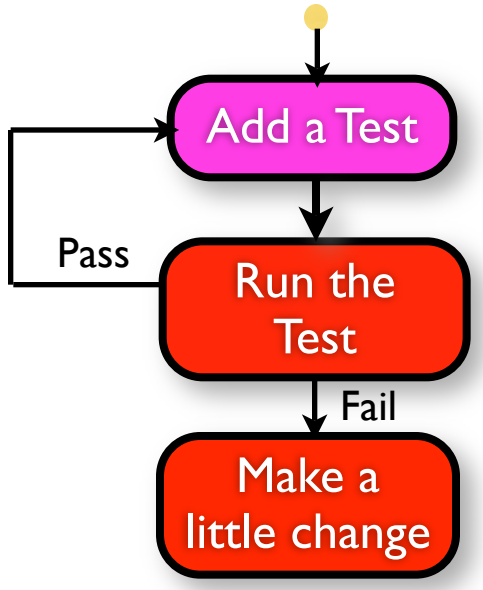

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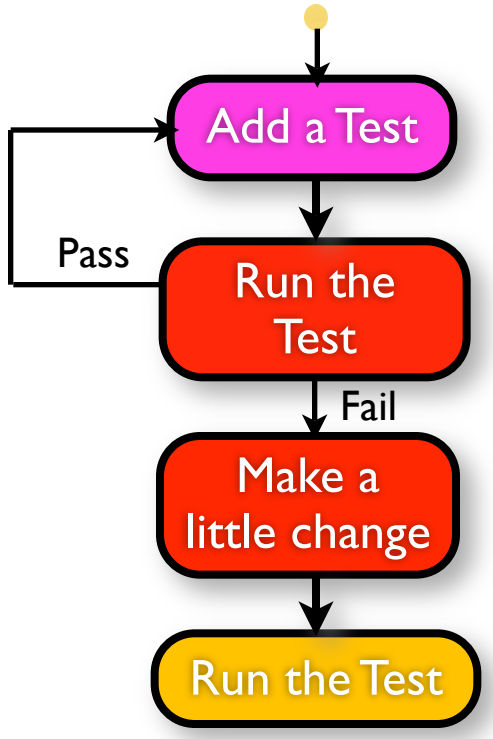

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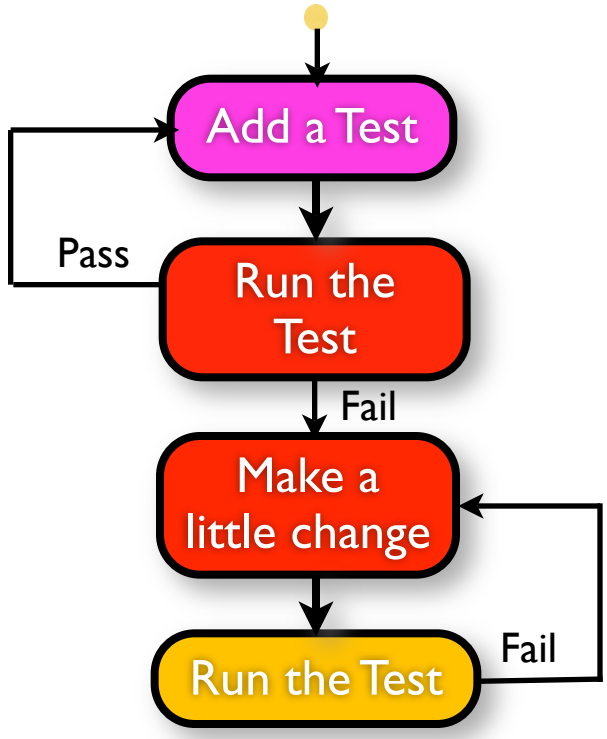

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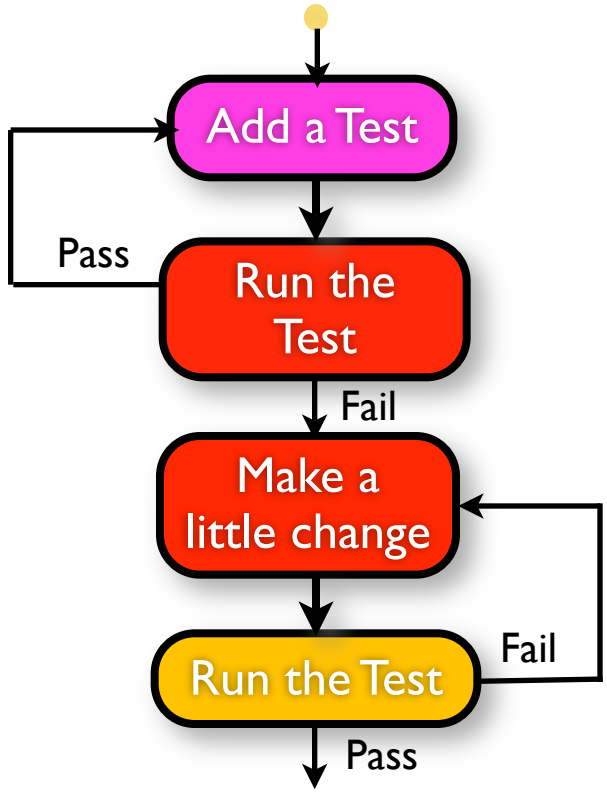

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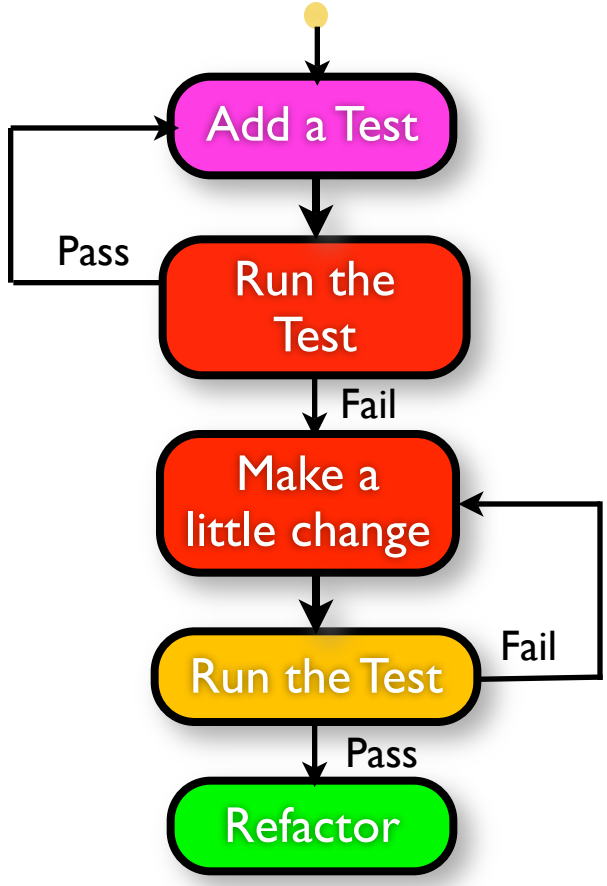

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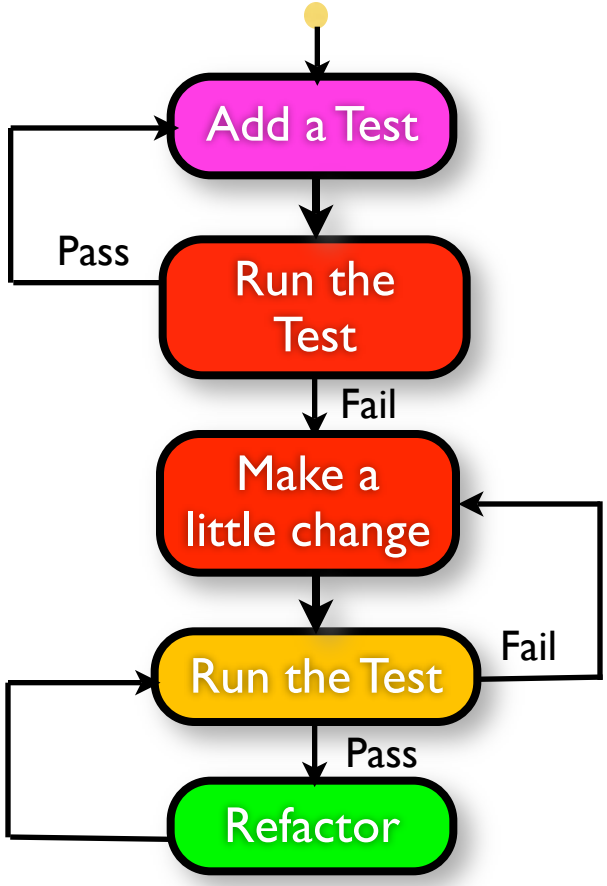

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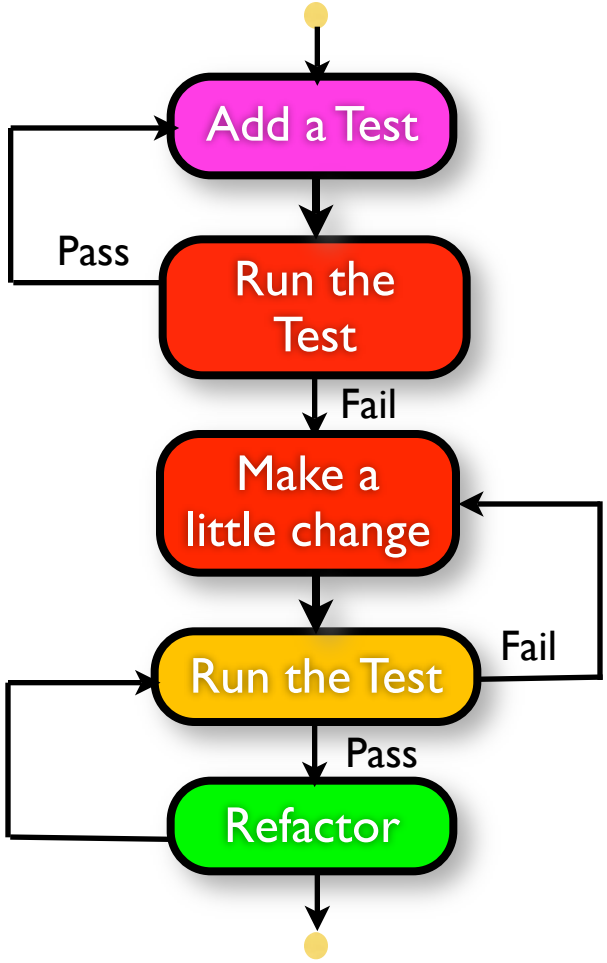

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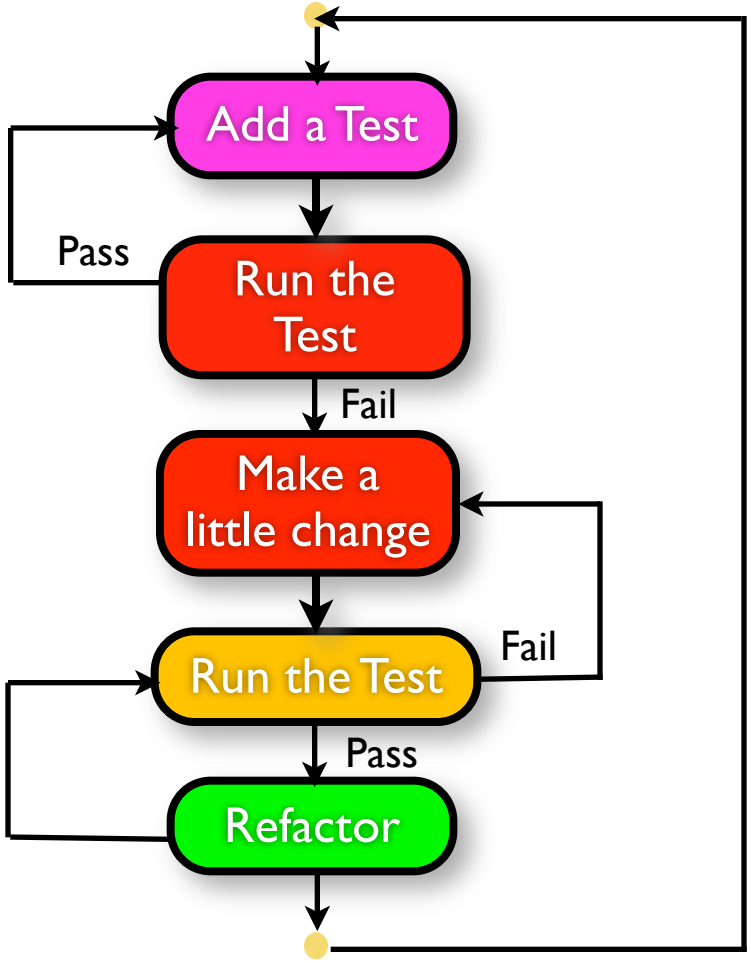

Mike Cohn's Testing Pyramid

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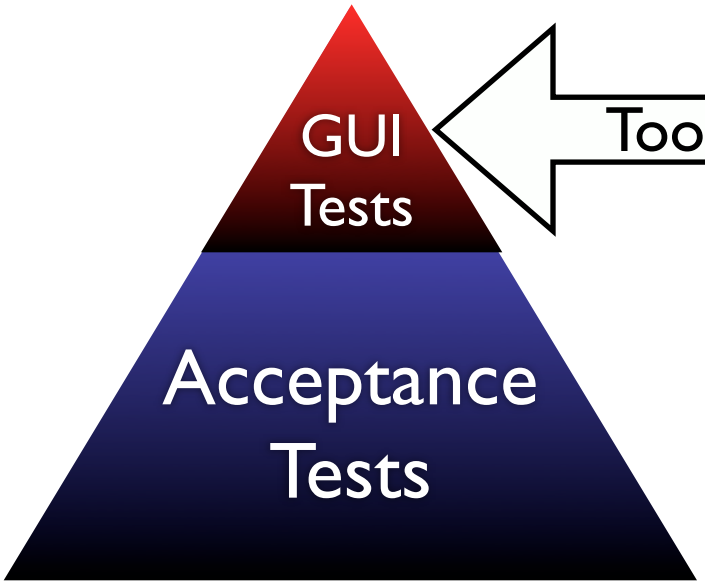
Small in Number

Tools: Selenium, Sahi, Watir, Abbot, Frankenstein

Mike Cohn's Testing Pyramid



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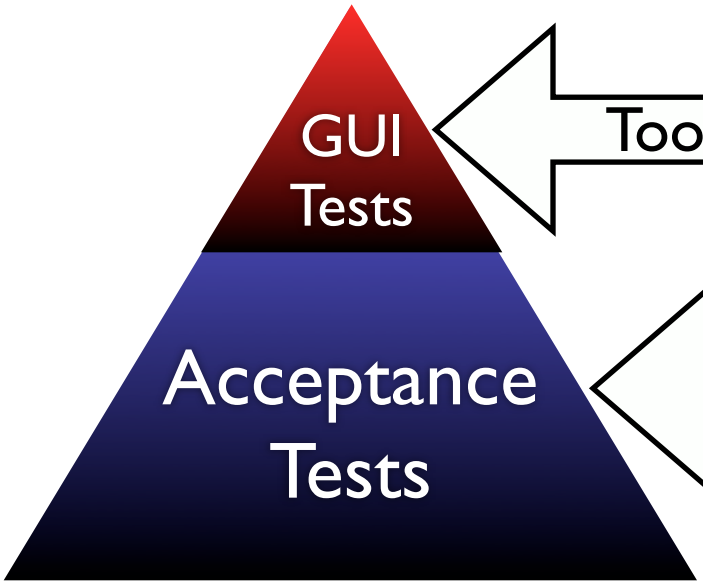

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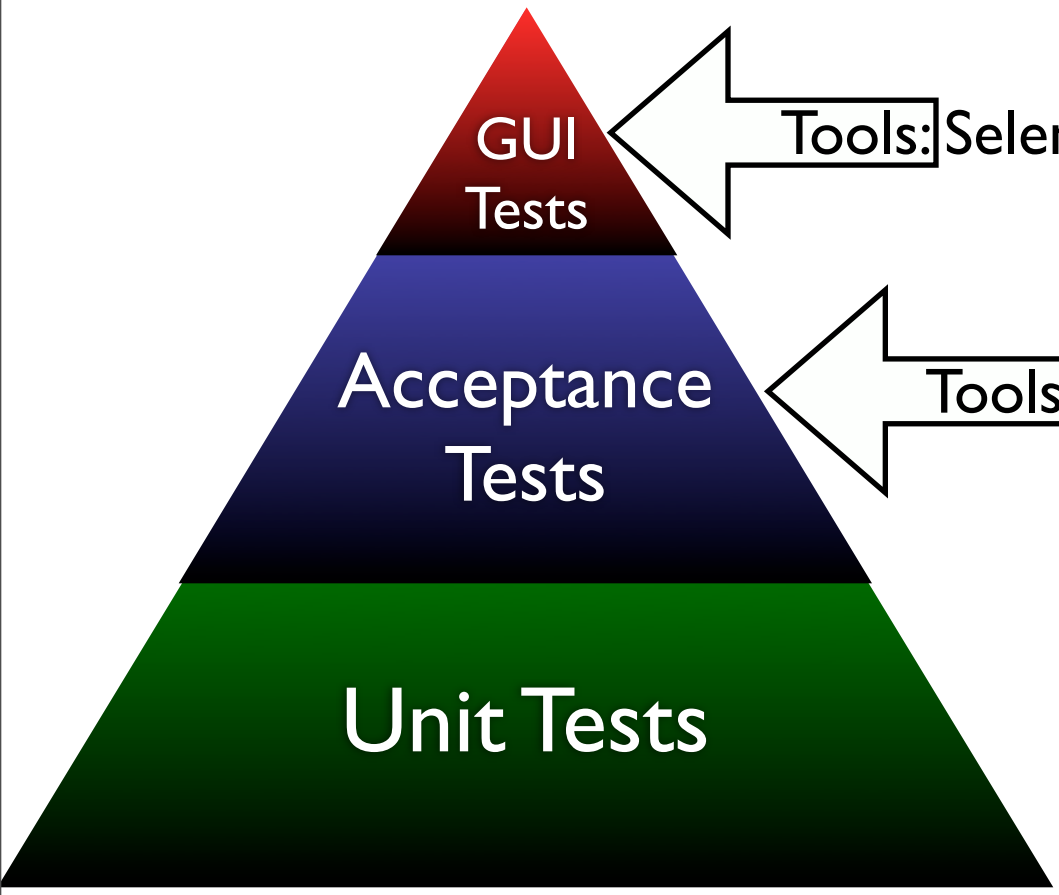

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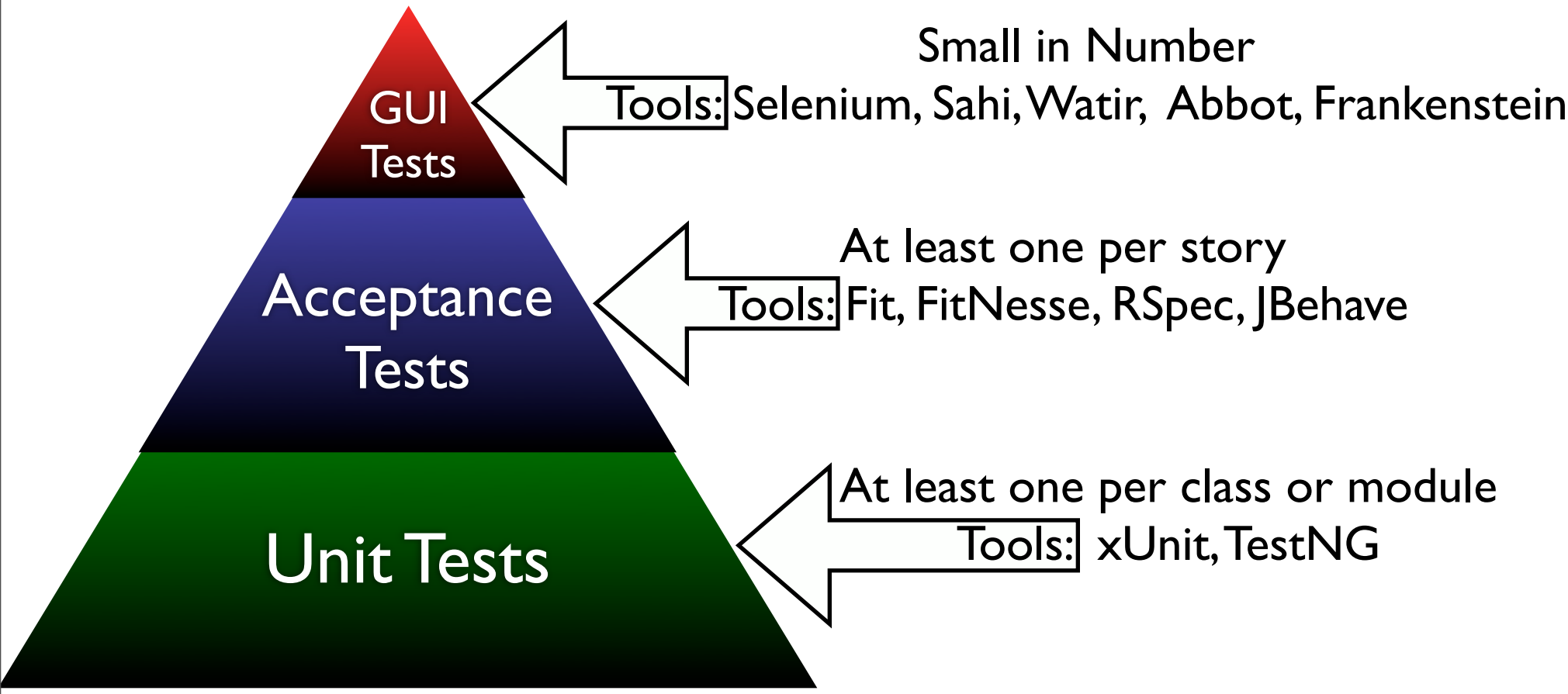

FitNesse and Selenium Demo

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References

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