

TestNet najaarsevent
10 oktober 2018



Testtools met AI

A collage of various AI-powered testing tool logos and a central question mark. The logos include:

- testim**: Elastic Cloud omgeving
- Test**: *execute thousands tests in minutes, Exploratory test code coverage
- appliTools**: Autonomous testing
- retest**: Ai powered visual testing, Automated Exploratory Testing
- eggplant**: Buzzwords
- mabl**: lightning fast test creation
- Sealights**: Buzzwords
- test.ai**: adaptive event analysis system
- functionize**: adaptive event analysis system
- AppTest.ai**: Beta
- appvance IQ**: Test gap analysis
- Buzzwords**: (multiple instances)

In the center of the collage is a black silhouette of a person's head with a large white question mark inside. Below the silhouette, the text "AI? Zinvol? Oordeel zelf" is written.

Wat kun je er *nu*
mee testen?

Eerst even kennis maken

Marek Lof

Test Manager bij CIMSOLUTIONS

Hannie van Kooten

Testspecialist bij Pre Sustainability

Werkgroep Testen met AI



Inhoudsopgave

Geschiedenis

Onderzoek naar ai tools

Problemen met huidige generatie tools

Oplossingen die tools met ai bieden

- Test management tool

- Code verbeteren

- Visueel testen

- Testgevallen genereren

- Bugs assistent

- Baseline genereren

Samenvatting



Third wave

1980 waterval en handmatig testen

1990 grote tools, XP, RAD

2000 open source frameworks, kennis delen, agile, XP, Scrum, Kanban, snelheid!

2010 schaalvergroting, hogere snelheid!, crowdtesten, feedback van gebruikers, cloud, apps, DevOps, Continu testen CI/CD-integratie

2020 Autonoom testen met Machine Learning en AI



Test tools met ai *op dit moment*

Wat doen ze dan?

Moeten we geloven wat ze zeggen?

Is er sprake van sjoemelsoftware of is het echt?

Geven ze ons inzicht in hoe ai wordt toegepast?

En niet te vergeten is het zinvol wat ze doen?



Een verslag van een onderzoek...



Visie van een maker op youtube:

Ai gaat problemen met Selenium of Appium oplossen

a=b?

Testen breken als de identifier van een element op de pagina is veranderd.

element

Testen falen als er een element ontbreekt, een stap ontbreekt, de test stopt.

deking

Het ontbreken van testen.



Coderen van testen is te tijdrovend.

Reactie op deze video: Is it fine, if I say 'bullcrap'?

Anderen vullen aan



Kwaliteitssoftware maken is traag en duur

De digitalisering van de maatschappij vraagt meer van de software



Time to market is kort

Visuele verschillen zijn moeilijk waarneembaar door tools en geven te veel fouten



Er wordt te veel, te weinig of het verkeerde getest



CI/CD pipeline is verstopt, testen te veel tijd

Verschillen met identifiers en layout

Baseline

MATCH

AI just like a real person, **IDENTIFIES** the screens and elements in your app

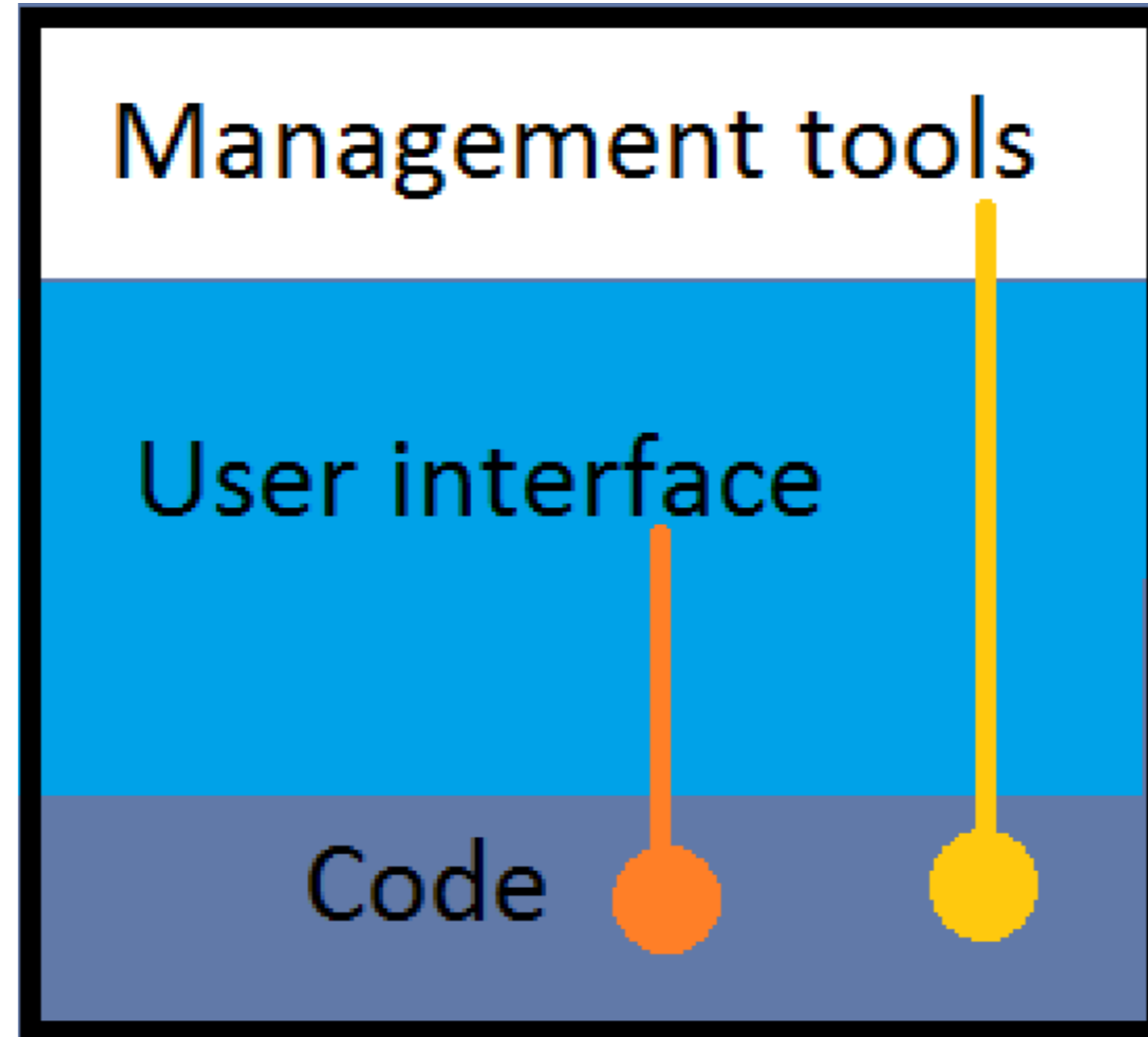
AI **EXECUTES** user scenarios—test on-demand whenever you're ready

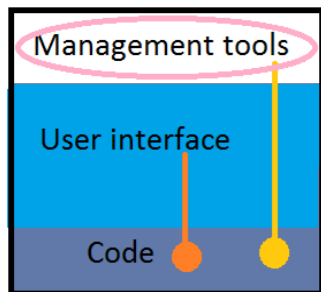
AI **RECOGNIZES** elements, so that even if things change, your test don't break.

Nieuwe run



Soorten tools





Probleem: dekking van testen

Eran Sher in TestTalk

Wat gebeurt er als je al je regressietests uitvoert, alle tests zijn voorbij, maar eigenlijk weet je niets over de dekking.

De inhoud van elke build moet worden getest.

Het is lastig omdat je met continue integratie veel builds krijgt zijn er incrementele codewijzigingen.

In veel gevallen is de functie zelfs niet als geheel gereed tot een van de laatste builds.





Continuous testmanagement.



Buzzwords
Buzzwords

SEALIGHTS FOR SOFTWARE DEVELOPMENT

Quality Trend Intelligence

Understand the Quality of the Deliverables Over Time



Test Gap Analytics

Discover Your Gaps and Plan Your Team's Next Steps.



Release Quality Analytics

Use Smart Analytics to Determine Release Readiness



Block Untested Code Changes

Solve Critical Issues Before They Impact Your Users



SEALIGHTS FOR QUALITY ASSURANCE

Automated Test Prioritization

Identify Redundant and Ineffective Tests



Exploratory Test Code Coverage

Improve Team Efficiency and Speed



Functional Test Code Coverage

Enable Visibility and Quick Feedback Loops



Quality Trend Intelligence

Approve or Fail Builds Based on Real-Time Insight



Sealights

Een vertaling...

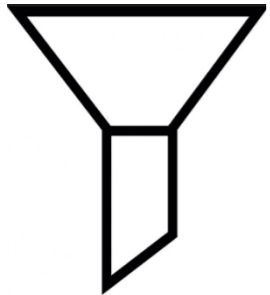
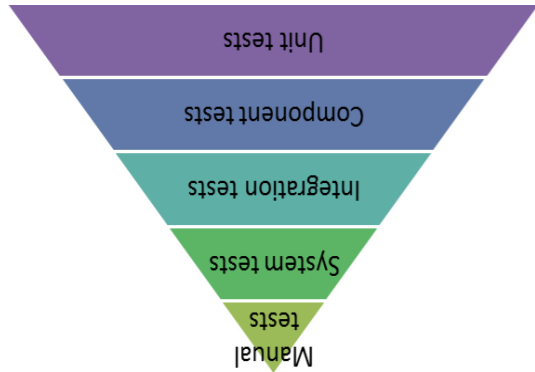
Er worden gegevens van alle soorten testen verzameld en een analyse gedaan op de dekking.

Deze analyse wordt zichtbaar gemaakt in dashboards waarin je kunt doorklikken tot in details. → gaten en dubbele testen.

De trends worden zichtbaar gemaakt → kwaliteitsverbeteringen

Commit check op ongeteste code.

Prioriteit instellen van testen.

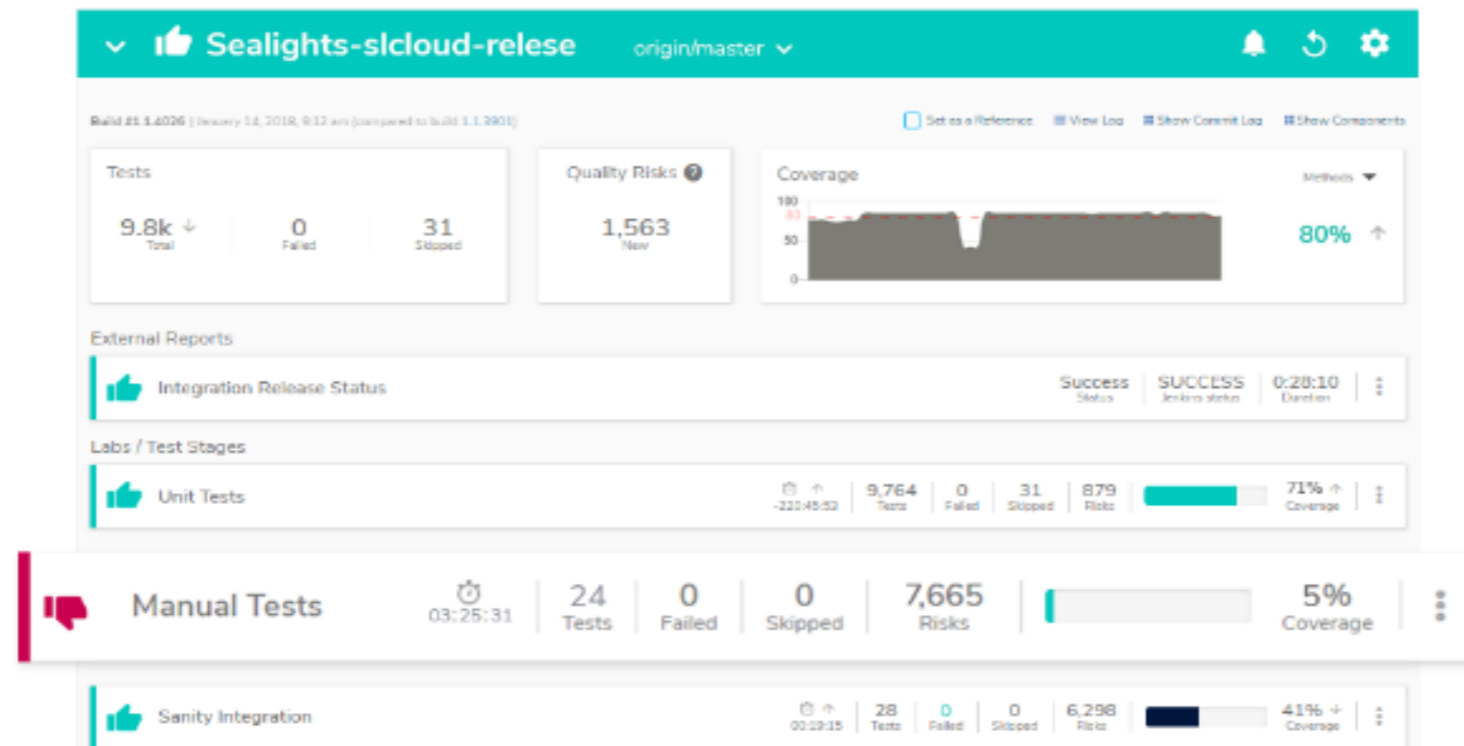


Exploratory test code coverage



Inzicht geven in welke codegebieden worden getest met handmatige en verkennende tests om de efficiëntie en snelheid van het team te verbeteren.

Overlap met andere testtypen tot een minimum beperken om testtijd te verkorten



Details



AI-gedreven  van te Leren  Praktisch Nut   Mening



White paper | Quality: The Missing Metric For Software Development Managers



White paper | Top 4 Machine Learning Algorithms for Testing



White paper | How to Use Analytics to Eliminate the Risk of Your Teams Technic...

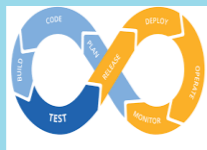
Israël



ai-bi?



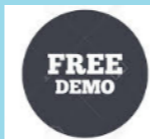
Ci integr.



internet



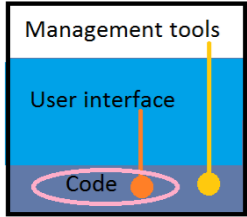
rapport



?



Sealights



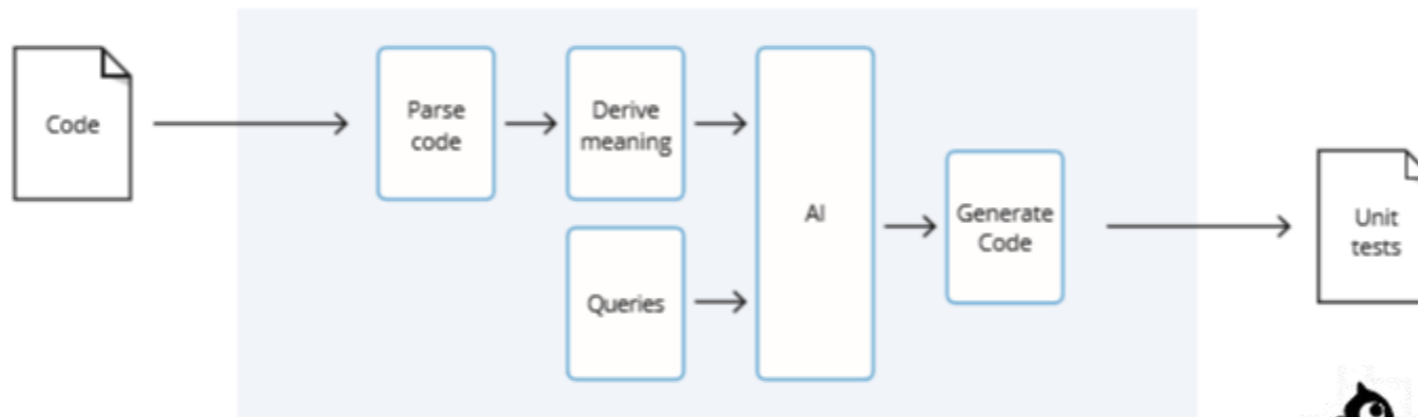
Code kwaliteit verbeteren

Spin off van de universiteit van Oxford

Gebruikt de code en codehistorie voor analyse

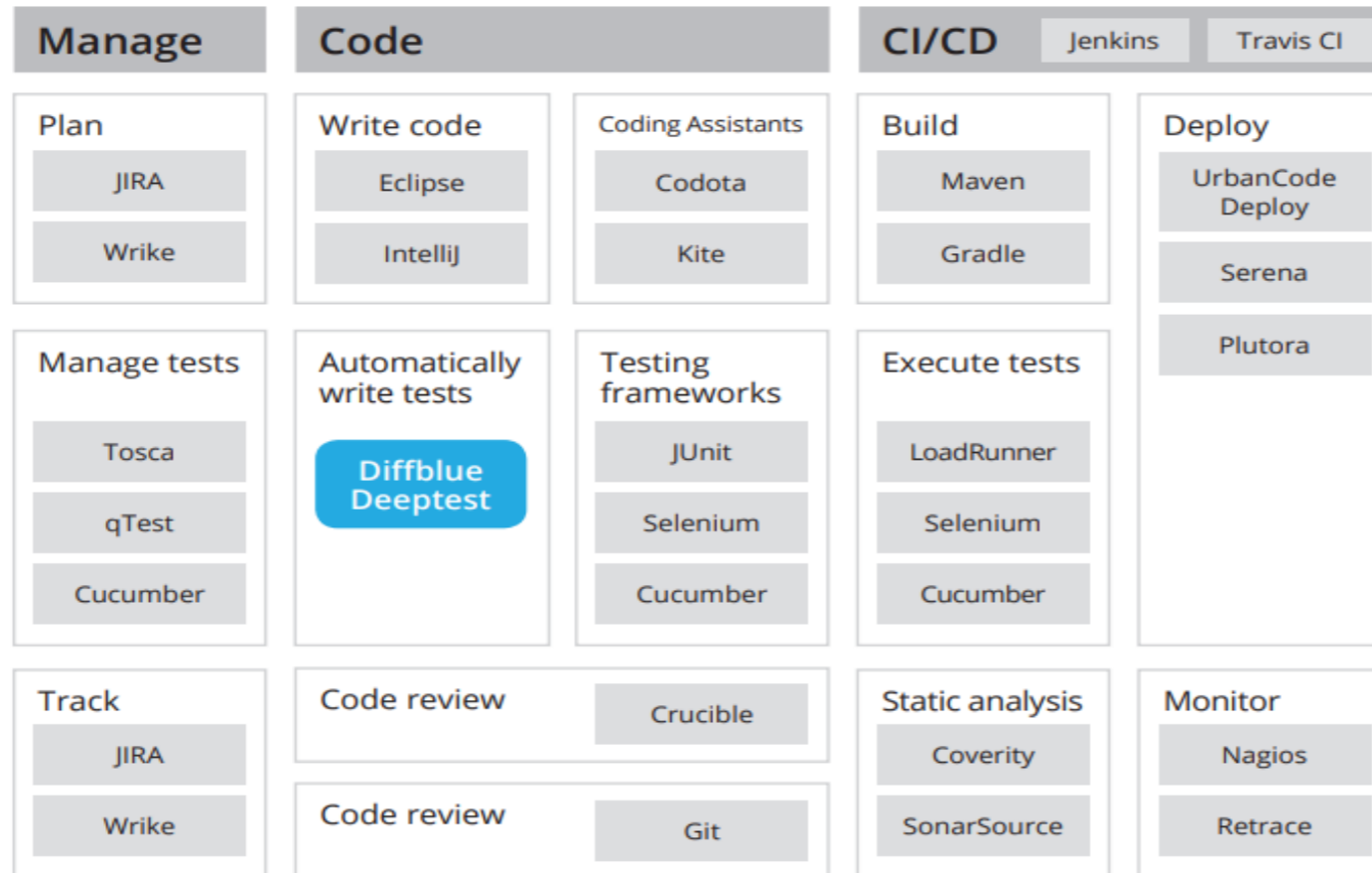
- dekking van code met testen
- automatisch testen genereren waar deze ontbreken (unit testen)

What does Diffblue Deeptest do with source code?



The above diagram shows the steps a piece of source code flows through

Plaats in softwareontwikkeling



Details

Probabilitstic Fault Localisation (paper)

Veel wetenschappelijke artikelen



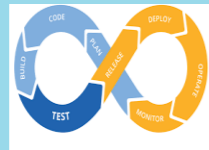
UK



Ai!



Ci?



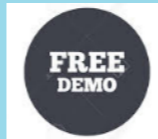
github



rapport



FREE
DEMO

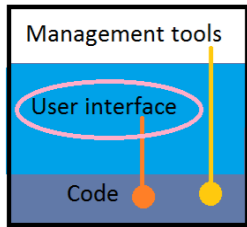


FREE
TRIAL



Github?





Verbeteringen in visueel vergelijken

Ai powered visual testing and monitoring

Aanvulling op bestaande testen

Kan in veel (test)frameworks draaien



WEB

Selenium Java
Selenium Javascript
Selenium C#
Selenium PHP
Selenium Python
Selenium Ruby
React Storybook (beta)
Angular Storybook (beta)
Vue Storybook (beta)
WebdriverIO
Watir
Capybara
Protractor
UFT/QTP
LeanFT C#
LeanFT Javascript
Coded UI



MOBILE

Appium native C#
Appium native Java
Appium native Javascript
Appium native PHP
Appium native Python
Appium native Ruby
Appium web C#
Appium web Java
Appium web Javascript
Appium web PHP
Appium web Python
Appium web Ruby
XCUI (Objective-C)
XCUI (swift)
Espresso
Calabash iOS
Calabash Android



SCREENSHOTS

CLI
C#
Java
Javascript
PHP
Python
Ruby
XCTest (Objective-C)
XCTest (swift)



OTHER

Windows UFT
Windows Coded UI
Windows Apps
PDF Forms
REST API

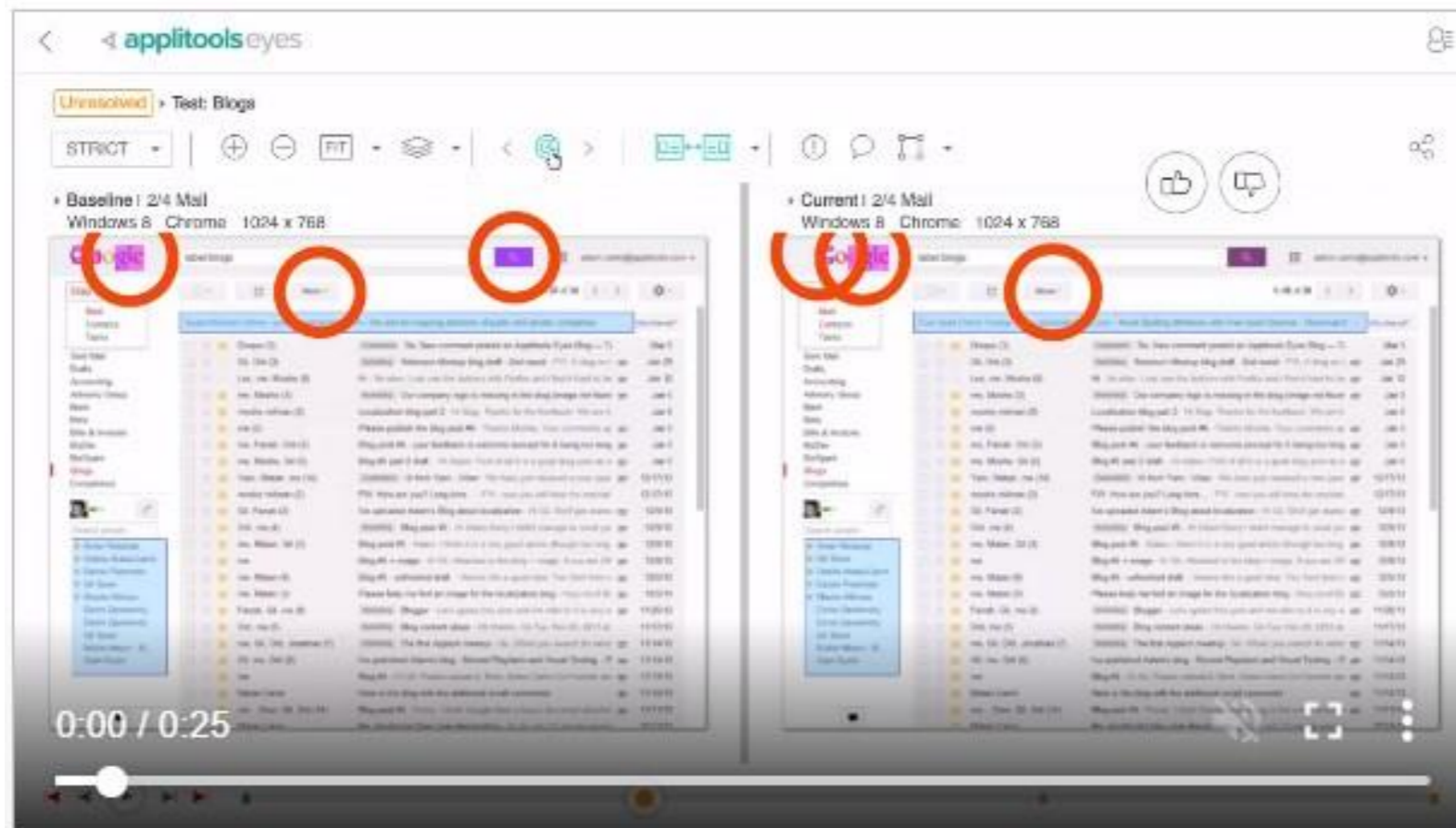


Wat kan applitools?

Visual testing kan veel fouten opleveren als er een pixel anders is.

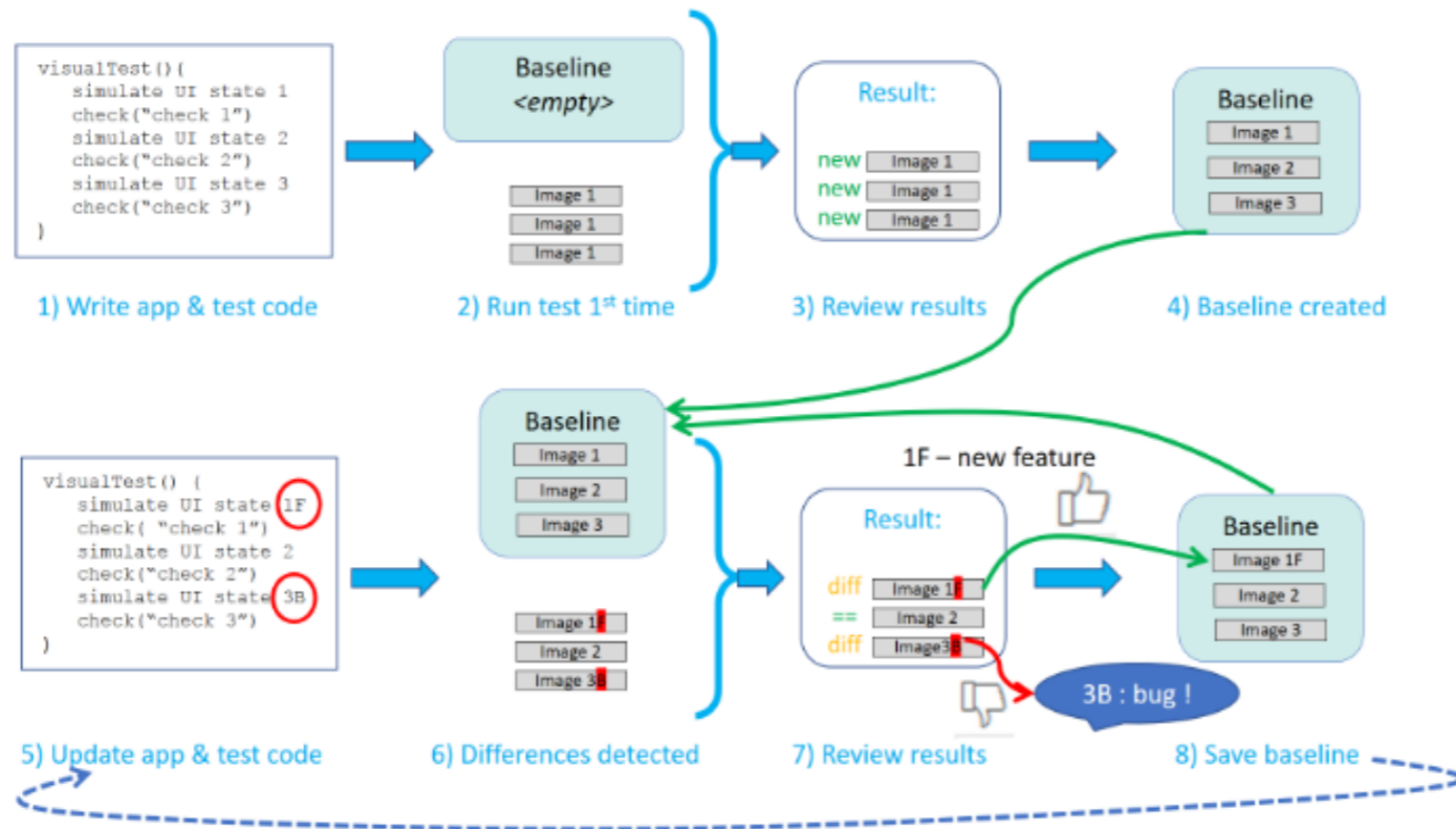
Applitools zet ai in om dit te voorkomen en te leren welke wijzigingen *betekenisvol* zijn en welke niet.

Baseline



Nieuwe run

Visuele verschillen beoordelen



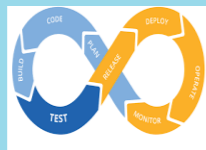
Israël
USA



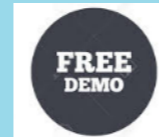
Ai



Ci

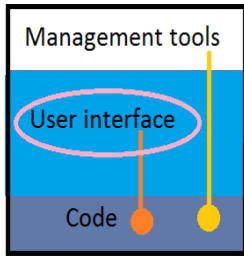


Sdk/api

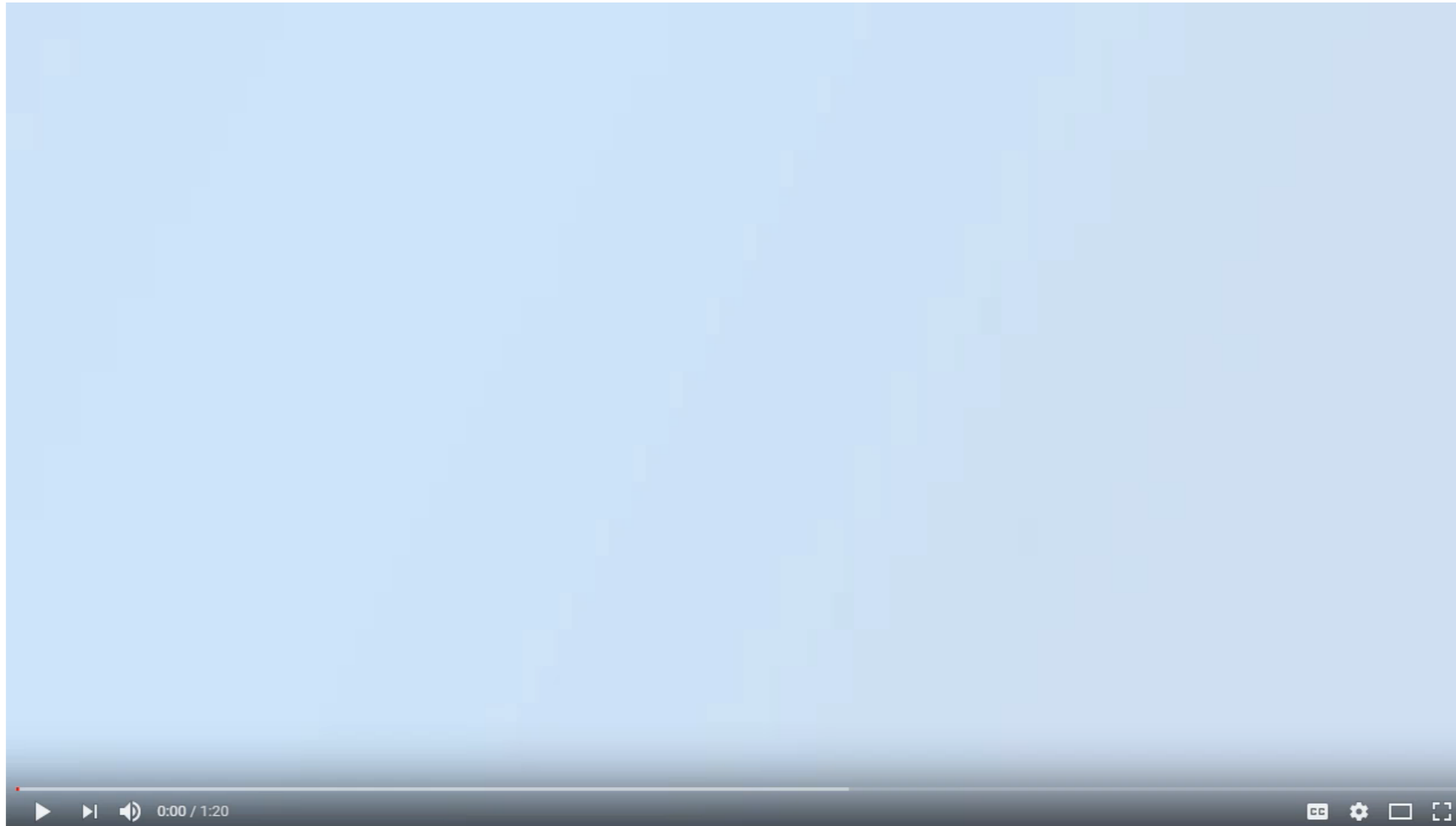


Individueel [\$299 p/m]
Enterprise Publ/ Priv Cloud





Zoveel mogelijk echte testgevallen



ultra high test engineer productivity-lightning fast test creation



Appvance ai uitleg



appvance IQ

Even herhalen

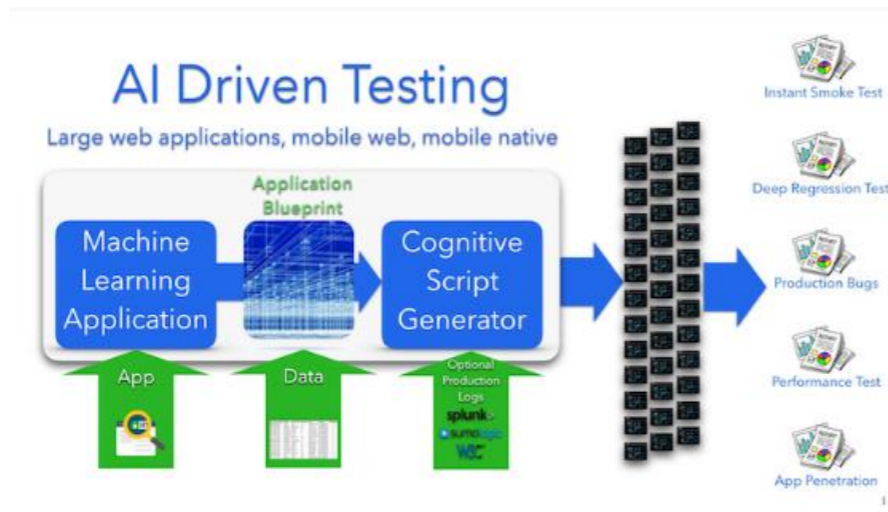
Een blauwdruk van de applicatie wordt gemaakt door de ai (paar minuutjes)

Nadat *we een paar invoervelden hebben gespecificeerd* gaat Machine learning verder om de applicatie klaar te maken..

Testscripts genereren gebaseerd op activiteiten van *echte gebruikers* (productie)

Het resultaat is honderd of duizenden scripts.

Deze scripts kunnen nu gebruikt worden voor functionele en performance testen.



Zijstapje: Testgevallen van productie

The screenshot displays the FullStory interface for a session replay. The top navigation bar includes the FullStory logo, a 'BACK TO EVERYONE' button, 'SESSION REPLAY', 'PAGE INSIGHTS PRO', and 'PRE CONSULTANTS'. The browser address bar shows the URL: <https://apps.simapro.com/Survey/Survey/Workbench?id=bbbbf029-3ffc>. The main content area is titled 'Edit survey' and contains a grid of survey questions and sections. The right sidebar shows a list of user actions, including 'User 207' with details like 'Yesterday, 3:08 pm · Chrome, Windows · 128 events' and a list of specific actions such as 'Clicked #surveyTitleTextArea'.

fullstory ← BACK TO EVERYONE ▶ SESSION REPLAY 📄 PAGE INSIGHTS PRO PRE CONSULTANTS ⋮

https://apps.simapro.com/Survey/Survey/Workbench?id=bbbbf029-3ffc 1280 x 958 >> CONSOLE PRO

Edit survey

Survey Title Survey preferences View survey introduction Due date Add conditions
Edit email template Help

+ Add section

Section Title	Section Title	Section Title	Section Title	Section Title
Add section introduction	Add section introduction	Add section introduction	Add section introduction	Add section i
+ Add question	+ Add question	+ Add question	+ Add question	+ Add questio
Company name	Are companies using LCAVLET to set up their procurement strategy?	Are companies using LCAVLET for reporting at product and organization	Are companies using LCAVLET as a basis for their overall sustainability strategies?	Are companies get external lab
Which country are you based in? (Country on which your answers will focus on)	How common is the application of LCAVLET for procurement?	How common is the application of LCAVLET for reporting?	How common is the application of LCAVLET for target setting?	How common i LCAVLET for the
	In which sectors is LCAVLET applied for procurement?	For which kinds of reports is LCAVLET applied? (See examples thanks to the "Y"	In which sectors is LCAVLET applied for target setting?	In which sector labels and cent
	Which policies or initiatives foster the use of LCAVLET for procurement? (See	In which sectors is LCAVLET applied for reporting?	Which policies or initiatives foster the use of LCAVLET for target setting? (See	Which policies i of LCAVLET for t
		Which policies or initiatives foster the use of LCAVLET for standard reporting? (See		

Trash

▶ ⏪ 12:58 / 36:16 SHARE 1X ✓ SKIPPING INACTIVITY FULL SCREEN

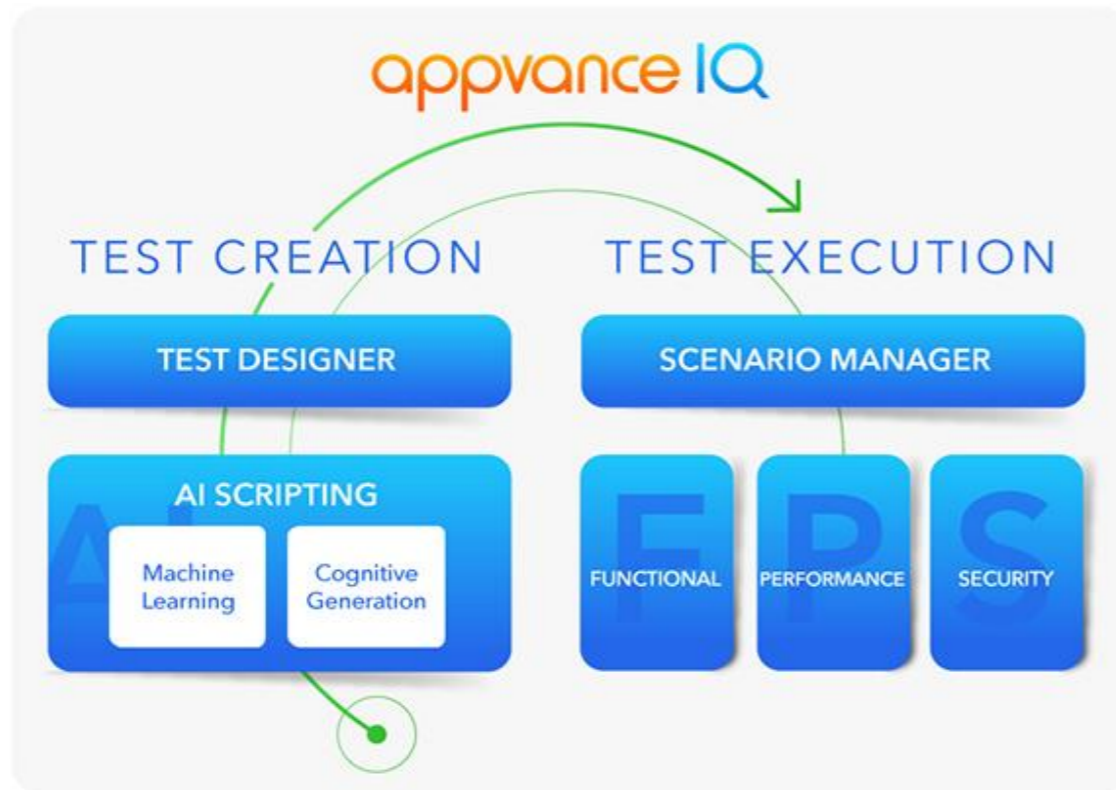
Autoplay off · Everyone 1 of 7

User 207
Yesterday, 3:08 pm · Chrome, Windows · 128 events
Amersfoort, UT, NL · 37.0.87.166

- Visit <https://apps.simapro.com/Survey...>
- Changed (""): #ng-app body.height100...
- Clicked #surveydetailscontainer div.sp...
- Clicked #emailtemplatemodal div.pre-f...
- Clicked #emailtemplatemodal div.pre-f...
- Clicked #surveyTitleTextArea
- Clicked #surveydetailscontainer div.sp...
- Clicked #surveydescription
- Clicked #surveydescription

Help

Details



Klanten op de website:

- multinationals

Software gemaakt met:

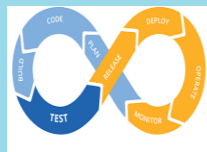
- Oracle forms
- Oracle webform server
- AngularJS
- HTML5

USA
Costa Rica
India

ai?



CI?



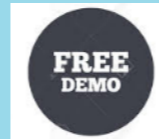
internet



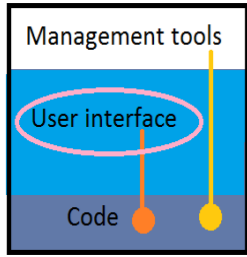
ja



?



appvance IQ



Testgevallen genereren en self healing testen



autonomous testing-no scripting-zero maintenance-execute thousands tests in minutes-ai diagnoses-visual testing



Functionize en ai



Even herhalen

- Data verzamelen: online gebruikers + testers
- Data in: tool (adaptive event analysis system) maakt modellen
- Modellen worden gepushed naar de Elastic Cloud omgeving
- Daar worden testen gerund op alle platforms
- In staat om statische en dynamische scenarios te beoordelen met ML

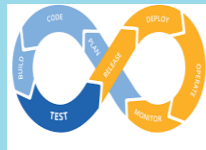
San
Francisco



ai



ci



internet



rapport

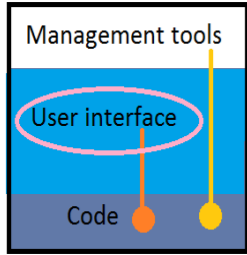


FREE
DEMO



?





Testgevallen genereren en kwaliteit voorspellen

Productivity gap

UX gap

Increase Coverage through Automated Exploratory Testing

AI tests what users can do



Eggplant AI automation. It auto-generates test cases to massively increase testing productivity, speed, and coverage. It uses artificial intelligence and **deep learning** to literally hunt defects — **predicting** where quality issues are most likely to pop up, and correlating data to quickly identify and resolve them.

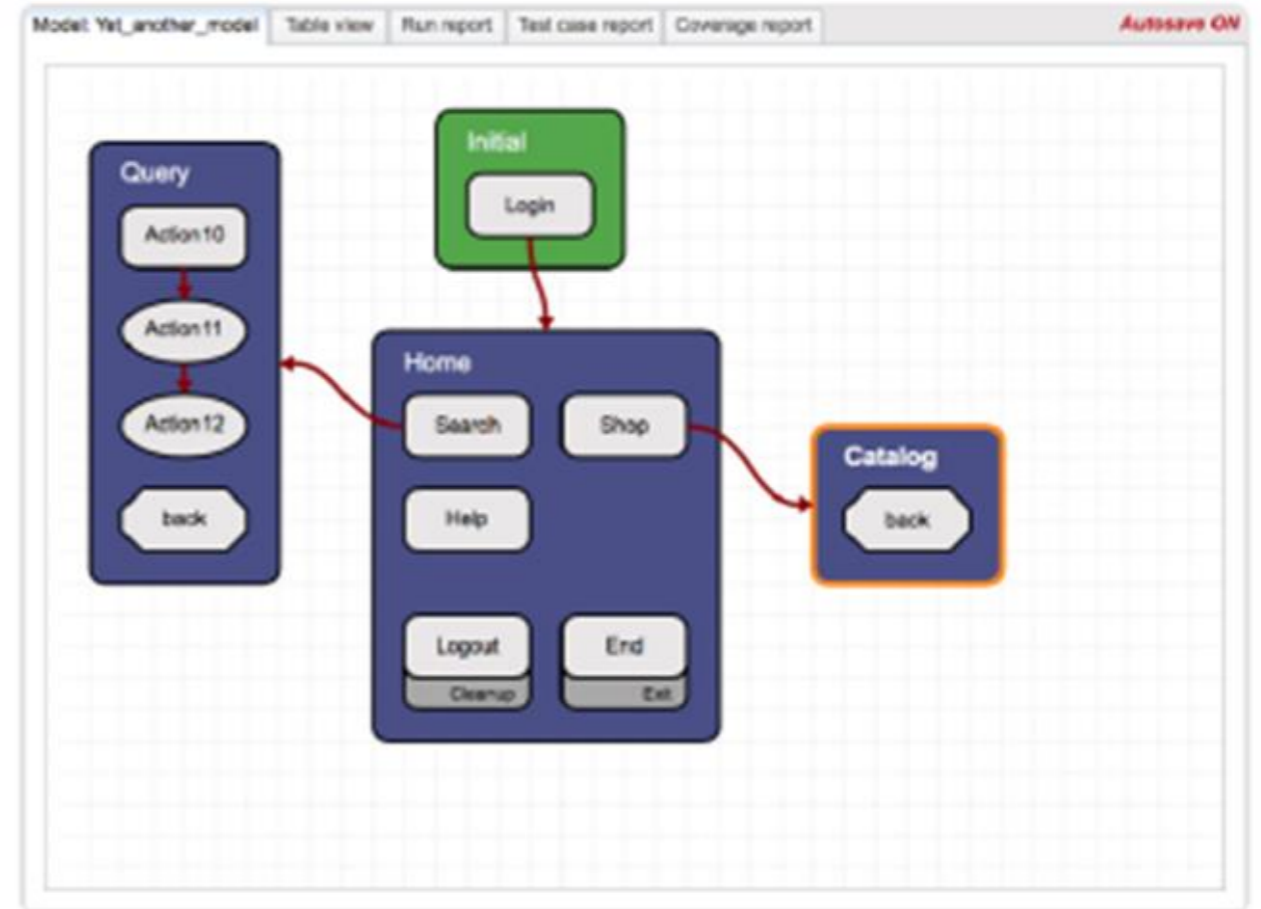


Functionele testen en model

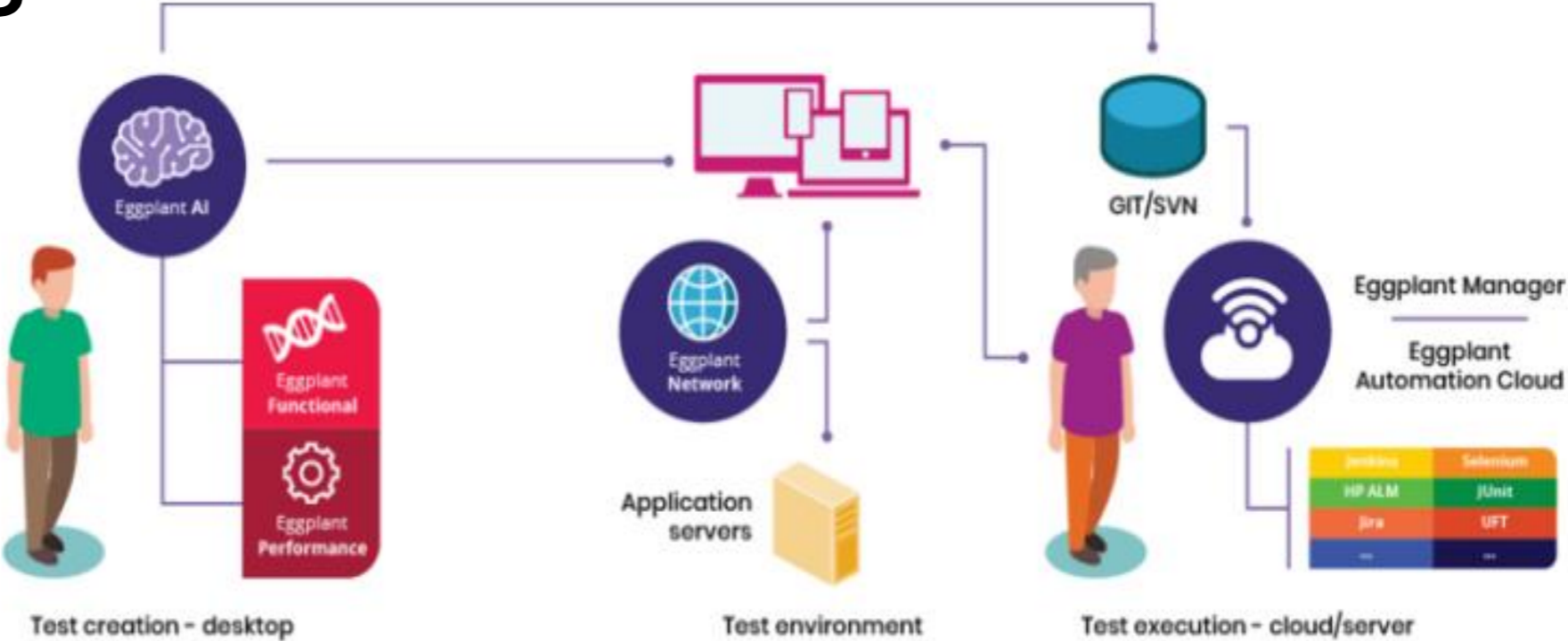
Functionele testsuite van eggplant nodig voor ai module

In de ai tool maak je een blauwdruk in een model met pagina's, widgets, acties en states.



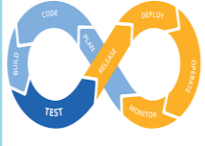



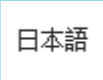

Bijzonder is dat de gebruiker de ai kan beïnvloeden door scenarios een wegingsfactor mee te geven.

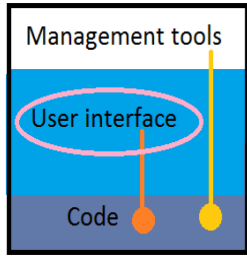


Details



Test suite functional performance-network-cloud automation-management tool ..

Londen USA 
 ai 
 Ci 
 internet 
 rapport 
 ? 
 日本語 
 **eggplant**



Record playback als basis voor testcases met ai



mabl

Help Default Insights 20 reza@the5thseason.net

Dashboard

Explore mabl

- Journeys: journeys describe the functionality mabl will test. Train mabl to test additional functionality. [New journey](#)
- Plans: Plans define where and when mabl will run journeys. Create a new plan to run an existing journey using Firefox. [New plan](#)
- Team: Invite your teammates to help train mabl and keep up to date on test status. [Invite teammate](#)

Recent Runs

Most Recent Status by Environment

- Http: 1 ✓ 0 ✗
- The 5th Season: 1 ✓ 0 ✗
- The 5th Season 2e rond.: 0 ✓ 0 ✗

Passed Search Movies

Visit home page 00:00:22 ✓ Passed

View output

Triggered Jul 1, 2018 6:47 PM by Schedule

mabl Trainer

2 Visit the default URL, e.g. <https://app.mabl.com>

3 Click on the link "Signup" to <https://app.mabl.com/signup>

4 Click on the "Name" text field

5 Generate a random string with format "Dan {{alpha:10}}" and assign it to variable "name", e.g. "Dan koaeNSwFan"

6 Insert value of variable "name" into the "Name" text field

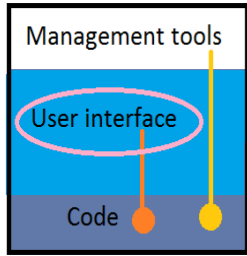
7 Assert "value" of the "Name" text field equals "undefined"

Save Cancel

Install Extension

Why do I need to install an extension?





Demo MABL

The screenshot shows the homepage of Burenstad.nl. The header includes the logo 'BURENSTAD WWW.BURENSTAD.NL', social media icons for Facebook, Twitter, LinkedIn, WhatsApp, a warning icon, and an email icon. A navigation menu contains 'Home', 'Oranjestad', 'Nieuws', 'Agenda', 'Kijken, kopen en doen', 'Eten, drinken en verblijven', and 'Evenementen'. The main content area features a large image of a town square with a church tower. A 'mabl Trainer' overlay is positioned over the page, displaying a list of test steps:

- 19 Switch context to the root frame
- 20 Hover over the <h1> element with text "Oranjestad Buren"
- 21 Hover over the <div> element with text "Home Oranjestad Nieuws Agenda Kijken, kopen en doen Eten, drinken en verblijven Evenementen Home /Oranjestad Buren Oranjestad Buren Een rijke geschiedenis en veel bezienswaardigheden Buren mag zich Oranjestad noemen, vanwege de band met de koninklijke familie. Willem van Oranje trouwde namelijk in 1"

The trainer interface includes playback controls (grid, back, play, forward, record), search, zoom, and refresh icons. It also has checkboxes for 'Hovers: Record' and 'Hide', and 'Save' and 'Cancel' buttons.



Make a plan

Let's make a basic plan that tests your journey **BurenStad PRD** every 4 hours.



What do you want to call this plan?



** This plan will run now and every 4 hours.
Later, you can add additional journeys to this plan.*

Save plan

Congratulations!

You've completed all the steps.

To help you get started I created 2
journeys for you.



Visit home page

This journey checks the homepage loads and logs in if credentials are available

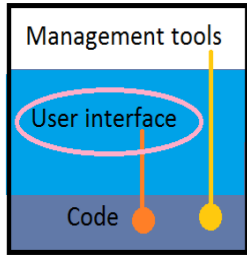
Visit all linked pages within the app

This journey crawls the app and loads each page. It will...

- take a screenshot of each page and notify you of unexpected changes
- check all links and report on any that are broken
- report javascript errors

Next up is the dashboard where you can see the latest status for each test.

Next



Deep Dive met MABL

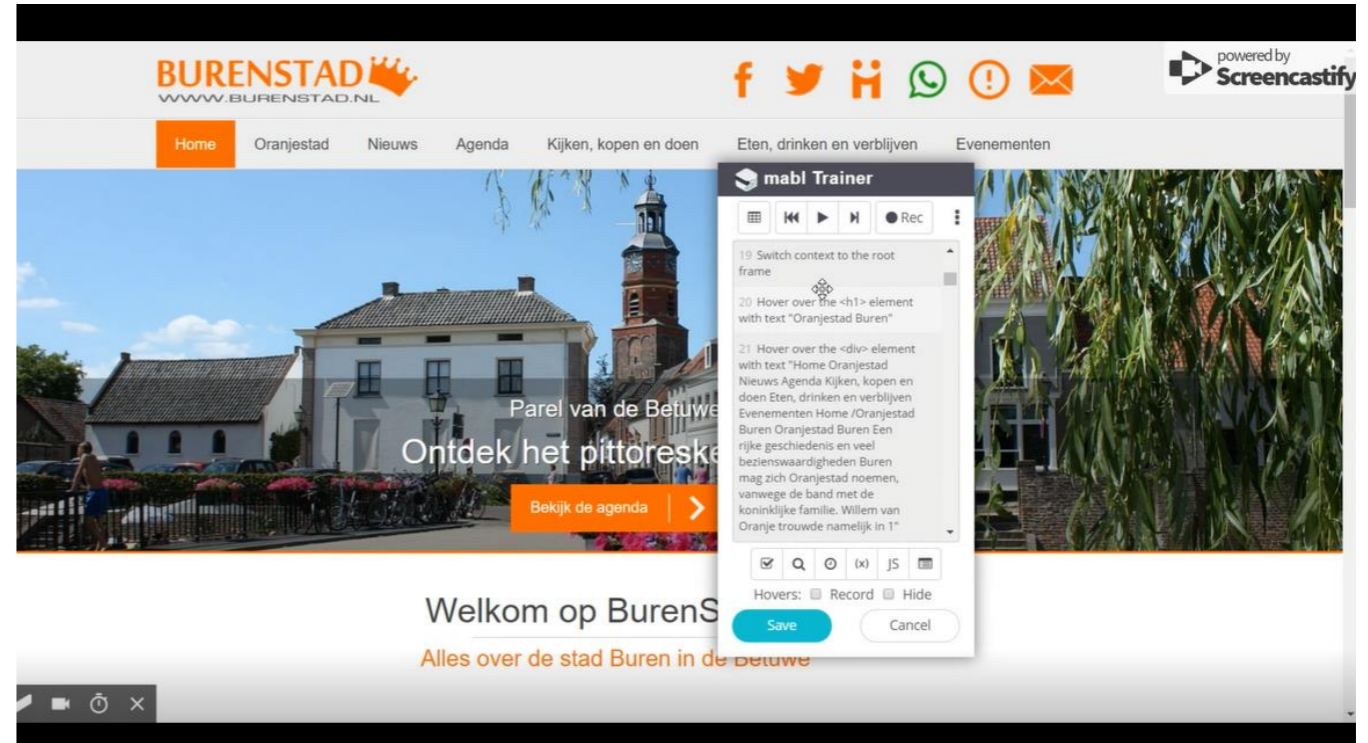
Dive films



Buren Stad.nl - Alles over de stad Buren in de Betuwe.webm



Buren Stad.nl - Alles over de stad Buren in de Betuwe - mabl trainer.webm





Check all pages for broken links and errors > BurenStad PRD > 2018-08-29 11:07:05

BurenStad PRD

Edit in trainer

New Jira issue

Running

Status

00:02:58

Runtime



Chrome

Links broken

I found 5 new broken links across 5 pages. There are 5 total broken links across 5 pages. I checked a total of 4897 links across 135 pages.

Collapse Logs

Auto-Scroll

Before Step

After Step

actions

2018-08-29 11:07:10,996 Starting journey run

Step 1: Set viewport size to width 1490

Step 2: Visit URL assigned to variable "app.url"

Step 3: Click on the element with text "Oranjestad"

Step 4: Switch context to <iframe> element

Step 5: Switch context to the root frame

Step 6: Click on the <h3> element with text "Kasteel Buren"

Step 7: Click on the text field with ID "naam"

Step 8: Enter "6" in the text field with ID "naam"



Step 13: Enter "66666" in the text field with ID "email"

- 2018-08-29 11:10:41,566 Looking for the field with ID "email" using an exact match waiting up to a few seconds.
- 2018-08-29 11:10:43,312 Looking for the field with ID "email" or a close match while waiting up to 30 seconds for the page to load.
- 2018-08-29 11:10:51,899 Entered "66666" in the field with ID "email".

Running

Dashboard

Plans

A plan defines where and when mabl will test your app's functionality as described by one or more journeys.

[New plan](#)

Plan	Created Date	Description	Triggered By	Environments	
<input type="checkbox"/> Check all pages for broken links and errors	Aug 29, 2018 9:43 AM	Load the base URL for the application, visit each of the linked pages, visit each of the links on those pages, a... so forth. Visit external pages but do not crawl the links	⚡ timer: 24 Hr 0 Min	<ul style="list-style-type: none"> BurenStad PRD BurenStad PRD https://www.burenstad.nl 	<input checked="" type="checkbox"/> On
<input type="checkbox"/> Verify home page load and login	Aug 29, 2018 9:43 AM	Attempt to log in (if applicable) and load the base URL for the specified application.	<ul style="list-style-type: none"> ⚡ event: deployment ⚡ timer: 4 Hr 0 Min 	<ul style="list-style-type: none"> BurenStad PRD BurenStad PRD https://www.burenstad.nl 	<input checked="" type="checkbox"/> On
<input type="checkbox"/> BurenStad PRD 4hrs Recurrent	Aug 29, 2018 11:05 AM	None	<ul style="list-style-type: none"> ⚡ timer: 4 Hr 0 Min ⚡ event: deployment 	<ul style="list-style-type: none"> BurenStad PRD BurenStad PRD https://www.burenstad.nl 	<input checked="" type="checkbox"/> On

Plans

BurenStad PRD 4hrs Recurrent

[Edit](#) [Notifications](#) [Share](#) [Delete](#)

Enabled On Run

Each execution starts 1 journey runs

Updated 27 minutes ago

BROWSERS



TRIGGERS

⚡ timer: 4 Hr 0 Min
⚡ event: deployment

APPLICATION

BurenStad PRD

ENVIRONMENTS

BurenStad PRD

https://www.burenstad.nl

JOURNEYS

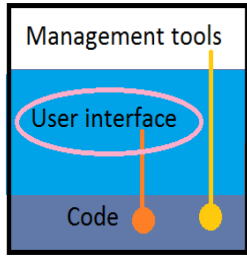
BurenStad PRD

History



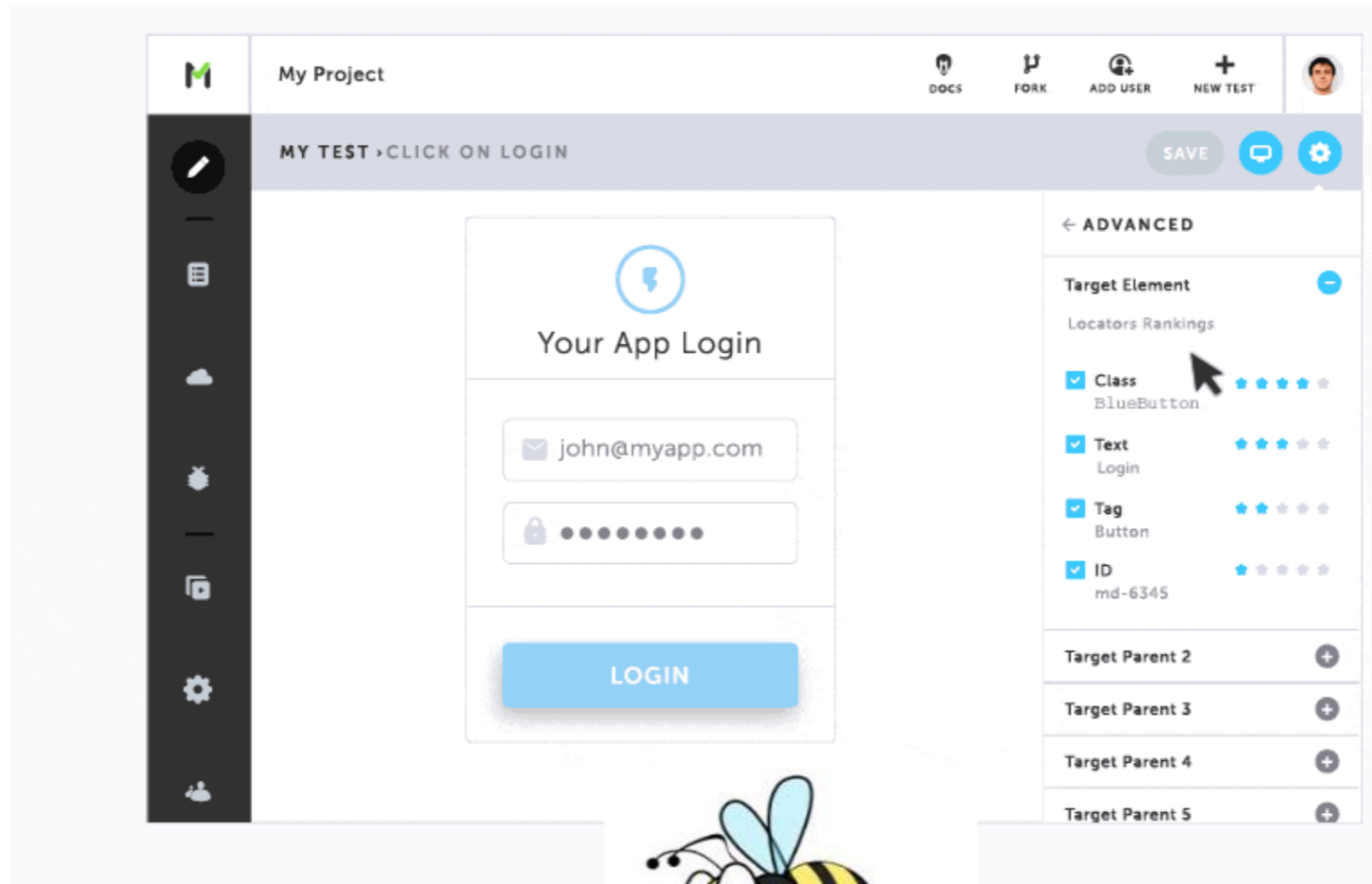
Status	Triggered By	Triggered ↑	Run Time	Actions	Journeys			
Running	Manual	Aug 29, 2018 11:31 AM	Running		BurenStad PRD 🔍	⚙ Running	00:00:23	View output
Passed	Schedule	Aug 29, 2018 11:06 AM	00:13:27		BurenStad PRD 🔍	✅ Passed	00:13:19	View output

[Show more runs](#)



Testim

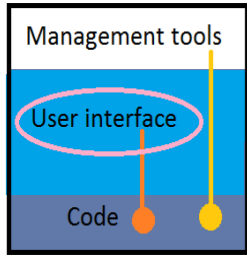
Testim gebruikt machine learning om het opstellen, uitvoeren en onderhouden van geautomatiseerde tests te versnellen.



autonomous authoring - tests that learn



testim



Retest



Finding the corresponding component after substantial changes

retest is Perfect for Agile Testing

“ We have come to value:

- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

From the [Agile Manifesto](#)

Individuals and Interactions over Processes and Tools

If you have a challenge in your team or culture, no tool is going to save you—not even retest. Aside from that, retest is specifically well-suited for agile testing (see below).

Working Software over Comprehensive Documentation

We should document as few as possible, and only what's necessary. Agile teams make an effort to bring everyone to the table, making astonishingly little documentation necessary. Although this reduces effort, in a changing team with changing requirements, this also means that no one remembers what a specific field in a specific situation should actually contain. This then makes even manual testing impossible.

retest helps by documenting the current state of the software in minute detail, serving as an additional documentation that can be automatically compared to the current version of the software and is easy to maintain.

Customer Collaboration over Contract Negotiation

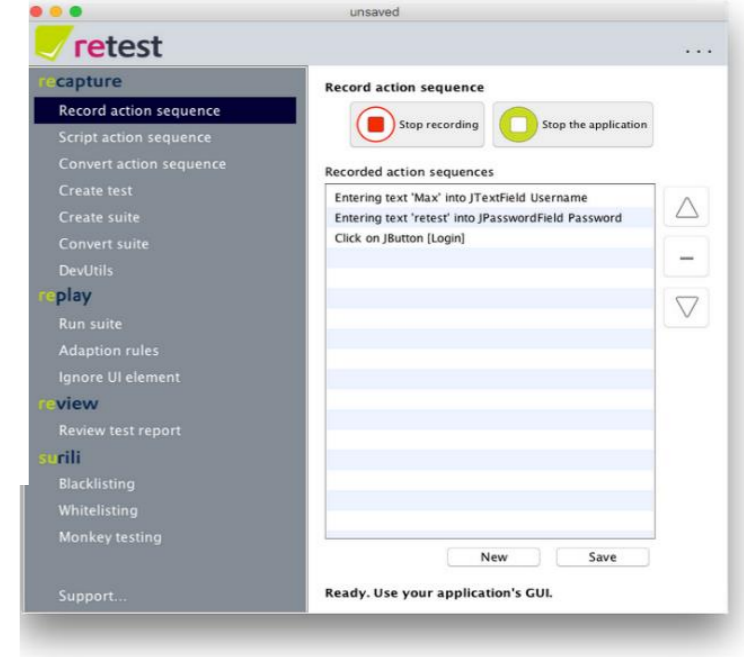
By focusing on ease of use, retest does not require technical knowledge and thus makes it easy to collaborate with business customers and lets them record valuable use cases or review questionable changes.

Responding to Change over Following a Plan

We should use an iterative, incremental approach to software development. Traditional GUI automation tools result in brittle and hard-to-maintain tests. This is why most practitioners caution to bring in GUI automation early when the GUI has not yet stabilized—which it ideally never does.

However, retest was built around the process of a changing GUI. Tests are robust and maintaining tests becomes as simple as a single click.

All of this makes retest the best tool to use for GUI automation in agile testing.



Tools die op testscenarios ai toepassen

Duitsland

ai!

Ci?

lokaal

rapport

Java

?



USA

ai

Ci

online

rapport

0 voor 100
runs/mnd



Israël

Boston

ai

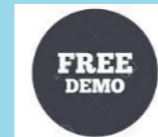
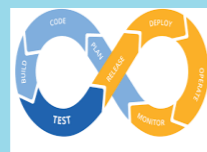
Ci

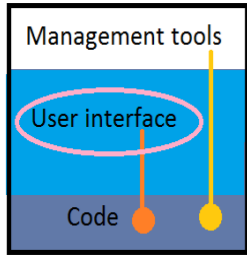
online

rapport

Chrome-
extension

wachtrij 0,15per run





App verkennen-testgevallen-bugs oplossen

sofy is a machine learning and ai powered *software testing assistant*



Upload Android en iOS apps

Crawler doet zijn werk

Bug gevonden? Dashboard met verschillen, visueel.

Rapportage in Jira met log en reproductiepad

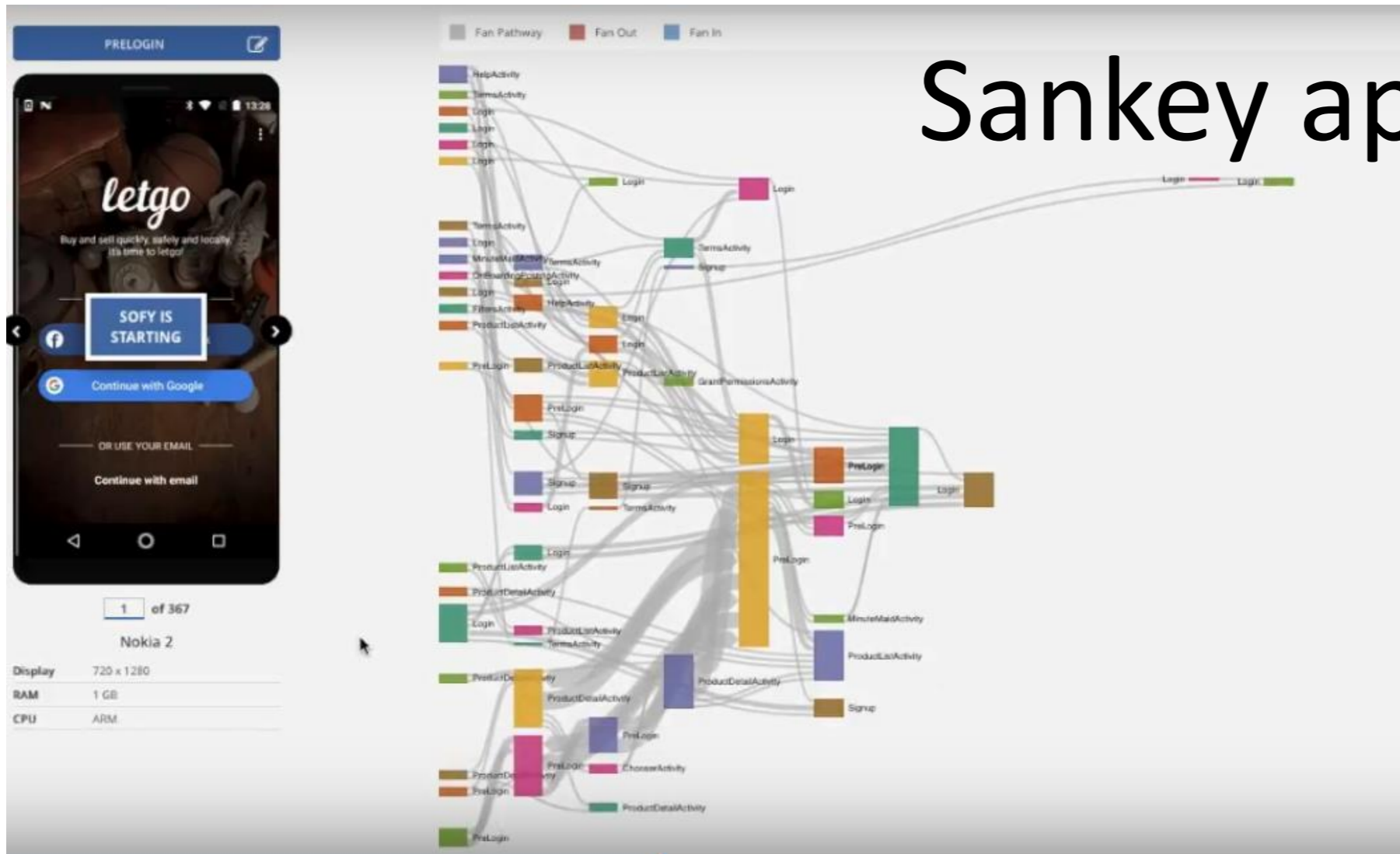
Bug rapport is tevens een test

Artikelen known issues framework gelinkt en links naar stack overflow voor workarounds

Uitgebreide cloud



Sankey app navigatie



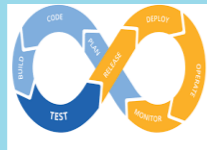
land



ai?



CI?



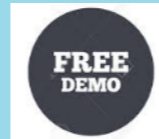
internet



rapport



FREE
DEMO

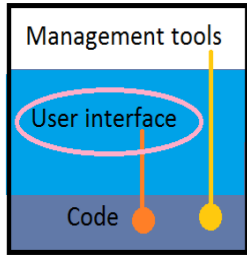


FREE
TRIAL



kosten





Baseline genereren en slim runs vergelijken



Accelerate Releases

Reduce time spent on regression creating and updating automated tests through TestRigor. TestRigor bot will autonomously discover all new functionality in your application.



Auto-adapting Tests

TestRigor is very stable to layout changes. We employ multi-level comparison algorithms to make sure we find the same information/controls on your page.



Screenshots of Each Step

TestRigor bot takes screenshots before and after each step.

functional regression testing without any human involvement

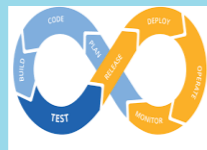
USA



ai



Ci?



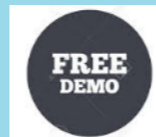
internet



rapport



FREE DEMO



FREE TRIAL



1200

3999 mnd



 **testrigor**



Baseline genereren-matchen verschillen

How to use



1. Upload App Binary(*.apk).

Apptest.ai services can be easily integrated into your CI (Continuous Integration) environment for automating the build and testing process.



2. Click "Start Test" Button.

Optionally, you can choose any target phones, or specific account credentials for testing.



3. Get results in minutes.

When testing is completed, app screen flows, bug reports, and performance optimization guides will be generated.

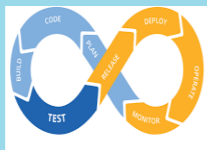
Zd Korea



ai?



ci



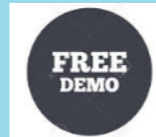
upload



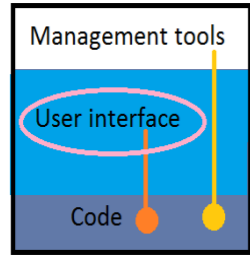
rapport



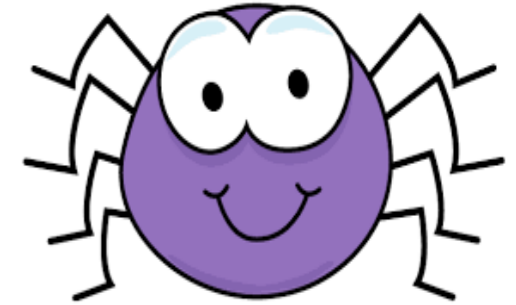
0 trial



AppTest.ai *Beta*



Testar



Open Universiteit

Universiteiten van Utrecht en Valencia

Beginfase van ai die zelfstandig kan draaien

Crashes en hangers

Je kunt zelf toevoegen Errors

Open source en te downloaden

Test*

Samenvatting Tools

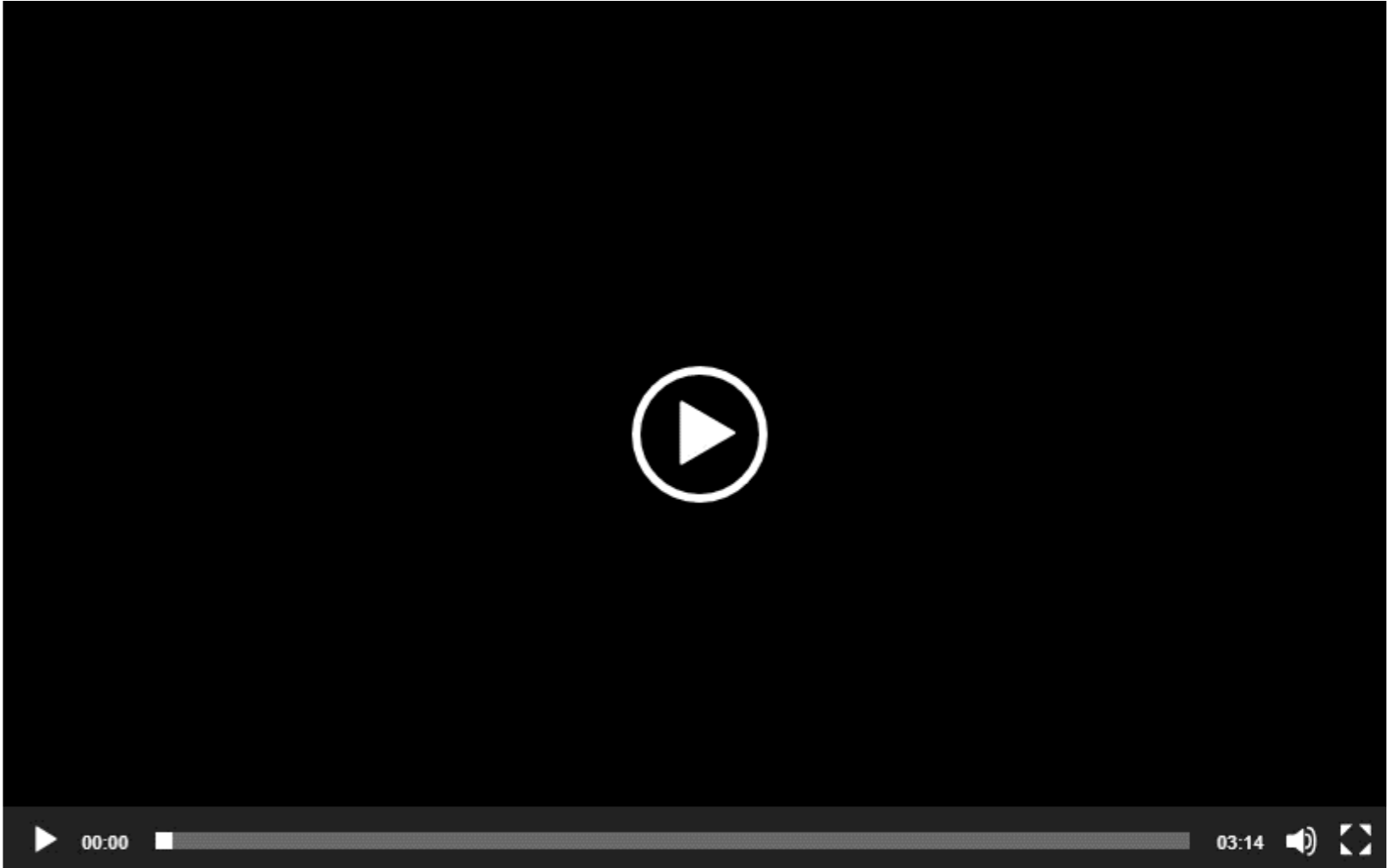
UNIVERSITAT
DUISBURG
ESSEN
Test Automation at the useR interface level (Testar)

¿What **T**est* is not ?

- It is not capture/replay
- It is not visual testing
- It does not generate scripts



Crash test



NL/SP



ai



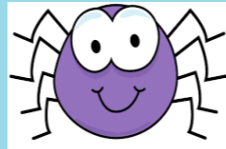
lokaal



FREE
DEMO



FREE
TRIAL



Test

Samenvatting Tools



1. Testdekking vergroten en zuinig testen
2. Code verbeteren
3. Visuele verschillen beter beoordelen
4. Functionele testen voor ai/monkeytest
5. Testgevallen genereren
veel en echte gebruikers
automatisch
6. Crash testen

Sealights

diffblue

Applitools

Functionize, Mabl, Testim, Retest

Alle tools behalve Sealights

Appvance en Functionize

Functionize, AppTest, Testrigor,
& Sofy

Testar

Wat vonden jullie van de tools?

Recap

- Hoe was het vroeger?
- Hoe is het nu?
- Hoe ziet de toekomst eruit?
- Weten we wat de tools ons te bieden bieden?
- Marketing is King!
- AI is niet te stoppen → Game Changer! (buzzword alert)
- Het echte werk ligt nog voor ons, to be continued!

Dank jullie wel

Opmerking: deze presentatie is als PowerPoint (dus inclusief alle filmpjes) te downloaden in de bibliotheek van TestNet