

Predictive Analytics in Quality Assurance

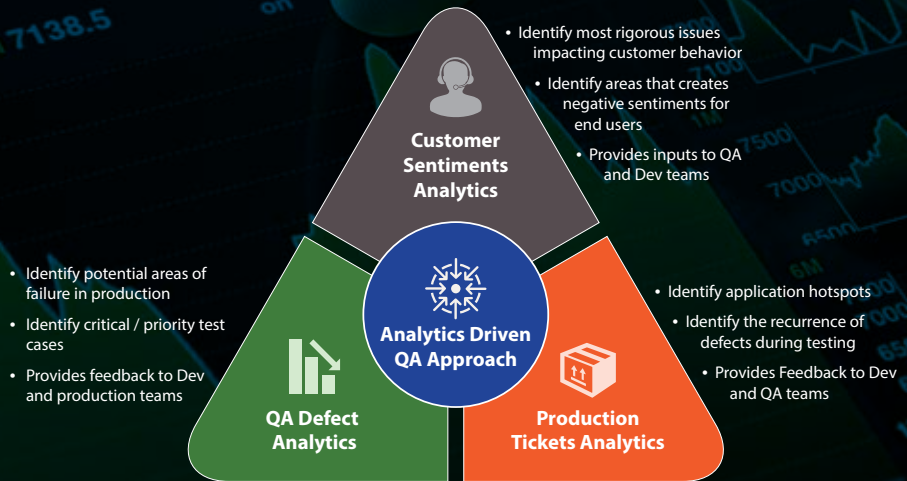
With the rapidly increasing complexity of the application and technology landscape, quality assurance (QA) needs to continuously evolve to meet the dual demands of faster time to market and better customer experience.

Typically, testing is based on the business and functional requirements and the objective is to identify technical defects early on. The impact of the application on the customer's behavior is a mere afterthought. Even in the process, defects data is not leveraged effectively due to lack of an inbuilt feedback loop.

Infosys solution on predictive analytics

in QA addresses these challenges and is based on a scientific approach to help unearth defects beforehand, reducing the

overall cost, and achieving high customer satisfaction. The key solution components are shown below:



Do you face these questions in your testing organization?

- What are the issues impacting end customers the most?
- How to improve end-user experience?
- How to optimize testing so that critical functionalities receive the utmost focus?

Challenges in the traditional QA approach

Traditional QA with its focus on validating business requirements, misses out on a wealth of information that can be gleaned from data sources such as defect logs, production incidents, and end-customer feedback.




- Testing is limited to business or technical requirements and ignores customers' usage patterns which results in gaps in customers' expectations
- Traditional testing fails to adapt to real-time learning, lacks a feedback loop
- Testing is inward-focused rather than customer-focused
- In spite of fully 'functional' applications, the customers may not always be satisfied

Information from defects and production incidents, and end-user feedback can provide valuable insights on customer needs and usage patterns, and application stability in production, thus completing a feedback loop that can help in real-time learning and continuous improvement of QA efforts.

Why choose Infosys for predictive analytics in QA?

Our predictive analytics solution analyzes structured and unstructured data from defect logs, production incidents, and social media to provide a 360-degree view of the behavior of applications in production, as well as how it impacts customers' sentiments. It helps companies minimize risk, increase agility, and bring in customer-centricity to the QA approach.

It provides a formal mechanism for feedback flow from one life cycle stage to another, helping in prioritization of key areas throughout the project life cycle.

	Customer sentiment analytics	QA defect analytics	Production tickets analytics
Source of data	Reviews on social media	QA defect logs	Production ticket data
			
Features	<ul style="list-style-type: none"> • Extracts and analyzes data from social media and provides an interactive visualization of feedback trends • Classifies technology-related comments into functional, compatibility, and performance issues enabling easier analysis • Helps QA teams identify focus areas for customer experience and helps strengthen the regression test suite 	<ul style="list-style-type: none"> • Identifies high-risk areas in the application which helps in risk-based prioritization of regression test cases • Shows the correlation between various application modules, based on the defect data, and helps make informed decisions on optimal test coverage • Provides inputs to production support teams to monitor high-risk functionalities 	<ul style="list-style-type: none"> • Identifies the application hotspots based on the production incidents • Highlights the areas of failure in production • Proactively helps production support teams to fix issues in other co-related areas • Input for QA team for regression strategy and thus potential areas of focus

Five major business benefits of our solution

With our predictive analytics solution, you get:

- Enhanced customer experience
- Reduced cost due to early defect detection
- Reduced time to market through shift left in testing
- Better risk management by prioritizing critical areas
- Increased testing efficiency by identifying optimal regression suite

Success stories

- 38% optimization in the number of test cases in regression suite and nearly 35% reduction in regression testing effort using the Infosys Defect Analytics solution, for the digital platform application testing for a leading retailer in the US
- Nearly 50% improved regression coverage and reduced negative user sentiments for a leading pharmacy retailer in Canada
- 20% improvement in defect detection and 15% savings in development effort with the Infosys Defect Analytics solution for a large global distributor of electronic components

For more information, contact askus@infosys.com



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