



Transforming the world... one power utility at a time.

Abjayon empowered a global power utility to thrive in the evolving energy landscape by implementing Oracle's Energy and Water solutions.

We addressed challenges like unexpected downtime, high maintenance costs, dated predictive capabilities and degraded performance.

By integrating the Oracle Utilities Work and Asset Cloud Service (WACS) platform with our Impresa Insights (AI - ML Driven Data Analytics Platform), we enabled real time data monitoring, predictive maintenance & influenced the overall lifecycle optimization.

With this collaboration, we have helped enable grid stability and positively impact operational efficiency. All this while while simultaneously reducing our partner's costs and compliance risks.

We welcome you to explore our success with the largest power transmission utility in a country and discover the benefits of our portfolio of services.



Discover about:

Abjayon

Our Client

The Solution

Our
Implementation



About Abjayon

Global power utility companies choose Abjayon for our deep domain expertise in Oracle Energy & Water (E&W) solutions. We are founded by former Oracle Utilities executives and we leverage our knowledge to deliver precise solutions implementation coupled with committed support.

We are a recognized leader in Oracle Meter Data Management, having implemented over 30 million smart meters, representing 25% of the global Oracle MDM footprint. We have implemented 20 Oracle CCB/CCS systems and multiple WACS/WAM implementations globally

We offer:

- End-to-end implementation of Oracle Energy and Water solutions, including CCS, CC&B, C2M, MDM, SGG, ODM, MWM, WAM, WACS, GIS integration, NMS, Oracle Utilities Analytics, Managed Services and Digital Self-Service Portals.
- Advisory services, business process design, change management and comprehensive technology solutions.

We're HQed in California, USA with delivery centers in the USA, Canada, India, Philippines and the Kingdom of Saudi Arabia.



About Our Client

Our client is the largest utility transmission provider in their country. They power an entire state contributing significantly to their nation's economy. They:

- Operate over 51,000 CKM of transmission lines and nearly 750 substations with a transformation capacity exceeding 1,38,000 MVA.
- Manage state-of-the-art HVDC lines, ensuring minimal power loss even across long distances.



The heart of the challenge

Abjayon sought to address several concerns for our client:

- Operational efficiency and service reliability owing to a lack of an effective asset health monitoring system
- Higher maintenance costs and revenue loss due to unexpected downtime
- Inefficient & error ridden asset monitoring due to manual processes
- Absence of real-time & predictive insights



Proposed solutions

Abjayon delivered a comprehensive implementation of advanced Asset Health Management System (AHMS) leveraging Oracle WACS and AI/ML technologies. We were able to:

- Introduce predictive maintenance strategies using ML to prevent unexpected failures
- Create dashboards and analytics for anomaly detection, diagnostics & performance tracking
- Automate risk assessment and resource prioritization
- Through the Impresa Insights (AI-ML driven data analytics) we were able to:
 - Ensure proactive decision-making with AI-driven insights and recommendations drawing data from multiple sources
 - Enhance grid stability by using AI to predict and address potential disturbances dynamically
 - Strengthen cybersecurity with AI-powered protocols for data and system protection
- Streamline regulatory compliance with automated reporting and audit-ready documentation
- Develop a centralized data warehouse for seamless integration and analysis of historical and real-time data, illustrated below.

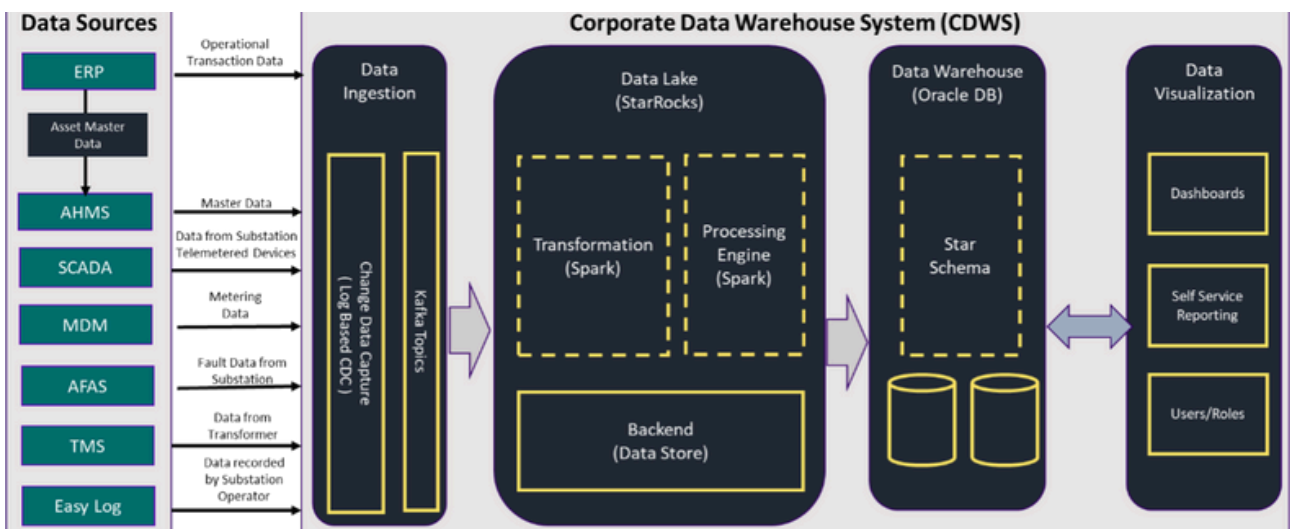




Implementation Process: The Abjayan Way

Abjayan delivered a bespoke solution crafted to the business culture of our client.

- **Assessment and strategy design:** We Identified the challenges in asset health management & defined a modernization path by leveraging Oracle solutions
- **Technology Selection and Framework Design:** We selected Oracle Work and Asset Management (WAM) and WACS for asset operations and health management. We then integrated AI-ML-driven data analytics via Impresa Insights to optimise data integration, historical data analysis and predictive capabilities.
- **System Integration and Data Handling:** Abjayan established a robust data warehouse to centralize and manage data from diverse systems. We then migrated legacy systems.
- **Advanced Analytics Deployment:** AI-powered tools were deployed for real-time monitoring, anomaly detection and risk assessment.
- **Testing and Optimization:** Abjayan conducted comprehensive testing, including regression and performance benchmarking with tools like Selenium and Oracle Testing Accelerator.
- **User enablement & operations support:** Abjayan provided intuitive dashboards for anomaly detection, condition diagnostics and lifecycle optimization. We also implemented remote monitoring capabilities and automated controls to minimize downtime and improve efficiency.
- **Continuous Improvement and Compliance:** Abjayan iteratively refined AI-ML models to adapt to evolving data patterns & operational needs. Also, we designed automated reporting for adherence to regulatory frameworks.



Extraction, Transformation and Loading [ETL] Block Diagram



Impresa Insights Dashboard

By harnessing the power of AI and ML in advanced Asset Health Management using WACS, large power utilities can significantly enhance the reliability, efficiency, and resilience of their operations. These technologies facilitate a proactive, data-driven approach to managing intricate power systems, driving operational excellence and improving customer satisfaction.

Connect with us to power your transformation.



abjayon
Bring IT On

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