The Addison-Wesley Signature Series

AGILE TESTING

A PRACTICAL GUIDE FOR TESTERS AND AGILE TEAMS

LISA CRISPIN
JANET GREGORY



Forewords by Mike Cohn and Brian Marick

Praise for Agile Testing

- "As Agile methods have entered the mainstream, we've learned a lot about how the testing discipline fits into Agile projects. Lisa and Janet give us a solid look at what to do, and what to avoid, in Agile testing."
- —Ron Jeffries, www.XProgramming.com
- "An excellent introduction to agile and how it affects the software test community!"
- —Gerard Meszaros, Agile Practice Lead and Chief Test Strategist at Solution Frameworks, Inc., an agile coaching and lean software development consultancy
- "In sports and music, people know the importance of practicing technique until it becomes a part of the way they do things. This book is about some of the most fundamental techniques in software development—how to build quality into code—techniques that should become second nature to every development team. The book provides both broad and in-depth coverage of how to move testing to the front of the development process, along with a liberal sprinkling of real-life examples that bring the book to life."
- —Mary Poppendieck, Author of Lean Software Development and Implementing Lean Software Development
- "Refreshingly pragmatic. Chock-full of wisdom. Absent of dogma. This book is a game-changer. Every software professional should read it."
- -Uncle Bob Martin, Object Mentor, Inc.
- "With *Agile Testing*, Lisa and Janet have used their holistic sensibility of testing to describe a culture shift for testers and teams willing to elevate their test effectiveness. The combination of real-life project experiences and specific techniques provide an excellent way to learn and adapt to continually changing project needs."
- —Adam Geras, M.Sc. Developer-Tester, Ideaca Knowledge Services
- "On Agile projects, everyone seems to ask, 'But, what about testing?' Is it the development team's responsibility entirely, the testing team, or a collaborative effort between developers and testers? Or, 'How much testing should we automate?' Lisa and Janet have written a book that finally answers these types of questions and more! Whether you're a tester, developer, or manager, you'll learn many great examples and stories from the real-world work experiences they've shared in this excellent book."
- —Paul Duvall, CTO of Stelligent and co-author of *Continuous Integration: Improving Software Quality and Reducing Risk*
- "Finally a book for testers on Agile teams that acknowledges there is not just one right way! *Agile Testing* provides comprehensive coverage of the issues testers face when they move to Agile: from tools and metrics to roles and process. Illustrated with numerous stories and examples from many contributors, it gives a clear picture of what successful Agile testers are doing today."
- —Bret Pettichord, Chief Technical Officer of WatirCraft and Lead Developer of Watir

Agile Testing: A Practical Guide for Testers and Agile Teams

Table of Contents

(`	\sim	n	t	e	n	t	c
l	,	()	П	ш	H	П	п	٠.

Foreword

Foreword

Preface

Acknowledgments

About the Authors

Part I: Introduction

Chapter 1 What Is Agile Testing, Anyway?

Agile Values

What Do We Mean by Agile Testing?

A Little Context for Roles and Activities on an Agile Team

How Is Agile Testing Different?

Whole-Team Approach

Summary

Chapter 2 Ten Principles for Agile Testers

Whats an Agile Tester?

The Agile Testing Mind-Set

Applying Agile Principles and Values

Adding Value

Summary

Part II: Organizational Challenges

Chapter 3 Cultural Challenges



Organizational Culture

Barriers to Successful Agile Adoption by Test/QA Teams

Introducing Change

Management Expectations

Change Doesnt Come Easy

Summary

Chapter 4 Team Logistics

Team Structure

Physical Logistics

Resources

Building a Team

Summary

Chapter 5 Transitioning Typical Processes

Seeking Lightweight Processes

Metrics

Defect Tracking

Test Planning

Existing Processes and Models

Summary

Part III: The Agile Testing Quadrants

Chapter 6 The Purpose of Testing

The Agile Testing Quadrants

Knowing When a Story Is Done

Managing Technical Debt

Testing in Context

Summary

Chapter 7 Technology-Facing Tests that Support the Team

An Agile Testing Foundation

Why Write and Execute These Tests?



Where Do Technology-Facing Tests Stop?

What If the Team Doesnt Do These Tests?

Toolkit

Summary

Chapter 8 Business-Facing Tests that Support the Team

Driving Development with Business-Facing Tests

The Requirements Quandary

Thin Slices, Small Chunks

How Do We Know Were Done?

Tests Mitigate Risk

Testability and Automation

Summary

Chapter 9 Toolkit for Business-Facing Tests that Support the Team

Business-Facing Test Tool Strategy

Tools to Elicit Examples and Requirements

Tools for Automating Tests Based on Examples

Strategies for Writing Tests

Testability

Test Management

Summary

Chapter 10 Business-Facing Tests that Critique the Product

Introduction to Quadrant

Demonstrations

Scenario Testing

Exploratory Testing

Usability Testing

Behind the GUI

Testing Documents and Documentation

Tools to Assist with Exploratory Testing



Sı	ur	nr	na	ary	/

Chapter 11 Critiquing the Product Using Technology-Facing

Tests

Introduction to Quadrant 4

Who Does It?

When Do You Do It?

ility Testing

Performance, Load, Stress, and Scalability Testing

Summary

Chapter 12 Summary of Testing Quadrants

Review of the Testing Quadrants

A System Test Example

Tests Driving Development

Automation

Critiquing the Product with Business-Facing Tests

Documentation

Using the Agile Testing Quadrants

Summary

Part IV: Automation

Chapter 13 Why We Want to Automate Tests and What Holds Us Back

Why Automate?

Barriers to AutomationThings that Get in the Way

Can We Overcome These Barriers?

Summary

Chapter 14 An Agile Test Automation Strategy

An Agile Approach to Test Automation

What Can We Automate?

What Shouldnt We Automate?



What Might Be Hard to Automate?

Developing an Automation StrategyWhere Do We Start?

Applying Agile Principles to Test Automation

Supplying Data for Tests

Evaluating Automation Tools

Implementing Automation

Managing Automated Tests

Go Get Started

Summary

Part V: An Iteration in the Life of a Tester

Chapter 15 Tester Activities in Release or Theme Planning

The Purpose of Release Planning

Sizing

Prioritizing

Whats in Scope?

Test Planning

Test Plan Alternatives

Preparing for Visibility

Summary

Chapter 16 Hit the Ground Running

Be Proactive

Advance Clarity

Examples

Test Strategies

Prioritize Defects

Resources

Summary

Chapter 17 Iteration Kickoff

Iteration Planning



Testable Stories

Collaborate with Customers

High-Level Tests and Examples

Summary

Chapter 18 Coding and Testing

Driving Development

Tests that Critique the Product

Collaborate with Programmers

Talk to Customers

Completing Testing Tasks

Dealing with Bugs

Its All about Choices

Facilitate Communication

Regression Tests

Resources

Iteration Metrics

Summary

Chapter 19 Wrap Up the Iteration

Iteration Demo

Retrospectives

Celebrate Successes

Summary

Chapter 20 Successful Delivery

What Makes a Product?

Planning Enough Time for Testing

The End Game

Customer Testing

Post-Development Testing Cycles

Deliverables



Releasing the Product Customer Expectations Summary

Part VI: Summary

Chapter 21 Key Success Factors

Success Factor 1: Use the Whole-Team Approach Success Factor 2: Adopt an Agile Testing Mind-Set

Success Factor 3: Automate Regression Testing

Success Factor 4: Provide and Obtain Feedback

Success Factor 5: Build a Foundation of Core Practices

Success Factor 6: Collaborate with Customers

Success Factor 7: Look at the Big Picture

Summary

Glossary

Α

В

C

D

F

F

G

.

1

ı

M

Р

 \cap



R

S

Т

U

٧

W

Bibliography

Index