Myron Kirk
Head of Test CoE, Boots

Testing: Evolution Or Revolution?
Testing: Evolution or Revolution?

Myron Kirk
Head of Test Centre of Expertise, Boots UK
My Role at Boots

- 20 years of IT experience
  - Software Testing
  - Software Engineering
  - Management and leadership

- Leading the Test CoE and Transforming Testing
  - Innovation: ways of working, tooling, continuous automation, agile testing
  - Implementing a ‘One Team’ partnership model

What We Stand For

Our mission
Be the first choice for pharmacy, health and beauty - caring for people, customers and communities everywhere

Our purpose
Championing everyone’s right to feel good

Our values
Trust
Care
Innovation
Dedication
Partnership
Software Testing Grows Up!

- Economies of Scale & Reduced Costs
- Industrialised Testing
- Independent Teams & Test CoEs
- Career Path & Qualifications
- SDLC Phases & Recognised Roles
- Mature Processes
- Global Teams & Partnerships
- Focus On Defect Detection
- Specialist Tools

Testing: Evolution or Revolution by Myron Kirk

let's feel good
The Context is Shifting Around Software Testing

- Rapid technological advances and changing consumer habits are key trends.
- Time to market is key, but so are quality & features. Enter Agile & DevOps.
- DevOps, presents technical and logistical challenges.
- Agile really is here this time, but in different shapes and sizes.
- Globalisation is still a theme, but the economics are continually changing.

- 51% of online sales via Mobile
- DevOps leveraged to deploy 50 or more times per day
- 50% of customer projects are now Agile in some form.
Big Challenges for Software Testing

• **More Devices, More Testing:** Technological advancement brings with it more variations of technology to test. How will we test more in less time?

• **Defect Detection:** Manual test phases focused upon defect detection take too long. How do we prevent defects & increase the pace of testing?

• **DevOps Releases:** How do we regression test 50+ releases per day?

• **Agile Testing:** How will large, separate test teams meet the challenge?

• **Future Testers:** Bridging the gap between product owners and development. How will testers integrate into the new paradigm, e.g. location, skills?

“Big, centralized Centers of Excellence (COEs) are a thing of the past; testers must work with development teams on day-to-day project activities”

Forrester 2013
Paradigm Shift for Software Testing: Skills Journey

Present

Test Managers

Test Leads

Automation Testers

Functional Testers

Future

QA Managers

Business Experts

Technology Specialists

Functional Testers

• Test Teams & Test CoEs need to transform their competency base.
• Functional testing skills will still be required, but in smaller numbers.
• The role of testing becomes focused on technology and achieving business outcomes – two very different skill sets.
• Successful test teams will embrace and plan for the change to succeed.
Increased demand for technical skills – testers that can code.

Testers will need to understand the business goals & vision.

Test teams will need to achieve a balance of technical & business skills.

Testers become quality leaders within a multi-disciplined team.
Paradigm Shift for Software Testing
Automation Everywhere

- Automated test execution in place from day 1.
- Automate test design & leverage wireframe/prototype automation.
- Drive for continuous automation.
- Set targets, push for increased maturity & remove barriers.

Tiered Automation Strategy

- Continuous build integration & automation.
- Early, frequent release-driven automation.
- Regular automated regression testing.
Paradigm Shift for Software Testing: Embrace Agile

- Co-locate testers with sprint teams but still leverage global teams.
- Cross-skill and encourage flexibility with consistency of practice.
- Integrated test planning deliverables covering all teams & types of testing.
- Automate in-sprint & in parallel to first manual runs (or before if possible).
- Utilise functional understanding to focus only on tests that deliver value.
Paradigm Shift for Software Testing: Journey Towards Agile – Example

**Iteration 1**
- Automated execution of IT1
- Functional & Non-functional Test Execution for IT1

**Iteration 2**
- Automated execution of IT1 & IT2
- Functional & Non-functional Test Execution for IT1 & IT2

**Iteration 3**
- Automated execution of IT1, IT2 & IT3
- Functional & Non-functional Test Execution for IT1, IT2 & IT3

**RELEASE**
- D1.1
- D1.2
- QA

**RELEASE HARDENING** (Regression Focus)
- SIT
- UAT
- Performance Test
- OAT

In-Sprint Engagement has boosted quality

Automation coverage is maintained as scope grows

Automate hardening phase & reduce over time
Paradigm Shift for Software Testing: Prevention Over Detection

- Implement deep root cause analysis with a ‘one team’ mind-set.
- Harmonise test planning to target testing to be effective & efficient.
- Use intelligent metrics & statistics that all parties underwrite.
- Consolidate data sources into a Single View of Quality.
- Track in-flight quality & make value driven, early quality interventions.

Create a Quality Mind-set

“Be a yardstick of quality. Some people aren't used to an environment where excellence is expected.”

Steve Jobs
Transition to Test Competency Centre

Project Delivery

Quality Engineering
- Continuous Automation
- Performance Engineering
- Service Imp. Testing
- People Development
- OAT

Foundation Services
- Root Cause Analysis & Defect Prevention
- Single View of Quality
- Agile Test Processes
- Continuous Analysis & Improvement

Embedded Test Teams

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Summary

- Technological advancements and changes to the way IT projects are delivered significantly impacts Software Testing as a discipline.

- Test teams need a sound strategy to shift automation left – “Automation Everywhere”.

- Agile should be fully embraced by Test Teams. Although, forward planning is essential as teams have to adapt and change!

- Testers become ‘Quality Leaders’ within projects, actively understanding and improving quality early to prevent late quality issues.

- Skillsets will change with an emphasis upon technical skills and business insight.

- Test CoEs become competency centres in order to offer a higher level of capability coupled with the flexibility required to deliver Agile projects.

“Resilience is all about being able to overcome the unexpected. Sustainability is about survival. The goal of resilience is to thrive.”

Jamais Cascio
Sources of Information

- Insights provided by Cognizant
- Insights provided by Test Direct
- Forrester: https://www.forrester.com/report/Consistent+Performance+In+Agile+Teams+Must+Include+Testing/-/E-RES87681