G-Cloud

Hitachi Digital Services

AI and GenAI
Strategy Assessment & Value Driven PoC

Hitachi Digital Services vision and mission

Hitachi has been a trusted supplier to the UK government for over half a century in Transport, Energy, Technology and Research among the numerous sectors where we have consistently delivered social value and value for money.

Hitachi Digital Services offers a diverse array of innovative technology solutions tailored to meet the specific needs and desired outcomes of governmental agencies. Specialising in advanced IOT, ERP, Machine Learning, data analytics, and cloud services, we stand out for our unwavering commitment to security, reliability, and innovation. With a track record of delivering robust and scalable solutions, Hitachi empowers government entities to streamline operations, increase efficiency, enhance data security, and optimize performance, thereby enabling them to better serve the UK public. By leveraging state-of-the-art innovative technology and a deep understanding of governmental challenges, Hitachi emerges as the premier choice for governmental agencies seeking to bolster their digital foundation and achieve their mission-critical objectives. Our cross-sector view and technology expertise makes us ideally placed to advise government on data-driven, end-to-end digital transformations that delivers value for money.

Hitachi Digital Services G-Cloud offerings

Partnership Offerings	Consulting/ Advisory Cloud Services	HARC/ Cloud Services	Healthcare Services
AWS Cloud Maturity Assessment	Business Analysis & Product Management	Cloud Cost Management – Assessment (FinOps)	Digital Care & Operations (DCO)
Azure Cloud Maturity Assessment	Data Strategy	Cloud Migration/Modernisation Assessment Strategy (Planning & Journey)	Lifestyle Management
GCP Cloud Maturity Assessment	Digital Transformation Strategy & Roadmap	Cloud Maturity Assessment	Secure Data Environment
Databricks Enablement Services	Cloud Organization Strategy & Design	Cloud Migration and Modernisation	Digital Healthcare Advisory and Technology Services
Oracle ERP	Organization Change Management	Cloud Operate Services	Lightbeam by Hitachi DS
SAP Cloud Support	Innovation Incubation Accelerators	Cloud Services	Luminai by Hitachi DS
Pentaho	Managed Service – Advisory	Harc Operations	Luminance by Hitachi DS
	Managed Service – Rail	Performance Testing and Engineering Services	
Sustainability Cloud Services	Cloud Managed Services	Quality Assurance and Engineering Services	**AI Cloud Offerings**
Application and Software (IT decarbonisation)	Oracle Cloud Support	Resilience and Chaos Testing and Engineering Services	AI Business Accelerator Incubate & Launch
Energy efficiency for buildings	Maturity Assessment	Security Testing and Engineering Services	AI Business Accelerator Innovate
ESG Supplier assessment and engagement	Observability Assessment	Security Services	AI Business Accelerator Optimise & Solidify
GHG Emissions Dashboard	Reliability & Resiliency Assessment	SWAT Services	AI Business Accelerator Foundation Platform
Energy Strategy	Security Posture Assessment	FinOps – Managed Cloud Cost Implementation	AI Business Accelerator Starter Platform
ESG Strategy	Advisory/Consulting – Service Management (Cloud Managed Service)	IOT – Internet of Things	GenAI Strategy Assessment
		Smart Spaces and Video Intelligence (SSVI)	

Overview

Harnessing the transformative capabilities of Artificial Intelligence (AI) and Generative AI (GenAI) is a necessity in today's rapidly evolving, highly competitive business landscape.

Hitachi Digital Services offers a comprehensive Strategy Assessment and Value Driven PoC service to help businesses navigating the intricate landscape. Our assessment is thoughtfully designed to guide organisations on a transformative journey.

Challenge

Organisations face several challenges that need to be addressed to effectively adapt transformative capabilities of Artificial Intelligence (AI) and Generative AI (GenAI).

Organizations often struggle with data quality issues, such as incomplete, inconsistent, or biased data, as well as limited access to relevant data sources. Building and deploying AI and GenAI solutions require specialized skills and expertise in data science, machine learning, and software engineering. Many organizations face challenges in recruiting and retaining qualified AI talent or providing training and upskilling opportunities for existing employees.

Integrating AI and GenAI solutions with existing systems, workflows, and processes can be complex and time-consuming. Legacy systems, data silos, and interoperability issues may hinder seamless integration and adoption. Addressing these challenges requires a holistic approach that combines technical expertise, organizational alignment, clearly defined value driven roadmap and ethical considerations.

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Solution

Hitachi Digital Services provides strategic guidance and consulting services to help businesses develop an AI and GenAI strategy, aligned with their goals, industry landscape, and technological capabilities.

Our “AI and GenAI Strategy Assessment & Value Driven PoC” service leverages Hitachi’s E3 methodology’s Model Dev Life Cycle Management (MDLC) process which is based on industry standards practices like **AWS Well Architected Machine Learning**, that comprises for two distinct phases – Envision, Evaluate and a recommendation for Execute phase.

Commencing with an in-depth exploration of business operations, objectives, and current data structures in the Envision phase; we will assess the readiness of the current data structures and identify the potential use cases through workshops and collaborative sessions. Envision phase will include data and infrastructure discovery, AI use case prioritization, adoption roadmap, the expected business value, success criteria, and complexity/risks estimation along with a proposed use case candidate. A candidate use case will be shortlisted based on the reediness for advancements with AI and Generative AI. Evaluate phase will focus on quickly building the identified use case as a proof of concept in your organization’s environment. Following table summarises the activities covered in the Envision and Evaluate phases:

Envision	Evaluate
1. Problem Definition, Objectives and Outcomes 2. Data Collection, Database Size and Complexity Analysis 3. Types of Tasks to be performed. Sample Q&A. 4. Establish criteria for AI Model / LLM selection: • Tasks to be accomplished. • Model Capability vs Accuracy vs Cost. • Proprietary vs OSS models • Cloud vs On-prem infrastructure • HW Selection & Indicative Cost 5. Security, Perf and Compliance needs 6. Acceptance criteria and Plan for Evaluate	1. Platform Setup • Architecture Definition including Infrastructure size. • KB Database and AI indexing model selection • Security architecture definition 2. Data Processing Strategy and Sample data (not more than 100 documents) 3. 3rd party libraries needed for Toxicity, Sentiments and Relevance 4. Notebook creation and Unit tests. Start Security use cases. 5. Prompt Sample and Output Templates 6. System Testing using candidate model with base configs. • Temperature • Max Tokens • Sample Prompts and results. • Toxicity, Sentiment and Relevance 7. Finalization of the platform

This will help the organisation to validate the use case and the value that can be driven using AI and/or Generative AI. This phase will produce the solution architecture documentation, a plan to deploy an at-scale production-ready solution during the Execution phase, and a TCO estimate for Infrastructure and foundational model services.

For this phase, we apply our own **GenAI Readiness Framework**, aimed to guide organizations through the complexities of integrating GenAI into their operations, focusing on maximizing benefits while mitigating risks. The framework brings forward a holistic approach across ten key areas:

- Strategic Alignment,
- Technology and Model Selection,
- Ethical and Legal Considerations,
- Data Management,
- Implementation and Integration,
- Talent and Capabilities Building,
- Risk Management,
- Monitoring, Evaluation, and Continuous Improvement,
- Stakeholder Engagement and Communication,
- Innovation and Future Readiness.

Hitachi Digital Services offers this service offering across a diverse range of industries, including Finance, Manufacturing, Automotive, Aerospace, Healthcare, Transportation Energy and Logistics.

Benefits

1. Conduct AI readiness assessments to evaluate organizational preparedness for AI or GenAI adoption and identify areas for improvement under ten key areas.
2. Identify AI or GenAi opportunities and use cases that can drive innovation, improve efficiency, and create value.
3. Plan and build a successful roadmap for the AI or GenAI journey.
4. Design and develop custom value driven AI or GenAI PoC tailored to the specific needs and requirements of businesses.
5. Get recommendations for:
    - Scaling PoC at scale to meet larger business objectives.
    - Data Strategy and Management
    - Establishing AI / GenAi Centre of Excellence
    - Responsible AI practices.

Case Studies

Qualifications

ISO 9001
ISO 27001
Cyber Essentials Certified
DSPT Certified
AWS Premier Tier Services
AWS Managed Service Provider
AWS Public Sector Partner
AWS Solution Provider Program
AWS − APN Immersion Days
Select Databricks Partner
Microsoft Solutions Partner: Infrastructure
Microsoft Solutions Partner: Data and AI
Microsoft Solutions Partner: Digital & App Innovation
AWS Oracle Competency Partner
Google Cloud Premier Partner
AWS Premier Consulting Partner
Oracle Global Cloud Premier Elite Partner
IoT approved Oracle Partner

CASE STUDY 1: Empowering PE Firms with GenAI Automation

Problem Definition

When a deal workflow begins, the deal team faces an inundation of data, **Confidential Information Memorandum** documents that often span over 100 pages, accompanied by additional documents like market studies and research papers that can exceed 200 pages. This extensive data load necessitated 2-3 weeks of research to complete the workflow, typically managed manually by associates. However, the team's capacity was limited, constraining their ability to swiftly sift through such a substantial volume of information.

Proposed Strategy

- **Synthesize:** Upload pdf and perform “Q&A” and “Summarisation” on the uploaded document
- **Search:** A natural language search which can search across documents and provide search results or build a human like response with citations / sources
- **Content Generation (aka Summarization):** Provide an experience for users who can generate content from inputs provided by the user. Examples include press releases, investor emails, etc.

CASE STUDY 2: Application Legacy Transformation and Modernization with GenAI

Problem Definition

A large manufacturing wants to build a process which can analyze PDF manuals, classify and summarize them to saves on paper printing costs. Also, it helps to cut down hours of manual classification and summarization work done by internal teams. Their business drivers for this initiative were to drive efficiencies and reduce costs. We are partnering with them to productionize this initiative.

Proposed Strategy

- **Classification:** Ingest pdf documents, identify sections of pages, and classify them as immutable and mutable sections.
- **Summarization:** A LLM powered process which can summarize mutable sentences of text into summarized and shortened form.
- **Semantic Search:** Summarized data (sentences) are run through semantic search layer to find similarity matches to trigger human in the loop review process.