

GlobalLogic Agentic AI Code Refactoring

SERVICE DEFINITION DOCUMENT - VERSION 1.0

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1. Detailed Service Description

1.1 Overview

GlobalLogic's Agentic AI Code Refactoring service utilises autonomous AI agents to accelerate the modernisation of legacy public sector IT estates. Unlike traditional manual refactoring or basic "lift and shift" approaches, our service employs **VelocityAI™** and the **Model Context Protocol (MCP)** to deploy intelligent agents that understand, map, and rewrite complex legacy codebases (including COBOL, monolithic Java, and .NET) into modern, cloud-native standards. This service reduces the time and risk associated with large-scale digital transformation by automating the most labour-intensive aspects of migration: code conversion, unit testing, and API generation.

1.2 Scope of the Service

The service covers the full technical lifecycle of AI-assisted modernisation:

- **Agentic Discovery:** Automated scanning of legacy repositories to map dependencies, logic flows, and technical debt hotspots.
 - **MCP Factory Implementation:** Wrapping legacy systems and data sources with the Model Context Protocol to make them accessible to AI agents.
 - **Automated Refactoring:** Deployment of coding agents to convert legacy code to target languages (e.g., Java/Python) and microservices architectures.
 - **Simulation & Testing:** Execution of refactored code in a "Simulation City" (digital twin) environment to stress-test functionality before production.
 - **Governance & Enablement:** Setup of VelocityAI runtime environments ensuring all agent actions are logged, auditable, and subject to Human-in-the-Loop (HITL) approval.
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1.3 Delivery Approach

We utilise a four-phase **Agentic Modernisation Framework**:

- **Assess & Blueprint (Weeks 1-4):** We deploy analysis agents to generate a "Software Bill of Materials" and complexity heatmap. We define the target architecture and agent guardrails.
 - **Pilot (Weeks 5-8):** We select a vertical slice of the application to refactor. Agents are tuned to specific coding standards and domain logic.
 - **Scale & Factory (Ongoing):** Multi-agent pods work in parallel to refactor the bulk of the codebase. Human engineers review PRs (Pull Requests) generated by agents.
 - **Optimise:** Agents continue to monitor the new codebase for optimisation opportunities and security vulnerabilities.
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1.4 Tools, Methods & Standards

- **Core Platform:** GlobalLogic VelocityAI™ (Agent Orchestration Runtime).
 - **Protocols:** Model Context Protocol (MCP) for tool interoperability.
 - **AI Models:** Agnostic support for Gemini 1.5 Pro, GPT-4o, Claude 3.5 Sonnet (selected based on task).
 - **DevOps:** Integration with GitHub, GitLab, Azure DevOps, Jenkins.
 - **Code Quality:** SonarQube, Checkmarx for automated scanning of agent-generated code.
 - **Standards:** ISO 9001 (Quality), ISO 27001 (Security).
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1.5 Deliverables

- Refactored, cloud-native source code committed to client repositories.
 - Comprehensive Unit and Integration Test Suites (generated by AI).
 - API Documentation (OpenAPI/Swagger) for new microservices.
 - Migration Report detailing technical debt removed and performance improvements.
 - VelocityAI Runtime Environment (if retained for ongoing operations).
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1.6 Dependencies & Constraints

- **Access:** Secure access to legacy source code, documentation, and non-production data environments is required.
 - **Subject Matter Experts:** Availability of client technical leads for domain logic clarification during the "HITL" review process.
 - **Infrastructure:** Provision of a cloud sandbox (AWS/Azure/GCP) for the "Simulation City" testing environment.
 - **Constraint:** Agents are configured to never commit code to production without human approval.
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1.7 Customer Responsibilities

- Providing a Product Owner to prioritise migration backlog.
 - Approving target architecture and coding standards.
 - Facilitating access to legacy subject matter experts (where available).
 - Timely review of Pull Requests to maintain agent velocity.
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1.8 Quality Assurance & Governance

Our "KYAI" (Know Your AI) framework ensures quality:

- **Deterministic Testing:** Agents must generate passing unit tests for every line of code refactored.
 - **Human-in-the-Loop:** All agent outputs are treated as "junior developer" contributions requiring senior engineer review.
 - **Hallucination Check:** Automated validation tools compare legacy inputs/outputs against refactored code to ensure functional parity.
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1.9 Security, Data Protection & Compliance

- **Secure by Design:** Agents operate within strict permissions boundaries (Least Privilege).
 - **Data Privacy:** No client code or PII is used to train public foundation models. We use private instances/endpoints.
 - **Clearance:** All staff are BPSS cleared; SC clearance available for sensitive datasets.
 - **Audit Trail:** VelocityAI logs every prompt, decision, and line of code generated by an agent for full traceability.
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2. Onboarding & Offboarding

2.1 Onboarding

- **Kick-off:** Alignment on security protocols, connectivity, and success metrics.
- **Tooling Setup:** Deployment of VelocityAI and connection to client repositories.
- **Ingestion:** Ingesting documentation and codebases into the agent's vector database (RAG).

2.2 Offboarding

- **Knowledge Transfer:** Final walk-through of the new codebase and architecture.
 - **Data Deletion:** Secure wiping of all vector stores and agent context data.
 - **Handover:** Transfer of all IP and script ownership to the client.
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3. Pricing & Commercials

Pricing Model

This service is typically delivered on a **Time & Materials** basis using the GCloud 15 Rate Card.

- **Discovery Phase:** Fixed Price packages available.
 - **Migration Phase:** T&M Sprint-based delivery.
 - **Volume Discounts:** Available for large-scale estate migrations.
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4. Case Studies

Case Study - Examples

4.1 Global Bank

40% reduction in mainframe migration time using Agentic Refactoring.

4.2: Healthcare Provider

Automated conversion of monolithic legacy app to microservices.

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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