

## *Evolving Agile Testing*

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@esconfs  
#esconfs<sub>1</sub>



## We provide Agile, Quality and Process Improvement Services such as

- **Consulting/Coaching:**

- Strategic advice and hands-on Coaching/mentoring in areas such as agile, testing, process improvement, etc.

- **Training** public/inhouse:

- Lean/Agile: Certified/Advanced ScrumMaster, Succeeding with Agile/Scrum, Agile project management, Agile Testing, Product Owner training, Lean/Kanban, etc.
- Testing (ISTQB Foundation and Advanced Test Manager/Analyst, Risk-based testing, Test design techniques, Testing for developers, TMap®, Peer Reviews, UAT, etc.)
- Requirements/Business analysis
- Software project management

- **Assessments**

- Agile practices
- Industry standards and models such as CMMI®, TPI®, TMMi®, etc.

# Agenda

- Setting the scene
- Requirements and Testing
- Agile Test Strategy
- Tester role

# The Major Agile/Lean Methods

- **Scrum (1995) – PM Oriented**

- Timeboxing
- Prioritized backlog
- Daily standup meetings
- Demo after each iteration
- Correct the process through lessons learned

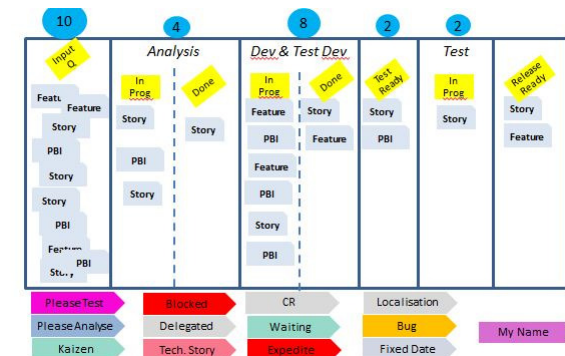


- **XP (1999) – Engineering Oriented**

- (A)TDD, refactoring, pair programming, continuous integration, simplicity, whole team, planning game, ...

- **Kanban(2010) – Continuous Improvement**

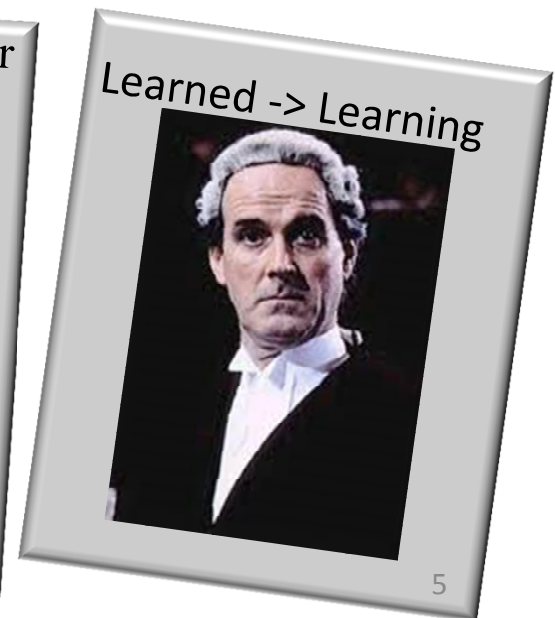
- Visualize
- Reduce WIP
- Manage Flow
- Make process Policies Explicit
- Nurture effective feedback loops
- Improve Collaboratively (using scientific method)



# Some Underlying Shifts...



Never delegate authority, delegate liability



# How agile changes things

- Whole Team Approach - collaboration
- Coding and testing are integrated rather than distinct phases
- Early and frequent feedback
- TDD/ATDD practices
- Test-infected developers, better automation strategies, better designed tests

Always working software

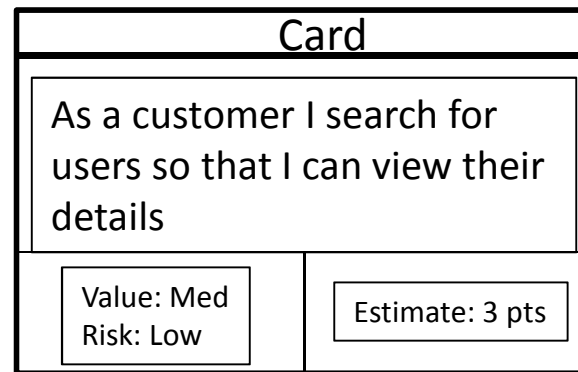
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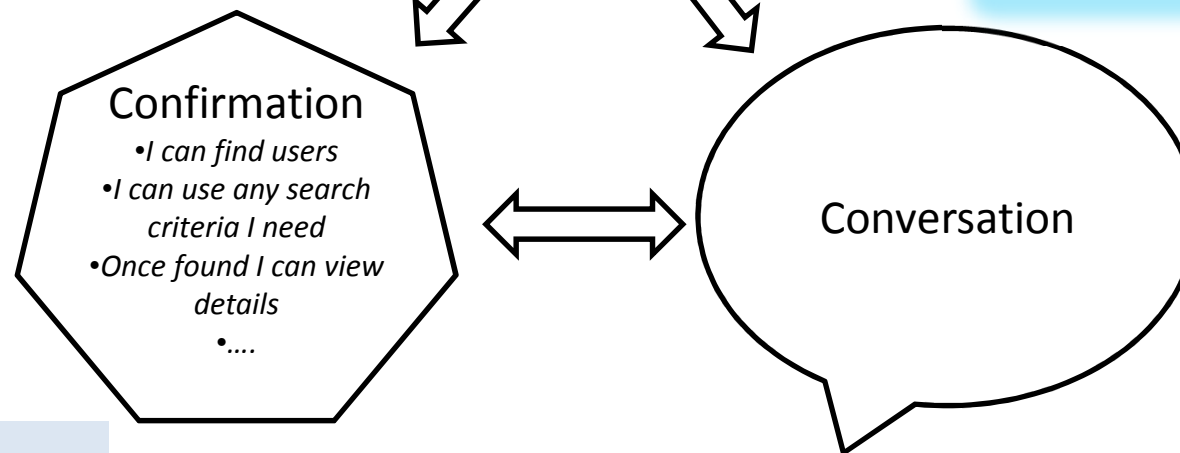
# User stories - CCC

## INVEST

As a <role>  
I need <action>  
so that <result>



- Independent
- Negotiable
- Valuable
- Estimable
- Small
- Testable



BDD:  
In order to <benefit>  
As a <role>  
I want <functionality>



# Purpose of confirmation/acceptance criteria

define the boundaries for a user story/feature

help the product owner answer what she needs in order for this feature to provide value (typically these are the minimum functional requirements)

help the team gain a shared understanding of the story/feature

help developers and testers to derive tests

help developers know when to stop adding more functionality to a story

# Level of detail in confirmation/acceptance criteria

Try to keep relatively high level

Detail goes into

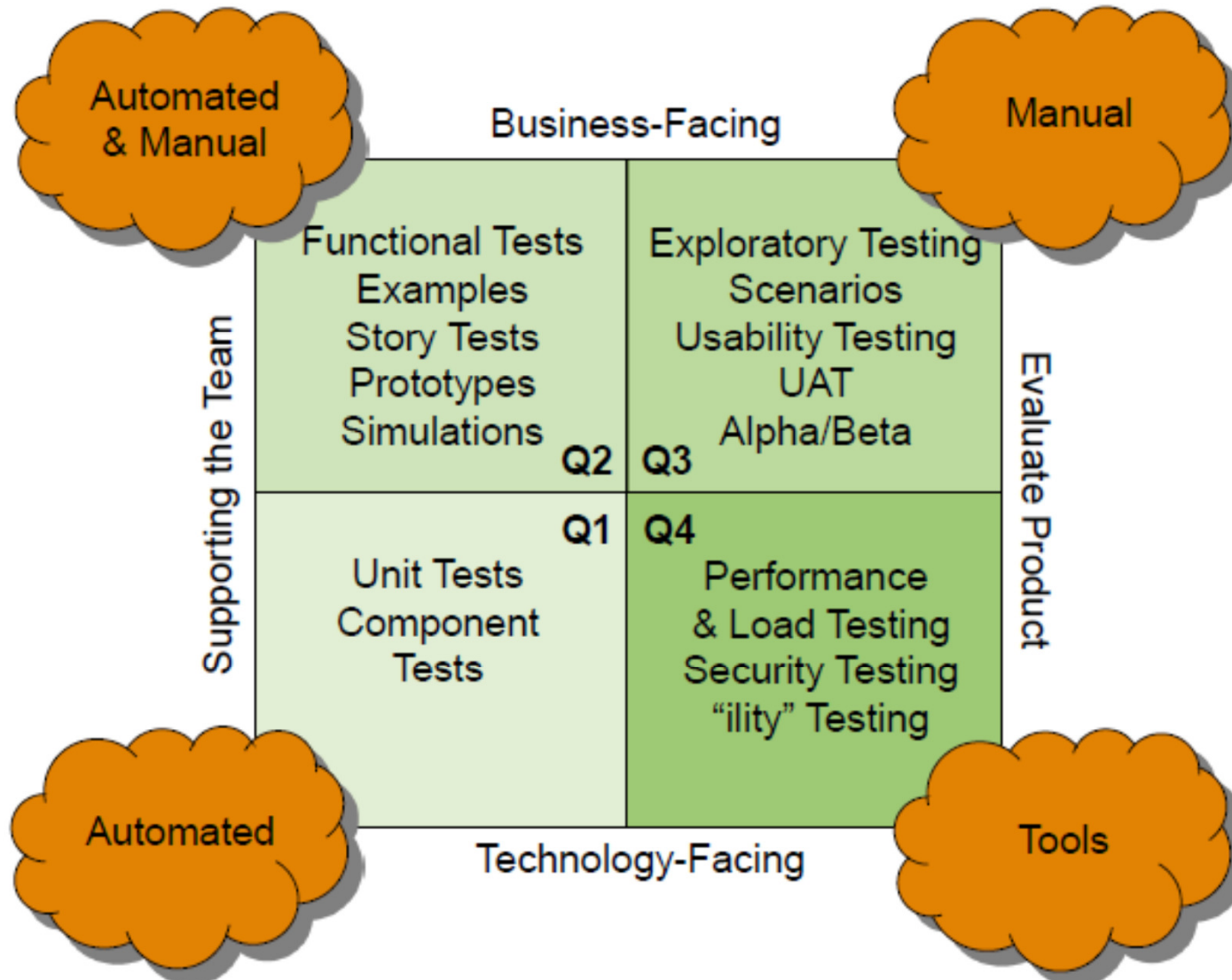
- Memory or internal team documentation (notes) – can include wireframes and screen mockups, validation rules, etc.
- Automated acceptance tests (ideally defined to be understood by all)

Note: examples make excellent acceptance criteria (see Specification by example by Gojko Adzic)

# Agenda

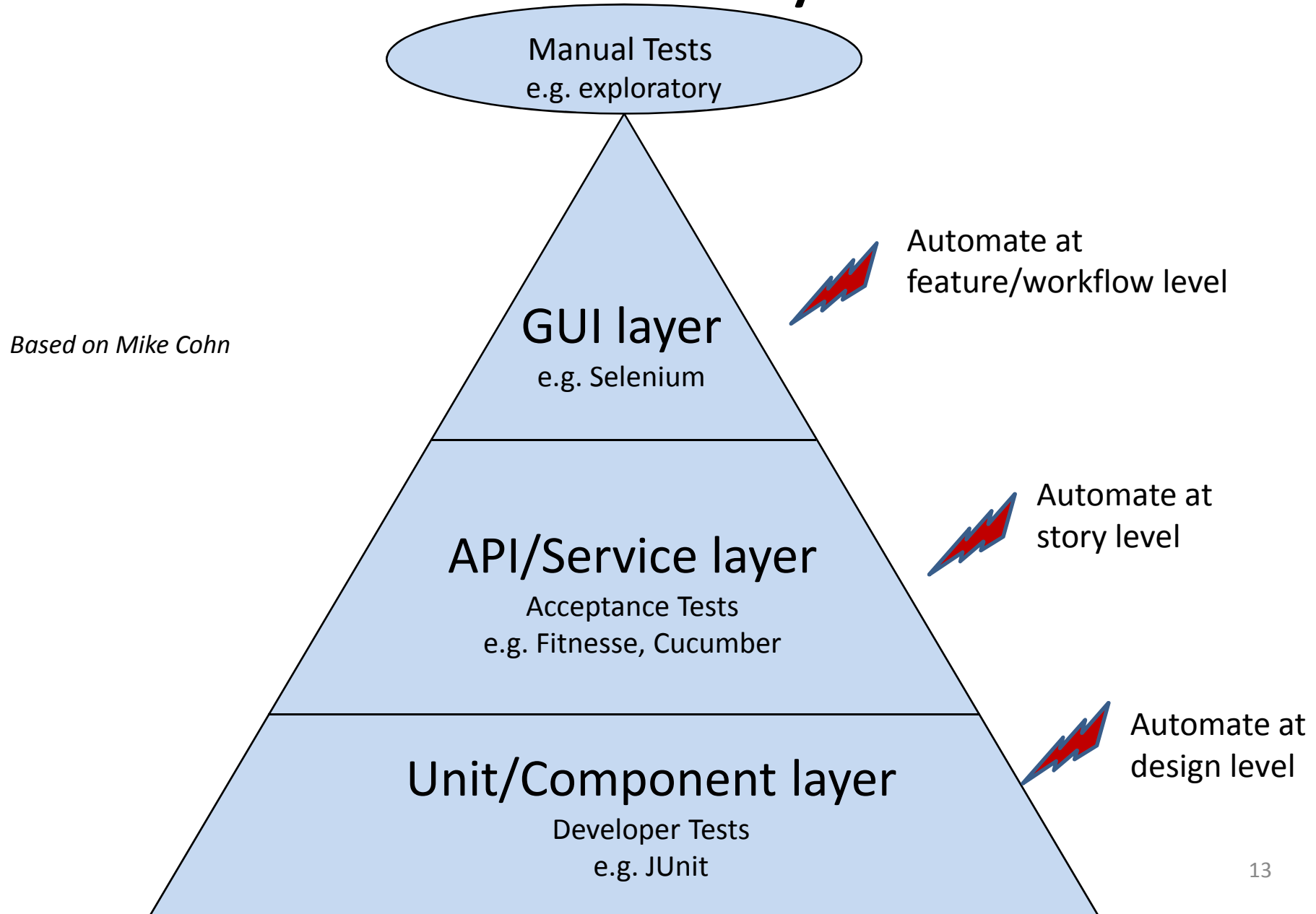
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# Agile Testing Quadrants



Brian Marick's agile testing matrix

# The Automation Pyramid



# Maintaining Context

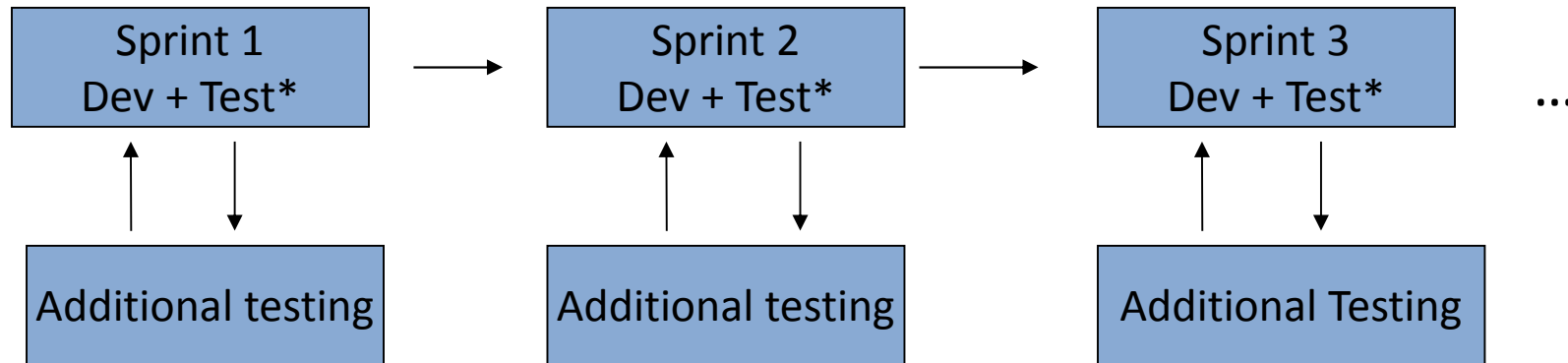


PRIORITY

GRANULARITY



# Sprints and Testing Strategy



\*Sprint test = Automated Unit & Acceptance, Manual Exploratory

Within a Sprint may need to perform additional testing as part of a defined but adaptive testing strategy e.g.:

- Feature/'epic' or workflow level testing
- Combination/feature interaction testing
- Business cycle & end-to-end scenario testing – exercising multiple stories, end of month processing, etc.
- Performance testing
- Usability testing
- Security testing
- System integration testing

- Note: Ideally any testing needed should be included within the Sprint rather than being deferred....otherwise are we defining one 'Done' for Sprints and another for Release...?

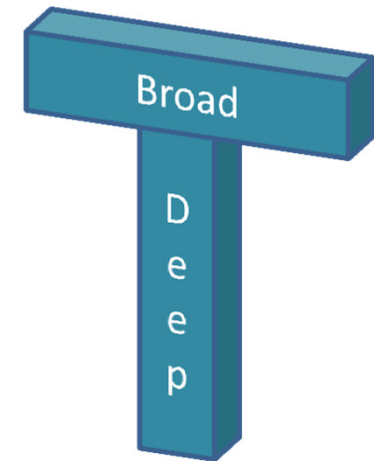
**Evolve to fully Working Software!!**

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# Role of tester

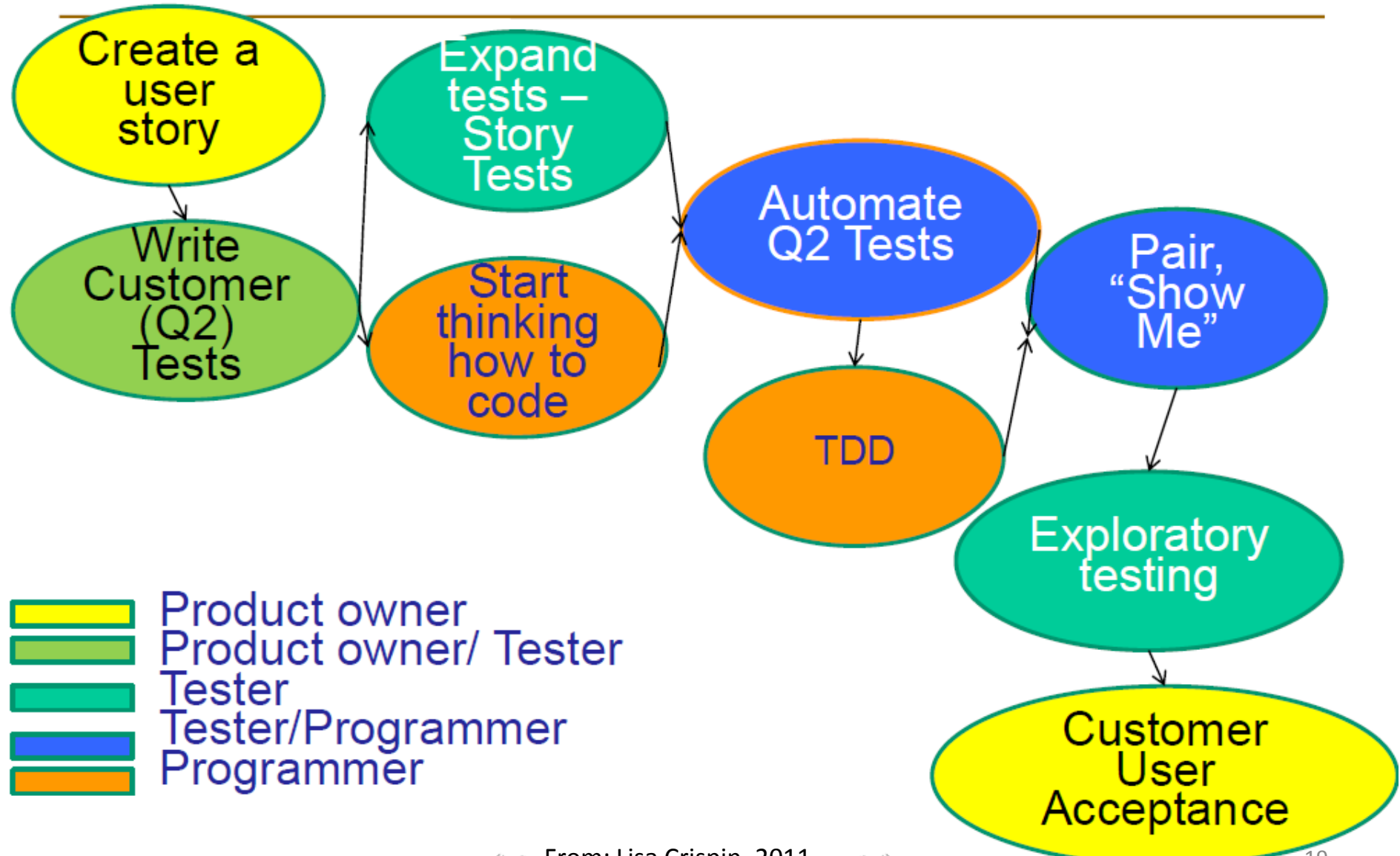


- Involved continuously from start...e.g.
  - Facilitate communication between the technical & business stakeholders
  - Support early validation of requirements
  - Help the customer/business stakeholders define acceptance criteria
  - Support creation of automated acceptance tests
    - Or define for developers to script
  - Expand scope of 'acceptance' tests
    - see agile testing strategy
  - Advise the team about overall risks and trends
  - Perform manual/exploratory tests
- Needs 'technical awareness'

# Role of developer in relation to testing

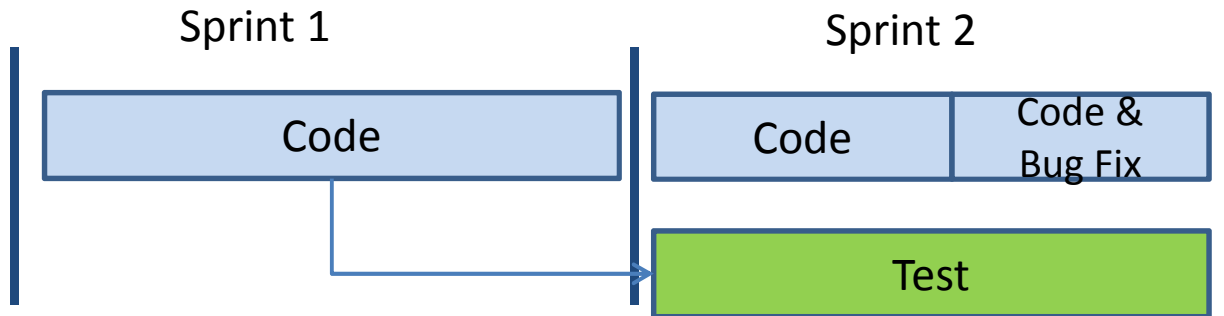
- Perform code reviews
- Use static analysis tools
- Perform effective unit testing
  - Automated ideally using TDD achieving structural coverage
- Perform component/component integration testing
  - Again ideally automated, API/Service level
- Support testers in Acceptance/System testing
  - Frameworks for automated API/Service level testing
  - GUI based automation

# Whole-team software development

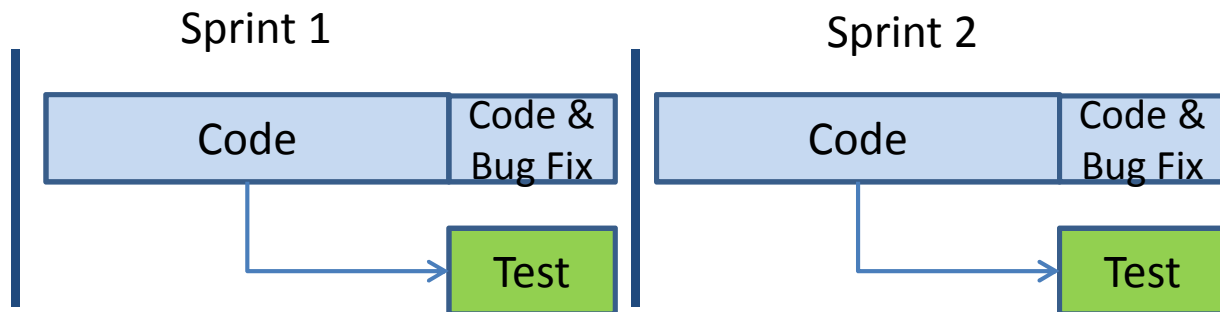


# Evolving from sequential to iterative/incremental

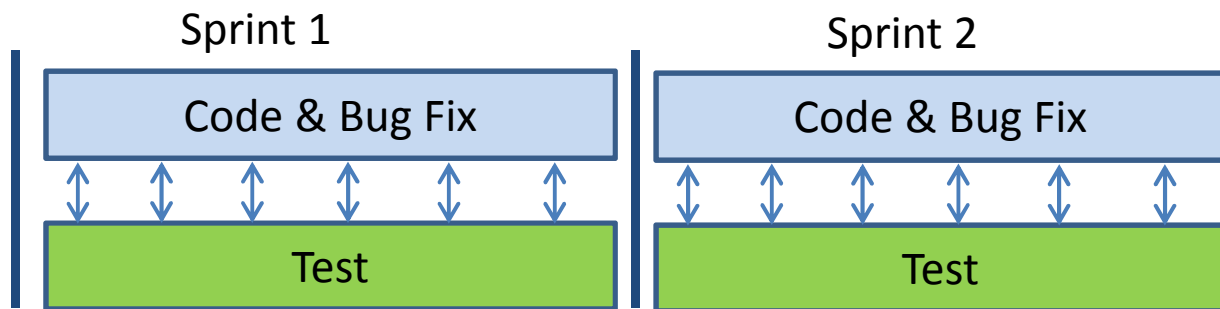
**A**



**B**



**C**



Task Board



# Key Opportunities to Innovate & Renovate

**Release  
Planning**



**Sprint  
Planning**

**Backlog  
grooming**

**Retrospectives**

# Q&A



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