



# The limitations of automation

Christophe Soens - BDD adept | Agilist | Test Specialist | QA Engineer



# Christophe Soens

**BDD adept | Agilist**

**Test Specialist | QA Engineer**

@ christophe.soens@tobania.be

<https://www.linkedin.com/in/csoens/>



Questions  
Feedback  
Conversations



Who are  
you?



2018

# HOW THE WORLD TESTS

An Annual Testing Report by Zephyr

2018  
19  
TENTH EDITION

# World Quality Report

Capgemini

MICRO  
FOCUS

sogeti  
part of Capgemini



Quality  
is  
Core



Quality is core



User Rating

Quality is core



Speed of Delivery

Faster Time To Market



Quality is core



## First Time Right

Building the **right** software

Building the **software right**

Quality is core

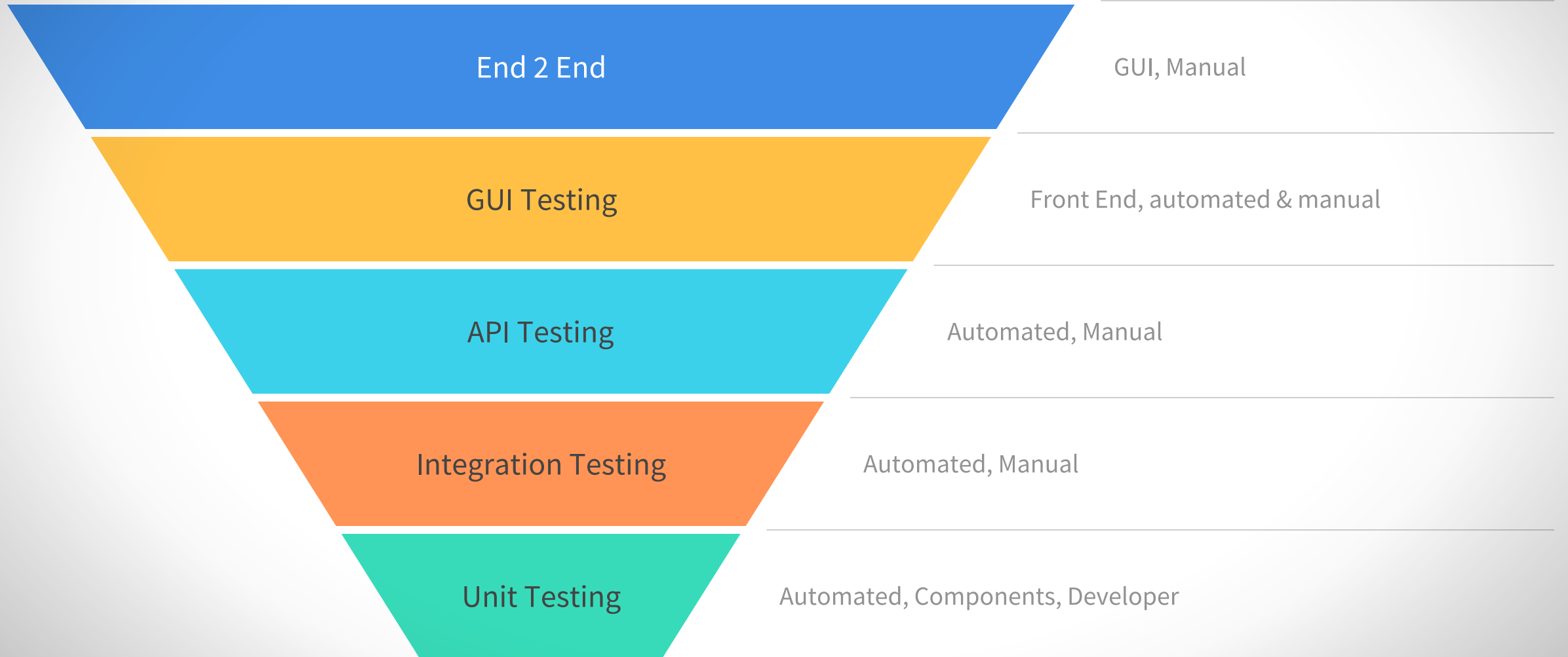


Continuous Delivery

Testing  
to  
improve

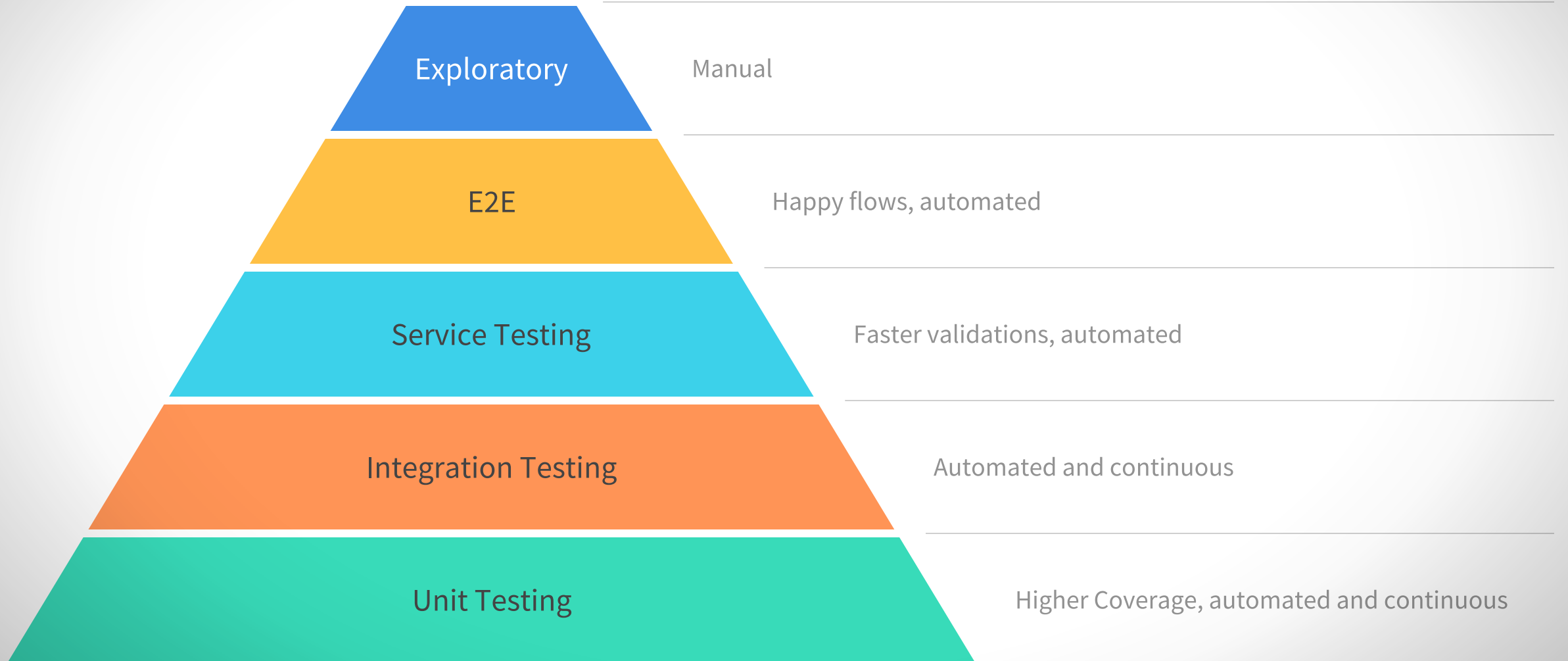


# Time Consuming, reactive





# Testing with Faster Delivery + Focus on Quality



# Shift Left



# Agile Scrum



# Testing in Agile & Scrum





# Automated GUI Testing



## Popularity of automating GUI tests

Continuous increase

Big Business

Automation of GUI = mainstream

# Automated GUI Testing



## Large and heavy testing projects

Long runs of multiple hours

Time consuming test script creation

Lots of functional testing

Regression

# Automated GUI Testing



## Maintenance

The larger the project, the intenser

Added functionality, increasing maintenance

High efforts: Engineers and time

# Automated GUI Testing



## Continuity

People leaving the project

New engineers



# Flaky Tests



# Flaky Tests

Pass  $\Leftrightarrow$  Fail **without  
code changes**

Not clear why

Digital Evolution

CI/CD: dependency on test  
results and feedback

Source of wasted time

Re-run test suites and  
investigating spurious failures.

# Flaky Tests

- **Concurrency**

Tests running concurrently

Live services

- **Cleanup state & Cache**

Corrupt and manipulated data

Wrong status environment

- **Infrastructure**

Unstable environments

Network issues

Drivers: config and version compatibility

CI bottlenecks

- **Failing Checks**

Too much activity for one check

Incompatibility browser and driver

No waits

- **3th party services**

Interaction / Dependency

Stubbing!

- **Time Bombs**

Server in maintenance at night

Different time zone when requesting current time in tests.

# Flaky Tests

Frustration

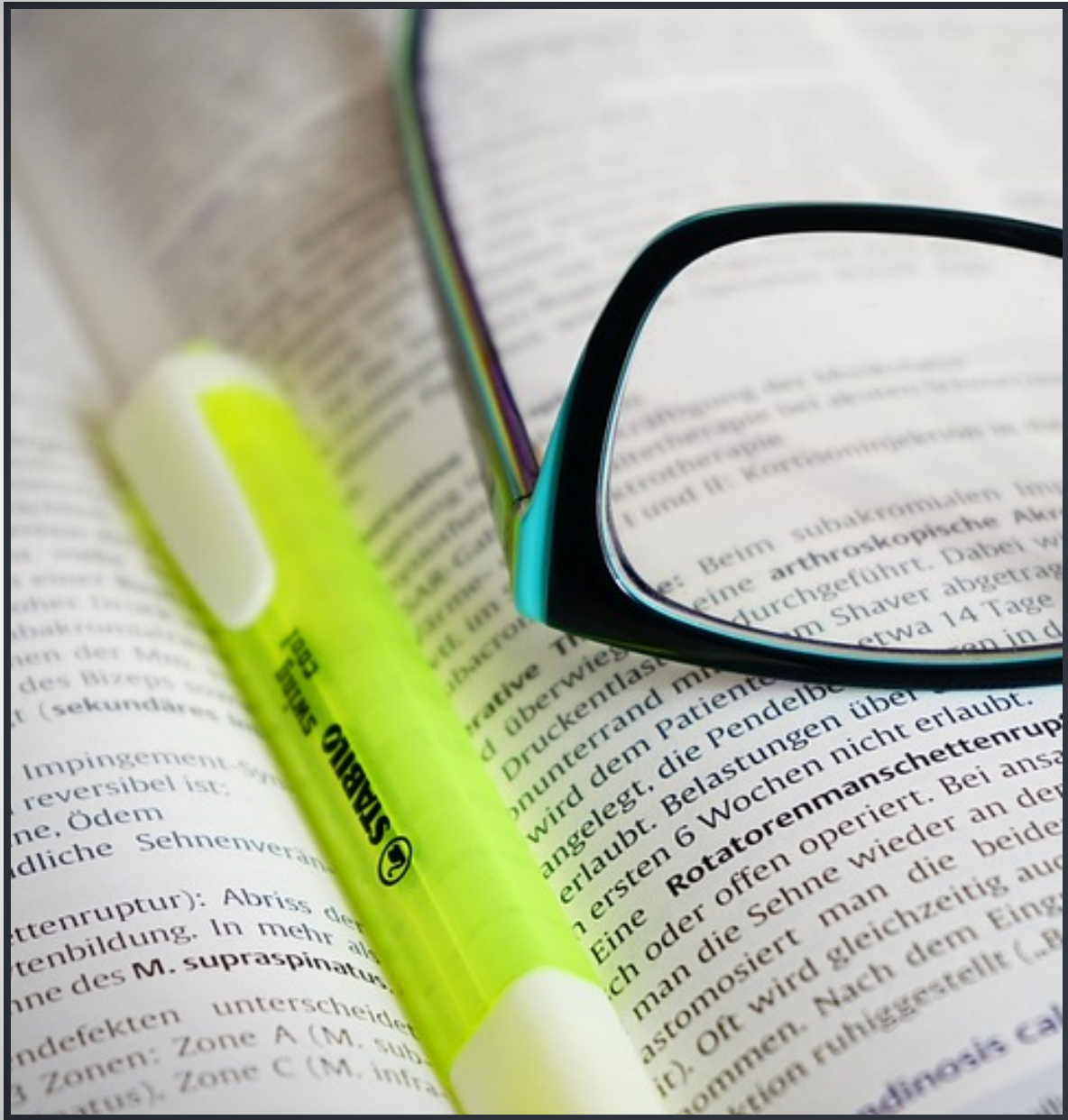
Scrum team

Lack of confidence

Lack of coverage

Risks of defects





# Take Aways

- Invest in Unit and Service Testing
- Keep GUI testing limited, small,
- Descoping tests
  - Clear irrelevant tests
- Keep the framework lean
- BDD: Keep tests understandable, transparent.
- Choose proven tools and frameworks.

