

IBM Consulting



G-Cloud 15

IBM – Data Fabric and Data Mesh Services

Service Definition Document

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Data Fabric and Data Mesh Services

Key features of this service

This service addresses the challenge of managing distributed data for business value by designing and building solutions based on Data Fabric Architecture combined with Data Mesh governance to exploit data assets. Data Fabric architecture is a set of services, and a platform that integrates data regardless of data location. A data mesh is a complementary data domain driven governance approach. This service includes the strategy, planning, design, build, deployment of data fabric and data mesh solutions. This service also includes the support and maintenance of such a service.

Key features include:

- Provision of a Data Fabric / Data Mesh Strategy, including Roadmap.
- Guidance to provide next generation, federated Data Governance.
- Assessment of Information Management and Architectural Maturity.
- Business collaborative selection of Data Solutions and technologies.
- Development and implementation of a Data Fabric / Data Mesh solution.
- Developing a Data Fabric Control Tower.
- Automated Data pipelines.
- Data virtualisation.
- Delivered by experts with a proven track record.
- Collaboration and co-creation with business and technical stakeholders throughout.

Data Fabric and Data Mesh Services

Key benefits of this service

- Multi-purpose Data and Analytics Architecture.
- Data does not need to be modeled to be accessed.
- Reduced deployment times.
- User self service for faster data access for decision making.
- Uses multiple IBM accelerators for efficiency and effectiveness.
- Delivers trusted data to inform effective business decision-making.
- Reduction in manual and duplicated data activities, reducing operating costs.
- Reusable, scalable modern architecture with reduced ownership costs.
- Increased data quality, traceability and security, supported by robust environments.
- Delivers an AI ready data platform to underpin AI Agents.

Data Fabric and Data Mesh Services

Why is the service needed

Organisations across many industries are recognising they are not maximising organisational efficiency or competitive advantage from the data available to them, whether it be proprietary, licensed or in the public domain. This Service benefits organisations that are experiencing one or more of the common pain points identified in this section using data fabric architecture and data mesh governance.

- The business must frequently interrogate data as the **data is not trusted**. Manual data manipulation or guess work is common as it takes too long for the business to access the data required to input into or inform a decision.
- There are **duplicated costs** to the business as data and analytics solutions and projects are being developed in silos within the organisation.
- The time taken to deliver data or analytics projects and programmes is increased, along with the costs to the business, as there is a **poor level of knowledge of the data sources**. This challenge often stems from an organisation having a lack of time or money to document or manage the data sources and data lineage and so it relies on scarce, valuable personnel across the organisation to provide the data answers. This low availability either results in project delays or low confidence in robust design decisions.
- **A lack of necessary and available skills** and experience across the organisation's data landscape, often relating to roles this Service provides including data architects, data engineers, data modellers, data profilers, data governance SMEs, data strategy SMEs.
- The business **not addressing root causes** to recurring or major data issues, resulting in both higher ongoing costs to ad hoc cleansing of data and lower business confidence in the data being reported on.
- **Lack of business stakeholder engagement** to address key or recurring data challenges as there is insufficient business understanding of the repercussions of the data issues and how to resolve them. A contributor to this business problem is often an insufficient level of clear communication and engagement by the data teams.
- **Data-related technology fails to be adopted** by either business or technical communities resulting in opportunities being lost to make competitive advantage gains or efficiency savings.

This also contributes to a direct financial loss when business and IT budgets are wasted. An organisation is unclear on where or how to start effectively selecting a new data vendor. The business is not bought-in to the data technologies being executed by the end users, often due to:

- ⇒ A lack of business involvement in the decision-making;
- ⇒ A lack of transparency to the business in agreement of the decision-making criteria and excessive time being requested of the business throughout the data technology decision-making process.
- The organisation assesses that data solutions are ineffective as **data repositories are inappropriately governed**, a challenge experienced across business functions and there is no clear plan to refine, integrate or consolidate either the repositories or the associated data controls.
- The organisation is **not clear on multi-cloud benefits** as planning for a new data platform has opened-up many unresolved architectural questions regarding handling data. The organisation is struggling to:
 - ⇒ turn related business disruptions into opportunities;
 - ⇒ make the trade-offs between its legacy data assets and new technologies;
 - ⇒ understand and realise the opportunity of portability across clouds, load scalable platforms;
 - ⇒ integrate the right governance policy, process and structure in business applications to achieve the long-term flexible vision and price point.

Data Fabric and Data Mesh Services

Service description

50-word summary:

IBM's Data Fabric and Data Mesh Service designs and builds a distributed cloud data platform based on data fabric architecture and data mesh governance which delivers business value by building a trusted data asset. The end-to-end service starts with strategy, planning and design moving to accelerated build and deployment.

Service options

IBM's scope of this Service comprises 5 sub-offerings, plus optional support and maintenance. These sub-offerings enable a flexible range of entry points for an organisation to use this Service. The entry point options are typically determined by the level of an organisation's: data maturity, clarity of data vision and direction, ambition to become truly data- driven and agreement on the design decisions for its Data and Analytics Platform.

The following sub-offerings apply to our Service which involve IBM advising and delivering on, designing, building and supporting a range of data capabilities for an organisation.

1. Data Platform Strategy

Description: This is an advisory consulting sub-offering that drives data's potential to provide insights, foster growth and reduce organisational costs. It involves close engagement with client business and technical communities from C-suite to Analyst, to define:

- The organisation's current and needed data maturity;
- Where today's strengths exist and tomorrow's challenges lie across the data ecosystem; Quick wins/ blockers to progress in terms of data architecture, data organisation, and data strategically.

Through close collaboration between IBM and the organisation, this sub-offering can also set out the organisation's Data Vision and Data Goals, starting Data Use Cases, Data Architectural perspectives, Data Initiatives required to meet the identified data challenges and a high level, agile Data Roadmap tackling operational issues as well as enabling innovation.

Duration: Typically 8-12 weeks.

2. Data Governance using the Data Mesh approach

Description: This sub-offering is an orchestration of People, Process and Technology that helps an organisation better manage the availability, usability, integrity, and security of its enterprise data.

It advises how to build robust governance through concepts such as data ownership, data decision forums, efficient processes, all enabled by data governance tooling. IBM's Data Governance Framework follows data mesh approach is used in this sub-offering to identify gaps against the required level of data maturity to input into an approach and roadmap for pragmatic action.

Duration: Typically 8-12 weeks.

3. Operating Model Design for the Data Function

Description: This is an advisory phase, working with key stakeholders across the business and technical communities. This sub-offering involves IBM designing a scalable Target Operating Model (TOM) for an organisation's Data/ Data & Analytics/ Business Insights-style function, defining the key aspects of teams for small, medium-sized and enterprise scale requirements.

It involves design of a high-level Operations Guide to "bring the governance to life" involving IBM good-practice data process templates, resources and implementation recommendations.

If required, the sub-offering can involve definition of the organisational function's data vision and data goals to support greater collaboration within the enterprise and break down silos, empower the enterprise with self-service access to technology capabilities and break down "business versus technology" barriers.

Duration: Typically 8-12 weeks.

4. Selecting the right Data Platform Fabric Architecture for your organisation

Description: Description: This sub-offering involves IBM collaborating with an organisation to help define its requirements of a new data solution (from a simple reporting solution to a complex Data and Analytics Platform providing enterprise-level Business Insights). The service provides a framework for the selection and subsequent procurement of a Data Solution. The framework provides:

- Out-of-the-box templates based on the 'Analytical hierarchy process' (AHP), a recognised and structured framework for guiding decision making, to simplify and de-risk complex technology selection.
- Templates available include: selection for a Data and Analytics Platform (on-premise or Cloud-based) solution, Data Integration (e.g. ETL) solution and a Master Data Management (MDM) solution.
- Templates for questionnaires to be sent to vendors based on the IBM templates. Example Proof of Concept Use Cases, for vendors to fulfil, to be used as part of a selection process if required by the organisation.

Duration: Typically 4-6 weeks.

5. Modernising and transforming data solutions for the cloud

Description: This sub-offering allows an organisation to build and modernise its current data solutions and move them to the Cloud if required, providing an integrated approach for both the data platform and the data consumption.

Organisations often need help in maximising the benefits of an integrated Cloud-based Application and Data strategy at Scale. This sub-offering supports the organisation to make a culture shift from the common 'Application First' to a more business-focused 'Data First' mentality. This is enabled via an integrated Data-driven Cloud Application Transformation offering, which covers the full lifecycle from an initial Advise stage to the Move, Build and Manage stages on the Cloud framework. Example delivery options which IBM has engaged with organisations include:

- Developing a new approach to data enablement in the cloud.
- Developing a Minimum Viable Product (MVP) Cloud Data Platform for a specific Use Case; Progressing the MVP into a production-level Cloud Data Platform on a Use Case by Use Case basis.
- Developing a Minimum Viable Product (MVP) Data Management solution for a specific use case or data domain. Including key use cases such as:
 - Data Cataloguing
 - Metadata Management
 - Data Quality Management
 - Data Access Controls
 - Data Lineage
- Building a new native Cloud-based Data Platform.

Duration: Iterative build which is typically delivered through 3-month sprints. Approach delivers business benefit after first 3 months.

6. User Support and Maintenance

IBM offers a range of service levels depending on the specific service or system that is implemented and its criticality."

