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Launch your GenAI eXpedition with AQE

Bringing the Promise of GenAI Down to Earth

CXOs are under immense pressure to leverage GenAI. Establishing a responsible, well defined, and managed GenAI QE program helps to convert this "30,000-foot view" to a grounded, simplified, practical, actionable, and measurable success.

Experiences that are deterministic and predictable should be augmented or moved to GenAI. This requires several stages of automation, with increasing levels of AI layered on.

Codeless Automation: Remove skills barrier:

- Drag and drop
- Low-code development
- Recorded automation
- Continuous automation (CI/CD)
- Tag autocompletion

This increased level of automation and coverage is essential but often is not very efficient and is costly to maintain.

AI-Driven Automation: Accelerate MTTC, MTTE and MTTM with:

- Intelligent learning (XPATH)
- Smart API modeling
- Smart UI modeling
- Smart mobile modeling
- Self-healed automation

AI-driven automation reduces the time required to generate, maintain, and execute the automations, but the challenge is how to decide which of the 1000s of test cases to execute. Therefore, for maximum value, it should be combined with Predictive AI.

Predictive AI: Reduce redundant/wasted effort via optimization:

- Data analysis segmentation and patterns identification
- Matrix factorization for process optimization
- Deep learning for complex patterns
- Supervised data training and machine learning algorithms
- Accuracy pre-benchmarking and benchmarking

The predictive selection process gives you an indication of which tests to run using text classification based on existing data, but this does not yet generate content. To achieve unassisted content generation, it is needed to progress to Cognitive Automation.

Cognitive Automation: Integrate AI and ML to evolve beyond traditional rule-based systems:

- Automate decision-making
- Natural Language Processing
- Process orchestration
- Machine learning models
- Data coupling
- Neural-connected workflows
- Human machine collaboration
- Conversion of pattern analysis into decision making

"Disruption is either going to happen to you or because of you."

Brian Solis, Digital Anthropologist and Futurist

Anticipated Measurable Outcomes from Integrating GenAI in QE Process

46%
Improved accuracy of predictive maintenance

45%
Improved ROI in quality engineering processes

41%
Improved customer satisfaction ratings

39%
Increased speed of product development cycles

32%
Increase in the number of quality issues identified before product release

Augmented and assisted automation using existing automations coupled to data and neural-connected workflows still require verification.

GenAI: Deploy inorganic colleague to gain organic trust and next level performance:

- Prompt engineering
- Predictive analytics
- Data pipeline orchestration
- Embedded vectorization
- Test Artifactory generation
- Correlation engines
- Conversational agents
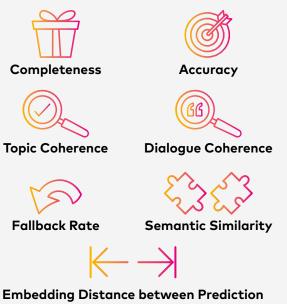- Data augmentation

Launch your GenAI QE Program

AQE's GenAI program gradually onboards capabilities and activities to harness the power of GenAI for practical use cases in a responsible way, incorporating the following steps.

- Identify or build the infrastructure. This must be secure, resilient, and meet all performance requirements
- Deploy the AQE evaluation framework to select the optimal LLMs
- Build robust data pipelines
- Create your banking context/taxonomy
- Measure the outcomes, building trust within your organization
- Onboard assisted, augmented, and complete GenAI QE use cases

Implementing GenAI not only increases your testing and business agility, but closely correlates with improved customer experience. With the Amdocs GenAI framework in place, the time for onboarding any disruption should be reduced from months to weeks and days.

The Amdocs GenAI QE Metrics

Measure your GenAI journey:

Completeness

Accuracy

Topic Coherence

Dialogue Coherence

Fallback Rate

Semantic Similarity

Embedding Distance between Prediction and Ground Truth (by LangChain Evaluator)

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