



TEST AUTOMATION

THE COMPLETE GUIDE

to benefits of test
automation and services
delivered by concircle company

CONCIRCLE

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table of **CONTENTS**

- PART 1** Why test automation matters
- PART 2** Benefits of test automation
- PART 3** Comparison of selected Test automation platforms suitable for SAP
- PART 4** Our team
- PART 5** Services & offerings provided by concircle automation
- PART 6** Case study - Voestalpine

CONCIRCLE

concircle is a consulting company for digitalization solutions especially in the areas of supply chain management, enterprise operations, manufacturing and test automation. The main focus is on manufacturing companies. The headquarter is located in Vienna (Austria), with subsidiaries in Bratislava (Slovakia), Munich (Germany) and Winterthur (Switzerland).



Winterthur Munich Bratislava Vienna

**We deliver IT
solutions for and
with our employees
that create
sustainable value.**

LEARN FROM LEADERS

Automating our software testing process has enabled us to quickly identify and fix defects and ensure our applications are robust and secure.

Rajeev Chawla. CIO of Amazon



You're either the one that creates the automation or you're getting automated.

Tom Preston-Werner,
Co-founder of GitHub

WHY test automation MATTERS

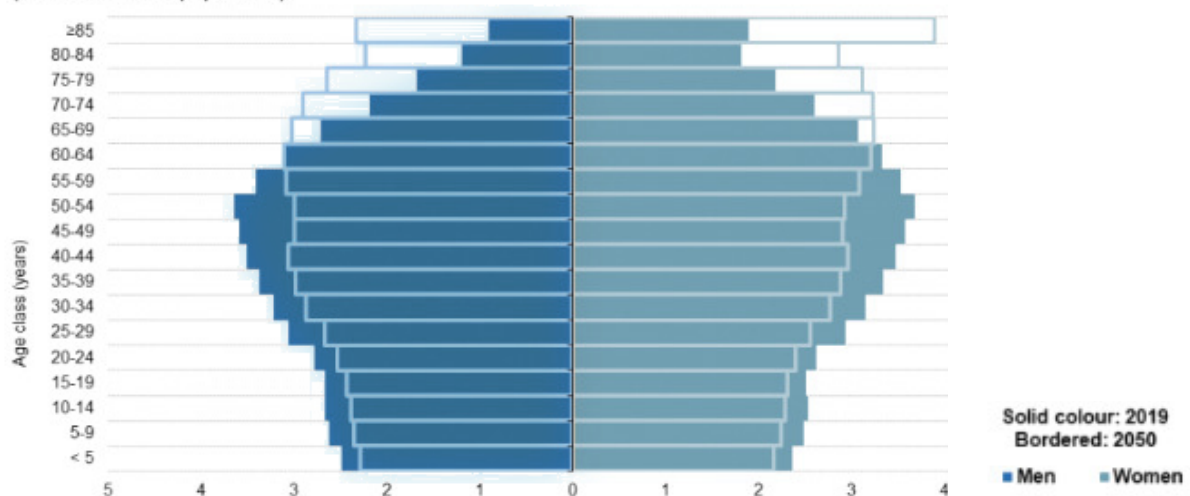


Recent changes across industries require more testing and it is becoming increasingly difficult to achieve the required volume and quality demanded by business.

There are several reasons for this:

- Application architectures are becoming more complex
- Ongoing cloudification or so called Cloud-Hybrid models are being introduced more and more, where the customer does not have the ability to differ individual upgrades.
- More frequent of deployments into production environments due to new methodologies are widely used such as Agile, DevOps. This makes traditional testing virtually impossible.
- Even small bugs in an application can bring an entire enterprise operation to halt and can cause not only financial but also reputational damage.
- Last but not least we see demographic change. Shortage of workforce. Europeans live longer than ever before and the proportion of people working age is shrinking in EU, while the number of older people is growing and this trend will continue even more as the post-war baby boom generation moves into retirement.

Population pyramids, EU-27, 2019 and 2050
(% share of total population)



BENEFITS of test automation

QUALITY

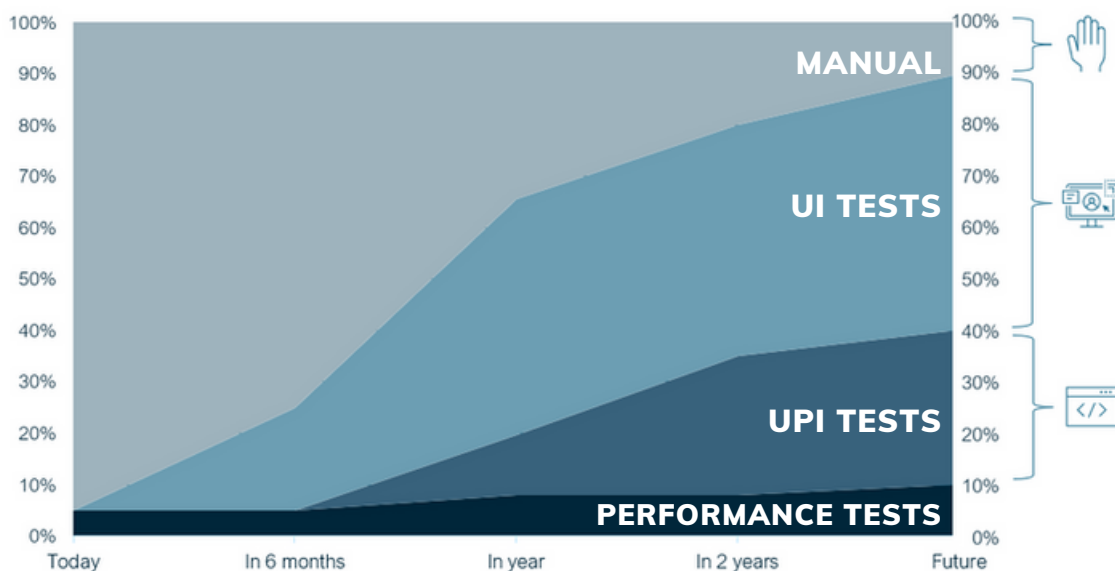
- Improved accuracy and reliability of test results
- Increased customer satisfaction
- Improved confidence in software quality
- Improved scalability and maintainability
- Reduced risk of software failure and costly rework
- Improved compliance with standards and regulations

COSTS

- Reduced testing effort & cost, including manual regression.
- Lowered maintenance & updates cost, reducing overall development cost.
- Decreased defects, improving product quality.
- Faster time to market, increased revenue and competitiveness.
- Improved ROI & cost savings through test script reuse.

TIME

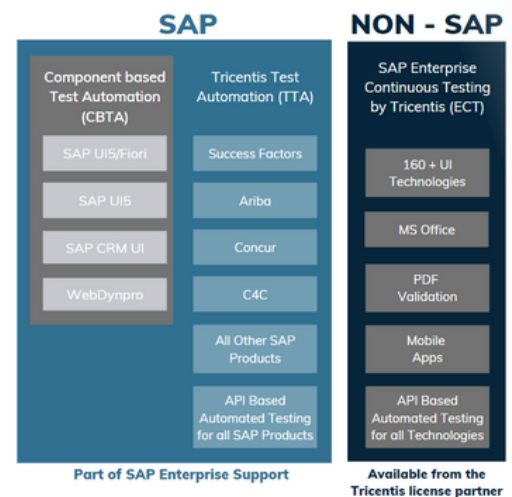
- Faster test execution
- Improved test automation development process
- Reduced time to market
- Quicker defect identification and fixes
- Faster time to market
- Enhanced collaboration between testers and developers
- Improved collaboration between testers and developers



Simply our mission as on the chart above is to move away from traditional manual testing and automate UI tests as well as API test, so your business or manual testers can focus on complex scenarios such as month-end closing activities.

comparison of selected test automation PLATFORMS SUITABLE FOR SAP

We understand, that you are not choosing your test automation platform every day. So in table below we have tried to compare popular test automation solution mainly used in SAP eco-systems. As with every technology, that are some pros and cons. Concircle architects can help you with the selection process in early stages based on technologies, that you want to test, types of tests you want to execute and also based on the SAP licenses you already posses, as there are selected tools such as Tosca TTA which can be be used for free, as long as you have purchased so called Enterprise Support license from SAP AG. And licenses costs are definitely a factor that should be considered while choosing your new test automation platform.



| Solution | Price | Maintenance complexity | API testing | Manual Test Data Sets | Test Case Design (Automatically generated data combinations) | Cross Application Testing | Comment |
|--------------------------------|---|------------------------|-------------|-----------------------|--|---------------------------|--|
| Worksoft Certify | High | High | ✓ | ✓ | ✗ | ✓ | Relatively expensive tool, less intuitive and more difficult to maintain. |
| Tricentis Tosca | Medium / SAP Enterprise Support licenses - free | Medium | ✓ | ✓ | ✓ (ECT) | ✓ (ECT) | High quality tool, also suitable for non-SAP applications, ability to test across multiple applications. New version supports AI. I.e. |
| SAP CBTA | Medium | High | ✓ | ✓ | ✗ | ✗ | Quality tool for SAP, but higher complexity for creating and editing scenarios |
| Copado | Low | Medium | ✓ | ✓ | ✗ | ✓ | A simple tool offers limited possibilities. |
| S4H Cloud Test Automation Tool | Free | Medium | ✓ | ✓ | ✗ | ✗ | Free with S4H Cloud ES. So-called no-brainer for S4H Cloud. API testing is limited to the S4H side. Not possible to use for non-S4H applications. Does not support side-by-side extensions such as iRPA. |

OUR AUTOMATION TEAM



Martin Štelbacký

Team Lead & Senior Test
Automation Engineer



Martin is currently focusing mainly on test management and SAP test automation. He has a vast knowledge of Worksoft Certify, SAP CBTA and also Tricentis Tosca. He has 10+ of experience with SAP (FI, CO, MM) and also SAP industry solutions, primarily from Telco, Steel, and Automotive industries, as he spent several years working for Siemens and Telekom.

Peter specializes in SAP test automation and management, focusing on technical aspects and mapping complex test scripts with ABAP or Visual Basic. With 10+ years of experience using tools like SAP CBTA, Worksoft Certify, and Tricentis Tosca, he has industry knowledge in Telco, Utilities, and Industrial sectors, and some experience with the latest S4 Cloud Test Automation Tool.



Peter Holotík

Architect & Senior Test
Automation Engineer



Michal Lahký

Test Automation
Engineer



Michal is a seasoned professional who specializes in test management and automation, with a focus on Tricentis Tosca. He is also experienced in other tools such as HP ALM and has functional SAP knowledge in the O2C area. Michal's expertise and commitment to staying up-to-date make him an invaluable asset to any team.

Boris's domain is also in various test automation platforms such as Worksoft Certify, Tricentis Tosca, or SAP CBTA. Similarly to other team members, he has proven 8+ years of functional knowledge from SAP, mainly from FI/CO modules such as GL, Fixed Assets, Controlling, Project Systems, and Treasury. He currently mainly focuses on Test case automation, test execution, reporting, and subsequent bug-fixing



Boris Fandák

Test Automation
Engineer



Lubomír Nagy

Test Automation
Engineer



Lubomir is our Tricentis Tosca expert with extensive experience in various industries, including the financial sector and manufacturing, such as Schneider Electric, Invensys, or Uniq. He is proficient in various languages, including Java, Python, and HTML, which are essential for solving complex test automation challenges, particularly for web and mobile applications.

With years of experience in project management, Joachim is well-versed in handling complex SAP and Automation projects. In addition to this, he has expertise in Tricentis Tosca and Copado Robotic Process Automation. His skill set and knowledge make him a valuable asset to any team.

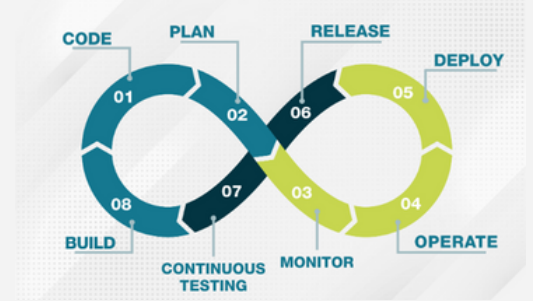


Joachim Zöchbauer

Senior Project Manager
& Architect



SERVICES & OFFERINGS



provided by concircle

Concircle offers various test automation services related to entire product lifecycle:

- Tosca or other SW Installation
- Automation Proof of Concepts using various technologies
- Risk Based Testing & Test Planning
- Test Case Design & Optimization
- DevOps Testing & Continuous Testing Transformations
- Reporting Concept
- Tosca or other SW Training
- Training of IT and Business
- Automated Software Testing (SAP and non-SAP)
- Test Script Maintenance

For new customers we have prepared set of lean packages, to allow simplified T-shirt sizing for your project needs. However we are open to adjust services based on customer need as every customer has different maturity level when it comes to test automation.

| | TIER I PoC | TIER II Starter | TIER III Enterprise |
|------------------------------|---------------|--------------------|------------------------|
| SW Installation | ✓ | ✓ | ✓ |
| Automated Test Cases | 3 | 20 | 40 |
| Demo | ✓ | ✓ | ✓ |
| Business Case Calculation | ✓ | ✓ | ✓ |
| Training & Coaching Sessions | | ✓ | ✓ |
| Continuous Testing Concept | | | ✓ |
| Transition to Customer Teams | | | ✓ |
| Test Execution | | | ✓ |
| | ~20 MDs | ~60 MDs | ~100 MDs |



SERVICES DELIVERED

- Creation of Test Automation Scenarios
- Creation of Test plans and Test packages for every release
- Planning of nightly jobs and execution of tests
- Daily error analysis and triage with development Teams
- Maintenance of test scenarios, Bug fixing
- Daily reporting



SAP SCOPE

- Vast majority with focus O2C and Finance processes
- 2 different SAP landscapes
- 13 integration E2E processes



USER INTERFACES/ INTEGRATIONS

- SAP GUI
- UI5/Fiori
- WebDynpro
- AIF
- iDocs/BAPIs
- RFC



TEST AUTOMATION TOOLS

- SAP CBTA – currently being sunset
- Tosca Tricentis



TESTING SCOPE

- 148 Test Scenarios
- Run daily (4 hours)
- 6 times a week
- On 3 remote desktops

case study VOAESTALPINE

largest steel
company in Austria

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Test automation is not a silver bullet that solves all testing challenges, but rather a powerful tool in the hands of skilled testers. It enables us to test faster, more consistently and more thoroughly, and ultimately helps us to deliver high-quality software that meets the needs of our users.



STAY IN
touch

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