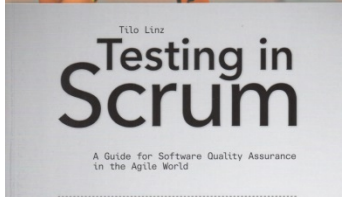
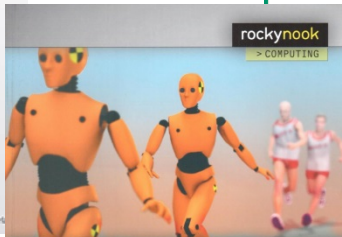


# Agile Testing

## Workshop

Tilo Linz, imbus AG





- *CoFounder and member of managing board imbus AG*
- *President ISTQB (2002-2005)*
- *Chairman German Testing Board e.V. (2002-2013)*
- *Author*
  - *Softwaretest Foundations*
  - *Software Testing Practice*
  - *Testing in Scrum*

# Why Agile ?

## Agile vs. Traditional

Agile project management is based on the assumption that the team learns from every Iteration.



The objective is to enable a project team to react quickly, simply and appropriate instead of wasting time and energy maintaining outdated plans.

# ■ Why Agile ?

## Objectives



- Reduced Time-to-Market
  - most valuable requirements first
  - short iterations resulting in shippable product
  
- Improved Software Quality
  - right requirements implemented
  - implemented right (done product)

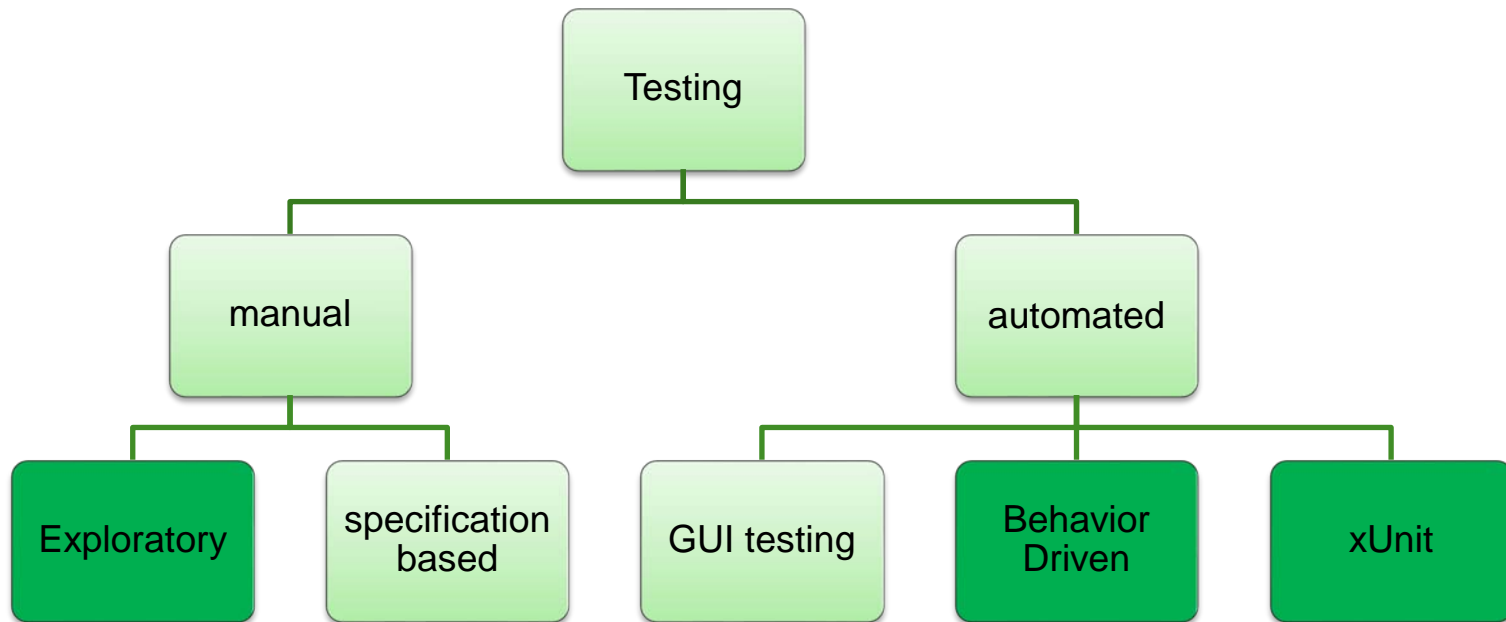
*Agile testing is testing of software within an agile development project. ... Agile testing follows the principles laid out in the Agile Manifesto and applies the principles of agile methodology to software testing.*

[URL: agiles Testen]




- Sprints & Timeboxing
  - Testing driven by iterations
  - Generating fast feedback
  
- Product & Sprint Backlog
  - Requirements understood (DoR)
  - Requirements testable (DoD)
  - Done product
  
- Transparency
  - Daily feedback on product quality
  - Input for retrospectives (process quality)

# Agile Testing Methods



 of more importance

 (maybe) of reduced importance

### Exploratory Testing

= Mission + Timebox

### Session Based Testing

= Mission + Timebox  
+ Report + Debriefing

### Test Tours

= Mission + Timebox  
+ Tour (Route/Taktik)

### Bug Hunting

= Mission + Timebox  
+  
Competition/Gameification

[Exploratory Testing]

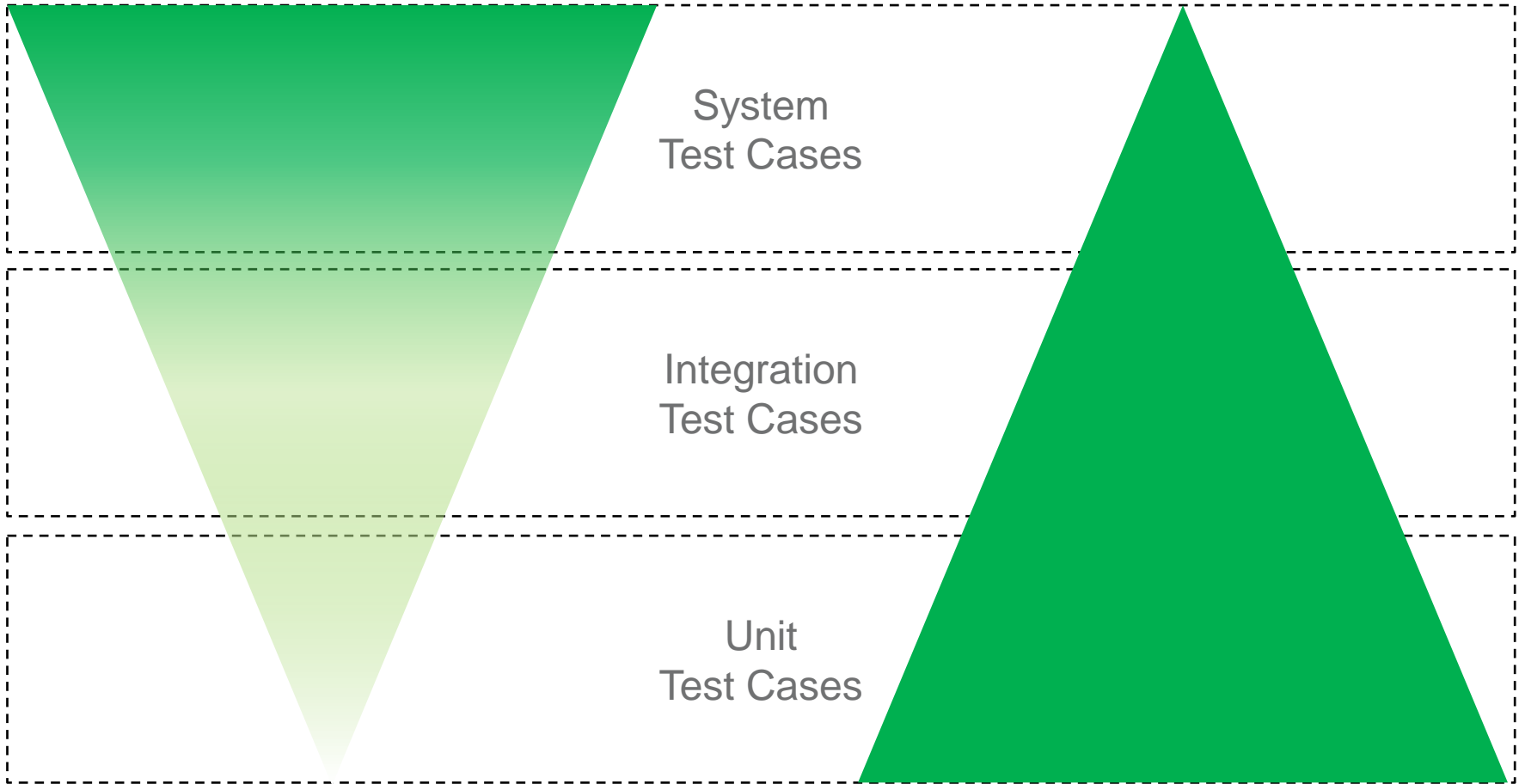


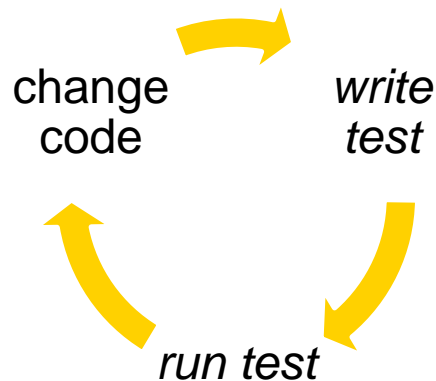
# Agile Testing

## Test Pyramid

(typical) V-Model Project

(ideal) agile Project





Test First is one of the most fundamental agile practice. Like many agile practices, the origin is the world of XP:

- turns the traditional sequence ‘program → test’ upside down to ‘test → program’
- tests are ,driving‘ the developers: ,test-driven development‘, - ,test-first programming‘, - ,Test First‘
- xUnit – Tools (s. [URL: Toolliste])

A test automation approach:

- to draft and automate tests in a natural-language-style (domain specific language, DSL)
- leveraging BDD frameworks
- can partially replace (traditional) system test cases

[See also: http://en.wikipedia.org/wiki/Behavior-driven\\_development](http://en.wikipedia.org/wiki/Behavior-driven_development)

# ■ Agile Testing

## Test First – Benefits

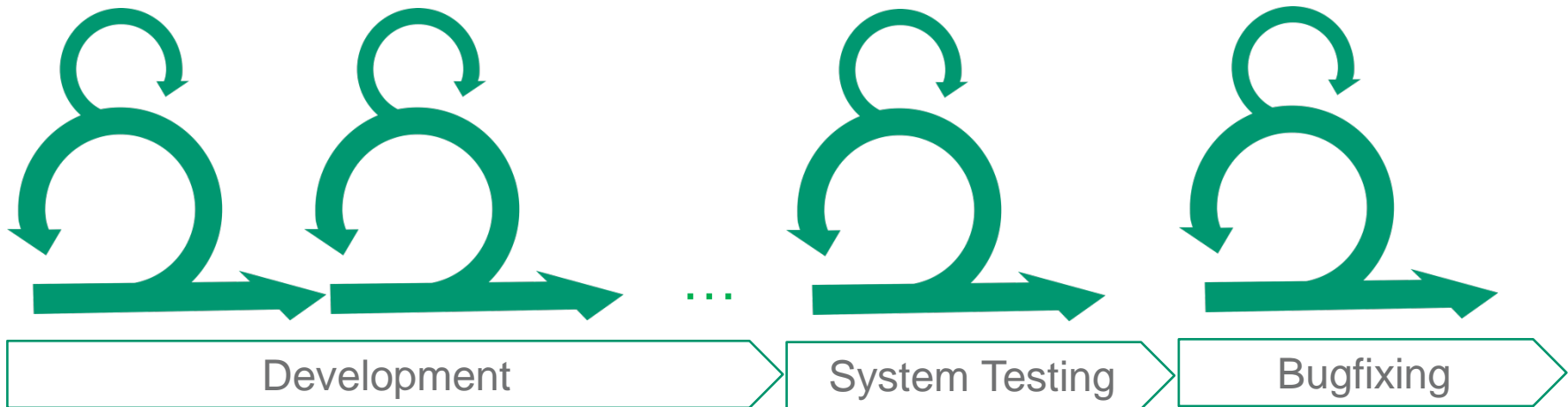


- Testing replaces trials
- Test cases provide objective feedback on progress
- Tests replace written specifications
- Test First improves the quality of public interfaces (APIs)
- Test First improves testability

- Done product for every increment
- Shippable = tested = working = „done“
  
- Fast daily feedback: Testers → Team
- Frequent feedback: Users/Customers → Team

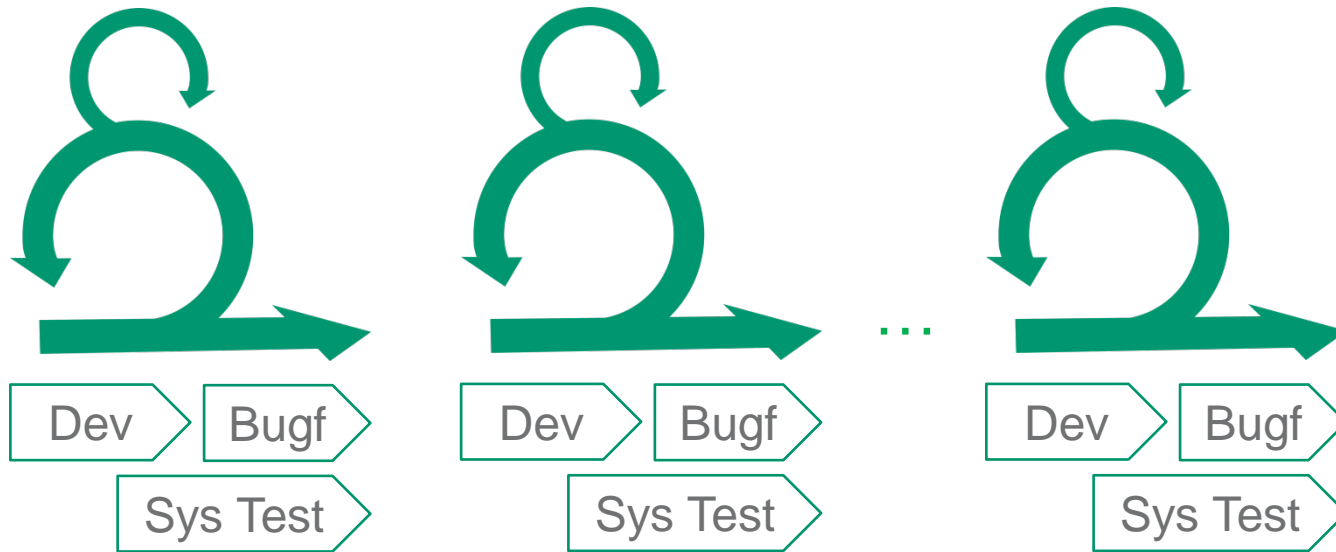
# Agile Testing

„System Test Sprint“ ?



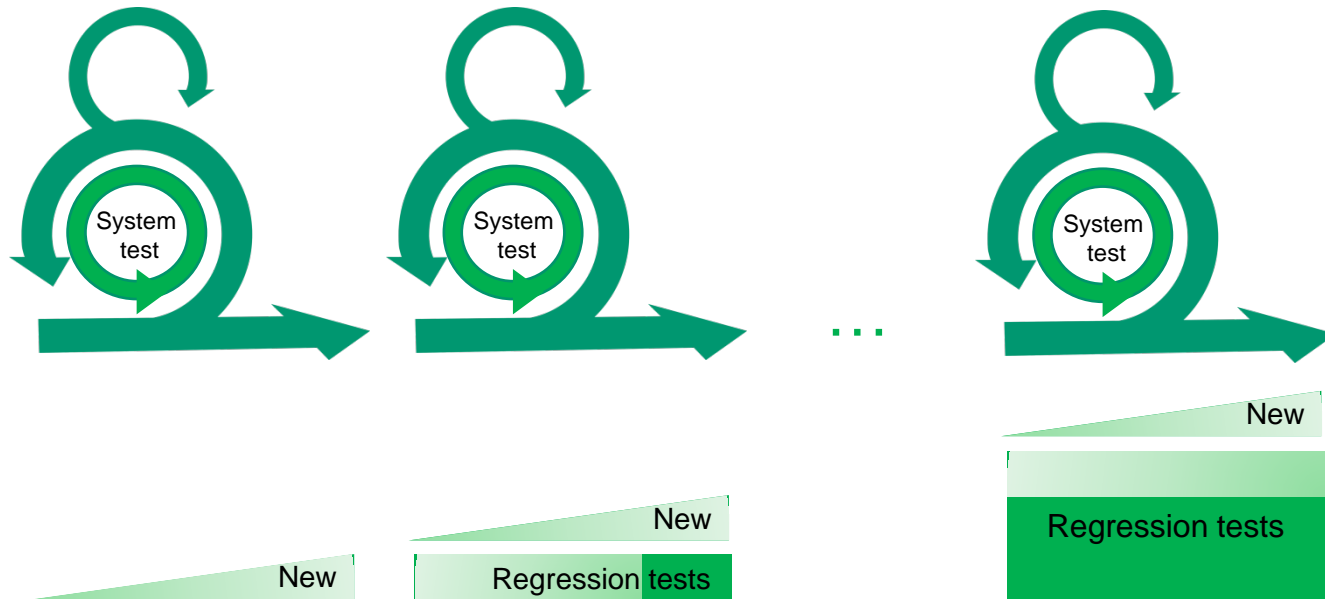
# Agile Testing

„End of Sprint Testing“ ?



# Agile Testing

Nonstop !



- Manual tests
- Automated tests



# Agile Transition

## Challenges



- From „Push“ to „Pull“
- From Config. Management to Continuous Integration
- From Test Phases to Test Nonstop

# Agile Transition

## Success factors



- Agile mindset / ‚Whole Team‘
- Coaching, Scrum Master
- Training (key methods)
  
- Test Automation
- Exploratory Testing
- Testing-Experts within each team  
(CI, Test First, Test design, ...)



Mike Cohn: Agile Estimating and Planning

Lisa Crispin: Agile Testing

Markus Gärtner: ATDD in der Praxis

Tilo Linz: Testen in Scrum-Projekten / Testing in Scrum

Robert C. Martin: Clean Code

Roman Pichler: Scrum

Ralf Wirdemann: Scrum mit User Stories

James Whittaker: Exploratory Software Testing

[http://de.wikipedia.org/wiki/Agiles\\_Testen](http://de.wikipedia.org/wiki/Agiles_Testen)

<https://www.testtoolreview.com/de/>

<https://www.scrum.org/Scrum-Guide>

<http://agilemanifesto.org>

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