

IBM Consulting

A glowing blue cube is positioned in the center of the image. The cube's faces are translucent, revealing a complex internal structure. Two of the visible faces feature a glowing blue cloud icon. The cube is surrounded by a network of thin, glowing blue lines that intersect at various points. The background is a dark, textured surface resembling a circuit board or a microscopic view of a material, with various rectangular and irregular shapes.

G-Cloud 15 IBM - Quality Engineering - Risk Based Testing Service

Service Definition Document

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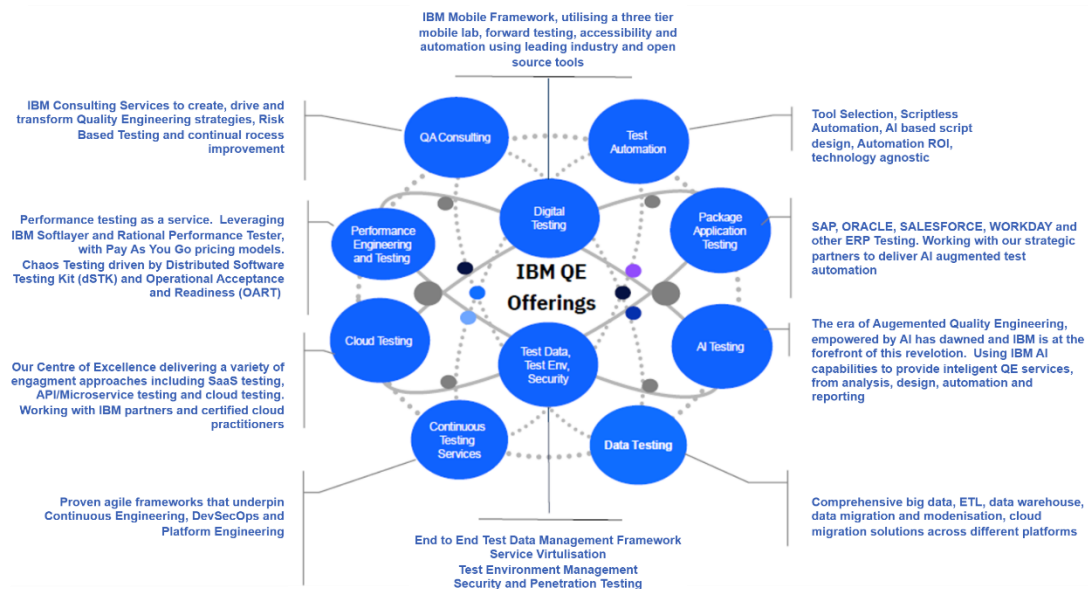
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IBM - Quality Engineering – Risk-Based Testing Service

Our offering Framework

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

IBM QE offerings cover the full breadth of testing needs.



The purpose of these services is to help you 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 by focusing resources where they are needed most, detecting defects early, ensuring product quality, and aligning with Business objectives.

Risk-Based Testing (RBT) is a strategic approach that helps organisations 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
- Testing prioritisation
- Continuous Monitoring
- Supports continuous improvement.

Benefits

- Reduced regulatory compliance risk
- Reduced IT failures
- Reduced operational hazards
- Limit losses and maximise returns
- Maximising customer satisfaction.

Key Differentiators

- IBM Risk-Based Testing Service uses data analytics to identify high-risk areas of the application and prioritise testing efforts accordingly
- IBM has a team of experienced testing professionals who can provide guidance and best practices for implementing Risk-Based Testing in your organisation.
- IBM Risk-Based Testing Service can be customised to meet the specific needs of your organisation and your testing goals
- IBM Risk-Based Testing Service follows industry standard security protocols to ensure the confidentiality, integrity and availability of your testing data
- IBM Risk-Based Testing Service provides real-time insights and reporting to help organisations continuously improve their testing processes and achieve better results over time
- 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
- 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.
- A/NZ Federal Agency Risk-Based testing used for a program with frequently changing requirements, achieving an 825 reduction in SIT Tests.

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Addressing Business Needs

By implementing risk-based testing approaches, firms can minimise 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 prioritising testing efforts on high-risk areas, RBT helps you maximise the value delivered to stakeholders.

Embrace RBT today and revolutionise your software testing process!

We have a team of experienced, certified professionals who can provide end-to-end support for your RBT needs. 5 risks that businesses can minimise 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 reliability, identifies flaws, and ensures seamless operation to prevent disruptions and enhance customer satisfaction.

Operational Hazards: Inefficient processes and resource allocation pose risks to financial organisations. Risk-based tests evaluate workflows, pinpoint bottlenecks and suggest optimisation opportunities.

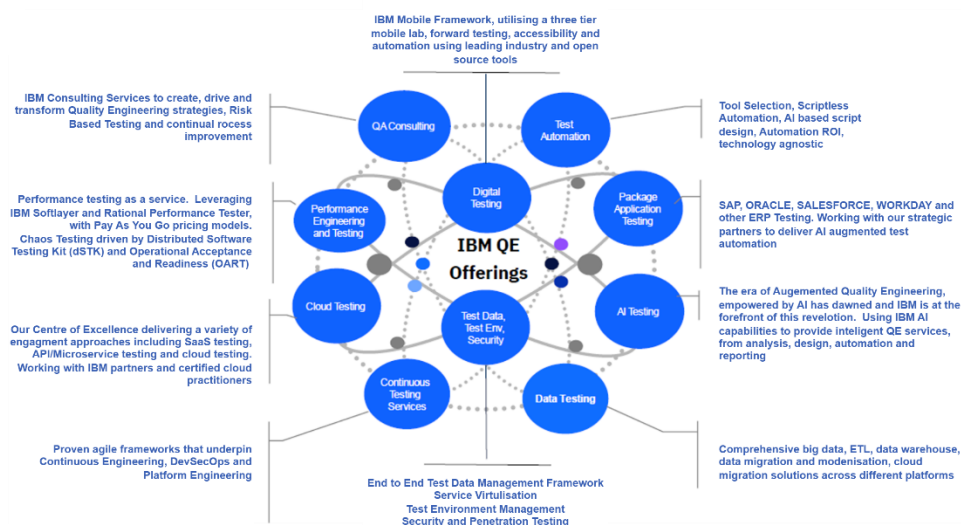
Credit and Market Risks: Risk-based testing analyses data trends, predicts threats and facilitates informed decision-making to limit losses and maximise returns.

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

IBM - Quality Engineering – Risk-Based Testing Service

Service Definition

Based on our assessment, 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.

Analyse Existing Activities and Guidelines: A 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 analysing historic data (looking for trends and areas of improvement).

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

Carry out a Risk Assessment Workshop: Product and Project. Organise a collaborative session with key stakeholders to assess risks related to functional suitability, security, performance, and compatibility—Utilise tools such as probability and influence matrices to rate risks and establish top priorities.

Establish a Risk Criteria: Effect, Probability, Threshold - Standardise the parameters employed in risk appraisals across the organisation. Define precise values for impact, possibility, and threshold levels to ensure consistent decision-making.

Develop Risk Mitigation Plans: Brainstorm and formulate tactics to tackle the most significant risks detected during the risk assessment stage. Consider both preventive and corrective steps to minimise risk and its consequences.

Formulate a Test Strategy: Emphasis on RBT Method - Design a thorough examination scheme emphasising a risk-based testing technique. Allocate testing efforts based on risk urgency and focus on high-priority areas.

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 asset-driven approach to delivery and bring 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:

Governance

- Environmental governance
- Data governance
- Quality governance
- Control functions.

Team

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

Stakeholders

- Strategy & Digital Testing
- Product ownership
- Communications approach
- Stakeholder engagement.

Process Integration

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

Inception

- Onboarding
- Coaching
- Training
- Location management.

Ways of Working

- Methods
- Empowering Team
- Transparency
- Continuous Improvement.



**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.**

IBM - Quality Engineering – Risk-Based Testing Service

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 who can also offer deep industry expertise and a trusted relationship.

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, with the impact of delivery reaching far beyond citizens and national services.

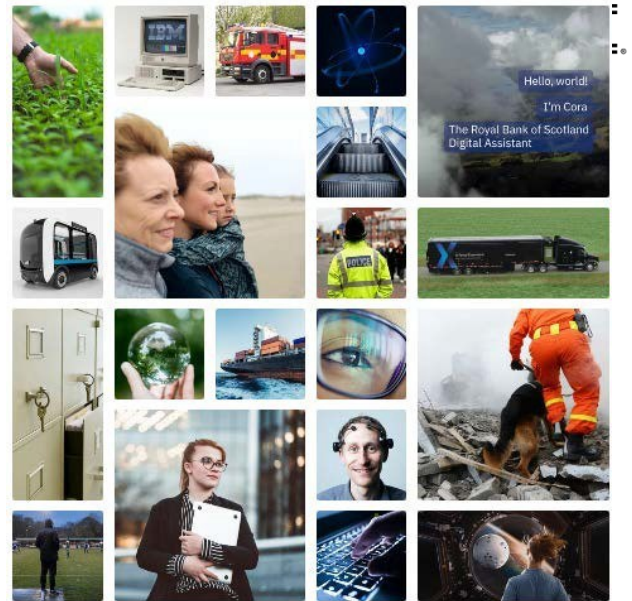
We bring industry experience, insight, and technology capability to deliver and operate secure, scalable, optimised, and available services for government.

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.

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



Artificial Intelligence

IBM develops **watsonx based generative AI solution** for the Austrian federal armed forces **to provide fact-based evaluation and classification** for the ability to remain capable of acting in the light of risk scenarios.



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**

