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Five ways GenAI can accelerate Quality Engineering

INSIGHTS FROM PLANIT'S QUALITY EXPERTS

The State of Quality Engineering today

Modern organisations are under pressure to be more proactive in the way they approach testing. In order to remain competitive and cater to evolving customer expectations, they must accelerate delivery without compromising on quality, and manage complex systems with interdependencies.

This shift to a more proactive testing mentality is leading businesses to move away from quality assurance (QA) practices. They are increasingly looking to more comprehensive quality engineering (QE) approaches, which embed quality-focused activities at every stage, ensuring that quality is not just tested but built into the product from the ground up.

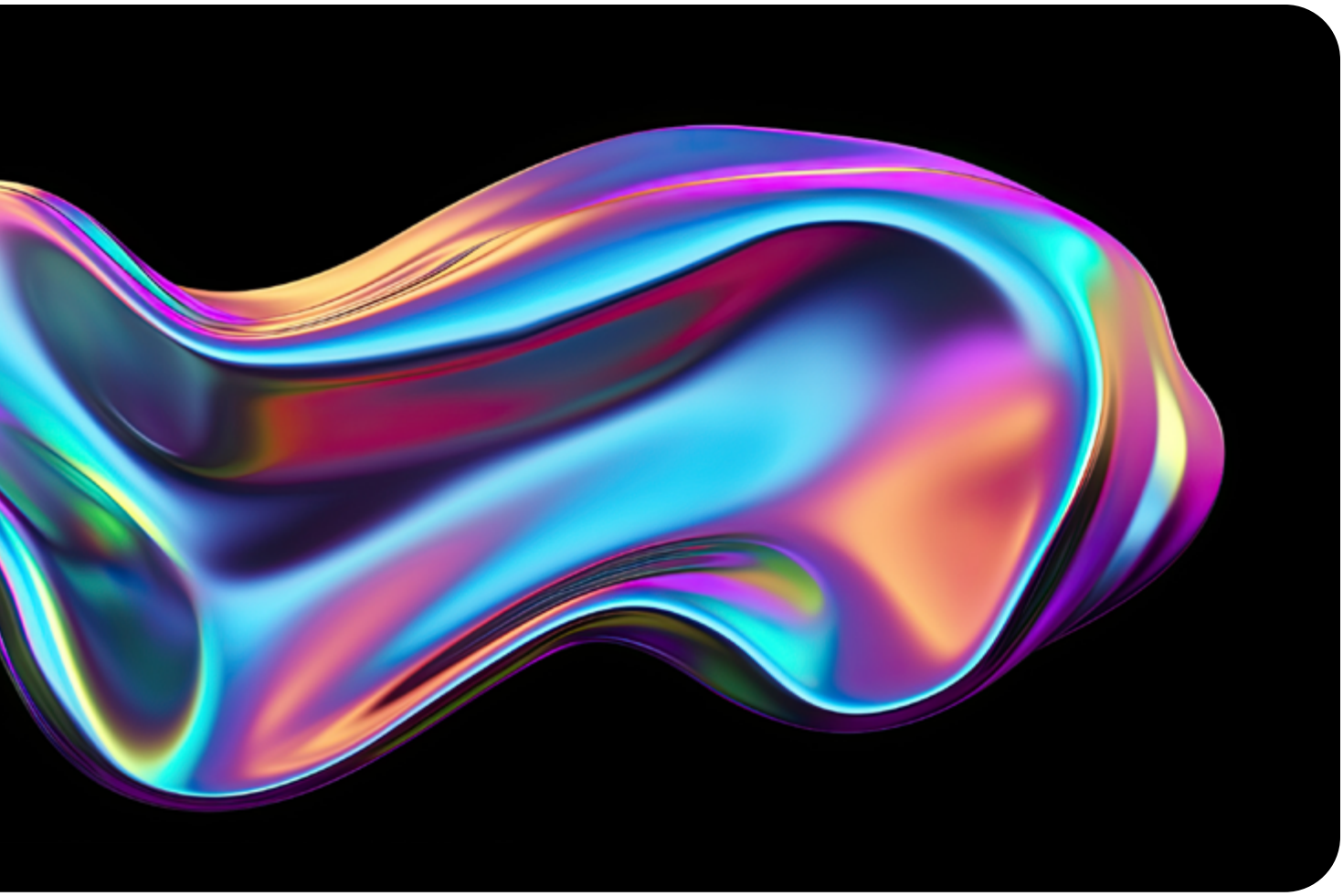
Proactive QE questions:

Can I scale my process when I need to, or does it scale automatically?

Can I identify problems quickly and remove components easily?

Can I observe the system or ask questions in a way that allows me to make improvements?

Can I recover the system from a failure?



Artificial Intelligence: the next frontier for QE

With these changes in the QE landscape already happening, Artificial Intelligence (AI) offers a significant opportunity to meet the challenges head on. AI can analyze vast amounts of data to identify patterns and predict outcomes, automate repetitive and time-consuming tasks, and provide intelligent insights that enhance decisionmaking processes.

Our experts identified five areas where AI can make a dramatic difference to QE processes, paving the way for a future where quality is not just assured but engineered with precision and foresight:

1. **AI-embedded automation tooling**
2. **Test asset generation**
3. **Optimised, insight-driven delivery**
4. **Accelerate shift-left**
5. **Cognitive testing with AI chatbots**

One: **AI-embedded automation tooling**

The application of AI in the identification and elimination of non-value-adding activities is a game-changer. AI-driven analytics can analyse extensive data sets to pinpoint delivery waste or inefficiencies in the development process. By removing these inefficiencies, the path to production becomes leaner and more efficient, saving both time and resources.

AI can also help predict potential future inefficiencies or bottlenecks, allowing for proactive optimisation.

Two: **Test asset generation**

With the application of GenAI, test assets - including test cases, test data, and scripts - can be generated rapidly and precisely. This quick delivery of test assets allows for faster initiation of testing processes, thereby accelerating the entire development cycle. As a result, quality assurance tasks can be prioritised and better managed.

GenAI's ability to handle these routine tasks also allows the QA teams to focus their efforts on more complex tasks, leading to more robust and thorough testing.

Three: **Optimised, insight-driven delivery**

AI-embedded automation tools not only accelerate testing processes but also bring in a level of precision and reliability that's hard to achieve manually. The self-healing aspect of the tools ensures that the system can recover from potential breakdowns or malfunctions independently without the need for human intervention, thereby reducing downtime and enhancing performance reliability.

Vision-based automation tools can interpret visual data, recognise objects and patterns, and make decisions based on these inputs. This capacity is especially useful in UI testing, where these tools can adapt to changes in the UI and ensure that the testing process remains continuous and consistent, even when dealing with non-web-based applications.

Four: **Accelerate shift-left**

The shift-left approach in software development aims to introduce quality assurance early in the developmental stages rather than in later phases. GenAI can help accelerate this shift-left movement by ensuring the early detection and resolution of defects.

This early consideration of quality not only reduces the likelihood of defects but also streamlines the delivery process by eliminating the need for extensive corrections in the later stages of development.

Five: **Cognitive testing with AI chatbots**

AI chatbots can provide a new level of cognitive testing by simulating user behaviour and interactions. They can mimic a wide array of user actions and responses, providing comprehensive testing of the product from a user's perspective. This can lead to the early identification of issues, allowing developers to correct them before they impact the user experience.

The intelligent feedback and suggestions provided by AI chatbots can also guide the development process, leading to a product that better meets user expectations and needs.

Putting those opportunities into practice

Planit Amplify

Planit is already taking advantage of the benefits of AI for QE, through the Amplify platform.

Amplify is our Quality AI Copilot, which is delivering:

- Increased consultant productivity by automating high-volume activities.
- Extended consultant capability through accelerated, easily accessible deliverables and assets.
- A single interactive source for all our delivery standards, guidelines, knowledge bases and accelerators.

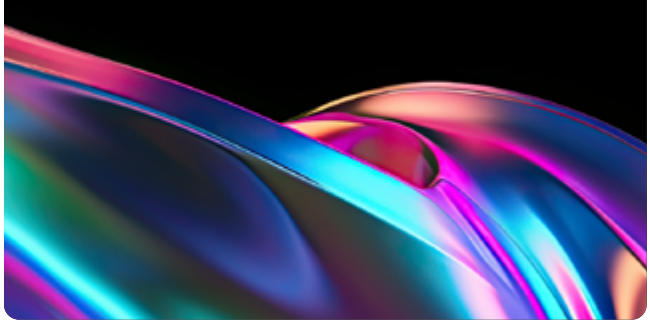
We're also making the Amplify platform available to Planit customers too, so you can start feeling the difference.

Amplify is:

- Governed by Planit's global policies to prevent consultants from entering any sensitive client information.
- Privately hosted with full control of data to meet privacy regulations.
- Security tested (Secure config, Architecture review, Penetration-tested).
- NOT tuned or trained on any employee input.

Want to learn more about how Amplify could work for your business?

CONTACT A PLANIT EXPERT TODAY



Benefits of the Amplify AI platform:

3 weeks

reduction in time for training and handover processes. AI facilitates quicker onboarding and knowledge transfer within teams.

50% +

less effort required to generate test scripts from scenarios. The platform converts high-level scenarios into detailed test scripts efficiently.

25% +

reduction in effort creating SAP test scripts. Amplify accelerates SAP test script delivery.

25% +

more edge cases identified during test case generation, with enhanced test coverage and a more robust evaluation of the software's quality.

99%

time saved in test data generation. This near-complete automation of the process accelerates the setup for testing and ensures higher consistency and quality of test data.

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Planit is a recognised leader in quality assurance and software testing services. Our expert consultants use cutting-edge methodologies and industry best practices to ensure the highest quality standards, helping organisations enhance their digital transformation journey and achieve critical business objectives.

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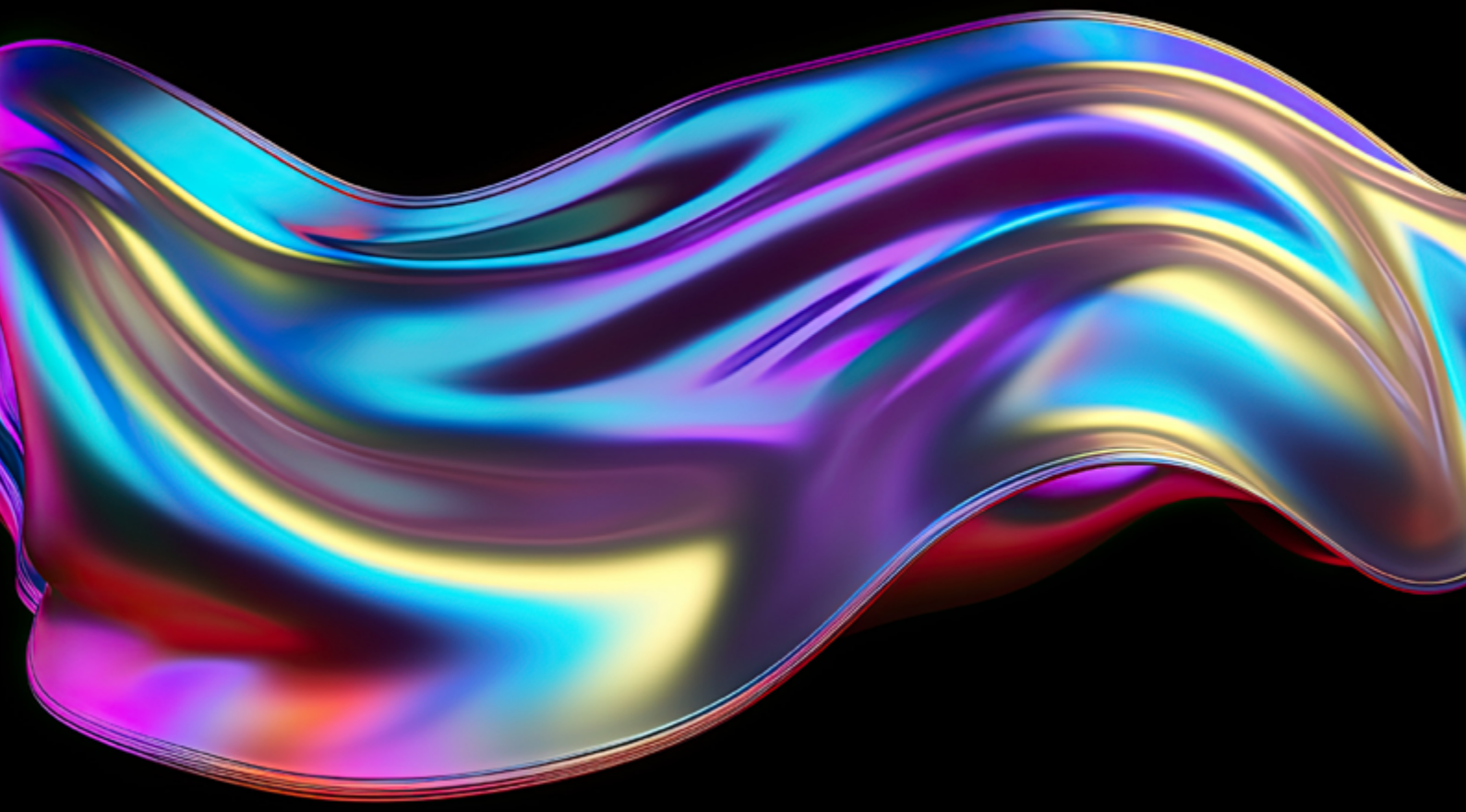
Learn more about Planit's Quality Engineering

Further reading:
Can GenAI benefit Quality Engineering



Founded:

1997

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Core services:

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