Unleashing Potential: Oil and Gas Industry Transforms Reporting, Saving Millions with Power BI

Our Oil and Gas partners are empowering their teams with self service reporting while saving millions in licensing and IT costs by making the switch to Power BI.

Customer: A leading provider of advanced technology for the energy industry. With operations in 20 countries, running the largest drilling rig operations in the world.

Business Challenge

The client faced difficulties in effectively tracking the performance of their operating oil rigs. They required a solution that could provide a daily overview of rig performance during active drilling operations and generate a summary report upon completion. The rig-related information was stored across multiple databases, necessitating the creation of data pipelines to consolidate and streamline the data. Additionally, the client sought to embed the dashboard in their web portal, implement row-level security, and establish a subscription feature to send PDF snapshots of the dashboard to drilling team members and managers via email.

Solution

DataFactZ developed a comprehensive rig performance dashboard to address the client's challenges and provide the desired insights and functionalities.

Key Features and Functionalities:

1. **Industry Metrics:** The dashboard provided insights on critical industry metrics such as ROP (Rate of Penetration), WOB (Weight On Bit), RPM (Rotations Per Minute), GPM (Mud Flow), DP (Differential Pressures), and more. Complex visuals were designed by layering multiple visuals to represent performance-related statistics effectively.

2. **Centralized Data:** DataFactZ designed robust data pipelines to extract data from diverse sources and perform necessary data modeling to support the dashboard. The solution also enabled self-service reporting capabilities. A security table was implemented to enforce row-level security, ensuring that users could only access relevant information.

3. **Dashboard Embedding:** The rig performance dashboard was seamlessly embedded within the client's web portal using REST APIs. This integration allowed easy access to the dashboard for authorized users.

4. **Dashboard Subscription:** DataFactZ utilized a combination of custom code and robotic process automation (RPA) software to implement a subscription feature. Users received daily snapshots of the dashboard via email, facilitating efficient tracking of rig performance. Upon completion of drilling, the drilling team automatically received an email containing a summarized rig performance report encompassing all relevant insights for the active drilling period.

Empowered operational teams with self-service reporting while saving $250k/yr in licensing and thousands of IT & Analyst support hours.
End to End: From Legacy Platform To Thousands of Report Subscriptions in 6 months.

Legacy BI Platform

- 1500 General access users in MicroStrategy reporting space
- 10GB size of the largest in-memory cube
- 100 report builders
- 122 grid reports
- 15 Dashboards/Dossiers
- 195 datasets or report objects
- Thousands of report subscriptions & deliveries
- Required to build custom user-access automation

Power BI premium
- Power BI Report, Datasets, & Paginated
- Migrated Power Users to Workspaces
- Knowledge Training & Development

Power Automate
- Power Automate Flows
- Custom automation for user access
- Subscription, notification, and alerting

Azure AD + Azure AD B2B
- User life-cycle govern through Azure AD
- Gets the business the data they need
- Lower management time of BI team

Results

Power BI integration empowered their teams with self service reporting while saving millions in licensing right out of the gate. Thousands of IT and analyst hours were saved by eliminating the platform support required with the legacy BI platforms previously used and analysts continually updating reports and dashboard for business and operations.

The rig performance dashboard successfully addressed the client's challenges. It provided real-time tracking and in-depth insights into rig performance. With row-level security implemented, users accessed only the information relevant to their roles. The dashboard was accessible through the client's web portal, enhancing convenience. The subscription feature ensured regular updates for drilling team members and managers, supporting informed decision-making. Overall, the solution optimized rig performance monitoring and reporting.

The Next Step

Request a 1 on 1 solution demo:
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