

Modern Enterprise Warehousing with Advanced Analytics for Oil & Gas

A governed data platform on Microsoft Fabric that turns field, production, and supply chain data into faster, evidence-based decisions.



Wragby Business Solutions & Technologies Limited

www.wragbysolutions.com

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The Challenge

Upstream and midstream operators lose real value to problems hiding in day-to-day operations:

- Production deferment with no clear line of sight to root cause
- Manual, backward-looking reporting that lags real field operations
- Supply chain delays that quietly stall critical field activities
- Fragmented data across JV partners, flow stations, and systems
- Mounting ESG and regulatory reporting demands (PIA, IFRS S2, HCDT)

Solution Overview

Wragby's Advanced Analytics solution for Oil and Gas solution is a governed enterprise data and analytics platform built on Microsoft Fabric that unifies production, supply chain, field, and business data into a single source of truth. Structured on a scalable medallion architecture with a dedicated landing zone, it consolidates data from across the organization to deliver consistent reporting, advanced analytics, and faster, evidence-based decision-making across the asset lifecycle and the wider enterprise.

Architectural Framework

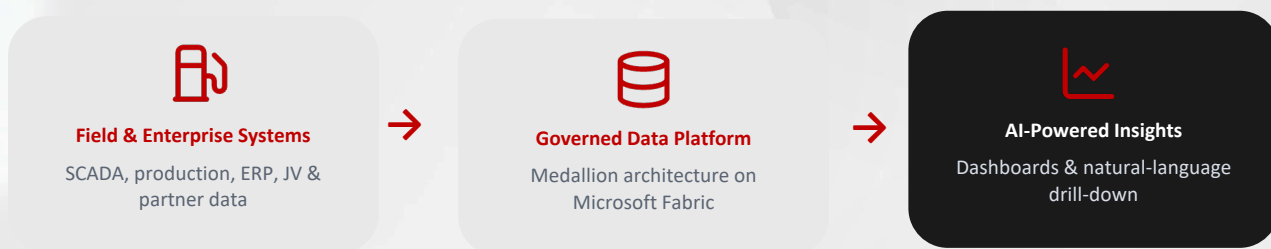
- **Landing Zone:** dedicated workspace for receiving incoming data from source systems. No data is persisted here, keeping raw external sources fully separated from governed data.
- **Bronze Layer:** raw data retained in its original form for traceability and reprocessing.
- **Silver Layer:** cleaned, validated, and conformed data ready for integration.
- **Gold Layer:** business-ready, aggregated data curated for reporting and analytics.
- Each layer is a dedicated Fabric workspace with its own Lakehouse for storage, supported by notebooks for transformation, pipelines for orchestration, dataflows for integration, and shortcuts for cross-workspace access without data duplication.

Deployment & Security

- Workspace-level isolation between the landing zone and the bronze, silver, and gold layers.
- Role-based access control through Azure Active Directory.
- Row-level security applied at report and dataset level.
- Secure, governed movement of data between layers using native Fabric capabilities.



How it works



Business Impact

- Fewer avoidable production losses
- A single governed source of truth across the enterprise
- Reduced duplication of data and effort across business units
- Faster, more reliable reporting cycles
- Audit-ready ESG & regulatory compliance
- A scalable foundation that supports future AI initiatives.

Core Capabilities



Automated end-to-end data pipelines from ingestion through to business-ready reporting orchestrated with transformation across all layers.



Scalable compute and storage with centralized governance, data lineage, and traceability across the enterprise



Deferment Root-Cause Analytics

Pinpoint the two or three causes driving most production loss, by flowstation and category.



Production Performance Forecasting

Track attainment against targets and forecast production with confidence.



Supply Chain Bottleneck Analytics

Surface procurement and logistics delays before they stall field operations.

Requirements

The items below support a smooth deployment. Not all are required at the outset; gaps can be addressed during the discovery phase of engagement.

- Active Azure subscription with Microsoft Fabric enabled.
- Fabric capacity sized to data volume; enterprise-scale deployments typically start at F16 or higher.
- Azure Active Directory for identity and access management.
- Identified source systems and their respective data owners.
- Defined reporting and business requirements, which may be finalized during discovery.
- Nominated technical and business stakeholders to support the engagement.



Real-Time Operational Dashboards

Self-service reporting and analytics for business users to monitor production capacity, deferred volumes, and KPIs as they happen.



ESG & Regulatory Reporting

Streamline compliance reporting aligned to PIA, IFRS S2, and HCDT.

Why Wragby?

Wragby is a multi-cloud solutions provider in Africa with proven expertise in Cloud Infrastructure Services, Managed Services, Data Services & AI, Cybersecurity, Modern Work, Business Applications, Product development, Digital Advisory, and IT Training services.

Through our seasoned professionals, advanced

specializations, and competencies, we pair deep oil & gas domain knowledge with modern data platforms to help operators turn field data into decisions.

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