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REISEN

## Teamgeist

Die Welt entdecken –  
gemeinsam Abenteuer erleben.



# Studiosus

Begegnen Sie Menschen  
und ihrer Kultur

SUCCESS STORY

## Tosca meets Studiosus Group

Creating sustainable test automation  
in an agile world



Maintainability, as well as stability of the automation, was not only of importance for the development cycles. Since the customer intended to reuse test cases for regression tests in further developmental efforts, they needed to be clean and understandable for other people that might be working with the artefacts in the future.

Test approach: Implementing the test automation required, first of all, a clear analysis of the requirements in order to identify where automation can add value and where it can't. The process of verifying the URLs of several thousand images is more predestined for automation than the correct positioning of a design element, for example.

In some cases, the dynamics within the expected results made it necessary to use the productive environment as a test oracle and apply production results for further verification against the system under test. Also, API cases were set up and integrated to facilitate the execution of the high number of required test cases.

Tooling: After setting the scope of the approach, the right tooling had to be defined. For this specific project, a clear decision was made for Tricentis Tosca, because it:

- ...supports a risk-based approach: Tosca provided full traceability between risk weighted requirements (in our case user stories) and execution results of test cases that covered them.
- ...combines UI and non-UI tests: Testing a huge number of individual journeys including different variants would have been slow and unstable in UI execution. Tosca's integrated API Scan enabled a fast creation of non-UI test cases which execute extremely quickly.

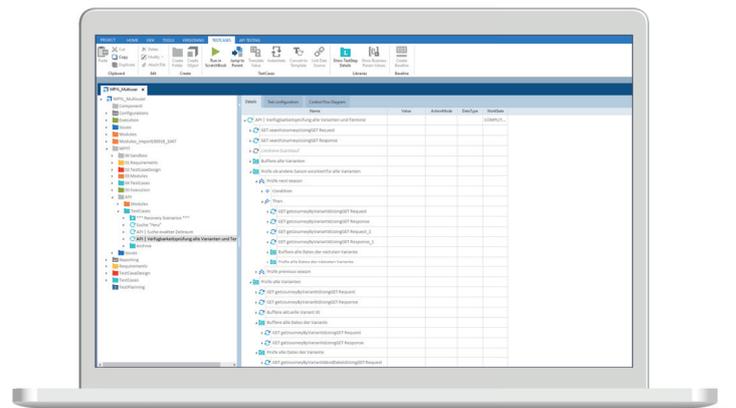
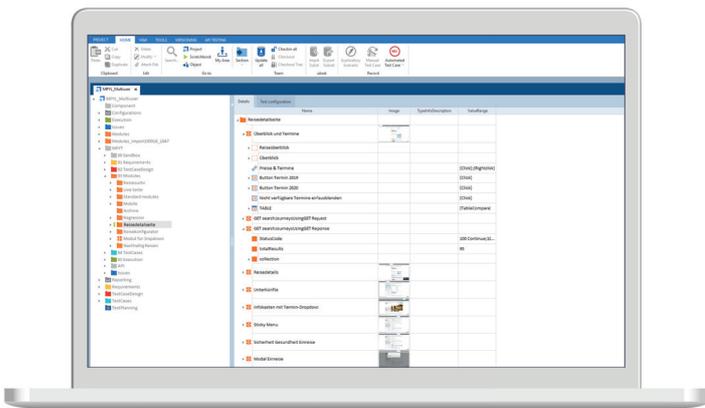
**Technologies:**

- React
- Magnolia CMS
- Spring Boot
- Elastic Search
- Tosca
- Jira

- ...ensures maintainability and reusability: Developing in an agile environment, the tested system was under constant change. Not only new features had to be tested, but also existing tests had to be maintained. The model-based approach of Tosca reduced efforts for adjusting tests after sprints and before hand-over for regression testing.
- ...creates business-readable test cases: All test activities should focus on facilitating a proper evaluation of the product's quality. Being scriptless, Tosca enabled to present the automation to non-Tosca developers and business owners.

**Result**

Keeping up with the rapid yet very clean implementation was intense but feasible. The test team was able to support the development team with constant feedback regarding issues and the current quality of their work. Decision makers could be provided with high transparency in terms of their product's quality. Supported by the proper tooling the test achievements were accomplished roughly at a one to five cost ratio between test and development, being far below the average proportion.



## FIVE TIPS

# Becoming an excellent Automation Engineer

### 1. Don't be a specialist

Successful Quality Assurance processes, in general, demand a diverse range of capabilities that are naturally embodied by different roles, each adding a specific skill set to the workflow. Nevertheless, excellent QA processes depend on strong, interdisciplinary teams. The industry seeks Automation Engineers being able to support test analysis by pointing out how their tooling and skillset can be deployed most effectively to serve the project's overall objective. Having the ability to merge the expertise of a variety of specialists and cross boundaries with other neighboring disciplines is key for an excellent QA team. Furthermore, having knowledge about a company's structure and its divisions is essential to support and engage each involved stakeholder at the right time in the right manner.

### 2. Be creative

It's an undeniable human trait that we tend to follow repetitive patterns to solve similar assignments. This traditional learning method helps to improve speed and increase confidence in acquiring a new skill. Nevertheless, holding on to old patterns and concepts to exhaustion can inhibit our creative abilities. Feeling confident towards exploring new paths and expanding your skills and tooling can open up a wide range of new possibilities. If you cannot make progress with an established solution, take the opportunity to try to think out of the box. Certain techniques such as Design Thinking or Lateral Thinking are effective methods to finding innovative solutions for complex problems.

### 3. Impress others

It is difficult to quantify the added value of testing and it is often a matter of perception and interpretation. The impact of alternating QA activities might roughly be measurable in long term lifecycles, given the right KPIs are provided. But how to price the improvement or the decline of quality these alternations yield?

How costly has the image loss of last week's productive failure been? How many customers purchased products from competitors during last month's downtime? Could testing have prevented it? Since the real cost of poor quality remains vague compared to the calculable costs of product licenses or an Automation Engineer's salary, test has to prove it's worth by providing additional values, such as building up trust. Trust that informed decisions can be made and trust that the incalculable but indisputable costs of existing or future failures have been reduced to an absolute minimum. Use the power of your automation to transparently cover all detected risks to a degree of reliability that exceeds any other alternatives.

### 4. Think about tomorrow

The average lifespan of software applications ranges from six to eight years – in some industries considerably longer. It is very likely that long after your own engagement, the tested software continues to be used in a dynamic environment with its operability being still of importance. It is essential to build and document your automation in a way that stakeholders retain a chance to retrace and successors are able to take up and further develop your accomplishments.

### 5. Stay connected

Automation tools don't grow on trees, time and effort are invested to build them. Connect with the community and maintain contact with your suppliers and fellow users. Engage in forums, call and meet people, attend trainings and visit conferences to grow your network and partnerships. Keeping up with and influencing your field of expertise makes you become better at what you do.