

Reimagining Quality Engineering: AI-infused Lifecycle Assurance

Why quality engineering needs reinvention

Enterprises today operate in a AI-first world where **speed, resilience and flawless customer experience** are non-negotiable. However, achieving these goals is increasingly challenging due to:

1. Exploding application complexity with infused-AI
2. Accelerated release cycles
3. Rising customer expectations
4. Regulatory, resilience and security imperatives
5. Data explosion with AI

Key shifts in quality engineering

The quality engineering (QE) landscape is undergoing a paradigm shift driven by digital transformation and AI adoption.

- **Continuous Quality Intelligence lifecycle:** Intelligence driven quality engineering strategy → start-left continuous testing → shift-right observability and monitoring
- **Intelligent automation:** Asset generation of test cases, script development, data generation, predictive defect analysis and self-healing automation scripts
- **Shift-right observability and monitoring:** Real user monitoring, synthetic testing and telemetry feed insights back into QE strategy for continuous improvement
- **Predictable quality:** Intelligence-driven insights identifying application hotspots and forecast release readiness
- **Optimizing Quality:** Leveraging autonomous automation with impact-based testing, optimized regression and elimination of redundant tests

Movate's AI-led QE capabilities



Platform-led transformation

- **Movate AI QE platform:** A unified AI-native ecosystem that delivers **assisted, autonomous and insights-led quality**. The platform integrates seamlessly with CI/CD pipelines for continuous testing and monitoring and has built-in **ethical AI guardrails**, ensuring compliance and trust.
- **Movate QENxt test automation platform:** A technology agnostic unified automation platform with self healing capability enabling **60% to 80% regression cycle time reduction and 100 percent regression coverage**.



AI agents across the lifecycle

- **Intelligent test generation agents:** Auto-generate test cases, BDD feature files and transactional test data, thereby reducing manual effort and accelerating test design by 15% to 20%.
- **Predictive quality-insight agents:** Analyze defect databases, and application telemetry to pro-actively identify hotspots, enabling risk-based testing and improving production quality by reducing severity-1 and severity-2 defects.
- **Autonomous agents:** Create self-healing scripts to reduce maintenance by **25% to 35%**, optimize impact-based regression suites integrated with pipelines to reduce effort by 20% to 30% and support chaos orchestration for resilience validation.



AI-readiness assessment

- **Movate's assurance framework:** Evaluates QE maturity, identifies AI intervention points, develops a roadmap for AI-native QE transformation and ensures organizations are data-ready and process-aligned before implementation



Performance and resilience engineering

- Includes smart performance testing, chaos engineering and vulnerability assessment for production-grade reliability.

Strategic Insight

Movate helps clients achieve **digital confidence** through:

- **An advisory-first approach** that ensures readiness and sustainable AI-driven transformation as delivered for a leading ed-tech company.
- **Platform-driven delivery** through an AI infused automation platform leading to an expected 25% to 30% reduction in script maintenance for a leading cosmetic company.
- **An AI-infused QE lifecycle** strategy development and implementation for a private equity firm to target 30% efficiency gains across the SDLC.



Srinivasan P N
Senior Lead Analyst



Movate drives end-to-end QE transformation by combining advisory-led assessments, AI-powered platforms, and autonomous agents to deliver predictable quality, resilient performance, and assured customer experiences.