Pioneer Natural Resources: The Kitchen Sink

Nick Larsen

Vice President

iOLAP

ABOUT NICK

Nick Larsen

Vice President

- 15-YEAR CAREER FOCUSED ON BIG DATA, ANALYTICS, MODERN APP DEV, AND CLOUD
- STUDIED AT THE UNIVERSITY OF NORTH TEXAS: MANAGEMENT INFORMATION SYSTEMS & JAZZ STUDIES
- LIVE IN TEXAS, FATHER TO MAX (9) AND HUSBAND TO JENNIFER (15 YEARS!)
- PASSION FOR SPORTS, CARS, MUSIC, AND GEEKERY

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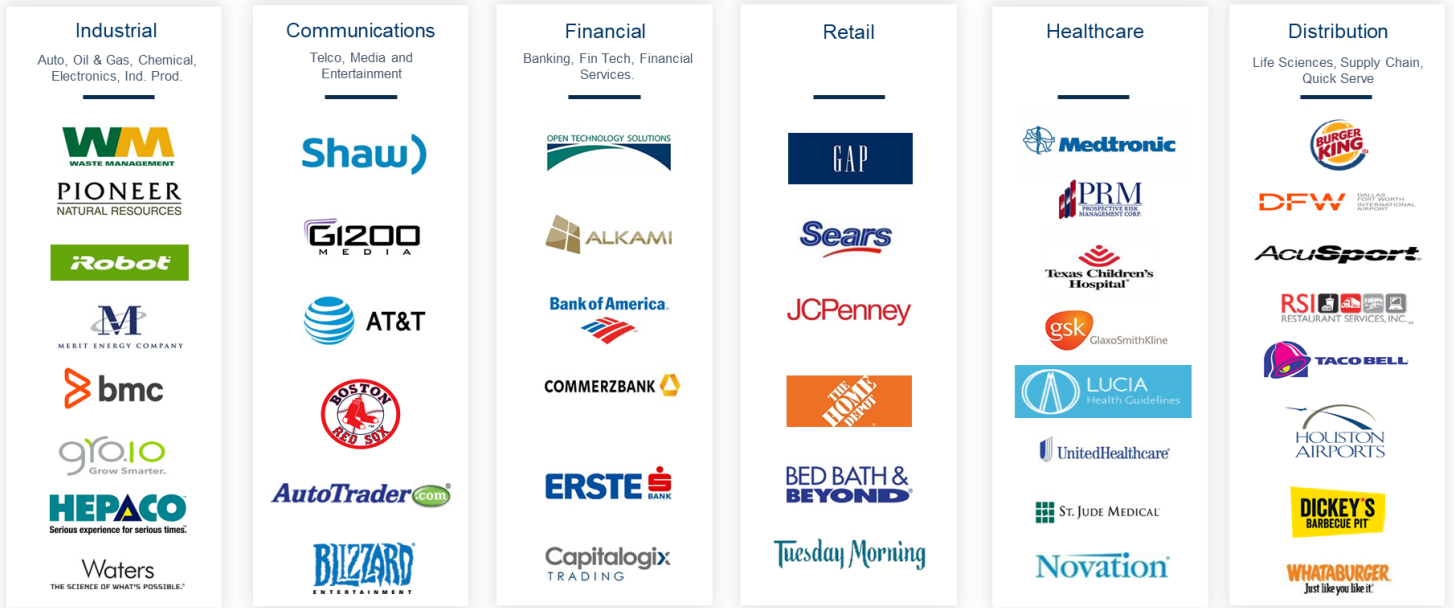
ABOUT IOLAP

- **Big Data, Analytics, and Systems Integration professional services**
  - Strategy
  - Implementation
  - Managed services
- **Founded in 1999 in Frisco, TX**
- **50 U.S. employees & 140 in Rijeka**
- **Broad yet focused technical expertise**
  - Cloud: AWS, Microsoft, IBM
  - Databases: Oracle, SQL Server, IBM DB2/Netezza/WoC, Redshift, Snowflake, Teradata, HANA
  - Analytics: OBIEE, Microstrategy, Tableau, PowerBI, Spotfire, Cognos
  - Big Data: Cloudera, Hortonworks, etc.
  - Data Integration: Talend, SSIS, Informatica, Datastage, ODI, etc.
  - Modern apps: Javascript, Python, Containers, etc.



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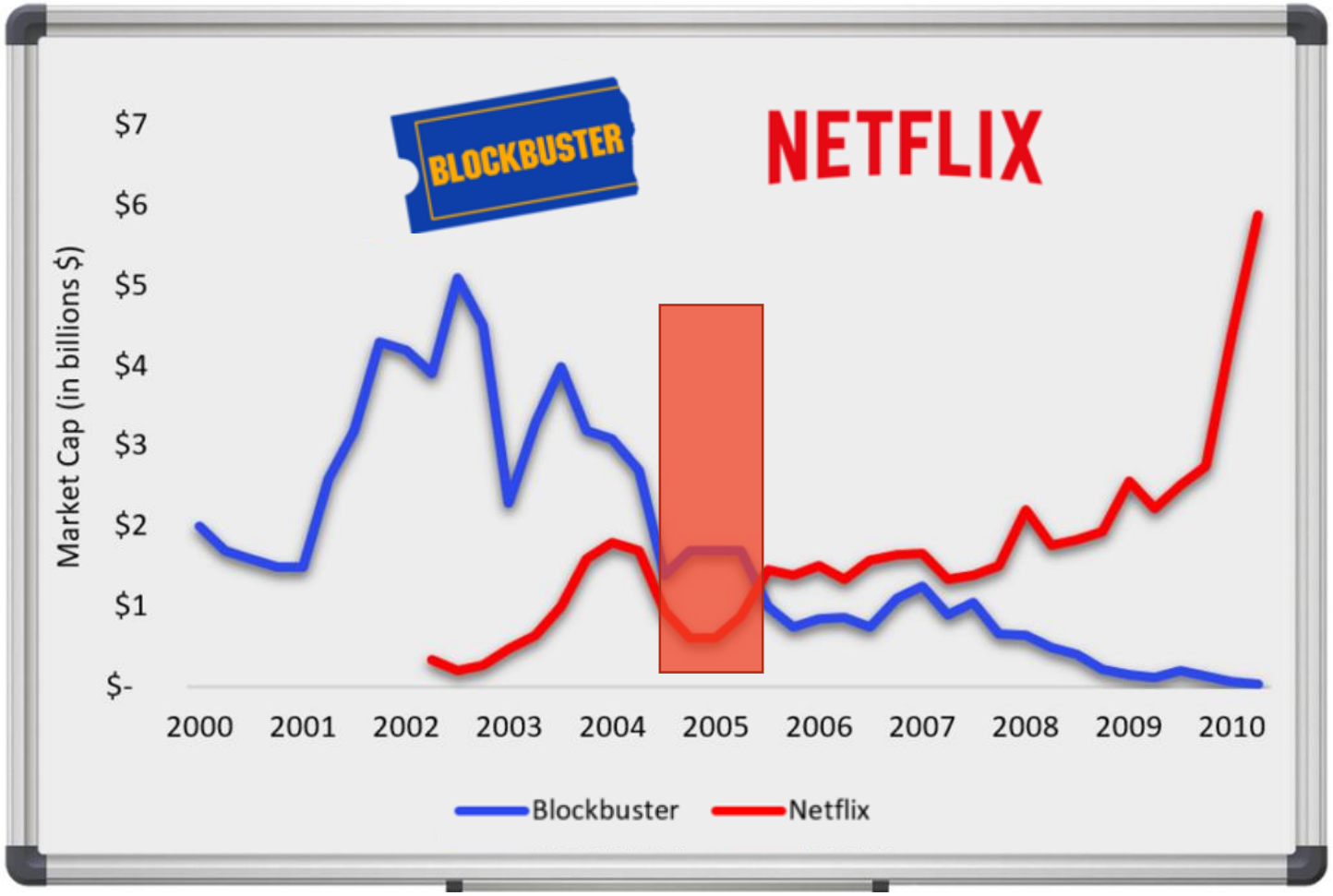
THE START OF MY ORACLE JOURNEY



at&t

Bank of America

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PIONEER NATURAL RESOURCES

Background

WHAT THEY DO	OUTCOMES	REVENUES
Oil and gas exploration primarily in Texas	300,000+ barrels of oil equivalent daily	$9.5 billion USD

- **Pioneer recently embarked on a multi-year program implementing Oracle EBS to streamline processes across every business unit and functional area**
- **Pioneer users needed a richer data set than BI Apps OOTB augmented with production, active operations, safety incidents, and realized pricing metrics**
- **User analytics maturity ranged from dashboard consumers to data scientists and the technical solution required a best in breed architecture**

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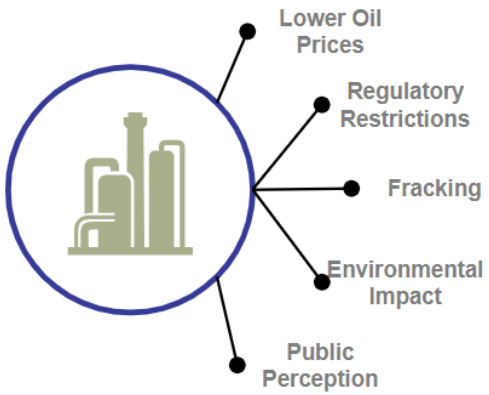
COMPETITIVE ADVANTAGE IN OIL & GAS

Market Pressures



Key Business Issues

Decreasing margins

Predict the effects of price fluctuations on operations and provide insight into factors that influence prices

Evolving technologies

Evaluate drilling locations and plan schedules to help lower production costs and increase productivity

Increasing uncertainty & risk

Identify high-risk employees by comparing their behaviors and working conditions with lower-risk workers

Operations efficiency

Prioritize replacement or preventive maintenance before a breakdown occurs

Complex supply chain

Identify which vendors are more likely to be reliable and cost efficient

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ARCHITECTURE GUIDING PRINCIPLES

- Position PXD for the future
- Deliver value more efficiently and effectively
- Drive down costs
- Comply with data management leading practices
- Do no harm
- Engage all users

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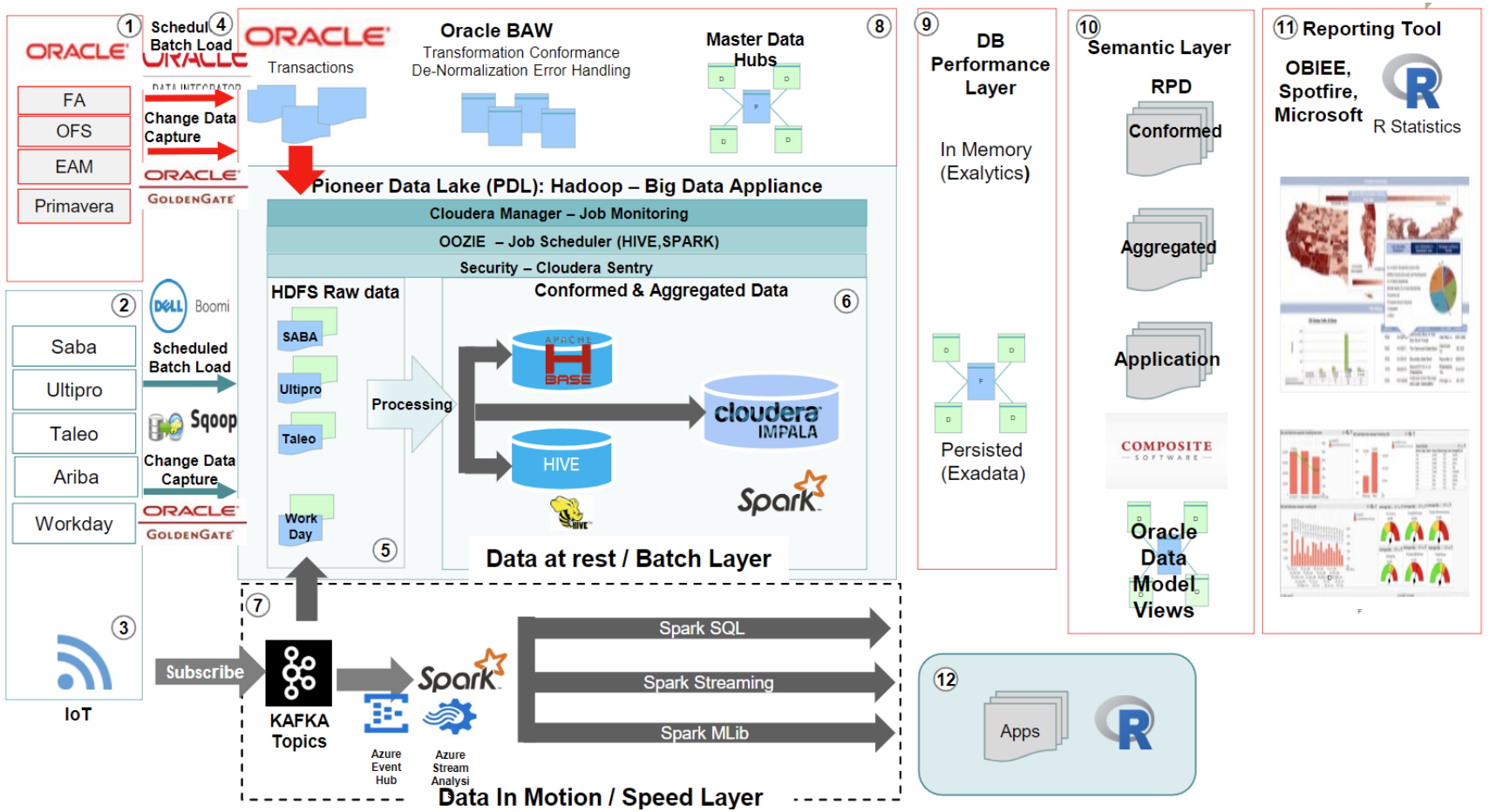
INCUMBENT ARCHITECTURAL RECOMMENDATION

- ✓ Position PXD for the future
- ✗ Deliver value more efficiently and effectively
- ✗ Drive down costs
- ✗ Comply with data management leading practices
- ✓ Do no harm
- ✓ Engage all users



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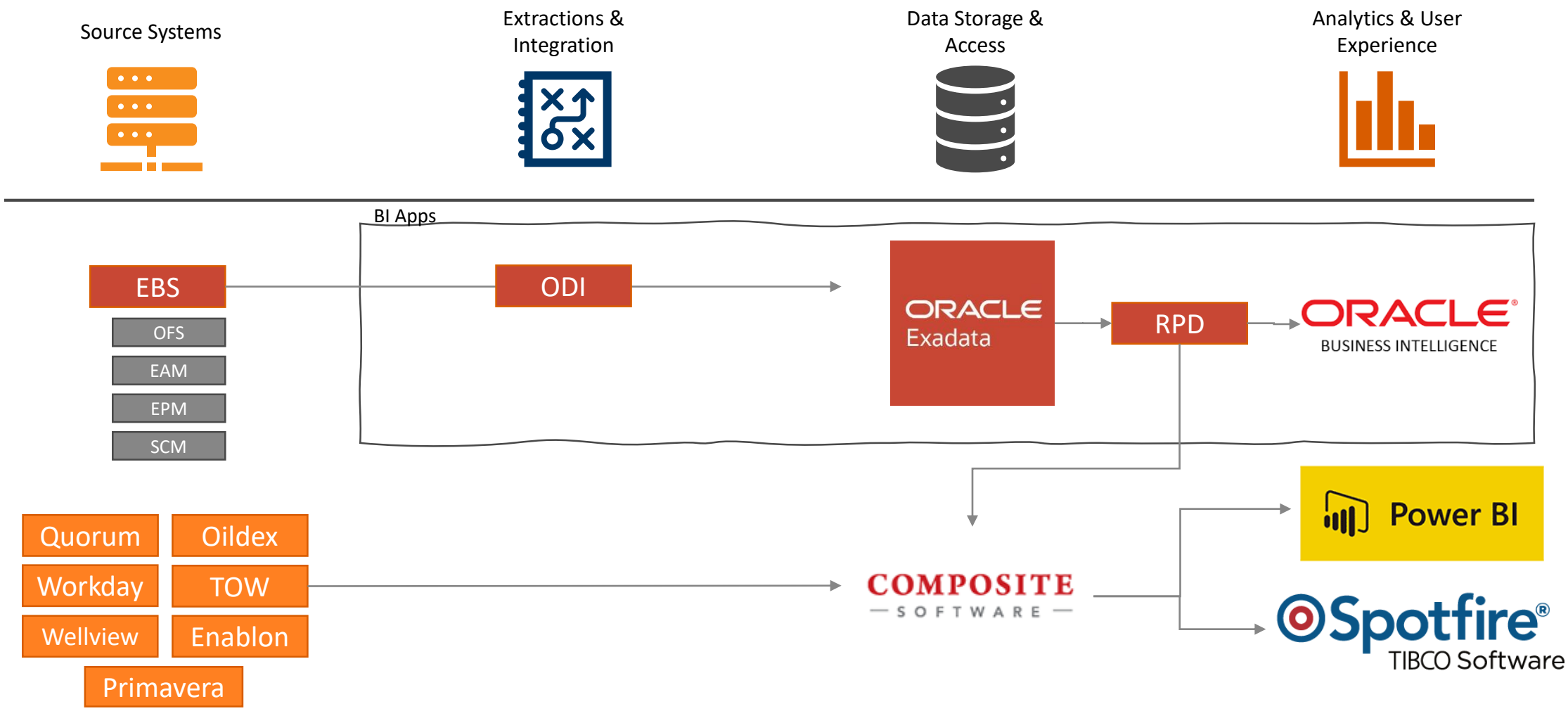
ARCHITECTURE WORKSTREAMS

Decision Points



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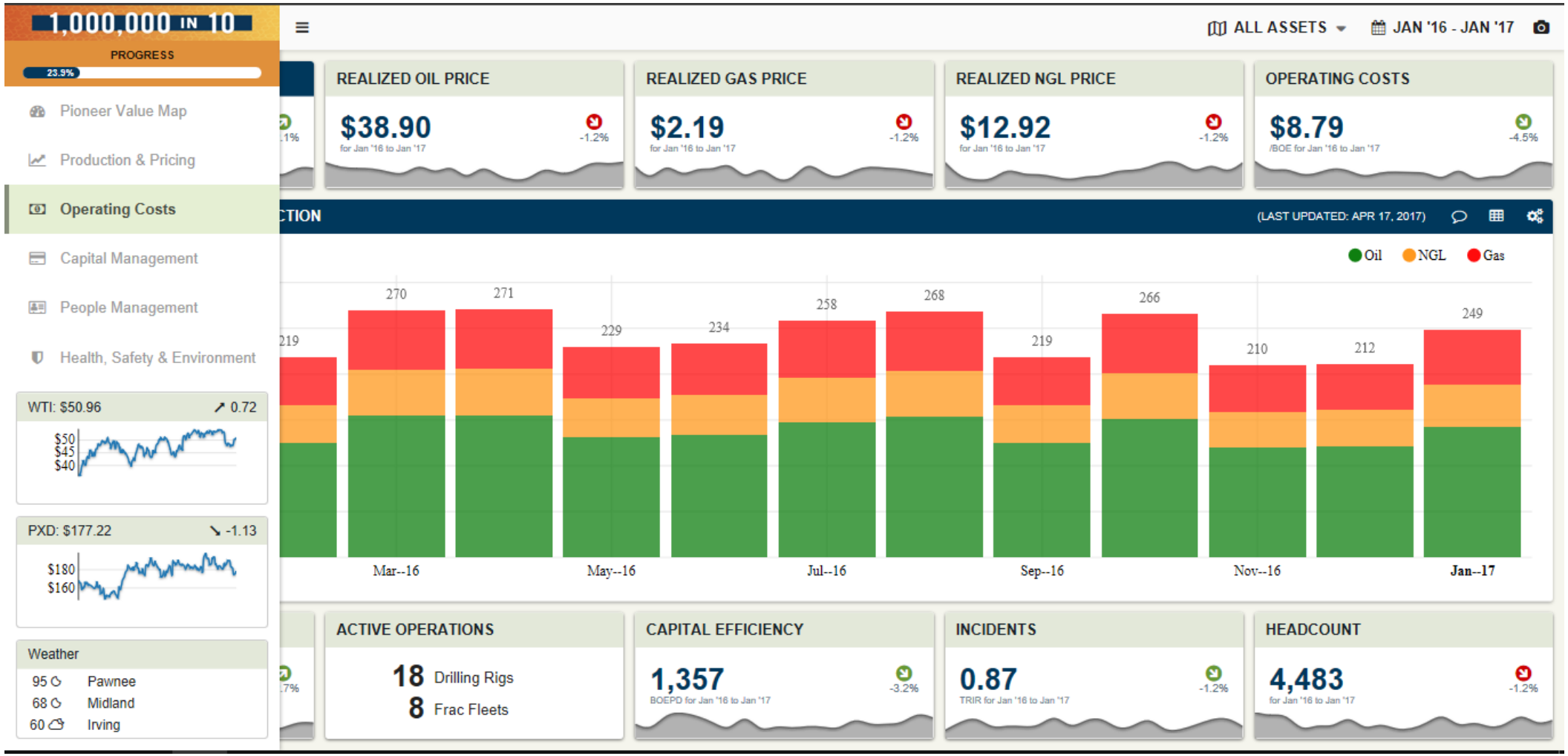
EXAMPLE DASHBOARD

Non OBIEE



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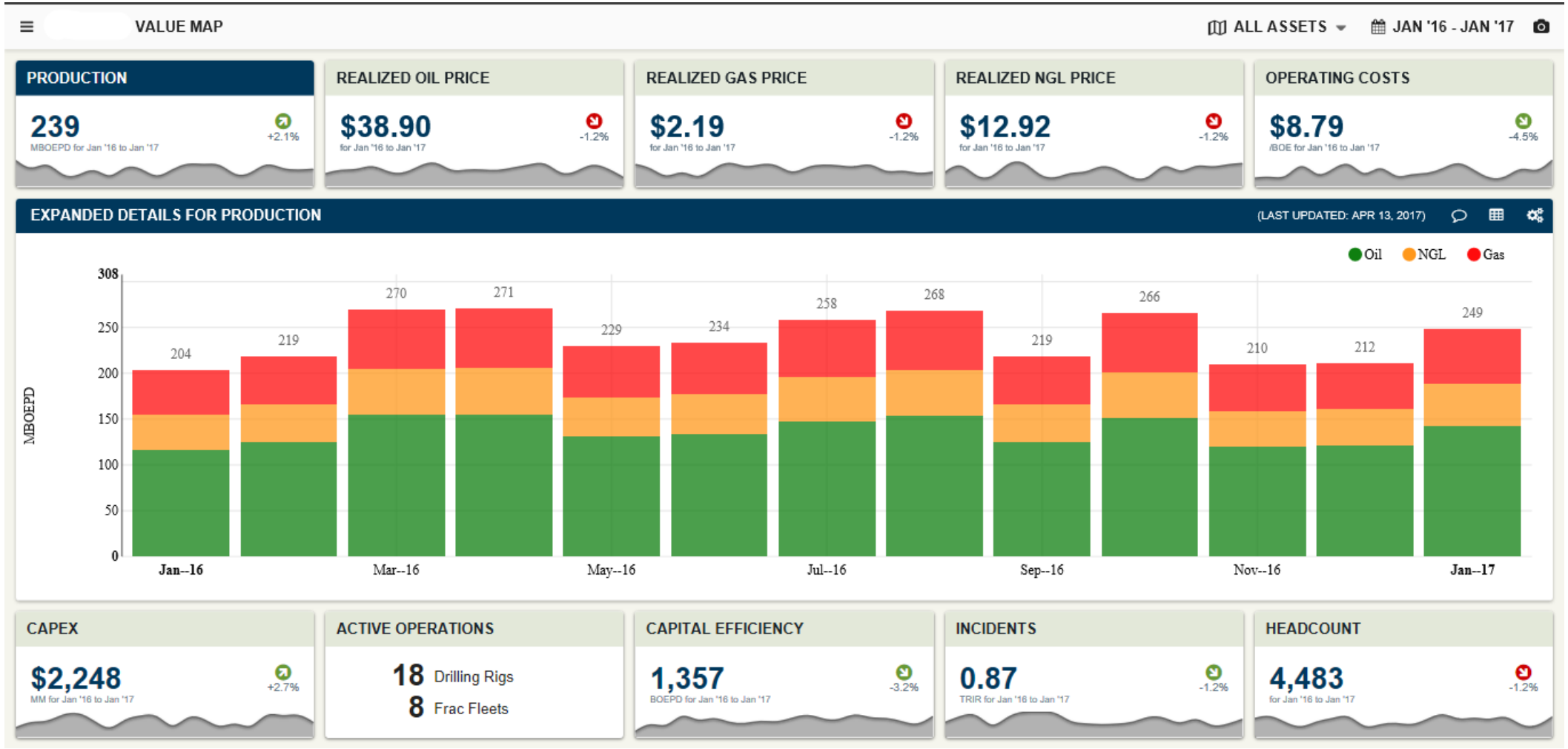

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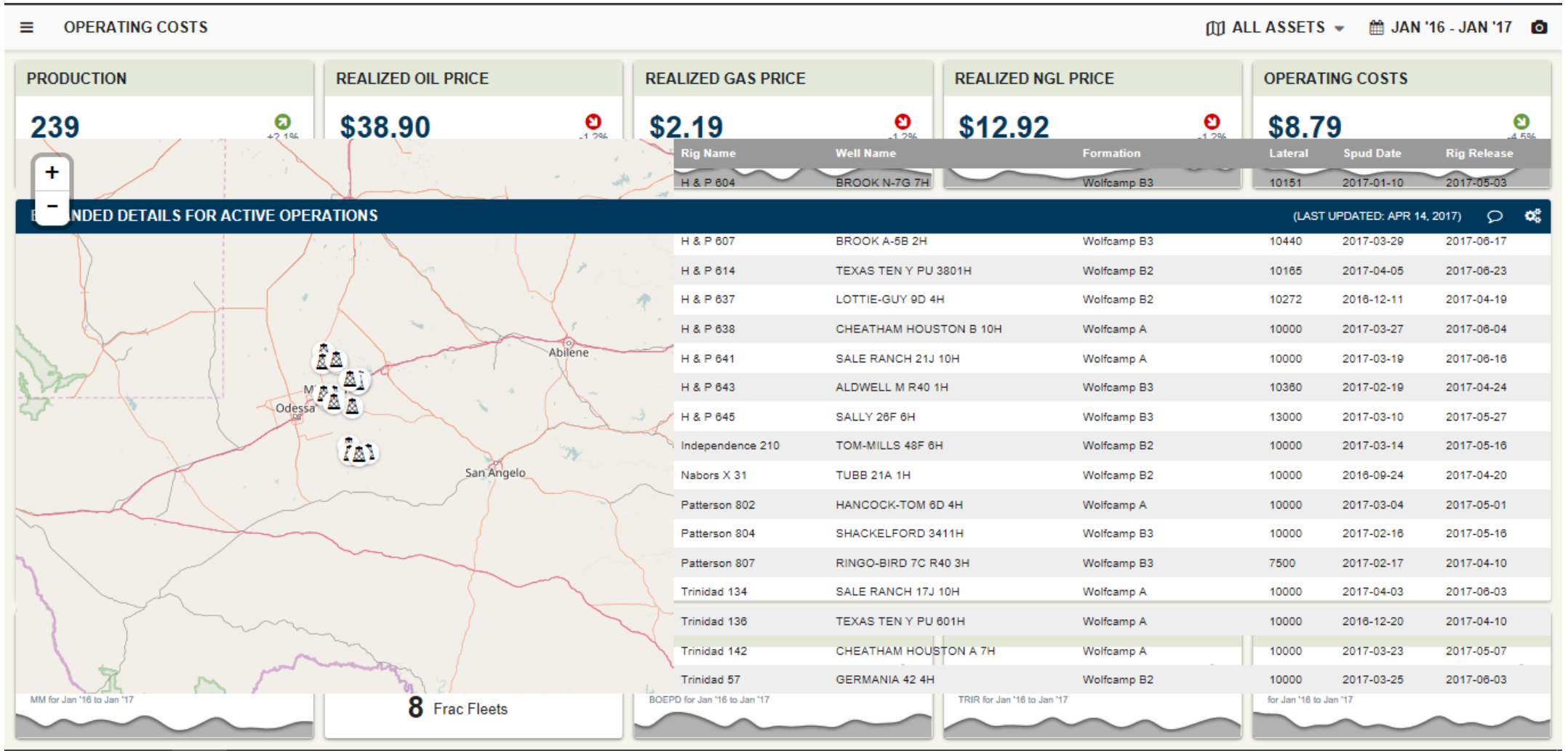

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WORK IN PROGRESS

- F&A data latency
- HR row level security
- Governance and guidelines for reporting tool selection; where do I go to find the data?
- Speed to market for ad-hoc and transactional data (not yet in the EDW)
- Data stewards and SME's by functional area

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KEY LEARNINGS

- Oracle provides an incredible ecosystem of technology and business value…
- Oracle breaks…
- Oracle works…
- There is no perfect architecture; avoid the kitchen sink

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ADRIATIC AWS
INNOVATION DAYS 2019
Thank You!