



Unlock Your Supply Chain

Supply Chain Optimization
In the Mature Oil Province



The North Sea Province

Much Like Alaska:

- Mature region with some new discoveries coming on line
- Well Developed Infrastructure
- Variable asset profiles per producer
- Emphasis on efficiency and safety



The Mandate in Mature Regions

- Contain or reduce operating costs while achieving high levels of safety and operational reliability
- Actively manage inventory investment
- Actively manage suppliers and spend

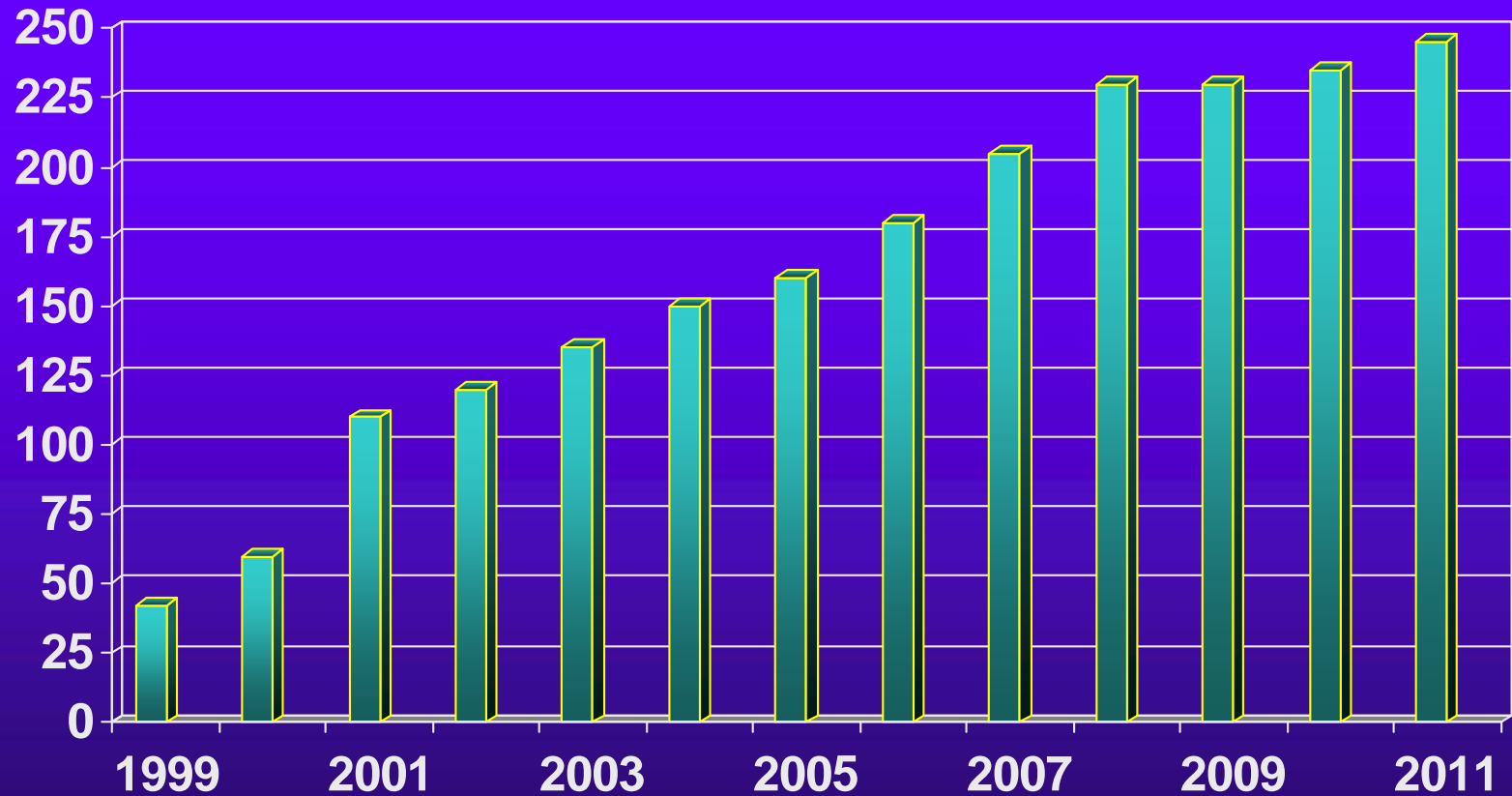


About ASCI's Perspective

- Alaska HQ: 12+ years high volume operations
- Alaska, Caribbean and Australia interests
- Service company – not a reseller
- Process optimization oriented, not asset intensive
- Performance | Technology | People



Alaska Employees





OPTIMIZE YOUR SUPPLY CHAIN

How do we get there?

What Does Optimize Mean?

- Decrease Operational Risk
 - Improve Equipment Up-Time
 - Execute More Quickly
 - Save Money



Unlock Your Supply Chain



Most Operators Do a Lot Here



And Less Here



Critical Success Factors

- Master Data Quality
- Technology Tools – e.g., Analytics & other B-I
 - Supplement ERP/EAMS capabilities – bridge gaps
- Optimal Use of External Resources



Let's get specific...



UNLOCK YOUR SUPPLY CHAIN



Excellent Example... Inventory Optimization

- Left Unchecked, Levels Steadily Expand
- Demand Patterns Change Over Time
- Eliminating Items No Longer Needed Is Difficult to Do in a Consistent Way
- New stock keeps on coming



The Alternative: Inventory Science (Inventory Analytics)

- Classify stock according to criticality (cost)
 - Five levels of criticality – A to E
- Build a cost model – ordering cost, handling cost, storage cost, carrying cost, etc.
- Stratify by usage and value
- Apply statistical algorithms at item level using these inputs

Easier Said Than Done!

Key Constraints:

- Number of Items to Analyze
- Quality of Readily Available Data
- Resources and Expertise
- Maintaining the Focus



Key Enablers of Stock Optimization

- Powerful inventory analytics tools that are fit for MRO environment
 - I.e., automate. Move beyond spreadsheets.
- Commitment to high quality master data and transactional data
- Use of third party assistance, during set-up and, if necessary, on an ongoing basis
- Adequate resourcing of analytics functions



Case Study – Tier One Integrated Oil Co

- Operating Profile:
 - Large amounts of MRO inventory
 - Upstream and downstream
 - Global operator
 - Varying levels of master data quality, by region
 - Well respected inventory analytics champion



Project Sequence

- “Pilot” implementations in two large regions
 - Lessons learned
 - Cost model methodology refined
 - ROI validated
- Global platform and processes established
- Duration: ~ three years from start of pilot to global implementation



Case Study Outcomes

- 20:1 Benefit/Cost Ratio in Year One
 - Many benefits recur annually
 - Not limited to stock reduction benefits
- Stock levels of certain high criticality items increased
- Overall stock almost invariably trended downward, while stock service levels went up
- Trust levels, relationships between Materials and Maintenance normally improved significantly



Case Study: Lessons Learned

- Data quality not an insurmountable barrier
 - Crawl | Walk | Run
- Smaller locations or those in rapid growth mode can benefit from ongoing third party assistance
- Good equipment BOMs are valuable
- Bring maintenance org in early, engage effectively in criticality classifications, stay engaged
 - In a successful project, good things happen. Maintenance and ops will notice.
- Annual training refreshers, reporting refinements and periodic cost model updates are beneficial

Other Benefits Realized

- Operational risk reduction
 - Ensures critical spares are available and properly located (higher service levels)
 - Match supply to CURRENT and anticipated item demand, not demand from two years ago
- Identify materials for vendor management
- Re-adjust levels and items in satellite locations (platforms, FPSO, rigs)
- Optimize bench stock and I.D. seasonal items



A Virtuous Circle

Processes that get better with inventory analytics:

- Better control of new stock additions
- More disciplined project returns policy
- More consistent, disciplined item obsolescence and surplus processes
- Highlights data quality issues, underscores demand for good master data
- Reporting and KPI's – easier to produce, more interest in them across org.



Final Thoughts

- We are in the early years of a revolution in business intelligence and analytics
 - ERP systems are just the enabler
- Oilfield MRO inventory represents an ideal application of high powered analytics
 - Automated, nuanced application of mature statistical algorithms
 - Still early days – early adopters will shine
- One strategy does not fit all
 - SaaS options, supplemental support options

More Kinds of Optimization....

Equipment Performance

Asset Performance
Visibility

Life Cycle Costing
Analysis

Component Failure
Analysis

Equipment
Criticality Analysis

Maintenance Effectiveness

Maintenance
Performance
Visibility

Standardize
Preventative
Maintenance Plans

Maintenance
Budget Analysis

Bills of Material
Analysis

Inventory Optimization

Inventory
Performance
Visibility

Optimize
Consumables &
Critical Spares
Levels

Obsolete and
Surplus Stock
Disposal

Material Master
Data
Standardization

Supplier Performance

Supplier Quadrant
Analysis

Supplier
Performance
Analysis

Supplier
Management

Vendor & Service
Master Data
Standardization

Procurement Effectiveness

Category Analysis

Contract
Performance
Analysis

Pricing Analytics

Spend
Classification

MRO Supply Chain Effectiveness

Procure-to-Pay
Visibility

Transactional Cost
Analysis

Warehouse Service
Level Analysis

Data Quality Audit