

# A Seamless and Successful Transition from Quality Assurance to Quality Engineering



# Preface



## Accelerate Your Path to Digitization

Quality Engineering has gained prominence with the shift to agile and DevOps. Companies are shifting from Quality Assurance process for an agile and scalable application development process. QE brings software development and IT operations teams together, removes silos, and embedding security in every step of the application development process. But this is just the tip of the iceberg among the reasons to shift from Quality Assurance to Quality Engineering. The move towards QE over QA is a cultural shift within the organizations and the development teams.

- **90% of large enterprises plan to deploy autonomous assurance and will be fully deployed by 2024 ~ Omdia AI Assurance Report**
- **IT spending on security testing will grow CAGR of 22.3 percent till 2025 ~ Gartner**
- **Global API testing marketing is expected to account for 3,265.52 million by 2028 ~ DataBridgeMarketResearch**

Better software performance results in high engagement. It is a continuous and evolving change impacted by market and industry trends as they come and go. Quality Engineering exists as the solution to enhance application quality while delivering faster cycle times and higher service levels

Quality engineering is a new paradigm that empowers software testers by complementing agile and DevOps methodologies. Quality engineers hold high expertise in working in advanced software development environments by ensuring that the outcomes remain consistent with the business goals. It is the next logical stage of quality assurance. While Quality assurance only ensures the quality of the product, quality engineering facilitates the development of quality products and the processes, including the quality and maturity of the quality team.



# Quality Engineering in the New Era of Application Development Process

Quality Engineering is becoming a vital part of the application development process due to several factors:



## Digitization

Web, mobile, and IoT are integral parts of lifestyle today. Companies are speeding towards digitization for effective communication, collaboration, and transparency between customers and the product.



## Automation

Automation is critical to digitization. The product development process speeds up when the right automation tools are present.



## Experience

Apps are sold if the experience offers something unique without performance issues. If the customer doesn't find the experience worth their time and money, they'll move on to something better.



## Testing Complexities

Apps function on multiple platforms and serve numerous purposes; hence need a solution for high performance under peak pressure.



## User Opinion

Users are now an integral part of the application development process, but the Quality Assurance team is not trained to convert their feedback into features. Quality Engineering considers and gives high value to user opinion while creating and updating the products.



## Market Relevancy

We are now functioning in a global marketplace, and competitors are increasing. Better experience and performance will keep you relevant in the market and a step ahead of your customers.

# Why Quality Assurance is Becoming an Afterthought?

Quality Assurance was successful until the need to create user-focused products started coming into the picture. We are now in the second half of 2022, and all the tried and testing QA approaches seem to be failing, and companies want more.



## Siloed Approach

Quality Assurance teams worked in silos and had little to no connection with development teams. It does very little to help the developer optimize the product for user experience, and much time is spent on navigation and features.



## Expensive

Quality Assurance is expensive and takes up significant resources allocated for testing and development.



## Inconsistency

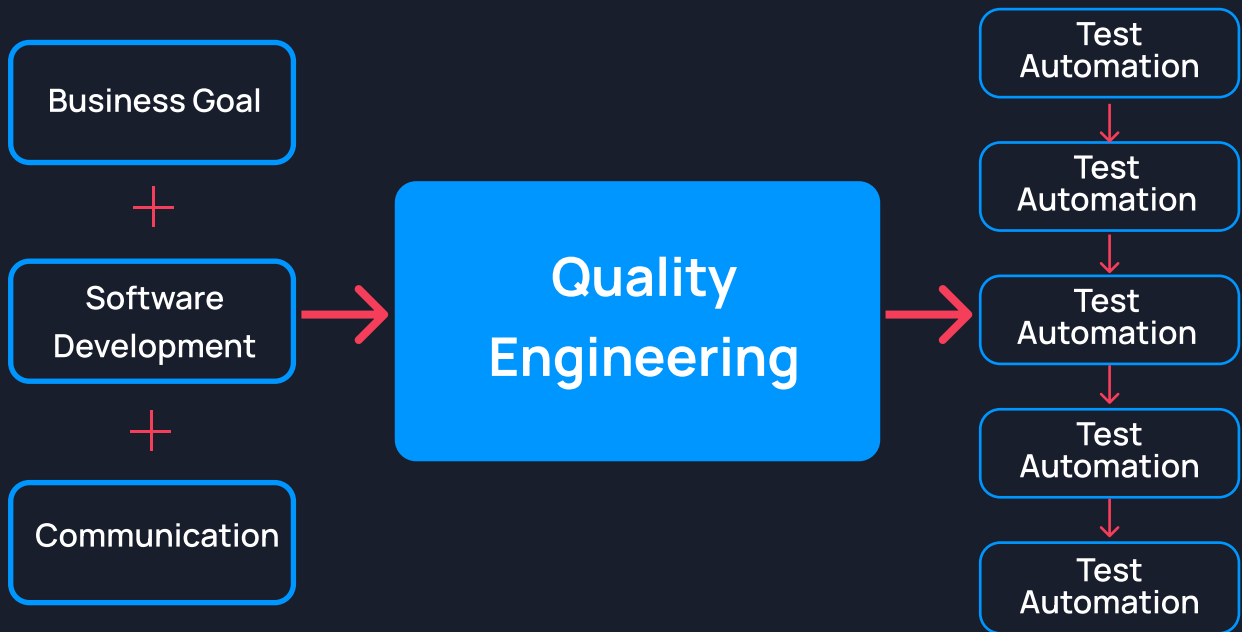
There is no consistent set of standards, and many professionals don't know what is expected from them in the project.



## It's a Mundane Activity

Very little is exciting about quality assurance. Most navigation and features are tried and tested, and there is very little room for innovation. QA becomes mundane after a while, offering very few opportunities for innovation.

# QA vs. QE – The Big Differences



## Quality Assurance

- > Quality-driven process.
- > The process is reactive
- > It prevents any mistakes or underlying issues in the product under development
- > Puts a lot of focus on standards, surveillance, and reporting

## Quality Engineering

- > Development driven process
- > The process is proactive
- > Supports product development from start to end
- > Focuses on cross-functional teams, processes, and tools

# The Driving Trends Towards QE over QA

Quality Engineering has the same goal as Quality Assurance, but there are still a few key differences:

- QA's goal is to **maintain the quality** of the finished product while QE implements a set of benchmarks that the product should meet during the different stages of development.
- Quality Engineering is more **flexible and easier to accommodate** while QA pays attention to the bigger picture.
- Quality Engineering **involves all the departments that are a part of the application testing and development process**. Every team member is responsible and must pay attention to the application's quality and performance. Quality Assurance is just the responsibility of quality assurance professionals with almost no involvement from development or testing teams.
- Quality Assurance has a "**one size fits all approach**," while QE uses different tools and solutions to solve different problems.



The shift from QA to QE is not just an industrial necessity but a cultural one. New technologies like automation and AI go well with quality engineering and improve the results. The outcomes are far more accurate than quality engineering because the processes are varied, and the engineers can tailor them according to the requirements of their clients. When combined with QE, new and emerging technologies make it easy to identify the problems before they occur.

# How Quality Engineering Elevates Software Quality

The success of conventional software development methodology relies on how successfully software testers analyze the software quality at the beginning of software deployment. Compared to this, quality engineering is an innovative approach that emphasizes on defecting prevention over measurement. A quality engineer works with development teams to ensure that the quality of the product touches all the critical factors considered as the benchmark for its market launch. Hence, QE merges the boundaries between development and testing and helps deliver the perfect product that you envisioned.





# Quality Assurance to Quality Engineering Transition – Best Practices

## Quality Improvement

Businesses should adopt QE tools and methods to gain the best out of their quality engineering journey. The management should also pay attention to the quality assurance practices and areas where they can improve.

## Workforce Transformation

Organizations need to evaluate the skills and strengths of their existing testing and development teams and reskill them with a quality engineering mindset. As your team transforms, the practice of keeping product quality and features becomes an integral part of the application development process.

## Continuous Testing Approach

Continuous testing occurs at multiple stages and ensures that the defects will be solved during any product development stage. QA to QE transition reduces manual testing processes to achieve continuous testing.

## Scalability

Say goodbye to extensive backtracking to add a new feature or improve the user load. QE ensures that you can make changes to your product without going through many hassles.

## Agility

Organizations have implemented agile and DevOps for rapid growth. QE would add the best features and remove the roadblocks so that you gain the best out of the application development process.

## Enterprise CI/CD

Organizations need to set up a Continuous Integration (CI) and Continuous Deployment (CD) pipeline as it will save time and effort spent on manual tasks.

# Start Your Journey from Quality Assurance to Quality Engineering

Quality Engineering is critical to any organization's digital transformation journey in 2022. In an industry dominated by technologies and solutions like agile, DevOps, and shift-left. You can only manage and upgrade the quality of your products if you start planning your transition from Quality Assurance to Quality Engineering at the earliest. A fully-fledged QE process will eliminate redundancies, improve the software release cycle, decrease overheads, and gain the upper hand in the competitive market without a budget increase. QualiZeal offers an immersive approach to the Quality Engineering journey and restructures frameworks, tools, and technologies for a seamless transition.

