

Agentic AI Mainframe Modernisation

SERVICE DEFINITION DOCUMENT - VERSION 1.0

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1. Detailed Service Description

1.1 Overview

Accelerate legacy-to-cloud transformation using Agentic AI. We automate discovery, code refactoring (COBOL/PL1 to Java/Python), and regression testing. This service de-risks mainframe migration to AWS, Azure, or GCP while eliminating technical debt and reducing MIPS costs. It provides secure, hybrid delivery for mission-critical public sector systems, ensuring functional equivalence through AI-validated testing.

1.2 Scope of the Service

This service covers the end-to-end modernisation lifecycle for legacy mainframe estates:

- **Automated Discovery & Assessment:** AI-driven scanning of legacy code (COBOL, PL/1, Assembler) to map dependencies and business logic.
 - **Code Refactoring & Conversion:** Automated conversion of legacy syntax to modern languages (Java, Python, C#/.NET) using GenAI agents.
 - **Data Migration:** Schema conversion from legacy stores (DB2, IMS, VSAM) to modern relational or NoSQL databases (RDS, Aurora, PostgreSQL).
 - **Testing & Quality Assurance:** AI-generated test cases and automated regression testing to ensure functional equivalence.
 - **Platform Re-architecture:** Migration of workloads to cloud-native architectures on AWS, Azure, or GCP.
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1.3 Delivery Approach

We utilise a phased, iterative approach aligned with GDS standards:

1. **Discovery:** Run Agentic AI scanners to inventory the estate, map dependencies, and define the "6R" disposition (Refactor, Replatform, etc.).
 2. **Design:** Define target cloud architecture (AWS/Azure/GCP), landing zone security, and data migration strategy.
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3. **Build (Refactor)**: Execute automated code conversion and business logic extraction. Developers review and optimise AI-generated code.
 4. **Test**: Parallel execution of legacy and modern applications. AI agents compare outputs to validate functional equivalence (Zero-Defect approach).
 5. **Transition & Handover**: Cutover planning, data synchronisation, operational readiness training, and decommissioning of legacy hardware.
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1.4 Tools, Methods & Standards

- **Modernisation Patterns**: AWS Mainframe Modernization, Azure Legacy Modernisation.
 - **AI & Automation**: GlobalLogic Agentic AI accelerators, GenAI code assistants (Copilot/CodeWhisperer).
 - **Languages**: COBOL, PL/1, Assembler to Java, Python, C#, TypeScript.
 - **DevOps & IaC**: Terraform, Jenkins, GitLab CI, Docker, Kubernetes.
 - **Testing**: Automated regression frameworks, AI-based test data generation.
 - **Standards**: ISO 27001, NCSC Cloud Security Principles, WCAG 2.2 AA (for UI layers).
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1.5 Deliverables

- **Mainframe Assessment Report**: Detailed inventory, complexity analysis, and dependency map.
 - **Modernisation Roadmap**: Costed plan with defined milestones and ROI analysis.
 - **Refactored Codebase**: Clean, documented, and version-controlled source code in the target language.
 - **Target Cloud Infrastructure**: Secure Landing Zone deployed via Infrastructure-as-Code.
 - **Test Suite**: comprehensive regression test pack and validation reports.
 - **Data Migration Scripts**: Automated ETL/ELT pipelines for schema conversion
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1.6 Dependencies & Constraints

- **Access**: Client must provide timely access to legacy source code repositories, copybooks, and database schemas.
 - **Environment**: Access to a non-production mainframe LPAR or emulated environment for baseline testing.
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- SMEs: Availability of legacy application SMEs to clarify obscure business logic if required.
 - Security: Agentic AI tools will be deployed within secure, isolated environments approved by the client to protect IP.
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1.7 Customer Responsibilities

- Provide access to relevant Subject Matter Experts (SMEs) for business logic validation.
 - Approve key deliverables and architectural decisions within agreed SLAs.
 - Facilitate connectivity (VPN/Gateway) to the legacy mainframe environment.
 - Sign-off on User Acceptance Testing (UAT) prior to production cutover.
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1.8 Quality Assurance & Governance

- Governance: Weekly status reports, RAID log management, and steering reviews.
 - Code Quality: Automated static analysis (SonarQube) of refactored code.
 - Functional Equivalence: Automated comparison of inputs/outputs between legacy and modern systems.
 - Security Assurance: Security-by-design approach ensuring target architecture meets NCSC guidelines.
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1.9 Security, Data Protection & Compliance

- Certification: Services delivered by BPSS or SC Cleared staff.
- Compliance: ISO 27001, Cyber Essentials Plus, and GDPR compliant processes.

Data Handling: All data encrypted in transit and at rest. AI models are isolated and do not train on client data without explicit consent

2. Onboarding & Offboarding

2.1 Onboarding

- Kick-off: Workshop to align stakeholders, confirm scope, and agree on ways of working.
- Setup: Provisioning of team access, secure development environments, and toolchain integration.
- Validation: Initial scan of the mainframe environment to verify assumptions.

2.2 Offboarding

- Knowledge Transfer: Handover workshops for internal teams or support partners.
 - Documentation: Delivery of full technical and operational documentation.
 - Decommissioning: Secure removal of GlobalLogic access and data sanitisation
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3. Pricing & Commercials

- Pricing Model: Time & Materials (T&M) aligned to the GCloud Rate Card.
 - Expenses: Travel and subsistence expenses are excluded and charged as per the Rate Card policy.
 - Licensing: Costs for cloud infrastructure (AWS/Azure/GCP) and third-party tools are excluded.
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4. Case Studies

4.1 Central Government Department:

Migrated a critical PL/1 mainframe application to AWS, reducing annual operating costs by 45% and enabling daily releases.

4.2 Healthcare Provider:

Modernised a legacy patient data system to a cloud-native microservices architecture, improving data accessibility and security.

5. About GlobalLogic & Why We're the Right Partner

5.1 About GlobalLogic

GlobalLogic, a Hitachi Group Company, is a leader in digital product engineering. We helped create some of the most innovative and widely used digital products and experiences. We integrate experience design, complex engineering and AI & data expertise to help public sector organisations and commercial enterprises accelerate their transition into digital-first businesses.

Unlike traditional systems integrators that focus on maintaining legacy IT, we focus on **building the new**. We combine a "chip-to-cloud" software engineering mindset with user-centric design to create digital products that citizens and employees want to use.

- **Global Scale, Local Delivery:** We employ over 32,000 professionals across 23 countries. In the UK & Ireland, we operate major engineering and design hubs in London, Manchester, Edinburgh, and Newry.
- **The Hitachi Advantage:** Acquired by Hitachi in 2021, we bring the agility of a Silicon Valley digital native backed by the financial stability, R&D depth and 110-year heritage of a global industrial giant.
- **Core Capabilities:** Our services span the full digital lifecycle, including Digital Advisory, Experience Design (via our Method design arm), Software Engineering, Data & AI, and Cloud Platform development.

5.2 Why GlobalLogic

We bridge the gap between strategic intent and technical execution. For public sector buyers, we offer a distinct alternative to incumbent providers by focusing on **delivery velocity** and **engineering rigour**.

- **We Build, We Don't Just Advise:** Our roots are in product engineering. We apply the same rigorous standards used to build life-critical medical devices and global banking platforms to public sector challenges. We deliver working software, not just slide decks delivering >2000 product releases per annum.
- **Velocity AI – Accelerating Impact:** We do not just build AI; we engineer ecosystems where intelligence is orchestrated across the business. Using our Velocity AI strategy, we typically

achieve a 30% increase in productivity and a 25% reduction in time-to-market for new digital services.

- **User-Centric, Security-First:** We align with GDS (Government Digital Service) standards by default, ensuring services are accessible and intuitive. Crucially, we embed security into the engineering lifecycle (Secure-by-Design), aligning with NCSC principles to manage data and risk effectively.
- **Proven in Regulated Environments:** We have two decades of experience delivering in highly regulated sectors, including Life Sciences, Healthcare, and Financial Services. We understand how to navigate complex compliance landscapes without sacrificing the pace of innovation and hold (amongst others) **ISO 13485 certification** and follow **IEC 62304 compliant** software development lifecycles.

5.3 Social Value & Ethical Impact

We believe that social innovation is as critical as technical innovation. GlobalLogic, as part of the Hitachi Group, operates with a deep commitment to creating positive impact for people and the planet. Our approach is grounded in measurable outcomes and global ethical standards.

- **World-Class Ethical Leadership:** In 2025, Hitachi was named one of the **World's Most Ethical Companies** by Ethisphere. This recognition reflects our commitment to integrity, compliance and high standards of governance in every public sector engagement.
- **Commitment to Diversity and Inclusion:** We are a signatory of the **CEO Action for Diversity and Inclusion**. We achieved the Hitachi Group 2030 goal of having **30% women in our workforce** in 2023, seven years ahead of schedule.
- **Sustainable Operations:** GlobalLogic holds an **EcoVadis Silver Rating**, placing us in the **top 15%** of companies assessed for sustainability in our sector. We report our own Scope I, II and III emissions and are fully aligned with Hitachi's target to achieve carbon neutrality at all business sites by 2030.
- **Proven Supply Chain Integrity:** Our **NQC Supplier Assurance** score exceeds the industry average by **25%**. This ensures that our delivery models are as responsible as they are resilient.
- **Talent Development and Wellbeing:** GlobalLogic is recognized as a global leader in talent development, receiving the **ATD Best Award in 2025**. This ensures our public sector teams are continuously upskilled in the latest technologies, including responsible AI and secure engineering practices.

6. Contact Details

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