BI Solutions for Telecom Infrastructure

Introduction:

Our client is a leading provider of specialty contracting services to the telecommunications infrastructure industry across North America. As part of the Business Intelligence (BI) team, we played a vital role in transforming raw data into actionable insights to support strategic and operational decision-making across the organization. Our team was responsible for developing, maintaining, and optimizing a wide range of Power BI reports and dashboards tailored to various business units. These include Enterprise Financials, Field Operations, HR Analytics, Supply Chain Management, and more. We collaborated closely with cross-functional teams to gather requirements, model data, and design interactive visualizations to drive efficiency, transparency, and performance improvement. By leveraging tools such as Power BI, SQL Server, AWS, and Alteryx, we deliver dynamic and scalable reporting solutions that empower users to monitor KPIs, track trends, and make informed decisions in real-time.

Targeted Customers

The primary consumers of our BI solutions for our client are internal stakeholders across various departments. Executive leadership relies on high-level dashboards for strategic insights and financial performance monitoring. Finance teams use our reports for budgeting, forecasting, and analyzing revenue and expenses. Field operations managers benefit from real-time tracking of work orders, audit compliance, and operational KPIs. Project managers and RTASQ users depend on task progress and issue-tracking dashboards to monitor project health. HR teams utilize workforce analytics to assess headcount, attrition trends, and hiring metrics, while the supply chain and procurement teams leverage data to optimize inventory levels, track vendor performance, and manage procurement spend. Additionally, IT and data governance teams rely on our reporting systems for access control, data quality assurance, and system performance monitoring.

Client Details:

Name: Confidential | **Industry:** Telecommunications | **Location:** United States

Technologies:

Power BI, Paginated Reports, DAX, AWS, Alteryx

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Project Description:

As a part of our client's Business Intelligence (BI) team, our primary objective is to transform complex, siloed business data into actionable insights that empower decision-making across the organization. We have developed and maintain a broad portfolio of Power BI reports and dashboards spanning multiple domains, including Finance, Operations, HR, Safety, Logistics, Asset Management, Fleet, and IT.

The BI ecosystem is structured through dedicated workspaces such as Enterprise Financials, RTASQ, Field Audit, OpsCenter, HR Analytics, Fleet, Material Management, Assets, Claims, IT Assets, and others—each serving a specific operational or strategic function. These workspaces consolidate data from various sources like SQL Server, Flat Files, SharePoint, and cloud-based systems (AWS), enabling a single source of truth for business reporting.

The project stresses upon scalable report design, dynamic filtering, interactive visualizations, and automated data refreshes. Through the implementation of standardized reporting frameworks and DAX-driven KPIs, the BI team has successfully reduced manual reporting efforts, increased data accuracy, and has enhanced the visibility of key metrics across departments. Our solutions support everything from executive dashboards and operational tracking to audit readiness and compliance monitoring.
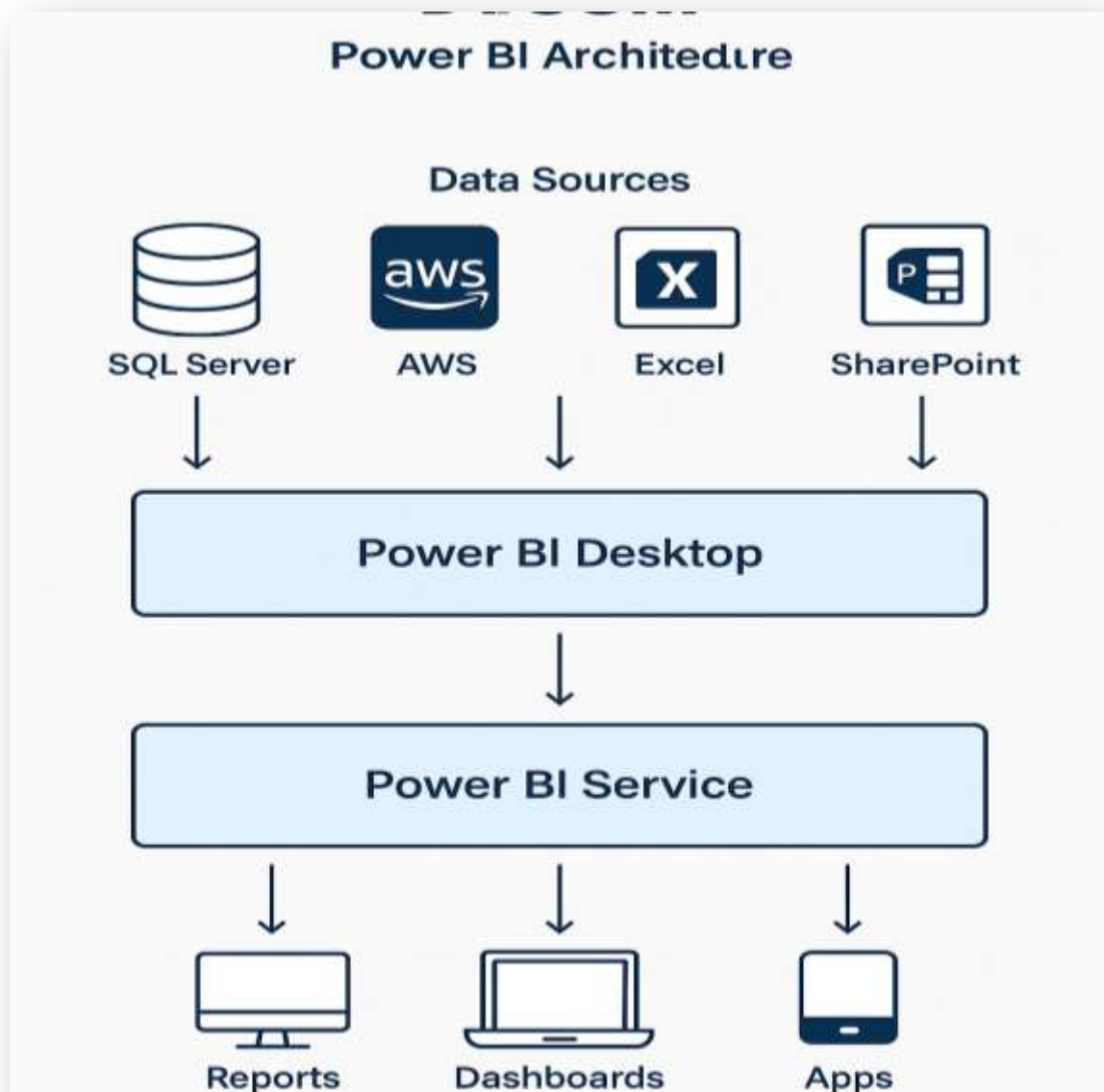
Project Impact

- **Enabled Data-Driven Decision Making:** Our solutions provides leadership and departmental teams with timely, interactive dashboards that support quick, informed decision-making across finance, HR, operations, safety, and logistics.
- **Reduced Manual Reporting Effort by 60–70%:** We replaced excel-based, manual processes with automated, refreshable Power BI reports—saving significant time for analysts and business users.
- **Improved Visibility across Business Units:** Consolidation of siloed data into centralized workspaces, allows teams to access a unified view of KPIs, trends, and operational performance.
- **Reduced Operational Risks:** We have enabled proactive monitoring of fleet status, safety incidents, field audit results, and compliance metrics—leading to improved risk management and reduced incidents.
- **Increased Productivity:** Our solutions have given operations and field teams access to real-time data on tasks, resources, and equipment, helping improve resource allocation and workflow efficiency.
- **Enhanced Audit Readiness & Compliance:** We have created standardized reporting structures for financial data, tax extracts, safety audits, and subcontractor tracking, supporting smoother audits and regulatory compliance.
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- **Fostered a Culture of Analytics:** Our solutions have encouraged business users to adopt self-service analytics using well-governed Power BI datasets and interactive reports—minimizing dependency on the BI team for ad hoc data needs.

Architecture:

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Screenshots:

Workspaces:

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Workspace with Reports:

Deployment Pipeline:

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Report Lineage View:

Row Level Security

Row-Level Security (RLS) is implemented at the subsidiary level to ensure users only access data relevant to their respective business units, enhancing data privacy and control within Power BI reports.

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Standard Report:

Paginated Report: