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Passing
the test

How Agile testing brought hyper efficiency to Swisscom's digital agenda

Case study

CHALLENGE

The rapid commoditization of the telecommunications market in Europe is putting significant pressure on communication service providers' revenues and growth prospects.

To compete and thrive in this cut-throat market, providers must adapt both what they do, and how they do it, for a new digital-first era.

> Back in 2016, Swisscom saw an opportunity to pivot to a truly digital business.

As Switzerland's leading provider of communication, IT and entertainment services, with a workforce more than 19,000 strong, the organization had a rich legacy of success to build on. Counting innovation and sustainability among its core values, the company set out to digitalize both its business and its internal IT function to simplify operations, increase flexibility, and reduce IT costs.

Software testing was a central component of the transformation with a sharp focus on Agile and DevSecOps. For years, Swisscom had been dependent on several service providers and licensed tools for this critical part of the application development process. However, the company recognized that its legacy arrangement—including a centralized testing center of excellence (TCoE) with 300 people—had become too rigid and needed to adopt nimbler ways. What's more, it was proving increasingly expensive, with 40 percent of capex expenditure devoted to testing, which was well above industry benchmarks. Swisscom wanted a more agile testing capability that would accelerate the release of high-quality software to market, while also driving down the cost.

WHAT ACCENTURE DID

Approach

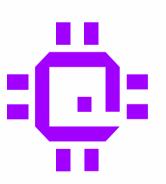Accenture worked hand-in-hand with Swisscom on a four-year transformation of its application testing approach.

Goals

To deliver on the program's twin goals of greater organizational agility and lower overall cost, our cross-functional team helped embed modern quality engineering and continuous testing principles right across the software delivery pipeline.
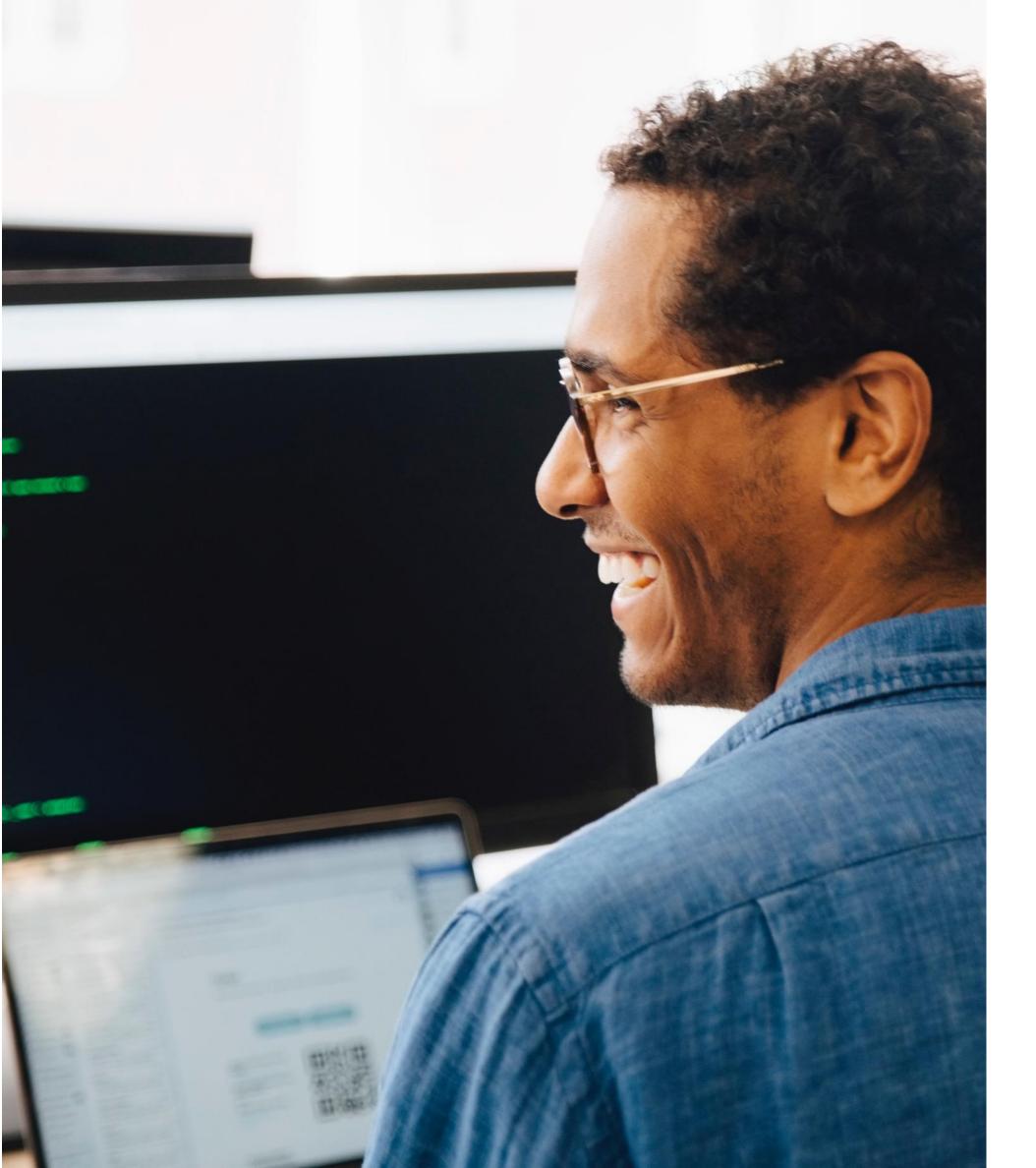
Shift Left

One key area of the program was introducing a modern, Agile "Shift Left" approach. This meant encouraging developers to test their own code much earlier in the development pipeline, relieving the dedicated testing function of some of the burden. However, for Shift Left to work in practice, the developers needed to be able to see how their code worked in the real world. Accenture built a service virtualization capability that could simulate application performance in a complex, interdependent production environment—helping developers visualize how the application would operate and interface with other components and enabling them to test the impact of their coding choices much earlier and with far greater effectiveness.

Automation

We developed a custom test automation framework and tools along with Swisscom to help them break free of huge licensing fees while building in-house capabilities and standardization. This included sourcing a new tool for test data management and enabling a more stable testing environment with automated system tools. Another important thrust for the program was extensive automation—including automating tens of thousands of manual test cases—to enable rapid, Agile testing at scale. Our bespoke modular automation framework has not only established 100 percent business process coverage but has also enabled 24/7 parallel, continuous test execution with reduced human intervention.

PEOPLE AND CULTURE

By working closely together to accelerate the adoption of Agile processes Swisscom and Accenture have cemented a genuine change in the way the organization thinks about software development. The idea of continuous testing and the mantra of "built-in quality" have been firmly embedded across its IT function.

> **For the testing team itself, this program has transformed day-to-day working life.**

Rather than having to perform laborious manual tests, greater automation combined with earlier testing has given team members the ability to think more strategically, develop their expertise, and create new tools.

At the same time, Swisscom developers now have the skills, the tools, and the mindset needed to take end-to-end ownership of the quality of their development work, rather than relying on testing at the end of the development lifecycle. This has been complemented by comprehensive training and wholehearted adoption of Agile, DevSecOps and the continuous integration/continuous delivery (CI/CD) pipeline.

VALUE DELIVERED

The transformation of Swisscom's application testing and quality function has been phenomenal. The results speak for themselves.

The share of capex devoted to testing has dropped from around 40 percent at the start of the engagement to just 8 percent today—a key objective—while extensive automation enables routine testing to be conducted at any hour of the day with reduced human intervention.
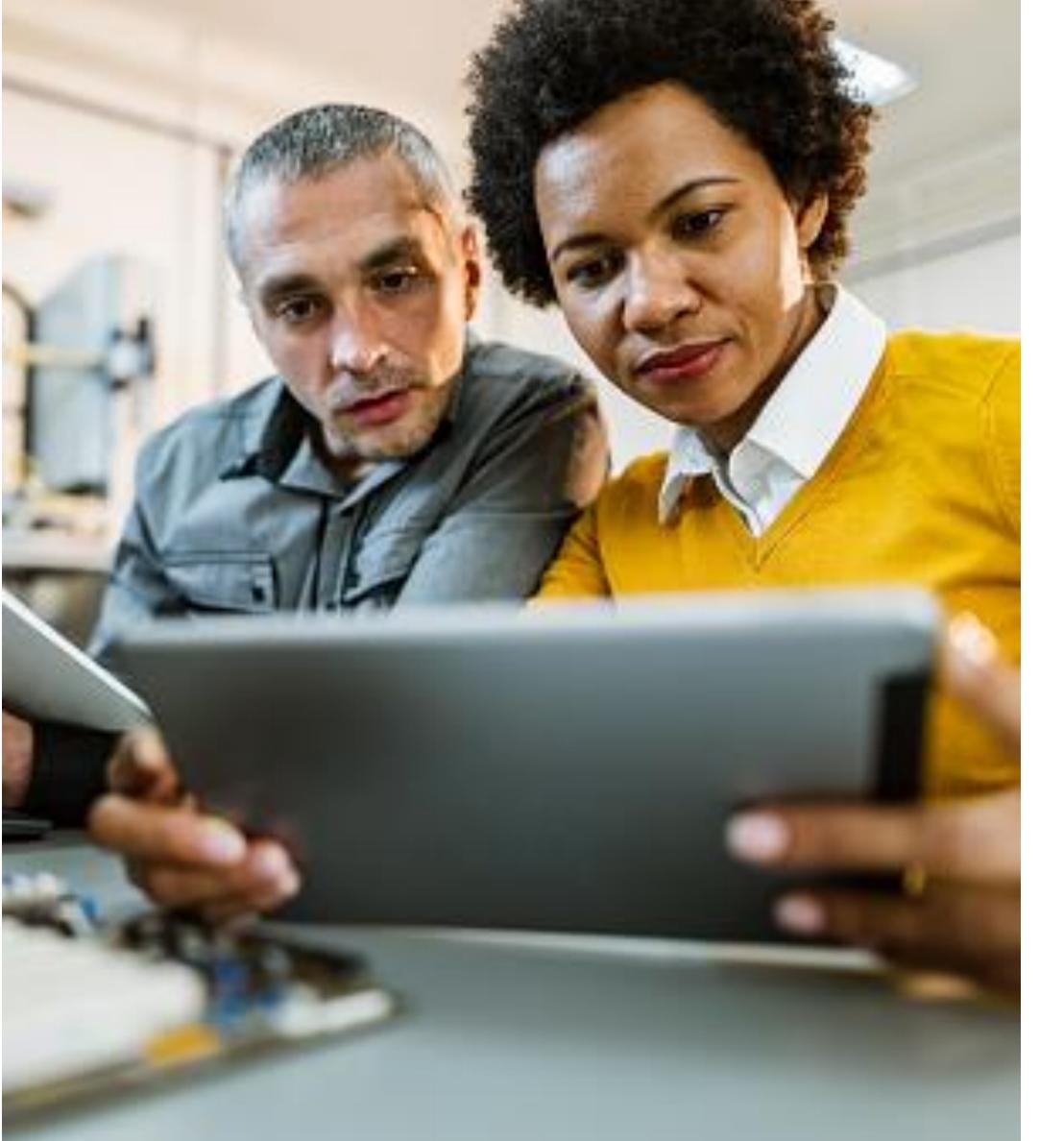
40 ➔ 8%
Drop in capex devoted to testing

50%
Reduced synthetic data generation time

New test data management processes and in-house tooling have reduced data masking time by 40 percent and synthetic data generation time by 50 percent, effectively enabling on-demand data creation for testing purposes.

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The overall testing approach has shifted from being reactive to more proactive and predictive, with automated server monitoring and self-healing for infrastructure issues. Service virtualization has enabled a real shift in mindset towards continuous and early testing, helping reduce defect slippage by 35 percent. More importantly, centralized testing has been minimized with a much leaner team providing only on-demand testing and consulting.

35%

Reduced defect slippage

80%

Drop in time to market

Swisscom's customers, too, are set to benefit from the new testing approach as with greater testing agility comes greater speed to market. When the business identifies a fix or a new feature to enhance customer experience, they have an IT organization on hand who can develop it, test it, and get it to market much faster. In fact, software releases that earlier took up to 12 weeks can now be made within two weeks—an 80 percent drop in time to market.

The secret to this success?

A deep and genuine partnership between two likeminded organizations, who collaborated with a true "one team, one goal" spirit. This was pivotal in cross-skilling Swisscom developers, enabling an Agile and DevSecOps-led culture, and baking quality right into design and development process itself.

The Agile tribes have become responsible digital masters with high-quality output, no longer dependent on a huge centralized test organization. Swisscom now has the modern, agile, and cost-effective IT organization it needs to deliver next-generation customer experiences and sustain its position as a digital leader in the European telecommunications market.