

IBM Consulting



G-Cloud 15 IBM – Cryptography and Quantum Safe Security Services

Service Definition Document

Email: ukcat@uk.ibm.com
Contact: Anne-Marie Wheeler

Contents

Service Overview.....	3
Addressing Business Needs	4
Service Definition	5
IBM Approach	6
Why IBM?	7
Values and Outcomes	8
This is IBM in the UK	9

Service Overview

Features

- Consultative and managed services to assess, implement and maintain quantum-safe solutions.
- Establish quantum safe transformation efforts tailored to organisation risk, strategy and ecosystem operations.
- Discover, observe and remediate cryptographic vulnerabilities.
- Develop your own Quantum Safe Centre of Excellence to prepare your workforce.
- Actionable recommendations to support operational implementation and gain executive buy-in.

Benefits

- Pre-empt and minimise impacts from emerging quantum computing threats.
- Modernise cryptography approach to support current and future IT transformation.
- Establish your own quantum safe capabilities that scale with your IT operations.
- Increase organisational awareness and foster excellence in quantum safety.

Key Differentiators

- Extensive expertise supporting the most business-critical services for UK government, including Critical National Infrastructure.
- Thought leadership in quantum computing, with 20+ years of cryptography transformation expertise.
- Leverage collaborations with IBM Quantum and IBM Research to be at the forefront of quantum safe innovation.
- Tailored and flexible experiences based on your organisational context and needs.

Addressing Business Needs

Secure Communications

Quantum Skills Shortage

Data Protection

Data is at risk from being decrypted, disrupted and manipulated. Organisations need to understand the steps required to implement quantum resilient protections.

Quantum Vulnerabilities

Service Definition

IBM provides a suite of consultative and managed services designed to understand your quantum risks and remediate them.

IBM - Cryptography and Quantum Safe Security Services are designed to be tailored to meet business requirements and align with potentially different levels of internal capability, providing commitment to service and quality levels throughout the engagement.

1. Quantum Safe Heatmap & Strategy

Understand quantum risks, baseline cryptographic maturity and discover existing cryptographic usage.

2. Discovery, Scanning & Inventory

Perform an in-depth discovery of selected application and server scope. Covering algorithms, protocols, data classification and other metadata.

3. MVP & Sandbox Testing

Proactively explore the main patterns of quantum safe using an iterative Minimum Viable Product (MVP) approach.

4. Prioritisation & Quantum Centre of Excellence Setup

Define target cryptographic maturity state, receive a tailored quantum safe roadmap and begin to setup your own quantum safe centre of excellence.

IBM Approach

We bring the benefit of having worked with the world's largest organisations, transforming complex, critical services. Our approach is based on robust methods, processes and personalised engagement.

- Proven delivery track record working in complex environments.
- Access to specialists who understand the lessons and risks for transformation.
- Being able to advise, support and transfer knowledge with your teams.
- Implementing strong governance, defined collaboratively within the context of robust methods and processes.
- Bringing an integrated and controlled planning approach.
- Proactive identification and management of risks and issues based on experience.
- Working across complex existing and new platforms.
- Experience with the latest technologies, tools and delivery methods.

Why IBM?

- Extensive expertise supporting the most business-critical services for UK government, including Critical National Infrastructure.
- IBM is a leader in quantum computing, with 20+ years of experience in quantum research and cryptographic methods.
- Agile approaches that adapt and scale with your level of maturity and pace.
- Agnostic approach allowing you to leverage a wide range of technologies and platforms on your quantum safe journey.
- Building long-term client relationships based on innovation, trust and service excellence.
- Developing and deploying world-class talent.

Values and Outcomes

1. Quantum Safe Heatmap & Strategy

- Understand your quantum safe exposure in your existing environment(s).
- Establish a plan of action to begin your quantum transformation.

2. Discovery, Scanning & Inventory

- Identify cryptographic strengths and areas for improvement.
- Detailed dashboard and risk summary to prioritise mitigation against key business risks.
- Increase cryptographic awareness and buy-in from key stakeholders.

3. MVP & Sandbox Testing

- Create an architecture for upgrading your cryptography infrastructure.
- Develop use cases and remediation patterns to prepare for the quantum era.

4. Prioritisation & Quantum Centre of Excellence Setup

- Drive sustainable quantum safe transformation by developing your internal capabilities.
- Gain actionable recommendations for investment with a Cryptographic Bill of Materials (CBOM).

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**

