

Case Study

Unifying 71 Safety KPIs to Transform Enterprise Safety Reporting

Client Overview

A leading diversified enterprise operating across multiple business units needed to strengthen visibility and consistency in safety performance reporting. Its existing reporting environment depended on information distributed across safety management applications, workforce systems, learning platforms, and manual spreadsheets. The organization sought to establish a centralized reporting ecosystem capable of supporting standardized performance measurement, reliable management insights, and automated reporting.

The Business Challenge



Disconnected Data Sources

Safety information was fragmented across operational systems and manually maintained records.



Manual Reporting Dependencies

Spreadsheet-based reconciliations, KPI calculations, and recurring reporting required significant manual intervention.



Inconsistent Performance Measurement

Differences in KPI definitions, business rules, and source mappings complicated enterprise-wide reporting.



Limited Management Visibility

Consolidated safety performance information was not consistently available across organizational levels.



Governance and Access Complexity

The organization required stronger controls for data validation, reporting consistency, and secure information access.

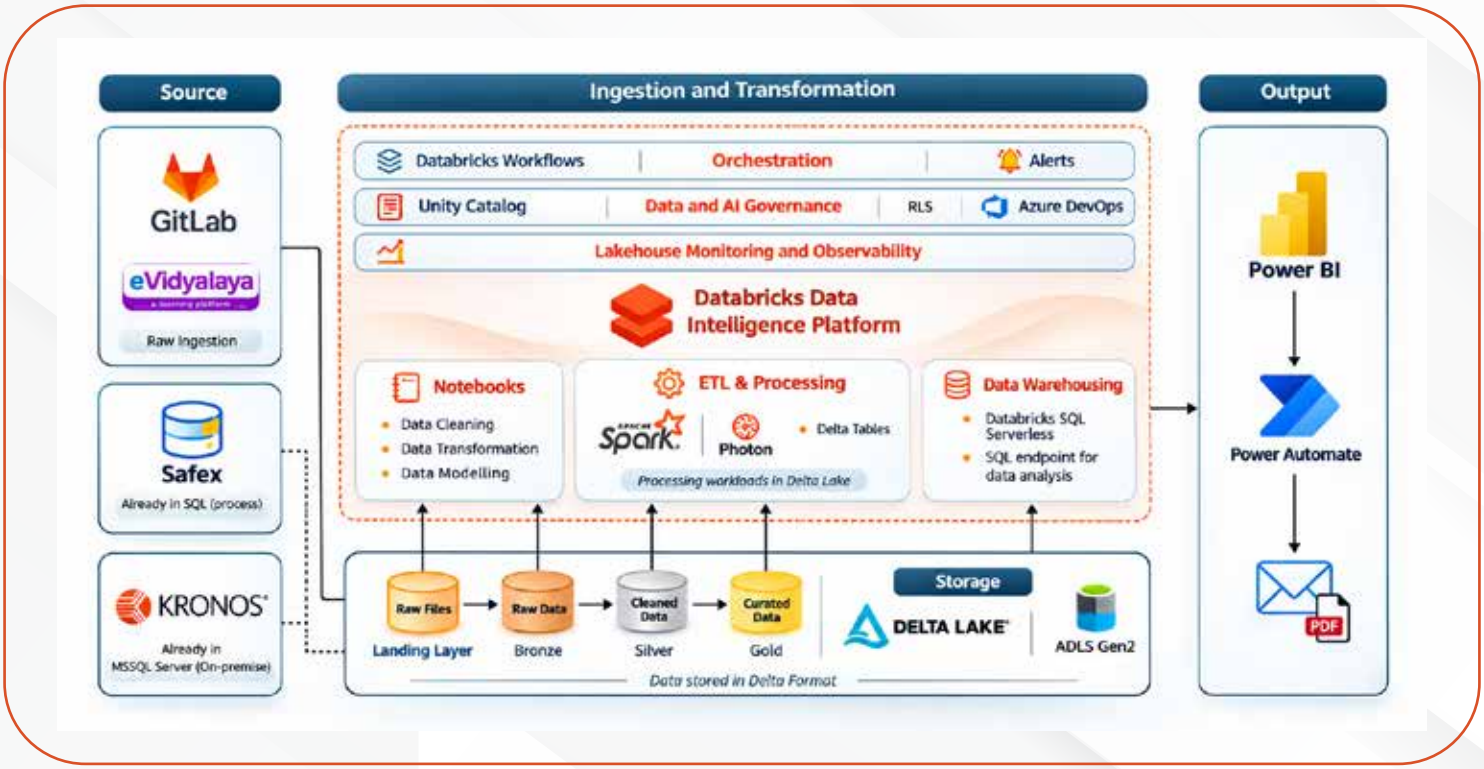
The Solution

Exponentia.ai engineered a centralized Safety Analytics platform combining modern data engineering, business intelligence, and reporting automation.

The implementation included:

- Azure Databricks Lakehouse architecture.
- Automated ingestion and transformation pipelines.
- Standardized safety KPI calculations.
- Interactive Power BI dashboards.
- Role-based access controls.
- Automated management reporting.
- Monitoring, auditability, and deployment controls.

Architecture Overview



Caption: Enterprise safety data is integrated into a governed Databricks Lakehouse, supporting standardized analytics, secure Power BI dashboards, and automated management reporting.

How the Solution Works



Enterprise Data Integration

Safety information from operational systems is brought into a centralized data environment.



Data Processing and Standardization

Landing, Bronze, Silver, and Gold layers support progressive cleansing, integration, and preparation of reporting-ready information.



Governed KPI Computation

A centralized Gold layer provides standardized calculations and business rules.



Interactive Analytics

Power BI enables users to explore safety performance through enterprise and business-unit reporting views.



Automated Management Reporting

Power Automate supports scheduled PDF reporting and email distribution, including key KPI information.



Security and Governance

Role-based access, validation, monitoring, auditability, and controlled deployments support reliable operations.

Business Impact

Centralized Safety Intelligence

Established a unified reporting ecosystem for enterprise-wide safety analytics.

Consistent Performance Measurement

Standardized KPI definitions and calculations across dashboards and management reports.

Reduced Manual Reporting

Automated recurring data processing, reporting preparation, and distribution activities.

Improved Management Visibility

Enabled consolidated access to safety performance information through interactive dashboards and recurring reports.

Stronger Governance

Introduced a governed reporting foundation with controlled access, validation, monitoring, and auditability.

The Transformation

The organization established a modern, governed foundation for safety performance management.

By integrating fragmented operational information, standardizing reporting logic, and automating recurring processes, the solution enabled more consistent access to safety intelligence while reducing dependence on manual reporting.



Interested in a customized solution designed to meet your unique requirements and achieve comparable results?

At Exponentia.ai, we partner with businesses to address complex data challenges and build trust in enterprise data. Our approach helps organizations streamline data management, improve visibility, and empower teams with reliable insights for better decision-making.

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