

# New futures in focus

**WORLD QUALITY REPORT** 

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## Quality Engineering trends in Benelux

Exploring Gen AI, challenges, and sustainable solutions

The Benelux region—comprising Belgium, the Netherlands, and Luxembourg—has long been a hub for innovation in sectors like finance, telecom, and technology. As organizations increasingly adopt Agile DevOps and look towards emerging technologies such as Gen AI, the region's approach to Quality Engineering is undergoing transformation like never before.

#### Adoption of Gen AI in Quality Engineering

In the Netherlands and Belgium, there's notable excitement about integrating Gen AI into Quality Engineering. Yet, despite this enthusiasm, actual implementation is still in its infancy. While financial institutions and major corporations are exploring AI-driven tools like Copilot and ChatGPT, many companies are only beginning to experiment with these technologies.

In the Netherlands, some organizations, particularly insurance firms, have successfully incorporated Gen AI into their processes, thanks to earlier investments in AI. However, for most engineers, Gen AI remains largely experimental. In Belgium, although many organizations are eager about Gen AI, they face challenges in justifying its application in Quality Engineering. The primary hurdle is advancing beyond basic test automation to more sophisticated AI-driven solutions.

#### Data security and ethical concerns

One of the key obstacles in Gen AI adoption is data security, particularly in industries like finance and government. While concerns about data breaches were initially widespread, enterprise-grade solutions like GPT Enterprise and Copilot have helped alleviate some fears, and organizations are now beginning to experiment with Gen AI in controlled environments.

Ethical considerations and the long-term environmental impact of Gen AI are also under scrutiny, particularly by government bodies. These concerns continue to shape how organizations approach AI deployment and data usage.

#### Need for a comprehensive Quality Engineering strategy

A major barrier to the successful adoption of Gen Al—and Quality Engineering as a whole—is the lack of a comprehensive strategy. Many organizations operate with fragmented approaches, focusing on tools rather than strategies that include test automation, data management, and risk analysis. Without a cohesive plan, the impact of Quality Engineering efforts is limited.

In both the Netherlands and Belgium, it's common for organizations to treat testing and automation as separate activities rather than part of an integrated strategy. This siloed approach often results in inefficiencies and missed opportunities to improve quality across the board.

#### Regulatory pressures and the role of testing

Regulatory requirements, such as GDPR and the Digital Operational Resilience Act (DORA), are shaping Quality Engineering, particularly in the financial sector. These regulations emphasize the need for rigorous testing to ensure compliance, but many organizations are still reactive in their approach. Instead of proactively improving Quality Engineering practices, they focus on addressing compliance issues as they arise.

In Belgium, the focus on regulatory testing remains limited. Testing is often seen as an afterthought in relation to infrastructure and performance, even though automation could help address a broader range of risks, including security and resilience.

#### Sustainability in Quality Engineering

Sustainability is gaining prominence among organizations in the Benelux region, particularly at the boardroom level. While sustainability is often considered in broader IT strategies, its role in Quality Engineering is still underdeveloped. Some experts suggest that sustainability could be treated as a quality characteristic, with a potential sustainability score introduced at the end of testing cycles.

Efforts to streamline IT environments and enhance testability through sustainability initiatives can make testing processes more efficient and reduce the environmental impact of IT operations. However, integrating sustainability into Quality Engineering is still in the early stages, and more effort is required to fully embed these practices across organizations.

#### The road ahead for Benelux

Quality Engineering in the Benelux region is at a crossroads. While Gen AI offers promising opportunities for improving testing and automation, organizations must first address fundamental challenges around strategy, risk management, and sustainability. By adopting a more integrated approach and investing in secure, scalable solutions, companies in Belgium, the Netherlands, and Luxembourg can better position themselves for the future.now a strong push towards on-site work. Many organizations are mandating a return to the office, emphasizing the importance of personal interaction and the co-location of development and testing teams. This shift is seen as crucial for maintaining product quality and fostering a culture of collaboration and learning.

### **Survey Watch**

Actively use Gen AI solutions (LLM and SLM models) like OpenAI, ChatGPT, or GitHub Copilot for Quality Engineering activities.

Responded that higher productivity is considered the most important outcome from Gen AI.

Believe that legacy architecture/technology is the top challenge in integrating test automation into CI/CD pipelines.

Responded that all Green IT KPIs are defined and tracked, focusing on environmental, social, and governance (ESG) parameters.

Implemented Gen AI to enhance test automation and are actively using it.

#### Contact

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