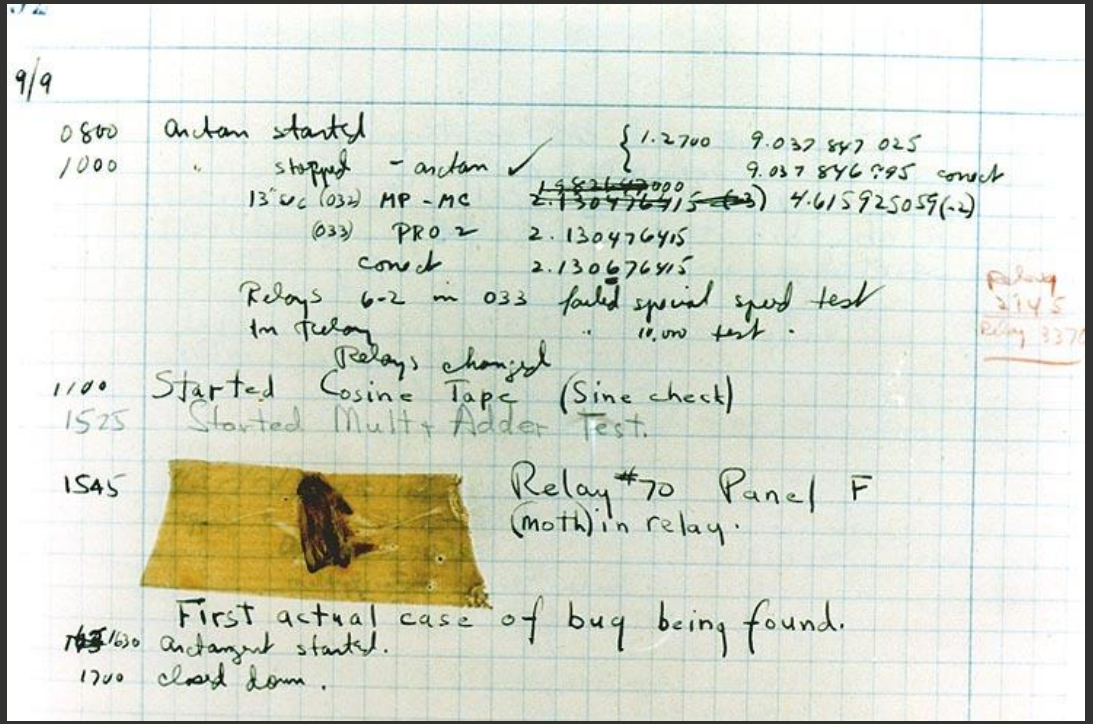
Trends in test automation

Dutch testing day

Jori Ramakers & Marielle Winarto

FUTURE

The Past

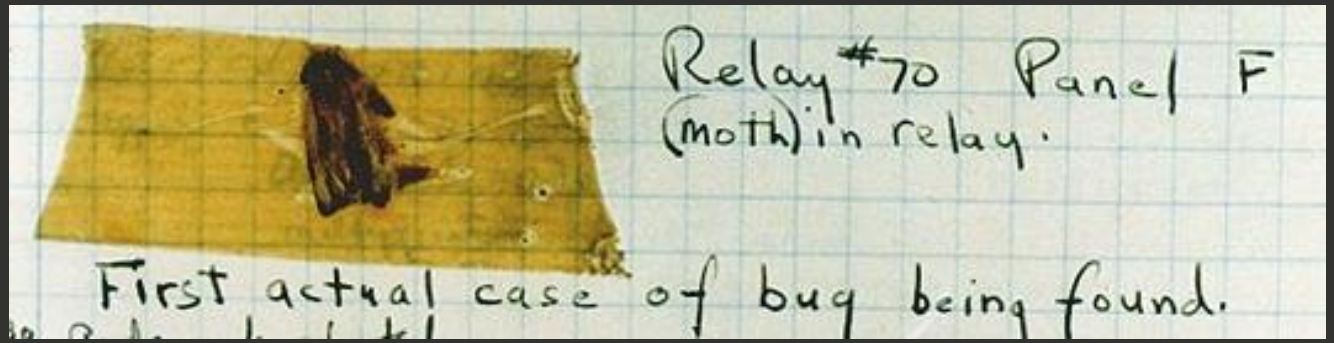


9/9

0800 Arctan started
1000 " stopped - arctan ✓ { 1.2700 9.037 847 025
9.037 846 795 correct
13" sec (032) MP - MC ~~1.982647000~~ ~~2.130476415~~ ~~(-3)~~ 4.615925059(-2)
(033) PRO 2 2.130476415
correct 2.130676415
Relays 6-2 in 033 failed special speed test
In relay " 10,000 test.
Relays changed
1100 Started Cosine Tape (Sine check)
1525 Started Mult + Adder Test.
1545 Relay #70 Panel F
(moth) in relay.
First actual case of bug being found.
1630 Arctangent started.
1700 closed down.

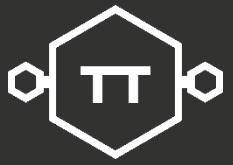
Relay 2145
Relay 3370

The Past


Relay #70 Panel F
(moth) in relay.
First actual case of bug being found.

2015

security
software defined
3d printing
internet of things
cloud
web-scale
everywhere
analytics
smart machines
context-rich

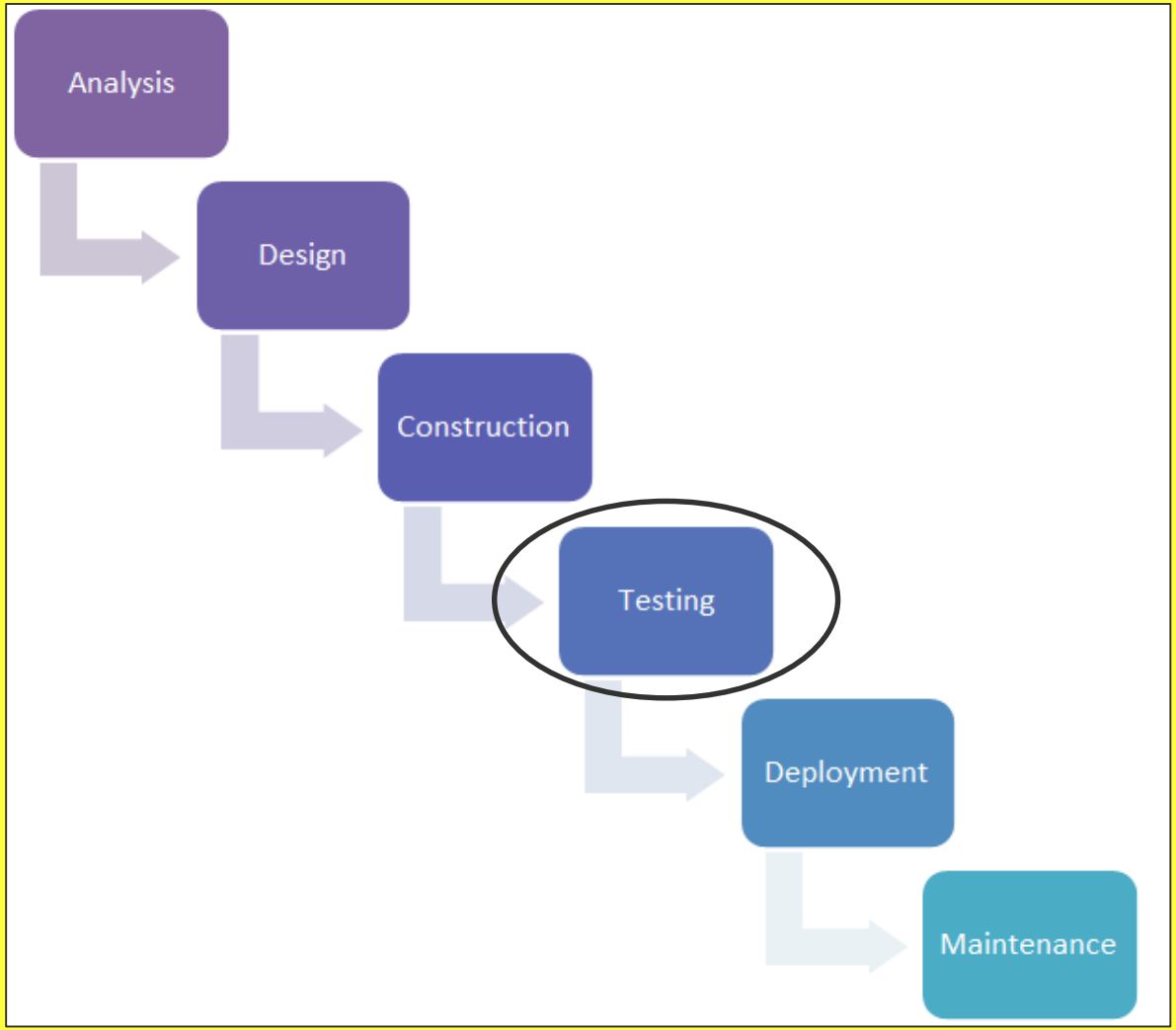


Test Automation

faster, more frequent and better testing
with tools

msi

ANALYSIS
SPECIFICATION
IMPLEMENT
PROJECT
DESIGN
TESTING
DEVELOP

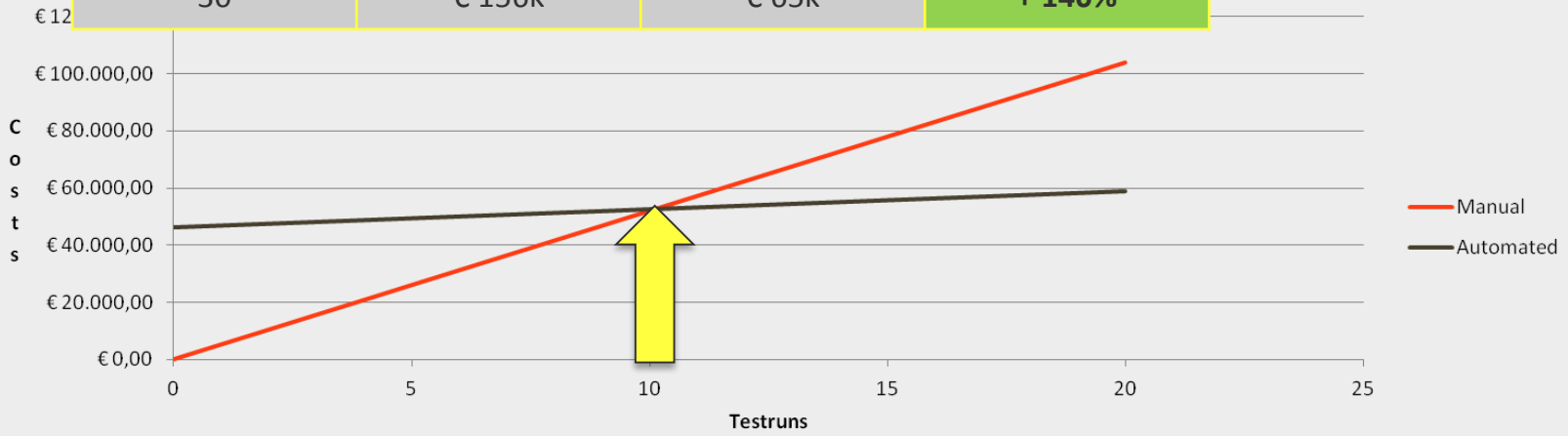

Analysis
Design
Construction
Testing
Deployment
Maintenance

Question

Automating the regression test

ROI

Testruns	Manual Execution	Automated execution	ROI
1	€ 5k	€ 47k	- 90%
5	€ 26k	€ 50k	- 50%
11	€ 57k	€ 54k	+ 10%
15	€ 78k	€ 56k	**+ 40%**
30	€ 156k	€ 65k	**+ 140%**

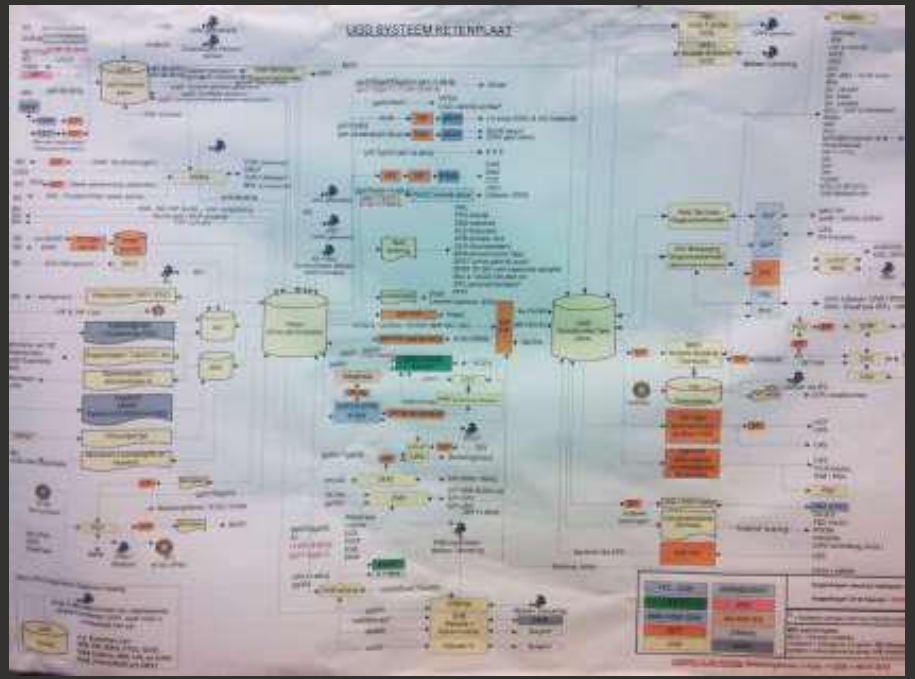


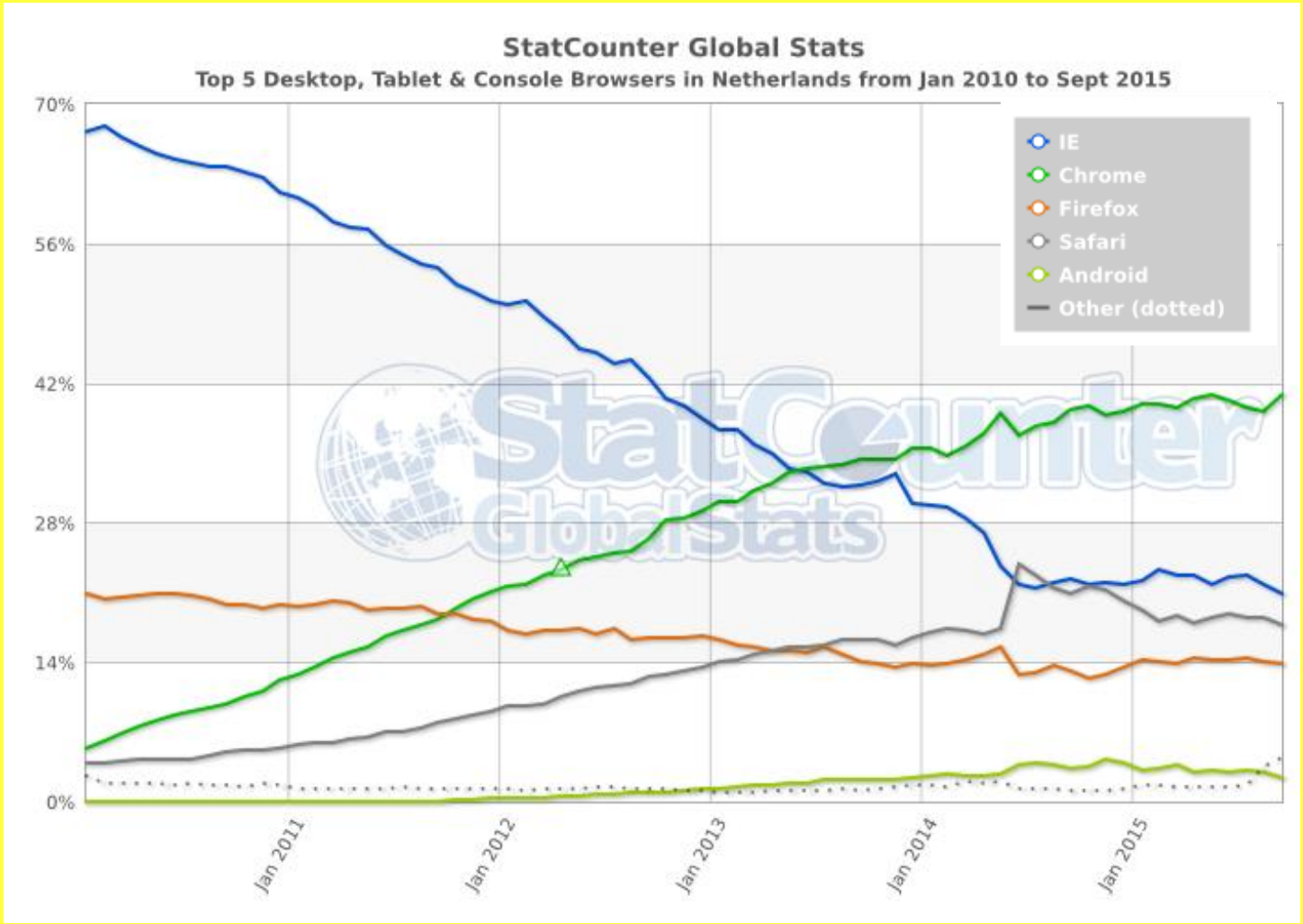
A specialist's job

Test Automation

- Only for regression testing
- Afterwards
- Technical
- Long ROI

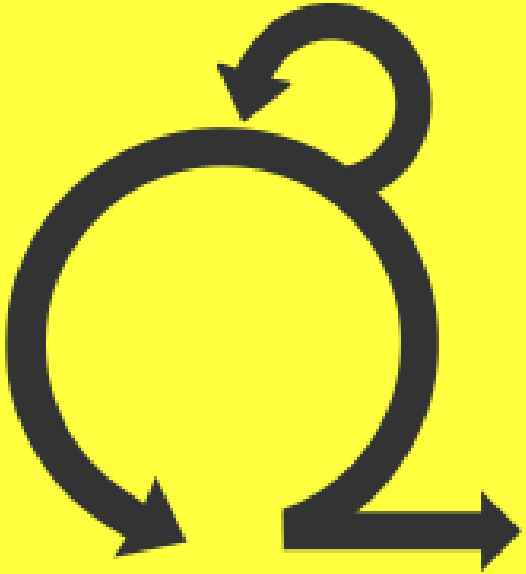
Integrations

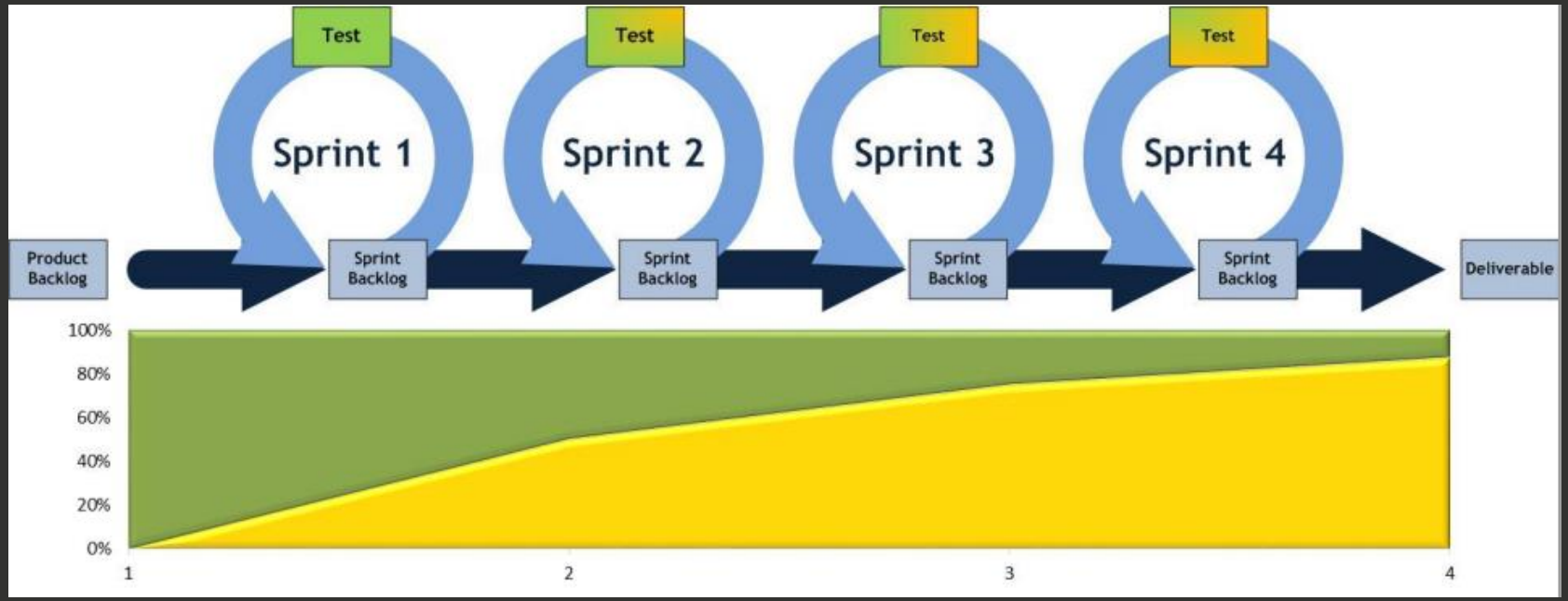


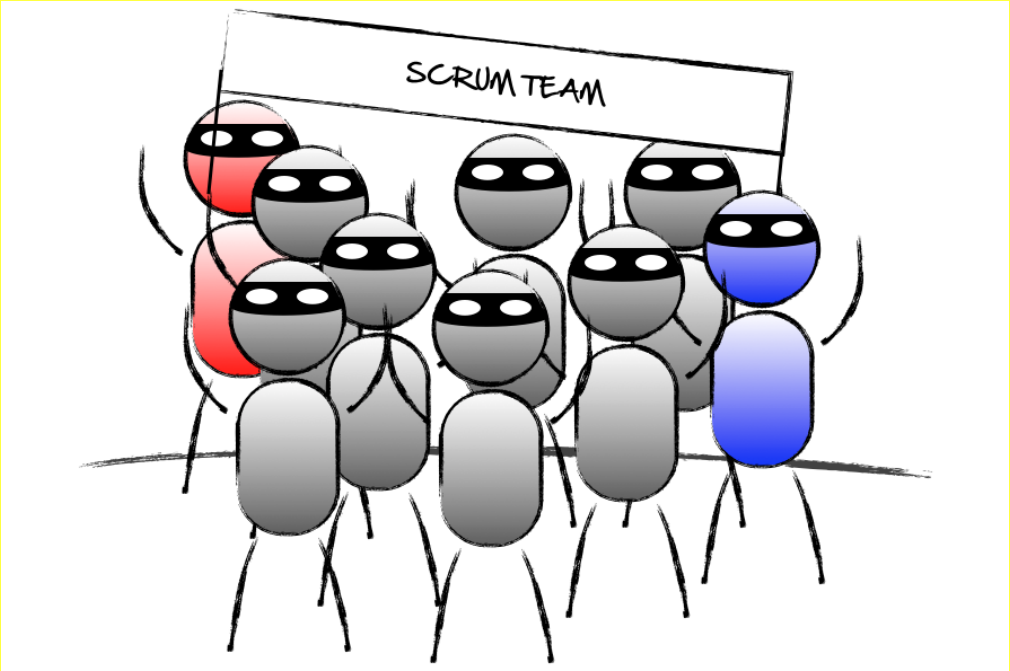

StatCounter Global Stats
Top 5 Desktop, Tablet & Console Browsers in Netherlands from Jan 2010 to Sept 2015
70%
56%
42%
28%
14%
0%
Jan 2011
Jan 2012
Jan 2013
Jan 2014
Jan 2015
IE
Chrome
Firefox
Safari
Android
Other (dotted)
StatCounter
GlobalStats

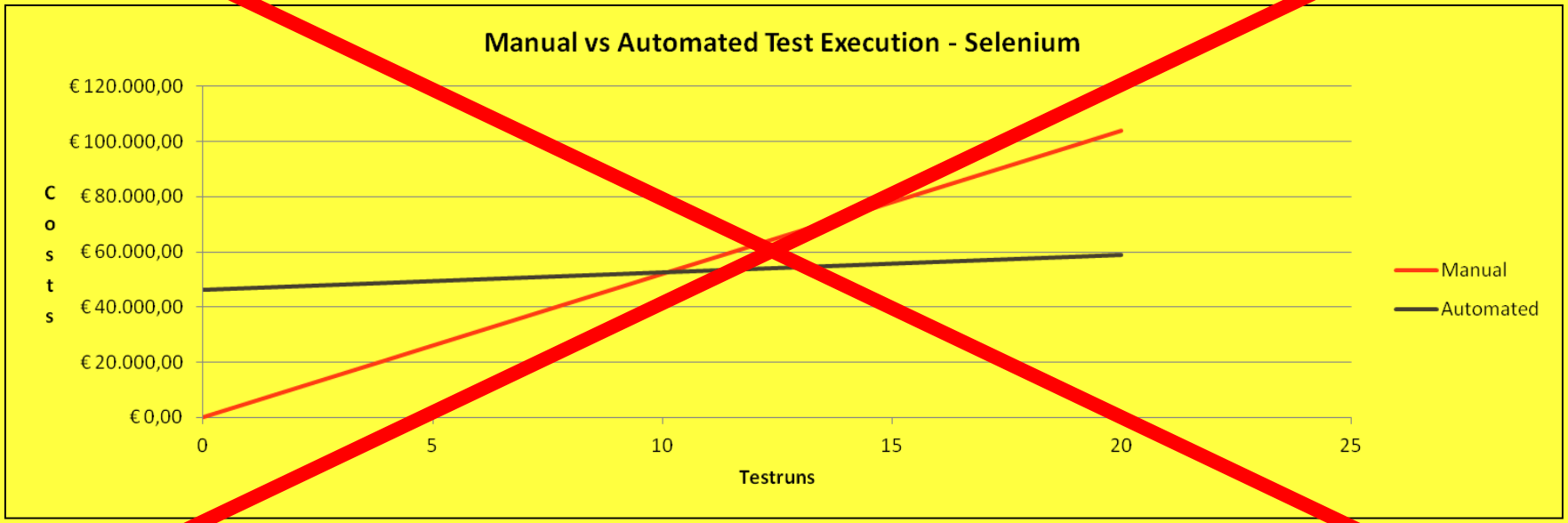
GALAXY Note
Xperia™ miro

Agile!




Test
Test
Test
Test
Sprint 1
Sprint 2
Sprint 3
Sprint 4
Product Backlog
Sprint Backlog
Sprint Backlog
Sprint Backlog
Sprint Backlog
Deliverable
100%
80%
60%
40%
20%
0%
1
2
3
4


SCRUM TEAM


Manual vs Automated Test Execution - Selenium
€ 120.000,00
€ 100.000,00
€ 80.000,00
€ 60.000,00
€ 40.000,00
€ 20.000,00
€ 0,00
Costs
0
5
10
15
20
25
Testruns
Manual
Automated

Wim

Test Tool Specialist

Wim has left the building

Need

- Shorter iteration time
- Fewer production incidents
- Less routine
- Agile/DevOps readiness

Speed

Quality

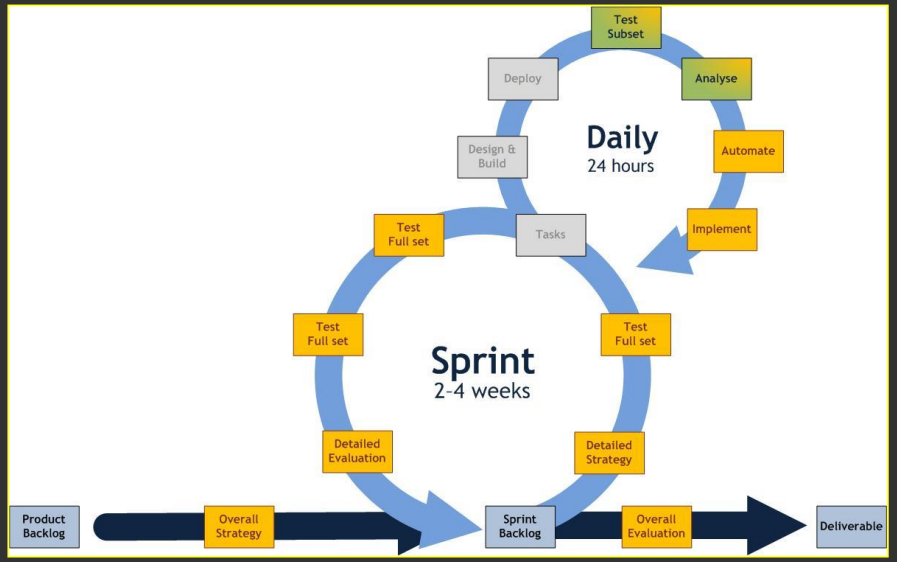
Solutions

- Flexibility
- Speed
- Adjustment to the organisation
- Robustness

Shortening time

- Scrum team
- From the very start
- Higher velocity

Fewer peaks



- Agile project
- Continuous testing
- No sprints at the end

Speeding up manual testing

- Testdata generation
- Repetitive

“I can now do three days of work in half an hour and even better than before.”

Interval testing

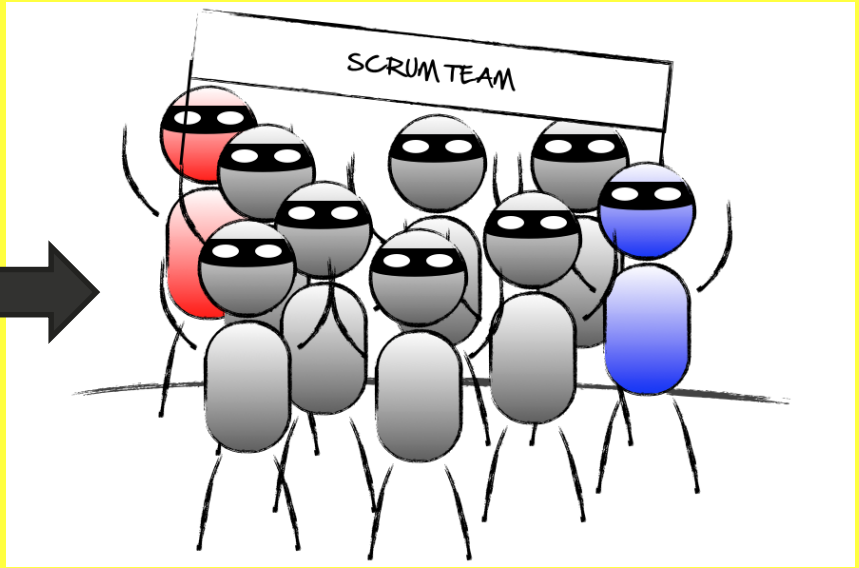
- Changes in infrastructuur
- Testing every quarter of an hour

Facebook DevOps

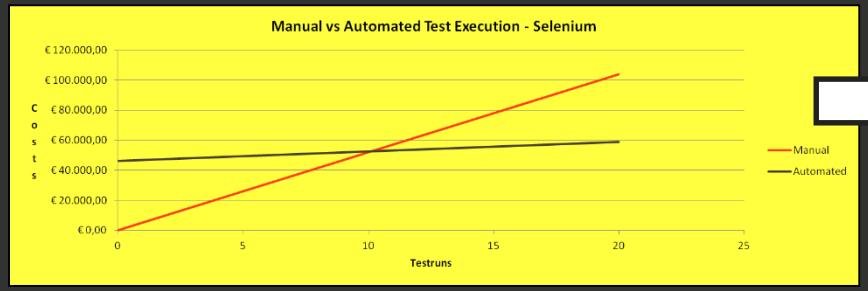
- Continuous deployment
- Code review
- “Automated everything”
- No dedicated test team
- A/B testing & Experimenting

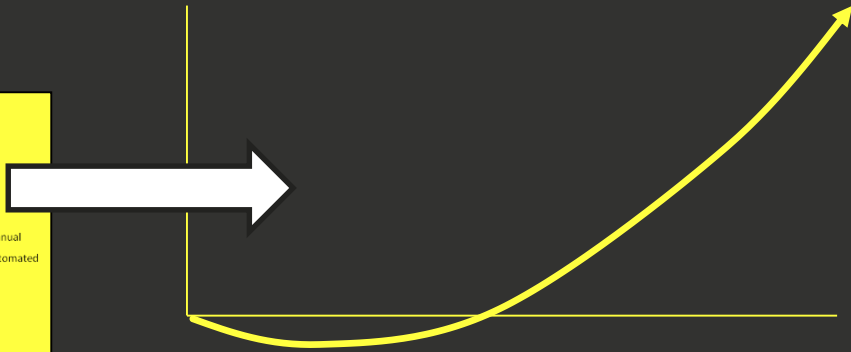
TREND

1. Functions change



2. Short ROI


Manual vs Automated Test Execution - Selenium
€ 120.000,00
€ 100.000,00
€ 80.000,00
€ 60.000,00
€ 40.000,00
€ 20.000,00
€ 0,00
Costs
0
5
10
15
20
25
Testruns
Manual
Automated

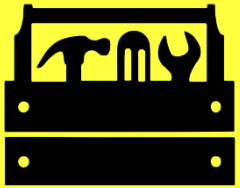


3. Better tools

maatwerk

of

one-size-fits-all



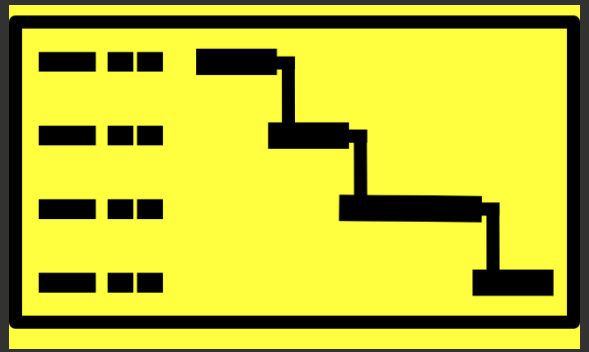
differentiatie

OSS

volwassen
open source

integraties

4. Part of the testing process



Apart project

Integraal onderdeel

Trends

Test automation

- NOT just for regression
- Can start early
- Sometimes technical
- Short ROI

Test automation will vanish