

IBM Consulting



G-Cloud 15

IBM – Generative AI Solutions for Healthcare
Service Definition Document

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Generative AI Solutions for Healthcare

Service Overview

IBM's Generative AI Solutions for Healthcare provide a comprehensive, safe, and scalable approach to transforming how care is delivered and how health systems operate. Our solutions deploy **role-based AI agents** across the entire healthcare value chain, from the **back-office to the bedside**, augmenting clinical teams, improving operational flow, and accelerating research and innovation.

Powered by AI, our approach combines healthcare domain expertise, governance, interoperability, innovation, and a robust library of pre-built agentic workflows to help organisations achieve measurable improvements in productivity, quality, patient experience, and system efficiency.

Features

- Agent Library & Role-Based Assistants
 - A comprehensive library of configurable AI agents designed to augment healthcare roles, including:
 - **Corporate & Back-Office Agents:** HR, finance, procurement, clinical coding, IT engineering.
 - **Operational & Middle-Office Agents:** scheduling, flow optimisation, referral and discharge management.
 - **Clinical Support Agents:** diagnosis assist, triage, pathway navigation, disease management.
 - **Research Agents:** protocol design, cohort selection, monitoring, synthetic data generation.
 - **Front-Office/Bedside Agents:** waitlist validation, prior authorisation, patient engagement.
 - Agents can be tailored to organisational standards (ICD-10/11, SNOMED CT, OPCS), workflows, and data policies.
- Learn-By-Doing Pilots & Scaling Framework
 - 6–8 week design-and-test cycles.
 - Aligned to clinical safety and IG requirements.
 - A/B measurement against baseline performance.
 - Scalable blueprints for multi-site rollout.

- Analytics, PHM & Process Intelligence
 - **PHM visualisation**: segmentation, inequalities, outcomes tracking.
 - **Pathway intelligence**: risk scoring, demand forecasting, capacity-aware routing.
 - **Operational analytics**: RTT, theatre utilisation, diagnostics performance.
 - **Process mining**: mapping real-world clinical and operational pathways to identify friction, variation, and improvement opportunities.
- Interoperability & Integration
 - FHIR/HL7 APIs, event-driven patterns.
 - EPR/EHR integration (Epic, Oracle Health, EMIS, MEDITECH, Dedalus, System C).
 - RAG over clinical repositories and local knowledge.
 - Surface insight and recommendations directly into clinical workflows and patient apps (e.g., NHS App).
- Governance-By-Design
 - Clinical safety alignment (DFCN/CSO models).
 - Guardrails, audit trails, secure data handling.
 - AI observability, evaluation, monitoring, and cost metering.
- Deployment Options
 - AI agents are deployable across:
 - **Microsoft Azure & Microsoft Marketplace**
 - **AWS & AWS Marketplace**
 - **Oracle Health AI Studio** enabling future integration with Oracle Health ecosystems.
 - **IBM Consulting Advantage Enterprise Solution**

Benefits

- **Improved productivity** across clinical, operational, research and back-office teams.
- **Better patient outcomes** through safer, more personalised, and timely decision support.
- **Reduced system pressures** via improved flow, accuracy, and automation.
- **Accelerated research** with AI-supported recruitment, monitoring and data curation.
- **Faster time-to-value** through modular, pre-built agents and rapid pilot cycles.
- **Safe AI adoption** aligned to NHS cyber, IG and clinical safety frameworks.
- **Cloud and vendor flexibility**, avoiding lock-in through open standards.

Key Differentiators

- Back-office to bedside coverage unmatched in scope and depth.
- Enterprise Consulting Advantage providing semantic grounding, orchestration, governance and multi-agent workflows.
- Healthcare domain depth spanning clinical, operational, research, analytics, and digital transformation.
- Vendor-agnostic ecosystem supporting Azure, AWS, Oracle Health, IBM and leading EPR vendors.
- Co-creation with IBM Garage accelerating adoption, prototyping and scaling of high-value use cases.

IBM Generative AI Powered Productivity & Quality Improvement for Case Workers & Support

Additional Service Information

IBM supports healthcare providers, ICSs and national bodies in deploying **safe, measurable, and scalable** Generative AI solutions that deliver real-world improvements across every part of the system. With a robust agent library, governed adoption frameworks, and open deployment options across Azure, AWS, Oracle Health and IBM Consulting Advantage we help healthcare organisations turn AI ambition into operational and clinical value.

IBM Consulting Advantage

IBM Consulting Advantage is a modular platform that provides the foundation for safely building, orchestrating, scaling and governing Agentic Applications in healthcare. It consists of the following core components:

- **Agentic App Library**
 - A catalogue of reusable, enterprise-ready agentic capabilities covering clinical, operational, research, and corporate domains. These components accelerate deployment and reduce build effort.
- **Agentic App Studio**
 - A low-code/no-code environment for rapid agent development, testing and configuration—allowing teams to customise workflows, prompts, guardrails and integrations.
- **AI Workspace**
 - A governed workspace for prompt engineering, evaluation, model selection, RAG integration, and collaboration across clinical, operational and technical teams.
- **Semantic Layer**
 - A healthcare-specific ontology and enterprise knowledge model that grounds AI agents in organisational context enabling safe, accurate and auditable reasoning.

- Agentic AI Core
 - The orchestration engine that coordinates multi-agent workflows, deterministic logic, model selection, context assembly and governance policies.
- Control Tower
 - Real-time monitoring, evaluation, auditability, cost metering and operational oversight ensuring every agentic workflow behaves safely, complies with policies, and delivers measurable value.



IBM's Client Zero Story

IBM's approach to Generative AI in healthcare is grounded in our own "**Client Zero**" experience using IBM Consulting Advantage, agentic workflows, and governed AI internally before deploying them with clients. This ensures every capability offered to the NHS and global healthcare providers is proven, safe, measurable, and operationally robust.

What Client Zero Demonstrates

1. **Real-world validation** of multi-agent orchestration, semantic grounding, governance, and interoperability.
2. **Improved productivity** across IBM's own HR, finance, procurement, clinical safety, and engineering workflows.
3. **Rapid cycle innovation**, with teams using AI Workspace and Agentic App Studio to build and refine applications.
4. **Enterprise-scale observability and governance** through IBM's Control Tower.

Healthcare-Relevant Lessons from Client Zero

5. The modular agentic approach significantly reduces development time for new workflows.
6. Safe-by-design governance enables rapid iteration while maintaining clinical-grade auditability.
7. Semantic grounding is essential for accuracy, domain alignment, and risk reduction.
8. Integrated operational analytics and process mining provide visibility into friction points and optimisation opportunities.

Why It Matters for Healthcare Organisations

Client Zero proves that IBM's technology and methods work at scale within a complex, regulated enterprise mirroring the challenges of health systems. This gives healthcare leaders confidence that IBM's GenAI solutions are not theoretical but validated in high-stakes, real-world environments.

For more information, please visit our UK Healthcare Sector page: <http://ibm.biz/uk-healthcare>

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



National Infrastructure



Social Care



Education



Work 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 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 new 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

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.



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



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



Changing the world

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



Tech talent

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



Royal recognition

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



Inventors

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



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



