

IBM Consulting



G-Cloud 15

IBM – Quality Engineering- Test Automation
as a Service

Service Definition Document

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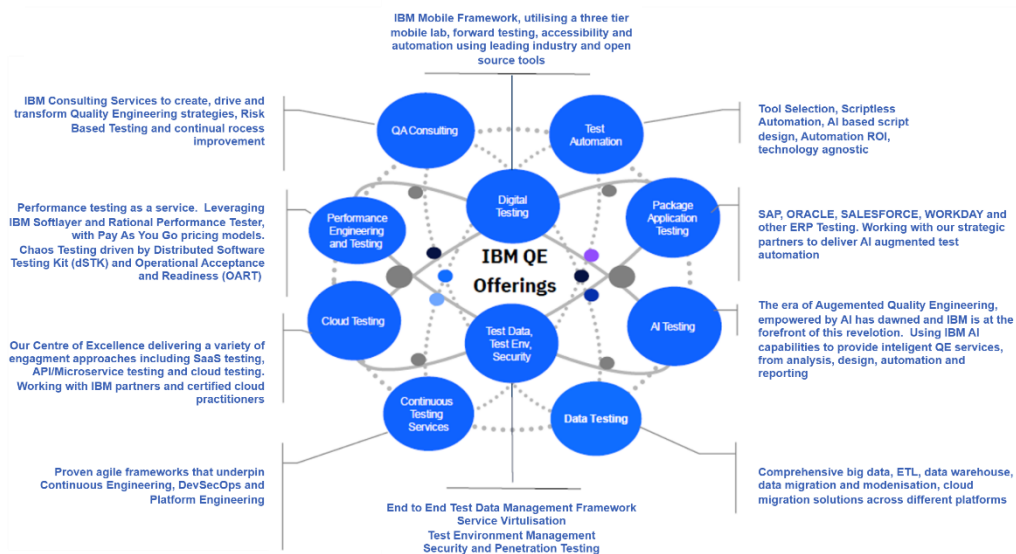
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IBM - Quality Engineering – Test Automation as a Service

Our offering Framework

The Test Automation as a 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.



At IBM QE, we leverage AI-driven automation to improve efficiency and speed, and reduce risk for your business. By combining our existing investments with our strategic partnerships with industry leaders Like Watsonx, Tricentis, Virtuoso and Keysight, we can automate testing processes, identify patterns, and accelerate testing cycles, ensuring faster time-to-market for your digital services.

IBM - Quality Engineering – Test Automation as a Service

Service Overview

Features

- Industry-leading testing tools
- Script-less Automation
- Test Design Automation
- End-To-End Automation
- Autonomous API Testing Automation
- On-site, Off-site, Near-shore and Off-shore delivery enabled
- Highly experienced Automation Experts
- Open source and proprietary tools expertise
- Powered by IBM IGNITE Platform, a set of Accelerators.

Benefits

- Quality standards across the enterprise delivering business outcomes
- Improved ROI on tooling investment
- Increased automation adoption
- Reduced Cost by up to 30%
- Up to 50% cost reduction across all test activities in an enterprise
- 40% less defects
- Increased speed of delivery
- Reduced CapEx costs
- Reduced risk of outage
- Increased brand reputation.

Key Differentiators

- Dedicated automation specialists across the globe
- Thousands of years of experience enabling client automation transformations
- AI and automation built into the IBM IGNITE Platform to accelerate Quality and Testing delivery
- Global Centre of Excellence for the delivery of Quality and Testing services
- We have operational clients in the UK Government as well as a wide breadth across all UK sectors.

Real World Case Studies

- IBM QE engages an Australian federal body to deliver end-to-end test automation and improved quality outcomes, achieving 100% Test Automation with 4600 Regression test runs every month.
- North American Insurer established a TEST Centre of excellence, achieving a 40 to 50% test case reduction through IBM's QE approach and technology for Optimisation.
- US Telco used AAT for API testing and achieved an 85% reduction in planning and execution effort. Streamlined testing, critical error identification, and expedited timeline.
- Guardian, a mission-critical, command & control system protecting UK airspace. Delivered 2 releases into live operation in 2023 with only a single incident raised. Our Quality Engineering team leveraged our long-standing, trusted relationship with our client to successfully move to automation of operational scenarios, iteratively refine user requirements and embed quality throughout the lifecycle to ensure a successful transition into live operations

IBM - Quality Engineering – Test Automation as a Service

Addressing Business Needs

IBM Quality Engineering (QE) provides comprehensive, innovative solutions to address the unique challenges facing the public sector.

With the ever-growing dependence on technology in government operations, ensuring the quality, reliability, and security of software systems becomes paramount.

IBM QE brings its deep industry expertise, cutting-edge tools, and proven methodologies to help government agencies achieve their quality goals, enhance citizen services, and drive digital transformation.

IBM QE can deliver automation management, tool configuration, and scripting skills.

In the rapidly digitising public sector landscape, the need for efficient, secure, and citizen-centric services has never been greater.

IBM can help you address your requirements for testing essential government digital services with rigour and depth. We can help you address your key business needs, including:

Key Challenges / IBM QE Solutions

Legacy systems and outdated technology - Modernisation strategies, integration testing with AI- led test automation, and legacy system transformation.

Cybersecurity threats and data breaches - Robust security testing, vulnerability assessments, and data protection measures.

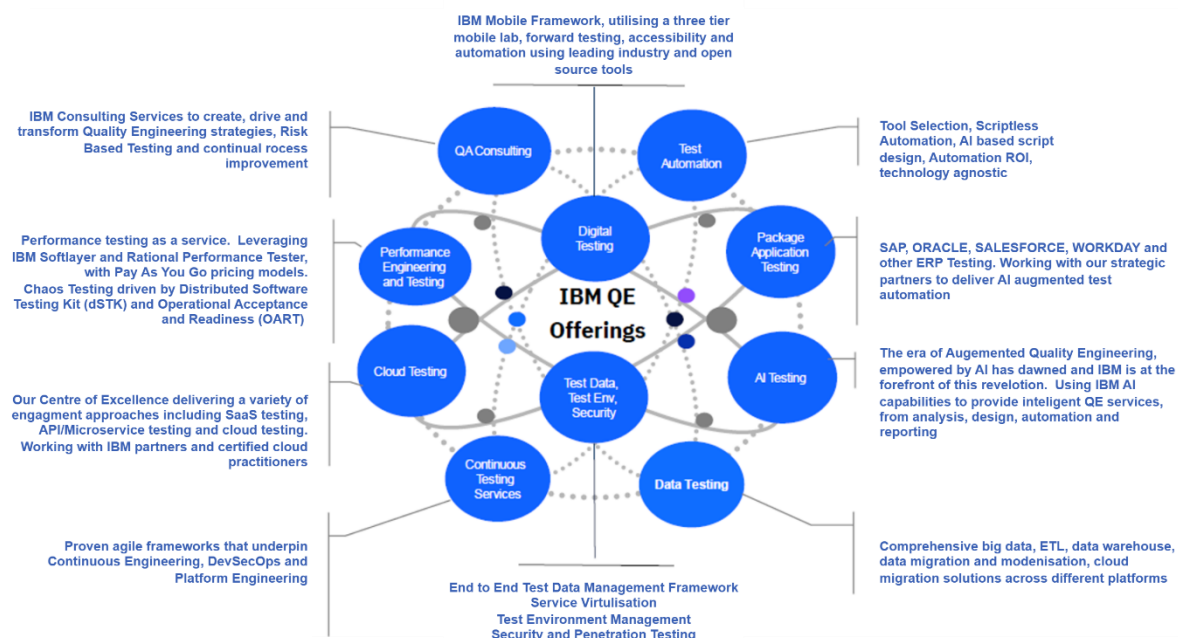
Ensuring compliance with government regulations and standards - Compliance testing frameworks, adherence to rules, and quality assurance processes.

Increasing user demands for seamless digital services - User-centric design, agile testing methodologies, and automation and continuous feedback for enhanced user experiences.

Optimising resource allocation and budget constraints - AI-led test automation, efficient resource utilisation, and optimisation of testing efforts for cost- practical quality engineering.

IBM - Quality Engineering – Test Automation as a Service

Service Definition



The diagram above details all the IBM QE offerings. Those offerings highlighted in BLUE are in scope for this Test Automation as a Service and cover mobile and digital channel quality and testing, utilising the latest in automation techniques and implementing Continuous Testing into delivery.

Act now to leverage AI-led automation, reduce risk to your business, and deliver innovative public services that set you apart from the competition.

Test Automation

AI Infused Script less automation and CTD-based Test Design that radically improves automation ROI working with IBM IGNITE Quality Platform, Keysight, Tricentis, Virtuoso, Open Source, and Selenium.

Digital Testing

AI-infused automated Digital testing processes, allowing teams to run comprehensive assessments quickly, evaluating software applications' quality and reliability on various devices, platforms, browsers, and screen sizes and maintaining brand credibility by preventing negative customer experiences due to faulty applications.

Continuous Testing Services

Our Proven agile testing frameworks underpin DevSecOps & Continuous Engineering, utilising a collection of assessments conducted throughout the software development lifecycle to ensure efficiency, reliability, and security.

AI Testing

IBM QE provide quality and testing services to verify the accuracy of your AI and Machine Learning applications. Leveraging the power of AI, we are revolutionising our offerings to deliver faster, more predictable, and results- focused solutions. This AI- driven approach endows our Quality Engineers with profound insight into daily and real-time outcomes, empowering our clients to make critical decisions with utmost confidence and precision.

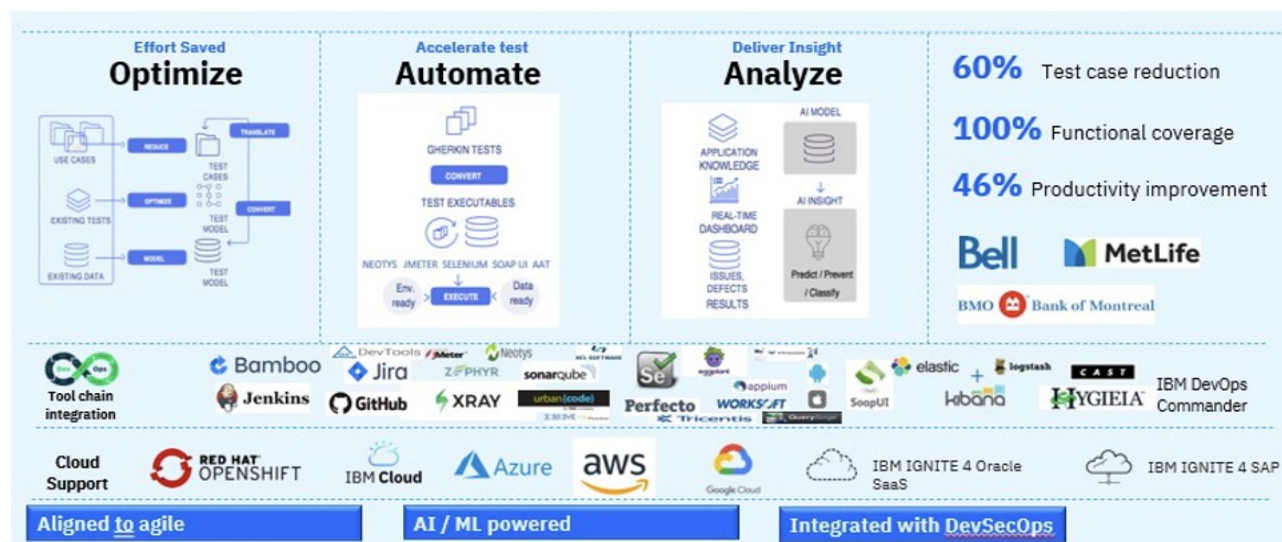
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IBM IGNITE Quality Platform

To support all our offerings, IBM also provides the IGNITE Quality Platform. This AI-enabled framework enables you to move from detection to prevention faster, with higher quality and lower cost.

The IBM IGNITE Quality Platform provides a set of loosely coupled tools within a toolchain to support industry-leading quality and testing services. Our services are built on real Quality and Testing experience with highly critical systems across government and other industries. We have made extensive investments in toolchains, automation, and robotics to deliver quality services that go beyond traditional testing. The platform offers extensive integration capabilities across toolchains and hyperscalers. The IBM Quality Engineers are highly trained across the Quality platform and other vendor tools.

The three phases depicted below are: Optimise to reduce costs whilst ensuring coverage (through Combinatorial, Risk-Based, or Model-based testing techniques). Automation to accelerate Testing using AI-infused tools. Analyse with AI-infused tools to identify trends, and Root Cause Analysis to deliver actionable insights.



- IBM is a recognised leader in Quality Engineering and Testing Services :
- Gartner: Magic Quadrant for API Management and Testing, October 2023,
 - The Forrester Wave™: AI Decisioning Platforms, Q2 2023:
 - Gartner: Market Guide for Application Testing Services, January 2022,
 - The Forrester Wave™ : Continuous Automation and Testing Wave 2021,
 - IDC 2018 : IBM Delivers Market –Leading Software Test Automation.

IBM - Quality Engineering – Test Automation as a 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

Stakeholders

- Strategy & Digital Testing
- 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



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.

Test Automation as a Service

IBM - Quality Engineering –

About IBM

Supporting Government

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.

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

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**

