Industrial Manufacturing
Heavy Equipment & Machinery
Enable a Flexible and Responsive Supply Chain
Presenter’s Name
Presenter’s Title
Safe Harbor Statement

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Agenda

- Leadership in Heavy Equipment & Machinery
- Innovation in Industry Specific Solutions
- Results Achieved by Oracle Customers
Did You Know?

Oracle’s in
Heavy Equipment & Machinery

9 of the top 10 Fortune’s industrial & farm equipment manufacturers run Oracle Applications

8 of the top 10 Industry Week’s leading machinery manufacturers run Oracle Applications

8 of the top 10 Oil & Gas equipment companies run Oracle Applications

7 of the top 10 construction equipment manufacturers run Oracle Applications
Challenges We’re Hearing….

Revenue Growth

“With the much of the cost-cutting already done, how can I grow top-line revenue to increase profits?”

“80% of the world’s top corporate CEOs declared that their primary objective has shifted from cost-cutting to revenue growth.”

IBM BCS, The Global CEO Study

Eroding Margins

“How can we implement Lean more effectively to improve margins in a complex product environment?”

“Pure and simple, lean is reducing the time from customer order to manufacturing and delivering products by eliminating non-value added waste in the production stream. The ideal of a lean system is a one-piece flow. A lean manufacturer is continuously improving in the direction of that ideal.”

James Womack, “Lean Thinking”
Challenges We’re Hearing….

Rapidly Changing Customer Demands

“How can we build a more responsive supply chain in a rapidly changing market?”

“Market leaders all have supply chains that are more responsive to customer demand.”

Yossi Sheffi, MIT, in the Economist, June 17, 2006

Aftermarket Growth

“How can we expand high margin aftermarket support opportunities?”

“Many discrete industrial organizations are finding great value in aftermarket services, including installation, after sale services, spare parts, warranty, and repair. Yet many other organizations fail to recognize the potential benefit this business can bring in revenue growth, profits, customer intimacy, and operational excellence.”

Challenges We’re Hearing…. 

Rapidly Changing Customer Demands

“How can we build a more responsive supply chain in a rapidly changing market?”

“Market leaders all have supply chains that are more responsive to customer demand.”

Yossi Sheffi, MIT, in the Economist, June 17, 2006

Demand Driven leaders typically have:
- 15% less inventory
- 17% stronger order fulfillment
- 35% shorter cash-to-cash cycle times

S&OP leaders outperform their competitors:
- Improved order fill rates
- Increased gross margin
- Higher customer retention

Source: AMR Benchmark Analytix

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Agenda

• Leadership in Heavy Equipment & Machinery
• Innovation in Industry Specific Solutions
• Results Achieved by Oracle Customers
Enable a Flexible & Responsive Supply Chain

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Oracle Global Order Promising
Consider All Supply Constraints to Accurately Promise Orders 24x7

- Consider all your supply chain constraints
- Consider supplier capacity when promising orders
- Enable 24x7 uptime by leveraging proven Oracle Database capabilities

ATP Engine runs in the database for 24x7 availability
Promise Complex Configurations
Support Mass Customization Through Multi-level Configure-to-Order Promising

- Tight integration with Oracle Configurator and Order Management enables accurate order promising of complex configurations
- Sourcing and availability can be dependent on the options selected during configuration
- Multiple levels of models, including outsourced configurations are supported
Collaborative Planning in Detail
Visibility Across the Global Supply Chain

• Extend Visibility to Multiple Tiers
  – Communicate requirements to all suppliers

• React Faster to Supplier Constraints
  – Get visibility to supplier capacity
  – Reallocate key components
  – Make alternate sourcing decisions

• Reduce Obsolescence
  – Understand impact of BOM changes to your contract manufacturer or supplier

• Reduce Non-Value Added Costs and Exception Overload
  – User-configurable exceptions
  – Automated exception handling via workflow

ORACLE
Real-Time Order Tracking
Provide Customers with Accurate Status Details

At-a-glance view of supply created for all top level configurations or ATO items on a sales order

Drill down to view supply status details...

CONFIDENTIAL: All capabilities and dates are for planning purposes only and may not be used in any contract
Alcoa Achieves Efficiencies with Global Order Promising

COMPANY OVERVIEW
- One of the world’s top producers of alumina and aluminum; other products include consumer products, fiber-optic cables, food service and flexible packaging products, plastic closures and windows and doors
- Major customer markets include the aerospace and defense, automotive, building and construction and packaging industries
- Revenues US$30+ billion. 130,000 employees. Global operations and customers

CHALLENGES/OPPORTUNITIES
- Highly customized business systems and processes represented a barrier to achieving necessary improved business performance and flexibility
- Need for Accurate and timely Order Promising, Accurate Forecasting, Advanced visibility to capacity and materials shortage; Effective Sales and Ops Planning
- Portions of the planned Mfg Ops are complex lot-based with networked multi-path routings.
- Processes need to be executed at an aggregate level of the product dimension
- 300 product families, 25,000 FGI, 75,000 lower level items across 14 separate orgs need to be planned

SOLUTIONS
- Oracle Global Order Promising (GOP)
- Oracle Demand Planning (DP)
- Oracle Advanced Planning (ASCP)

CUSTOMER PERSPECTIVE
“It’s about value-chain linkage, acquisition integration and lower operating costs ... We chose Oracle for cost, functionality, overall reliability, value-chain linkage and the e-business functionality that Oracle was developing.”
Kevin Homer, North America CIO, Alcoa

RESULTS
- Eliminated 43 legacy planning and operations systems with EBS Suite
- Real Time Order Promising against a statement of future supply
- Able to check availability against statement of product family level supply
- Able to check availability against a statement of item-level supply
- Summary: More accurate order promise dates, Improved forecast accuracy, Improved capacity plans, Improved sales and operations planning

Source: Oracle Customer Experience
Enable a Flexible & Responsive Supply Chain

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Advanced Planning and Scheduling
Balance Complex Multi-tiered & Global Supply & Demand

- Real-time end demand visibility – Quickly sense and respond to demand changes
  
Shape demand and align business plans quickly

- Manage your business with real-time sales and operations planning

- Collaborate across the entire supply chain with a single plan

- Monitor performance to drive continuous improvement
Advanced Planning and Scheduling
Balance Complex Multi-tiered Global Supply and Demand

Integrated Planning Functions

Best in class Business Processes

Supply Chain Risk Management
Demand driven adaptive planning
Real-Time S&OP
Operational Excellence
Multi-Enterprise Collaboration

Network Design
Demand Sensing And Shaping
Postponement Optimization
Holistic Supply Planning
Promise, Distribute, and Replenish

Role-based Portals

Preconfigured Worksheets and Workbenches
Execute to plan

Products

Strategic Network Optimization
Inventory Optimization
Real-Time Sales and Operations Planning
Demand Management and Advanced Forecasting
Predictive Trade Planning and Optimization
Advanced Supply Chain Planning
Production Scheduling
Global Order Promising
Collaborative Planning

Platform

XML
WFL
Connectors
Common planning data model
Embedded Analytics

Future *

Future E-Business Suite
Legacy ERP
Real-Time Sales & Operations Planning
Enabling the Next Generation Best in Class S&OP Process

- Move from a periodic reactive process to a real time proactive process
  - Combine demand review, supply review, product review, and management review into a collaborative real time sales and operations planning process
  - Combine strategic and tactical decisions

- Start quickly with best practice templates and easily adapt to your business

- Sense, shape, and respond to demand
  - Start with more accurate consensus forecast
  - Shape demand by managing product introductions and sales promotions
  - Profitably balance supply, demand, and budgets

- Drive tactical decisions into execution and monitor performance
Balance Supply with Demand
Key Suppliers Can Participate Directly in the Supply Review Process

- **Communicate sales and operations plan to suppliers**
  - Get visibility to supplier capacity
  - Reallocate key components
  - Make alternate sourcing decisions

- **Include suppliers and contract manufacturers in exception management process**
  - Waterfall analysis
  - User-configurable exceptions
  - Automated exception handling via workflow
Kvaerner Power Improved Inventory & Productivity

COMPANY OVERVIEW
- World’s leading supplier of chemical recovery, power boilers & evaporators for the pulp and paper industry
- HQ: Oslo, Norway;
- Parent Revenues of $7B in 2005
- US Base: Charlotte N.C.
- Revenues US$ 700M

CHALLENGES & OPPORTUNITIES
- Low turnover parts, equipment leading to excessive inventory
- Inefficient order processing cycle leading to inefficiencies
- Growing IT expenses resulting from more demands on information

SOLUTIONS
- Oracle Discrete Manufacturing
- Oracle Order Mgmt
- Oracle iProcurement
- Oracle Purchasing
- Oracle Financials
- Oracle Projects
- Oracle Advanced Supply Chain
- Oracle Inventory Optimization

CUSTOMER PERSPECTIVE
"Not only has upgrading to Oracle E-Business Suite helped Kvaerner Power integrate the applications, it’s helped the internal processes of our company as well. Instead of working in stand alone silos, we now understand the big picture. And from a management perspective, we are able to see the status of the company on a daily basis."
Woody Muth, Director of IT, Kvaerner

RESULTS
- $3.4 million in total productivity and growth benefit
- Inventory turns up 43%
- Order processing time reduced 83%
- On-Demand saved $310K in annual IT spend
- Avoided $50K in annual hardware expense
Enable a Flexible & Responsive Supply Chain

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Support Diverse and Complex Production
Complete Lean Manufacturing Solutions

Advanced Planning
- Planned Orders
- Schedule Changes
- Component Substitutes
- Resources Substitutes

Demand Variability

Cost Analysis

Integrated Intelligence

Productivity

Mixed Mode Mfg Execution
- ETO/Project
- Seiban CTO / ATO
- Standard WIP
- MTS
- Flow / Lean
- Lot-Based

MES

Model Shop Floor

Contract Mfgrs

Suppliers

Lot / Serial Genealogy Tracking

Quality Management

Sample
Analyze
Adjust

Partner Collaboration

- Material Availability
- Mfg Capacity
- Schedules/Changes
- Production Status
- Ship Notices
- Invoices/Payments

Customer

Enterprise Shop Floor

Contract Mfgrs

Suppliers

ORACLE
Execution Options Provides Agility
Utilize the Manufacturing Technique Which Best Meets Your Specific Requirements

Mobile Supply Chain Applications

<table>
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<th>Discrete Mfg (WIP) ... plus ... MES for Discrete Mfg</th>
<th>Flow Manufacturing</th>
<th>Shop Floor Management</th>
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<td>Traditional discrete (batch) manufacturers in a low-to-medium production volume, high product mix environment.</td>
<td>Make to order “demand flow technology” or lean manufacturing lines or cells in a low-to-medium production volume, high product mix environment.</td>
<td>Lot or lot/serial controlled end items that require lot integrity during entire production cycle. Low volume desktop / high volume interface rqmts.</td>
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Flexible & Configurable Mfg Execution Capabilities

- Production
  - Configurable work lists
  - “Paperless” work instructions via graphically rich screens
  - Streamlined transactions
  - Supervisor dashboard to monitor shop floor state*
  - Integrated quality data collection
  - Product genealogy tracking
  - Label printing (product identifiers, packaging, etc)

- Assembly

*Not applicable for Flow Manufacturing
Production Scheduling Provides Agility
Maximize Shop Floor Throughput and Optimize Resource Utilization

- Maximize throughput of bottleneck resources
  - Automatic detection of bottlenecks
  - Minimize setup with intelligent sequencing

- Improve shop floor performance
  - Minimize the effect of unplanned downtime
  - Easy identification of issues
  - What-if rescheduling
  - Drag and drop

- Quickly determine the best schedule
  - Fast easy simulation
  - Scenario comparison and key performance indicators

- Implement quickly by leveraging out-of-the-box integration
  - Integrated manufacturing planning and scheduling
  - Fully integrated with Oracle E-Business Suite
Oracle Flow Manufacturing Solution
Support Lean Production Operations

- Robust Scheduling and Sequencing
- Feeder Line Synchronization
- Outbound Broadcast Sequencing
- Kanban Planning and Execution
- Mixed Model Simulation with Takt Time Analysis
Flow Manufacturing
Support Lean Practices to Reduce Cycle Time & Waste

- Define and associate standard processes with configurable models
- Add alternate paths & rework loops
- Add standard events, associate with options
- Identify TQC and value-add events
- Associate work instructions with optional events

- Calculate line & operation takt and req’d resources
- Highlight imbalances based on option’s planning percentages
- Reorganize events into balanced operations

- Kanban planning based on option planning percentages
- Demand leveling and smoothing by line rate
- Order promising by line rate
- Collaborative planning for VMI and consigned
- Inventory optimization for postponement

- Kanban execution
- Constrained based line sequencing based on configuration and its attributes
- Feeder line & supplier synchronization for “just in time” configured component delivery
- Operator workstation to deliver configured work instructions to the floor

Value Stream Mapping ➔ Line Design ➔ Lean Planning ➔ Lean Execution
COMPANY OVERVIEW
- World leading manufacturer of transport temperature control
- Business unit of Ingersoll-Rand Company, Ltd., founded in 1938
- Products include heating, cooling and ventilation systems for trailers, trucks, buses, shipboard containers, light rail, and railway cars
- Operates ten manufacturing plants in seven countries

CHALLENGES / OPPORTUNITIES
- Complex, mixed-mode production
- Inventory build-up due to “push” mfg

SOLUTIONS
- Oracle E-Business Suite
- Oracle Discrete Manufacturing
- Oracle Flow Manufacturing
- Oracle Order Management
- Oracle Purchasing
- Oracle iProcurement
- Oracle iSupplier Portal
- Oracle Financials

RESULTS
- Increased plant production and capacity by 30%
- Reduced inventory by 23% and pull sequences by 20%
- Achieved 66% reduction in vendor transactions, receiving activity, and managed stock locations
- Transitioning major manufacturing operations from push-based MRP to pull-based lean manufacturing
- Supports mixed manufacturing methods including engineer-to-order, build-to-order, assemble-to-order, configure-to-order, and build-to-stock

CUSTOMER PERSPECTIVE
“1st Year benefits are attributable to Lean, but every year after from Y+1 to infinity are attributable to the system by enforcing and maintaining the lean processes”
Mike Macrie, Global Director, Back Office Applications

Thermo King Reduced Inventory by 23% & Increased Capacity by 30%
Enabling a Flexible and Responsive Supply Chain

Summary

- Provide multi-level order promising for material and capacity constraints
- Collaborate with suppliers and customer to respond quickly to changes

- Integrated Demand and Supply Planning
- Collaborate with suppliers, dealers and distributors on Supply chain requirements
- Integrated VMI/Supply Chain exception management

- Complete Mixed Mode Manufacturing capabilities to Support, ETO, CTO, Make-to-stock, etc
- World class Flow Manufacturing capabilities with Takt Time analysis, Scheduling/Sequence optimization and more

Provide accurate order visibility and customer delivery schedules

Match supply to demand in a long lead time multi-tiered supply chain

Support diverse and complex production requirements
The Only *Complete* Heavy Equipment & Machinery Solution
Heavy Equipment & Machinery Footprint

Customer & Distribution Channels
- Order Capture
- Goods & Services
- ETO/CTO
- Sales
- Marketing
- PRM
- eCommerce
- eBilling/Payment
- Service

Analytics
- Marketing Analytics
- Sales Analytics
- Service Analytics
- Supply Chain Analytics
- Financial Analytics

Operations and Manufacturing
- Pricing & Contract Management
- Field Service/Depot
- Asset Lifecycle Mgmt
- DeMantra/Supply Chain Planning
- Global Trade Management
- Project/Project Manufacturing
- Demantra/Supply Chain Planning
- Direct Procurement
- Product Lifecycle Management
- Transportation & Logistics
- Export Compliance

Corporate Administration
- CPM
- Financials / Cash Mgmt
- Human Resources
- Facilities Management
- Indirect Procurement
- Projects
- Compensation
- Helpdesk (HR, IT)

Infrastructure
- Hubs (Asset Hub, Product Hub)
- Customer Data Hub
- Integration Framework (e.g. BPEL)
- Technology (e.g. Database, Application Server, RAC, Oblix, Times Ten)

Oracle
ISV Partners
Market-Leading Middleware Platform

Best-Selling
- 32,000+ Customers Deployed
- 70% of World’s 50 Largest Firms
- $1B+ Business

#1 Middleware – APS Market Share

Highest Rated
Only vendor in Gartner and Forrester leader quadrants for all Middleware components.

Fastest Growing Middleware
2005 Growth Rates

SOA Vendor of Choice

Most Comprehensive

- User Experience
- Business Intelligence
- Financials
- SCM
- CRM
- Industry Apps
- Composite Apps
- Security
- Tools
- Systems Management
- Grid Infrastructure
- Application Server

Source: Forrester Research ranking of Application Platform Servers, April 2005

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Oracle’s People Advantage

- 30,000 applications customers
- 30,000 middleware customers
- 220,000 database customers
- 1,700 application ISVs
- 5,000 middleware ISVs
- 9,000 database ISVs
- 35 Fusion strategy council members
- 29,000 developers, support engineers and consultants
- 1,300 participants in early customer adoption programs
- 950 customers participating in Customer Advisory Boards
- 500 Industry & Product strategy council members
- 425 user groups
- 275,000 customers benefiting from shared innovation
- 390 customers
- 30,000 middleware customers
- 29,000 developers, support engineers and consultants
- 1,300 participants in early customer adoption programs
- 950 customers participating in Customer Advisory Boards
- 500 Industry & Product strategy council members
- 425 user groups
- 275,000 customers benefiting from shared innovation
Agenda

- Leadership in Heavy Equipment & Machinery
- Innovation in Industry Specific Solutions
- Results Achieved by Oracle Customers
Heavy Equipment & Machinery Customer Results

- gained $6.2M in incremental sales 1st year, improved sales productivity through automated pricing and proposal generation with Siebel CRM

- realized total productivity and growth benefits of $3.4Mil and reduced order processing time by 83% with Oracle E-Business Suite Order Management

- purchase order release efficiency improved over 700% and 800,000 items were loaded in a unified corporate catalog with Oracle E-Business Suite Procurement

- increased service productivity; drove 50% of service requests to Web Consolidated more than 40 after-hours call centers into 1 with Siebel Service

- increased Production of Plant by 33%, reduced pull sequences by 20% and reduced inventory by 23%. with Oracle Flow Manufacturing

- reduced inventory cost by $26M, reduced costs and increased order accuracy with Oracle Ebusiness Suite
What Customers Are Saying….

“In our business, projects are large and extremely complicated, so high quality project management is essential to earn our customers' trust. We focused on finding a solution that provides the best business management capabilities and performance. . . that was the main reason we chose Oracle Projects.”

-- Mal-Ho Song, VP, Process Innovation Division

“As a result of Oracle E-Business Suite implementation, many processes have been streamlined. There is increased visibility, in real-time, into important business parameters. This, in turn, is contributing significantly in cost reduction”

S.S. Godbole, General Manager, Projects

“We have totally eliminated the complexity of integration from the process of expanding our IT infrastructure – thanks to the built-in integration of Oracle’s E-Business Suite.”

-- Chen Jun, IT Director
The Oracle Difference

Only Oracle ….

- Offers fully integrated solutions of applications and technologies configured for your industry

- Delivers products and features to optimize collaboration across the entire Supply Chain

- Provides real-time Sales & Operations Planning and order promising to effectively plan supply, resources and long-lead items

- Embeds Analytics in the application to better manage the enterprise

- Provides the capability and flexibility to enable Lean Manufacturing