

Oracle Industry Solutions: Mining and JD Edwards EnterpriseOne

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ORACLE
JD EDWARDS ENTERPRISEONE

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Oracle Industry Solutions: Mining and JD Edwards EnterpriseOne

EXECUTIVE OVERVIEW: ORACLE SOLUTIONS FOR MINING

The mining industry operates in the challenging environment of volatile commodity markets. Historical high commodity prices have created growth and expansion in the mining segment. As a result, mining organizations are operating in an increasingly complex and global environment. Additionally many companies are vertically integrated and now include operations from extraction to processing and production.

The diverse and often remote locations of mine sites create specific challenges for mining organization. Human resource management is complicated due to the aging workforce and remote locations. The critical function of equipment maintenance relies on skilled resources and parts that may not exist on site or in country. MRO supply chain management must be flexible enough to deal with high value critical spares to low value high volume consumables. An optimal MRO supply chain can reduce material inventory costs while minimizing shutdown risks due to parts shortage.

- JD Edwards EnterpriseOne and the complimentary solutions from Oracle support the broad range of business and operational requirements of the mining industry from green field to production as outlined in Table 1.

Table 1. Business Solutions for the Mining Industry from Oracle Corporation

Exploration	Capital Project	Asset Management	Extraction	Processing	Logistics	Sales and Marketing	Abandonment
Business Planning							
		<ul style="list-style-type: none"> ▪ <i>Geological Modeling</i> ▪ Enterprise Mine Planning ▪ Supply Chain Planning ▪ Budgeting 					
		Mining Asset Life cycle Management					
	<ul style="list-style-type: none"> ▪ Project Management ▪ Project Costing ▪ Asset Maintenance 	<ul style="list-style-type: none"> ▪ Asset Decommissioning ▪ MRO and Service Procurement 					
		Mining					
		<ul style="list-style-type: none"> ▪ <i>Mine Planning</i> ▪ <i>Mine Dispatch and Operations</i> ▪ Production Reporting ▪ Preparation Plant Management 	<ul style="list-style-type: none"> ▪ Stockpile Management ▪ Blend Management ▪ <i>Environmental</i> ▪ Health and Safety 				
		Supply Chain Management					
		<ul style="list-style-type: none"> ▪ Supply Chain Planning ▪ Assay Management ▪ Contract Management ▪ Sales Management 	<ul style="list-style-type: none"> ▪ Price Management ▪ Transportation Management ▪ Transportation Execution 				
Enterprise Management and Collaboration							
<ul style="list-style-type: none"> ▪ General Ledger ▪ Payables ▪ Receivables ▪ Cash Management ▪ Fixed Assets 	<ul style="list-style-type: none"> ▪ Business Intelligence ▪ Scorecard ▪ Reporting 	<ul style="list-style-type: none"> ▪ Human Resources ▪ Payroll ▪ Training 	<ul style="list-style-type: none"> ▪ Benefits ▪ Time and Labor ▪ Recruitment 				
Technology							
<ul style="list-style-type: none"> ▪ Systems Management ▪ Identity Management ▪ Enterprise Application Server 	<ul style="list-style-type: none"> ▪ Data Hubs ▪ Service Oriented Architecture (SOA) ▪ Business Process Execution (BPEL) ▪ Security 						Hardware

Product Key: product type = Oracle solution *product type* = third part solution

FINANCIAL MANAGEMENT

The JD Edwards EnterpriseOne financial management solution is ideal for the mining industry because it helps you:

- Streamline business processes, giving you more time to analyze data, not just process it.
- Fully automate financial processes.
- Produce accurate and usable management reports, allowing you to control and track cost and revenue effectively.

Financial and Business Planning

For mining organizations evaluating new opportunities means anticipating production, cost and potential profit. The EnterpriseOne financial management solutions allow you to plan and revise capital budgets as they proceed through review and approval. 'What if' analyses may be done to examine alternative capital projects and courses of action. Oracle applications give you the tools you need make the informed and accurate decisions. Project management and Enterprise Performance Management solutions will also allow you to evaluate performance against your original plans.

In addition, you can track budgeted costs versus actual costs, as well as budgeted costs versus committed costs, so you can better manage spending practices.

JD Edwards EnterpriseOne includes a complete financial suite of applications including **General Ledger, Accounts Receivable, Accounts Payable, Financial Planning and Budgeting, Fixed Asset Accounting, Financial Reporting, and Time and Labor**. The integrated nature of our solution ensures that information is entered just once, and is then shared throughout the entire application. This eliminates redundant data entry and multiple postings to various sub-systems. The user may drill down from the G/L directly to the source entry. The integration and real time visibility ensures accurate and timely financial and operational reporting.

Management will have up-to-the minute access to cost information. JD Edwards EnterpriseOne provides numerous standard financial reports, which are easily tailored to meet the organization's specific requirement.

One of the key advantages to the JD Edwards EnterpriseOne financial solution is flexibility. The chart of accounts and organizational structures are specifically designed to accommodate and manage change. Reporting structures are held independently from the chart of accounts. As the organization's requirements change over time, these reporting structures can easily adapt to the changes using simple 'drag and drop' functionality. This 'drag and drop' reorganization allows new reporting structures and rollups to

be created for financial, organizational, and 'what-if' reporting purposes, without affecting data integrity or history.

Enterprise Performance Management

The JD Edwards EnterpriseOne **Enterprise Performance Management** solution provides access to real-time information — both internal and external to your business — you can stay abreast of the key metrics you need to track and make informed decisions. In addition, Enterprise Performance Management facilitates the capture, creation, organization, access, distribution, and use of data by aligning key business processes, technology, and information management principles, allowing you to search against multiple data stores, tag content, and create profiles.

- **Scorecard:** Align indicators with your corporate goals to validate business plans, facilitate proactive decision making, and ensure that all levels are in line with your strategic direction by tracking specific key performance indicators you select. In addition, you can compare internal metrics with industry and competitor statistics to assess the health of your business;
- **Analytical applications:** Create, deploy, and manage analytical applications, including financial forecasting, planning and modeling, and performance measurement;

PROJECT MANAGEMENT

From initial scope definition to completion, managing the many details of projects can sometimes be overwhelming. The JD Edwards EnterpriseOne Project Management solution fully supports the many aspects involved with overseeing a project. The collaborative nature of our web-based applications and open architecture enables you to:

- Improve workforce productivity by reducing the project management staff needed to execute costs for a project, as well as the productivity per employee in the organization;
- Improve speed and accuracy to adapt to changes associated with projects, so you can complete all projects on time and on budget;
- Exercise full control over your purchasing and subcontracting procedures;
- Manage and maximize the productivity of heavy equipment;

Our integrated solution guarantees that all project information is reflected immediately, regardless of its origin. The real-time forecasting aspect of the project management solution allows your project managers to look ahead and view trending against budget, which in turn allows for proactive project management and reduced project costs.

Construction projects involve the collaboration of many team members working in concert to a common goal. Oracle's collaborative technologies enable communication between team members to ensure efficient execution. These solutions include self-service applications, configurable portals, workflow and interoperable technologies that enable communication within and outside your organization.

Change Management

With JD Edwards EnterpriseOne project management, you can manage change without creating bottlenecks, and assess the feasibility and risk of a revision before it reaches the approval stage.

Its flexibility allows you to protect the best interests of the project, and your own business goals. Easy access to real-time and historical information helps you make sense of an ever-evolving change request cycle by:

- Automatically updating cost and units online as changes reach the appropriate approval status;
- Monitoring and prioritizing requested, required, and expired dates;
- Locating change requests using a variety of search criteria, including project, originator, status, type, and priority;
- Integrating change-related costs into the job as soon as they are conceived;

Time Entry

JD Edwards EnterpriseOne **Time and Labor** applications can be deployed in web-based formats, such as HTML, to enable remote labor and equipment time entry. Our technology also gives you the ability to utilize handheld devices, such as Microsoft Windows CE devices and PDAs.

ENTERPRISE ASSET MANAGEMENT

Capital Asset Management

In the mining industry your assets are the key to profitability and long term growth. One of the indicators of when this equipment needs to be serviced is utilization (i.e. hours, gallons of fuel, miles) of the asset. You need a simple way to collect utilization data and log it into your management system. You would also like the system to automatically schedule maintenance and allocate maintenance costs to appropriate projects and departments. Plant and equipment management makes it easy to gather and track the necessary information and schedule maintenance and repairs. Integration with Work Order Management, Project Costing, and General Accounting helps ensure that maintenance costs are properly accounted for.

Capital Asset Management is an integrated approach that ties work management, procurement and material management into human resources, finance, materials planning, shop floor control and process control (for in-house alarming).

The capital asset management solution boosts cash flow and drives more value from your investments by enabling Reliability-Centered Maintenance (RCM). Integrated with your enterprise system, JD Edwards EnterpriseOne capital asset management applications have more power to analyze data, determine when to perform key component

replacements, engineer out recurring problems, and reduce overall maintenance costs — increasing the speed and amount of your ROI. Capital asset management incorporates:

- Condition-based monitoring (CBM) – Monitor the condition of your most important assets, and react accordingly to reduce equipment downtime and maximize utilization;
- Failure mode and effects analysis (FMEA) – Create and leverage a knowledge base of maintenance data, to analyze recurring maintenance issues, diagnose problems and increase the productivity of your maintenance staff;

JD Edwards EnterpriseOne capital asset management integrates with other JD Edwards EnterpriseOne products including **Advanced Planning, Procurement and Subcontracts Management, Workforce Management, and Enterprise Performance Management**, along with all of the products from the financial management and project management suites, for a complete tier one enterprise management solution. Because the capital asset management solution connects with your enterprise and project management systems, you can relate an asset to any relevant area of your enterprise. The costs that are incurred and the benefits gained from acquiring and using the asset then become clear.

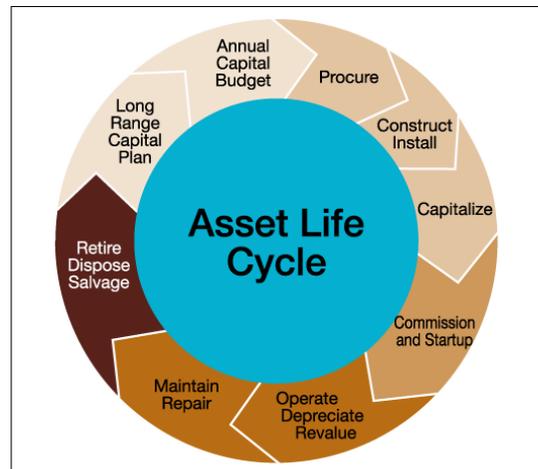


Figure 1 - The Asset Life Cycle

- Drive revenue through increased asset utilization
- Cut operating and maintenance cost by reducing unplanned and reactive work orders and associated parts consumption.
- Enhance liquidity by reducing capital spares

Capital asset management provides benefits to mining organizations by:

- Maximizing availability and utilization of their plant and equipment;
- Minimizing the required inventory of spare parts;
- Avoiding out-of-stock situations on critical parts;
- Optimizing the hours of maintenance staff;
- Reducing unanticipated breakdowns;
- Assisting with repair versus replace decisions;
- Tracking warranty commitments on each asset as a whole and for individual components;
- Reporting on each assets ownership costs, operating costs, and revenue stream;
- Anticipating the time requirements and costs for each service event;
- Integration to fixed assets and other financials;

Asset Financial Management

With the JD Edwards EnterpriseOne **Capital Asset Management** (CAM) Solution you can maintain enterprise-wide information about the total cost and benefit of ownership. This solution gives you instant, online access to book value, utilization, location, depreciation, and revenue and cost streams.

SOURCING, SUPPLIER AND MATERIALS MANAGEMENT

Materials Management

The JD Edwards EnterpriseOne materials management modules provide solutions for inventory management, warehouse management, replenishment planning, procurement, and transportation management.

JD Edwards EnterpriseOne **Inventory Management** and **Warehouse Management** solutions provide a flexible solution to accommodate your unique storage, handling and management needs. Inventory supply and demand information is seamlessly integrated with replenishment planning and procurement. Our configurable procurement process supports multiple business rules and provides automatic tracking of vendor performance characteristics. **Transportation Management** manages your inbound (and outbound) transportation requirements. Multi-segment routes and multi-modal routes can be configured. Automatic calculation based on configurable rate structures feeds automatically into accounts payable.

Supplier and inventory analysis information is automatically tracked and available on-line or through reporting. ABC analysis and inventory turns reports are available from within inventory management.

Strategic Network Optimization

JD Edwards EnterpriseOne **Strategic Network Optimization** provides a strategic planning tool for evaluating long-range decisions over a multi-period, user-defined time horizon. It helps optimize supply chain networks, handle crisis situations, and plan tactical sourcing, pre-builds, or capacity allocations. Strategic Network Optimization also features extensive visualization and reporting capabilities, unique capital asset management heuristics, and currency exchange rates.

Multi-mine modeling may be done to determine the best sourcing solution to meet contracts with specific quality characteristics, for example in the case of coal - ash or sulfur content. The model can evaluate blending options and costs to maximize contract revenue and minimize quality penalties. Constraints such as shovel availability or processing plant capacity may be incorporated to generate a feasible plan.

Requisition Self-Service

JD Edwards EnterpriseOne **Requisition Self-Service** streamlines your workflow and enhances employee productivity, to help you quickly procure operating resources, materials, and services online, and collaborate easily with your employees and suppliers in real time. Requisition Self-Service simplifies the procurement process, allowing you to automate the many manual processes involved in managing your procured resources. The JD Edwards EnterpriseOne Procurement Management Solution is integrated to assist you with managing your suppliers and subcontractors and is flexible enough to accommodate your changing business processes.

Subcontract Management

JD Edwards EnterpriseOne **Procurement and Subcontracts Management** module enables you to control the subcontractor relationships required to execute work. Features of this solution include:

- Subcontract financial status tracking, including total and open commitments, change orders, payment applications, and payments.
- Automatic retention calculation and retention release.
- Tracking of open documents such as contracts, insurance certificates, bonds, lien waivers, etc.
- Supplier self-service applications to facilitate subcontractor collaboration
- Purchase order management

- Purchase order management enables our clients to control direct and indirect purchasing for mining operations. Features of this solution include:
- PO financial status tracking, including total and open commitments, change orders, payment applications, and payments.
- Automatic retention calculation and retention release, where applicable.
- Tracking of documents such as agreements, specifications, MSDS sheets, lien waivers, etc.
- Supplier self-service applications to facilitate supplier collaboration.

Supplier Self-Service

By automating many paper-based processes and providing web-enabled **Supplier Self-Service**, JD Edwards EnterpriseOne procurement solutions boost the productivity of your employees and partners. With our collaboration capabilities, you can configure business workflows with your supply partners, receive and send electronic documents (in XML format) for electronic ordering, confirmation and invoicing, using one of multiple standards provided.

WORKFORCE MANAGEMENT

Human Resources Management

Our human resources solutions ensure that your employees maximize their potential. These solutions coupled with personnel training and skills management allow for seamless collaboration with your most valuable stakeholders, your employees. With Web-enabled **Employee Self-Service** and **Manager Self-Service** applications, your human resources department's productivity will soar. Workflow messaging helps speed work through the process as well as facilitating worldwide collaboration while simultaneously driving down administrative costs. Benefits administration along with compensation, competency, performance, and employee management solutions come standard with JD Edwards EnterpriseOne's collection of workforce management software.

In mining organizations, workplace safety is a critical issue. Injuries can lead to lost productivity, workers compensation claims, and higher disability insurance tax. This system provides you with accurate analysis of where injuries are taking place, what job task is being performed, and other pertinent factors that can help you determine the most effective ways to improve safety training, as well as provide safer working conditions.

JD Edwards EnterpriseOne **HCM Foundation** provides some of the most powerful tools available to help managers and executives determine needed competencies and map those competencies to specific positions at all levels

the organization. Once competencies and positions are defined and captured in the database, they can be quickly matched with existing employee skill sets. With JD Edwards EnterpriseOne HCM, you'll always have a current database of employee skill sets and competencies. HR can offer targeted training programs. Managers can search internally for required talent or request an outside hire. And, employees can identify the skills they need to advance their careers.

Payroll Management

JD Edwards EnterpriseOne includes a best-in-class payroll system for running payroll for large labor forces and management staffs in disparate locations.

Payroll delivers innovative, efficient solutions for your most complex payroll issues, from benefits administration and union rules for multiple trades, to employee retention, compensation planning, and multiple rates of pay. A central database with fully integrated HR and payroll solutions allows you to build a more responsive employee database tailored to your organization's unique needs.

Recruiting Management

JD Edwards EnterpriseOne **e-Recruit** transforms the paper-intensive processes associated with recruiting into a streamlined electronic system. By automating many time-consuming tasks— such as creating and posting job openings, matching candidate qualifications to job requirements, and converting applicants to employees — the JD Edwards EnterpriseOne e-Recruit solution allows you to compress the entire recruiting cycle, from job posting to hiring.

CUSTOMER RELATIONSHIP MANAGEMENT

JD Edwards EnterpriseOne CRM enables you to manage all your customer interactions from first marketing contact to sales, service, and support.

To forge an effective strategy in this competitive environment, companies need a customer-centric approach:

- Identify and retain profitable customers;
- Increase operational efficiencies and use lower-cost service and support channels to improve profitability;
- Expand into new markets and gain greater market share;
- Prepare the business for ongoing regulatory change;

Superior customer support and reliable tracking of issues and resolutions not only increases customer satisfaction but also improves your call center productivity.

With our CRM solution, companies can provide multiple channels for customer interactions and swift resolution of customer issues. Whether customers initiate contact through a call center, in person, or by email, fax, or web Self-Service, support staff have real-time access to complete and accurate customer histories and account data. Access to a robust knowledgebase helps staff resolve common issues on the first contact. When further follow-through is needed, advanced workflow routes the issue through escalation procedures. Regardless of customer type, service details, or location, your support staff can quickly access the information needed to resolve each unique issue.

Order Management and Fulfillment

JD Edwards EnterpriseOne **Order Management** lets you track bulk material orders, execute them and bill for them accurately and efficiently.

Agreement Management

JD Edwards EnterpriseOne **Agreement Management** helps you to set up, change, and manage agreements with customers, vendors and partners. Agreement management is integrated with sales order management and purchase order management. Sales and purchase orders can be associated with the agreement immediately and agreement specific pricing applied.

Agreement information is easily accessible, including:

- Complete information on a variety of agreements, such as purchase and supply contracts, exchange agreements, throughput agreements, and storage deals;
- Agreement association with each transaction — recording the agreement associated with each sale, purchase, transfer, or inventory movement to automatically keep a running balance
- Easy access to agreements using a variety of search criteria, such as branch/plant (refinery), agreement name, or description, type, status, effective date, product number, and partner agreement number

In addition, you can easily monitor the running balance of transactions that affect each agreement for immediate updates.

ORACLE PRODUCTS FOR ORACLE INDUSTRY SOLUTIONS

JD Edwards EnterpriseOne
Analytics

- Enterprise Performance Management

JD Edwards EnterpriseOne
Capital Asset Management

- Resource Assignments
- Condition Based Maintenance
- Preventive Maintenance
- Work Order Management
- Equipment Cost Analysis

JD Edwards EnterpriseOne
Customer Relationship Management

- CRM Foundation
- Agreement Management
- Order Management

JD Edwards EnterpriseOne
Financial Management

- General Ledger (G/L)
- Accounts Payable (A/P)
- Accounts Receivable (A/R)
- Fixed Asset Accounting
- Advanced Cost Accounting

JD Edwards EnterpriseOne
Human Capital Management

- HCM Foundation
- Human Resources
- Time and Labor
- Payroll
- e-Recruit
- Employee Self-Service
- Manager Self-Service

JD Edwards EnterpriseOne
Project Management

- Contract and Service Billing
- Change Management

JD Edwards EnterpriseOne
Supply Chain Execution

- Transportation Management
- Warehouse Management
- Inventory Management

JD Edwards EnterpriseOne
Supply Chain Planning

- Strategic Network Optimization

JD Edwards EnterpriseOne
Supply Management

- Procurement and Subcontracts Management
- Supplier Self-Service

ACRONYMNS AND ABBREVIATIONS

CAM	Capital Asset Management
CBM	Conditioned Based Monitoring
CRM	Customer Relationship Management
FMEA	Failure Mode and Effects Analysis
MSDS	Material Safety Data Sheet
RCM	Reliability Centered Maintenance



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