

Mining & Distribution Analytics

VV Group of Companies, a diversified company featuring VV Minerals India's largest mining, manufacturer of Garnet & Ilmenite and also a market leader in exporting minerals across the globe. The company has also vested interests in other industries like Textiles, Food & Agro, Pigments, and Paints.



Project Name	Enterprise Business Analytics
Client Name	VV Group of Companies
Duration & Team	Live since 2013 12 months and 12 people <ul style="list-style-type: none">• 1 Lead Architect• 2 Lead Data Analyst• 1 Data Scientist• 5 Lead ETL Developers• 2 UI/UX specialist• 1 Quality Manager
Data Volume	20 million rows for every quarter, with live streaming data from sensors visualized with less than 10 seconds lag
Infrastructure	Hosted on Private Cloud with Linux Operating systems. <ul style="list-style-type: none">• RDBMS Source Systems (12 difference source systems)• Cassandra for log monitoring from SCADA based systems• Pentaho Community Edition 5.4 for data ingestion and visualization service 200 users and 10 power users• Scheduled ETL jobs to run every 2 hours once to monitor near time data and live streaming with 10 seconds lag

Business Problem

- Managing Broad range of Industry investments via different businesses operating in different locations across the country with available data from different IT systems are cumbersome. (*Textiles, Food and Agro, Pigments, Paints, Mineral mining and Manufacturing, Sugars Manufacturing & Exporting, etc*)
- Need to monitor production and mining units with data captured from sensor devices (SCADA compliant)
- Lack single point of truth to depend upon to track and improve performance of sales, purchase, manufacturing and optimize resource utilization

- Mobile Monitoring capability as decision makers are on the move

Solution

- Pentaho platform to consolidate data from multiple disparate data silos and provide a total enterprise view with common discipline to analyse from macro to micro
- Mobile Analytics with alerts and collaborative features for immediate decision making
- Connected enterprise with defined similar data models to track sales, purchase, accounts and manufacturing
- Live push of fast data from sensors to visuals with < 10 second lag for downtime reduction
- Yield monitoring through prebuilt custom algorithms
- Prescriptive schedule for washing and processing which optimizes machinery utilization
- Alerts based on flexible thresholds configurable specific to location and enterprise
- Customer 360 to understand demographic sensitive data for upselling
- Suggestive algorithms for dynamic pricing and payment terms using what if simulation