



Project Profile

TESTOMAT Project

Taking test automation to the next level

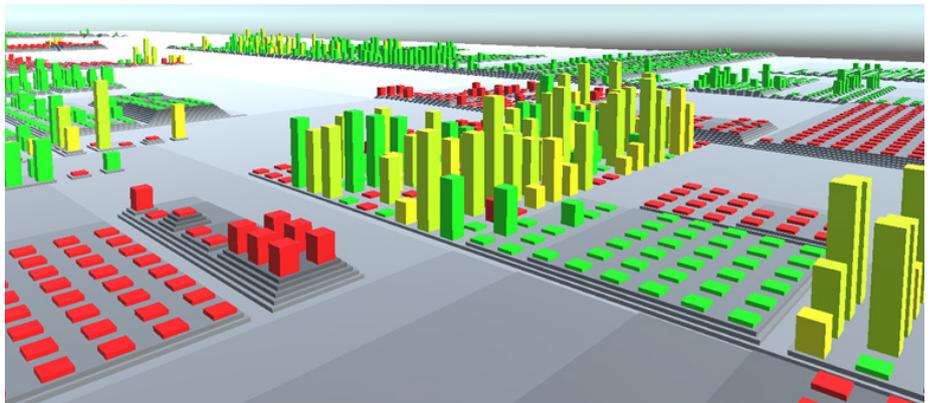
The ITEA TESTOMAT Project will allow software teams to increase development speed without compromising quality by advancing the state-of-the-art in test automation towards a more agile development process. The resulting Test Automation Improvement Model (TAIM) will serve as a reference guide, with listing best practices.

ADDRESSING THE CHALLENGE

Nowadays, quality software has come to mean 'easy to adapt' because of the constant pressure to change. Consequently, modern software teams seek a delicate balance between two opposing forces: striving for reliability and striving for agility. Manual testing is no longer an option; the bulk of the test load must be automated. The challenge will be to find a series of gradual improvements to provide software teams with a roadmap for improving their automated tests in a cost-efficient way. The TESTOMAT Project will allow software teams to increase the development speed without sacrificing quality. To achieve this goal, the project will advance the state-of-the-art in test automation for software teams moving towards a more agile development process.

PROPOSED SOLUTIONS

The project will develop a Test Automation Improvement Model (TAIM) that defines key improvement areas in test automation, with the focus on measurable improvement steps. TAIM will explicitly avoid human interpretation via external auditors, instead exploiting the presence of continuous integration tools and tapping into the logs to get quantitative data about the actual development and test execution. The TAIM model in its current form will be refined and validated in TESTOMAT Project and, as such, will go from TRL Level 5 (large-scale prototype tested in intended environment)



Featuring "Cityscapes" to Visualize tested files

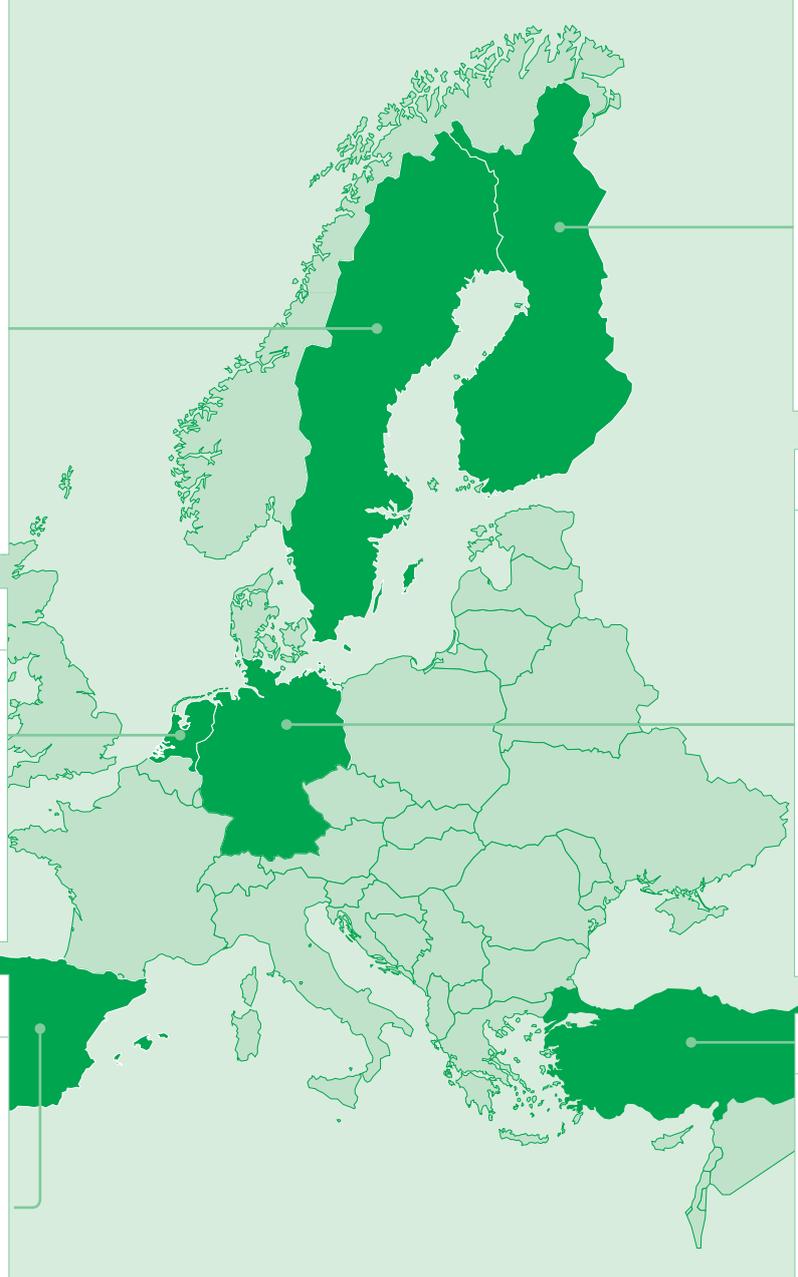
to TRL level 6 (prototype system tested in intended environment close to expected performance). Moreover, since automated tests imply tool support, TESTOMAT Project will advance the state of the art in test automation in three key areas: tools assessing test effectiveness, test execution tools with prioritization, verification tools integrated in a continuous integration tool chain. By applying state-of-the-art techniques on realistic use-cases provided by software testing teams, the TESTOMAT Project consortium will push the state-of-the-practice in test automation to the next level.

PROJECTED RESULTS AND IMPACT

The TESTOMAT Project technology innovations will be brought to the market

as tool extensions and plugins for continuous integration servers, packaged as downloadable software under the appropriate licence. Consultants will be able to exploit the TESTOMAT Project results and so improve their offerings. Finally, the project's results will influence relevant standards regarding software quality and software testing. Today, software is part of anything we buy or do so by elevating test automation to the next level, TESTOMAT Project will have an immediate effect on software quality and thus ultimately on the quality of life.

TESTOMAT Project



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MIDDLE EAST TECHNICAL UNIVERSITY

Project start

October 2017

Project leader

Sigrid Eldh, Ericsson

Project website

<https://www.testomatproject.eu/>

Project end

September 2020

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ITEA is a transnational and industry-driven R&D&I programme in the domain of software innovation. ITEA is a EUREKA Cluster programme, enabling a global and knowledgeable community of large industry, SMEs, start-ups, academia and customer organisations, to collaborate in funded projects that turn innovative ideas into new businesses, jobs, economic growth and benefits for society.