Workshop – Federated Data Governance: Structuring Teams and Driving Accountability

Data is not just a service—it's a core asset. This workshop explores how to structure data teams and governance effectively.

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Workshop Overview

1 Traditional Approaches Falling Short

Traditional governance and team organization can no longer keep pace with today's distributed data landscapes.

2 Rethinking Management

Organizations must rethink how they manage, govern, and structure their data functions.

3 Balancing Act

Learn to balance centralized oversight with distributed autonomy while ensuring accountability.
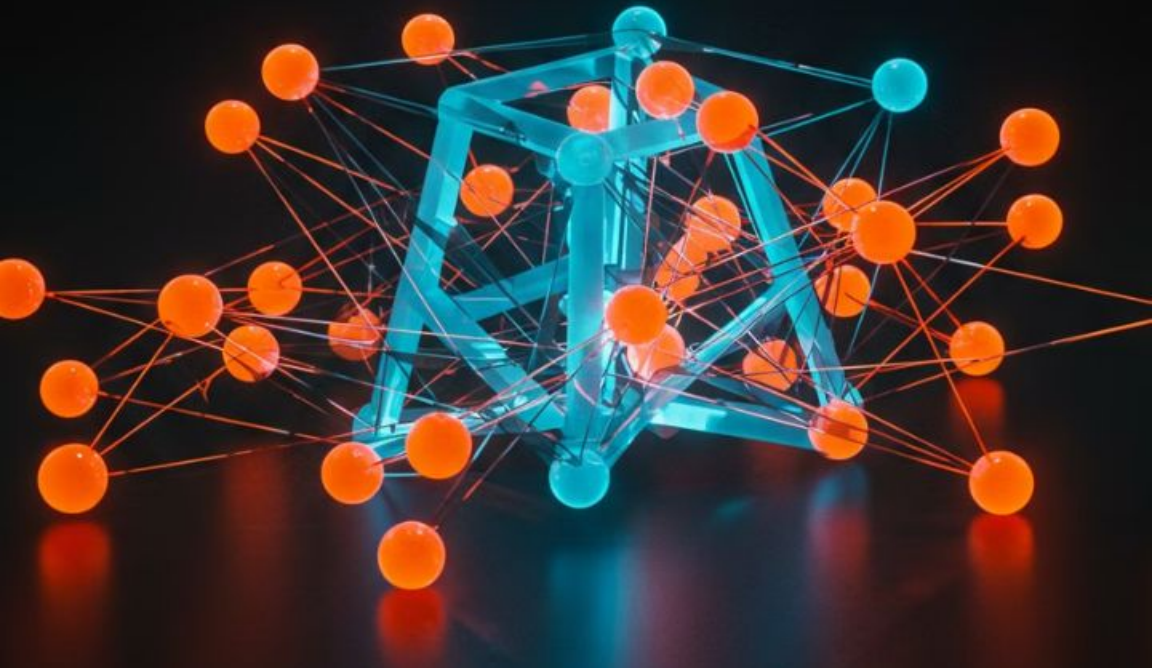
Key Topics & Objectives

Topics Covered

- Federated Data Governance

- Data Products and Contracts

- Team Structures for Impact

- Sustainability in Governance

Learning Objectives

- Build federated governance frameworks

- Structure data teams effectively

- Embed accountability at every level

- Implement sustainable practices

Why We Need a New Approach

Current Limitations
Data governance often provides static policies focused on compliance rather than enabling innovation.

Modern Needs
Organizations need flexible, computational, and adaptive data governance frameworks.

Federated Solution
Federated data governance balances control with innovation through decentralized decision-making.

Accountability Gaps
Unclear ownership leads to quality issues and compliance vulnerabilities.

What is Data Governance?

Traditional Definition

The exercise of authority, control, and shared decision-making (planning, monitoring, and enforcement) over the management of data assets.

Alternative Perspective

Data Governance is a human-based system by which data assets in a socio-technical system are directed, overseen, and by which the organization is held accountable for achieving their defined purpose.

What is Federated Data Governance?

Federated Data Governance balances local autonomy in data handling with overarching organizational policies to achieve cohesive, secure, and compliant data practices within a socio-technical system.

1

Central Oversight

Core policies, standards, and frameworks set by a central authority.

2

Domain Autonomy

Business units manage domain-specific requirements and implementations.

3

Shared Accountability

Clear ownership at each level with transparent responsibility models.

Case Study: Polar Energy implemented federated data governance across offshore operations, reducing compliance issues by x% while accelerating data-driven decisions.

"Roles" of Data Governance

Data Negotiator

Translating business and regulatory requirements into actionable data policies.

Data Director

Shaping focus and priorities in Data & AI-driven initiatives.

Data Auditor

Overseeing and ensuring the accountability for data.

Data Accountability

Why It Matters
Without clear accountability, data quality, security, and availability suffer.

Creating Ownership Culture
Team members must feel responsible for data.

Defining Clear Roles
Data needs well-defined roles across the organization.

Practical Implementation
Set up reporting structures and implement checks and balances for data.

Understanding Data Accountability

Concept	Definition	Key Question
Ownership	The person or team with long-term control and decision rights over a dataset or data product.	Who ultimately governs and defines this data?
Responsibility	The person or team actively managing, maintaining, or using the data on a day-to-day basis.	Who works with this data and ensures quality?
Accountability	The person or role that ensures compliance, alignment, and that responsibilities are fulfilled—but may not handle the data directly.	Who ensures that governance is followed and enforces policies?

Data Ownership

Balancing ownership across organizational levels is key to effective federated governance.

1 — **Central Ownership**

Enterprise-wide policies, standards, and compliance frameworks.

2 — **Domain Ownership**

Business units manage domain-specific implementations and requirements.

3 — **Shared Responsibility**

Clear RACI matrices define handoffs between central and local teams.

Case Study: FjordStep

Implementing a decentralized ownership models during retail expansion, allowing regional data teams to adapt while maintaining compliance with central standards.

Ensuring Accountability in Distributed Landscapes

Clear accountability frameworks prevent data governance gaps in federated models. RACI matrices define who does what across domains.

Responsibility Area	Finance	Marketing	Inventory	Sales
Maintaining Customer Data Quality				
Managing Data Contracts & Compliance				
Ensuring Sales Data Accuracy				
Inventory Data Reconciliation				
Customer Data Access & Sharing Rules				
Analyzing Customer Behavior for Insights				
Revenue & Cost Reporting				

R=Responsible, A=Accountable, C=Consulted, I=Informed. This matrix enables data governance by clarifying cross-functional ownership.

Ensuring Accountability in Distributed Landscapes

Data Ownership

Define clear roles and responsibilities for maintaining data quality and ethical use.

Data Contracts

Establish agreements between producers and consumers to clarify expectations and responsibilities.

Culture of Responsibility

Ensure every team member understands their role in the data ecosystem.

What Are Data Products?

Shifting from project-based to product-based thinking transforms data management effectiveness.

Reusable Assets

Well-defined interfaces and documentation enable teams to leverage existing data assets without rebuilding.

Self-Service Analytics

Packaged data, metadata, and access controls empower business users to explore insights independently.

Interoperability

Data products connect seamlessly across domains while maintaining federated accountability structures.

Retail Case Study

A multinational retailer increased analytics adoption by implementing composable data products with clear ownership boundaries.

Designing Data Contracts

The foundation of effective federated data governance enforcement lies in clear agreements between data producers and consumers.

1 Define Ownership

Establish clear data ownership and stewardship responsibilities across organizational boundaries.

2 Specify Access Rights

Document who can access what data, when, and under which conditions.

3 Set Service Levels

Outline quality standards, refresh rates, and support expectations.

4 Prevent Bottlenecks

Create standardized interfaces that reduce dependencies between teams.

Structuring Data Teams

Centralized Functions
Core data infrastructure and governance oversight.

1

Decentralized Functions
Domain-specific data expertise embedded in business units.

2

Balancing Innovation
Teams must support both transformation and foundational infrastructure.

4

Modern Roles with right Mindset
Data Science, Data Engineering, DataOps, and Data Management.

3

Three-Dimensional Approach to Data Teams

1 — Strategic Level
Align with organizational goals

2 — Operational Efficiency
Build robust processes and tools

3 — Distributed Autonomy
Embed data functions in business units

This multi-layered approach ensures data teams can balance innovation with foundational stability, creating a system that supports agility without sacrificing control.

Data Teams for Maximum Impact

Data Governance
Establish data policies, standards, and controls to enable trusted, ethical, and compliant data use.

Data Strategy
Navigate uncertainty in data towards overall business objectives and priorities.

Data Scientists
Leverage advanced analytics and machine learning to uncover insights from data.

Data Engineering
Build and maintain the data infrastructure, pipelines, and platforms to support data-driven initiatives.

Data Operations
Ensure reliable and efficient data processing, monitoring, and incident response.

Distributed Data Management
Empower domain experts to manage data within their business units.

Central Data Management
Provide centralized data enablement and support for the entire organization.

Strategical / Tactical Guidance

Data Teams

Distribution

Cross-Team Collaboration & Accountability

Data Director

Oversees strategic vision and standards across the organization.

Aligns data initiatives with business goals and regulatory requirements.

Data Negotiator

Facilitates agreements between data producers and consumers.

Mediates conflicts and ensures data contracts are properly designed.

Data Auditor

Verifies compliance with governance policies and data contracts.

Monitors data quality metrics and reports on governance effectiveness.

FjordStep successfully transitioned from startup agility to structured governance by clearly defining these roles while maintaining innovation.

Federated Data Governance Models

Central Oversight

Ensures alignment across organization

Distributed Ownership

Maintains autonomy across data hubs

1

2

4

3

Continuous Process

Ongoing maintenance of standards

Governance Framework

Roles, access controls, compliance

The "Gravitational Pull" of strong governance ensures central alignment while allowing decentralized teams to maintain necessary autonomy.

Lessons from NASA's Mars Missions

Mars Global Surveyor   **1**

Teaches us about long-term data management challenges and sustainability.

2   Mars Climate Orbiter

Highlights the importance of standardized data practices and clear accountability.

Human-in-the-loop   **3**

Critical for managing complex systems and ensuring quality control.

4   Sustainable Practices

Ensure your data organization remains agile and maintainable over time.

Key Takeaways

1   Team Structure

Structure data teams for maximum flexibility and impact across strategic and operational dimensions.

2   Accountability

Ensure data accountability through clear roles, ownership, and data contracts.

3   Governance Model

Design federated governance to balance distributed autonomy with central oversight.
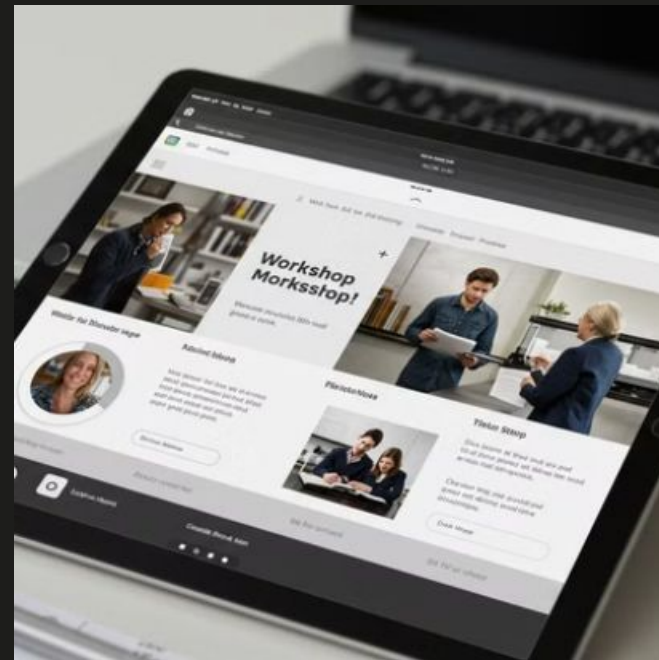
4   Sustainability

Implement practical steps to create a sustainable, future-proof data organization.

Post-Workshop Resources

Access workshop materials, slides, and recommended reading on DataOps, Data Governance, and team organization strategies.