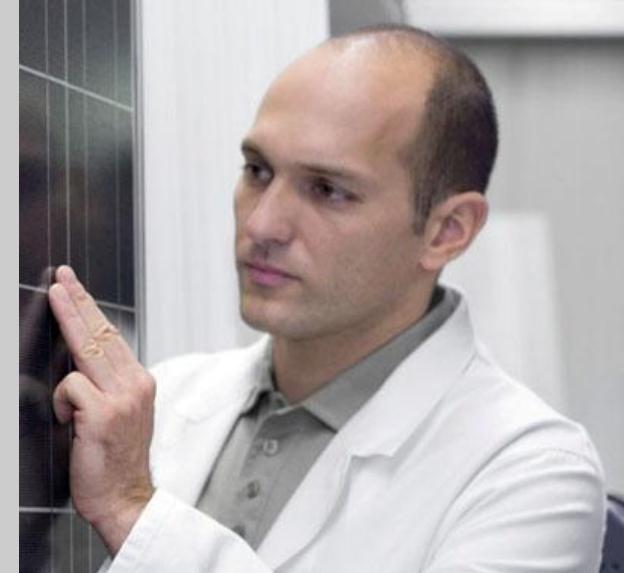


Reliance Industries Limited

Executive Board Presentation
BEST BUSINESS PRACTICES & MEASURES



SAP INDUSTRY BLUEBOOK : Oil & Gas

APPROACH WHITE PAPER
BUSINESS TRANSFORMATION SERVICES

28th June 2010

Author .
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THE BEST-RUN BUSINESSES RUN SAP™

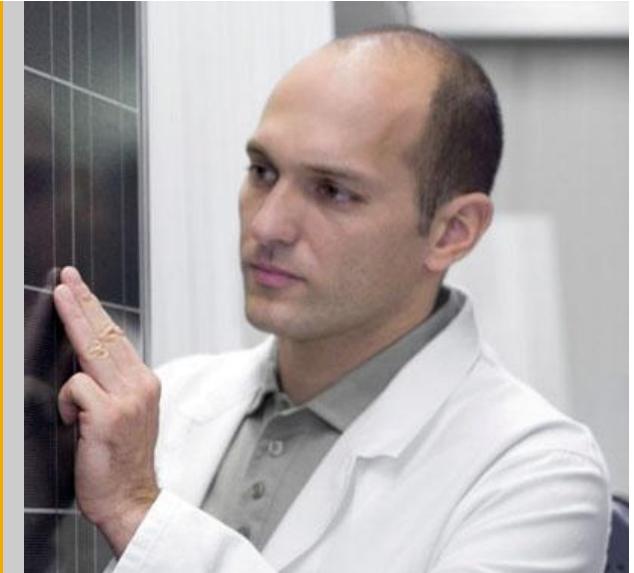


SAP INDUSTRY BLUEBOOK : Oil & Gas

Volume - 2 (PART - B)

Oil & Gas - Best Business Practices

APPROACH WHITE PAPER BUSINESS TRANSFORMATION SERVICES



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THE BEST-RUN BUSINESSES RUN SAP™



Content – Volume(2)



Planning Building Commissioning Assets

Optimized Asset Operation & Maintenance

Fuel Replenishment & Terminal Automation

Fuel Price Management

Oil & Gas - Strategic Sourcing & Procurement

Venture Partnership (JVA)

Operation Risk management in Oil & Gas

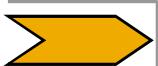
Oil & Gas – Risk Compliance

Oil & Gas – UpStream Operations

Oil & Gas – Down Stream Marketing & retailing

Content – Volume(2)

 O&G – Primary & Secondary Distribution

 O&G – Terminal Automation

 O&G – TSW & Scheduling Cockpit

 O&G - Pipeline Visualization

 O&G - Sustainability

 O&G – Refining & Manufacturing

 O&G – Supply Transmission & Trading

 O&G – High Performance Organization

 O&G – Energy Data Management

 O&G – Identity Management

Content – Volume(2)

O&G – HR Operations

O&G – Core HR / Global Payroll

O&G – Operational Financials

O&G – Financial Closure

O&G – Financial Analytics

O&G – Consolidation & Strategic IT

O&G – International Trade & Scheduling

O&G – Bulk Transportation Management

O&G – Work Force Scheduling

O&G – Asset Safety & Compliances

Content – Volume(2)



O&G – Process Integration

O&G – Enterprise Performance Management

O&G – Business Intelligence / Platform

Best Practice Value Scenario

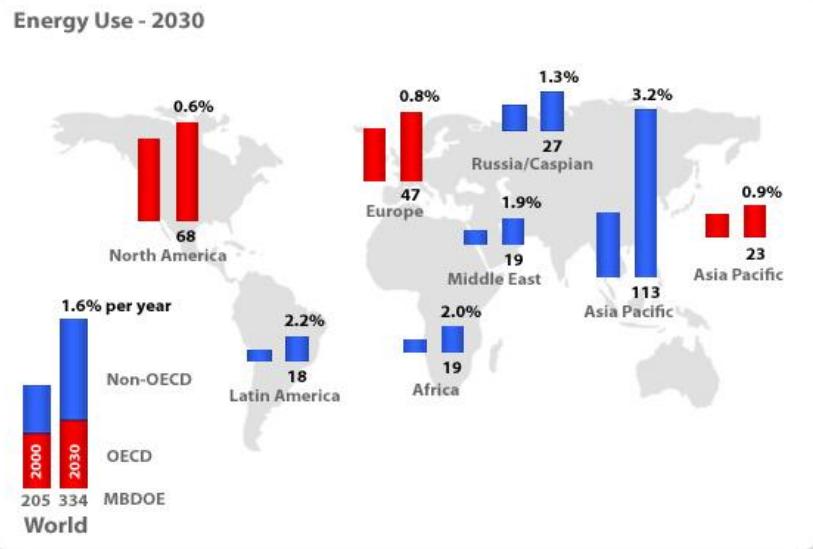
O&G – UPSTREAM , A BATTLE FOR NEW RESOURCES



THE BEST-RUN BUSINESSES RUN SAP™



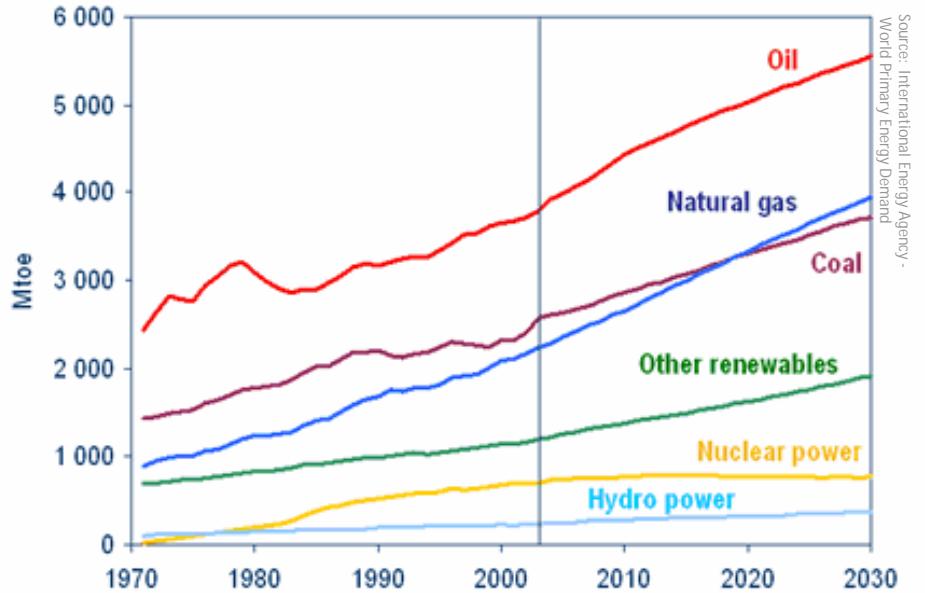
Outlook for Energy – A View to 2030



- Oil & Gas will continue to lead among the different forms of energy supply

- Robust energy demand growth will continue through 2030

- Energy demand will grow by about 50% mainly driven by developing countries



The Future Supply of Resources is a Massive Challenge for Energy Companies

Supply Challenges in Oil & Gas



Energy Security Shapes Policy

- Increased risks of supply disruption
- Policy impacts on regulations & taxes
- Unconventional resource incentives
- Sustainable and responsible development

National Oil Companies Expand

- Control of future energy supplies through strategic direct investments
- Leverage reserve control for consumer access
- Cooperate to share risk and gain access to proven technology



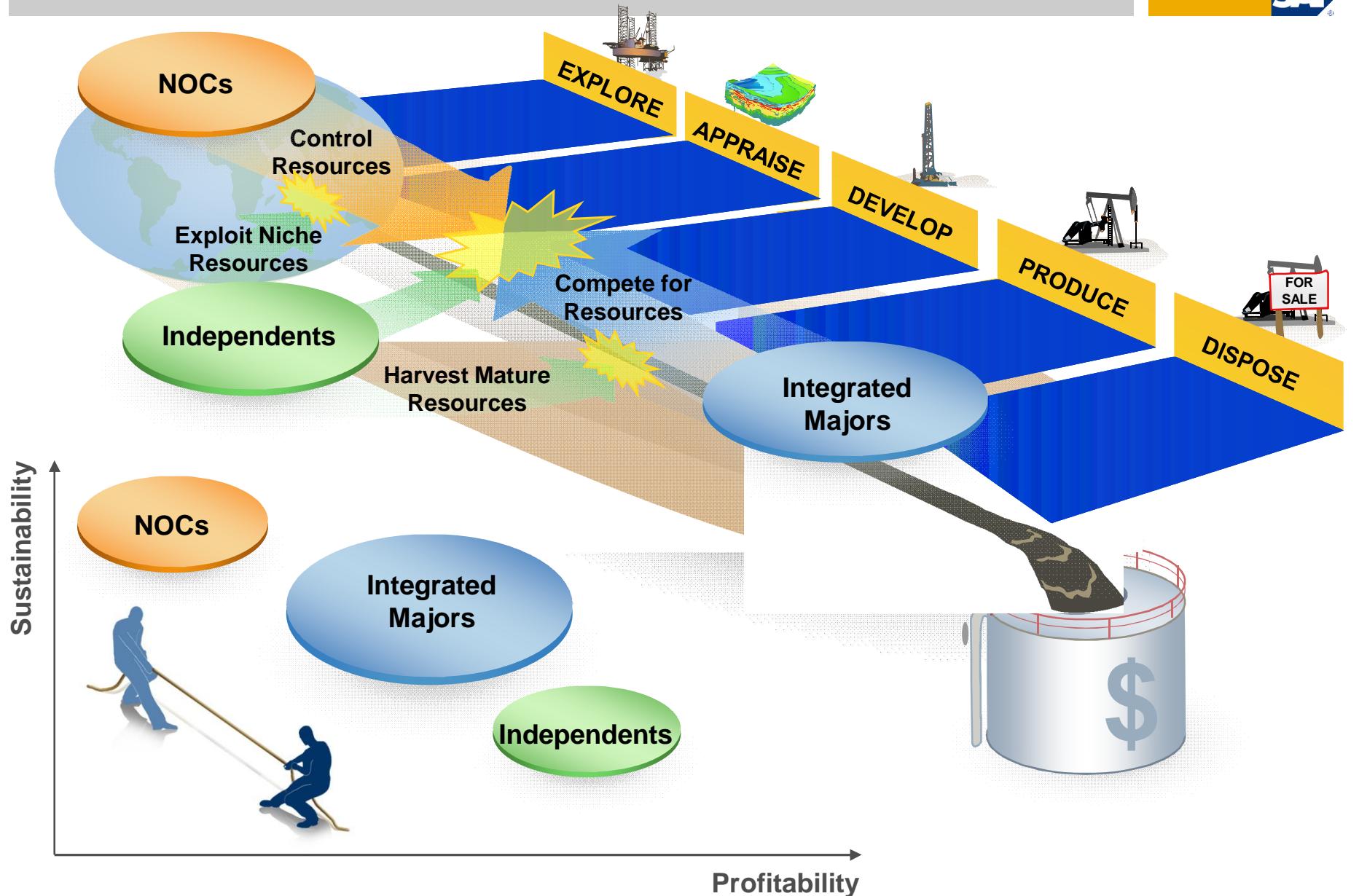
Growing Limits on Reserve Access

- Increasingly remote opportunities
- Governments Limiting Access
- Entrance of Advanced Technology Providers

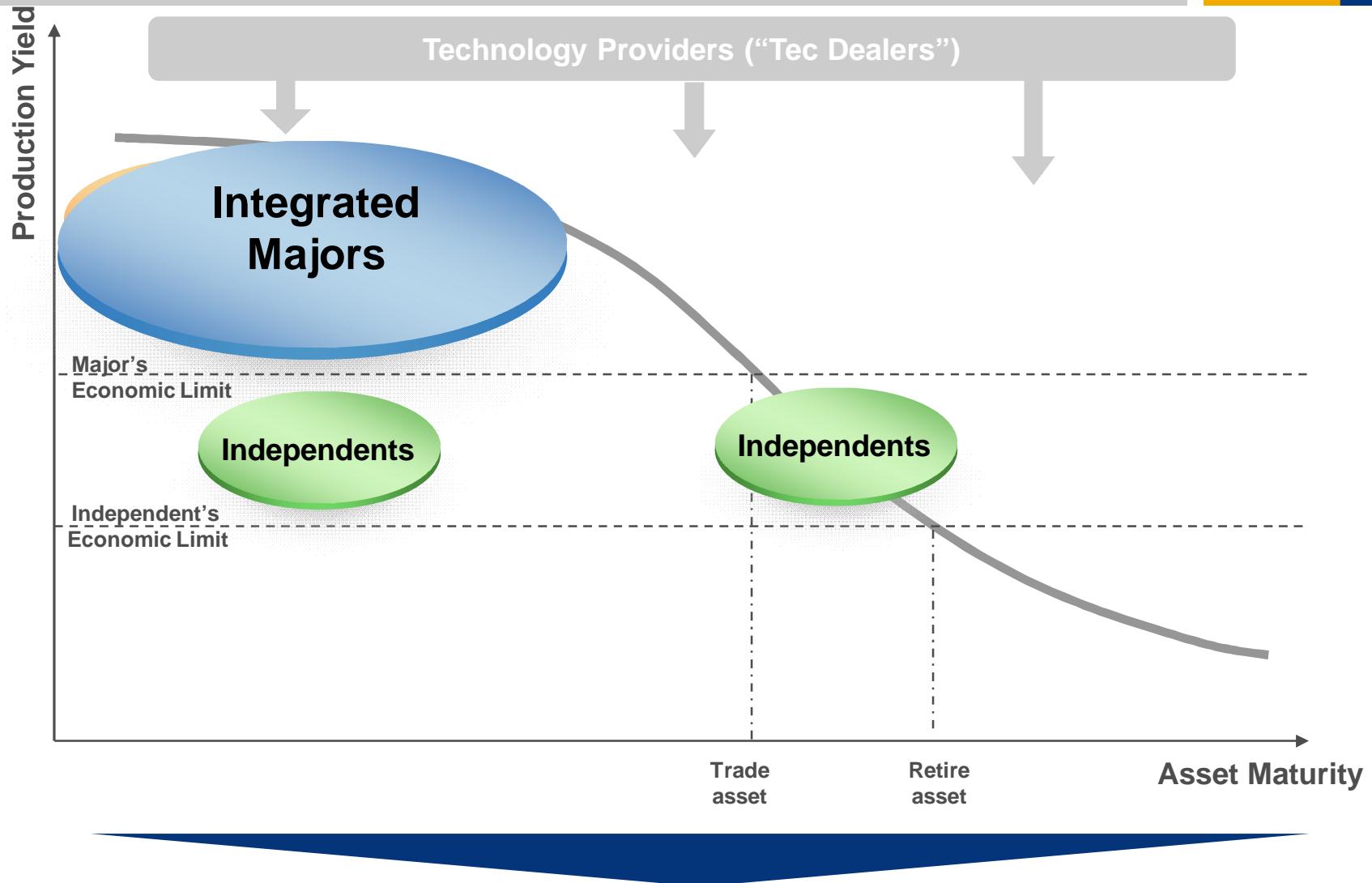
Globalization Drives Change

- Global operating models
- Concentration of portfolio into strategic plays
- Talent pool is aging, tightening, and shifting

Energy Demand and Industry Trends driving the Market in Upstream towards a Battle For New Resources



A Closer Look to the Future Market Model

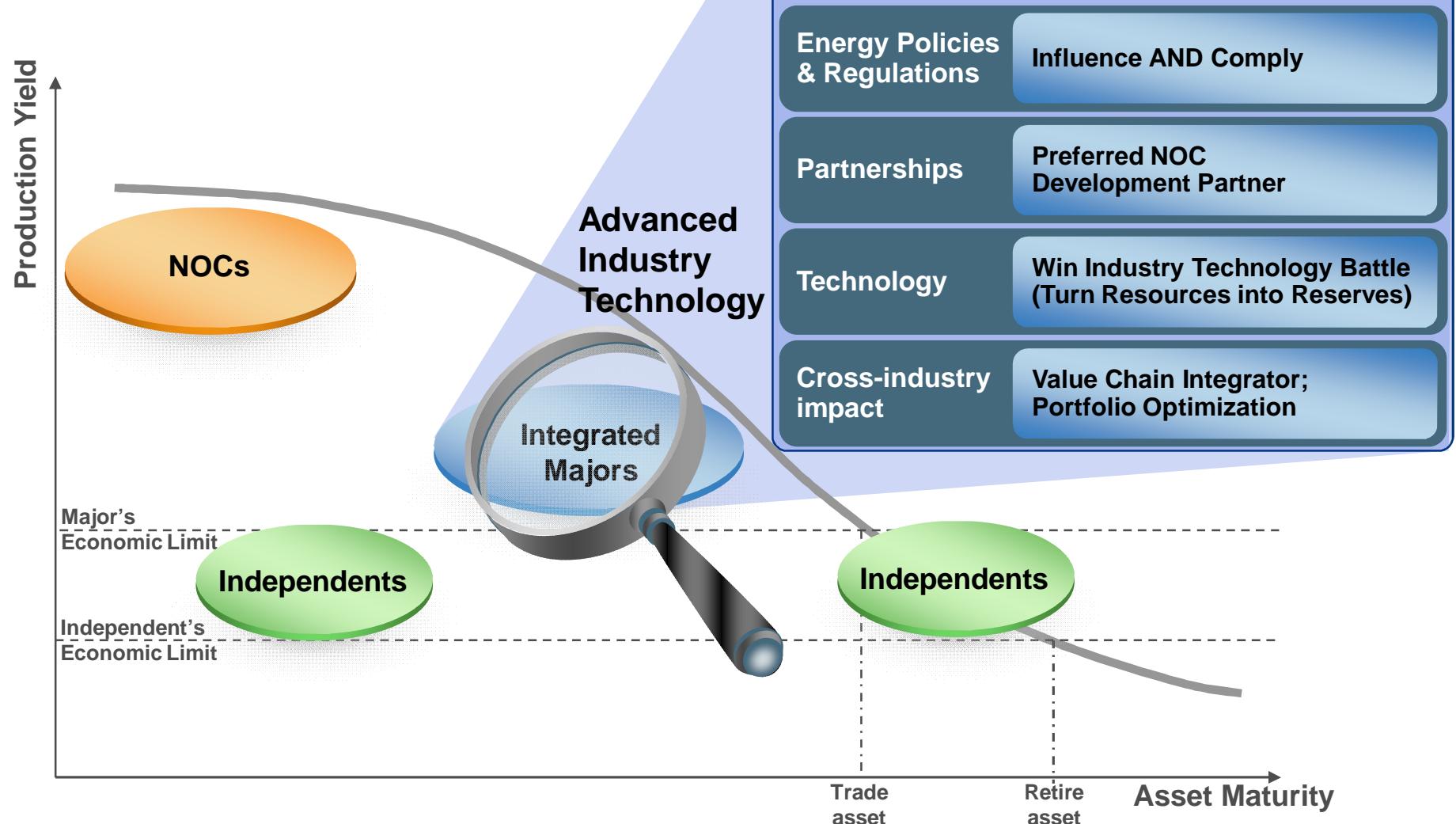


NOCs are pushing the Center of Gravity - Challenge for all Market Players to align

Basis for Competition is different for each model

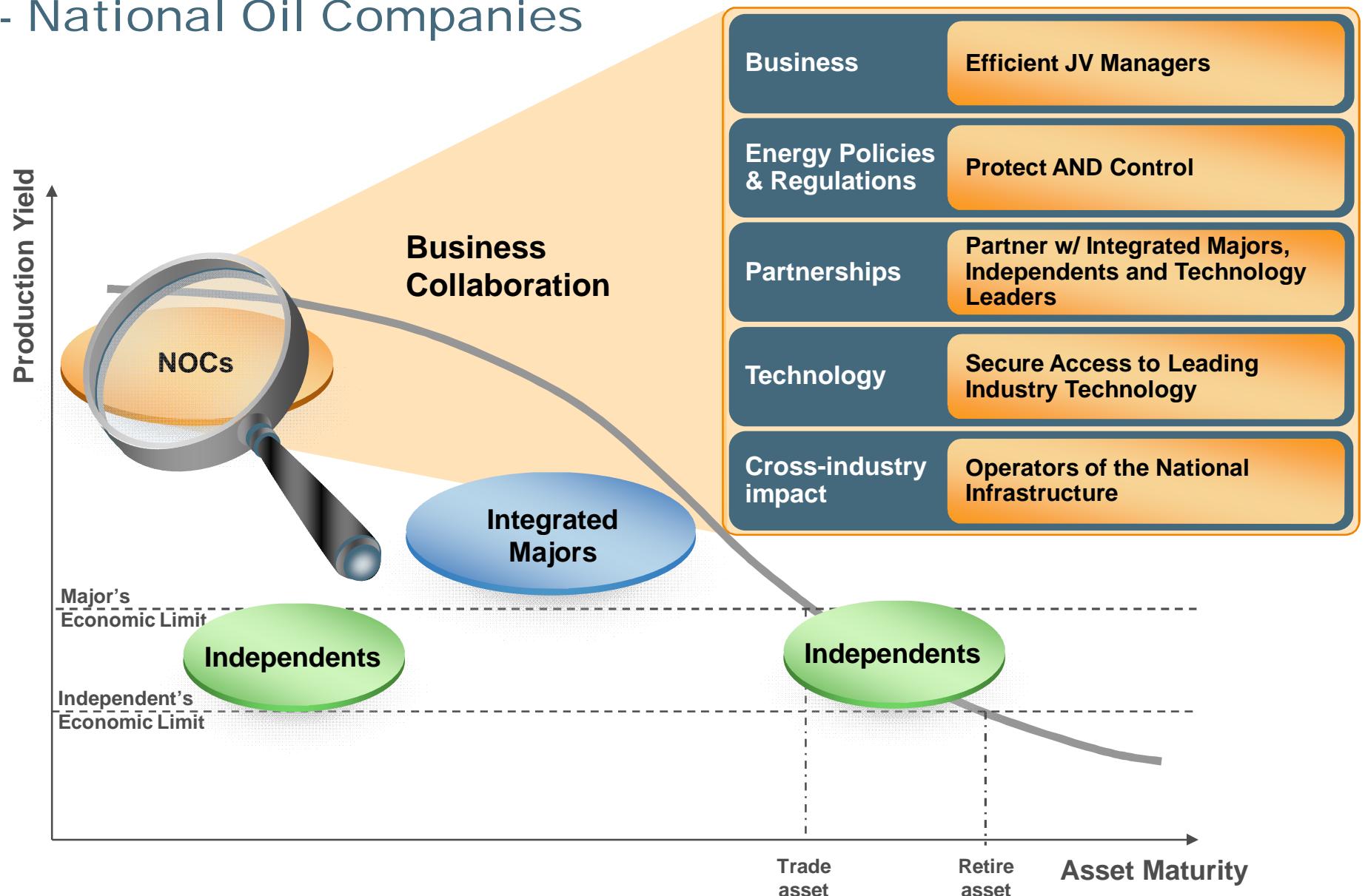


- Integrated Majors



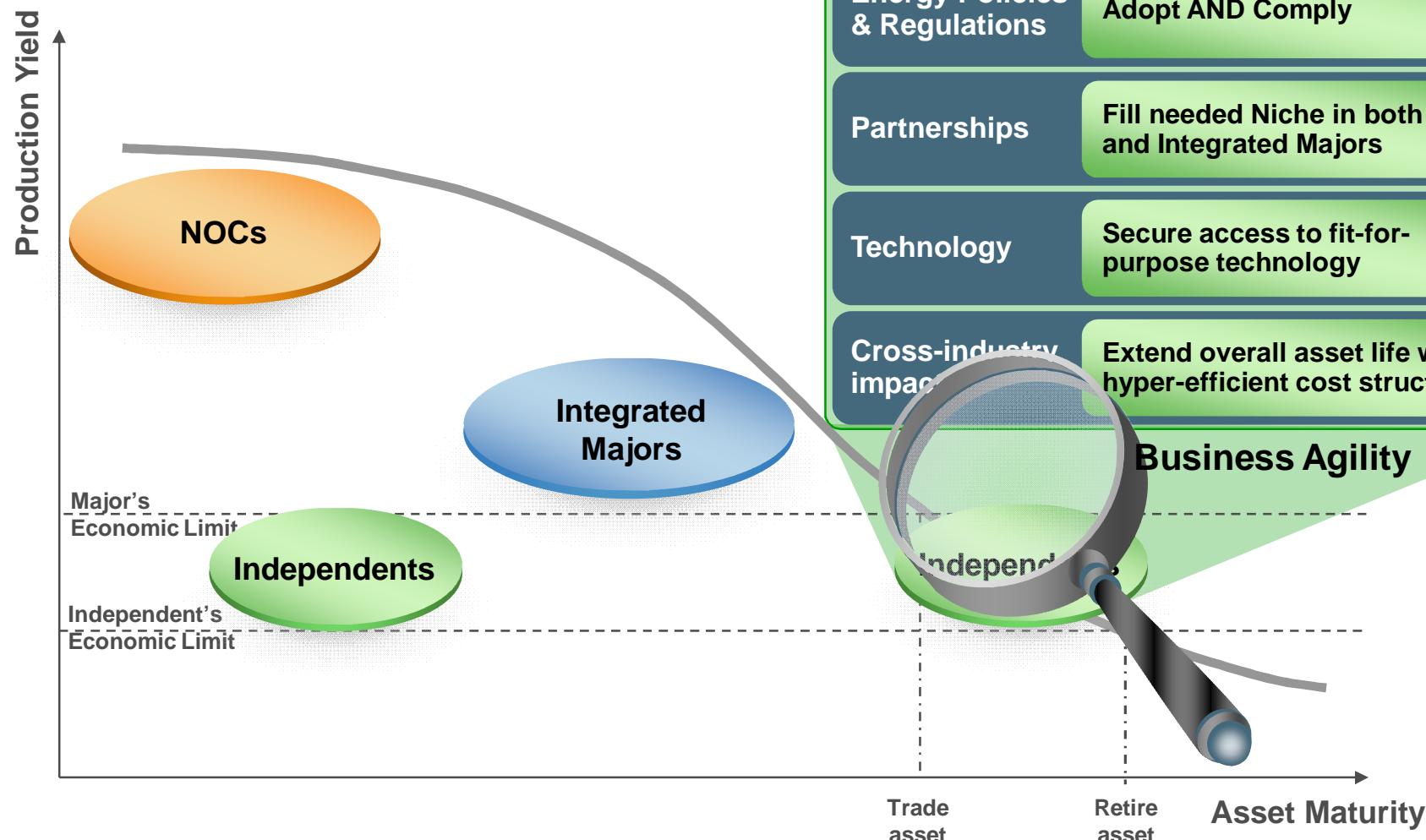
Basis for Competition is different for each model

- National Oil Companies

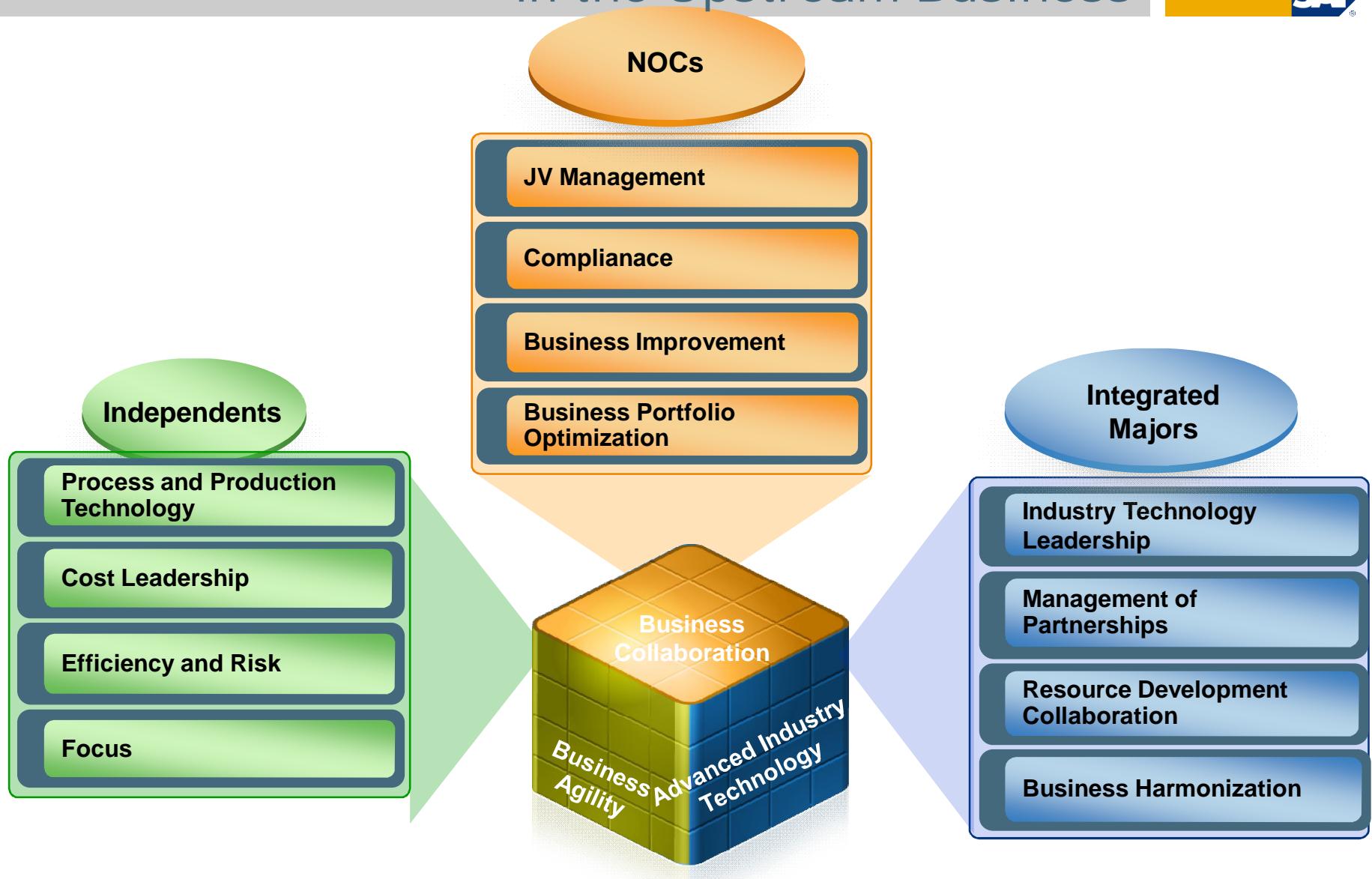


Basis for Competition is different for each model

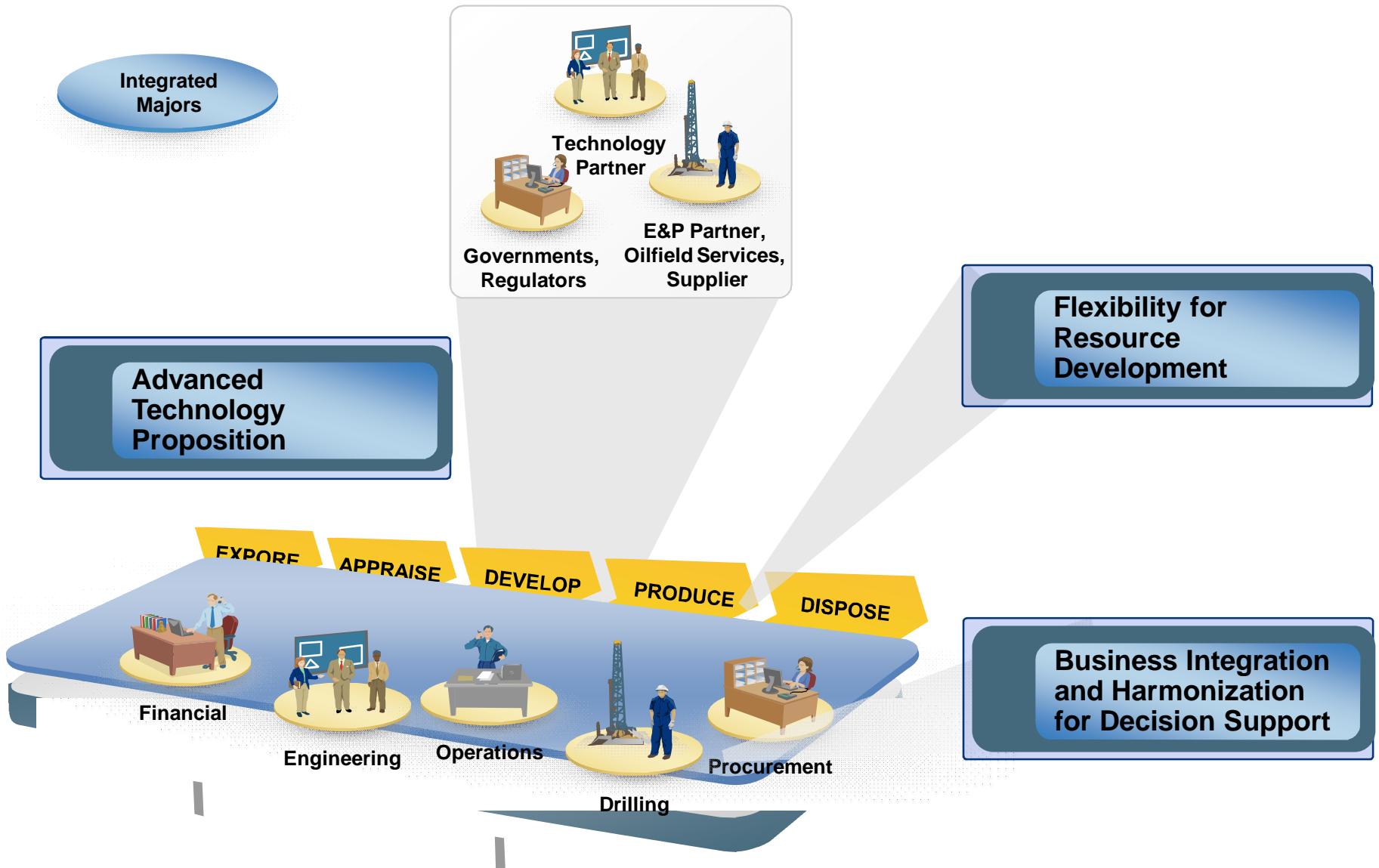
- Independents



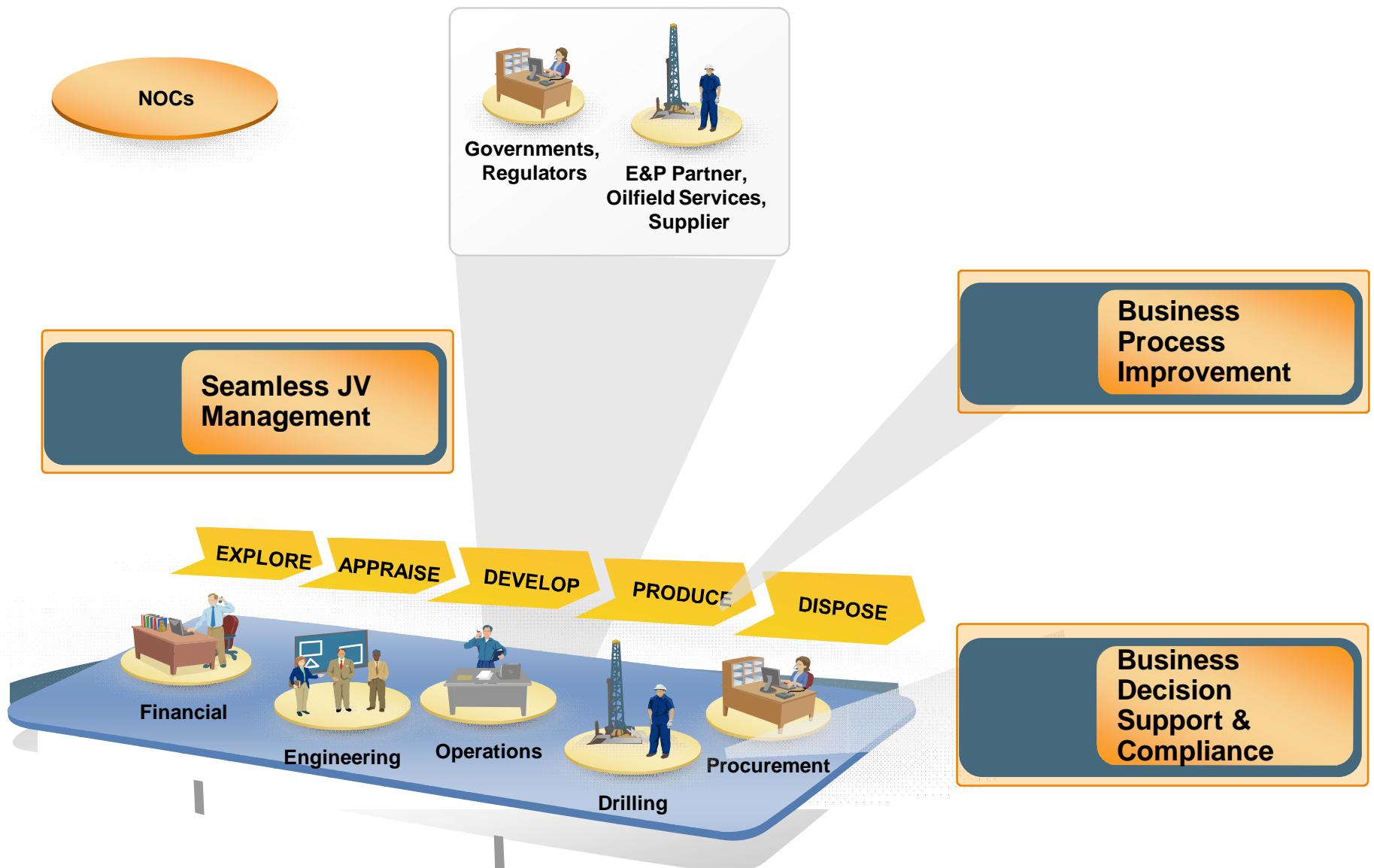
Impact on Differentiators in the Upstream Business



... resulting in Business Requirements for Integrated Majors : Technology Approach



Business Requirements for NOCs – Business Collaboration



Business Requirements for Independents – Business Agility



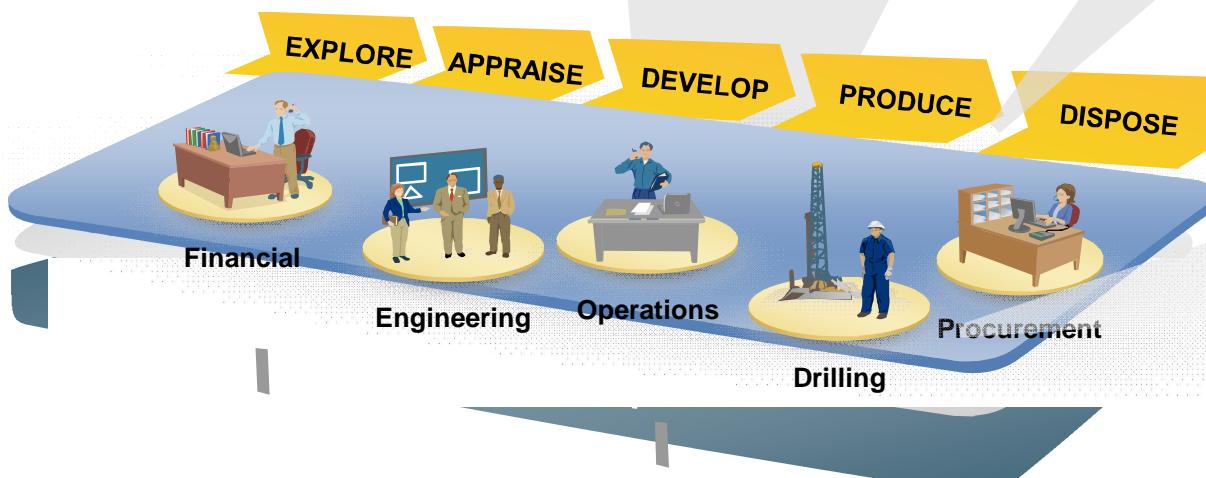
Independents



Compete in E&P Technology

Cost Leadership

Flexible Business Decision Support



Conclusions for Business Requirements in Upstream



**Supply Chain Integration
varied based on
Business Model**

**End-to-End Supply Chain
Integration supports the
Best in Class Technology
Proposition**

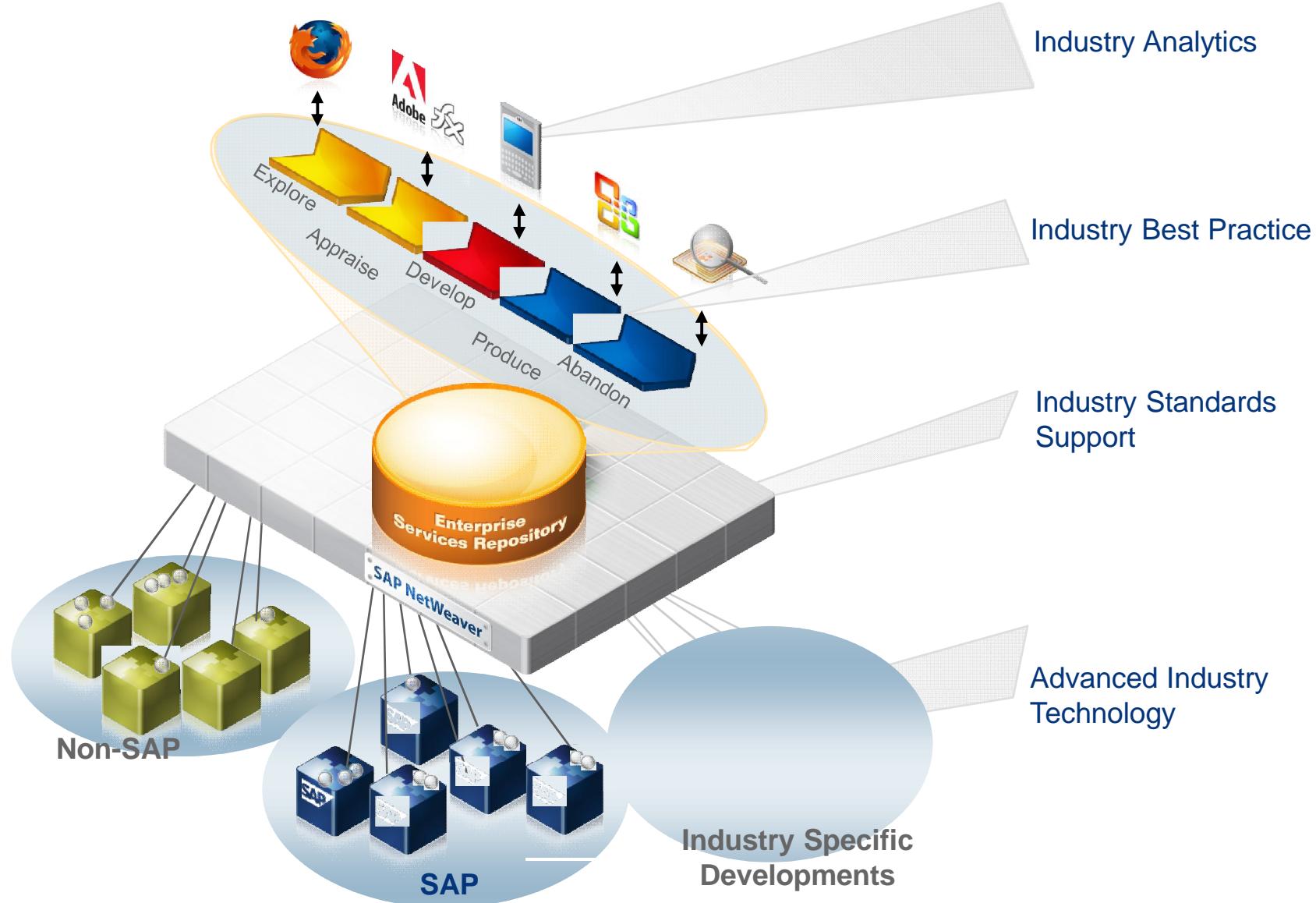


**Value Chain Integration
drives Cost Efficiency**



**All Business Models
require the Integration of
Business Execution for
Business Decision
Support**

SAP provides one Oil & Gas Platform for the Integration of Business Execution



IT Challenge of Integrated Majors



Achieving Excellence with Harmonization requires Inter-operability
Enable Digital Oil Field



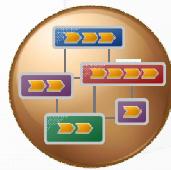
Connecting People



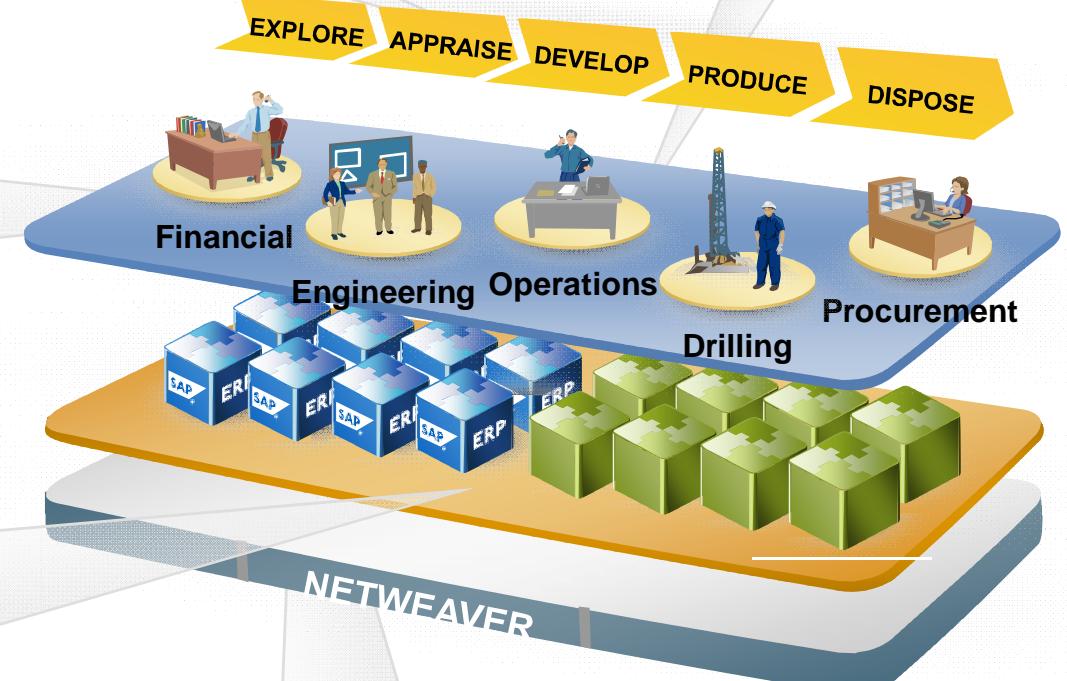
Smart Information & Process Distribution

Role based, intuitive User Interface

Define E&P Best Practice



Standardization & Harmonization
Intra- & Inter-Company Processes



Standardization through IT Infrastructure
International Compliance
Consolidation Flexible IT Infrastructure

IT Challenge of NOCs

Managing Relationships & Governance requires Inter-operability



Integrated Reporting



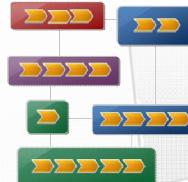
Robust & Compliant Reporting
Information based on Roles

Adopt Standards



Tech. & Bus. Integration
Flexible & Collaborative

Business Process Mgmt



BPM Concept & IT Enablers
Hetero. IT with Auditable points

JV Process Orchestration



Transparent & Efficient Process
Governmental & Internat. Regulation

EXPLORE APPRAISE DEVELOP PRODUCE DISPOSE

Financial

Engineering Operations

Procurement

Drilling

NETWEAVER

Flexible IT Infrastructure

JV Governance through IT Infrastructure
International Compliance
Consolidated & Standardized

IT Challenge of Independents

Combining Cost Efficiency with Innovation requires Inter-operability



Introducing new
Technology



Across the Value Chain
Inter-Company Collabor.

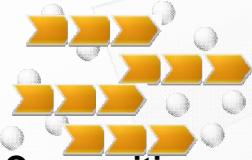
Cost Efficiency
Standardization

by

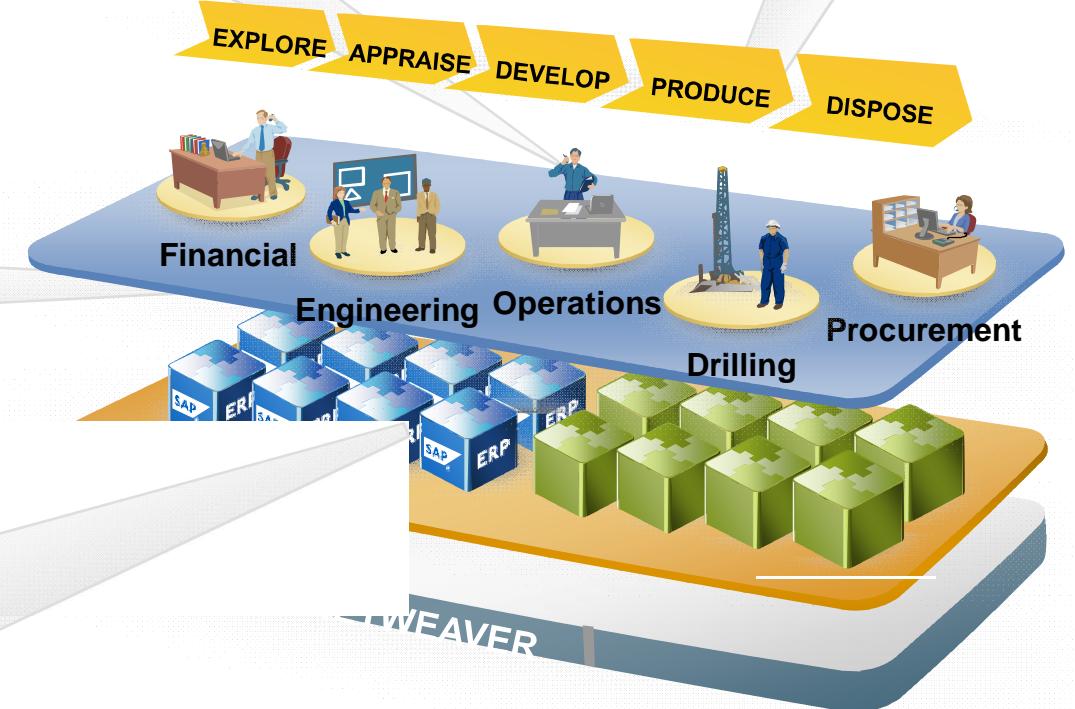


Smart Information & Process Distribution
Role based, intuitive User Interface

Innovation via Composition



Process Composition
Intra- & Inter-Company Processes



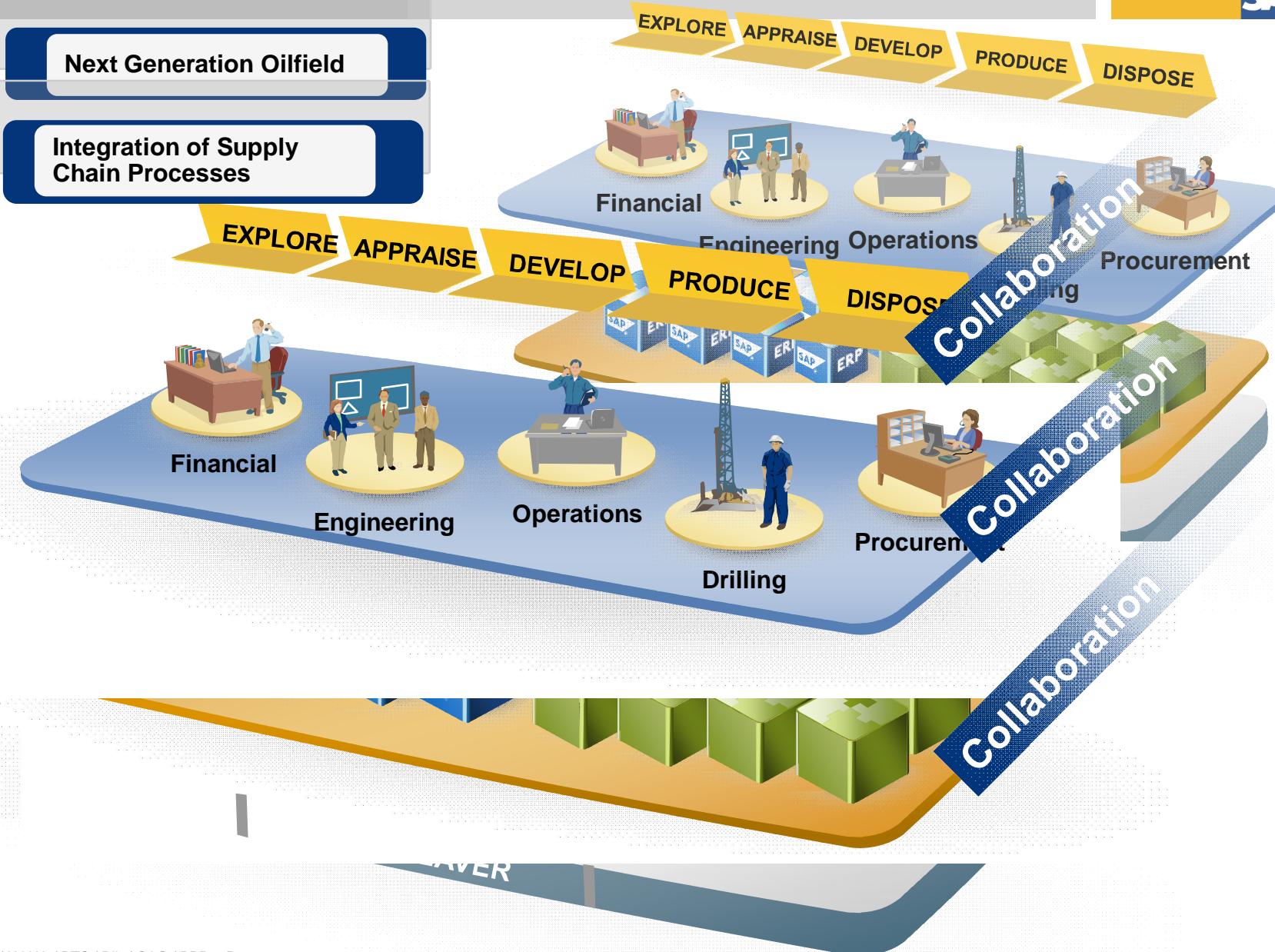
Flexible IT Infrastructure
Optimized Landscape
International Compliance
Consolidation

Flexibility for Future Collaboration between Companies



Next Generation Oilfield

Integration of Supply Chain Processes



Key trends driving change in the Upstream Industry



Increasing customer demands and environmental complexity are driving the need for constant innovation

New policy focused on Energy Security



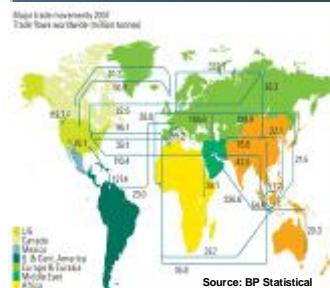
- Increased risks of supply disruption
- Policy impacts on regulations & taxes
- Unconventional resource incentives
- Sustainable and responsible development

National Oil Companies Expand



- Control of future energy supplies through strategic direct investments
- Leverage reserve control for consumer access
- Cooperate to share risk and gain access to proven technology

Global strategic moves



- Global operating models
- Concentration of portfolio into strategic plays
- Talent pool is aging, tightening, and shifting

Diminishing access to reserves



- Increasingly remote opportunities
- Governments Limiting Access
- Entrance of Advanced Technology Providers
- Increased M&A activity as part of central strategy

Need for constant innovation ... affecting industry business models



Customers are demanding more flexible business models and companies are innovating to support them

Energy Security Shapes Policy

- Assessing and quickly responding to a constant set of changing risks and regulations
- Accurately model scenarios under different risk-related events
- Able make the right decisions

National Oil Companies Expand

- Collaborate with National Oil Companies and partners
- Winning competitive bids for production sharing contracts, exploration licensing rights.
- Right information for accurately assessing the portfolio

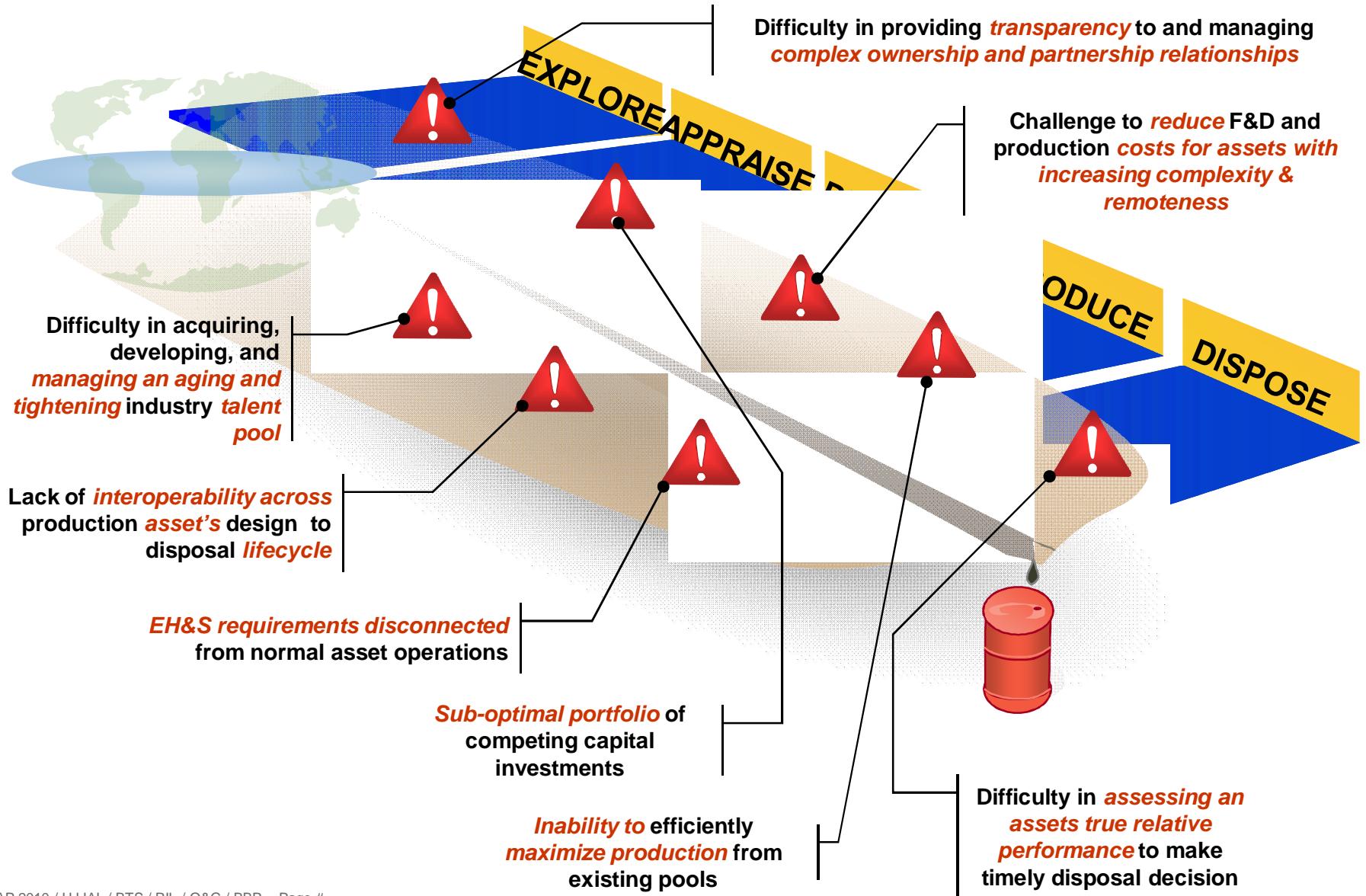
Global strategic moves

- Companies restructure to better position themselves in the fast changing market.
- Execution of environmentally sound practices around offshore seismic
- Incorporating global operating models and processes.

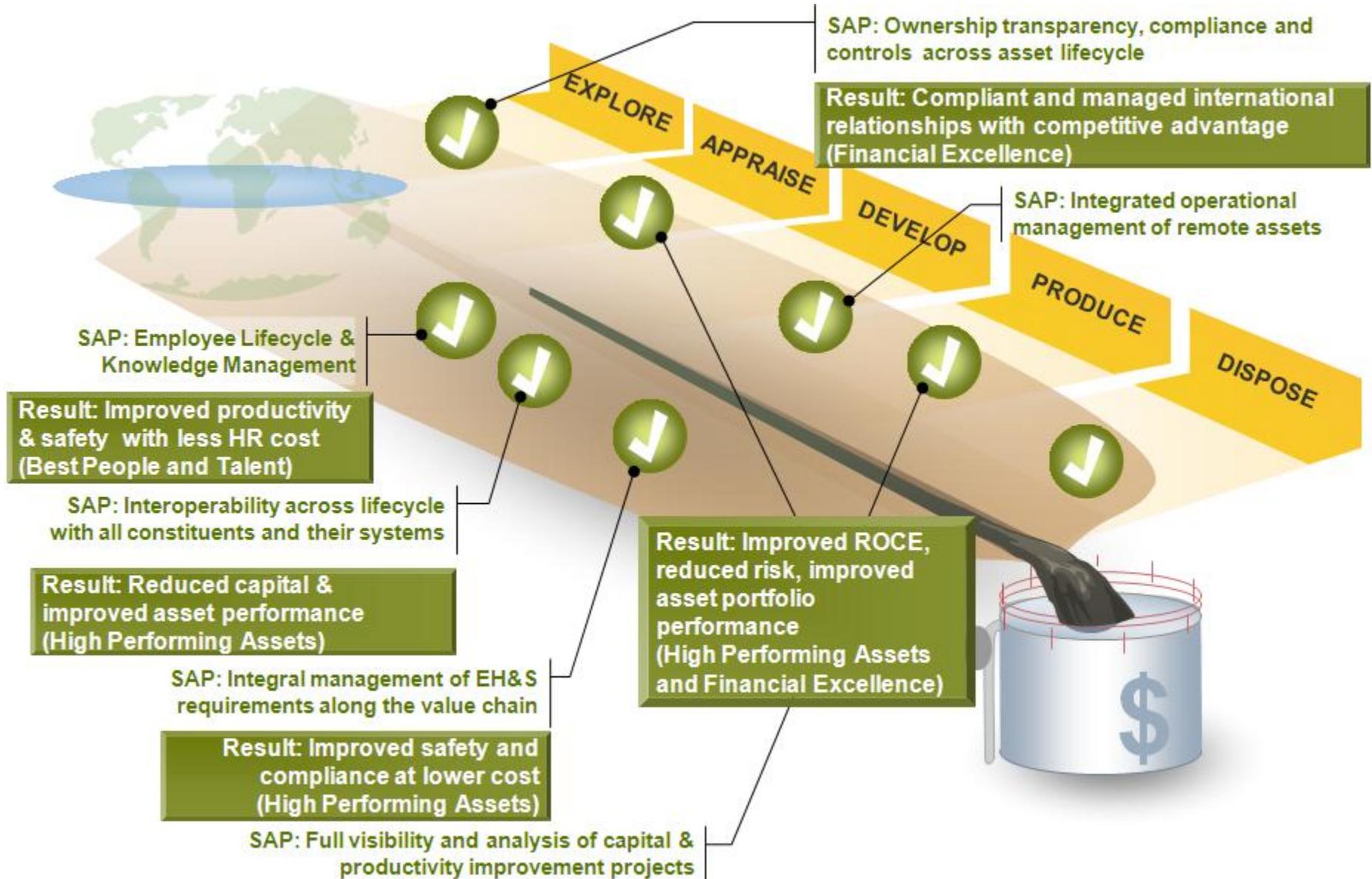
Diminishing access to reserves

- Greater commercialization of oil sands, LNG and GTL markets
- Logistical challenges in monitoring operations and manage people movements

Barriers to achieving both profitability and sustainability in the Upstream Oil & Gas



SAP enables to better balance profitability vs. sustainability by providing ...



Assess, Design, Build and Commission Assets

Integrated Process for Design/Build/Buy/Commission



Assess, Design Build and Commission Assets

- Optimizing and managing complete lifecycle of capital portfolio and project management processes.
- Handover of assets to operating owner from construction /engineering company.
- Master data is ready on day 1 to efficiently operate and maintain the assets



Solution enabled by SAP	Key benefits
<ul style="list-style-type: none">■ Manage Asset Portfolio<ul style="list-style-type: none">▪ Plan and oversee investments▪ Balance high-level resource allocation▪ Manage portfolio of capital projects■ Manage Capital Projects<ul style="list-style-type: none">▪ Collaborate with design partners▪ Monitor project execution▪ Ensure milestone achievements▪ Manage purchasing, progress payments■ Manage Asset Master Data<ul style="list-style-type: none">▪ Building and sustaining the asset master data foundation▪ Collaboration owner/operator with EPC and equipment manufacturers■ Operational Readiness<ul style="list-style-type: none">▪ No delay in operational start-up▪ Minimize errors & reduce training▪ Keep information in sync for future capital projects	<ul style="list-style-type: none">■ Standardized, Integrated and transparent capital and project management process■ Earlier sustainable returns from investments■ Accelerated time to service■ High quality of asset information and safe and reliable asset operations■ Role-based delivery of information to workers■ Smooth Collaboration with engineering and equipment partners

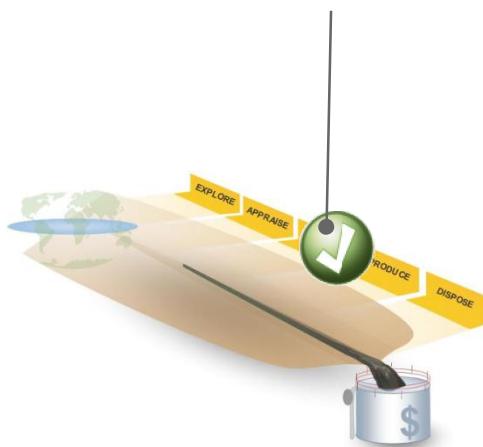
Asset Visibility & Performance

Operations are Visible, Allowing Rapid Response & Drill-Down



Asset Visibility and Performance

- Provide a single, real time view of plant & ERP data for managers to take action.
- Maximize returns on a network of assets through optimization



Solution enabled by SAP

- Connect operating systems & Business Applications to dashboards with real time alerts. Asset performance is monitored and events are triggered automatically.
- Bring together data from Operations and Maintenance into unified reporting and KPIs
- Standardize work processes and easy adoption. “Sharing of best business practices between site/plants”
- EAM processes are optimized, balancing efficiency with effectiveness, with all asset content available in a single source
- SAP® ERP, EH&S, Manufacturing Dashboard (MII), and Plant Mobility Solutions

Key benefits

- Stakeholders gain visibility across operations. Data leveraged from the source; No need to change core systems
- Managers and LOB's roll up results and look across sites/plants – benchmark best practices and drive results
- Increasing uptime, reducing overall process costs and enabling faster reaction to changing business requirements
- Optimization of maintenance spend

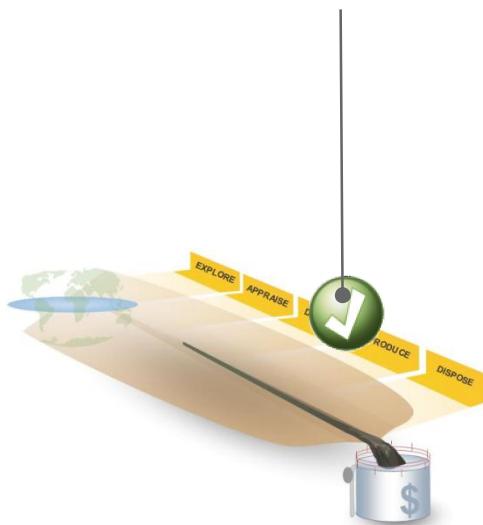
Optimized Asset Operations and Maintenance

Maximum Uptime



Optimized Asset Operations and Maintenance

- Maximize asset uptime, ensuring assets run at their optimum performance levels.
- Management of facilities and suppliers to ensure SLAs are enforced.
- Management of high investment in spare parts.



Solution enabled by SAP

- Planning and Scheduling
 - Technical asset management, business planning and budgeting, workforce management, and maintenance planning and scheduling
- Operations and Maintenance
 - Preventive and Corrective Maintenance, Maintenance order processing, Subcontracting, Mobile Asset Management
- Service Procurement
 - Fully integrated plant maintenance service request, spot bidding and procurement process
- Spare Parts Management
 - Seamlessly integrated Maintenance and Materials Management.

Key benefits

- Integrated asset management solution from planning through performance management
- Higher quality and profitability, decreased workforce and maintenance costs, increased production and more opportunities to meet customer demand
- Less unplanned maintenance, shorter turnaround times
- Ensures contract compliance
- Spare parts inventory that is effectively managed leads to reduced costs and improved optimization

Operational Risk Management

Enabling Business Process Safety & Compliance



Operational Risk Management

- Operational Risk Management connects the stakeholders with the operational management of safety for the environment, the people and the assets.
- This enables you to move beyond compliance and create a proactive risk management strategy and realize it in daily operations



Solution enabled by SAP	Key benefits
<ul style="list-style-type: none">■ Keep the Stakeholders Informed and Involved<ul style="list-style-type: none">■ Closed loop risk management including risk mitigation and prevention■ Auditable business processes and audit management solution■ Keep the Environment Safe<ul style="list-style-type: none">■ Integrated database and company-wide transparency regarding compliance with relevant regulations■ Emissions and Energy Management■ Keep the People Safe<ul style="list-style-type: none">■ Health and safety management■ Safety trainings and certificates■ Incident Management■ Keep the Assets Safe<ul style="list-style-type: none">■ Reliability centered maintenance■ Safe Systems of work: Lockout/tagout and work permits	<ul style="list-style-type: none">■ Operational Risk Management will support companies on their way to operational sustainability■ Mitigate strategic, operational, financial and personal risks■ Clear defined processes for monitoring and reporting conformity to regulatory requirements and corporate policies■ Reduced risk of incidents and fines. Assure health of all employees and contractors■ Safe operations and mechanical integrity through cost effective maintenance and reliability programs

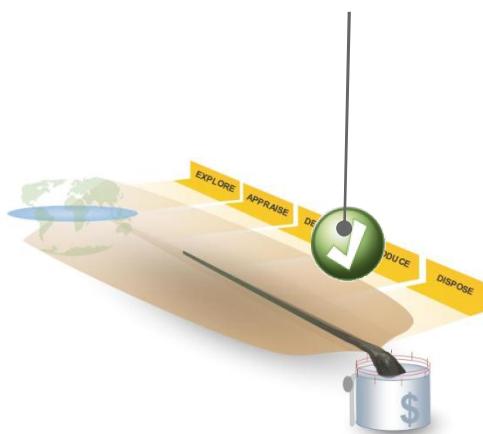
Operational Excellence

Integrated Sourcing and Procurement



Strategic sourcing and collaboration

A Closed Loop between Sourcing and Procurement, Enables Critical Transparency into the End-to-end Process From Savings Identification to the Delivery of Realized Savings



Solution enabled by SAP

- Sophisticated spend analytics provides data aggregation and enrichment
- Sourcing analysis, project management, RFx and award
- Manage contract activities from – strategy, creation, negotiation, and finalization
- Automated procure to pay process – delivering compliance, supplier collaboration, and increased adoption and productivity

Key benefits

- Actionable spend visibility to maximize spend under management and savings opportunities
- Compliance with sourcing and Development of a qualified supply base to generate further negotiated savings
- Accelerated cycle time to decrease maverick buying and speed-up contract utilization

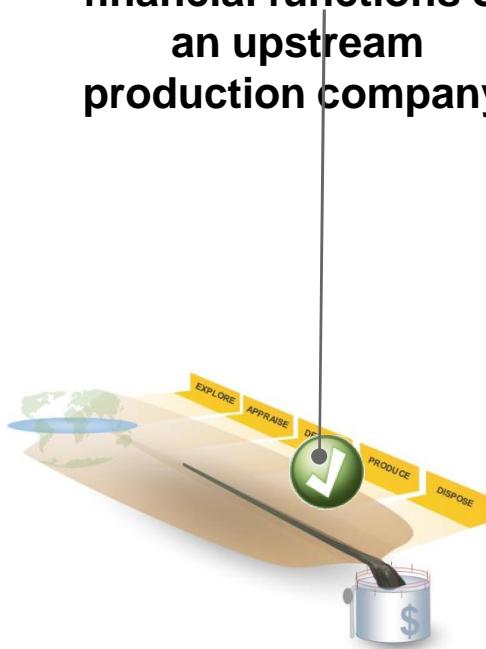
Financial Excellence

Manage Effective Venture Partnerships



Manage Effective Venture Partnerships

- SAP streamlines the business processes for the production, land, gas control, and financial functions of an upstream production company.



Solution enabled by SAP

- Joint Venture Accounting
 - Cash calls to/from partners
 - Partner billing for venture expenses and revenues
 - Allocations of billable and non-billable costs
 - Multi-currency processing
- Production and Revenue Accounting
 - FDC to contractual allocation
 - Valuation, Rev. Distribution & Regulatory Management
- Production Sharing Accounting

Key benefits

- Accurate and timely accounting - streamlined cash call and joint interest billing processes
- Increased customer/partner satisfaction with fewer incorrect billings
- Lower overhead costs – time savings with greater automation
- Greater efficiency in billing partners- shortening the cash flow cycle

Financial Excellence

Enterprise Performance Management



Enterprise Performance Management

- SAP Business Objects provides the leading solution to unlock information, enable insight, manage performance, and govern compliance regardless of the underlying business applications and data stores.



Solution enabled by SAP	Key benefits
<ul style="list-style-type: none">Management AccountingFinancial and Management ReportingFinancial Planning, Budgeting and ForecastingProfitability AnalyticsProduct and Service Cost AnalyticsPayment Behavior AnalyticsCorporate Investment ManagementLegal and Management ConsolidationBusiness Objects Financial ConsolidationBusiness Planning and Consolidation	<ul style="list-style-type: none">Monitor results and measure performanceReduce budget cycle timesVisibility into budgets & actualMinimizes business and compliance risk through a transparent, fast close and full audit trailVisibility into factors that drives costsMaximize Profitability – Know exactly where profit is madePower – Accelerate processing and reporting for a faster close

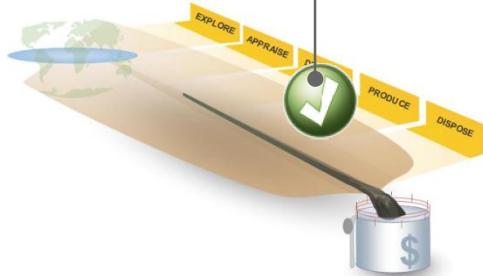
Best People and Talent

Developing Human Capital



Developing Human Capital

- Link committed and future demand with talent supply (recruiting, training, partners)
- Improve resource utilization
- Use subcontractors more strategically to...
 - Increase resource utilization
 - Improve margin on subcontractors



Solution enabled by SAP

- E-recruitment
- Employee master data mgmt & skills tracking
- Employee administration, payroll & time management
- Education integrated with development plans
- Self service career development
- Performance management
- Legal reporting

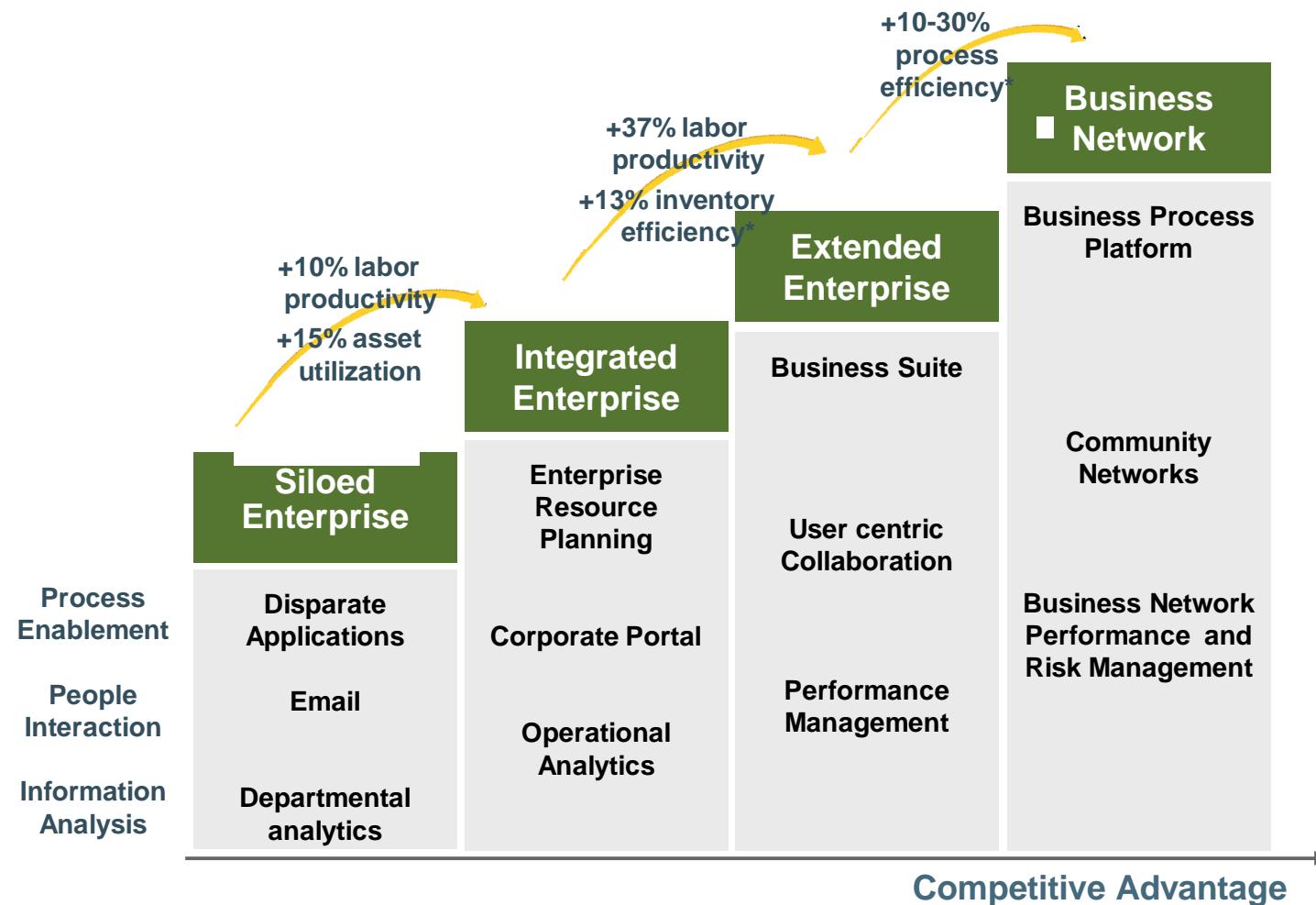
Key benefits

- Create Talent Pool of highly skilled individuals
- Train Employees to elevate their profitability
- Compensate High Performers to increase longevity
- Use Analytics to understand profitability and realization

SAP Supports Business Network Transformation



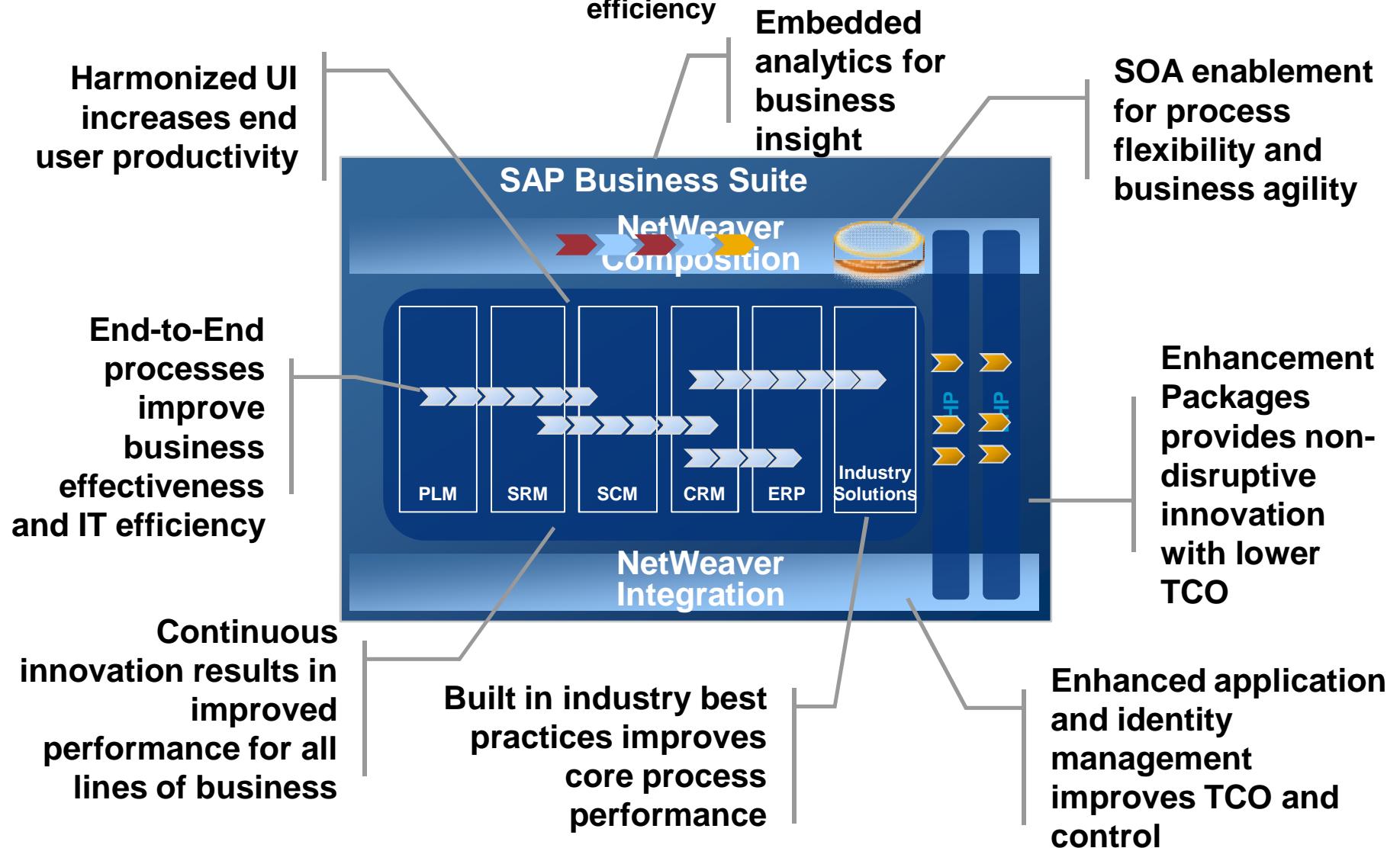
Companies are moving beyond internal execution to optimize performance across a network of partners and realizing value at each step to fund further transformation



IT for Efficiency, Flexibility and Insight



The SAP Business Suite enables companies to drive flexibility and insight without reducing efficiency



Best Practice Value Scenario

O&G – DOWNSTREAM MARKETING & RETAILING

Key trends are driving change in Downstream Marketing and Retailing industry



Changing supply and demand side dynamics are driving the need for constant innovation

Increasing Governmental regulation



- Sarbanes Oxley
- Environmental safety & employee safety
- Sanction Party compliance
- Hedging laws – IAS 39, FAS133

Demand Side Pressures



- Maturing markets, competition in retail market
- Increased customer power & intelligence
- Additional demands for services
- Hyper competitive channels
- Distributor Consolidation

Supply Side Pressures



- Reduced number of exclusive brands
- Supplier rationalization
- Vendor globalization
- Increased risks of supply disruption
- Price volatility

Operational Efficiency



- High cost of operation
- New technologies (VMI, on-board computing, RFID)
- Inflexible and heterogeneous infrastructure
- Inability to provide one version of truth
- High degree of manual processing

The need for constant innovation is affecting industry business models



The Market is demanding more flexible business models and companies are innovating to deliver them

Increasing Government Regulation

- Single business platform to address reporting and compliance needs
- Reusable enterprise services and process components that support rapid change

Demand Side Pressures

- Providing exceptional reliability and high fulfillment rates
- Active management of prices and margins throughout all business channels

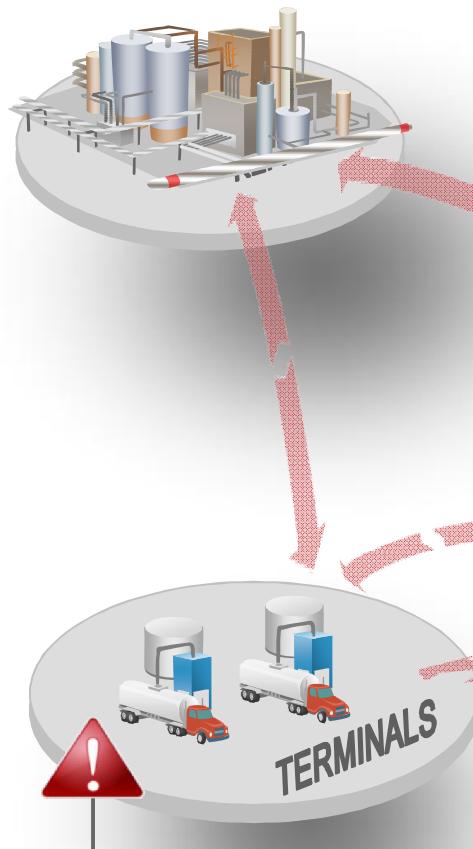
Supply Side Pressures

- Improved and automated communication to suppliers, visibility in contracts
- Improved sourcing decisions and better utilization of resources

Operational Efficiency

- Automation and integration of business processes and integration of existing systems
- Fast access to accurate data in order to reduce cycle times

Downstream Marketing & Retailing: Disruptive Growth



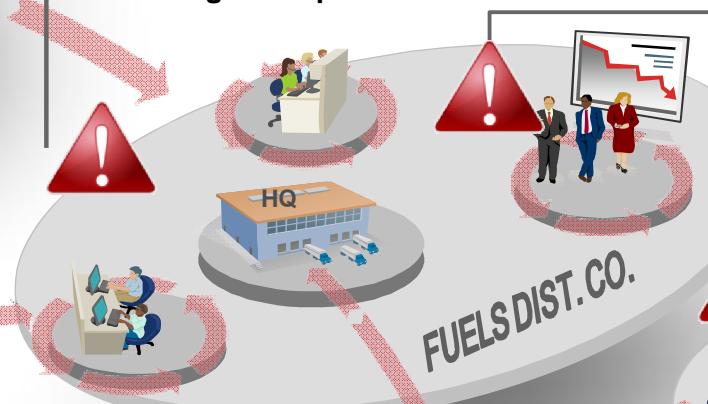
Terminal Management & Automation

- Missing visibility into terminals
- Missing integration of existing terminal systems
- Paper based and manual processes
- Lack of supplier integration

SAP 2010 / UJJAL / BTS / RIL / O&G / BBP - Page #

Cost, Revenue & Margin

- High number of incorrect invoices and high Days Sales Outstanding
- High transportation cost due to poor utilization of fleet
- High fuel purchasing cost
- Disconnected or non-existing price management processes



FUELS DIST. CO.

Distribution Planning & Customer Management

- High error rates due to poor inventory accuracy
- Disconnect between replenishment and transportation planning
- Transportation inefficiencies
- Customer service requirements (e.g. VMI)
- Constant expediting to meet terminal demand
- Channel allocation & margin management
- Disconnect with haulier companies



WHOLESALE CUSTOMERS

Business Process Platform

- Heterogeneous applications with disparate data models
- Inflexibility in dealing with business changes (i.e. M&A, business relationships, etc.)
- Compliance issues
- Transparency & growth limitations



CONVENIENCE SUPPLY CO.

Fuel and Convenience Retailing

- Disconnect between fuel and dry goods business
- High cost of operations
- Loss of margins
- Low profit per customer visit

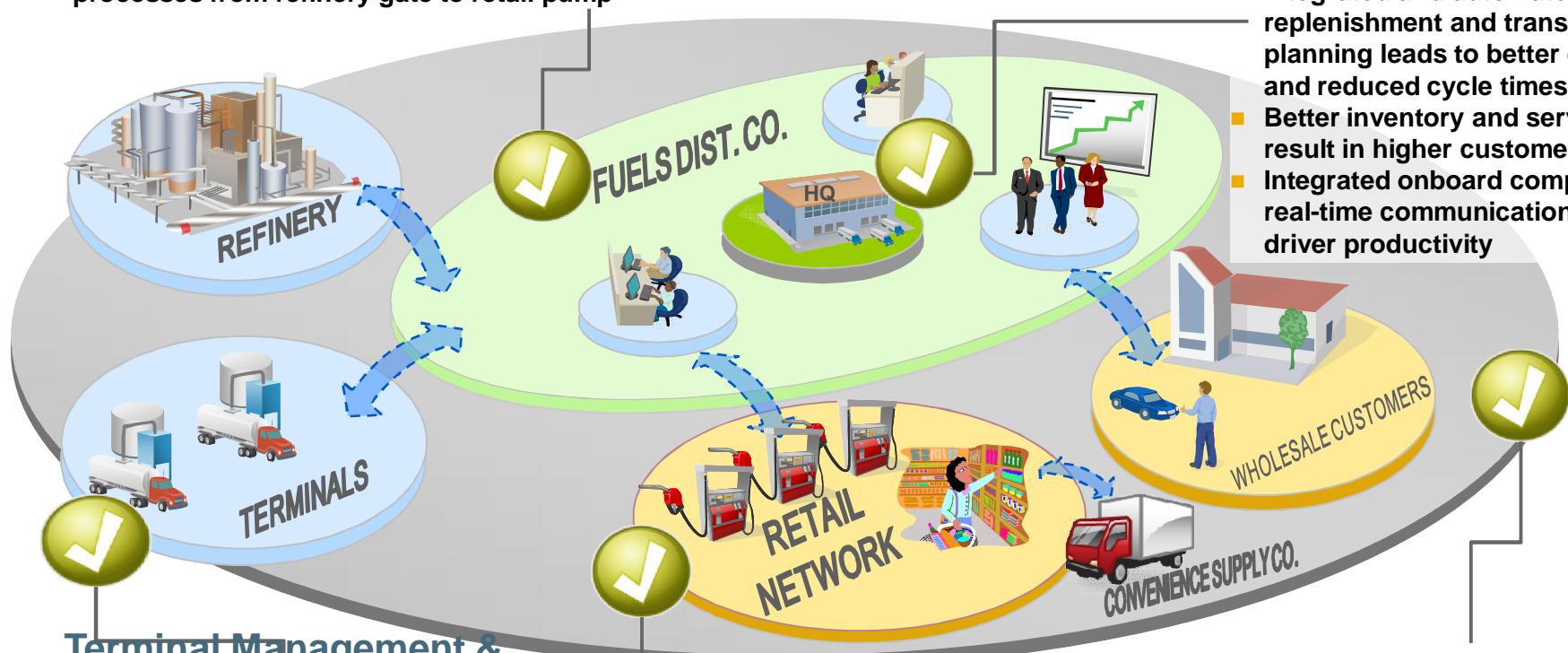
BBP - Page #

Downstream Marketing & Retailing: Profitable Growth



Cost Control and Profit Margin Maximization

- Low administrative and operational costs due to automated processes, e.g. short billing times through up-to-date delivery information and reconciliation
- Reduced fuel purchasing and transportation cost (best buy support, optimal usage of fleet)
- Increased margin due to closed loop price management & optimization processes from refinery gate to retail pump



Terminal Management & Automation

- Full visibility into terminals
- Integration of existing terminal systems
- Fully automated processes
- **Integration of suppliers**

Integrated Fuel & Convenience Retailing

- Integrated wet and dry good business
- Managed margins
- Reduced cost of operation
- Increased customer visit basket size

Distribution Excellence & Customer Satisfaction

- Streamlined forecasting and real-time requirements planning result in more accurate forecasts
- Integrated and automated replenishment and transportation planning leads to better decisions and reduced cycle times
- Better inventory and service levels result in higher customer satisfaction
- Integrated onboard computers and real-time communication increase driver productivity

Business Process Platform

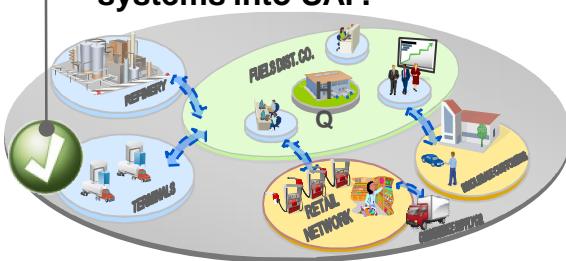
- Flexible and agile platform for addressing business needs
- Low TCO from integrated solution
- Supporting compliance, transparency & growth

Terminal Management & Automation



Terminal Management & Automation

- SAP helps its customers to optimize & automate logistic and administrative business processes in terms of terminal management in order to reduce time, costs and manpower.
- Establish highly integrated data communication – internally and with partners.
- Provide full visibility into terminals.
- Integrate existing terminal systems into SAP.



Terminal Management & Automation

- Fully scalable and modular IT architecture
- Supports integration and harmonization of field equipment and 3rd party TAS components
- Depot stock management (per tank) for own stock and 3rd party stock
- Automates and supports standard terminal processes, e.g. check-in, loading, check-out
- Security management (identification of trucks and drivers)
- Printing of transport documents
- Fail safe capable for 24/7 operation

Key benefits

- Improved operational productivity
- Improved data quality
- Reduced labor costs up to 25%
- Reduced administrative costs up to 20%
- Reduced maintenance costs up to 10%

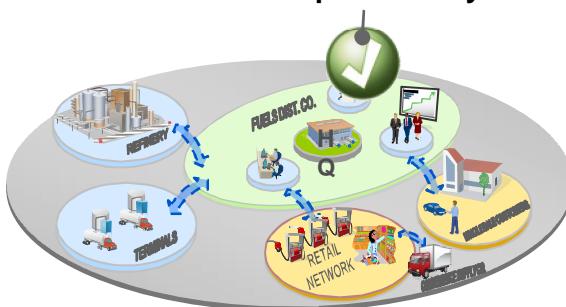


Distribution Excellence & Customer Satisfaction



Distribution Excellence & Customer Satisfaction

- SAP helps to manage truck fleets, inventory, replenishment and truck dispatch processes more efficiently.
- Streamlined forecasting and real-time requirements planning result in more accurate forecasts
- Integrated replenishment and transportation planning leads to reduced cycle times
- Better service levels result in higher customer satisfaction
- Integrated onboard computers increase driver productivity



Distribution Excellence

- Optimal sourcing based upon product availability, existing contracts and costs
- Integrated automatic stock replenishment, truck dispatch planning and optimization
- Dispatching: Handle must go and can go orders, dangerous goods, optimize trailer compartment utilization and consider axle weight restrictions
- Tele-Sales with integrated pre-scheduling
- Optimization of single and multi drop scenarios
- Automated reconciliation and posting of all required transactions in SAP

Key benefits

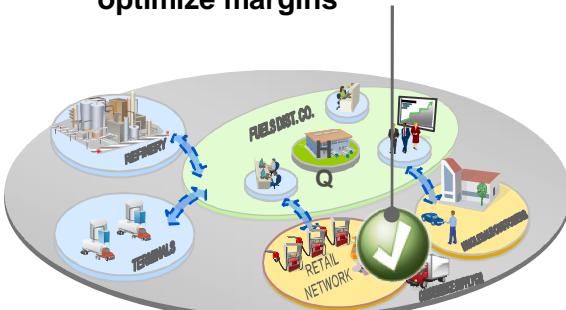
- Reduced transportation costs
- Reduced inventories
- Reduced fuel cost
- Improved operational productivity
- Reduced truck fleet up to 12%
- Reduced replenishment costs up to 30%
- Reduced stock-outs up to 15%

Integrated Fuel & Convenience Retailing



Integrated Fuel & Convenience Retailing

- SAP's integrated solution provides seamless information flow and powerful functions for all business aspects within the retail network, helping to manage the wet and dry side of the business.
- Automated and standardized business processes and virtual back office functionality result in reduced cost of operation
- Customer loyalty programs result in higher customer retention.
- Sophisticated price management capabilities help manage and optimize margins



Fuel & Convenience Retailing

- Convenience retailing for dry goods including store management, assortment planning, merchandising, retail pricing and promotions
- Fuels inventory management and reconciliation based on sales meter readings and tank dip readings
- Settlement of payment card transactions and invoicing of dealers
- Loyalty management to plan and execute closed loop loyalty programs, such as preferred shopper programs
- Price management and optimization in order to meet volume goals at maximum achievable margin

Key benefits

- Improved profitability through optimization of each customer visit "basket"
- End-to-end solution of wet and dry value chain
- Lower operational costs through automated and standardized processes
- Increased customer retention
- Closed-loop price management and optimized fuels and dry goods profit-volume balance

Cost Control and Profit Margin Maximization



Cost Control and Profit Margin Maximization

- SAP provides the visibility customer need to manage costs and margins and sense and respond to market volatility.
- Only SAP and partners provide a fully integrated, closed loop price management and optimization solution for all channels of trade from refinery gate to retail pump
- SAP's logistics solution for terminal management, marketing and distribution helps to increase operational efficiency and decrease costs



Cost Control & Margin Maximization

- Price management and optimization for all channels of trade: lubricants, aviation, marine, bitumen, wholesale/rack fuels, retail fuels, retail dry goods
- Best pricing practice & workflows (strategize, determine, execute, monitor and govern price decisions)
- Executive dashboards (analytics and dashboard applications to aggregate and visualize data)
- Operational excellence through integration of terminals, fleet, retail stations and scheduling department

Key benefits

- Margin increase through integrated price management:
 - Chemicals: 1 to 3% return on gross revenue
 - Lubes, marine, aviation, bitumen: 0.5 to 2% return on gross revenue
- Rack/wholesale fuels: 0.2 to 0.5 cpg gross margin uplift and 8% improvement in ratability
- Retail fuels: 0.5 to 1.4 cpg gross margin uplift at current volumes or 8 to 12% volume increase without margin loss
- Retail dry goods: 1 to 2% return on gross revenue
- Cost benefits through distribution excellence:
 - Short billing cycles
 - Reduced purchasing & transportation cost
 - Reduced replenishment costs

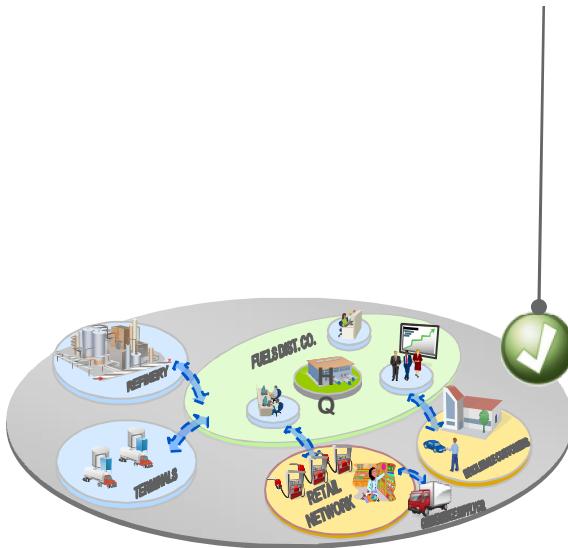
Flexible Business Process Platform

Integrated IT



Flexible Business Process Platform:

- SAP helps organizations establish their unique business process platforms based on enterprise SOA by delivering:
- Flexible and agile platform for addressing business needs
- Lower TCO from integrated solution



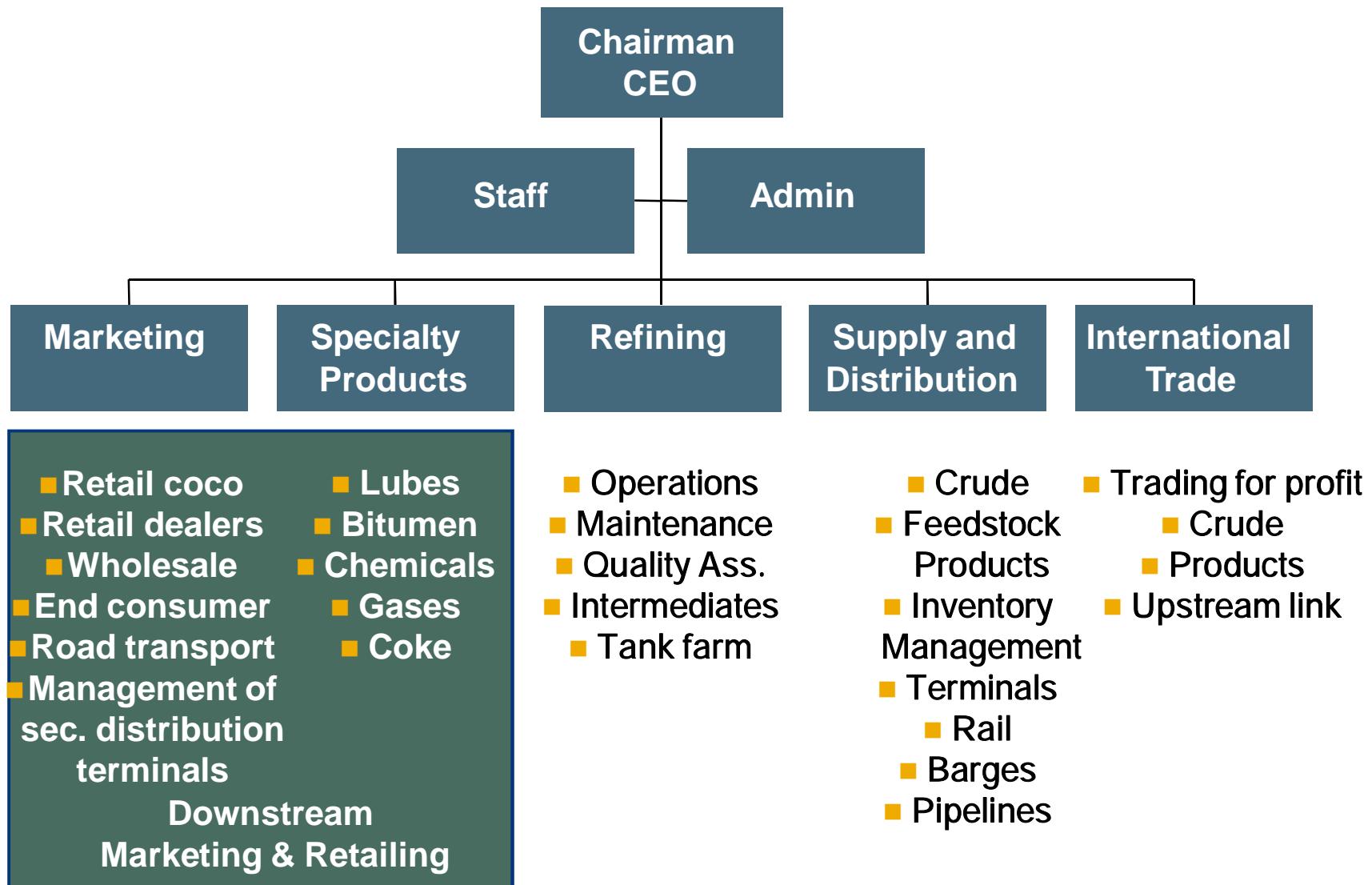
Solution enabled by SAP

- Ready-to-execute software that enables industry-rich business processes
- Reusable enterprise services and process components that support rapid change
- A unified technology foundation for running business processes efficiently
- Innovative business processes enabled by service-enabled applications
- Vibrant ecosystem

Key benefits

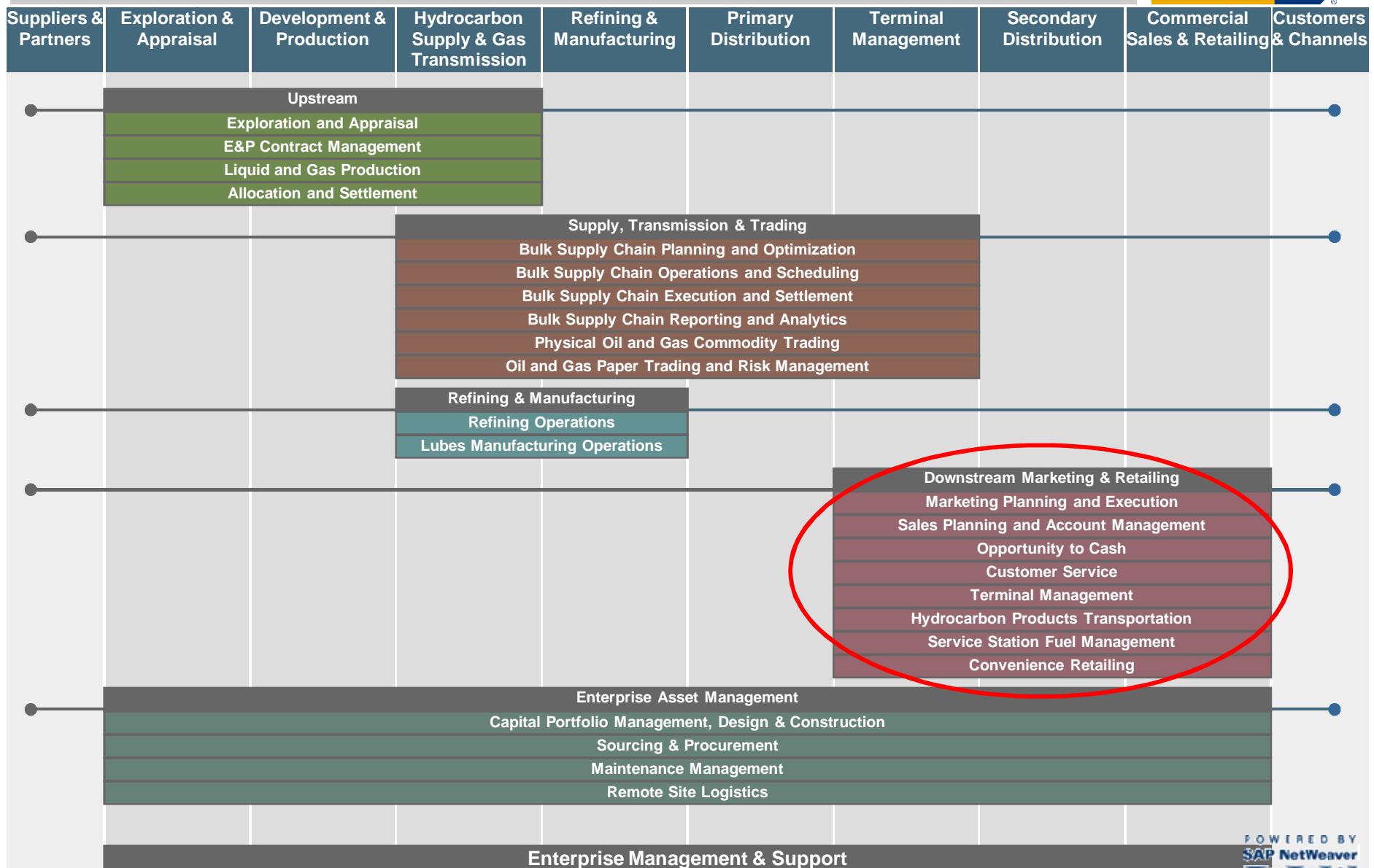
- Faster and more flexible business innovation
- Strategic alignment between business and IT. Reduced operating costs
- Reduced total cost of ownership
- Improved user productivity, collaboration, and business insight

Operating Areas in a Downstream Oil and Gas Company

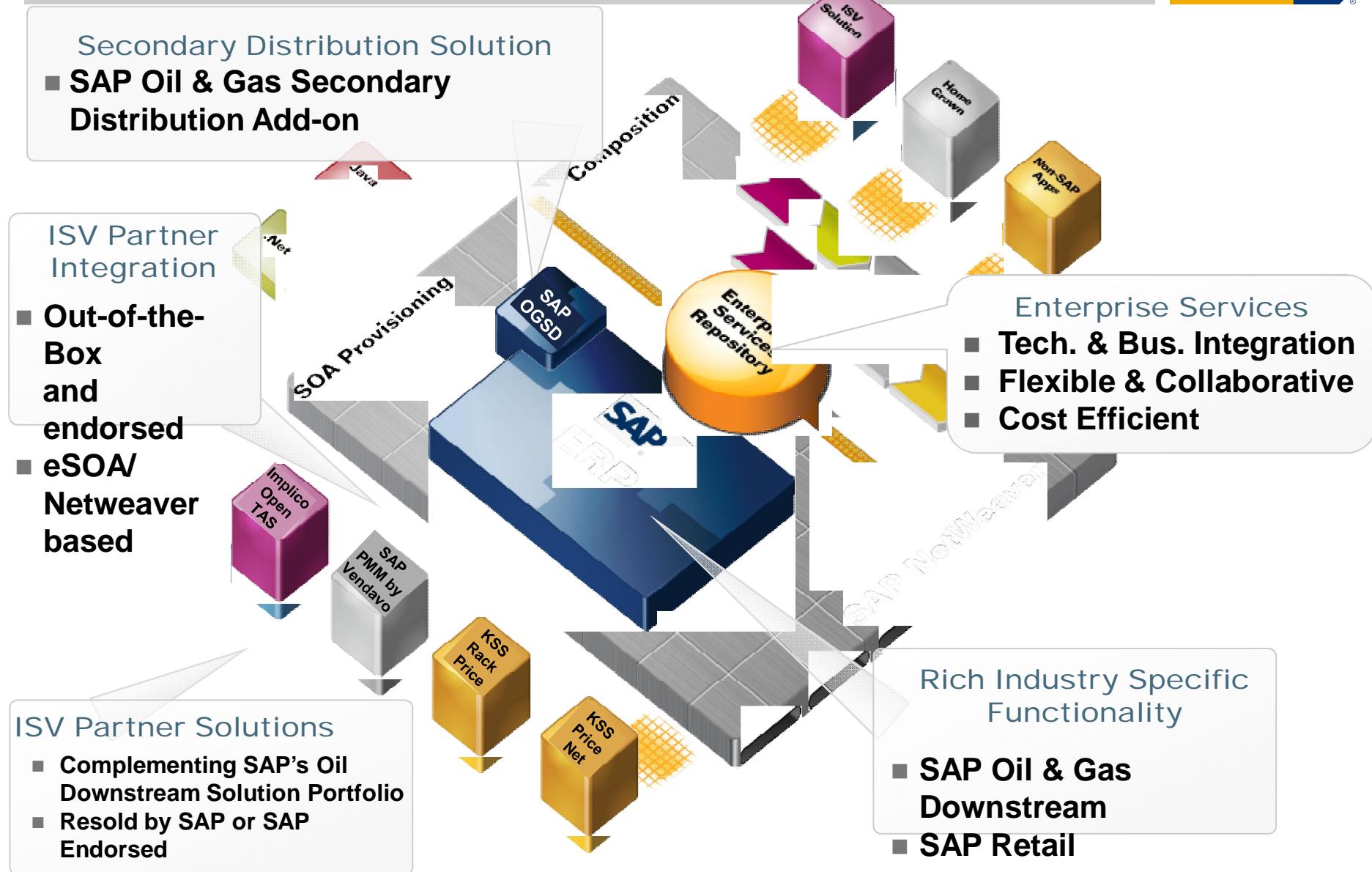


Oil & Gas – Down Stream ...

Best Practice Solution Map



SAP's Solution for the Oil & Gas Downstream Marketing Business



Service Station Fuel Retailing and Convenience Retailing



Service Station Fuel Mgt.



Example business processes:

- Fuel inventory
- Fuel Pricing
- Payment Card Handling
- Dealer Settlement

Convenience Retailing



Example business processes:

- Assortment Planning
- Merchandising
- Retail Pricing
- Promotions

Service Station

Fuel Retailing and Convenience Retailing



Convenience Retailing (incl. Store Management)



- Assortment Planning
- Merchandising
- Retail Pricing
- Promotions

Fuels Management



- Fuel inventory
- Fuel Pricing
- Payment Card Handling
- Dealer Settlement

Site and Headquarter Accounting



- Rebate Management
- Payment Card Processing
- Site Settlement
- Site Expense Invoice

Business Analysis and Reporting



- Sales Analysis
- Vendor Performance
- Loyalty Card Processing
- Franchisee Support

SAP's Solution for Oil & Gas Downstream – Secondary Distribution Solutions

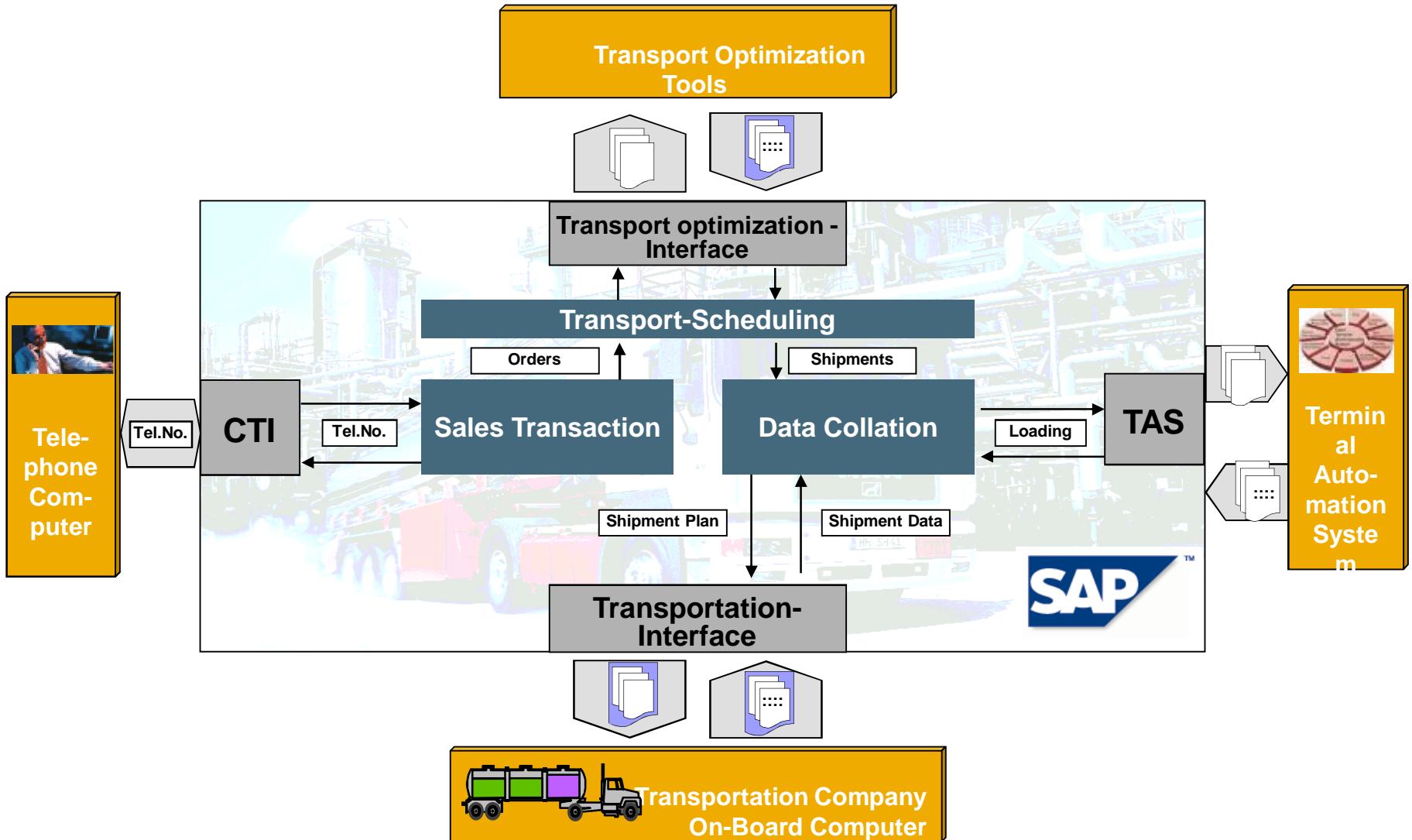


Secondary Distribution Solutions

SAP Oil & Gas Secondary Distribution

- Telesales including Best Buy Analysis
- Tour Planning
- Data Collation (Fuel Volume Reconciliation)
- Interfaces of External Systems (TAS Systems, On-board Truck Computers, Geographical Information Systems, etc.)

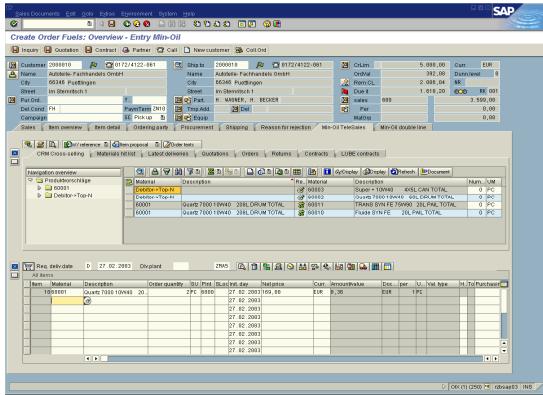
SAP Oil & Gas Secondary Distribution – Integrated Systems Landscape



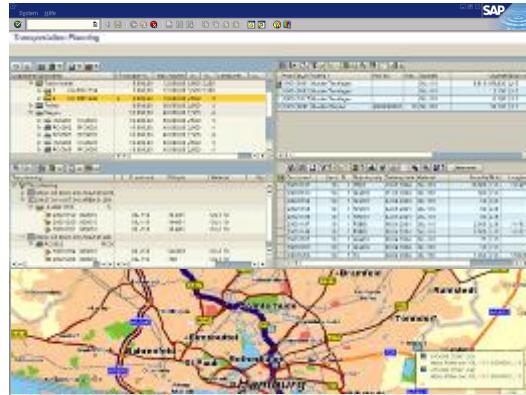
SAP Oil & Gas Secondary Distribution - Key Functionality



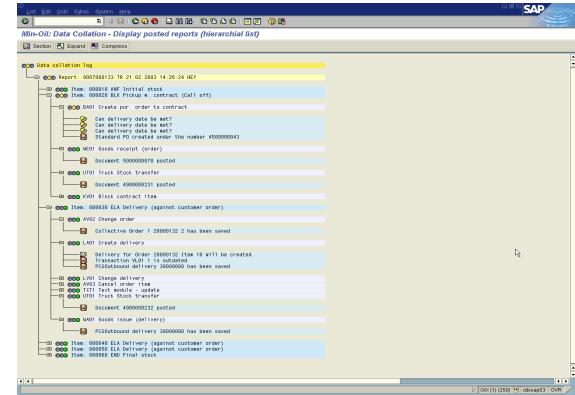
Telesales and Pre-scheduling



Tour Planning



Data Collation (automated Reconciliation)



Effective Customer Interaction

- Telephony integration
- Display all key information on one screen
- Credit Control
- Detailed customer history
- Transportation Pre-Planning

Best buy Analysis

SAP 2010 / UJJAL / BTS / RIL / O&G / BBP - Page #

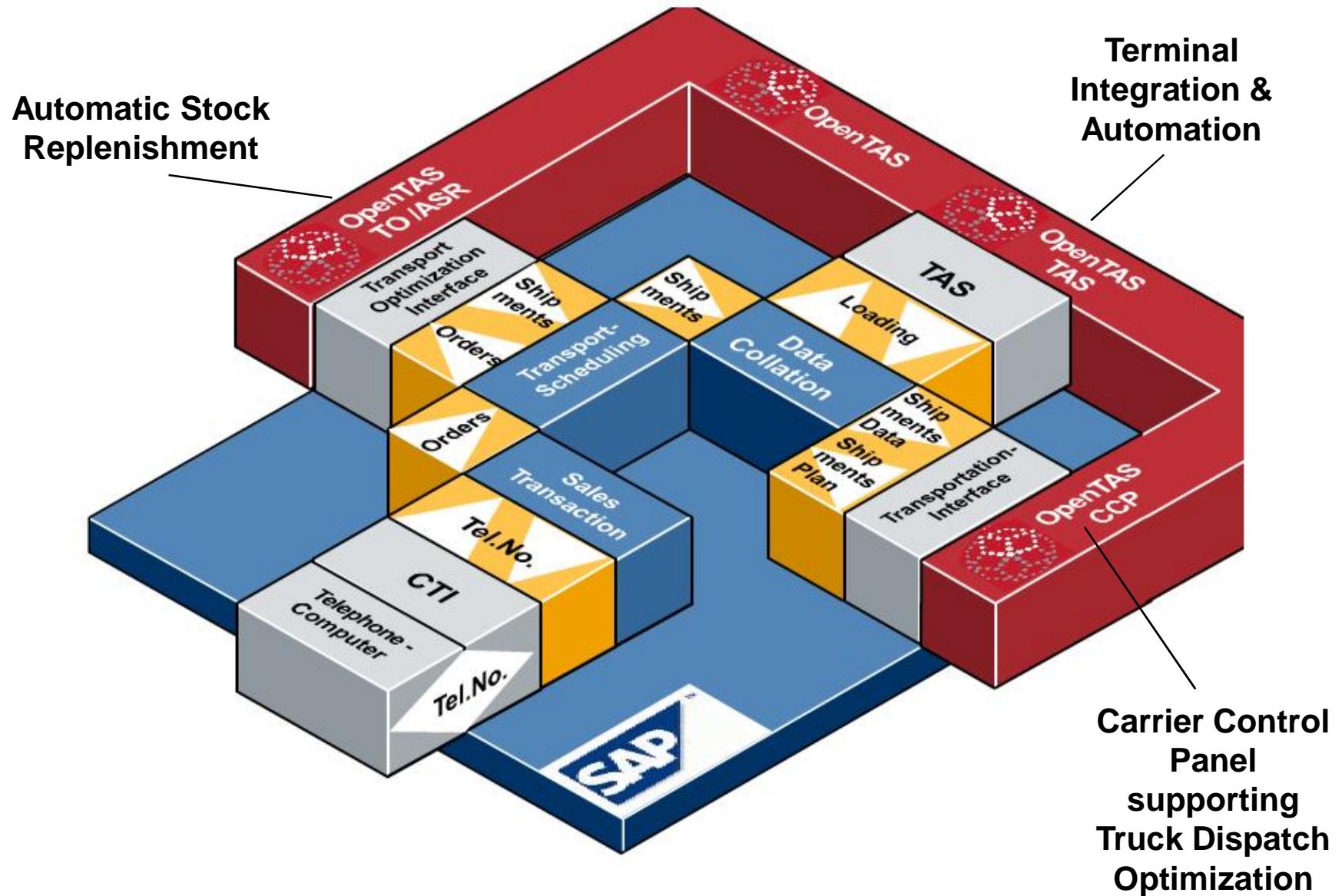
Effective Utilization of truck Fleet

- Tour planning with graphical visualization
- Integrated tour planning & scheduling
- Fully customizable easy to use screens

Reduced Administrative Overhead

- Business Process Control uses Defined Identifiers
- Manual data input or automatic data feed
- Automated posting of all required transactions

SAP OGSD + OpenTAS by Implico – Further Integration and Automation Options



SAP's Solution for Oil & Gas Downstream – Price Management Solution

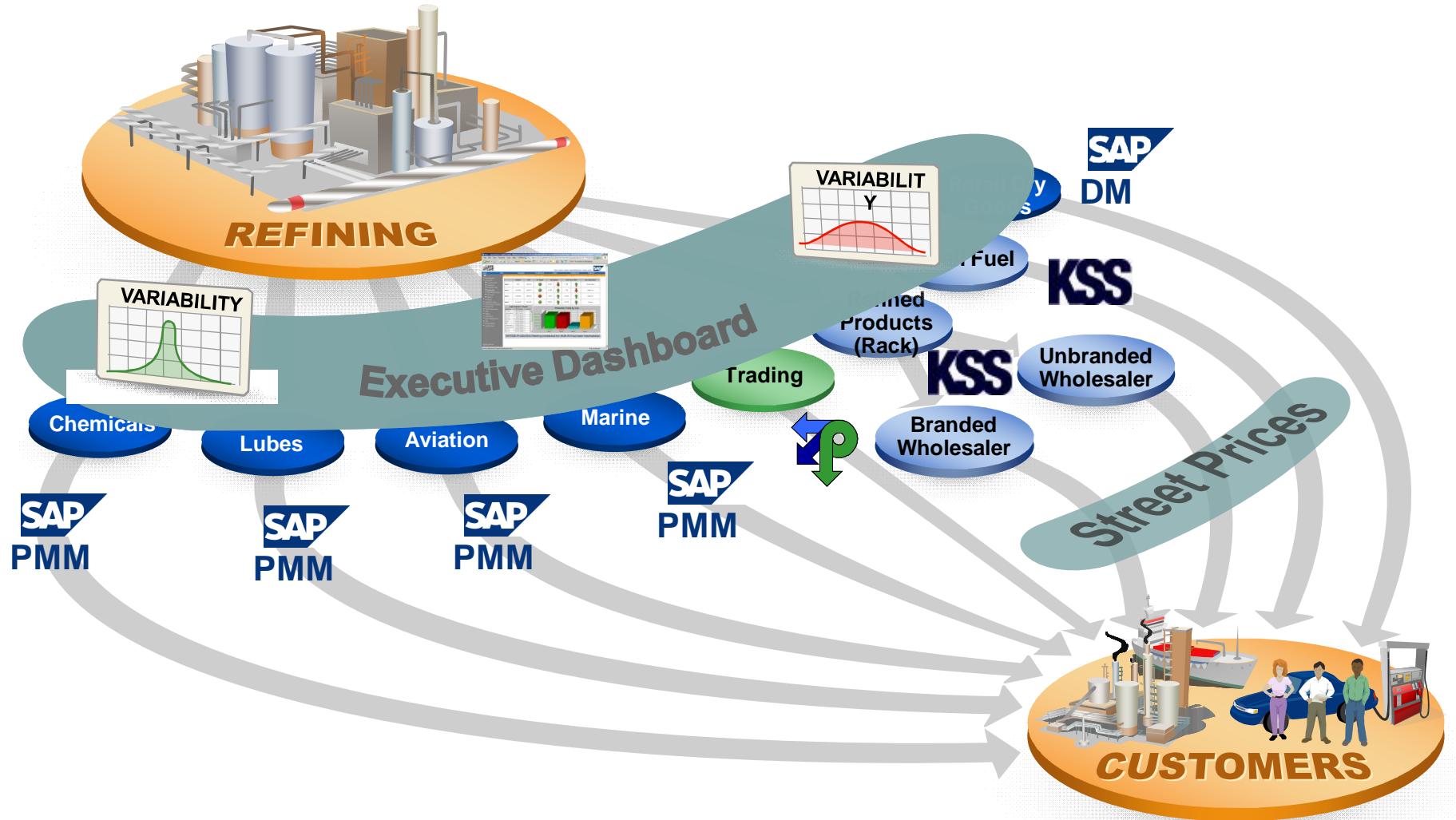


Price Management Solution

SAP PMM by Vendavo

- Managing contract profitability in lubricants, aviation, marine, bitumen, fuels
- Price analysis, setting and policy management
- Interactive price negotiation **KSS RackPrice**
- Meet volume objectives at the maximum achievable margin at terminal/ rack
- Pricing and performance analytics
- Price setting – via manual entry, pricing rules, formulae and/or optimization
- Price execution **KSS PriceNet**
- Retail pump pricing
- Price strategy, setting, execution, monitoring

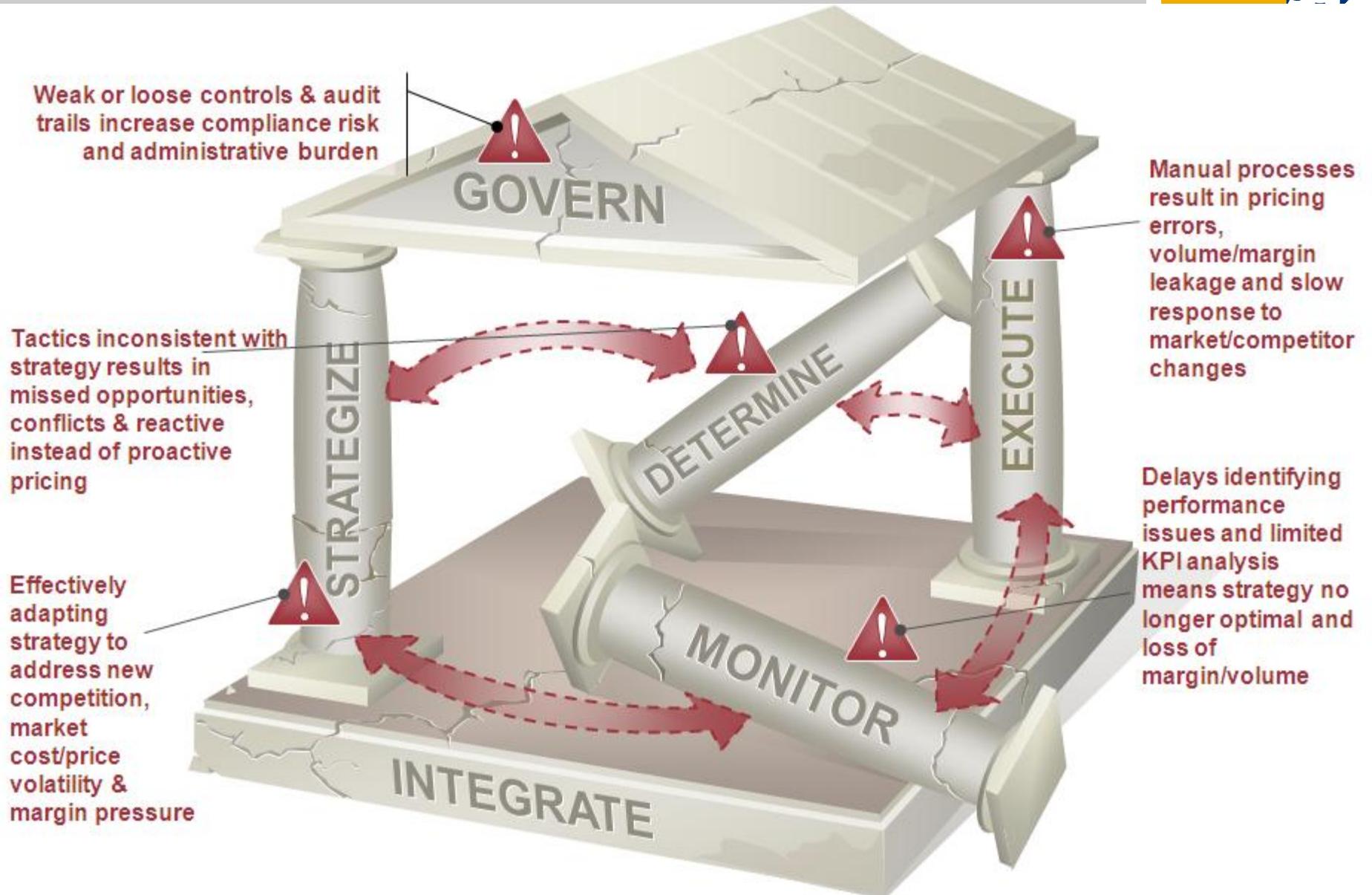
SAP and its Partners Provide the ONLY Price Management and Distribution Solution that Addresses ALL Channels from Refinery to End Use



Different Tools Needed for Different Channels due to Differing Competitive Situations, Objectives, and Cycle Times



Typical Challenges in the Pricing Process



Only SAP, KSS and Vendavo provide Fully Integrated, Closed Loop Price Management and Optimization



Solution:

Price-change limits by user login,
Approval workflow, Capture & archive
analyst over-rides, Compliance reports

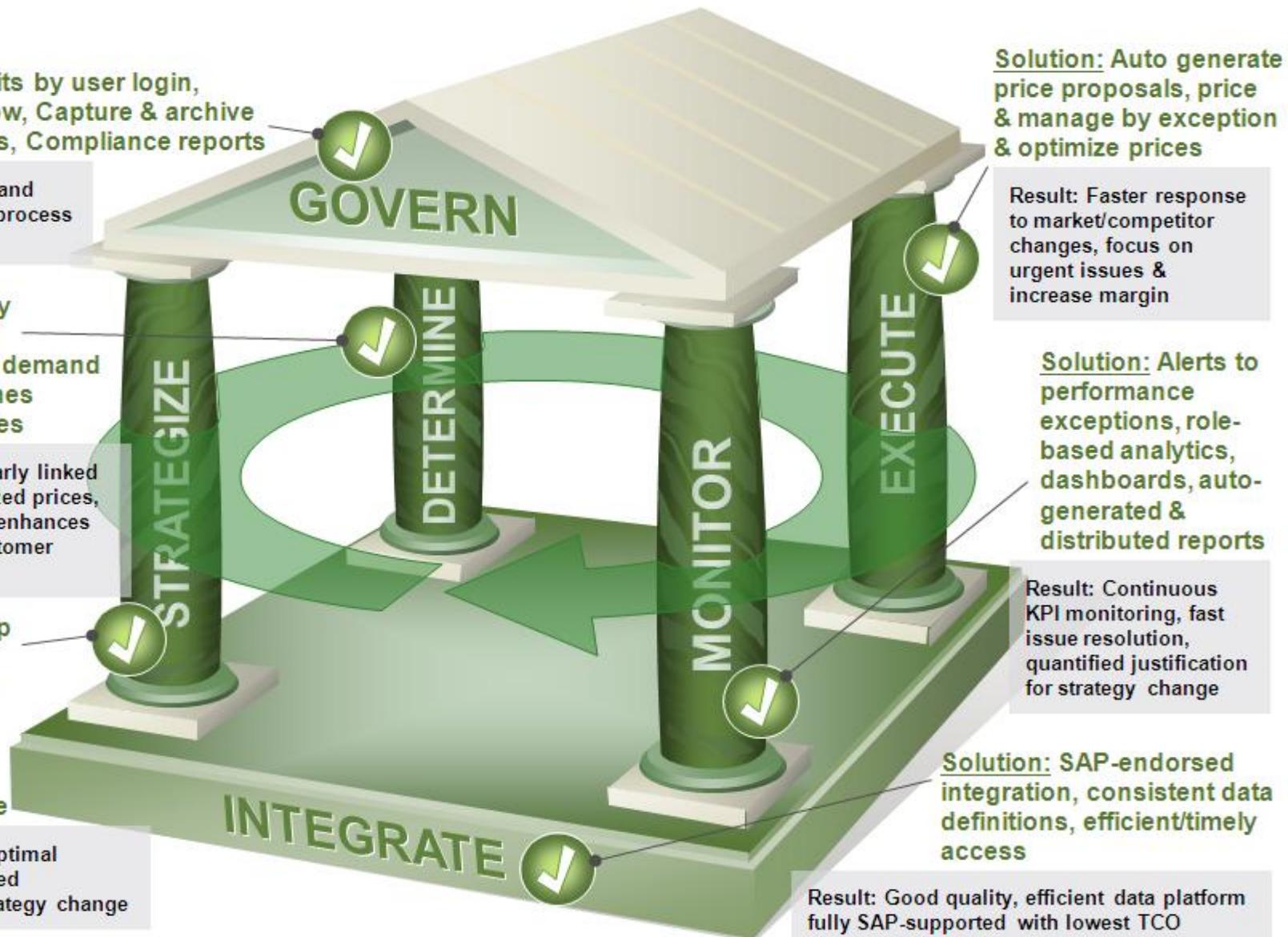
Result: Compliant and
controlled pricing process
with full audit trail

Solution: Strategy defined by clear consistent rules, demand modeling fine-tunes tactical boundaries

Result: Tactics clearly linked
to strategy, optimized prices,
consistent pricing enhances
brand image & customer
loyalty

Solution: Develop quantitative scenarios, apply competitor modeling, simulation & analytics to refine

Result: Adaptive optimal
strategies, quantified
justification for strategy change



Best Practice Value Scenario

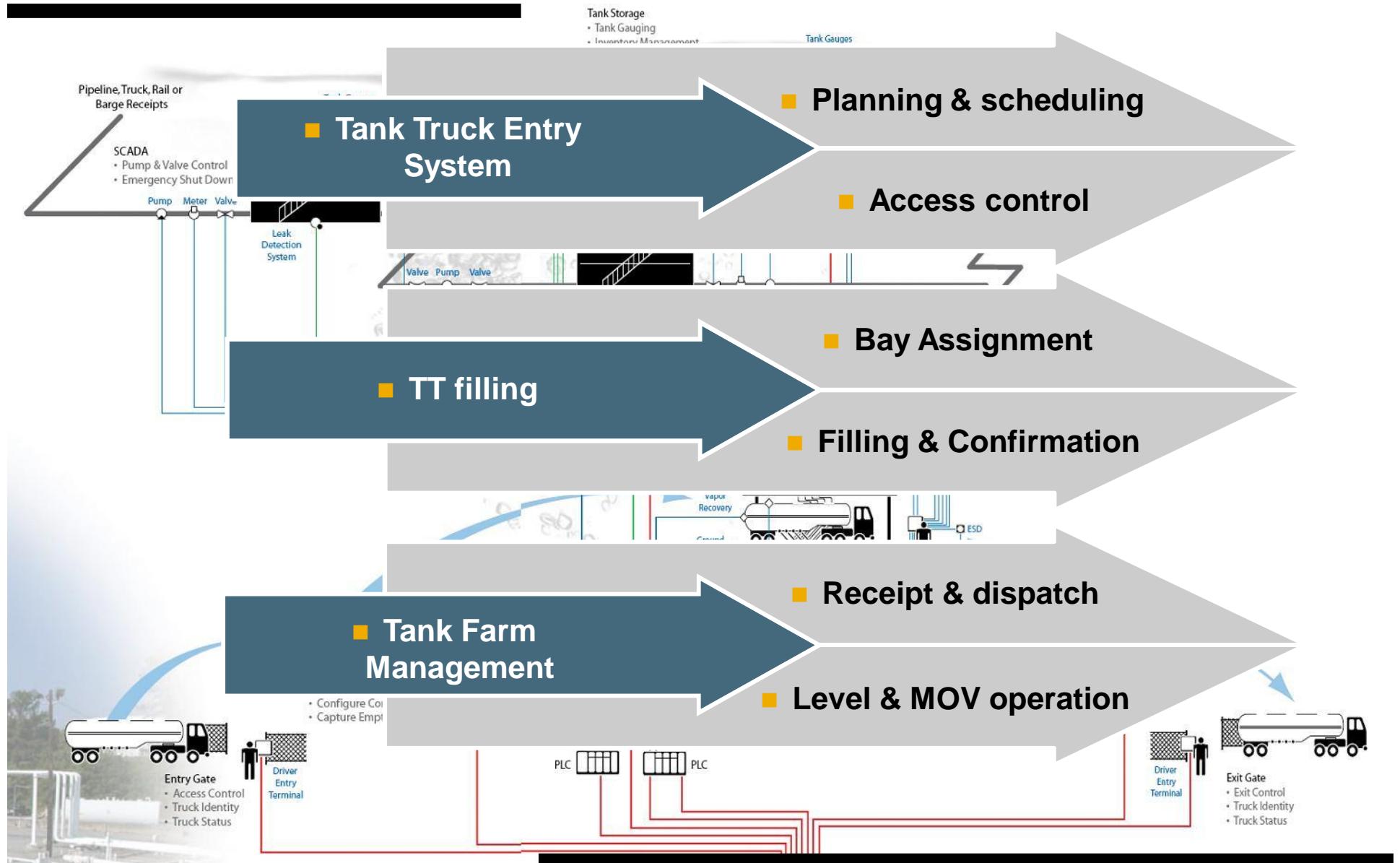
O&G – OIL TERMINAL AUTOMATION



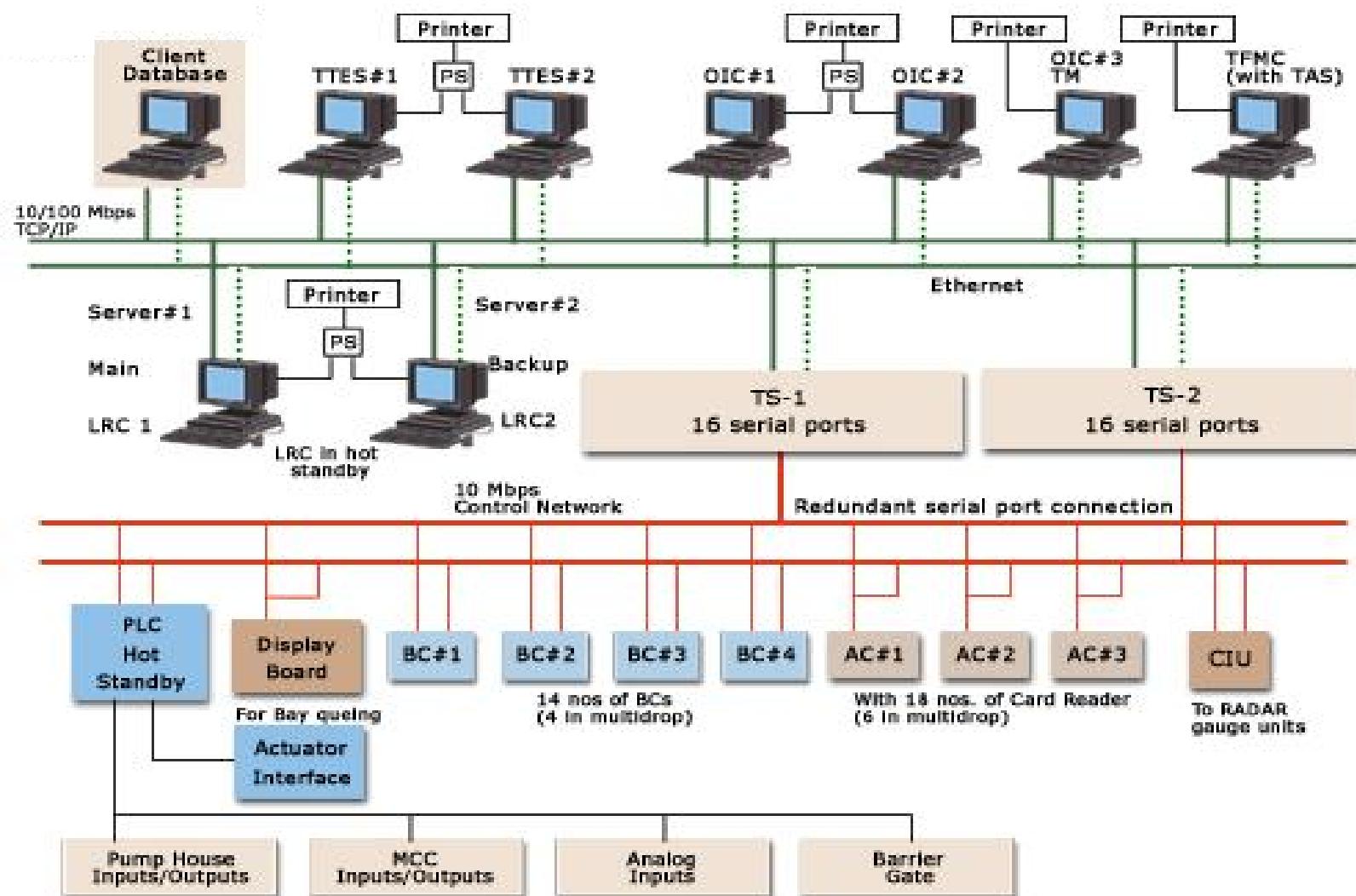
THE BEST-RUN BUSINESSES RUN SAP™



The Business Challenge -



The Business Challenge – Current TAS Architecture

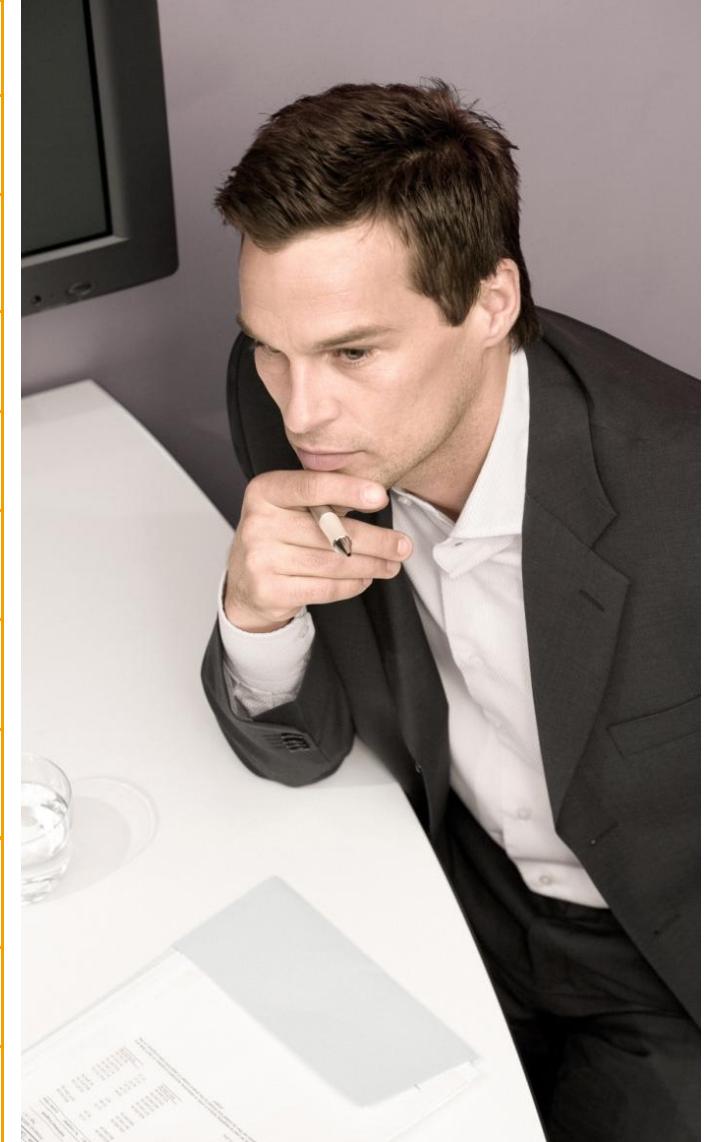


The Business Challenge -

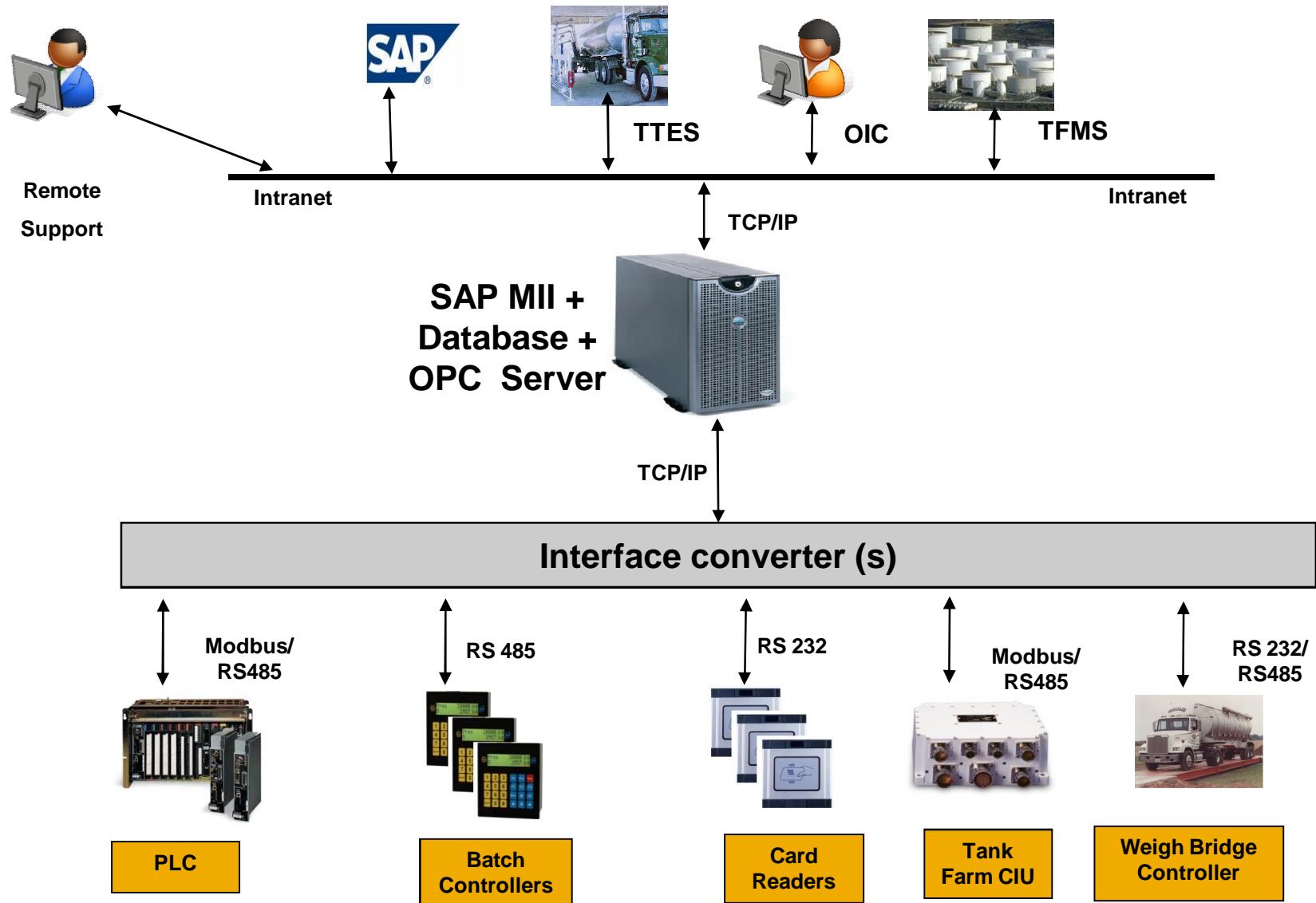
TAS - Pain Areas



- Site specific customized software solutions
- Different Operating Systems from one vendor
- Hard coded interfaces with no expandability – can't replace different field equipment
- Customized SAP interface
- No or limited technical support at site
- High dependency on vendor for any customization due to limited access /training
- No common pool of Customer resource for managing TAS
- No bird's view of Terminal at State Office /Head Office
- No standard or common front end available to Customer
- No business analytics
- Multi-vendor management and multidimensional issues



SAP xMII Solution Architecture



A flexible / easy to maintain system, capable of handling even multiple Hardware vendors at one location....

Integrating disparate components of Automation system within an Oil terminal – Tank Lorry Loading / Tank Management / PLCs and interfacing with the backend ERP system where applicable leading to overall reduction in the TCO

Transforming Pain to Gain.....

- From a Terminal specific solutions to enterprise wide universal web solution.
- A solution which is scalable & easy to manage by the internals reducing the Vendor dependency on sustenance & future expansions
- Rationalisation of Hardware
- Standardisation of interfaces.

Approach/Activities

1. Business Functionality

- Fit with current requirement
- Fit with future requirements
- Options for process flexibility
- Ease of use
- Audit trail

2. Technology

- Performance throughput
- Scalability
- Fit with hardware and network plan
- Technical design of the product
- Integration
- Ease of deployment

3. Futuristic approach

- Clear Road map with support

Results/Deliverables

1. Business Functionality

- Meets Business requirements
- Easily configurable & expandable solution with proper controls by managed by customer.

2. Technology

- Library of interfaces will help the customer to deploy any new location with ease
- Technical requirements of redundancy, web-enabled, centralised control, integration with any thirdparty device are met
- SAP support

Business Benefits and Value Proposition

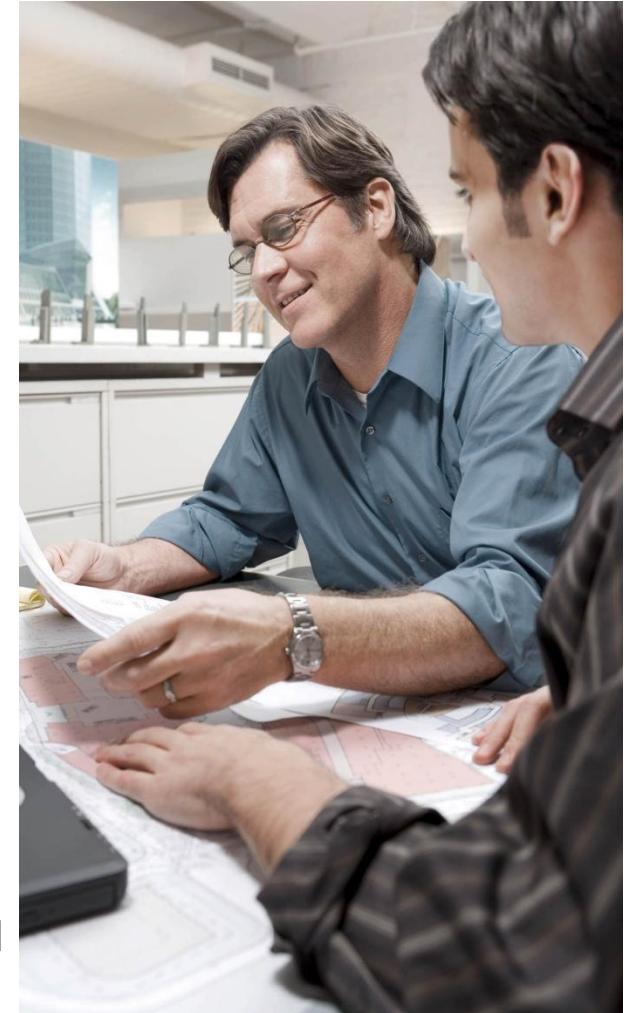


Business benefits -

- Universal solution for customer and enabling customer to have complete control on the automation
- End-to-end solution integrating all field systems to business system using one solution.
- Reduce TCO in terms of hardware management and single layer of software solution across organization

The value propositions are -

- Unified solution across organization
- Leveraging existing assets
- deliver "*a single version of the truth*" across the enterprise
- **Seamlessly synchronizes** enterprise business processes (ERP) and real-time field systems.
- Delivers **Integration, Intelligence and control** in one layer
- **Reduced costs, errors and latency** associated with manual data entry of plant data into ERP



Best Practice Value Scenario

O&G – TSW

The Business Challenge



- Managing the bulk supply chain can represent as much as 80% or more of your business, analysts and companies believe a 50 cents per barrel saving can be achieved with SCM – that's \$35 million per day for the industry!
- Today there is a fierce competition for energy reserves & supply.
- Balance supply and sustainability
- Increased risks of supply disruption
- The “glue” that cements the whole process together is the Operations and Scheduling stage – dealing with the Real World and performing the business there.



Implementation for SAP Trader's and Scheduler's Workbench (TSW)



- The design and implementation of TSW is a complex task, highly integrated in the ERP processes.
- Our service utilizes the capabilities of SAP NetWeaver and the functional strength of the Traders and Schedulers Workbench to create a single platform to manage scheduling activities.
- If this a new implementation or a Scheduling solution that is put on top of existing ERP processes – the final result will be a tightly integrated Scheduling and Operations system.
- Also a "stand-alone" scheduling hub system can be implemented leveraging SAP technology.
- From designing, to prototyping – up to a full-scale implementation: this service is scalable.

Example of a Global Oil Company

Key Challenges

- Refinery reporting systems are at the end-of-lifecycle
- No Visibility on global inventory; redundant data entry

Project Objective

- Replacement of end-of-lifecycle legacy refinery reporting systems
- Visibility of global oil movements and global inventory
- Elimination of manual, redundant data entry
- Automated refinery transaction processing
- Connection of legacy ERP- and the various refinery process control systems

Why SAP Service?

- Using up-to-date SAP applications
- Utilizing the full network of Consulting, Solution Management, Custom Development and GDC

Key Benefits

- Single nomination created with updates automatically available to all
- Inventory actuals & projections available to crude / product optimization in 'real time'
- Bookings generated automatically in SAP – no recycle due to errors
- Architectural approach will enable all Lines of Business across all verticals (e.g. Chemicals, Gas, Upstream, Downstream) to utilize this platform as their single business process platform for all bulk movements.

Integrated Supply Chain - Benefits



Tangible Benefits	Enabler	% Impact *
Revenue <ul style="list-style-type: none"> <input type="checkbox"/> Improved risk management 	<ul style="list-style-type: none"> <input type="checkbox"/> Real-time supply chain data 	5-8 %
Lower operating costs <ul style="list-style-type: none"> <input type="checkbox"/> Reduction in transportation costs <input type="checkbox"/> Improved scheduling <input type="checkbox"/> Improved forecast accuracy <input type="checkbox"/> Product blending <input type="checkbox"/> Reduced manual admin. work 	<ul style="list-style-type: none"> <input type="checkbox"/> Real-time visibility across entire supply chain <input type="checkbox"/> Integrated scheduling tools <input type="checkbox"/> Central supply chain master data <input type="checkbox"/> Integrated scheduling tools <input type="checkbox"/> One-time entry, consistent, transparent data 	5-9 % 1-5 % 3-5 % 2-6 % 15-20 %
Lower working capital requirement <ul style="list-style-type: none"> <input type="checkbox"/> Reduction in inventory levels <input type="checkbox"/> Reduction in outstanding payments 	<ul style="list-style-type: none"> <input type="checkbox"/> Integrated planning/execution tools <input type="checkbox"/> Expedite contract to cash cycles, eliminate invoicing errors 	6-10 % 10-20 %

* Benchmarks from SAP Value Engineering

Tangible Benefits of an Integrated SCM Solution



Tangible Benefits

Greater revenue

- Improved risk management

Enabler

Real time supply chain data

Lower operating cost

- Reduction in transportation costs
- Improved scheduling
- Improve Forecast accuracy
- Reduced TCO
- Reduction in manual administrative work

Real time visibility across entire supply chain

Integrated scheduling tools

Central supply chain master data

Eliminate legacy systems, reduce interfaces

One-time entry, consistent, transparent data

Lower working capital requirement

- Reduction in inventory levels
- Reduction in outstanding payments

Integrated planning/execution tools

Expedite contract to cash cycles, eliminate invoicing errors

Key Takeaways

- For many Oil & Gas companies, managing the bulk supply chain can represent as much as 80% or more of their business
- Analysts and companies believe a 50 cents per barrel saving can be achieved with SCM – that's \$35 million per day for the industry !
- The “glue” that cements the whole process together is the Operations and Scheduling stage – dealing with the Real World and performing the business there
- Having complete visibility of supply chain activity and staying on top of Real World events are the keys to successful Operations
- Driving excellence in Operations into Execution and Settlement in a one-step process enables fast revenue realization

➤ **SCM Success = Bottom Line Success !!**

Quantifiable Benefits of Integration



**SAP SCM solution is delivered with 65+ interfaces “out of the box”.
This shows the significance and the challenge of the integration issue.**

Integrated Business Function	No. of interfaces
Trading	5+
Contract Management & Pricing	5+
Supply & Demand Planning	10+
Distribution Scheduling	10+
Analytics	20+
Inventory Management	15+
Total	65+

Strategic Benefits of an Integrated Supply Chain



- **Enable business performance improvements**
- **Ability to integrate new business/acquisitions**
- **Standardized data & reporting across organization**
- **Speed up the planning process and offer high level of predictability, particularly the budget**
- **Reduction in processing errors and reconciliation efforts**
- **Improve response time**
- **Confidence in the integrity of the data**
- **Simplified IT landscape**
- **Ability to drill down to transaction levels of detail**

Competitive Framework for Process Industries



	Laggards	Industry Average	Best in Class
Organization	Silo-based supply chain operations with little synchronization and collaboration across departments; moving toward more business unit or regional oversight	Moving toward a more centralized supply chain management organization but most activity is still decentralized into business units and regions	Central supply chain management organization established with executive who has end-to-end supply chain responsibility; strong cross-functional metrics in place
Knowledge	No budgeted projects for visibility improvement	Actively working to improve end-to-end and plant floor to top floor visibility	End-to-end supply chain visibility in place with strong strides being made toward plant floor to top floor visibility
Technology	Spreadsheets and home-grown Access database solutions are common for supply chain planning; legacy or heavily customized supply chain execution applications	Advanced supply chain technology / solutions deployed for a handful of key supply chain management functions; lack closed-loop integration between planning and execution	Extensive use of advanced supply chain technology with closed-loop integration between planning and execution
Performance Metrics	Forecast accuracy at the product family level is below 61% Perfect order percentage is 85% or less Logistics costs as a % of sales is greater than 10%	Forecast accuracy at the product family level is 61%-71% Perfect order percentage is 86%-90% Logistics costs as a % of sales is 7%-10%	Forecast accuracy at the product family level is 71% or better Perfect order percentage is 91% or better Logistics costs as a % of sales is 6% or less

Source: AberdeenGroup, March 2007

TSW Implementation with Trading Integration (Triple Point)



Keep TSW implementation in first phase as slim as possible.

Add TSW functionality in a second phase (could start even after first phase is productive)

TSW and TPT need to start working with each other as early as possible.

→ identify, at what point of time TPT requires the TSW masterdata

Masterdata and Movement scenarios should be defined in TSW and uploaded into TPT → start with definition of TSW masterdata and gathering of Movement scenarios with Business groups as soon as possible

From then on TSW and TPT can move more independently, until the integration is set up (mainly via GTM deal and TSW Nomination).

TPT – GTM interface is via PI → predefined structures for this interface are already part of the purchased package

EhP3 is a prerequisite to use GTM/TSW integration

Best Practice Value Scenario

O&G – SCHEDULING COCKPIT



THE BEST-RUN BUSINESSES RUN SAP™



The Business Challenge



- Managing the bulk supply chain can represent as much as 80% or more of your business, analysts and companies believe a 50 cents per barrel saving can be achieved with SCM – that's \$35 million per day for the industry!
- The “glue” that cements the whole process together is the Operations and Scheduling stage – dealing with the Real World and performing the business there.
- Currently the daily work of a scheduler is spread over several instance and screens - or even worse: different systems.
- Since scheduling is a complex task, multiple transactions need to be supervised and executed.
- Slow decision making process, tracking and avoiding mistakes

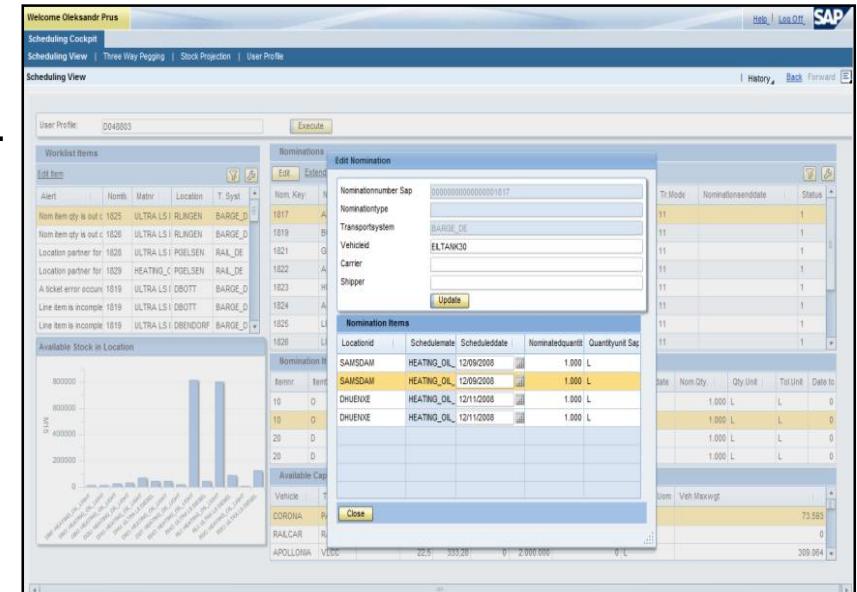


Design and Implementation for Scheduling Cockpit



The Scheduling Cockpit offers tailor-made portal access for a Scheduler of an Company that has to plan bulk movements; the screen covers the daily business requirements that a scheduler is facing

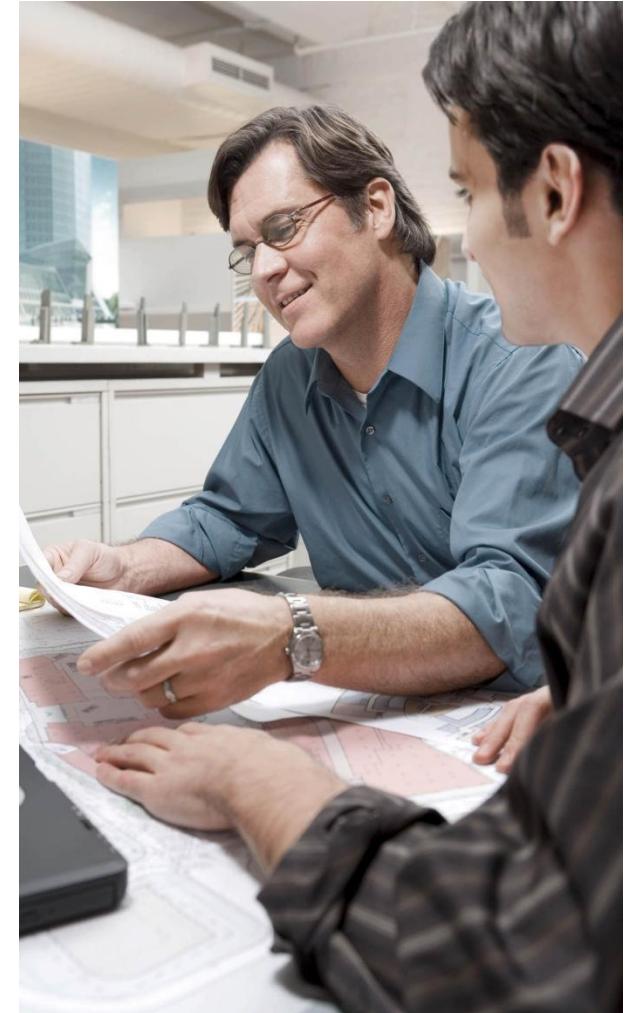
- The Design and Implementation Service for Scheduling Cockpit as a tool will help your schedulers to do their work more efficiently.
- Access scheduling functions via a tailor-made Portal makes the daily work for a scheduler much easier - faster decision making, tracking and avoid mistakes!
- Our service utilizes the capabilities of SAP NetWeaver and the functional strength of the Traders and Schedulers Workbench to create a single platform to manage scheduling activities.
- From designing, to prototyping and up to a full-scale implementation: this service is scalable.
- Does not compete with any functionality in the SAP Standard releases.



Business Benefits and Value Proposition



- SAP TSW is the world's No. 1 scheduling application for Oil, Gas and Mining Industry
- Access scheduling functions via a tailor-made Scheduling cockpit makes the daily work for a scheduler much easier
- This service can be combined with a TSW implementation which enables integration among Operative and Commercial areas
- TSW will already give you a unique source information – the scheduling cockpit simplifies it
- It can be adapted / enhanced for various business processes, e.g. marine scheduling, laytime & demurrage handling, Vetting, Event handling, etc.
- TSW function Dynamic Scheduling can be fully integrated and incorporated into the existing solution



Design and Implementation of Scheduling Cockpit



Key Challenges

- Complex daily bulk movement activities and huge information workload managed by a scheduler
- Slow decision making process, tracking and avoiding mistakes

Project Objective

- Provide an introduction workshop on scheduling functions via a tailor-made portal to simplify the daily work for a scheduler
- From designing, to prototyping and up to a full-scale implementation the delivered service is scalable

Key Benefits

- Tailor-made service delivery and customer specific introduction of the Scheduler's Cockpit
- Visibility of daily bulk movement information on one single screen
- Single portal-based access of all functionality and data required for scheduler's daily work
- Integration with SAP TSW. Upcoming TSW functions (e.g. Dynamic Scheduling) can be flexibly incorporated
- Profile-based view and functionality
- Third party and customer access
- Quicker scheduling process

Design and Implementation for Scheduling Cockpit



Welcome Oleksandr Prus

Scheduling Cockpit

Scheduling View | Three Way Pegging | Stock Projection | User Profile

Scheduling View

User Profile: D048803

Execute

Worklist Items

Alert	Nomrk	Matnr	Location	T. Syst
Nom item qty is out c	1825	ULTRA LS I	RLINGEN	BARGE_D
Nom item qty is out c	1826	ULTRA LS I	RLINGEN	BARGE_D
Location partner for	1828	ULTRA LS I	PGELSEN	RAIL_DE
Location partner for	1829	HEATING_C	PGELSEN	RAIL_DE
A ticket error occur	1819	ULTRA LS I	DBOTT	BARGE_D
Line item is incompl	1819	ULTRA LS I	DBOTT	BARGE_D
Line item is incompl	1819	ULTRA LS I	DBENDORF	BARGE_D

Nominations

Nom. Key	N
1817	A
1819	B
1821	G
1822	A
1823	H
1824	A
1825	L
1826	L

Edit Nomination

Nominationnumber Sap: 00000000000000001817

Nominationtype: BARGE_DE

Transportsystem: EILTANK30

Vehicleid: EILTANK30

Carrier:

Shipper:

Update

Nomination Items

Locationid	Itemnr.	Item	Scheduledate	Scheduleddate	Nominatedquantit	Quantityunit Sap
SAMSDAM	HEATING_OIL_	HEATING_OIL	12/09/2008		1.000	L
SAMSDAM	HEATING_OIL_	HEATING_OIL	12/09/2008		1.000	L
DHUENXE	HEATING_OIL_	HEATING_OIL	12/11/2008		1.000	L
DHUENXE	HEATING_OIL_	HEATING_OIL	12/11/2008		1.000	L

Available Stock in Location

Available Cap

Vehicle	T
CORONA	P
RAILCAR	R
APOLLONIA	VLCC

Close

History Back Forward

Tr.Mode Nominationsenddate Status

11		1
11		1
11		1
11		1
11		1
11		1
11		1
11		1
11		1

Date Nom.Qty. Qty.Unit Tol.Unit Date to

	1.000	L	L	0
	1.000	L	L	0
	1.000	L	L	0
	1.000	L	L	0

Uom Veh Maxwgt

	73.593
	0
	309.064

Best Practice Value Scenario

O&G - PIPELINE VISUALIZATION



THE BEST-RUN BUSINESSES RUN SAP™



The Business Challenge

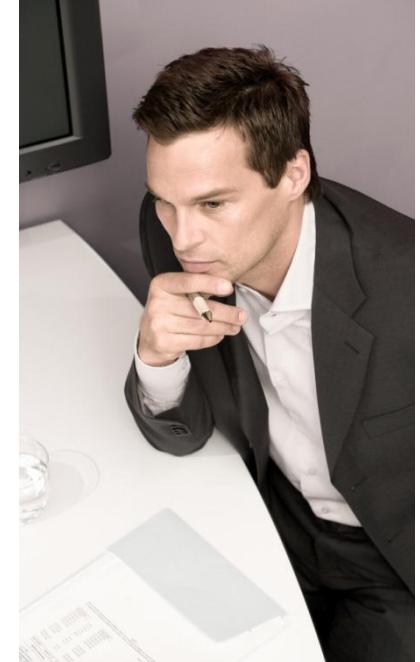


■ Pain Points

- Since scheduling is a complex task, multiple transactions need to be supervised and executed in real time.
- Complex nomination processes put a huge data and workload on a scheduler's desk.
- Pipeline networks require sophisticated allocation processes and up-to-date inventory information – batches needed to be located time, quality and quantity wise.

■ Goals/Needs

- Managing the bulk supply chain can represent as much as 80% or more of your business, Analysts and companies believe that up to 50 cents per barrel of savings can be achieved with efficient Supply Chain Management – that's \$35 million per day for the industry!
- Front end scheduling functions should have an intuitive GUI allowing easy access to data and functionality to optimize that data.
- Scheduling functions should be tightly coupled with back end realizations to enable a fast and error free translation of plans to actions.

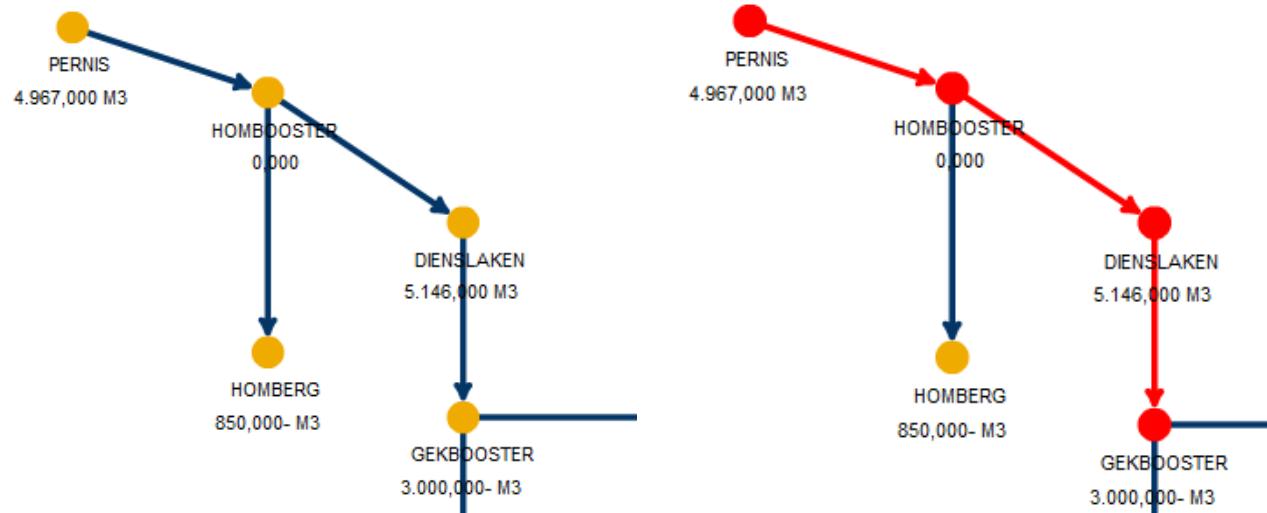


Design and Implementation for a Pipeline Visualization Tool



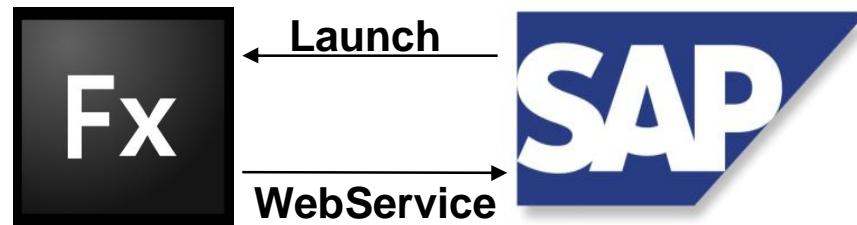
The Pipeline visualization tool designed and implemented by our service is a tailor-made "add-on" that takes the usability and comfort within the nomination process to a higher level

- Seamless integration in existing SAP for Oil & Gas solution
- The graphical display of transportation scheduling documents (nominations) in the pipeline network supports the scheduler with his daily work
- A range of functionalities including viewing pipeline batches, switching batches between nodes to achieve operational optimization, and validations and plausibility checks on operations based on capacities and physical constraints are delivered.
- Easier and faster hands-on experience for new colleagues
- Puts the "cream" on top of the world's No.1 Scheduling solution: TSW



The Pipeline Visualization is based on:

- 2-Tier architecture with a Client/Server
- Adobe Flex 3 runs inside the client's web browser (any)
- Service Oriented Architecture (SOA). Communication takes place via Web-services.
- Elements of the graph theory (algorithms, data model) used to prepare data in the backend.
- Data storage, enhancement, and business logic in the SAP ERP Backend
- The Adobe Flex application is delivered from SAP Backend to the client via Business Server Pages, located in the Backend which also provides the Web-services.



Business Benefits and Value Proposition



- SAP TSW is the world's No. 1 scheduling application for Oil & Gas
- Using graphical ways to display highly complex nominations makes scheduling and related activities much easier
- This service can be combined with a TSW implementation which enables integration among Operative and Commercial areas
- TSW will already be a unique source of information for you – the visualization of the pipeline network simplifies it!
- It can be adapted / enhanced for various business processes, e.g. for base chemical pipelines.
- Since this is not a "product" but a scalable service we make it fit to your business – in line with future SAP strategies for SCM for the Oil, Gas and Mining industry.

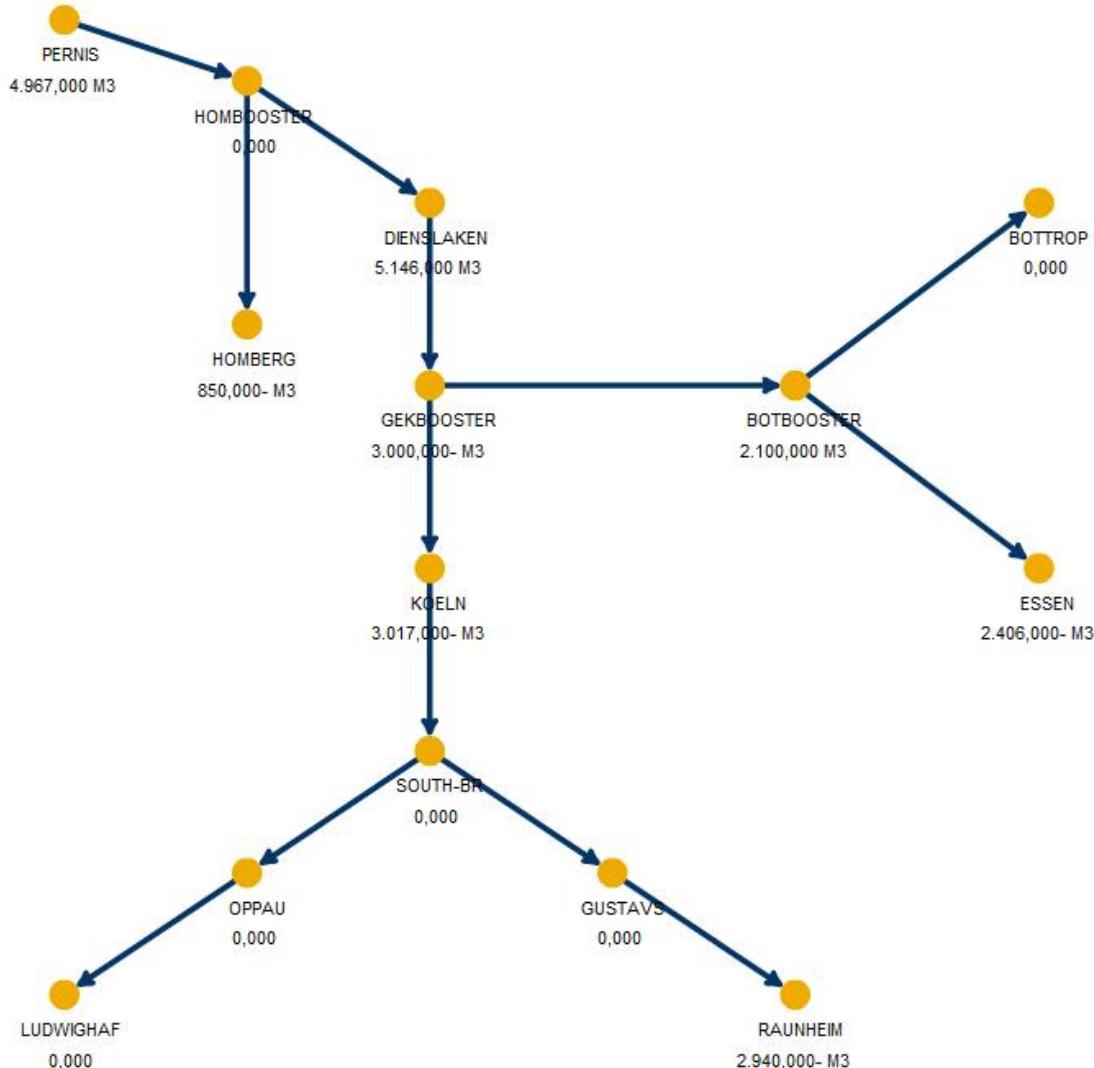


Example –

How the network looks like



SAP for Oil & Gas - Pipeline Visualization



Graph control bar

Graph
RMR pipeline Germany

Properties

Key	Value
WERK	RMR

1. Select starting node:
2. Select nomination:
3. Select target node:

Key	Value

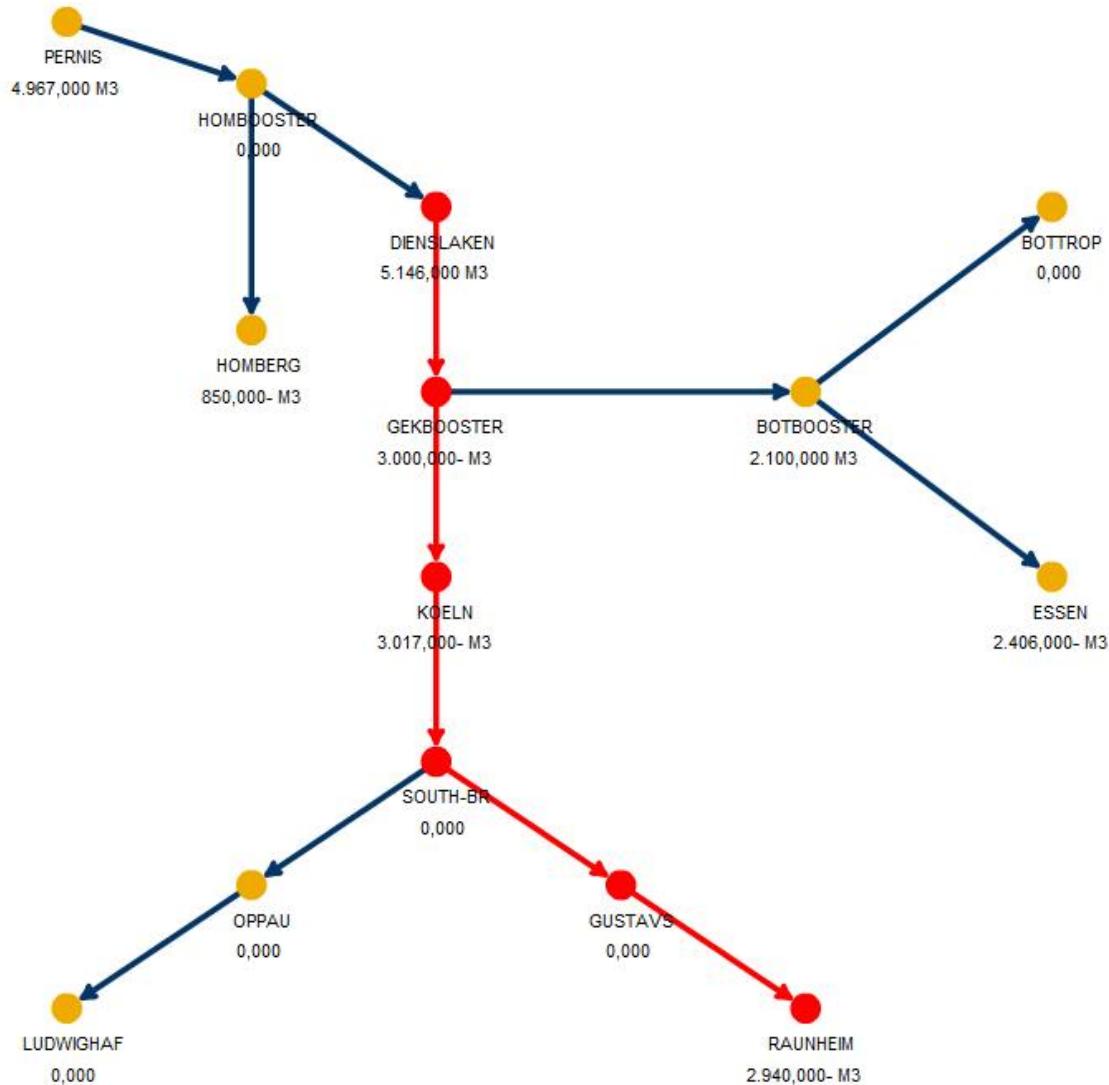
Assign Cancel

Example –

Viewing nominations and paths



SAP for Oil & Gas - Pipeline Visualization



Graph control bar

Graph
00000000000000006607

Properties

Key	Value

1. Select starting node: RAUNHEIM

2. Select nomination:

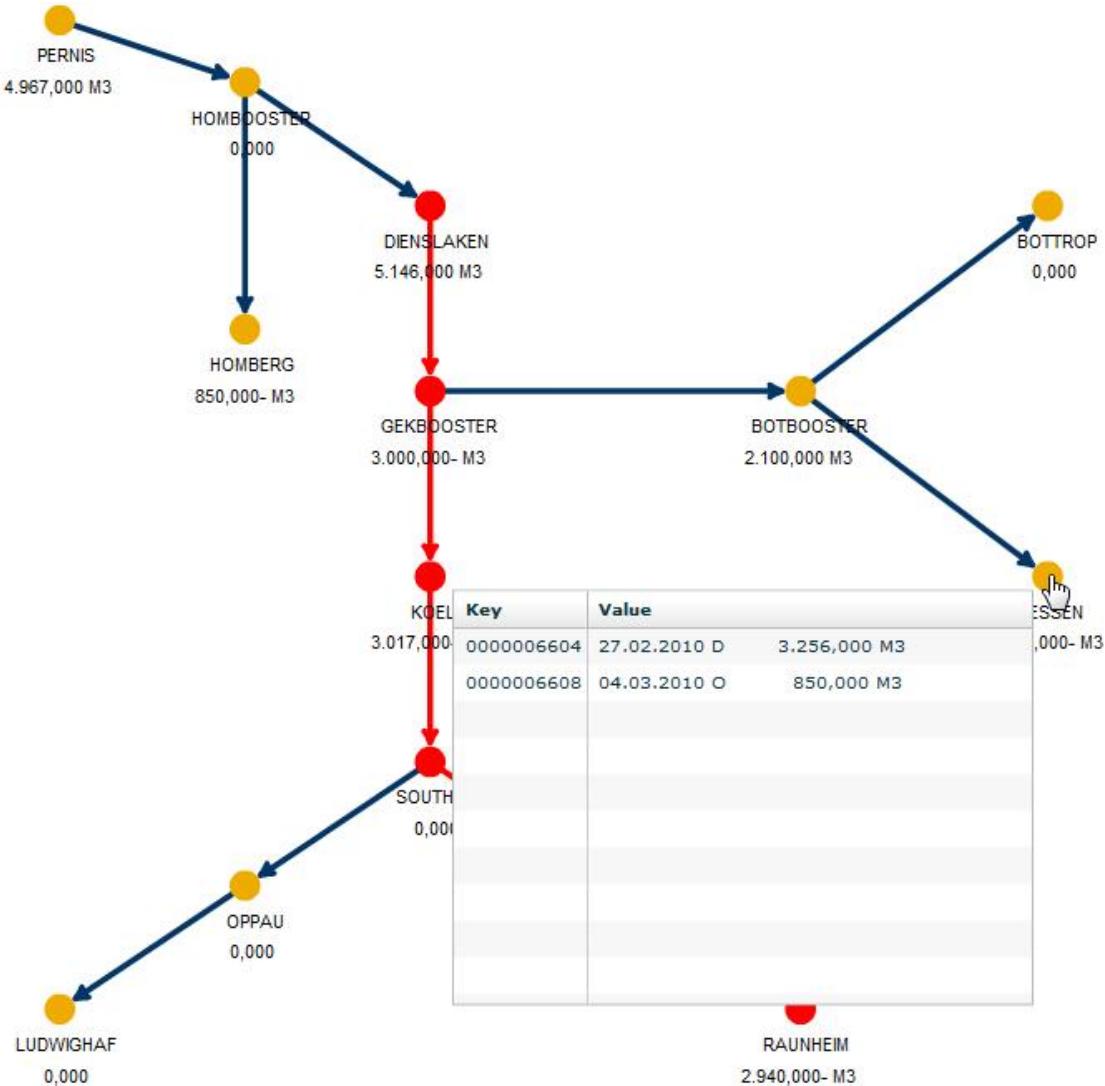
Key	Value
0000006609	05.03.2010 O 1.050,000 M3
0000006606	05.03.2010 D 2.100,000 M3
0000006607	06.03.2010 D 1.890,000 M3

3. Select target node:

Assign **Cancel**

Example – Mouse overs and node switch selection

SAP for Oil & Gas - Pipeline Visualization



Graph control bar

Graph
000000000000000006607

Properties

Key	Value

1. Select starting node: RAUNHEIM

2. Select nomination:

Key	Value
0000006609	05.03.2010 O 1.050,000 M3
0000006606	05.03.2010 D 2.100,000 M3
0000006607	06.03.2010 D 1.890,000 M3

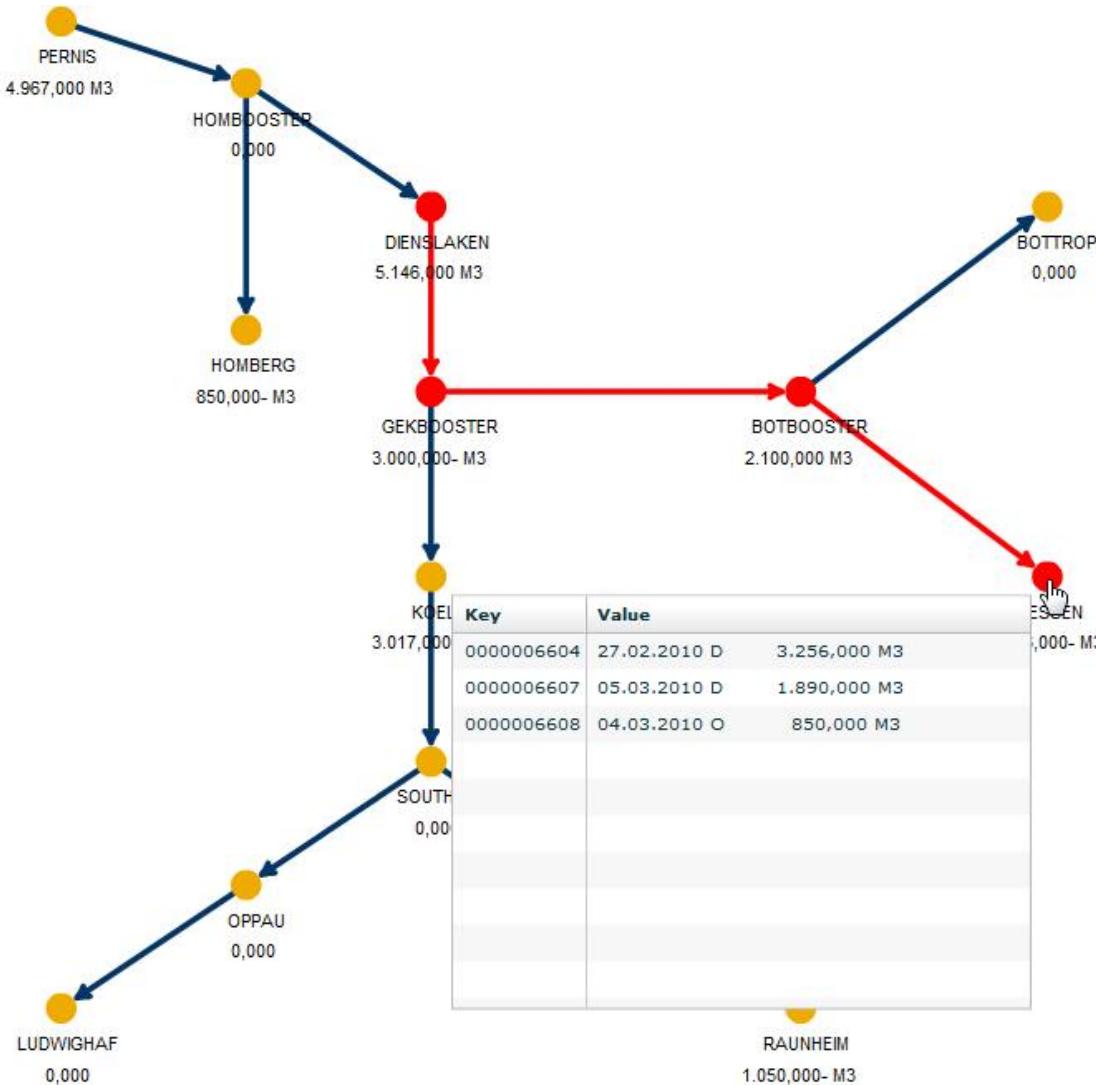
3. Select target node: ESSEN

Assign **Cancel**

Example -
... after the switch and the new path



SAP for Oil & Gas - Pipeline Visualization



Graph control bar

Graph

000000000000000006607	
------------------------------	--

Properties

Key	Value

1. Select starting node: ESSEN

2. Select nomination:

Key	Value
0000006604	27.02.2010 D 3.256,000 M3
0000006607	05.03.2010 D 1.890,000 M3
0000006608	04.03.2010 O 850,000 M3

3. Select target node:

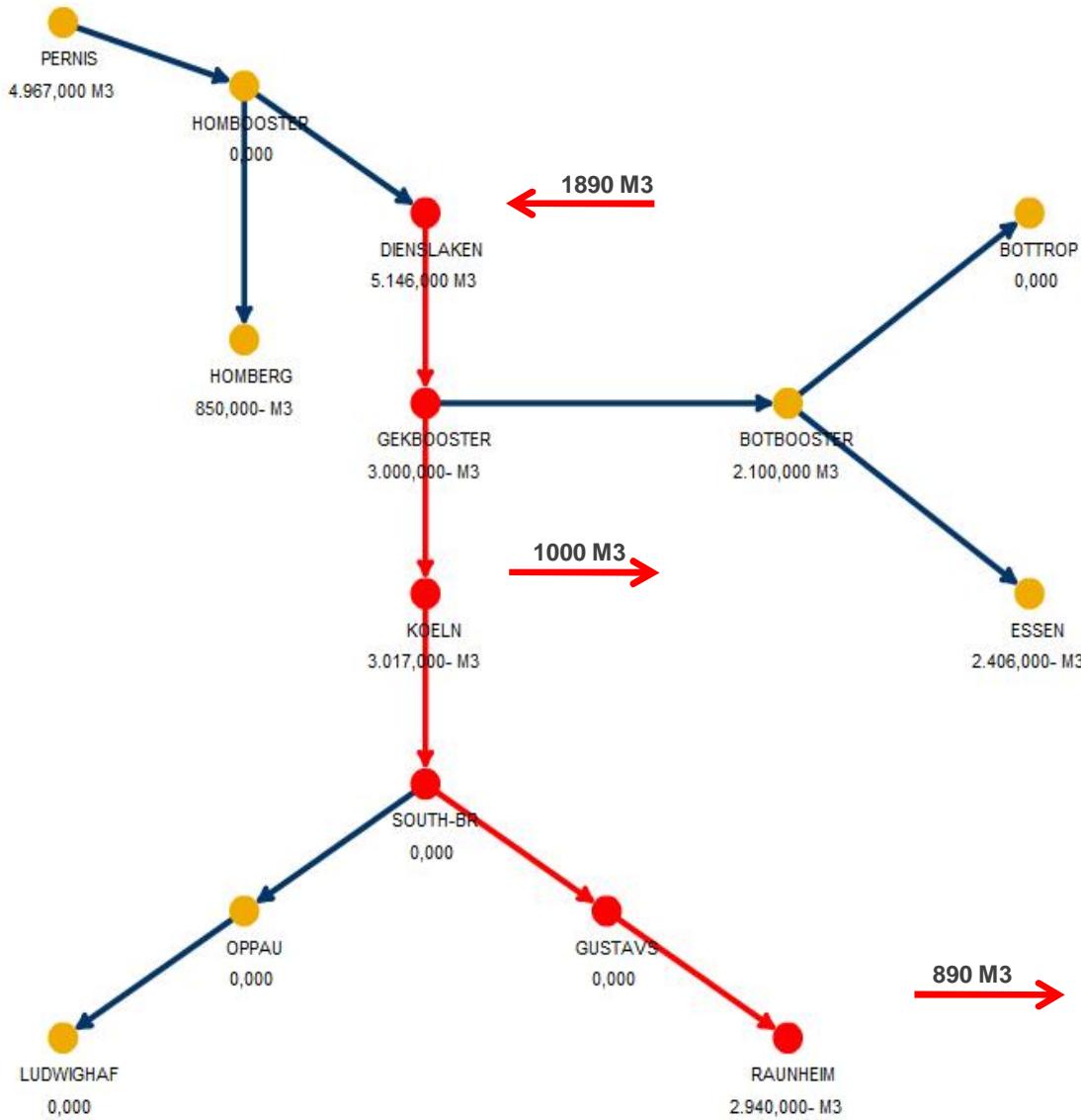
Assign **Cancel**

Proposal

Multiple loads and discharges



Scenario – Multiple discharges



Graph control bar

Graph
00000000000000006607

Properties

Key	Value

1. Select starting node: RAUNHEIM

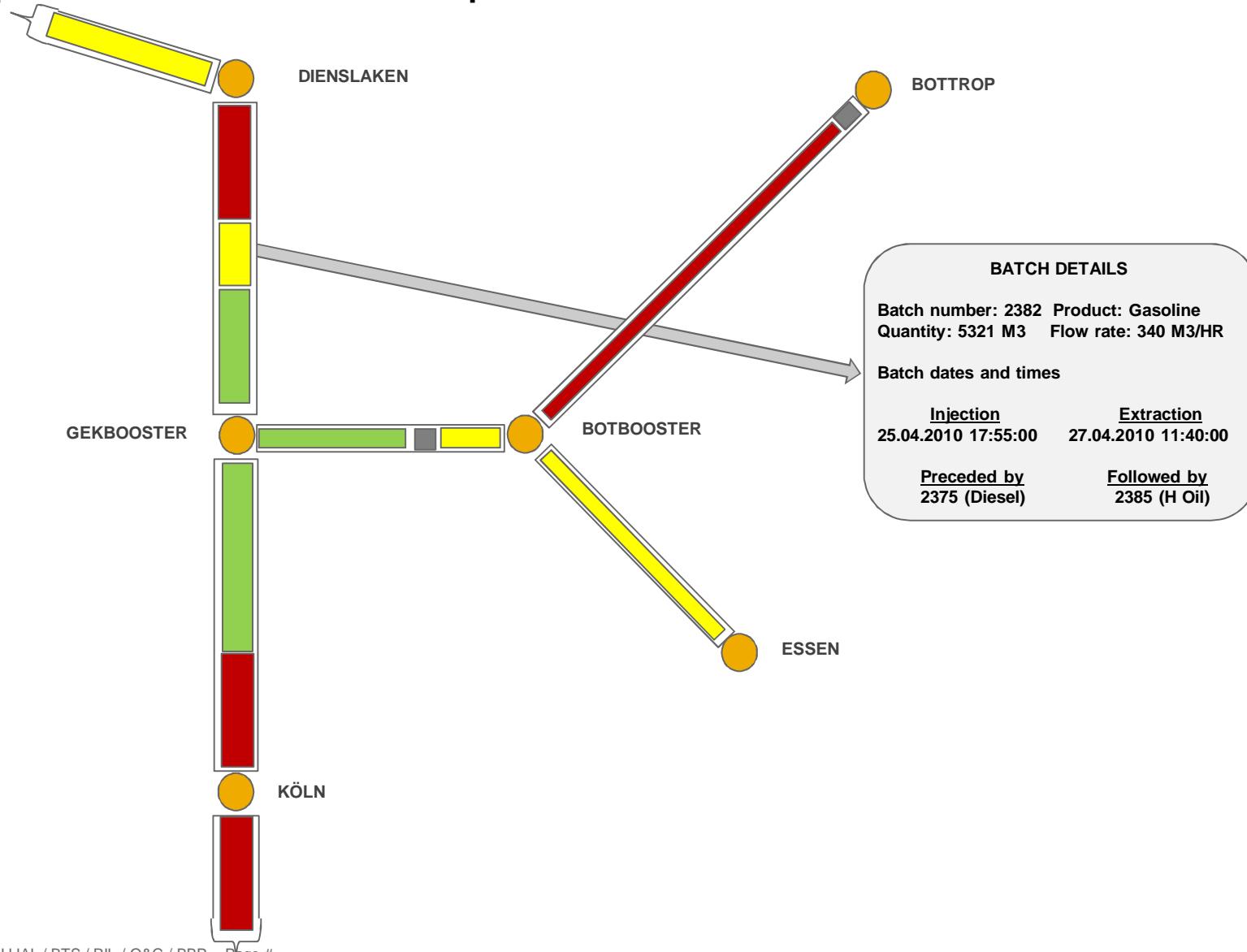
2. Select nomination:

Key	Value
0000006609	05.03.2010 O 1.050,000 M3
0000006606	05.03.2010 D 2.100,000 M3
0000006607	06.03.2010 D 1.890,000 M3

3. Select target node:

Assign **Cancel**

Example Scenario – Multi Product Pipeline



Best Practice Value Scenario

O&G – REFINING & MANUFACTURING



THE BEST-RUN BUSINESSES RUN SAP™



Key trends are driving change in the Downstream Refining & Manufacturing Industry



Increasing supply volatility and environmental complexity are driving the need for operational flexibility

High focus on operational reliability



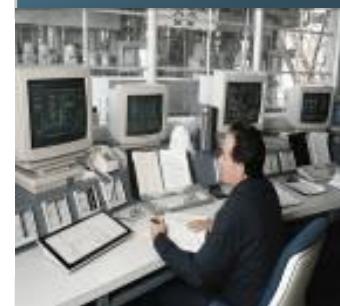
Workforce Management



Regulations and Compliance



Focus on operational transparency



- Reliability Centered Maintenance Operations
- Integrated safety procedures
- Tight crude supply market and feedstock variation impacting operations

- Aging and tightening industry talent pool
- Difficulty to attract, train and retain right people
- Cross company management of skills needed for business

- Stricter product specifications on benzene, sulfur, etc.
- Increasing consequences for HSE violations
- Tightening air, water, and waste regulations

- Lack of visibility into cross plant real-time performance
- Closing the loop of strategy with execution
- Understand refining value chain contribution

The need for constant innovation is affecting industry business models



Customers are demanding more flexible business models and companies are innovating to support them

Operational Reliability

- Consistent, streamlined processes for asset management across asset network

Workforce Management

- Maximize asset utilization
- Improve visibility for better business planning and decision support
- Recruiting new staff as well as training and development of workforce
- Knowledge retention through training and mentoring programs supported with knowledge management systems

Regulations and Compliance

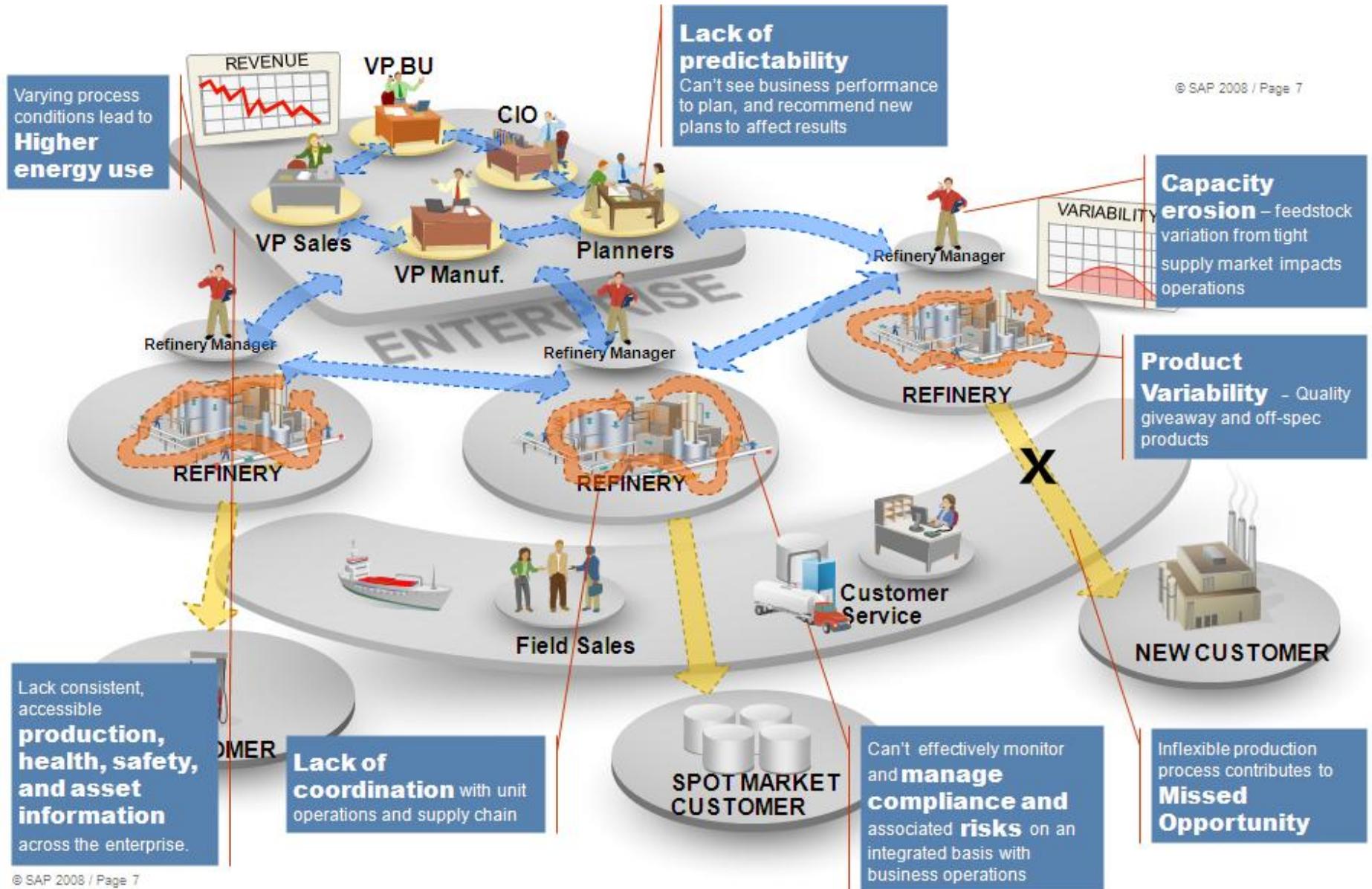
- Compliance with emission regulations (US Clear Air Act, Kyoto Protocol)
- New product specification regarding sulfur content and biofuel mix

Focus on Operational Transparency

- Tracking Business Performance
- Integration of multi location assets
- Need for analytics.

Volatility Affecting Refining Operations

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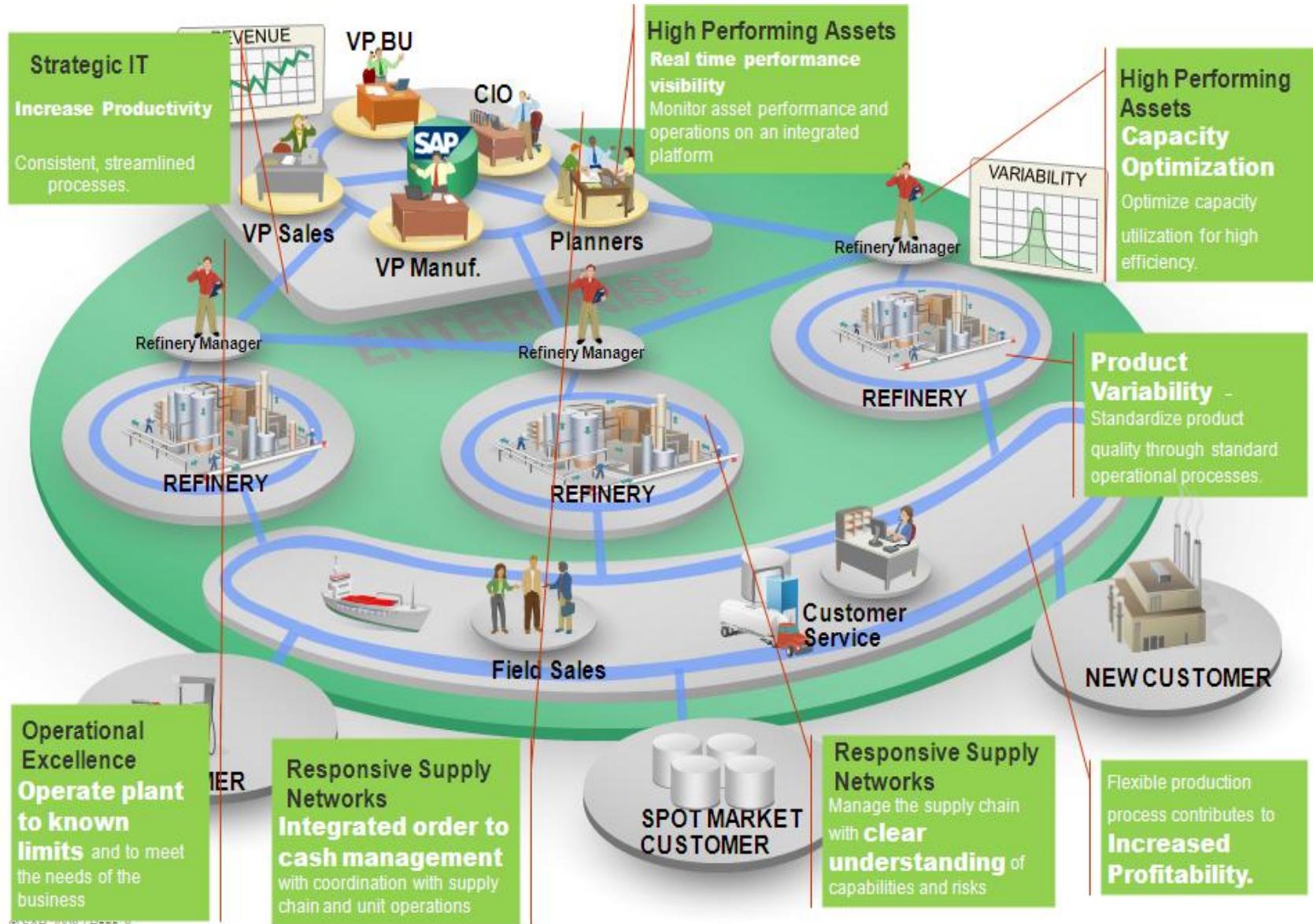


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SAP 2010 / UJJAL / BTS / RIL / O&G / BBP - Page #

kde4 Modified Slide to remove enterprise platform
Ken Evans, 12/12/2008

Operational Visibility helps Refineries address Market and Supply Volatility



kde5

Modified to show addition of enterprise wide platform with SAP, solid integration, improved charts, etc.

Ken Evans, 12/12/2008

High Performing Assets

Assess, Design, Build and Commission Assets



Assess, Design Build and Commission Assets

- Optimizing and managing complete lifecycle of capital portfolio and project management processes.
- Handover of assets to operating owner from construction /engineering company.
- Master data is ready on day 1 to efficiently operate and maintain the assets



Solution enabled by SAP

Manage Asset Portfolio

- Plan and oversee investments
- Balance high-level resource allocation
- Manage portfolio of capital projects

Manage Capital Projects

- Collaborate with design partners
- Monitor project execution
- Ensure milestone achievements
- Manage purchasing, progress payments

Manage Asset Master Data

- Building and sustaining the asset master data foundation
- Collaboration owner/operator with EPC and equipment manufacturers

Operational Readiness

- No delay in operational start-up
- Minimize errors & reduce training
- Keep information in sync for future capital projects

Key benefits

- Standardized, Integrated and transparent capital and project management process
- Earlier sustainable returns from investments
- Accelerated time to service
- High quality of asset information and safe and reliable asset operations
- Role-based delivery of information to workers
- Smooth Collaboration with engineering and equipment partners

Operational Risk Management

- Connects the stakeholders with the operational management of safety for the environment, the people and the assets.
- This enables you to move beyond compliance and create a proactive risk management strategy and realize it in daily operations



Solution enabled by SAP

- **Keep the Stakeholders Informed and Involved**
 - Closed loop risk management including risk mitigation and prevention
 - Auditable business processes and audit management solution
- **Keep the Environment Safe**
 - Integrated database and company-wide transparency regarding compliance with relevant regulations
 - Emissions and Energy Management
- **Keep the People Safe**
 - Health and safety management
 - Safety trainings and certificates
 - Incident Management
- **Keep the Assets Safe**
 - Reliability centered maintenance
 - Safe Systems of work: Lockout/tagout and work permits

Key benefits

- Operational Risk Management will support companies on their way to operational sustainability
- Mitigate strategic, operational, financial and personal risks
- Clear defined processes for monitoring and reporting conformity to regulatory requirements and corporate policies
- Reduced risk of incidents and fines. Assure health of all employees and contractors
- Safe operations and mechanical integrity through cost effective maintenance and reliability programs

High Performing Assets

Optimized asset operations and maintenance



Optimized Asset Operations and Maintenance

- Maximize asset uptime, ensuring assets run at their optimum performance levels.
- Management of facilities and suppliers to ensure SLAs are enforced.
- Management of high investment in spare parts.



Solution enabled by SAP

■ Planning and Scheduling

- Technical asset management, business planning and budgeting, workforce management, and maintenance planning and scheduling

■ Operations and Maintenance

- Preventive and Corrective Maintenance, Maintenance order processing, Subcontracting, Mobile Asset Management

■ Service Procurement

- Fully integrated plant maintenance service request, spot bidding and procurement process

■ Spare Parts Management

- Seamlessly integrated Maintenance and Materials Management.

Key benefits

- Integrated asset management solution from planning through performance management
- Higher quality and profitability, decreased workforce and maintenance costs, increased production and more opportunities to meet customer demand
- Less unplanned maintenance, shorter turnaround times
- Ensures contract compliance
- Spare parts inventory that is effectively managed leads to reduced costs and improved optimization

High Performing Assets

Asset Visibility & Performance



Asset Visibility and Performance

- Provide a single, real time view of plant & ERP data for managers to take action.
- Maximize returns on a network of assets through optimization



Solution enabled by SAP

- Connect operating systems & Business Applications to dashboards with real time alerts. Asset performance is monitored and events are triggered automatically.
- Bring together data from Operations and Maintenance into unified reporting and KPIs
- Standardize work processes and easy adoption. "Sharing of best business practices between site/plants"
- EAM processes are optimized, balancing efficiency with effectiveness, with all asset content available in a single source
- SAP® ERP, EH&S, Manufacturing Dashboard (MII), and Plant Mobility Solutions

Key benefits

- Stakeholders gain visibility across operations. Data leveraged from the source; No need to change core systems
- Managers and LOB's roll up results and look across sites/plants – benchmark best practices and drive results
- Increasing uptime, reducing overall process costs and enabling faster reaction to changing business requirements
- Optimization of maintenance spend

Operational Excellence

Integrated Sourcing and Procurement



Strategic sourcing and collaboration

- A Closed Loop between Sourcing and Procurement, Enables Critical Transparency into the End-to-end Process From Savings Identification to the Delivery of Realized Savings



Solution enabled by SAP

- Sophisticated spend analytics provides data aggregation and enrichment
- Sourcing analysis, project management, RFx and award
- Manage contract activities from – strategy, creation, negotiation, and finalization
- Automated procure to pay process – delivering compliance, supplier collaboration, and increased adoption and productivity

Key benefits

- Actionable spend visibility to maximize spend under management and savings opportunities
- Compliance with sourcing and Development of a qualified supply base to generate further negotiated savings
- Accelerated cycle time to decrease maverick buying and speed-up contract utilization
- Maximize savings delivery, reduce operational costs, increase contract compliance, avoid maverick buying, and improve productivity

Responsive Supply Networks

Bulk Transportation Management



Bulk Transportation Management

- Oil and Gas companies need to react fast on reliable data from all their assets and modes of transportation, along the whole supply and distribution network
- Bulk Scheduling covers all processes from High-level long-term planning of oil down to detailed scheduling and execution



Solution enabled by SAP

- Forecast demand and Optimize replenishment
- Match demand and supply
- Proposals for Nominations and assignment of available vessels
- Mid-term forecasting on all locations
- Match demands, supplies, and transport avails (vessels)
- Schedule bulk movements (nominations)
- Manage detailed load / discharge scheduling
- Consider specific legal requirements in the oil industry (like multiple UoM's, etc.)

Key benefits

- The books are always correct, physical = book once tank data are uploaded
- Take direct actions, alerts are recognized on time
- Best decision support through common real-time data visibility across the landscape
- All scheduling operations are in sync
- Employees are all in line with company goal, no silos in the business

Enterprise Performance Management

- SAP Business Objects provides the leading solution to unlock information, enable insight, manage performance, and govern compliance regardless of the underlying business applications and data stores.



Solution enabled by SAP

- Management Accounting
- Financial and Management Reporting
- Financial Planning, Budgeting and Forecasting
- Profitability Analytics
- Product and Service Cost Analytics
- Payment Behavior Analytics
- Corporate Investment Management
- Legal and Management Consolidation
- Business Objects Financial Consolidation
- Business Planning and Consolidation

Key benefits

- Monitor results and measure performance
- Reduce budget cycle times
- Visibility into budgets & actual
- Minimizes business and compliance risk through a transparent, fast close and full audit trail
- Visibility into factors that drives costs
- Maximize Profitability – Know exactly where profit is made
- Power – Accelerate processing and reporting for a faster close
- Deliver reliable and timely data to stakeholders

Talent Management

- Talent management with SAP ERP HCM integrates processes to identify, develop, compensate, and retain talents.
- It supports end-to-end processes for recruiting, employee performance management, talent review, succession management, enterprise learning management, and compensation management.

Solution enabled by SAP

- E-recruitment
- Employee master data mgmt & skills tracking
- Employee administration, payroll & time management
- Education integrated with development plans
- Self service career development
- Performance management
- Legal reporting

Key benefits

- Create Talent Pool of highly skilled individuals
- Train Employees to elevate their profitability
- Compensate High Performers to increase longevity
- Use Analytics to understand profitability and realization



Strategic Information Technology

Business Process Platform



Business Process Platform

SAP helps organizations establish their unique business process platforms based on enterprise SOA by delivering:

- Flexible and agile platform for addressing business needs
- Lower TCO from integrated solution

Solution enabled by SAP

- Ready-to-execute software that enables industry-rich business processes
- Reusable enterprise services and process components that support rapid change
- A unified technology foundation for running business processes efficiently
- Innovative business processes enabled by service-enabled applications
- Vibrant ecosystem

Key benefits

- Faster and more flexible business innovation
- Strategic alignment between business and IT. Reduced operating costs
- Reduced total cost of ownership
- Improved user productivity, collaboration, and business insight



Continued ...
Volume (2) PART-C

Thank you !



Q E D : Volume-(2) PART-B

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