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Data & BI DevOps Modernization for a Finance Firm

Executive Summary:

A leading financial services organization sought to strengthen its analytics foundation by migrating critical workloads from OLTP systems into a scalable data warehouse, while modernizing BI development and automating delivery. Reporting delays, manual deployments, and fragmented data pipelines were creating friction for both business users and technical teams.

Through a structured modernization initiative, the program introduced automated provisioning, standardized BI DevOps practices, optimized data models, and a unified deployment workflow. The transformation reduced risk on OLTP systems, accelerated report delivery, and established a consistent, high-performance analytics environment.

About the Client:

The client is a financial services organization operating large-scale transactional systems, reporting platforms, and regulatory analytics workloads. The business depends on timely insights and secure, compliant data operations across multiple customer-facing and back-office functions.

Project Highlights:

- BI deployments accelerated by **40-50%** through standardized pipelines
- OLTP load was reduced by **35-45%** after warehouse migration
- Fresher reports delivered faster through optimized ETL pipelines
- IaC provisioning reduced operational effort **by 20-30%**
- Improved audit compliance via controlled release and monitoring frameworks

Business Challenge:

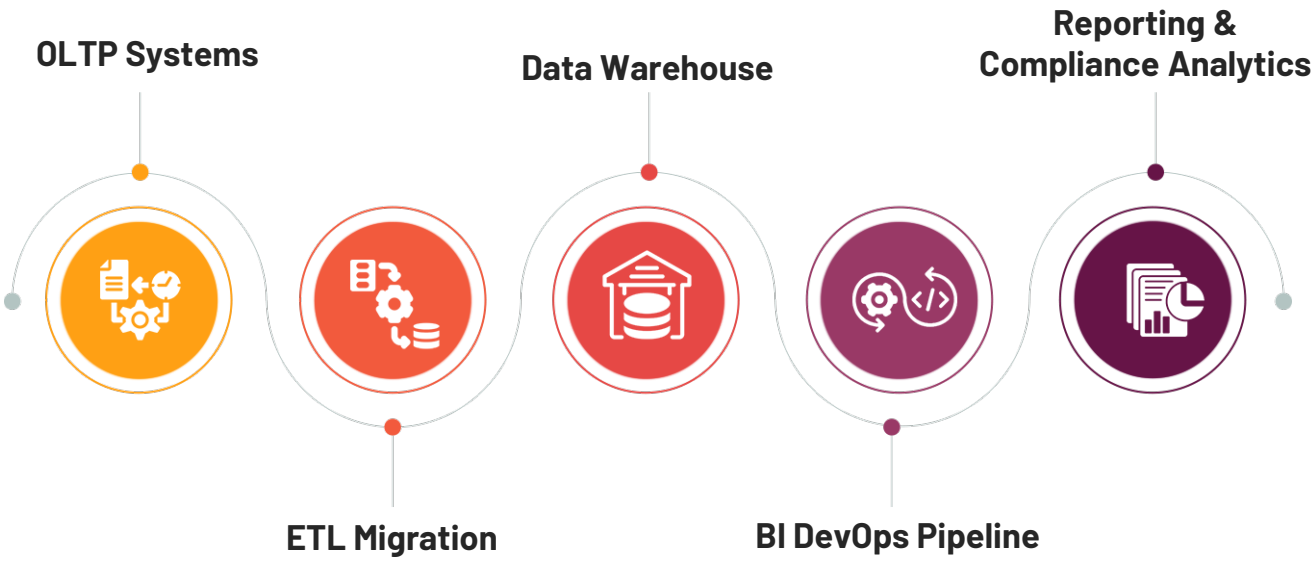
Critical reporting was tightly coupled to OLTP systems, creating performance overhead and increasing operational risk. BI deployments relied on manual steps, causing inconsistencies between environments, while fragmented ETL pipelines slowed data availability. With compliance requirements rising, the client needed a modernized data warehouse and a streamlined DevOps approach to ensure reliable, timely, and auditable analytics delivery.

Our Solution:

The engagement unfolded as a year-long modernization program executed with around 55+ FTEs across DevOps, BI Engineering, Data Admin, and Support teams. The initiative rebuilt the analytics backbone through structured phases spanning assessment, ETL development, BI transformation, automated deployments, monitoring, and long-term operational readiness. Key capabilities delivered include:

- **Modern Data Warehouse Foundation:** CI/CD-enabled BI report setup, Git-based versioning, and Terraform-powered IaC templates for early environment provisioning.
- **Standardized ETL & BI Development:** End-to-end schema design, transformation logic implementation, unit testing frameworks, and reusable scaffolding to accelerate future BI projects.
- **DevOps Platform Enablement:** Central tool framework, code coverage tools, static code analyzers, and integrated CI/CD templates for reliable, repeatable BI deployments.
- **Automated Data Migration & Validation:** Historical data loads, report reconciliation, UAT support, and a CI/CD-based ETL deployment workflow.
- **Production Monitoring & Reliability Controls:** Automated alerts, centralized logging, SLA/SLO definitions, pipeline parallelization, and a trained team for incident response and blameless post-mortems.

Solution Architecture Overview



Factspan is a Data and AI company. We help global enterprises and product companies to collect, store, and manage their varied and complex data structures, identify patterns and trends, and build analytical models to analyse and deliver business outcomes.