Software Testing Automation

presented by
Gülay Bayramoğlu
on **11.12.2017**
At Istanbul Technical University

Abstract;

Test automation is a term used in software testing and some other kinds of software related testing or quality assurance. Turkcell organizations are investing in automated testing in order to prevent software defects and increase testing effectiveness during software life cycle. In devops methodologies, this task is considered an important activity, considered the key of the agile testing. This paper presents testing automation details and benefits.

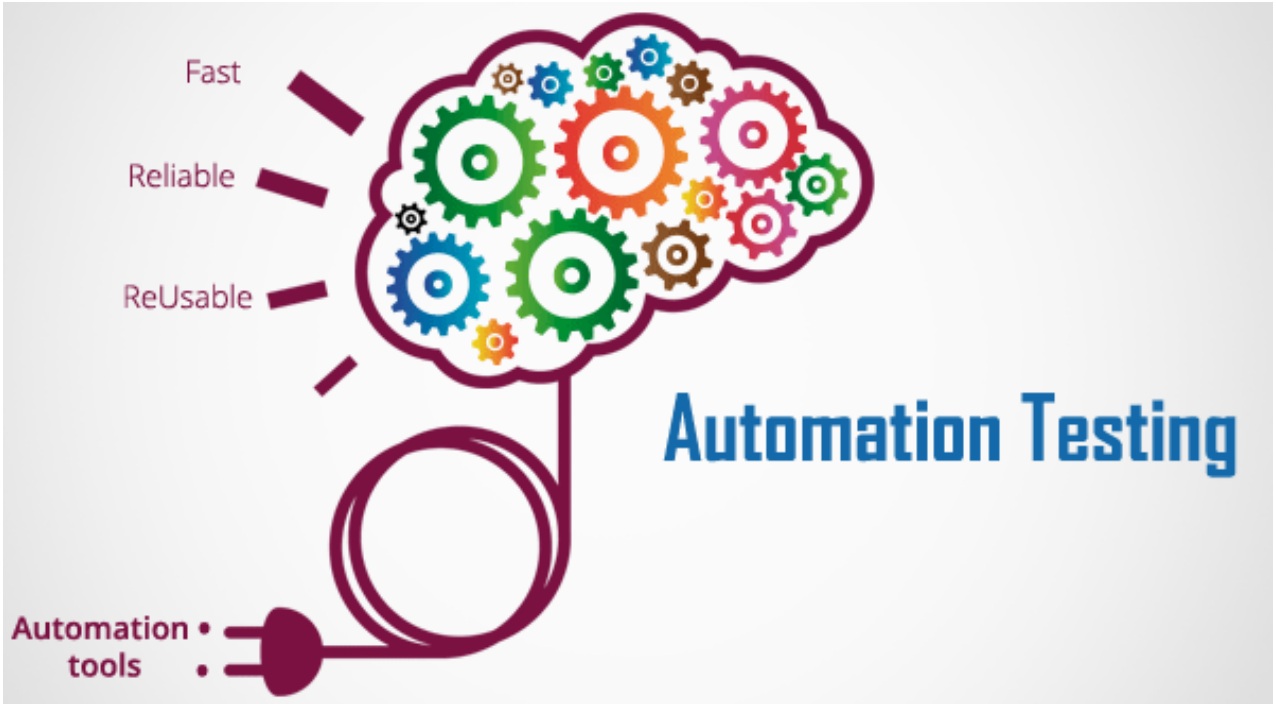
«If you intend productivy and quality, you have to do invest in automation».

SOFTWARE TEST AUTOMATION

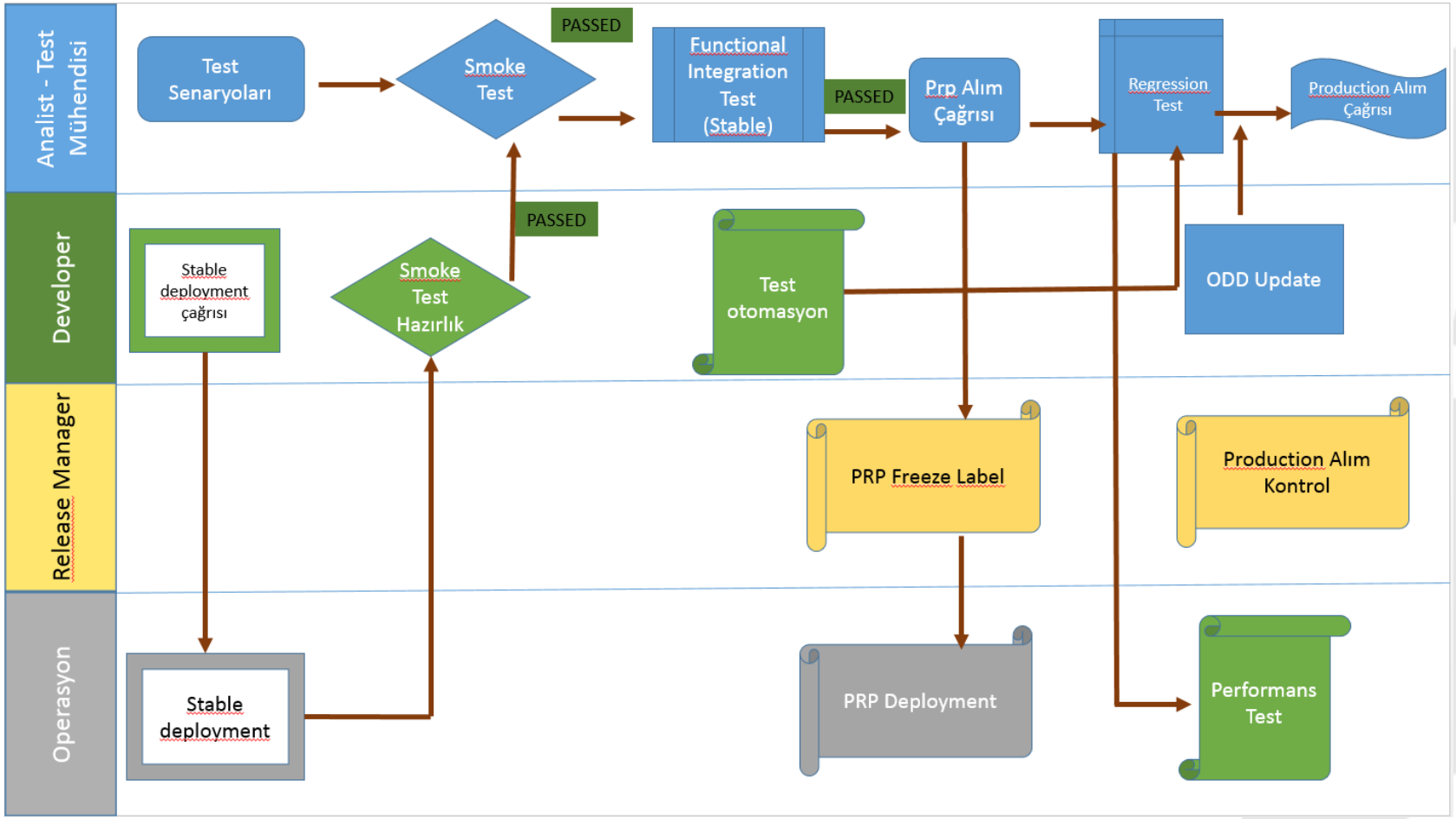
- What is Software Test Automation?
- Why Is Software Test Automation Important?
- When Software Test Automation Process (ROI)
- How Software Test Automation
- Test Automation and Tools for Software

What is Software Test Automation?

Using Automation tools to write and execute test cases is known as software testing for more the fast, reliable and reusable.



What ?

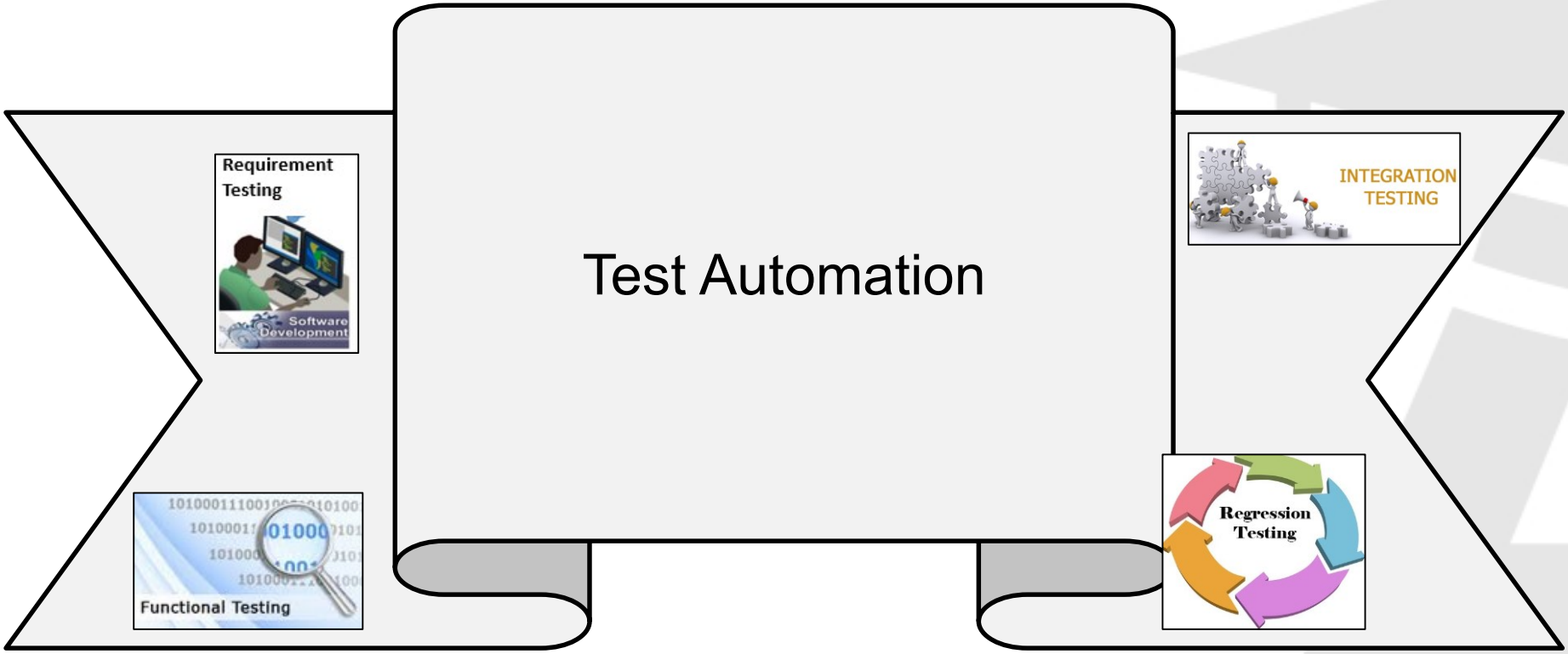

Analist - Test Mühendisi
Developer
Release Manager
Operasyon
Test Senaryoları
Smoke Test
PASSED
Functional Integration Test (Stable)
PASSED
Prp Alım Çağrısı
Regression Test
Production Alım Çağrısı
Stable deployment çağrısı
Smoke Test Hazırlık
PASSED
Test otomasyon
ODD Update
PRP Freeze Label
Production Alım Kontrol
Stable deployment
PRP Deployment
Performans Test

What ?

- ✓ Record the script
- ✓ Data selection via automation
- ✓ Run the scripts
- ✓ Report results

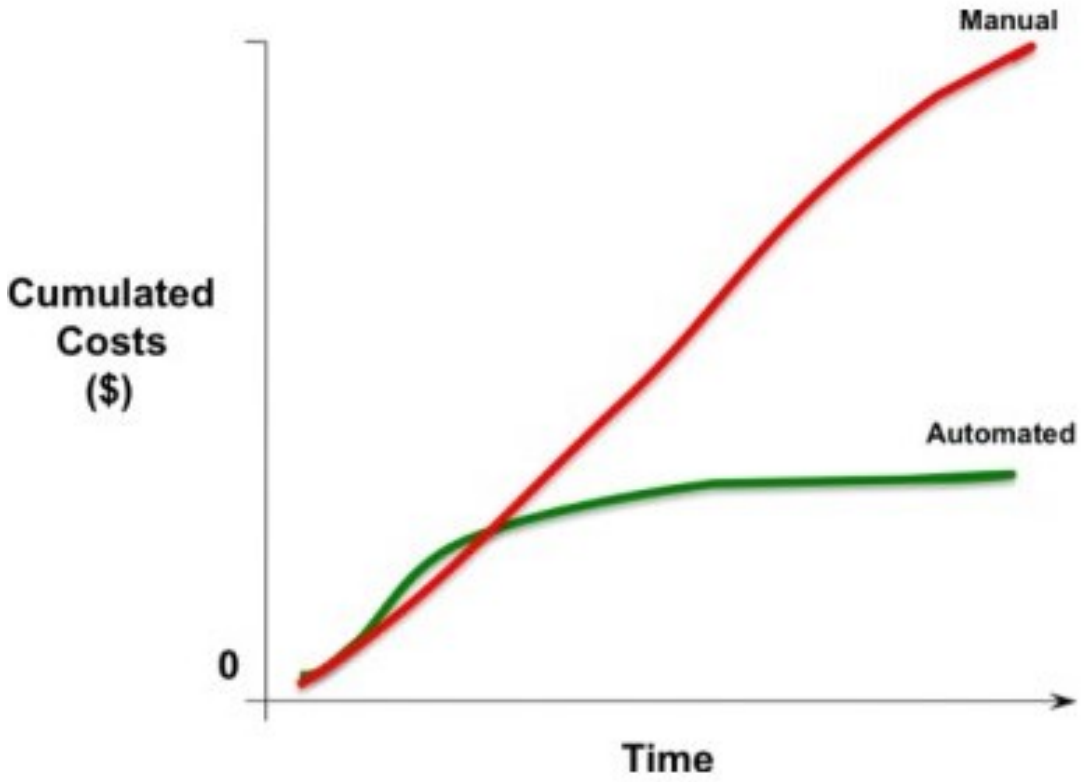
What ?

Fast and end to end execution



What ?

Cost during test execution



Why ?

TURKCELL AKADEMİ

Benefits…

- Reliable: eliminating human error
- Reusable
- Better Quality Software
- Speeds up the regression steps
- Cost Reduction
- Solution Integration Problems

Why ?

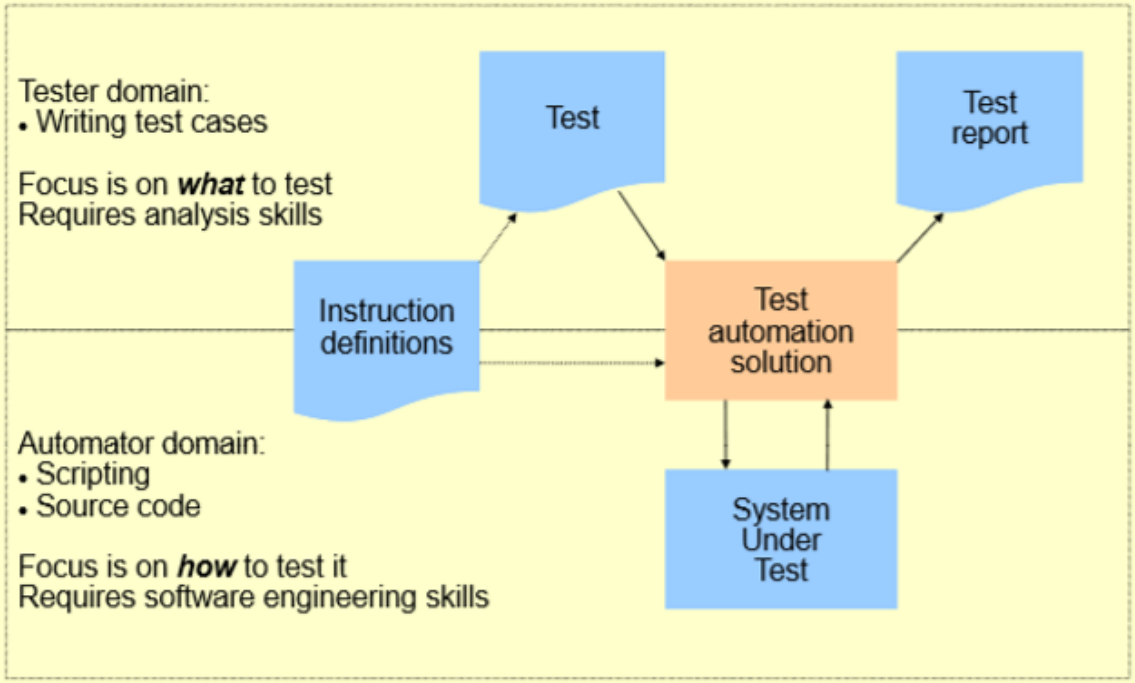
TURKCELL AKADEMi

Disadvantages

- High investment is needed in the tools and training
- High man power requirement for test preparations
- Maintiance and process management

How ?

The tester and automator roles



Choosing Automation Test Tools

- ✓ Ease of integration
- ✓ Benefit & Cost Compatibility
- ✓ Performance
- ✓ Maintainability
- ✓ Support via automation tool’s partner

Automation Real ROI

Automation ROI value IS the benefit of this type of testing, and it can be:

- ✓ Reducing Time to Market
- ✓ Increased Test Efficiency (Productivity)
- ✓ Increased Test Benefit & Cost

How ?

Automation Metrics

Coverage: Measuring test scope and success.

Progress: Testing Efficieny

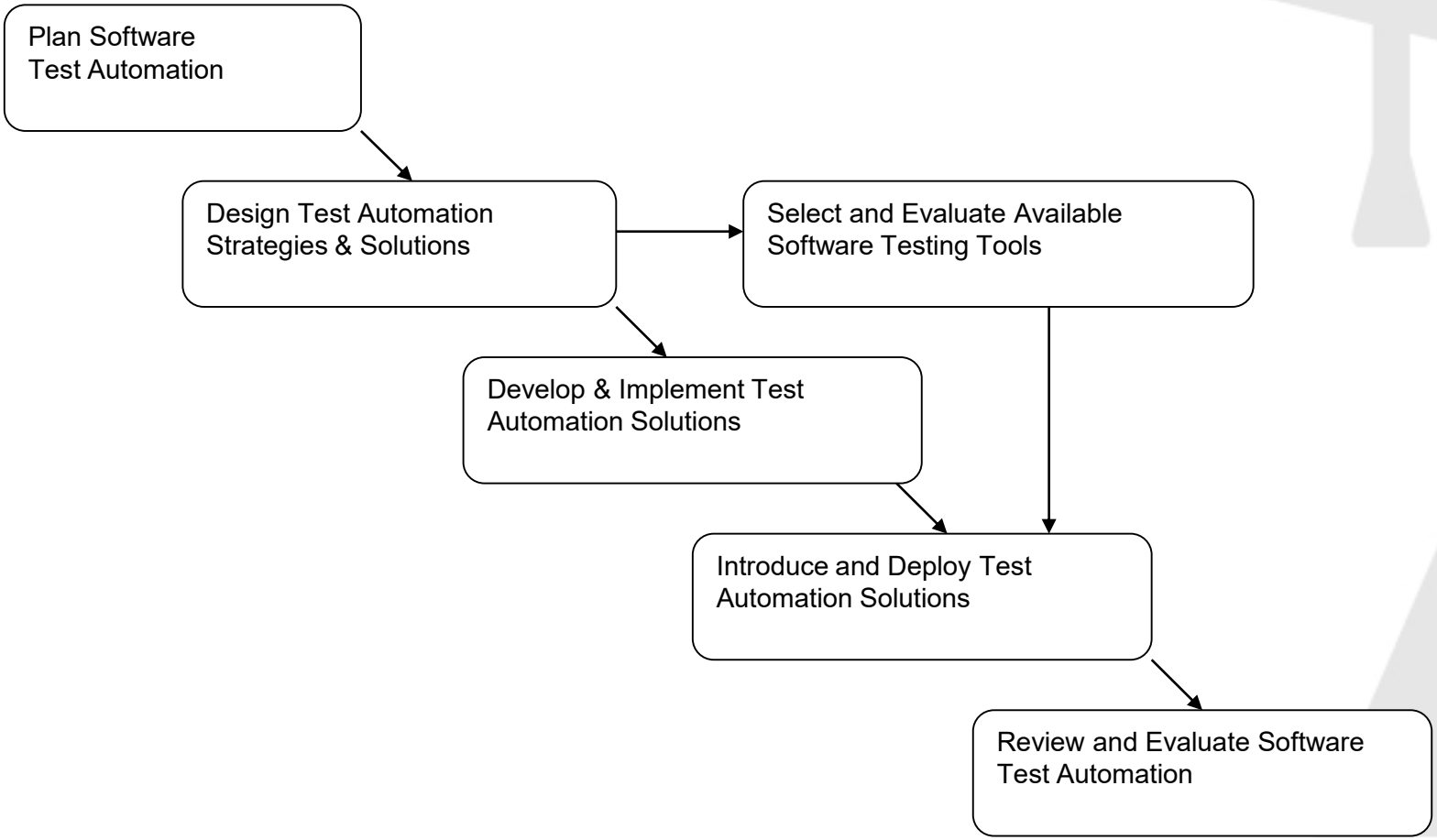
Quality: Testing product quality. Usability, performance, scalability, overall customer satisfaction, and software defects.

Application Selection for Automation

- ✓ How many application tests selected do we run?
- ✓ How much time does it take to run all the tests?
- ✓ How is test coverage defined?
- ✓ How much time does it take to do data analysis?
- ✓ How long does it take to build a scenario and required driver?
- ✓ How often do we run the tests selected?
- ✓ How many people do we require to run the tests selected?
- ✓ How much system and lab time is required to run the tests selected?
- ✓ How many defects do we solution as yearly?

How ?

What does Automation roadmap?



Needs of Software Test Automation

- ✓ Dedicated work developer for test automation
- ✓ The support from directors
- ✓ The dedicated budget and project schedule
- ✓ A well-defined plan and strategy
- ✓ Maintenance of automation developer and tools

Test Automation at Turkcell

Requirements

- ✓ Scripting to regression test scenarios on preproduction environment
- ✓ Scripting to regression scenarios on preproduction Production environment

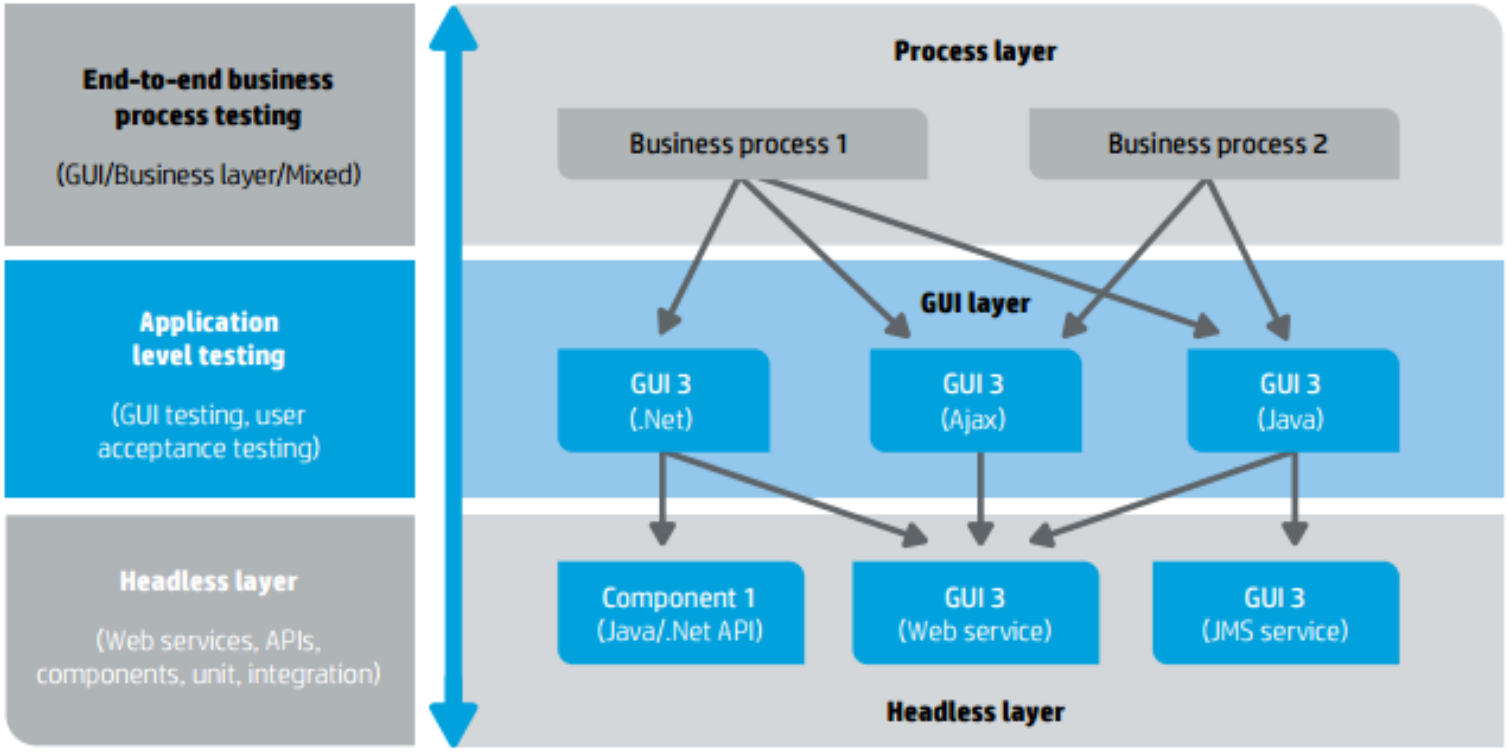
Live…

TURKCELL AKADEMİ

Test Automation at Turkcell

Test Automation Tool at Turkcell

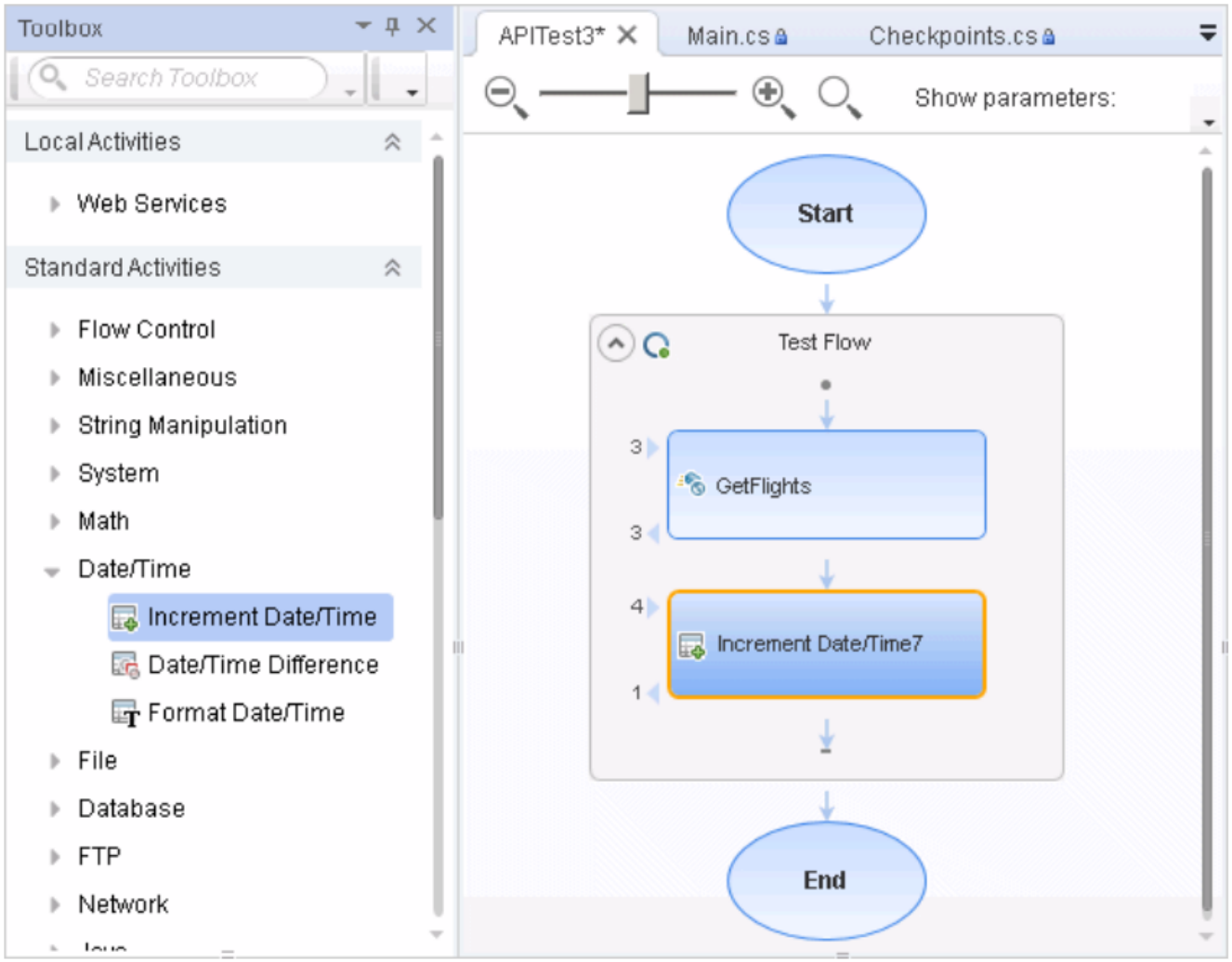
HP Unified Functional Testing software



https://www.youtube.com/watch?v=fuvR9dRUZCI

Live…

Recording scnearios via UFT



Live…

Scripting scnearios via UFT

MercuryTours | BookFlight

Action4

```
1  Browser("Book a Flight:Mercury").Page("Book a Flight:Mercury").WebEdit("passFirst0").Set "John"
2  Browser("Book a Flight:Mercury").Page("Book a Flight:Mercury").WebEdit("passLast0").Set "Smith"
3  Browser("Book a Flight: Mercury").Page("Book a Flight: Mercury").WebList("creditCard").Select "Visa"
4  Browser("Book a Flight: Mercury").Page("Book a Flight: Mercury").WebEdit("creditCard").Set "12345678"
5  Browser("Book a Flight: Mercury").Page("Book a Flight: Mercury").WebList("cc_exp_dt_mn").Select "01"
6  Browser("Book a Flight: Mercury").Page("Book a Flight: Mercury").WebList("cc_exp_dt_yr").Select "2008"
7  Browser("Book a Flight: Mercury").Page("Book a Flight: Mercury").Image("buyFlights").Click
8  Browser("Flight Confirmation: Mercury").Page("Flight Confirmation: Mercury").Image("home").Click
```

https://www.youtube.com/watch?v=fuvR9dRUZCI

THANK YOU