devops …
een nieuwe koers
of het eindpunt voor testers?

Jean-Paul Varwijk & Huib Schoots - TestNet Jubilieumevenement 2017

Improve
QUALITY SERVICES

THE WONDROUS WORLD OF SOFTWARE TESTING

ARBOROSA

Time schedule

What is devops? (40)
- Lecture – 10 minutes
- Discussion – 30 minutes

Radical automation (10)
- Interactive lecture – 10 minutes

Testing in devops (70)
- Lecture – 10 minutes
- Discussion in groups – 40 minutes   **11:00 = BREAK (30)**
- Debrief – 20 min

Experiences (30)

Future (30)

What is DevOps?

What problem is devops trying to solve?

The opposing interests of

building & changing software vs.

running & maintaining software

What do you think devops is?

Work in groups of 6

If you are not speaking, take notes

1) **Each at a time explain in 60 seconds what devops is to you**

2) **When you are all done take one minute to summarize your thoughts on devops**

devops defined

devops is a term used to refer to a set of practices that emphasize the collaboration and communication of both software developers and IT professionals while automating the process of software delivery and infrastructure changes. It aims at establishing a culture and environment where building, testing, releasing and operating software can happen rapidly, frequently, and more reliably.

(Wikipedia)

At its essence, devops is a culture, a movement, a philosophy.

It's a firm handshake between development and operations that emphasizes a shift in mindset, better collaboration, and tighter integration. It unites agile, continuous delivery, automation, and much more, to help development and operations teams be more efficient, innovate faster, and deliver higher value to businesses and customers.

(Atlassian)

devops means…

Bringing people together
All stakeholders contribute
(Business Owners, Architects, Developers,
Testers, Business Analysts, Support, Operations,
Security, Suppliers, …)

Processes
- Business process
- Change process
- Practices
  - Release Planning
  - Continuous Business Planning
  - Continuous Integration
  - Continuous Delivery
  - Continuous Testing
  - Continuous Monitoring & Feedback
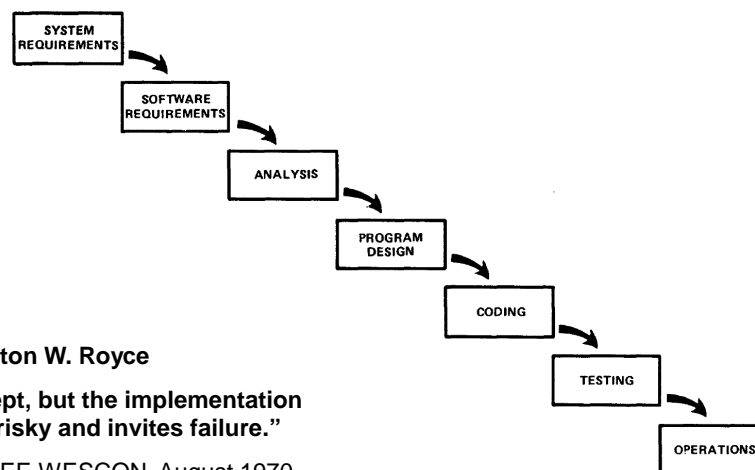 - Continuous Improvement

Culture
- Collaboration and sharing across roles
- Focus on business objectives/value
- Learning through experimentation

Technology
Allowing focus on high-value creative work
while delegating routine tasks to automation

- Infrastructure as Code
- Delivery pipeline
- Deployment

"Managing the development of large software systems"

Dr. Winston W. Royce

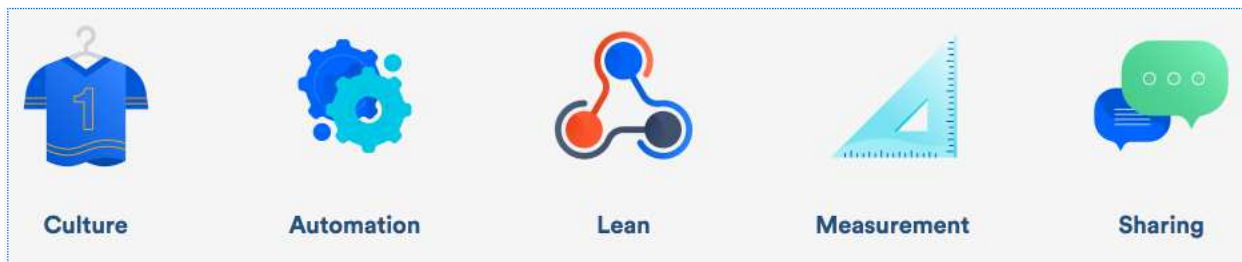"**I believe in this concept, but the implementation described above is risky and invites failure.**"

From: Proceedings, IEEE WESCON, August 1970

"Managing the development of large software systems"

Continuously

Continuously

Continuously

Continuously

Continuously

Continuously

Continuously

Dr. Winston W. Royce

"I believe in this concept, but the implementation
described above is risky and invites failure."

From: Proceedings, IEEE WESCON, August 1970

---

devops framework: CALMS

Culture   **Automation**   **Lean**   **Measurement**   **Sharing**

Culture: cross-functional collaboration

Automation: configuration as code, continuous delivery, test automation

Lean: continuous improvement everywhere

Measurement: help to make decisions to improve (feature usage, customer journeys, SLA, etc.)

Sharing: bridge gaps, create common ground, share responsibility and success

**Bridge the gap between
the 'fast dynamic' world of development &
the 'rigid static' world of IT operations
to be able to
create value for our customers
by delivering reliable software fast**

Radical Automation

Why don't ~~developers~~ programmers not just test everything?!

Can't we just automate everything?

Continuous Testing

Continuous (or … shift left)

Teams focus on quality, work on short feedback cycles instead of late in the process.

The goal is to increase quality, shorten long test cycles and reduce the possibility of unpleasant surprises at the end of the development cycle or worse, in production.

Test Types

- Checking
- Exploring
- Monitoring
  - Checks over time

Testing

- Unit tests
- Integration tests
- Functional tests
- Acceptance tests
- Performance tests
- Security tests
- Health checks

Conditions

- Test data management
- Test environment provisioning and configuration
- Test skills
  - Test design
  - Experience & practice
  - Context knowledge
- Creative and critical thinking
- Tool support
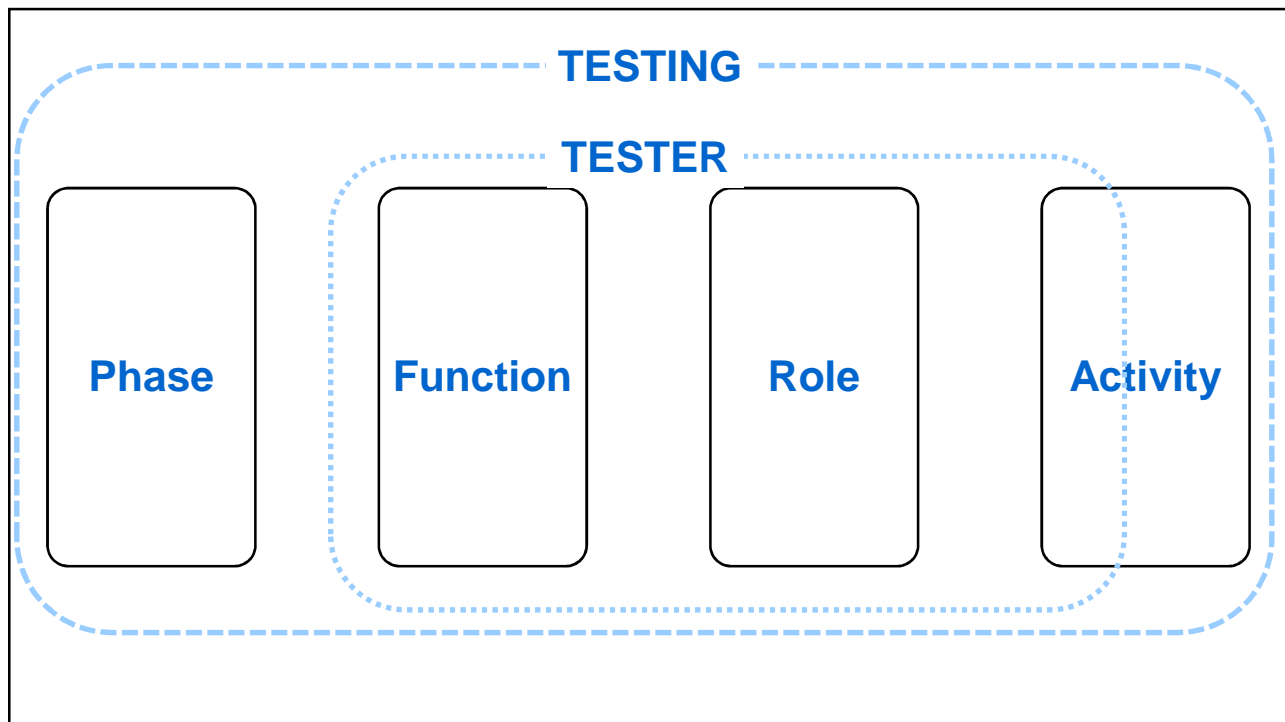- Deal with complexity

Testing in DevOps

Testing in Agile / DevOps

Low level testing

- Unit testing
- Test Driven Development
- Developer - Tester Pair testing

High level testing

- Tool aided testing
- Behavior Driven Testing
- Exploratory Testing

TESTING

TESTER

| Phase | Function | Role | Activity |

How do you test in devops?

Work in groups of 6
Create flipcharts

1. **How do you test in devops** **(15 min)**
2. **What changed in testing in devops** **(5 min)**
3. **Do we need testers in devops? And what do they do?** **(15 min)**
4. **Do we need test managers in devops?** **(5 min)**
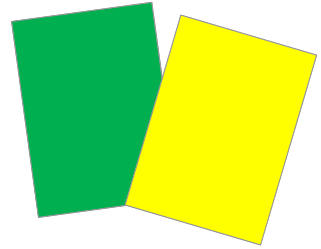
devops: experiences

What are your experiences "doing" devops?

The future

Discussion: testers of the future…

- **What does the future look like for testers?**
- **What character qualities and skills are important?**
- **How can you prepare for that future?**

Testers of the future

- Critical thinking, asking questions: problem solving vs problem searching mindset
- Excellent testing is needed for feedback and learning … and cannot be automated
- Testing isn't fun for many people: so they don't want to do it or learn it (and will never be excellent)

Which means:
- Less testing, more coaching
- More technical skills needed to effectively collaborate
- Create strategy, give insight & keep overview

Prediction:
- Old school testing (creating test plans & test cases and execute them later) will die!
- Excellent testers (who surprise teams by finding awesome bugs) will be needed!
- We think we will need less testers in the future…

References

- Testen is dood. Nee hè, toch niet alweer?
  http://nieuws.testnet.org/vak/testen-is-dood-nee-he-toch-niet-alweer/
- DevOps: Breaking the Development-Operations barrier
  http://www.atlassian.com/devops
- What is DevOps?
  http://aws.amazon.com/devops/what-is-devops/
- Continuous Delivery
  http://continuousdelivery.com/
- The Phoenix Project (book)
- List of DevOps Blogs and Resources for Learning
  http://devopscube.com/list-of-devops-blogs-and-resources/
- Continuous Testing in DevOps
  http://danashby.co.uk/2016/10/19/continuous-testing-in-devops/
- Continuous Delivery Testing Pathway
  http://katrinatester.blogspot.com/2015/09/continuous-delivery-testing-pathway.html
- Don't Fear, Testing Team! DevOps is here!
  http://devops.com/dont-fear-testing-team-devops-is-here/

Contacts

Jean-Paul Varwijk

@arborosa

jean-paul@arborosa.com

06 – 20 08 94 51

http://www.arborosa.org

Huib Schoots

@huibschoots

huib.schoots@improveqs.nl

06 – 24 64 10 33

http://www.huibschoots.nl