IBM Consulting

GCLOUD 14 | IBM United Kingdom Ltd

# IBM Quality Engineering

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# Risk Based Testing Service

Create new ways to reduce risk for a business.

Contents

# IBM Quality Engineering – Risk Based Testing Service Our offering Framework

*The Risk Based Testing service is part of the IBM QE (IBM Quality Engineering) suite of offerings.*

IBM Quality Engineering (IBM QE) offerings cover the full breadth of testing needs.

The purpose of these services is to help you to deliver quality government services at scale and to get increasingly complicated applications to market faster, with fewer defects and at a lower cost.


IBM Quality Engineering uses Risk-Based Testing to maximise efficiency, focusing resources where they are needed most, to detect defects early, ensure product quality and alignment with Business objectives.
Risk Based Testing (RBT) is a strategic approach that helps organizations like yours identify, mitigate, and manage software risks. With RBT, you can significantly benefit from improved customer satisfaction, reduced downtime, and a competitive edge in the market.

# IBM Quality Engineering – Risk Based Testing Service Service Overview

| | |
|---|---|
| Features | • Risk identification<br>• Testing prioritization<br>• Continuous Monitoring<br>• Supports continuous improvement |
| Benefits | • Reduced Regulatory compliance risk<br>• Reduced IT Failures<br>• Reduced Operational hazards<br>• Limit losses and maximise returns<br>• Maximising customer satisfaction |
| Key Differentiators | • IBM Risk Based Testing Service uses data analytics to identify high-risk areas of the application and prioritize testing efforts accordingly.<br>• IBM has a team of experienced testing professionals who can provide guidance and best practices for implementing Risk Based Testing in your organization.<br>• IBM Risk Based Testing Service can be customized to meet the specific needs of your organization and your testing goals<br>• IBM Risk Based Testing Service follows industry-standard security protocols to ensure the confidentiality, integrity, and availability of your testing data.<br>• IBM Risk Based Testing Service provides real-time insights and reporting to help organizations continuously improve their testing processes and achieve better results over time.<br>• IBM Risk Based Testing Service promotes collaboration between development and testing teams, enabling them to work together more effectively and deliver high-quality software faster.<br>• The service can be scaled up or down to meet the needs of any project, from small applications to large enterprise systems. |
| Real World Case Studies | • IBM was tasked with a large-scale data migration testing project for a prominent Australian multinational bank, which aimed to seamlessly migrate around 400-500 applications using a like-for-like conversion approach. IBM engaged in a Hybrid IT Pilot (Wave Group 1 - Waves 1-4) with a duration of 4 years using risk-based testing methods during the test phases. The outcome of this approach was a successful data migration testing project, meeting the client's objectives and ensuring a seamless transition of applications within the specified timeframe.<br>• A/NZ Federal Agency Risk based testing used for a program with frequently changing requirements achieving an 825 reduction in SIT Tests. |

# IBM Quality Engineering – Risk Based Testing Service Addressing Business Needs

By implementing risk-based testing approaches, firms can minimize these risks, ensure effective and secure operations, and maintain a competitive edge.

With a robust Risk Based Testing approach, you can:

– Efficiently allocate resources by focusing on high-risk areas
– Detect defects early, reducing fixing costs and improving product quality
– Ensure better test coverage and informed decision-making
– Enhance product quality and customer satisfaction
– Increase confidence in software releases
– Save costs by addressing defects early
– Ensure regulatory compliance
– Align testing efforts with business goals
– Continuously improve your testing strategies

By prioritizing testing efforts on high-risk areas, RBT helps you maximize the value delivered to stakeholders.

Embrace RBT today and revolutionize your software testing process!

We have a team of experienced and certified professionals who can provide end-to-end support for your RBT needs
6 Risks That Businesses could minimize through Risk Based Testing.

**Regulatory Compliance Risk**: Failure to meet legal requirements can lead to fines, reputational damage, and license revocation. Risk-based testing identifies gaps and ensures compliance.

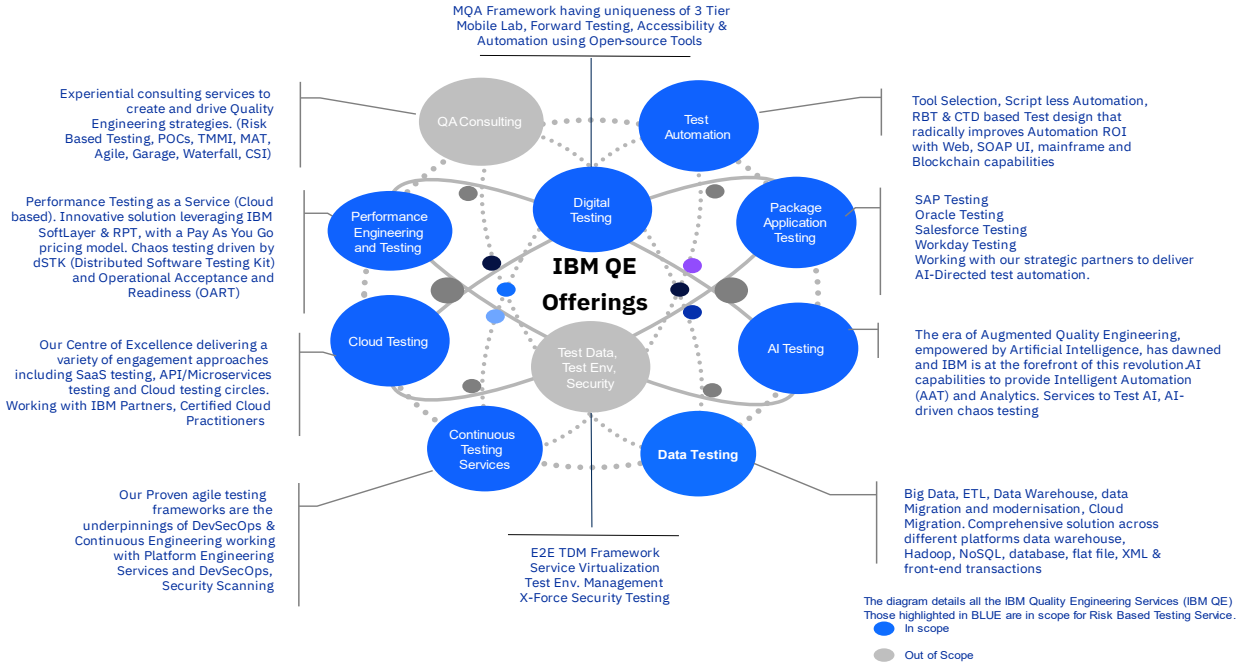
**IT Failures**: Risk-based testing assesses system dependability, discovers flaws, and ensures seamless functioning to prevent disruptions and enhance consumer satisfaction.

**Operational Hazards**: Inefficient processes and resource allocation threaten financial organizations. Risk-based tests evaluate workflows, pinpoint bottlenecks, and suggest optimization opportunities.

**Credit and Market Risks**: Risk-based testing analyzes data trends, predicts threats, and facilitates informed decision-making to limit losses and maximize returns.

**Customer Satisfaction Concerns**: Risk-based testing identifies areas of improvement to surpass customer expectations, foster loyalty, and enhance reputation.

# IBM Quality Engineering – Risk Based Testing Service Service Definition




## Based on our point of view, we recommend the following transition activities to a risk-based testing strategy.

The diagram above details all the IBM QE offerings. Those offerings highlighted in BLUE are in scope for this Risk Based Testing Service Offering.

**Analyze Existing Activities and Guidelines** – Brief overview of the importance of assessing the current testing methodology. Key steps such as reviewing documentation (test plans, testcases, test reports), interviewing stakeholders (developers, testers & others) in one on one and/or in workshops and analyse historic data (look for trends and areas of improvement).

**Identify Key Stakeholders** - Determine who will participate in risk evaluation and priority setting. Ensure representation from various departments such as development, quality assurance, business analysts, and end users.

**Carry out a Risk Assessment Workshop** – Product and Project - Organize a collaborative session involving vital individuals to examine threats related to functional suitability, security, performance effectiveness, and compatibility. Utilize tools like probability and influence matrices to rate risks and establish top priorities

**Establish a Risk Criteria** - Effect, Probability, Threshold - Standardize the parameters employed in risk appraisals across the organization. Define precise values for impact, possibility, and threshold levels to guarantee uniform decision-making.

**Develop Risk Mitigation Plans** - Brainstorm and formulate tactics to tackle the most significant risks detected during the risk assessment stage. Consider both preventative and curative steps to minimize risk consequences and likelihood

**Formulate a Test Strategy** - Emphasis on RBT Method - Design a thorough examination scheme emphasizing a risk-based testing technique. Allocate testing efforts according to risk urgency and concentrate on high-priority regions

# IBM Quality Engineering – Risk Based Testing Service IBM Approach

The most critical systems that support government organisations demand quality outcomes. To achieve this, we take an extensive, assets driven approach to delivery and bring an extensive depth of knowledge in Quality and Testing methods.

We categorise our approach into six areas, each of which has a set of specific activities:

*We have a "Test Less, Test Right" mantra and we believe in accelerating testing using AI to improve root cause identification and achieve faster resolutions.*

Governance

- Environment governance
- Data governance
- Quality governance
- Control functions

Stakeholders

- Strategy & Advisory
- Product ownership
- Communications approach
- Stakeholder engagement

Inception

- Onboarding
- Coaching
- Training
- Location management

Team

- Team sizing and structure
- Quality standards
- Tooling and automation
- Metrics

Process Integration

- Demand
- Branching and merging
- Testing approach
- Path to live

Ways of Working

- Methods
- Empowering Team
- Transparency
- Continuous Improvement

About IBM

Supporting Government

We help government organisations in the UK and worldwide deliver and transform essential public services – our teams are passionate and proud about helping you to make a real difference to people's lives.

Government Services Supported by IBM

Defence and Intelligence

Public Safety and Policing

Healthcare

Life Sciences

Tax and Revenue Management

National Infrastructure

Social Care

Education

Works and Pensions

The problems we solve for clients are complex and cannot be satisfied with technology alone. They require a partner that can also offer deep industry expertise and a relationship of trust.

IBM combines the portfolio, people and sense of purpose necessary to meet today's enterprise demands. Every day, we support and manage complex delivery for government clients where the impact of delivery has a wide-reaching impact on citizens and national services.

We bring access to the industry experience, insight and technology capability to deliver and operate secure, scalable, optimised and available services for government.

We support you by bringing:

- Industry expertise – Professionals who understand and are passionate about delivering quality public services and can bring industry insights and apply innovation to your business processes.
- Trust and security capabilities – Protecting valuable data and insights and deploying innovations responsibly.
- Innovative technology – Expertise in areas such as AI, blockchain, 5G, Automation, IoT, cybersecurity and quantum, delivered in a Hybrid Cloud environment.
- Experienced Services professionals to support strategy, innovation and deliver transformation and change to processes, applications, and cloud infrastructure.
- Global alliances – valuable partnerships with the world's leading vendors

About IBM

This is IBM in the UK

We have worked together with organisations in the UK for over 100 years, with a rich history of joint innovation and achievements, built on trusted relationships.


## Cloud

Together, IBM and Red Hat are working to deliver the world's only **next-generation hybrid multicloud platform**

## Economy

IBM has been **integral to the UK economy for >100 years**, and is one of its largest tech employers

## R&D

In the UK alone, IBM **invests £170 million in R&D** each year

## Quantum

IBM Q, **the world's most advanced quantum computing initiative for commercial use**, is being used by CERN

## Environment

IBM's **focus on sustainability** began in 1971 with our first environmental policy

## Changing the world

IBM was awarded **World Changing Company of the Year** 2019 by Fast Company

## Royal recognition

29 UK IBMers received **honours from the Queen** for contributions to tech and society

## Diversity

IBM **won the Global Diversity Award** 2019 and the ENEI's **Gold Standard**

## Graduates

IBM is committed to developing future talent – we are Target Jobs' **Graduate Employer of the Year** 2019

## Volunteering

IBM dedicates **>20,000 volunteering hours every year** for a better society

## Tech talent

IBM runs P-TECH schools in 18 countries, helping **>100,000 students build skills for careers of the future**

## Inventors

IBM UK is home to many Master Inventors, with **>250 patents filed last year** alone

## We are Here to Help

This document provides an overview of our service with context about how our services can support you and how we work. You can also find out more about us and our work at ibm.com.
However, every organisation faces unique challenges and our specialists are available to answer your questions and discuss how our services can be tailored to your needs. You can reach us by email, and we are here to help.

*Anne-Marie Wheeler*
ukcat@uk.ibm.com www.ibm.com