

Herzlich willkommen  
Danke für Ihre heutige Webcast Teilnahme



# TRENDS IM msg.TESTCENTER

KI-gesteuerte Testautomatisierung mit  
Tricentis Tosca, Vision AI

**26.03.21 10:00-11:00 Uhr**

Bastian Siedek, msg systems ag  
Gerta Sheganaku, Tricentis GmbH





# Heutige Präsentatoren



**BASTIAN SIEDEK**

Senior IT Consultant  
Stellv. Tricentis Partner Manager  
msg systems ag



**GERTA SHEGANAKU**

Product Managerin AI ML  
Tricentis GmbH



# Housekeeping

1. Sie sind gemuted
2. Über das Chatfenster freuen wir uns über Ihre Beiträge
3. Der Webcast wird aufgezeichnet
4. Umfrage nach der Veranstaltung
5. Sie erhalten die Slides per eMail

# Agenda

1. Vorstellung der msg Gruppe

---

2. Test & Quality Management in der msg

---

3. msg.Testcenter of Excellence

---

4. IT-Trends

---

5. Vorstellung Tricentis und Live Demo

---

6. Was Sie schon immer über smarte Testautomatisierung wissen wollten!

---

7. Fragen



## Wir sind eine international agierende Unternehmensgruppe

- Gründungsjahr: 1980
- Unternehmenssitz: Ismaning/München
- Umsatz: 1.031 Mio. € (2019)
- Über 8.000 Mitarbeitende
- Standorte in 27 Ländern
- Branchen: Automotive, Banking, Food, Insurance, Life Science & Healthcare, Manufacturing, Public Sector, Telecommunications, Travel & Logistics, Utilities
- Starke Unternehmensgruppe aus über 20 starken Marken
- Platz 6 unter den umsatzstärksten IT-Beratungs- und Systemintegrationsunternehmen in Deutschland

# msg Test & Quality Management: Fakten

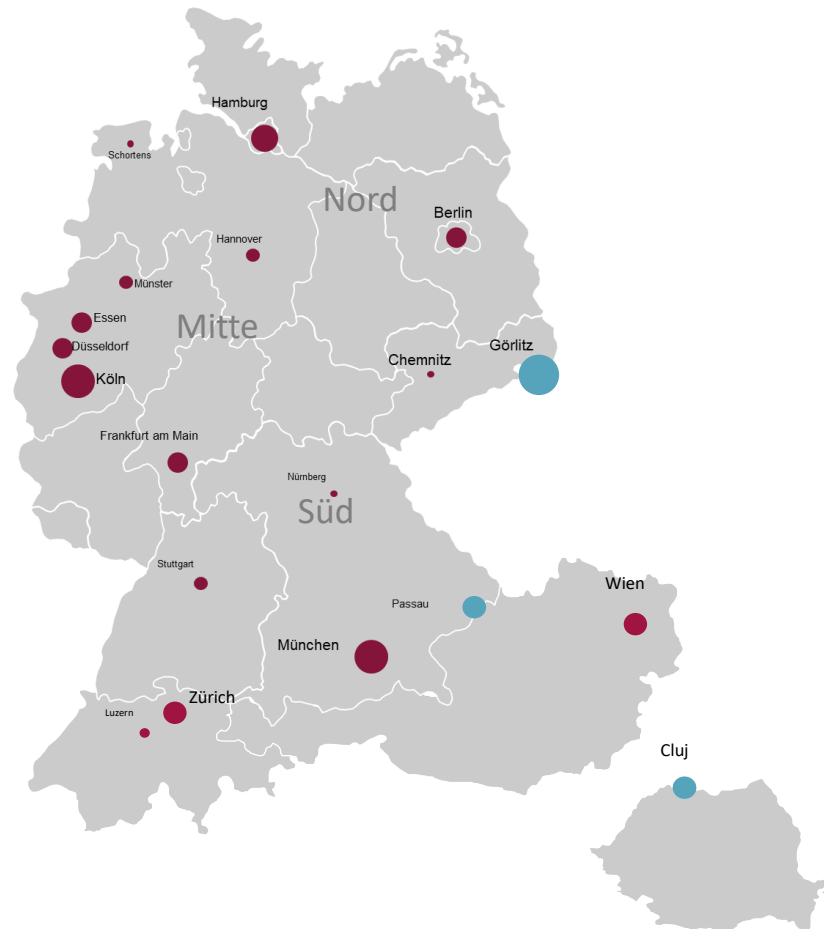
## Branchen

- Insurance
- Public Sector
- Automotive
- Financial Services
- Life Science & Healthcare
- Telecommunication
- Travel & Logistics
- Utilities

## Kapazitäten

- 400+ Onsite Consultants DACH
- Offsite Testcenter Deutschland
- Nearshore Testcenter Rumänien
- Offshore Testcenter Indien

## Standorte im DACH-Raum



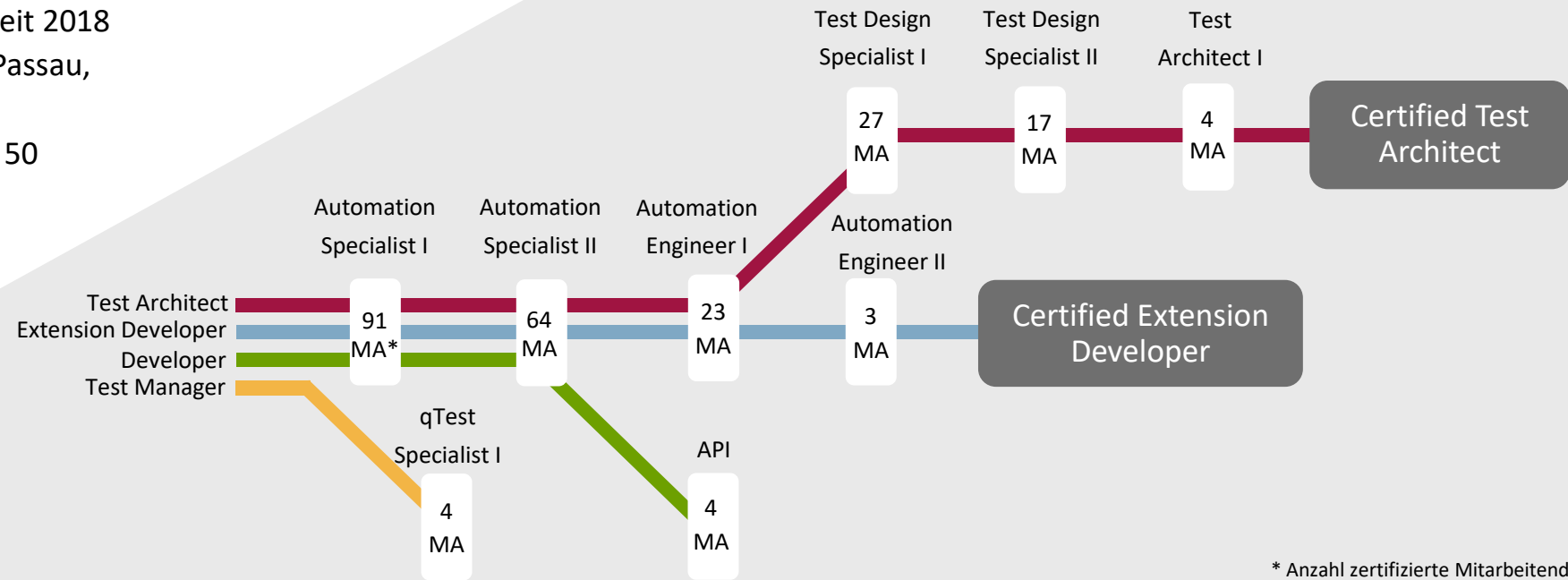
## Kooperationspartner



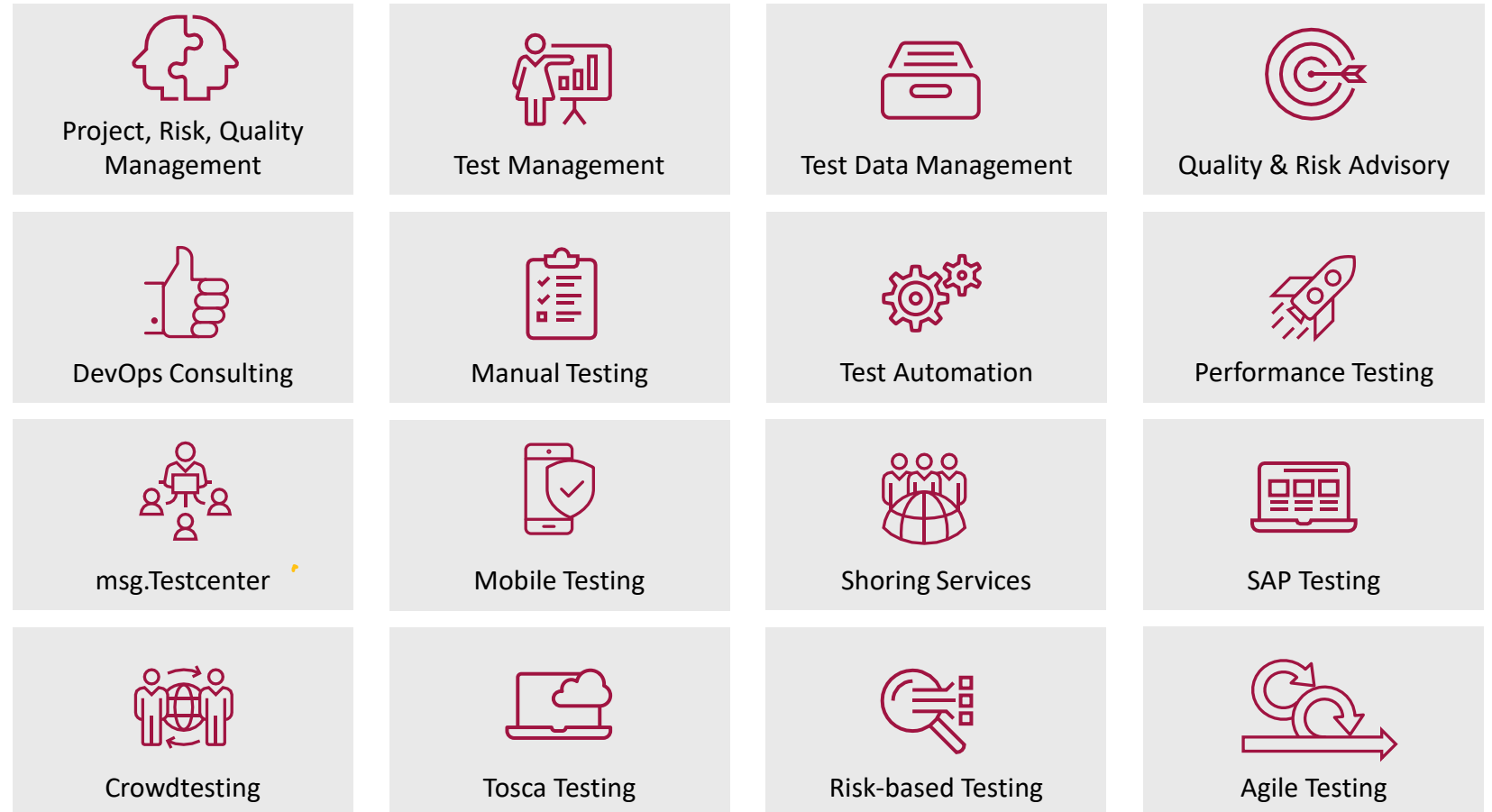
## Zahlen & Fakten

- msg ist Tricentis Premium Partner seit 2018
- Test Automation Service Center in Passau, Görlitz und Cluj
- Projekterfahrungen durch mehr als 50 Kundeneinsätze
- über 200 zertifizierte Tosca Experts

## Schulungspfad & Zertifizierungen

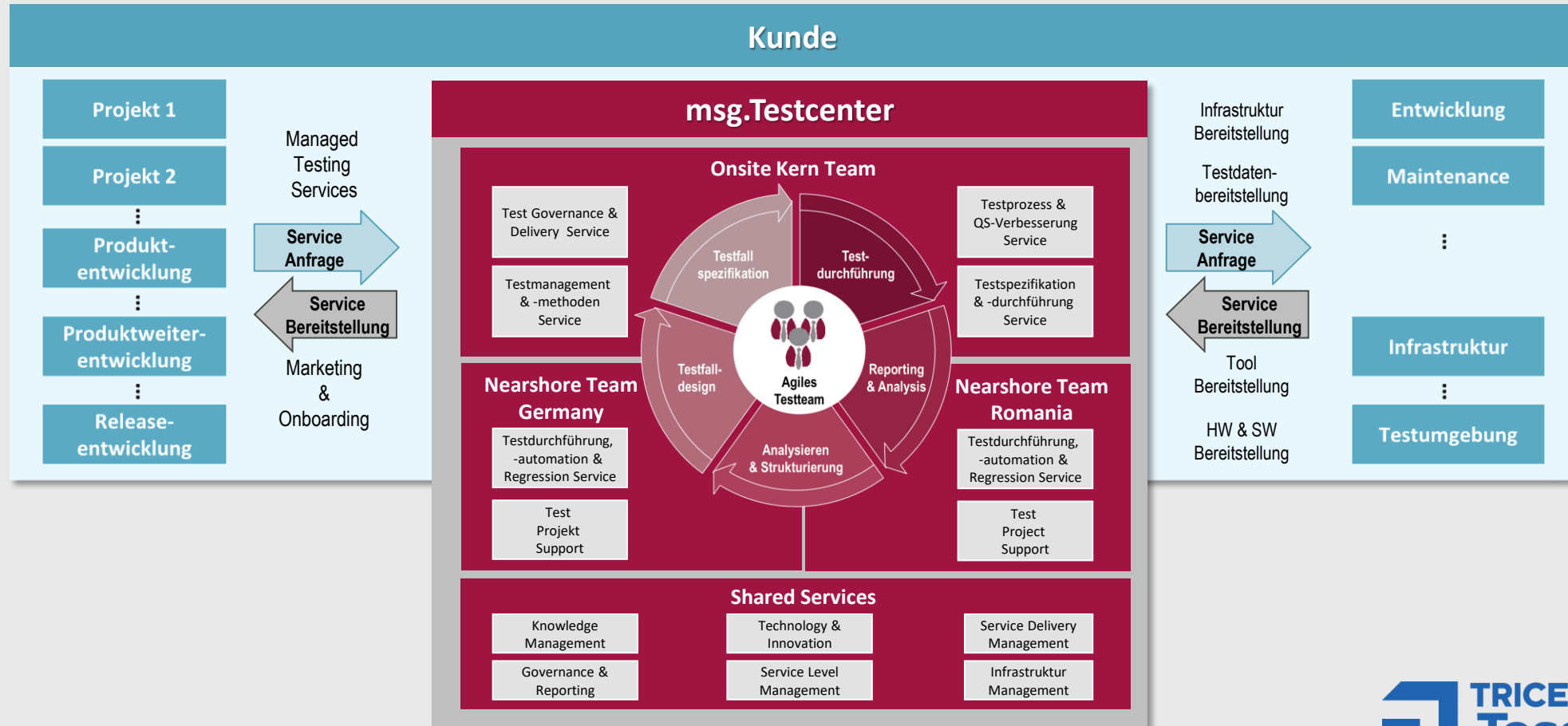


# Leistungsportfolio msg Test & Quality Management Consulting, Solutions & Services





# Das msg.Testcenter – Smart Shoring Modell



## Leistungsportfolio: Dialog im msg.Testcenter

„Wie schaffen wir es Software häufiger auszuliefern und den Releasezyklus zu verkürzen, ohne umfassendes Testing zu vernachlässigen?“

„Welches Outsourcing-Modell ist für mich das Richtige?“

„Ich brauche Unterstützung.“  
„Wenn ich Outsourcing nutze, wie bleibe ich in Kontakt und wer ist mein Ansprechpartner\*in?“




Sie fragen

msg antwortet

„Wir führen Ihre Testautomatisierung Suite kurzfristig aus, so dass Sie Ihre Release-Zyklen systematisch und zuverlässig verkürzen können.“

„Wir bieten smarte Service- und Shoring-Modelle an, die bedarfsgerecht abgerufen werden.“


„Im msg.Testcenter kann unser Kernteam Sie mit einer Onsite Präsenz unterstützen.“ „Sie haben jederzeit einen Single Point of Contact.“



**Hyper-  
Automatisierung**

**Low-Code  
No-Code**

**Crowdtesting**  
 passbraíns

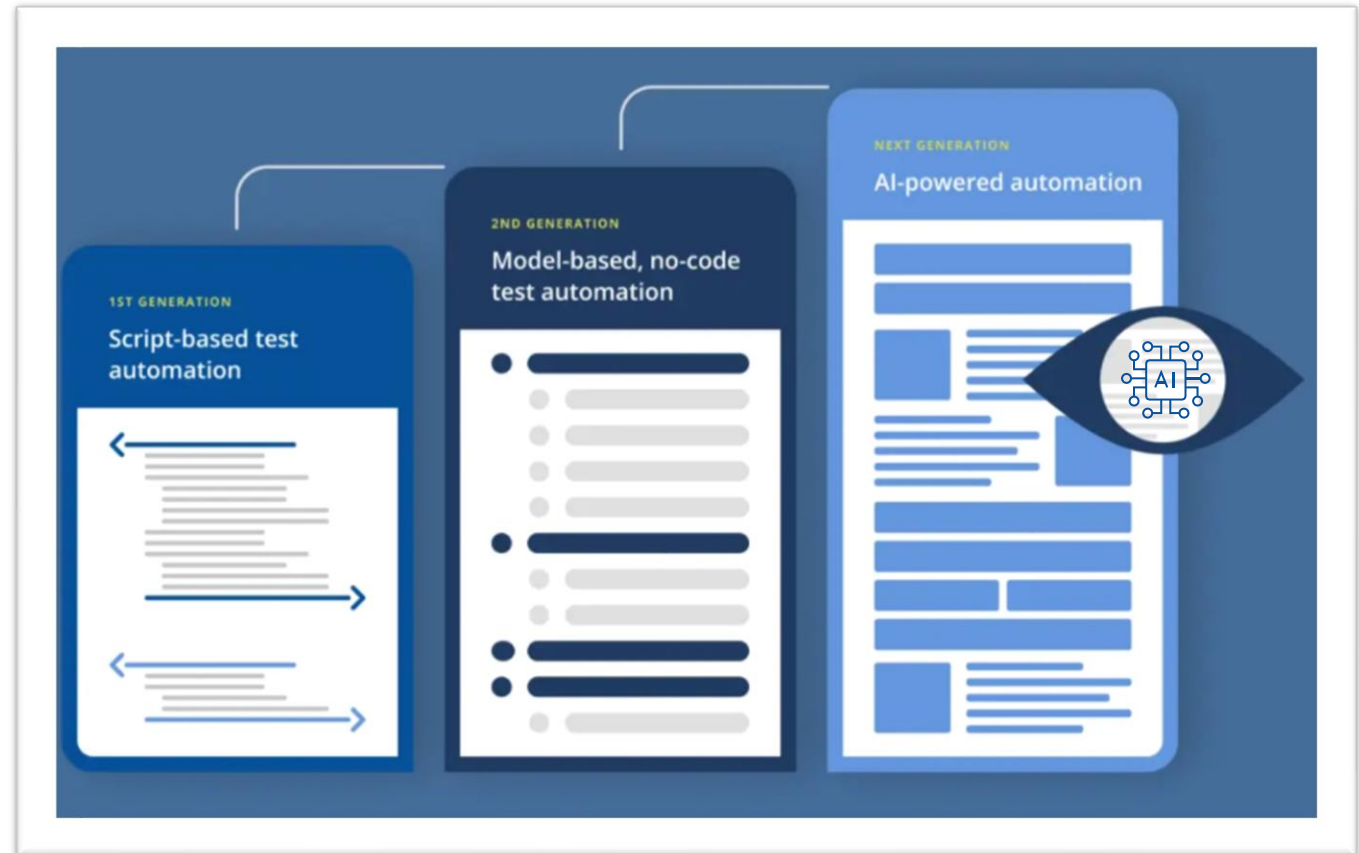


**Cloud + AIoT**





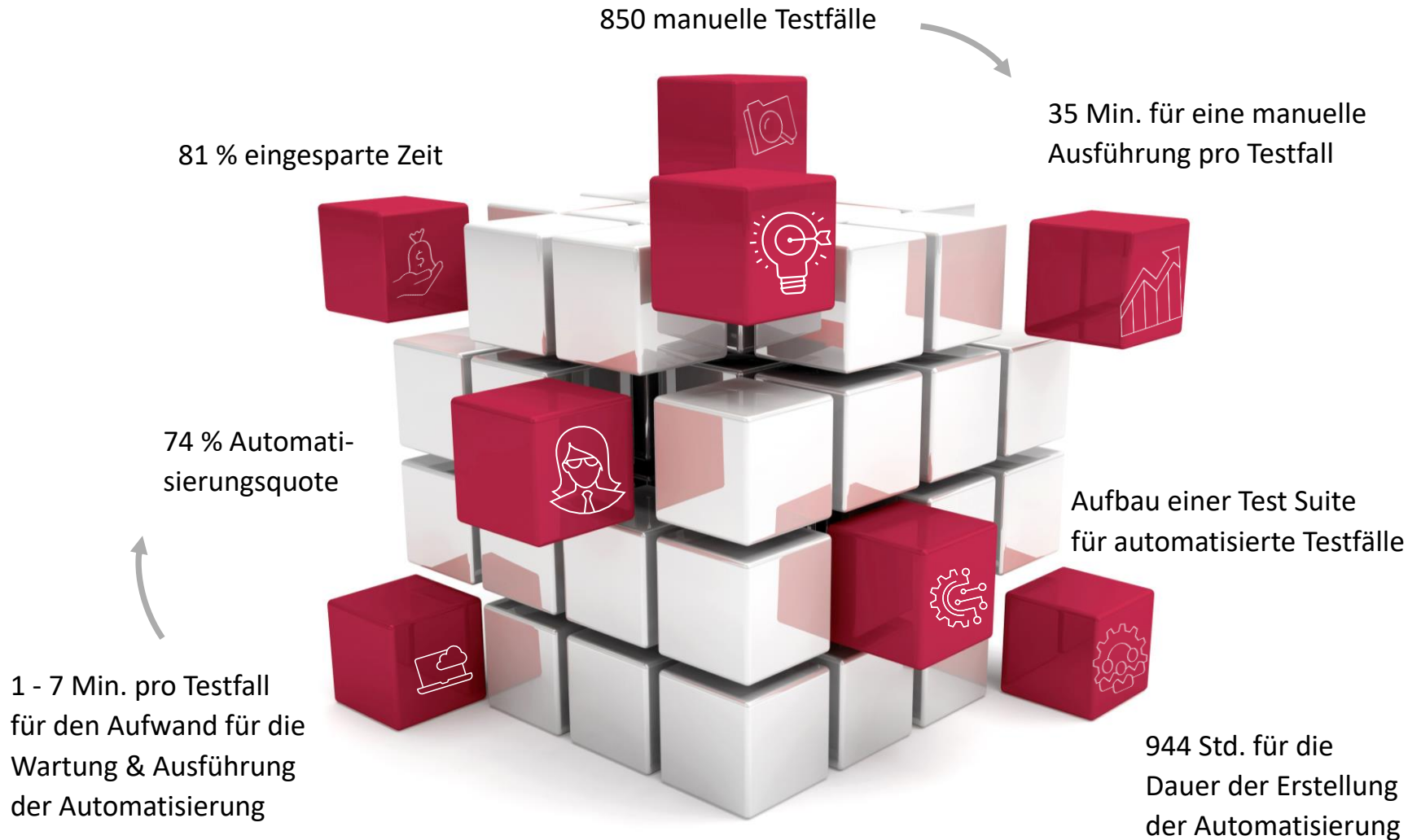
## Vorstellung und Live Demo



Was Sie schon immer über smarte Testautomatisierung wissen wollten!

# Eine Testautomatisierung Journey

## Automatisierung von Testfällen mit Tricentis Tosca



## Einführung Testautomatisierung



Auswahl Testautomatisierungstool Tricentis Tosca und Zugriff auf Kundeninfrastruktur



Identifizierung von Automatisierungspotentialen und Auswahl PoC-Testfälle



Automatisierung und Ausführung Testfälle



Fehlermanagement und Optimierung



Bewertung der Testautomatisierung  
Weitere Vorgehensweise

Sind Sie interessiert?

**Wir bieten Ihnen eine kostenlose, individuelle WebSession** oder einen vor Ort Termin an, wo wir Ihnen die wichtigsten **Aspekte der Tosca Testautomatisierung erläutern**, sowie einen ersten Vorschlag für ein auf Sie **zugeschnittenes Servicepaket** oder einen **PoC** unterbreiten.



# Zeit für Ihre Fragen



# Nächster Webcast: Fr. 23.04.2021, 10 Uhr

**Trends im msg.Testcenter:**

**Performance als Erfolgsfaktor mit dem msg Last- und Performance Testing Service**

Datum: 23.04.2021

Uhrzeit: 10:00 - 11:00

Ort: Teams Live WebCast



**Melden Sie sich noch heute unter [msg.group](https://msg.group) an!**

.msg

# msg Test- und Quality Management



Bastian Siedek  
Senior IT Consultant  
Tel.: +49 160 96 91 19 02  
Bastian.Siedek@msg.group

msg systems ag  
Robert-Bürkle-Straße 1  
85737 Ismaning

+49 89 96101-0  
+49 89 96101-1113

info@msg.group

value – inspired by people





## **Vision AI**

How Tricentis' next-gen test automation technology revolutionizes UI testing

The continuous testing market leader with agile test management and advanced test automation optimized to support over **160+ technologies**



## Results



**10X**

Faster Testing



**50%**

Lower Costs



**90%**

Risk Coverage

## Partners



## Tech Alliances



2020

**Launch SAP OEM & SolEx**  
Transformational partnership

2019

**LiveCompare Acquisition**  
Impact Analysis

2018

**QASymphony Merger**  
Test Management

2017

**Q-up Acquisition**  
Test Data

2017

**Flood Acquisition**  
Load Testing

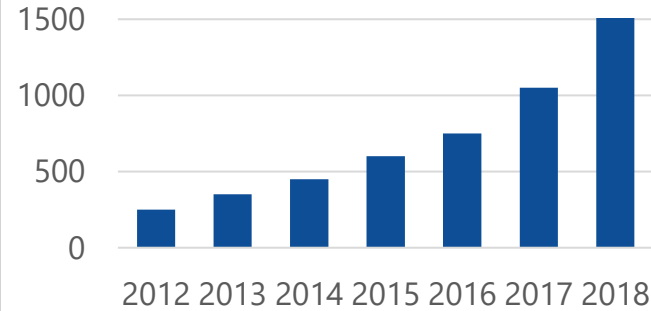
2016

**Insight Venture Partners Investment**

2007

**Founded**

## Customers



Greater than  
**1,800+**  
Customers  
World Wide

**7 of the top 10**  
Global Banks

**6 of the top 10**  
Financial Services

**4 of the top 10**  
Energy/Utilities

**8 of the top 10**  
Insurance Companies

**7 of the top 10**  
Telcos

**7 of the top 10**  
Global Services

## Analyst Recognition

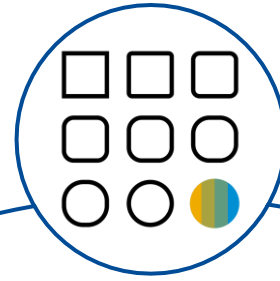


# Why SAP Chose Tricentis as Its Official Testing Solution



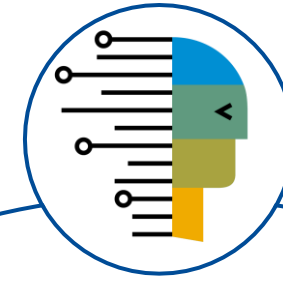
## The Global Leader in Enterprise Testing Solutions

- 1** Leader in Gartner Magic Quadrant
- 2** Proven Results in the World's Biggest Brands
- 3** Versatile Platform for Customers at Any Stage of SAP Modernization



## Enterprise-Grade Platform for SAP Testing and Beyond

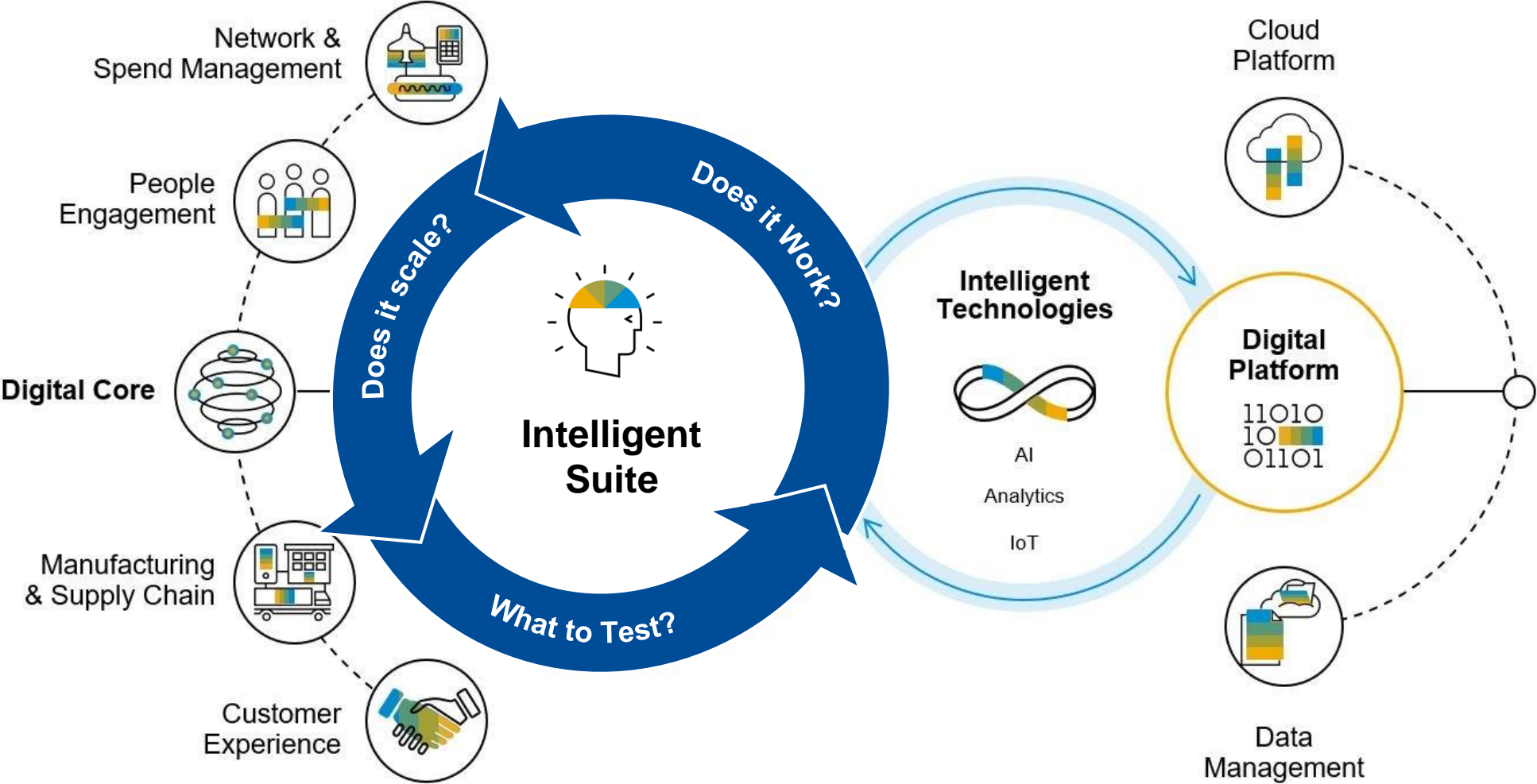
- 4** Model-Based Automation for Resiliency and Scalability
- 5** Risk-Based Approach That Minimizes Business Downtime
- 6** Seamless Integrations for SAP and Non-SAP Testing



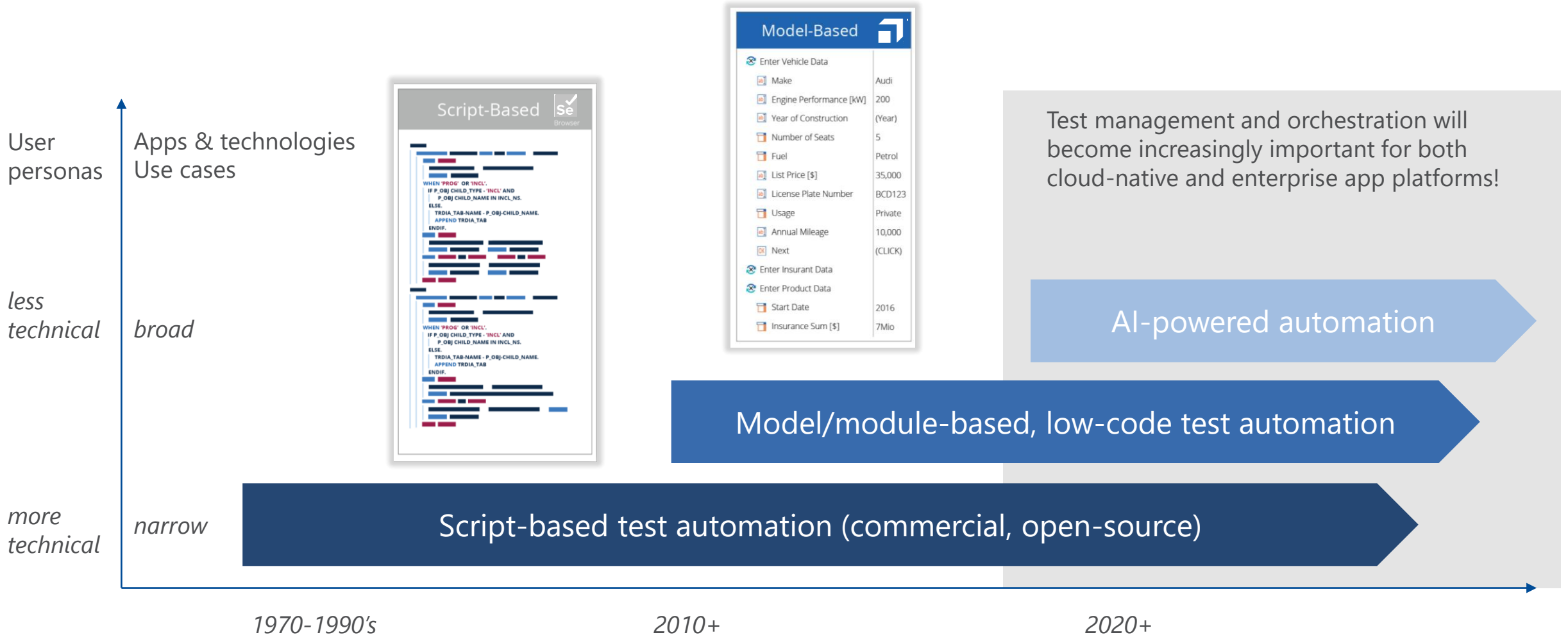
## Modern, AI-Driven Technology for Easy Adoption

- 7** AI-driven Impact Analysis for Fast, Safe Changes
- 8** Cloud-Based Architecture
- 9** No-Code, Business Friendly Platform for Easy Adoption

# The Intelligent Enterprise and the Need for Enterprise Testing



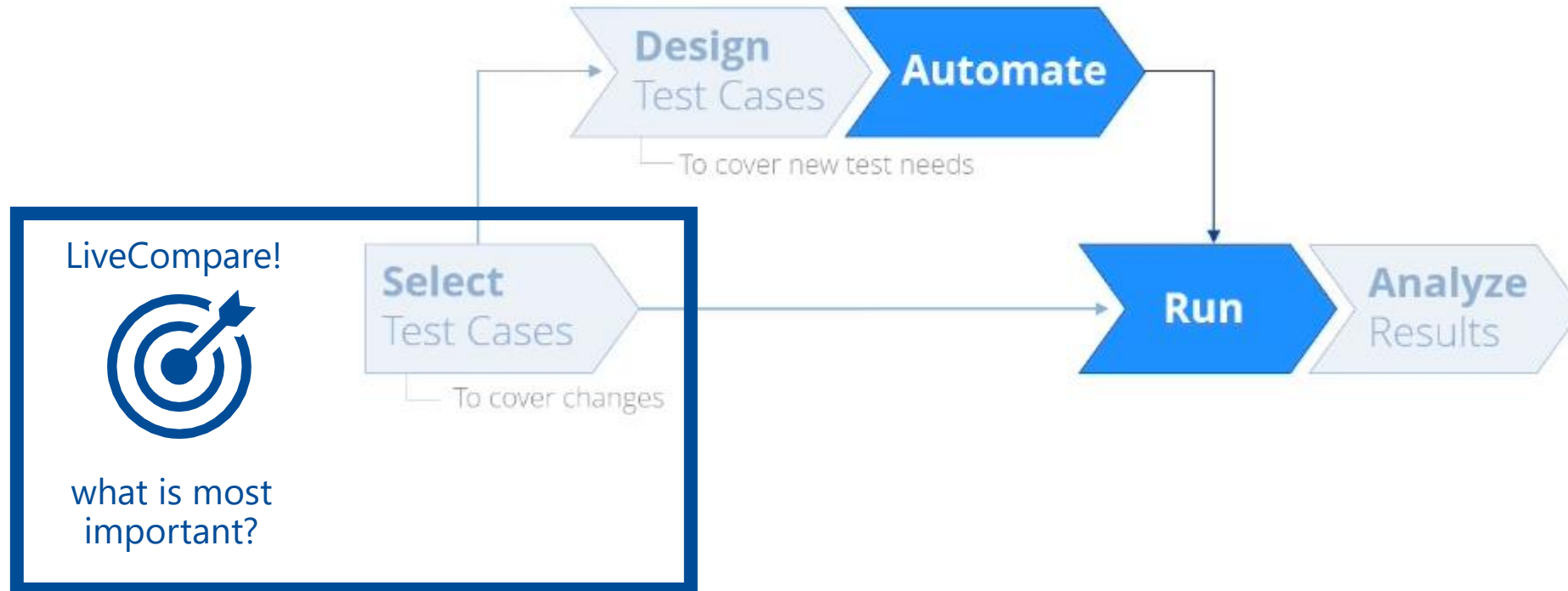
# We're entering the next era of test automation





# The software testing process

**#1 Challenge:** technical scripting



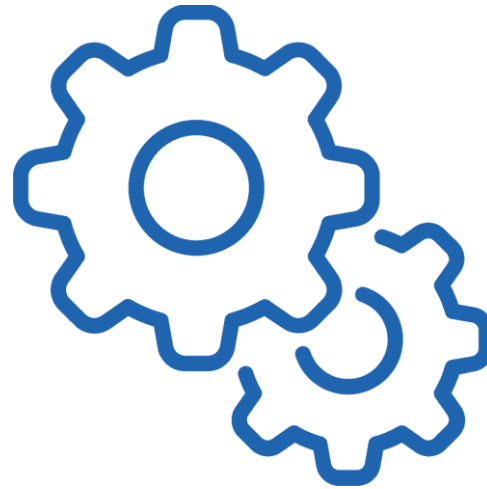
# Main problems with UI automation

## Fragility



Tests are not stable and keep breaking

## Know How



Automation is too technical

## Speed



UI automation happens too late

# Why do UI tests break?



Fragility

Status

Status

What you see

vs.

The code

```
<lightning-base-combobox lightning-combobox_combobox class="slds-combobox_container" lightning-base-combobox_basecombobox-host>
  <div lightning-base-combobox_basecombobox role="combobox" aria-expanded="false" aria-haspopup="listbox" class="slds-combobox slds-d
    <div lightning-base-combobox_basecombobox role="none" class="slds-combobox__form-element slds-input-has-icon slds-input-has-icon_
      <input lightning-base-combobox_basecombobox id="input-248" type="text" role="textbox" autocomplete="off" name="progress" placeh
        "none" readonly class="slds-input slds-combobox__input" aria-controls="dropdown-element-248">
      <div lightning-base-combobox_basecombobox class="slds-input__icon-group slds-input__icon-group_right">...</div>
    </div>
    <div lightning-base-combobox_basecombobox id="dropdown-element-248" data-dropdown-element="true" role="listbox" class="slds-listb
      dropdown_fluid slds-dropdown_length-with-icon-10 slds-dropdown_left"></div>
    </div>
  </lightning-base-combobox>
```

```
<div class="dropdown">
  <button class="btn btn-default dropdown-toggle" type="button" id="menu1" data-toggle="dropdown">Tutorials
  <span class="caret"></span></button>
  <ul class="dropdown-menu" role="menu" aria-labelledby="menu1">
    <li role="presentation"><a role="menuitem" tabindex="-1" href="#">HTML</a></li>
    <li role="presentation"><a role="menuitem" tabindex="-1" href="#">CSS</a></li>
    <li role="presentation"><a role="menuitem" tabindex="-1" href="#">JavaScript</a></li>
    <li role="presentation" class="divider"></li>
    <li role="presentation"><a role="menuitem" tabindex="-1" href="#">About Us</a></li>
  </ul>
```

# Why do UI tests break?



Fragility

Chrome File Edit View History Bookmarks People Window Help 02:46

Recently Viewed

https://gs0.lightning.force.com/one/one.app#/sObject/Opportunity/home?i=1441535711730

Take a Tour of Salesforce Choose Your Tour

Create Opportunity

Opportunity Information

Opportunity Name\*  ⓘ

Account Name\*

Type

Primary Campaign Source

Discovery Completed

Opportunity Owner

Close Date\*

Stage\*

Probability (%)

Amount

The same control:  
"Opportunity Name" Input

New Opportunity

Opportunity Edit

Opportunity Information

Opportunity Owner

Opportunity Name

Account Name

Main Contact

Quote number

Manufacturer (Primary)

Opportunity Type

# What if the machine sees like us?



Fragility

## If the machine sees like us...



## ...it will adapt like us



**Self Healing**

Tests as adaptable as users



# Automation is too technical



Know How

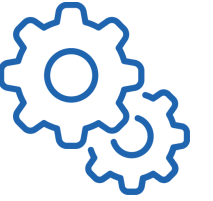
```
▼<div>
  ▼<div class="css-10nd86i-container" id="currentInsurerDropDownList">
    ▼<div class="currentInsurerList__control css-1nalo3b-control">
      ▼<div class="currentInsurerList__value-container css-1hwfws3">
        <div class="currentInsurerList__placeholder css-1492t68-placeholder">Se</div>
        ▼<div class="css-1g6g0oi">
          ▶<div class="currentInsurerList__input" style="display: inline
          </div>
        </div>
      </div>
    ▼<div class="currentInsurerList__indicators css-1wy0
      <span class="currentInsurerList__indicator-se<span class="currentInsurerList__indicatorSeparator"></span>
    ▼<div aria-hidden="true" class="currentInsurerList__dropdown-indicator css-1ep9fjw-indicatorContainer">
      ▼<svg height="20" width="20" viewB
        <path d="M4.516 7.548c0.436-0.4
        0.787 0.335s-0.57-0.112-0.789-0.3
        4.084-4.695-4.502s-0.436-1.17 0-1.615z"></path>
      </svg>
    </div>
  </div>
</div>
<input name="currentInsurer" type="hidden" value>
```

**CONFUSING**

Current/Recent insurer

# What if we take the code out of it?



Know How

Current/Recent insurer

 | ▾

## Using Visual Clues

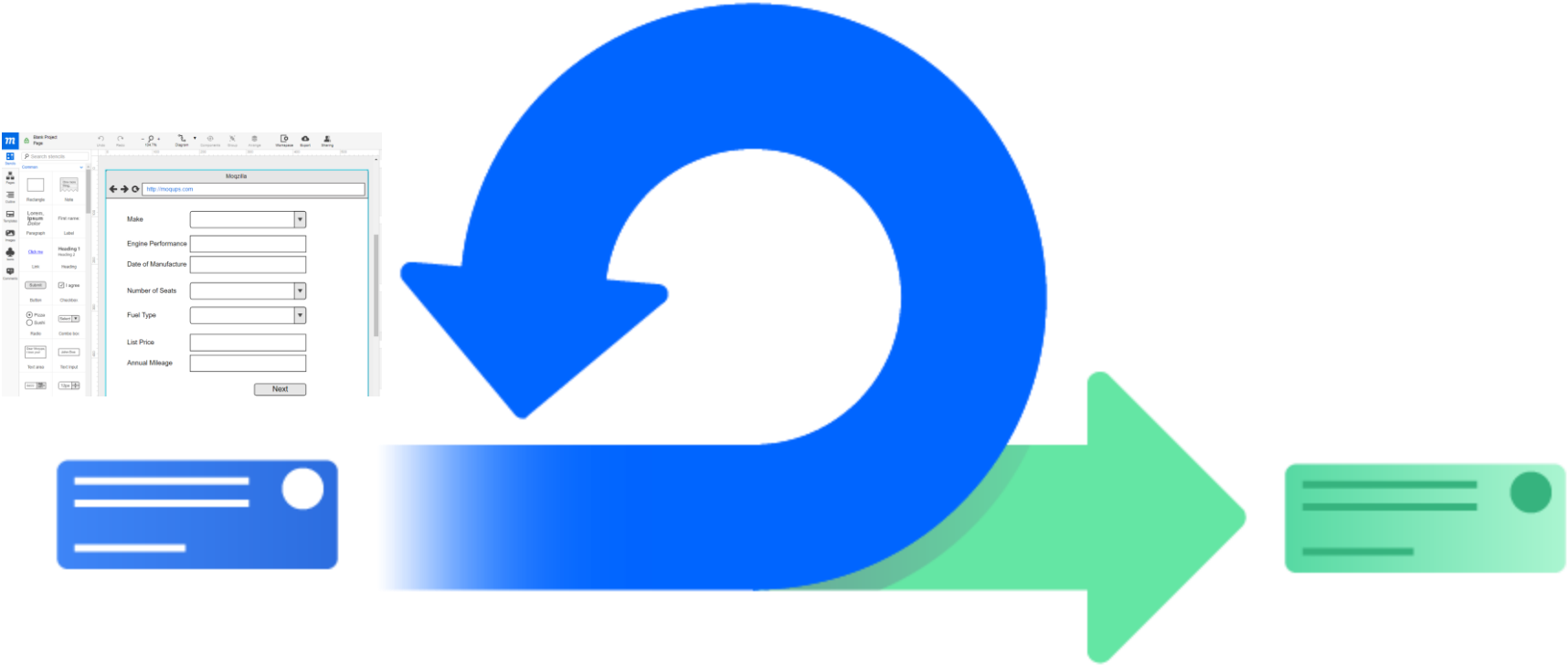
write automation once and run it anywhere

# UI automation happens too late



“We want to release faster!”

# What does a sprint look like?

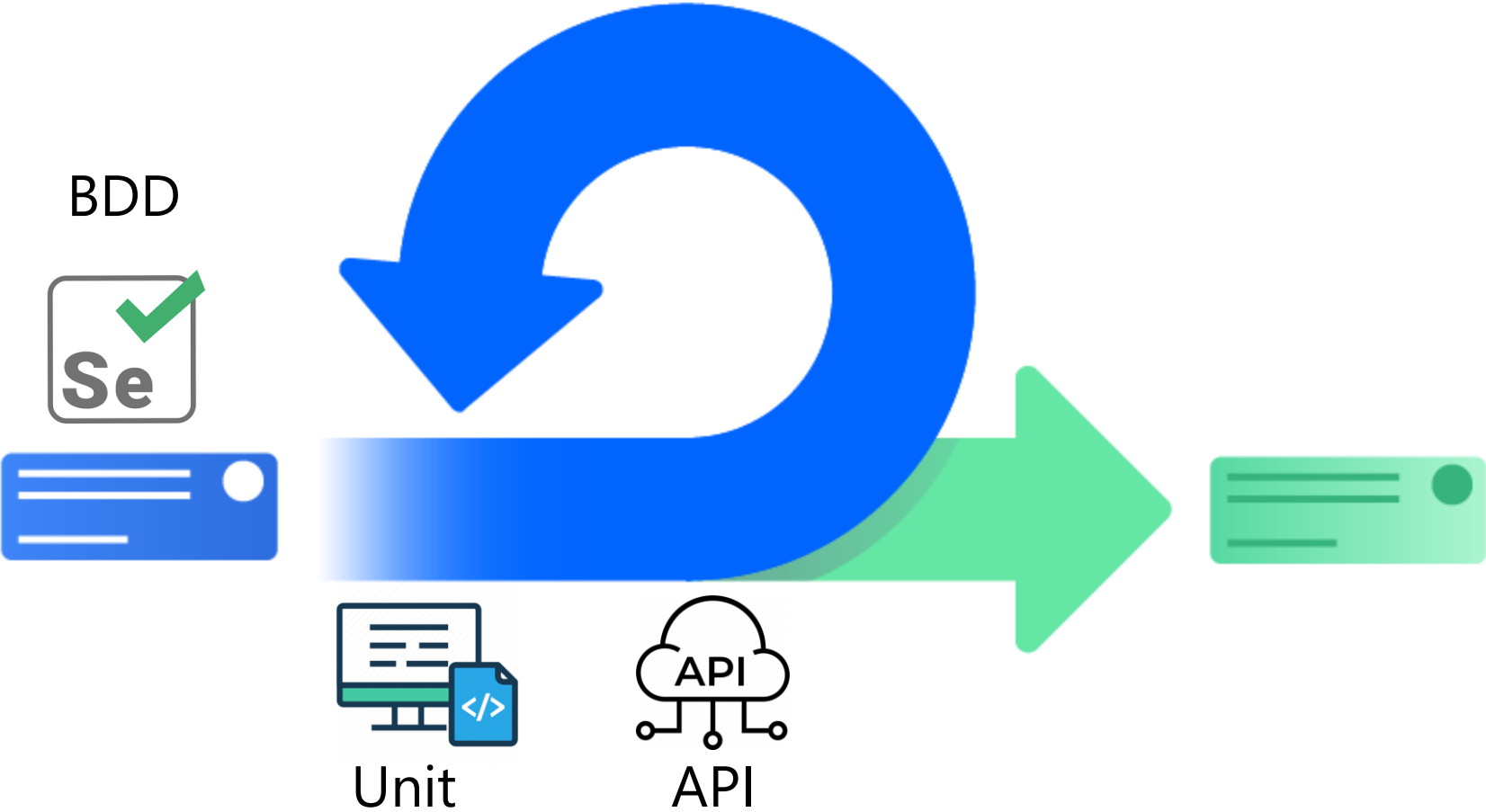


Write story card

Build/Test

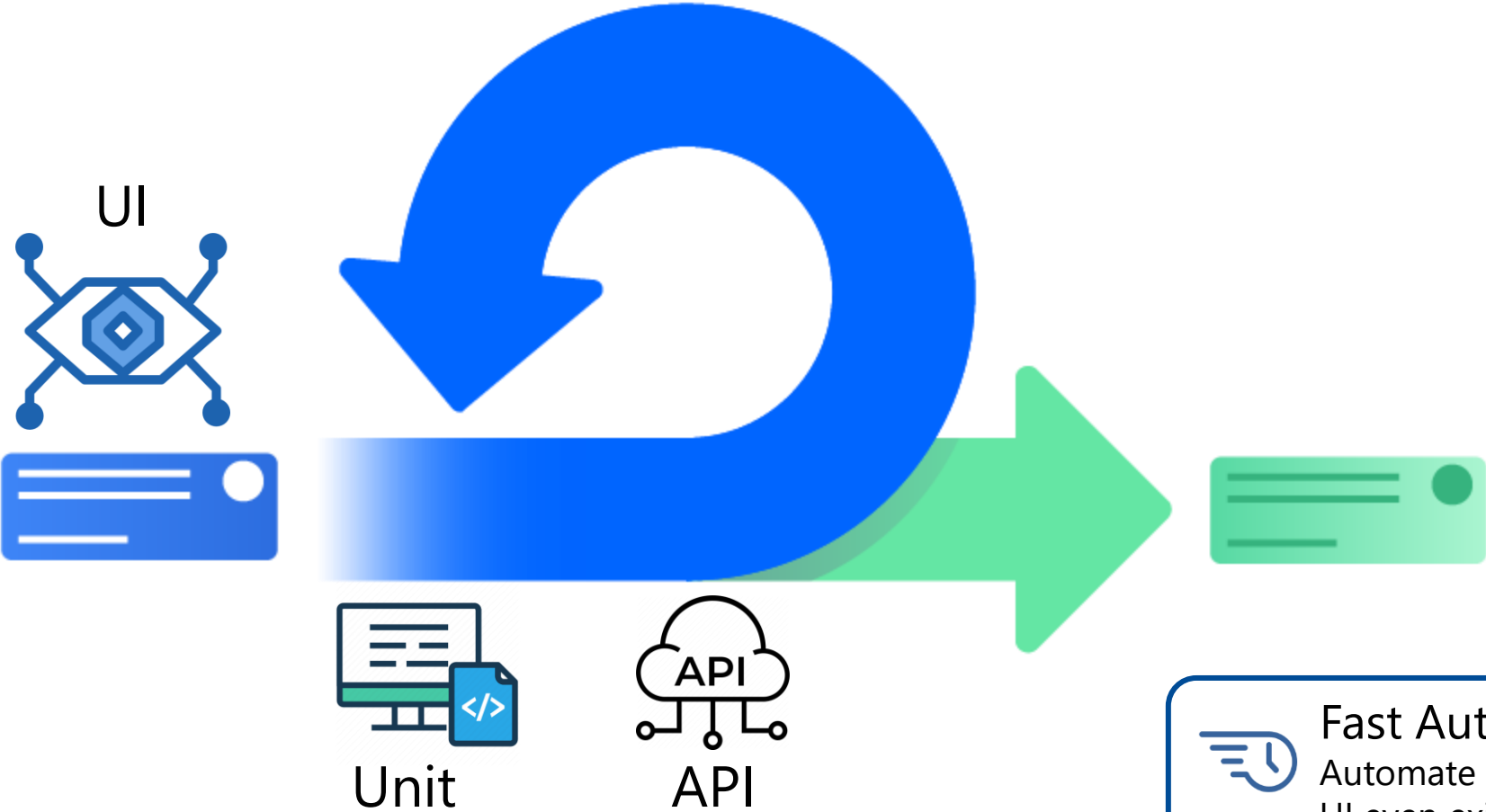
Deploy

# Where does UI testing happen in the sprint?





# What if UI testing could happen in-sprint?



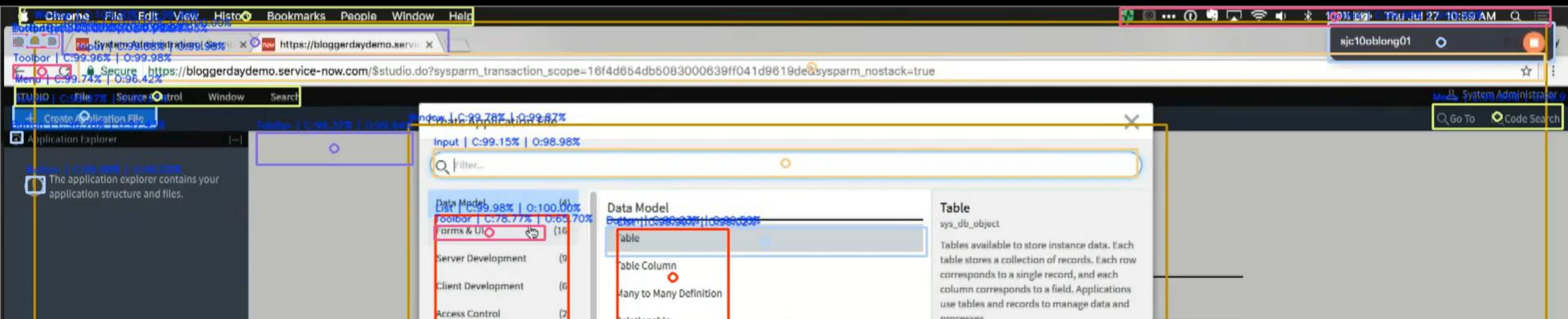
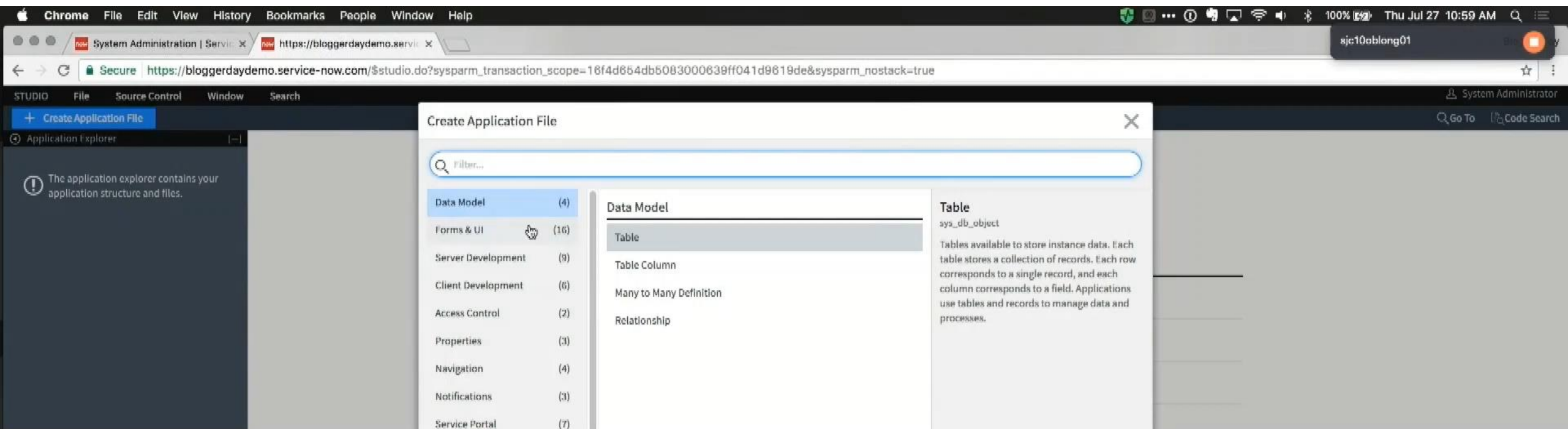
 **Fast Automation**  
Automate in-sprint, before the UI even exists

# Introducing Vision AI

Deep learning-driven automation that sees and uses interfaces the same way humans do

# Real time object tracking

Vision AI can track controls on any technology in real time, enabling automation at the speed of sight



# Test automation is full of "AI buzz"

ai test automation

About 102,000,000 results (0.65 seconds)

Ad · www.testrigor.com/ ▾  
**AI-Powered Autonomous Tests - End-to-End Functional UI Tests**  
Cut your time spent on code maintenance, and focus on scaling your business. Request a free demo today! Fully-Autonomous QA. Test in Plain English.

**Benefits**  
Scalable, Autonomous QA Team  
Move Fast, Don't Break Things

**Request Free Trial**  
Chat with Experts  
Accelerate Dev Cycles

Ad · www.eggplantssoftware.com/test/automation ▾ (800) 640-3842  
**Low Code Test Automation - An AI-Assisted Approach**  
Find Out How AI And Analytics Can Deliver True **Test Automation** in The New Norm. Create...

Ad · www.cognizant.com/ ▾  
**AI-Enabled Automation - Cognizant® Evolutionary AI**  
Read How Leading Organizations Transformed Their Digital Core To Enable AI. Get The eBook.

Ad · www.ibm.com/automation/intelligence ▾  
**IBM® Automation Intelligence - Automation, Strengthened by AI**  
Improve Business Processes to Boost Efficiency and Speed with Intelligent **Automation**.

www.testim.io · resources · ai-automated-testing-future ▾  
**AI-Based Software Testing: The Future of Test Automation**  
Aug 14, 2019 — AI is showing great potential in identifying **testing** defects quickly and eliminating human intervention. Such advances have provided the ...  
You visited this page on 10/26/20.

techbeacon.com · App Dev & Testing · Testing ▾  
**5 great ways to use AI in your test automation | TechBeacon**

102M hits on Google

ai test automation

**AI-Powered Autonomous Tests - End-to-End Functional UI Tests**  
Cut your time spent on code maintenance, and focus on scaling your business. Request a free demo today! Fully-Autonomous QA. Test in Plain English. Types: Mobile Test Automation, Web Test Automation, AI-Driven Testing, Autonomous Mobile Testing...

Ad · www.testrigor.com/features VISIT SITE

**Codeless Ai Test Automation - No More Test Breakage**  
Automate Your Manual Testing. No Framework required. Maintenance Free. 100% code free. Artificial Intelligence technology that automatically overcomes changes in the app. Zero Coding. Dedicated support rep. Quick Setup. DevOps-Friendly. Easy to start. For...

Ad · www.testcraft.io/ai/testing VISIT SITE

**Automated Web & App Testing - Visual AI Regression Testing**  
App Quality Has Never Been So Visible. Quickly Detect Bugs With Visual AI Testing. Ensure Visually Perfect Sites & Apps With Applitools. Free Account - Start Now. Visually perfect. Leverage existing testing. Minimize UI bugs. Automate visual testing. Free trial - start no...

Ad · www.applitools.com/visual-ai/testing VISIT SITE

**How AI is transforming software testing - Raj Subramanian | SeleniumConf Chicago**  
16K views · 1 year ago  
Selenium Conference  
Artificial Intelligence and machine learning are advancing at a rapid pace. This being the case how are we as Testers going to ...  
Subtitles

**AI and Software Test Automation: All you need to know**  
6.7K views · 1 year ago

533K videos on YouTube

ai test automation

About 308,000 results (0.28 seconds)

DevOps.com  
**Tricentis Introduces Next Generation AI-Powered Test Automation**  
Test automation technology has evolved from script-based, to model-based, and is now moving towards AI-based approaches. This new ...  
5 days ago

SDTimes.com  
**news digest: Tricentis AI-powered test automation, NetBSD 9.1 released, and AWS porting assistant for .NET now...**  
Vision AI is a test design and automation solution which allows organizations to address the needs brought about by the increasing prevalence of ...  
5 days ago

The Enterprisers Project  
**How artificial intelligence (AI) and machine learning are ...**  
Flaky automation that cannot be trusted slows the testing process. Among the root causes for non-trustworthy test automation are things like ...  
3 weeks ago

AIthority  
**Eggplant Launches Cloud Platform for AI-Driven Intelligent ...**  
Fully automated self-healing test assets: The use of AI identifies the tests needed and builds and runs them automatically, under full user control.  
2 weeks ago

308K news articles

# Vision AI – Next-generation automation

Deep learning driven automation that sees and uses interfaces the same way we do

## Universal



Vision AI works **across application landscapes, independent of your technologies and environments.** Automate everything, from legacy apps to the latest tech, no matter if running behind a virtual desktop or in the web.

## Self-healing resilience



When your application changes, Vision AI attempts to **adapt to the change**, meaning less time fixing breakages, and more time doing what you love

## Making DevOps a reality



Start building **automation before the application is ready**, work off mockups or even early designs! Test driven UI development is now real.



# Tricentis Tosca, powered by Vision AI

Allows teams to...



## Test Sooner

Shift testing left by automating tests based on mockups and use those same tests as the application is developed



## Test Smarter

Vision AI keeps up with your application changes, regardless of the underlying platform, avoiding massive rework as the application evolves



## Test More

Create stable and resilient automation for virtual/remote applications running on Citrix, VMware, etc.

# Vision AI lets you focus on the tasks that matter!

Integrated into Tricentis Tosca's no-code solution, Vision AI makes test automation easy for business analysts and subject matter experts to contribute regardless of the skill level or technical expertise.

“We have evaluated a number of vendors promising to make testing simpler using AI, and apart from what we have seen from Tricentis, nothing else came even close to solving our problems.”

**Markus Bonner, Test Manager  
Vienna Insurance Group**



# What's next for Vision AI?

# How Vision AI works with Tosca

- Scan and execute using the Vision AI engine – our AI based UI automation engine
- Vision AI fully blends into our powerful Tosca test automation suite – mix Vision AI test steps using visual identifiers with all our other technologies as needed:
  - ✓ Risk based testing
  - ✓ Test data management
  - ✓ API
  - ✓ Data integrity
  - ✓ Powerful packaged app solutions (SAP, SFDC, ...)
  - ✓ ...

# Vision AI – part of the Tricentis AI Platform

Object Intelligence



Reading Intelligence

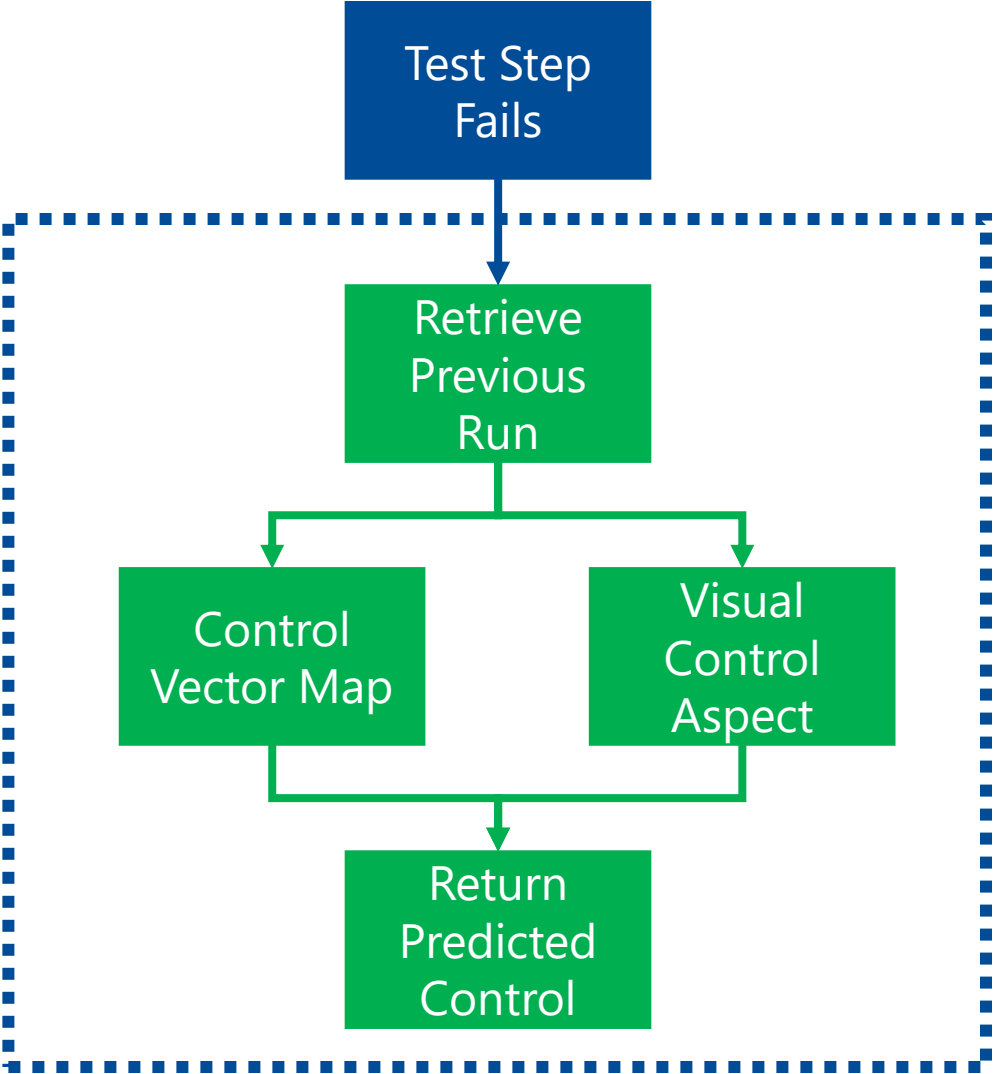


Self-Healing Intelligence

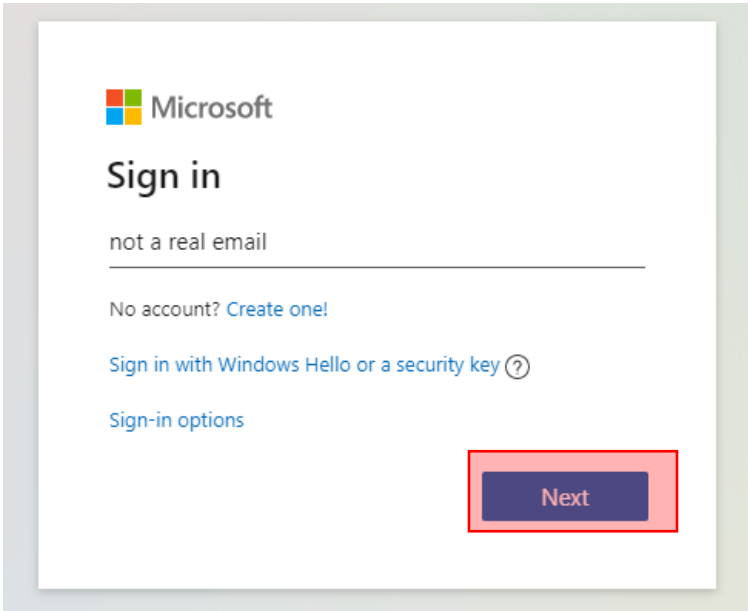




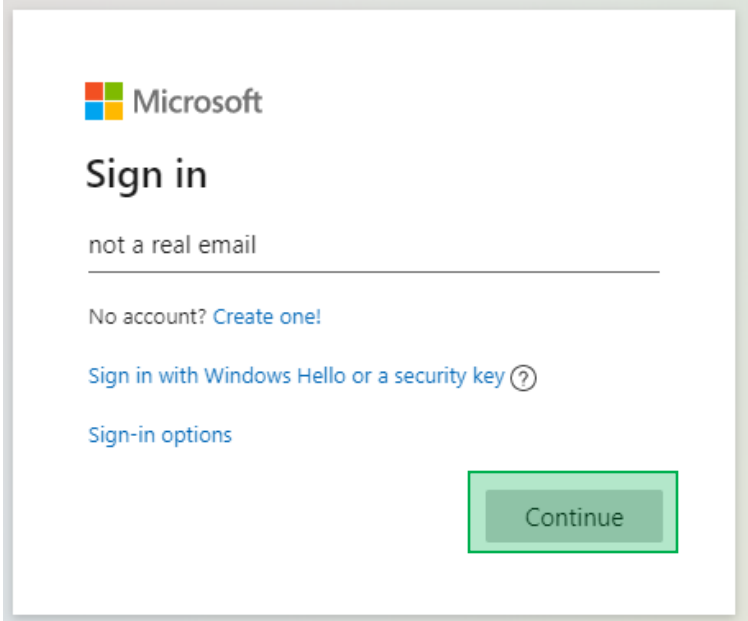
# Self-healing AI



Visual AI  
Self  
Healing  
Service



Last  
successful  
run



Current run

# Outlook: Tricentis AI Platform

- Vision AI services consumed by other products and engines
  - Object detection and classification service
  - Rapid OCR service
  - Self healing identification
- Self-healing TBox – use Vision AI capabilities with the technical steering
- Vision AI + Tricentis qTest – create and edit tests from your web browser
- Guided self-building tests (research phase)

# Our comprehensive approach to AI test automation

## Vision AI

- Deep learning to understand & drive visual interfaces the same way humans do
- Introduced in Tosca 14
- Trained on 9M controls, 12.5M examples; and continuously learning

## Self-healing AI

- Continue with an action when tests break (retry, resolve or use a different case)
- Available for script-based automation of web apps; planned for mobile apps

## Risk AI

- Predicting risk analytics of code changes and measuring code coverage
- Trained on 10's of MLOC of open-source projects in GitHub
- Available today in LiveCompare for SAP; in early access for other applications

