

Developments with Digital Oilfield IT Infrastructure

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June | 2011

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OIL AND GAS

Safe Harbor Statement

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Oracle Acquires Best-in-Class Companies

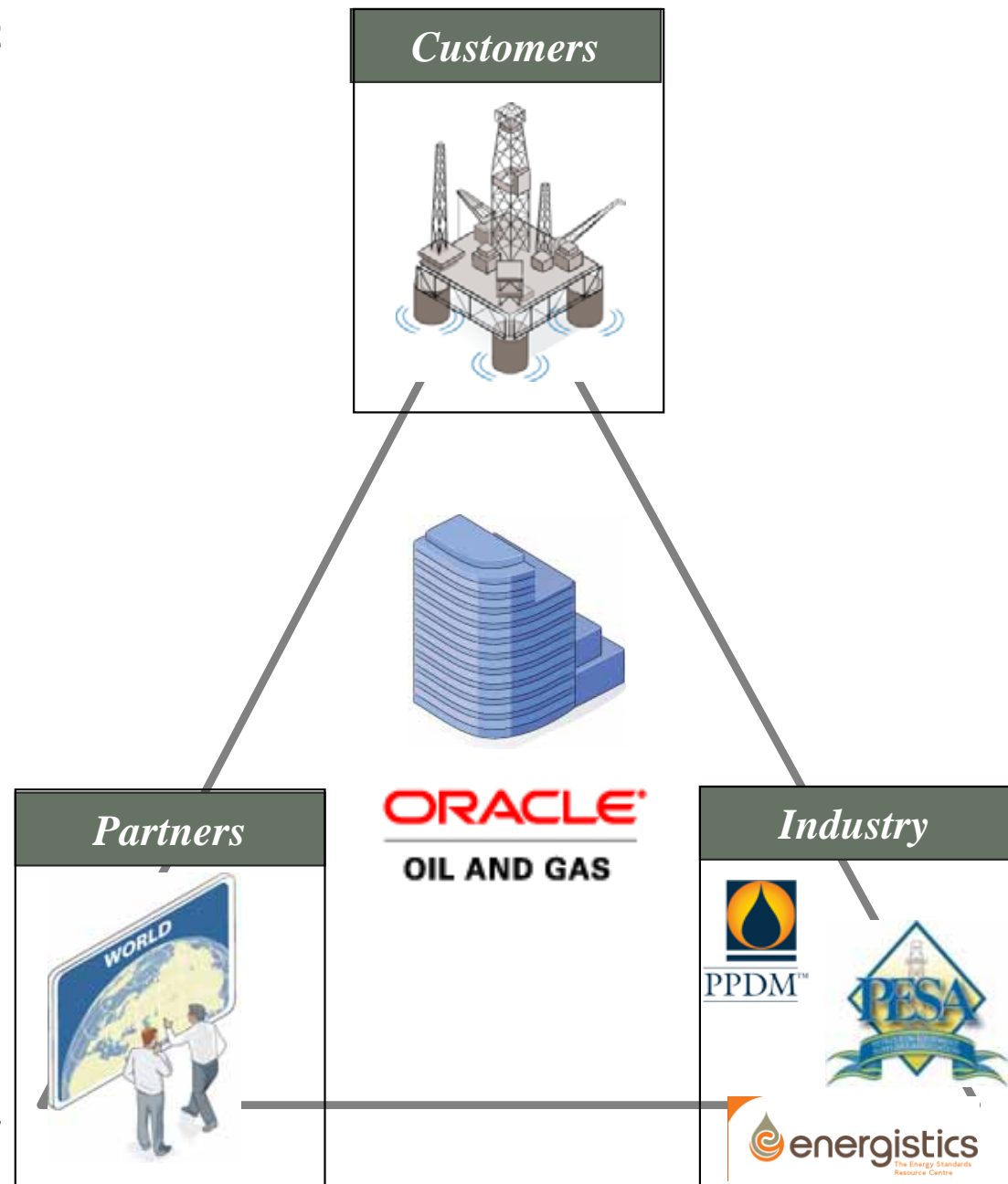


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Oracle's Leadership in Oil & Gas

Oil and Gas Industry Business Unit

- Oil & Gas IBU people in 8 Oil & Gas Hubs
- Extended network of oil & gas sales, consultants personnel on 6 continents
- Generating Oil industry-specific business Best Practices
- Strategy Focus:
 - **Customers**
 - **Partners**
 - **Industry Associations**
- Product Innovation
 - Leverage Oracle horizontal functionality and architecture advantages
 - Develop new Oil & Gas solutions based on newly acquired products
 - Collaborate with customers on new product development and strategy



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What IDC is Saying:

"Oracle continues to build their presence in the oil and gas industry. Oracle was invited in 2008 to join The National Petroleum Council by the Secretary of Energy. **It's quite a distinction for Oracle, as they are the only enterprise software company to be a part of the council.** The National Petroleum Council is an oil and gas advisory committee to the Secretary of Energy. The council serves to represent the views of the oil and natural gas industries in advising, informing, and making recommendations to the Secretary of Energy with respect to any matter relating to oil and natural gas. This membership reflects their commitment to the oil and gas industry, and strengthens their understanding of the challenges facing the industry."

Catherine Madden
IDC, October, 2008



NATIONAL
PETROLEUM
COUNCIL

An Oil and Natural Gas Advisory Committee
to the Secretary of Energy

Survey of Oracle's Oil & Gas Customer Base



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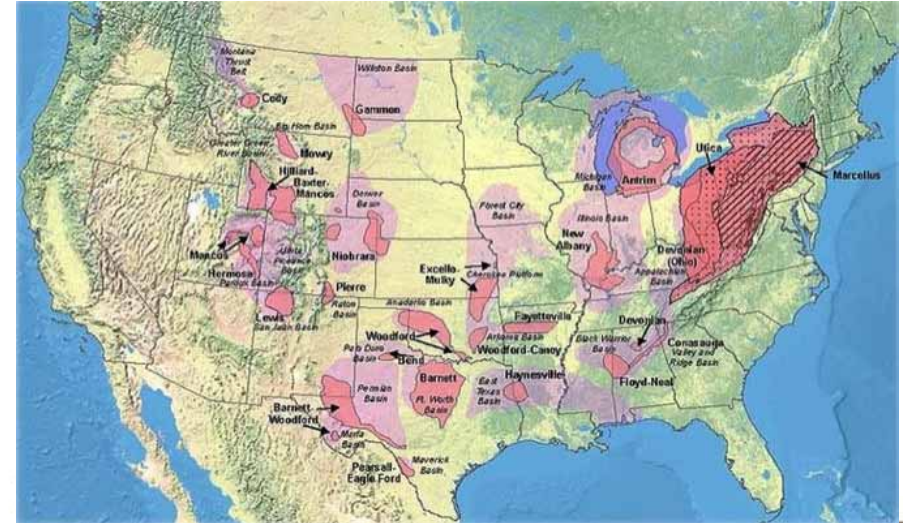
Shale Gas, Oil Sands and Bakken

The Manufacturing Approach to Oil & Gas Development

Increased efficiency reduces execution timeline

Manufacturing process

- Staged development
- Dedicated in-house construction management teams
- Dedicated drilling rigs
- Multiple small contractors
- Standard designs
- Assembly line drilling & completions



National Energy Board
Office national de l'énergie



Canada

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Oil & Gas Business Drivers for IT

1) Safety

- Reduce incidents with training, procedures, monitoring, and analysis



2) Real time drilling & production

- High volume real time data ingestion
- Real time analytics
- Pattern Matching Correlation
- Real Time self learning
- Predictive modeling



3) Deliver major capital projects on budget and on time

- Reduce construction costs by maximizing design reuse
- Optimize purchasing and logistics - the right material, to the right place, at the right time, for the right cost
- Multi-year project cycles leads to a focus on spend prediction (oil) vs. spend tracking (gas)
- Improve capital cost visibility and auditability



Oil & Gas Business Drivers for IT

4) Reduce in-service costs of operating assets

- Lower total operating costs by developing a culture of asset standardization
- Improved cost optimization
- Use the information we have to know how much we are spending and on what – improved operating cost visibility and auditability



5) Expand field staff for remote projects

- Grow asset staff without growing IT employee base
- Data/document access and high quality capability between Field and HQ will critical going forward



6) Maintaining safe and compliant operations

- Governance Risk & Compliance
- Environmental metrics will become a daily part of operational processes
- Control emissions and maintain environmental compliance



7) Improve stakeholder relations

- Reputation Management is critical
- Operators will need to provide more information to 3rd parties
- Consistent stakeholder message from all parts of the organization



IT Drivers for the Oil & Gas Business

1) Integrate IT with the business

- Enterprise architecture / portfolio management with business input
- Consultative relationship between IT and the Business at all levels

2) Enable Growth while reducing unit costs

- Outsourcing
- Application Rationalization

3) Maintain service effectiveness

- Upgrade or replace obsolete software

4) Change the IT Dynamic

- More INFORMATION
- Less TECHNOLOGY

Leading Initiatives for Shale Gas, Oil Sands and Bakken

1 Safety

5 Governance, Risk & Compliance



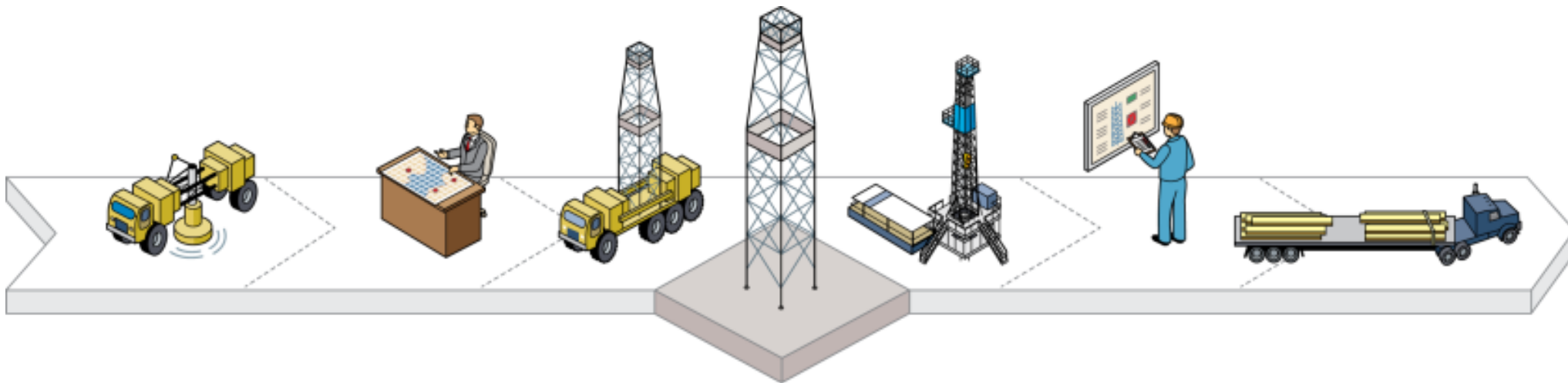
2 Real Time Drilling



4 Strategic Planning



3 Asset Integrity



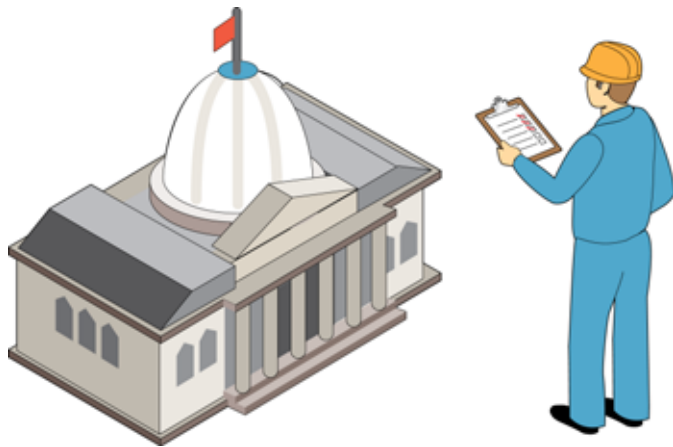
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#1 Safety

Safety	Real Time	Capital Projects Management	Reduce Costs	Staff Support	GRC	Stakeholder Relations
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Key Stakeholders: *CEO, COO, VP Ops, VP HSE*

Improve Worker Safety and Environmental Compliance



- Accurately manage employee and contractor health and safety performance
- Ensure that global HSE policy compliance is met
- Monitor and ensure that health and safety KPIs are met

#2 Real Time Drilling & Production KPI & Metrics Visibility

Safety	Real Time	Capital Projects Management	Reduce Costs	Staff Support	GRC	Stakeholder Relations
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Key Stakeholders: *CEO/COO/VP Operations/Production CIO, CTO*

Providing a 360- degree view of all information and helping to accelerate decisions in the digital oil field.



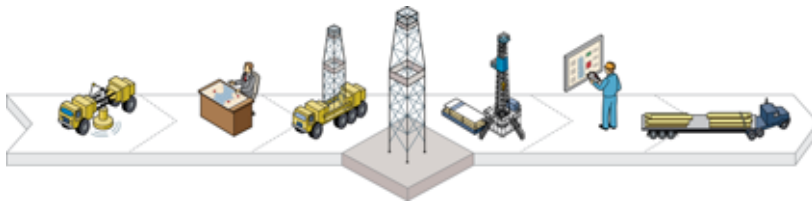
- Identify KPIs appropriate to operators goals
- Establish processes to gather corresponding data
- Deploy data gathering and management tools
- Real-Time Interactive Dashboards
 - Integrated with federated data sources – access different sources for Historical and Real-Time data
- Event Driven Alerts
- Event Driven Actions

#3 Asset Integrity

Safety	Real Time	Capital Projects Management	Reduce Costs	Staff Support	GRC	Stakeholder Relations
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Key Stakeholders: *COO, VP Operations and Production, CIO*

Improve decision-making and reduce unscheduled downtime. Asset lifecycle management and condition-based maintenance for oil and natural gas exploration, drilling, and production. Improved ability to schedule rigs based on requirement and availability.



- **Improve Asset Visibility, Tracking, and Control**
 - Complete asset history with secure reporting, proactive policy mgmt, and robust financial control & reporting
- **Operate and maintain the asset**
 - Highly automated execution of financial, operational, and maintenance strategies
- **Streamline design and construction of complex capital assets**
 - Projects, Document management & collaboration

#4 Strategic Planning

Safety	Real Time	Capital Projects Management	Reduce Costs	Staff Support	GRC	Stakeholder Relations
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Key Stakeholders: *CEO/COO, VP Operations/Production, CFO, CIO,*

What-if & analysis capability to support optimization and prediction in a less complex, more cost-effective software environment



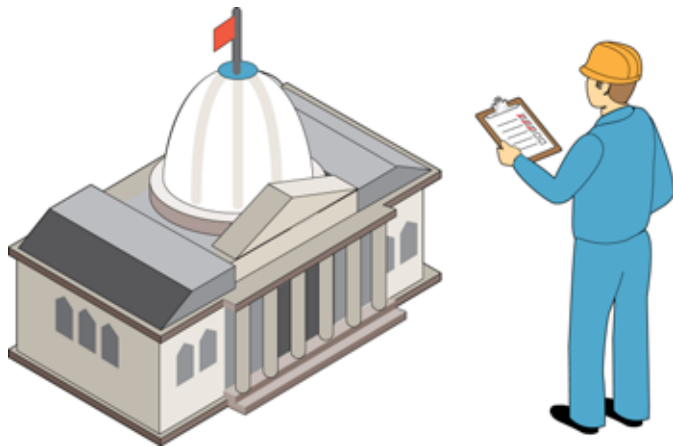
- Estimating the possible reserve sizes of unproved oil and gas prospects prior to drilling
- Developing pricing views for marketing gas at all major trading hubs across North America
- Predicting prices, supply/demand volumes, imports, exports, operating rates for plants
- Improving the accuracy of cost estimates of a single well exploration
- Assessing the probability of drilling a successful well
- Determining optimum replacement rates for equipment

#5 Governance Risk & Compliance

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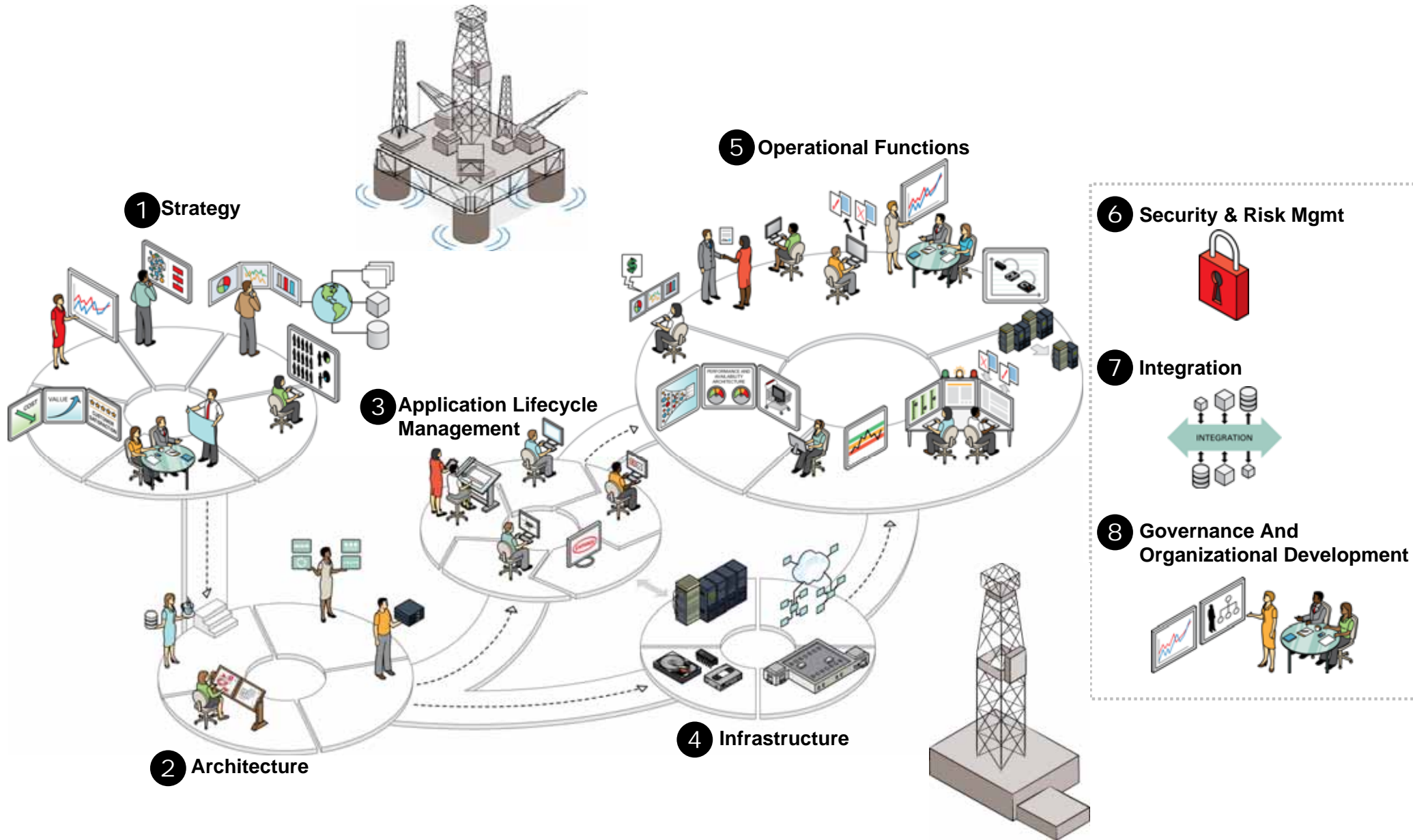
Key Stakeholders: *CEO COO, CFO, VP Legal, Regulatory*

Consistent, effective publishing, management and retrieval of documents



- Insight into critical risk areas with executive dashboards and drill down reporting
- Accelerate risk response with integrated risk reporting and remediation
- Control user access and enforce segregation of duties with business-driven rules
- Document control
 - Common taxonomies
 - Consistent retention
 - Document migration from shared-drives
 - Common search mechanism across repositories
 - Document custodians
 - Document templates

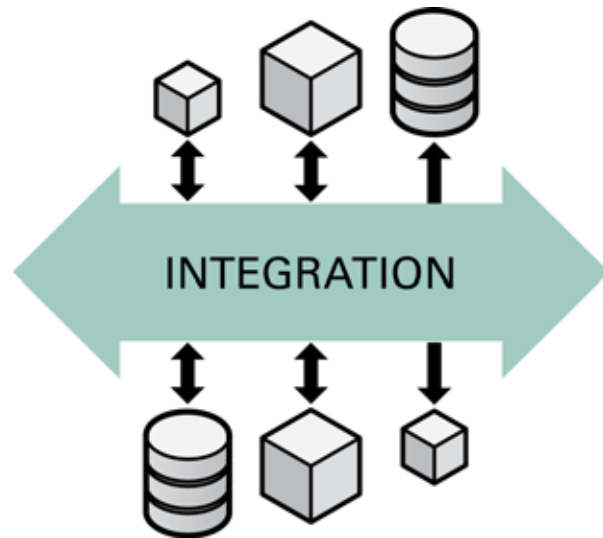
What it Means for the CIO



Integration

Safety	RealTime	Capital Projects Management	Reduce Costs	Staff Support	GRC	Stakeholder Relations
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Standards-based SOA integration framework allows the easy orchestration of cross application business processes. A platform that offers increased service levels while lowering management and operational costs.



A 360 Degree View

- Deliver flexible, scalable and dynamic interaction with key Third Party vendors
- Build differentiated business capabilities that provide a competitive advantage
- Help scale the company and create the agile enterprise—which will build a Robust IT Infrastructure

Practical Effect of:

- Application integration
- Application rationalization
- Software portfolio management
- Spreadsheet reduction
- Elimination of spreadsheets & email as a primary data source



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Role-Based Access to Trusted Data Sources

Safety	Real Time	Capital Projects Management	Reduce Costs	Staff Support	GRC	Stakeholder Relations
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Defined, trusted sources of data and information with a secure, common access mechanism based on user business roles.



Protect enterprise sensitive data, lower administrative cost and provide end-to-end regulatory compliance

- **Compliance Auditing**
 - Built-in reports
 - Published data warehouse
 - Configurable Alerts
 - Manage audit settings
- **Detect and Prevent Insider Threats**
 - Detect suspicious activity early
 - Escalate auditing as needed
- **Protect and Secure valuable audit data**
 - Consolidate and eliminate audit silos
- Investigations and remediation (Breach notification laws)



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Role-Based Access to **Trusted Data Sources**

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Improve governance and reduce risk through the consolidation, cleansing and sharing of enterprise information

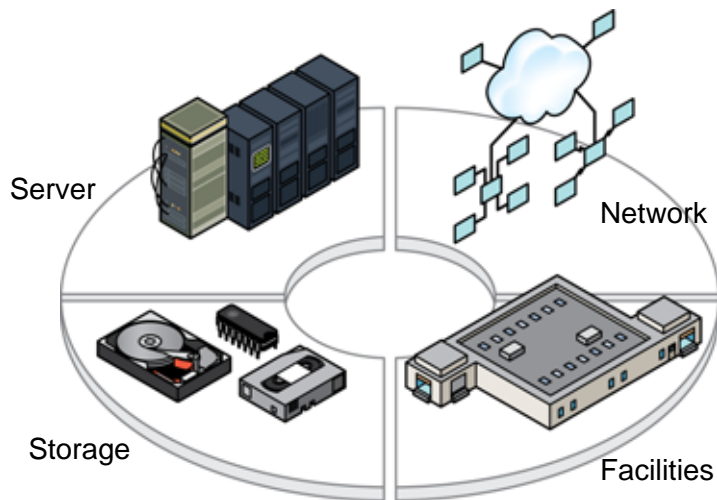
- Master data management
- Defined data and information repositories
- Data migration
- Contextual search mechanisms
- Defined metadata
- Quality improvement
- Elimination of spreadsheets & email as a primary data source



IT Infrastructure for Shale Gas, Bakken and Oil Sands

Safety	Real Time	Capital Projects Management	Reduce Costs	Staff Support	GRC	Stakeholder Relations
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Improve the infrastructure efficiency using the right-size hardware resources for computing and storage. Deploy integrated and fully tested hardware appliances for OLTP and transactional workloads that can be scaled out easily when demand increases.



Foundation for Business Intelligence

For leading Unconventional Company, Enterprise Information is delivered through the implementation of:

- Oracle Business Intelligence:
- Oracle Business Intelligence
- Oracle Hyperion Enterprise Performance Management
- Oracle E-Business Suite (ERP)

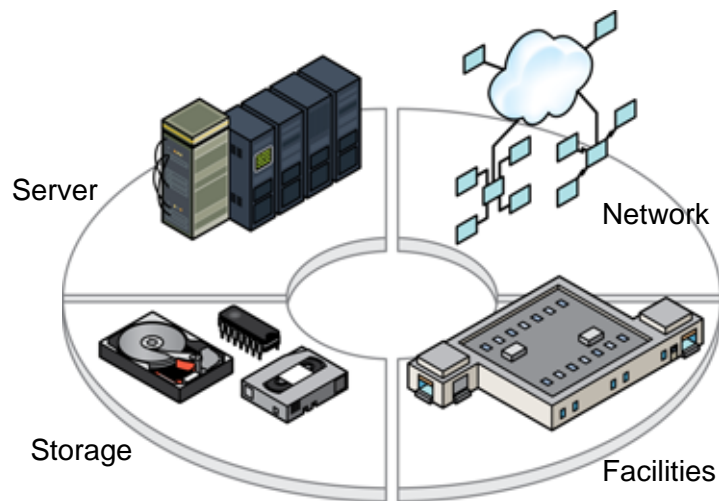
Integrated with:
Oracle Stack of Middleware

Powered by: Exadata

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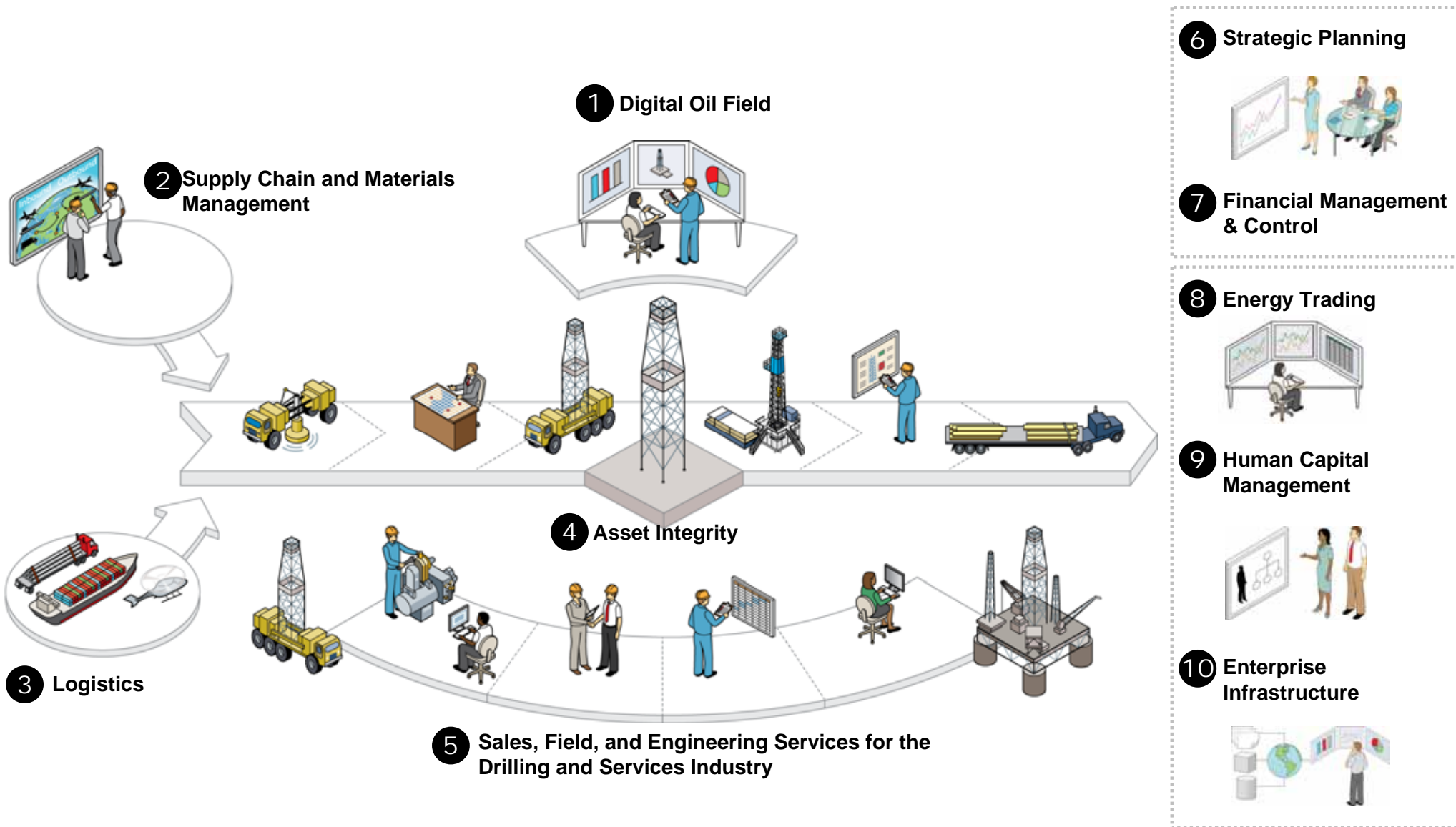
Foundation for Performance

The primary need: **PERFORMANCE**
Specifically: Provide timely estimated reserves data to the market

Results:

3D modeling data was particularly suitable to the Exadata Hybrid Columnar Compression
Customer was able to achieve 62X compression of the data and the compression actually improved performance.

How Oracle Solutions Help Manage the Upstream Lifecycle



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