



HITACHI

Hitachi Solutions Europe

G-Cloud 15 Service Definition Document

Modern Data Architecture and
Engineering

Modern Data Architecture and Engineering

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What the service is, what you get, and the benefits

Service Description

We help you design and build a modern data platform that brings data together from different systems, improves data quality, and keeps it secure. We set up the right structure, controls and automated deployment so your organisation can produce trusted reporting and support advanced analytics and AI, with clear handover to your team.



Service Features

- Assess data maturity (GOV.UK), align to TCoP.
- Design lakehouse in Microsoft Fabric or Azure Synapse.
- Build ETL/ELT pipelines with Azure Data Factory and Databricks.
- Model data for reporting: star schemas, medallion Bronze/Silver/Gold.
- Set up governance, cataloguing and lineage using Microsoft Purview.
- Deliver dashboards and self-service analytics in Power BI.
- Automate deployments with IaC, CI/CD and Azure DevOps.
- Secure data with DevSecOps, RBAC, auditing and encryption.
- Optimise cloud cost and carbon using FinOps practices.
- Upskill teams with training, handover and runbooks.



Service Benefits

- Faster insight with trusted data in one place.
- Reduce manual reporting through automated pipelines and Power BI.
- Improve data quality with checks, deduplication and clear ownership.
- Lower risk with secure design, auditing and access controls.
- Scale easily as demand grows using Fabric/Synapse lakehouse patterns.
- Meet compliance needs with Purview lineage and retention controls.
- Cut cloud spend by right-sizing and storage lifecycle policies.
- Ship changes safely with CI/CD and automated testing.
- Enable AI and advanced analytics with well-prepared datasets.
- Build in-house capability via training, coaching and knowledge transfer.



Modern Data Architecture and Engineering

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Design and build a secure, governed data platform for trusted reporting



What this service is for

Bring data together, make it reliable, and make it usable

Many organisations have data spread across systems, with inconsistent definitions, manual reporting workarounds, and limited confidence in quality. This service is for teams that need a clear target data architecture and an engineering approach that improves trust without slowing delivery.

We design and build the platform structure, pipelines, governance and deployment automation so your teams can produce reliable reporting and support advanced analytics and AI. We also plan for handover so your team can run and extend the platform safely.

Key outcomes: Faster insight with trusted data in one place. | Improve data quality with checks, deduplication and clear ownership. | Lower risk with secure design, auditing and access controls. | Enable AI and advanced analytics with well-prepared datasets.



Why this service is useful

Fix root causes, not symptoms

When data is fragmented and unmanaged, teams spend time reconciling numbers, chasing owners, and rebuilding extracts. This creates delays, weak assurance, and low confidence in decisions. This service helps you move from manual, one-off reporting to repeatable pipelines, clear models, and governed self-service analytics.

It is also useful when you need to improve security and compliance around data access, auditing, lineage and retention, while keeping delivery iterative and decision-led.

Common triggers: Reduce manual reporting through automated pipelines and Power BI. | Meet compliance needs with Purview lineage and retention controls. | Ship changes safely with CI/CD and automated testing. | Cut cloud spend | Scale easily as demand grows using Fabric lakehouse patterns.



Why this service is different

Practical patterns, strong controls, and a clear route to BAU

We start with evidence and alignment, using your current state and data maturity (GOV.UK) to agree priorities and an achievable target design. We build around proven platform patterns (Fabric/Synapse lakehouse, medallion modelling, automated pipelines) so teams can deliver value early and extend safely.

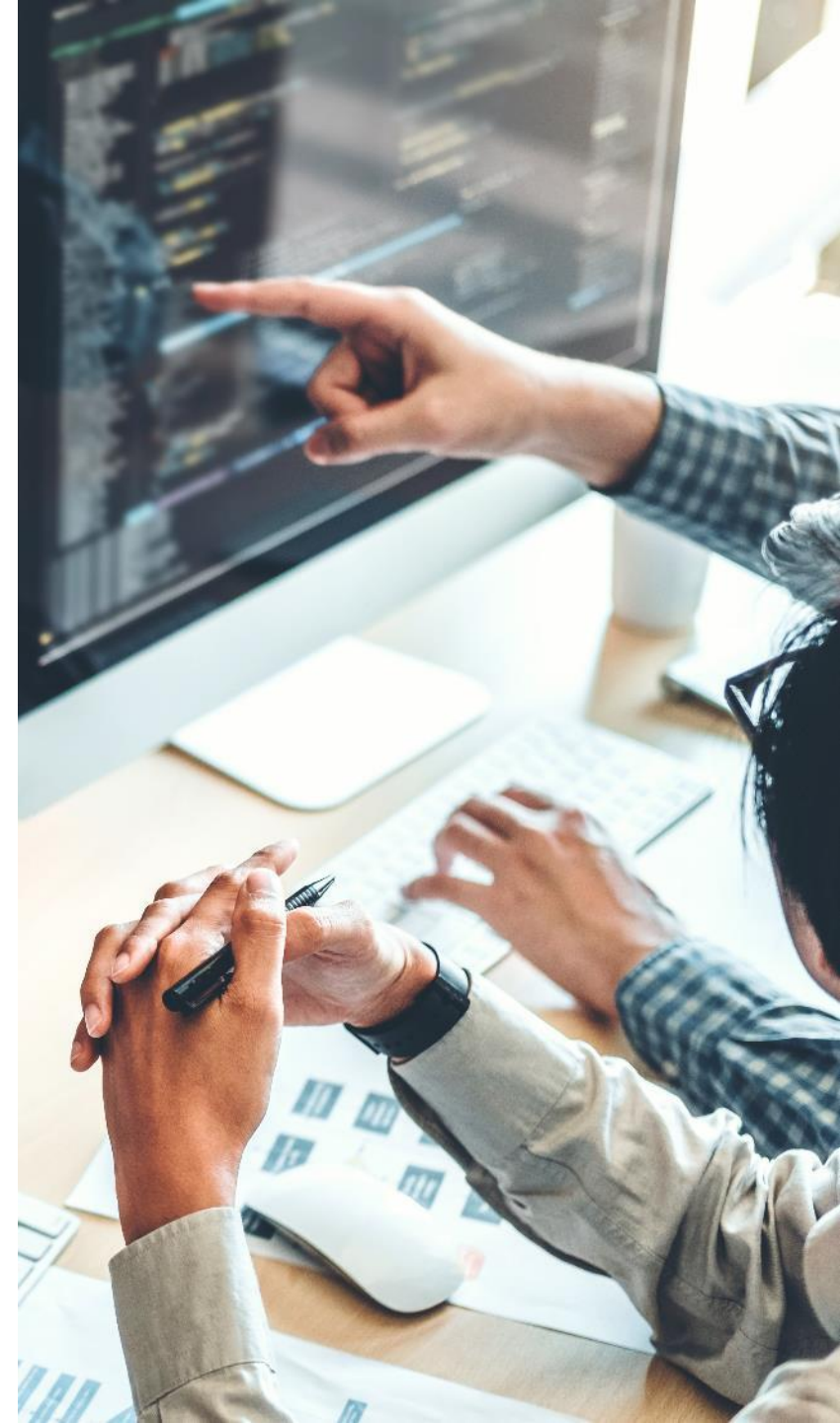
Security, governance and deployment automation are built in from the start, with auditing and access controls, and decision logs where required. We plan handover as a delivery outcome, not an afterthought, using training, runbooks and practical coaching.

Differentiators: Assess data maturity (GOV.UK), align to TCoP. | Automate deployments with IaC, CI/CD and Azure DevOps. | Secure data with DevSecOps, RBAC, auditing and encryption. | Upskill teams with training, handover and runbooks.

Modern Data Architecture & Engineering

We help you **design and build a modern data** platform that brings data together from different systems, improves data quality, and keeps it secure. We assess data maturity using **GOV.UK guidance** and align delivery to the Technology Code of Practice, so decisions are clear and assurance-ready.

We design lakehouses in **Microsoft Fabric**, build ETL/ELT pipelines with Azure Data Factory and Databricks, and model data for reporting using star schemas and a Bronze/Silver/Gold approach. We enable governed self-service analytics in Power BI, with cataloguing and lineage in **Microsoft Purview**, **automated deployments** using IaC and CI/CD in Azure DevOps, and **security controls** (DevSecOps, RBAC, auditing and encryption). We finish with training, runbooks and a clear handover to your team.

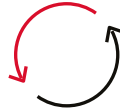


Value from your data

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Faster insight with trusted data in one place.



Reduce manual reporting through automated pipelines and Power BI.



Meet compliance needs with Purview lineage and retention controls.



Lower risk with secure design, auditing and access controls.



Improve data quality with checks, deduplication and clear ownership.



Enable AI and advanced analytics with well-prepared datasets.

How we will deliver

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Discovery-led, iterative, and assurance-ready from day one

We deliver in clear phases with regular checkpoints so you can review working outputs, not just documents. Early decisions cover target architecture, data standards, security controls, governance and deployment approach, so teams avoid rebuilding pipelines and models repeatedly. Throughout, we keep an auditable trail through design decisions, acceptance criteria, test evidence and handover assets.

We start by agreeing priority datasets and reporting outcomes, then design the lakehouse and modelling standards. We build pipelines and models iteratively, add governance and security controls, and validate quality and performance. Finally, we transition to BAU with runbooks, training and a prioritised backlog for next steps.

Mobilise

Create the conditions for safe delivery.

Confirm scope, priorities, environments and access. Agree stakeholders, ways of working and governance. Define “good” for data quality, modelling, security and compliance. Set up delivery tooling, backlog and initial risks and dependencies.

Outputs

- Delivery plan + ways of working
- Access and environment readiness plan

Design

Agree the target data architecture and the first use cases to deliver.

Define source-to-target mappings, transformation rules and modelling approach (star schemas and medallion layers). Design governance and security controls (RBAC, auditing, encryption) and confirm deployment approach (IaC and CI/CD).

Outputs

- Target architecture + standards (where required)
- Prioritised dataset backlog + mapping outlines

Build

Design and build the lakehouse in Microsoft Fabric or Azure Synapse.

Build ETL/ELT pipelines using Fabric capabilities and, where required, Azure Data Factory and Databricks. Implement data quality checks, deduplication and exception handling.

Build reporting-ready models and publish initial Power BI outputs iteratively.

Outputs

- Working lakehouse + initial pipelines
- Reporting model + initial Power BI outputs

Test

Prove correctness, security and reliability.

Validate data quality and reconciliation (where required), pipeline performance and refresh behaviour.

Validate access controls, auditing and lineage. Fix defects and tune pipelines and models. Capture test evidence and decisions so go-live is predictable.

Outputs

- Test pack and results (quality/performance/security)
- Monitoring baseline + quality evidence (where required)

Transition to BAU

Make it operable and reusable beyond the project.

Deliver runbooks, ownership and support model. Complete handover and training.

Confirm governance routines for data changes, model updates and pipeline releases. Leave a prioritised improvement backlog and clear next-step roadmap.

Outputs

- Runbooks + handover and knowledge transfer
- Deployment and governance operating routines (where required)

At the end, you have:

Target data architecture and delivery roadmap

Purview catalogue and lineage baseline

Lakehouse foundation in Fabric or Synapse

Security controls: RBAC, auditing and encryption

Repeatable ETL/ELT pipelines (ADF/Databricks where required)

IaC and CI/CD release approach in Azure DevOps

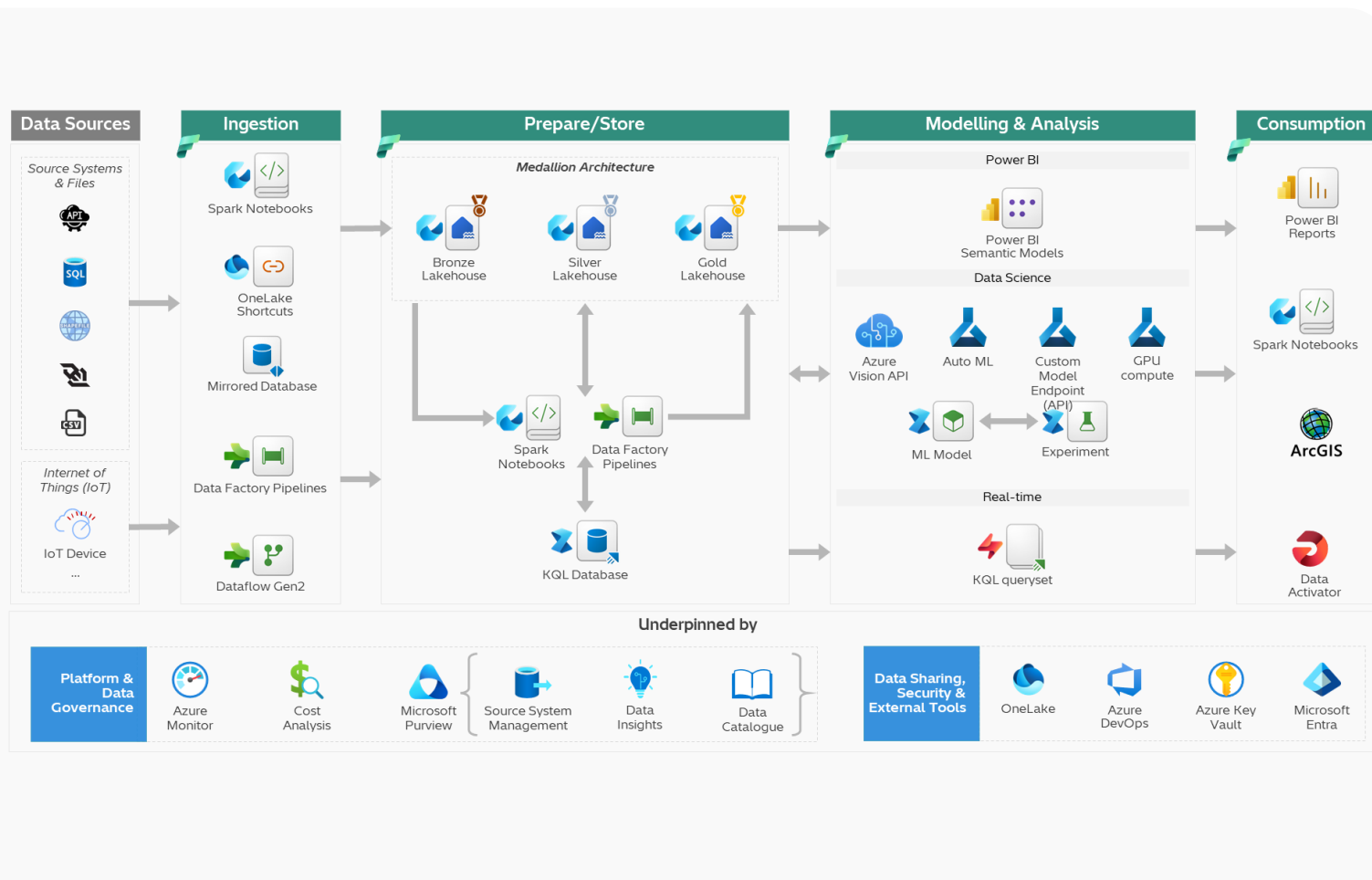
Reporting models: star schemas + semantic layer

Runbooks, training and BAU handover pack

Our Solution: High-level Modern Data Platform

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Example Architecture



This diagram shows the end-to-end flow we use to design and engineer a modern data platform. On the left, we start with your real data sources across systems and files. We then build reliable ingestion using ETL/ELT pipelines, selecting Fabric capabilities and, where required, Azure Data Factory and Databricks.

In the centre, we use a lakehouse with Bronze, Silver and Gold layers to improve data quality and make transformations repeatable. On top of this, we create reporting-ready models and a semantic layer for consistent definitions, then publish trusted dashboards and self-service analytics in Power BI. Where required, the same foundation supports advanced analytics and AI.

Underpinning every step are governance and controls: Microsoft Purview for cataloguing and lineage, role-based access, auditing and encryption, plus automated deployments using IaC and CI/CD in Azure DevOps.

The Hitachi logo is displayed in a bold, white, sans-serif font in the upper right corner of the image. The background is a photograph of a grand, multi-story classical building with a curved facade, many windows, and a balcony with a decorative railing. A large Union Jack flag is flying from a pole in front of the building. The overall image has a muted, greyish tint.

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Hitachi Solutions Europe

UK Government Overview

Hitachi Solutions for the UK Government

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Our **vision** is to be government's partner of choice for the design and delivery of **sustainable, human-centred, Microsoft Solutions and digital services**.

Human-centred Services

Every service starts with people and how technology can make their day simpler.

+

Deep Microsoft Expertise

Hitachi Solutions is dedicated exclusively to the Microsoft ecosystem.

+

Emotionally Aware Delivery

Our former civil servants bring deep understanding and cultural alignment.

=

+

One Hitachi

Hitachi Solutions is part of Hitachi, Ltd., one of the world's largest and most respected organisations.

Sustainable government transformation.

Human-centric by default.

Powered by Microsoft.



Our Credentials

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Microsoft



Microsoft global Government and Finance **Partner of the Year 2025**

Microsoft Partner of the Year 2025 Finalists in Build and Modernise AI Apps, Dynamics 365 Supply Chain, Dynamics 365 Sales and Customer Insights, and Low Code Application Development

22 Years in **Microsoft's Inner Circle** (including 2025)

Microsoft Solutions Partner across AI Business Solutions, Cloud and AI Platforms and Security with **18+ specialisations**

Industry



Keystone member of the **Government Digital Sustainability Alliance**

Crown Commercial Service Supplier

Cyber Essentials Plus Certified

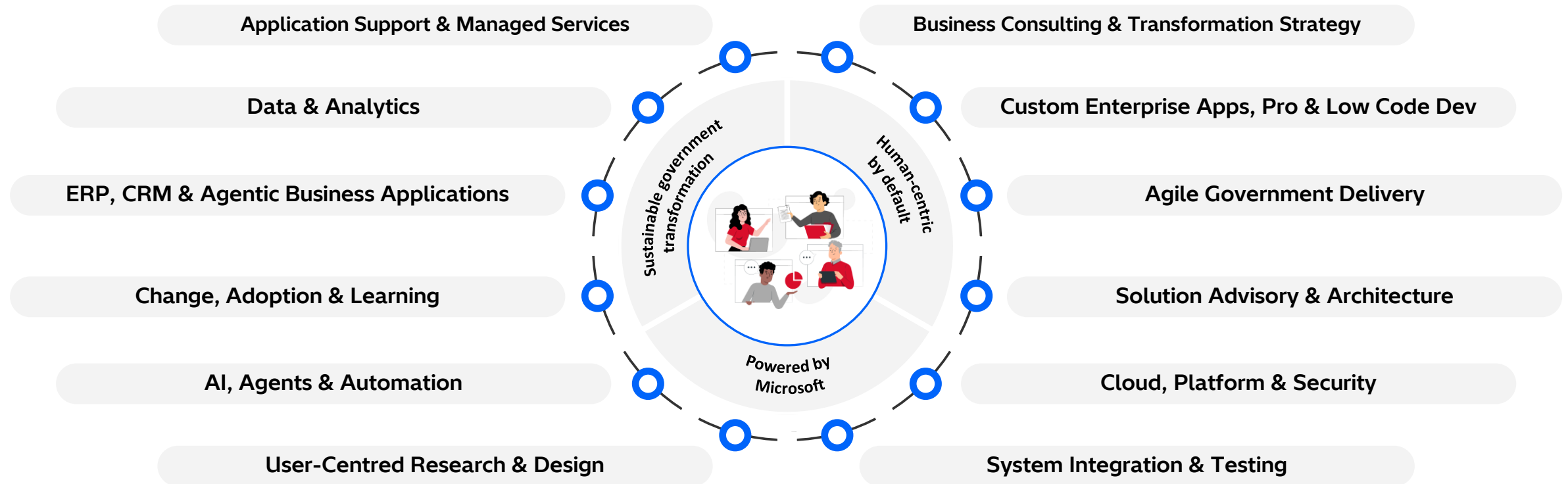
ISO-certified across Quality, Environment, Service, Business Continuity, Information Security, and Privacy Management

Recognised in the **Smarter Working Live Awards** for our regulatory services Customer Experience work with the Environment Agency

Our Services and Expertise

HITACHI

Sustainable business transformation through tailored advisory, consulting, and technology solutions.



Our Clients



"Hitachi Solutions brings substantial digital expertise to the table, complementing our robust business experience. Their insights have been instrumental in identifying opportunities for enhancement and accelerating our initiatives."

Gillian Pratt
Deputy Director Future Regulation
at Environment Agency



"Hitachi Solutions brought in a great project team who we kept for the full duration; they engaged with The Royal Mint side of things very effectively. It really felt like they were part of our own team."

Richard Hobbs
CIO The Royal Mint



"Hitachi Solutions bring the innovation, space and expertise needed to deliver digital transformation at a pace that is needed."

Andy MacDonald
Director of Customer Services,
Aberdeen City Council



"Hitachi Solutions were really good to work with, expertly turning our processes into slick system functionality. Their patience, understanding and "one team" approach to this project facilitated a free-flowing, inclusive environment. Hitachi Solutions' expert technical teams have delivered a great user experience, employing creative thinking to deliver to our often complex requirements."

Daniel Saward
OIA Head of Digital Technology



"DHSC collaborates closely with Hitachi Solutions LTS, emphasising the significance of our enduring partnership characterised by collaborative teamwork and mutual trust. Operating with a framework of high trust and capability, Hitachi Solutions ensures the delivery of quality and excellence to DHSC. Hitachi Solutions should be very proud of their track record in DHSC."

Bryan Rayner
Head of IT Business Systems



"Right from the start, we recognised in Hitachi Solutions a potential partner that would listen to us and really recognise the value of what we were trying to achieve, the lifesaving benefits of what we were trying to build and support."

Alex Duncan
Chief Technology Officer



Centre for Environment
Fisheries & Aquaculture
Science



Department
for Environment
Food & Rural Affairs



Valuation Office
Agency



HM Revenue
& Customs



Rural Payments
Agency



City of Westminster



Homes
England



THE ROYAL BOROUGH OF
KENSINGTON
AND CHELSEA



UK Export
Finance



Forestry and
Land Scotland
Coilltearachd agus
Fearann Alba

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