Smart Oil Fields

Key Engagements

- *Upstream Data Analytics* - Solution built for an Oil Field Service Provider for facies classification

- *Monitoring Well Integrity* - Solution built for an E&P major in Middle East to predict well integrity incidents

- *Integrated Oil Fields* - Solution built for an E&P Operator as part of an accelerator program for integrated NPT analytics

- *Refinery Plant's Alerts & Events Forecasting* - Designed a solution using MS Azure to analyze streaming data from a Process Historian

- *Refinery Incidents Analyzer* - Solution delivered as an AI driven model based on the refinery incident model

Business Impact

- ✓ Improves operational performance by comparing patterns across sites

- ✓ Enhances local reporting and decision making

- ✓ Enhances real-time analytics at the site level

- ✓ Provides a unified view of data from multiple sources – structured, semi-structured and unstructured

- ✓ Improves asset monitoring by analysis of incidents

- ✓ Monitors and predicts asset integrity across the energy value chain
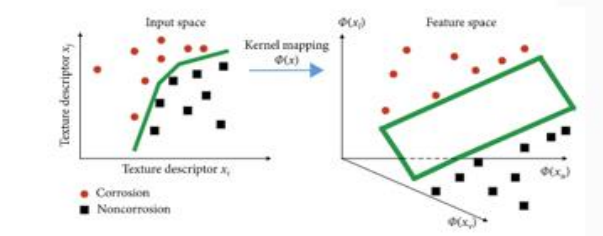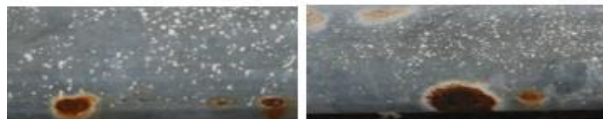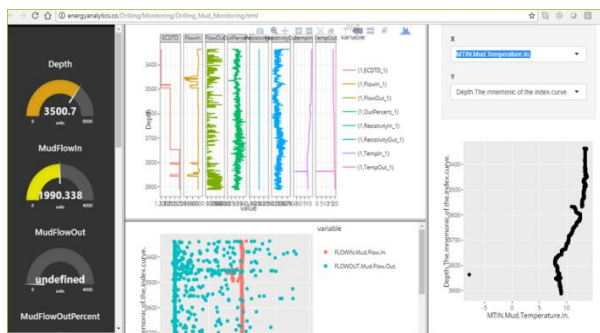
Upstream (Remote Operations)
Real-time Analytics for Offshore Fields

- Well Logging/LAS (Depth Based) - Interfacing with MWD/LWD Tools, Batch Mode Visualization & Analytics

- Drilling/WITS0 (Depth Based/Time Series) - Interfacing with WITS OPC Server; Real-time + Batch Mode Visualization & Analytics

- Production/Telemetry (Time Series - Interfacing with OSI PI Historian) - Real-time + Batch Mode Visualization & Analytics

Midstream (Predictive Maintenance)
Pipeline 360/Integrity Analytics

- Improve pipeline monitoring by analysis of incidents and surveyed images (with labels in place)

- Apply predictive as well as prescriptive analytics in a cognitive platform

- Understand the correlation and relationship between various reported events

- Showcase the health of pipelines and take necessary action in case of discrepancies from data analyzed from past incidents

- Generate Risks Scoring against a pipeline section

Downstream (HSE/Safety)
Refinery Plant's Alerts & Events Forecasting

- Measure, Predict and Benchmark datasets from real time energy consumption

- Predict future possible alerts and events by generating alerts for any abnormality from past A&E datasets and benchmarks laid out by OEM vendors,

- Generate variance reports on actuals, predicted and planned against the heat/energy consumption at an asset level

- Improve regulatory compliance by integrating RPA bots to do process monitoring & manage escalations

- Solution also supports for 3D and AR (Augmented Reality) models

Smart Oil Fields

Key Accelerators

- ✓ Deep Learning for Prediction on Seismic Datasets
- ✓ Oil and Gas Production Analysis
- ✓ Asset Performance / Failure Analysis
- ✓ Pipeline Incidents Data Modelling
- ✓ Information Management for Capital Projects
- ✓ Blockchain enabled Crude Oil Trading

Design Led Transformation

- "Systems Thinking" that is critical in delivering Business Performance Metrics
- Specialists have experiential knowledge in multiple technology transformations across domains
- Integrated solutions leveraging engineering and advances in IT – led by Design Thinking
- Domain knowledge in successfully applying these emerging technologies to solve business problems
- Deliver high value-added, fast, and cost-effective projects

Performatica LLC
3423 Williams Glen Drive,
Sugar Land TX 77479, USA
www.performatica.net
marketing@performatica.net

Interpretation Plot
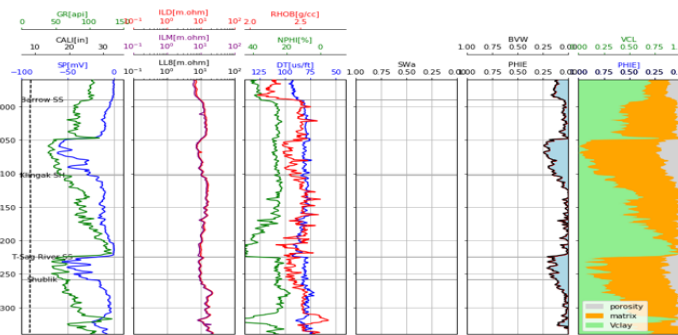
Engagement Model

- On demand services partner - OPEX mode of technology transformation
- Lower TCO by adopting Public Cloud, Open Source, Rapid Application Development (RAD)
- Act as customer's extended technical R&D labs
- Partnership with SAP, IBM, Microsoft, Google & AWS

Consulting + Technology solutions **team from Fortune 500 and Tier 1 IT/ITES Firms**

Members from consulting, technology and operations provide an **all-inclusive perspective at an engagement level**

Design Thinking and Change Management at the core of any proposed solution

Leveraging **low-code/no-code platforms for MVPs** as part of our engagements

Consulting Focus Areas

- **Strategic Planning** - Design Use-cases, technical and domain related Market Research, Open Innovation, agile R&D

- **Operations Management** - Drive Business Transformation, Program Management, Metrics Management/Business Performance

- **Technology Transformation** - Develop Domain Solutions Prototyping, Applied Analytics, Remote Monitoring, Risk Management in select verticals.

- **Digital Platform Alliances** - Discover industry alignment to post covid-19 era, sustainability goals and Industry 4.0+ demands by building a responsive Digital Ecosystem.

Industry 4.0 → 5.0 ("New Normal")

- Real-Time Monitoring Dashboards, Decision Support/Expert Systems
- Remote Operations – Connected Factory Models
- RPA (Robotic Process Automation)
- Responsive Support
- Risk Controls (IoT Enabled Predictive Models)