

G-Cloud 15 Service Description



Data Lakehouse Architecture Design and Implementation

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We help you design and implement a data lakehouse, a unified architecture that combines the expansive storage capabilities of data lakes with the management and structured querying features of data warehouses. Using the latest technologies, this service enhances enterprise data management, analytics, and operations.

What is the Service

We offer a comprehensive approach to designing and implementing a data lakehouse architecture, which merges the expansive storage of data lakes with the sophisticated management capabilities of data warehouses. This integration supports advanced analytics, enabling business intelligence (BI) and machine learning (ML) directly on vast datasets. The architecture utilises cloud-based object stores, allowing direct manipulation of data without costly proprietary systems or extensive ETL processes, enhancing efficiency and reducing overhead costs.

The data lakehouse is structured into multiple integrated layers. The object store layer provides the foundational data storage, while the data layer manages the organisation and structuring of this data. The processing layer handles data processing and query execution, and the semantic layer ensures data consistency, facilitating understanding across BI and ML applications. Communication between these layers is managed by the communication layer, ensuring efficient data transfer, while the client layer provides the user interface for system interaction.

This layered architecture leverages open-source technologies, promoting flexibility, portability, and cost-effectiveness, making it an ideal solution for organisations aiming to streamline their data management and accelerate insight generation.

What can it do for you

Adopting a data lakehouse architecture can dramatically enhance your ability to process and analyse data at scale, improve data governance, and reduce operational costs.

By providing a unified platform for all your data needs, the service enables easier access to data, facilitates advanced analytics, and supports real-time decision-making. It's designed to be flexible, supporting various data formats and structures, and integrates well with existing environments to minimise disruption.

Service Features

- 1. Unified data architecture merges lakes and warehouses for streamlined management
- 2. Cloud-based object stores allow direct data access, reducing costs
- 3. Eliminates extensive ETL processes by enabling direct data manipulation
- 4. Supports advanced analytics with BI and ML on diverse datasets
- 5. Object Store Layer provides scalable and secure data storage
- 6. Data Layer organizes and structures large data volumes efficiently
- 7. Processing Layer executes complex data processing and queries
- 8. Semantic Layer ensures data consistency for analytics tools
- 9. Communication Layer facilitates effective data flow between layers
- 10. Client Layer offers user-friendly interfaces for system interaction

Service Benefits

- 1. Enhances operational efficiency by integrating data management systems
- 2. Reduces IT overhead with cost-effective data storage solutions
- 3. Speeds up data access for analytics without traditional ETL bottlenecks
- 4. Enables real-time decision making through direct data queries
- 5. Ensures data security and scalability in storage solutions
- 6. Improves data organisation for better accessibility and analysis
- 7. Supports complex analytics operations with advanced processing capabilities
- 8. Maintains data integrity across various analytical tools
- 9. Streamlines data communication to optimise system performance
- 10. Improves user experience with intuitive data interaction interfaces

Contact details

End-to-end transformation and innovation experts

Applying our skills in innovation and collaboration from across the Methods Group, to deliver end-to-end business and technical solutions that are people-centred, safe, and designed for the future.

Methods provide collaborative and innovative solutions to help Central Government adapt to the changing landscape and deliver better outcomes for citizens.

With a focus on driving interoperability and innovation in UK Central Government, we have helped multiple organisations in the sector modernise their IT architecture, systems, strategy, and operating models to improve organisational resilience and service delivery.

Methods deliver wide-ranging services and thought leadership to support delivery including:



Onboarding and offboarding process



Ordering and Invoicing

Once we have agreed a Statement of Work(s) we will sign the appropriate agreement and complete a Call Off contract with an attached Statement of Work(s), and submission of a Purchase Order. We will then set up a mutually acceptable start date and commence work.

Payment terms are 30 days or less as may be agreed.

Please note - we are unable to accept Government Procurement Card (GPC) payments.



Customer Responsibilities

For any given requirement, we will identify any dependencies on the customer (e.g. access to key stakeholders, facilities, documentation, etc.) and agree these at the start of the work.

Making a difference

The work we do each day is focused on delivering a positive difference for the public sector for the benefit of society as a whole.



Customer stories



Cloud Hosting & Service Modernisation
Modernised digital services using secure cloud hosting, streamlined legacy workflows, and improved data insights. Delivered faster decisions, reduced manual effort, and a more transparent, **user-friendly experience** for internal teams and external users.



Cloud-Based ITSM Consolidation
Unified multiple service desks onto a cloud-based ITSM platform, standardising processes and automating workflows. Improved incident, change, and problem management, **boosting overall service reliability, efficiency, and organisational visibility.**



Large-Scale Cloud Migration (100+ Apps / 120TB)
Delivered cloud migration of **100+ legacy applications** and **120TB of data** with **100% availability.** Strengthened compliance, improved transparency, and significantly enhanced operational resilience across critical digital services.



Azure Migration & Modern Workplace Enablement
Migrated data centres to Azure and deployed modern workplace cloud services, delivering secure, scalable infrastructure. Achieved improved user experience, strengthened security posture, and **£1m savings** - all with zero service disruption.



Cloud ITSM Migration (ServiceNow SaaS)
Successfully migrated from a legacy ITSM tool to a modern, cloud-based ServiceNow platform. Delivered scalable, robust service operations, strengthened governance, and enabled faster, more consistent digital service delivery across the organisation.



Cloud-Native Data Pipelines (Azure Integration)
Built automated Azure Data Factory pipelines into a Lakehouse architecture, using Bronze/Silver/Gold layers and Delta with CI/CD. Delivered secure daily refreshes, improved data quality, lower manual effort, and more efficient reporting.