ORACLE ENTERPRISE ASSET MANAGEMENT

Not Just For Manufacturers

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Executive Summary

Today's asset-intensive industries are not just in manufacturing. Diverse industries such as mining, government, education, real estate, telecom, and retail implement Oracle Enterprise Asset Management (eAM) across their equipment, buildings, facilities, and vehicle fleets. With Oracle eAM, managers can proactively match resources such as inventory, equipment, and skilled personnel to asset maintenance demand. In this session, find out how Solid Energy is implementing and benefiting from Oracle eAM in their business. As part of the Oracle E-Business Suite, Oracle eAM enables complete Asset Life Cycle Management.

Asset and Resource Management

The success of any company depends on the productive deployment and coordination of three classes of resources: people, material, and assets. Traditional ERP (Enterprise Resource Planning) systems have focused on people and material, with incomplete and disjointed attention to Asset Management strategies. A new breed of ERP suite is emerging that adds Asset Life Cycle Management—for complete management of assets from cradle to grave.
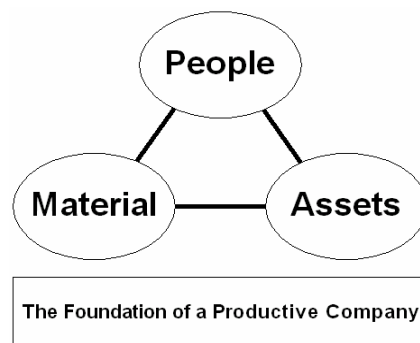
Asset Life Cycle Management is becoming a competitive differentiator for *asset-intensive organisations*—those in which the availability of assets is critical to successful operation. Such entities can be found in widely divergent industries:
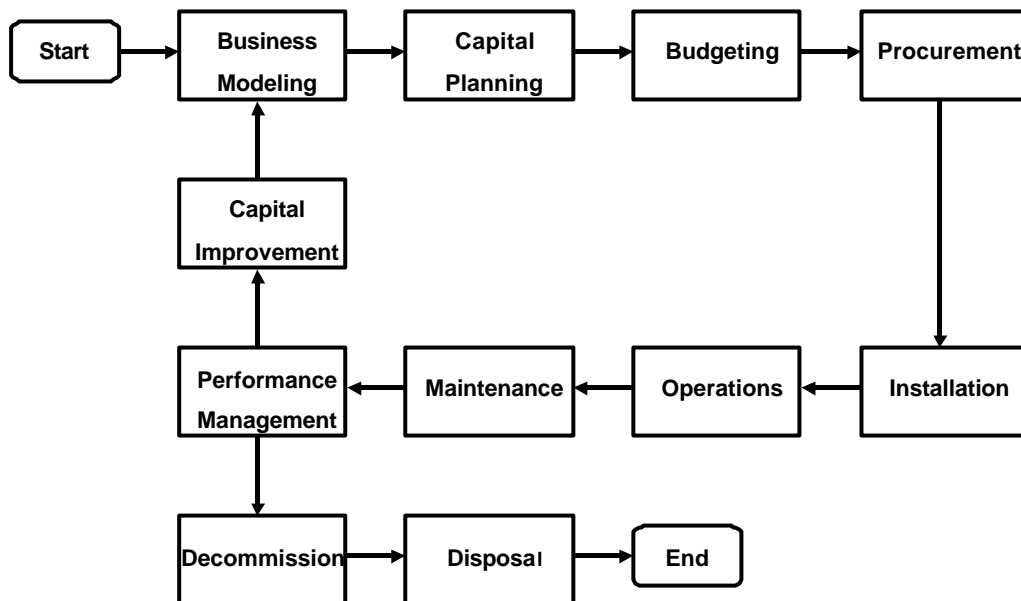
Industry	Critical Assets
Manufacturing	Machines, warehousing equipment
Mining	Shuttle cars, conveyors, continuous miners
Utility	Transmission towers, generating equipment
Oil & Gas	Oil rigs, ocean-based platforms, pipelines
Healthcare	Diagnostic equipment, patient furniture
Education	A/V equipment, classrooms
Government	Buildings, Vehicle s
Waste Management	Vehicles, Machines
Real Estate	Buildings

On a day-to-day, tactical basis, asset-intensive organisations are concerned with management of operations and maintenance. Over longer periods, issues such as capacity planning become increasingly important. **Managing the interaction of two or more departments can determine the success or failure of the organisation.** Complete asset management addresses both long- and short-term issues of asset management.

ERP suites have grown to include Financials, Manufacturing, Supply Chain Management, and Human Resources functionality. The latest component to be added to such suites is Asset Management. Until recently, Asset Management automation has meant stand-alone departmental computerised maintenance management systems (CMMSs). Bringing asset or maintenance management into the ERP suite enables complete management of the asset life cycle. **Maintenance is no longer an afterthought, but rather an integral part of strategic asset management.**

An integrated system provides many benefits during specific stages of the life cycle, as outlined on the next page. At the corporate level, however, a complete system allows life cycle cost optimisation, capacity optimisation, and operational efficiency—which are not achievable without a complete integrated system.

The diagram below illustrates the general life cycle of an asset—starting with business planning and moving through the phases of acquisition, operation, and end-of-life disposition.

Start → Business Modeling → Capital Planning → Budgeting → Procurement

Business Modeling ← Capital Improvement ← Performance Management ← Maintenance ← Operations ← Installation ← Procurement

Performance Management → Decommission → Disposal → End

The Asset Life Cycle

The Asset Life Cycle

An integrated system that includes asset management provides unique benefits in each stage of the asset life cycle.

- **Business Modeling** that is based on actual operating and performance data allows companies to continuously monitor and modify the model under changing conditions. For assets, modeling generates capacity and performance requirements that can be used for capital planning.

- **Capital Planning** is the starting point for asset-related business execution. Timetables and budgets originate in capital plans; companies can monitor and measure performance against these plans. This is a critical and dynamic part of the business cycle.

- Operational and capital **Budgets** generated as part of planning processes are the foundation of business-performance monitoring. Budgets are important for operational as well as financial management.

- **Procurement** of assets is where detailed information about assets starts to be collected. Performance specifications are part of any request-for-quotation process, and should flow through to purchase contracts, and on to receiving and inspection documents. Quantity and cost information should flow to payables and fixed-asset records to ensure proper accounting and ongoing depreciation calculation.

- **Installation** of assets requires tools for physical installation, as well as management of the people and materials required to execute the work. Often, installation is fully or partially executed by the people who are tasked with ongoing maintenance. Capture of as-built configuration information and other details is necessary to support future operation and maintenance. Linkage of the actual

work required back to the capital-budgeting system is necessary for project management and control.

- **Operation** of assets requires tools for planning and scheduling the productive use of an asset. In a manufacturing environment, this means tools that consider product demand, production capacity, production cost, and maintenance requirements. The relationships of these factors are nonlinear and dynamic. Planning tools must allow for repetitive, real-time reevaluation and adjustment of schedules.

- **Maintenance** of assets requires tools for labour, and material planning to support work execution. Scheduling tools must consider resource availability, material availability, and operational requirements of an asset. Performance and operational characteristics should drive dynamic adjustments to the preventive and predictive tasks associated with asset maintenance.

- **Performance Management** and reporting is critical for asset managers who must make decisions about the operation and maintenance of an asset. Access to daily business-intelligence information is a necessity. This type of timely information is available only with an integrated enterprise asset management system.

- **Capital Improvement** is commonly part of an asset's life cycle. Extending the life of an asset or improving its operating characteristics is often more cost-effective than replacing the asset. Access to historical performance, cost, and financial information is required for optimal decisions regarding capital improvements. Capital-improvement decisions feed back to the planning process, and, for many assets, result in multiple loops through the asset life cycle.

- **End-of-Life Decommissioning** of an asset means its physical removal from operation and its removal from systems for planning maintenance and operation.

- **Disposal** of an asset involves physical disposal, as well as accounting disposal, to remove it from further involvement in operational and financial reporting.

Critical Success Factors for Asset Management

Critical to successful asset management are

- Support for the complete asset life cycle
- Ease of use for people in all parts of the company
- Collaborative access and sharing of information
- Common data model
- Reporting and feedback tools

Why "Best of Breed" Fails

"Best of breed" systems fail to meet the needs of complete asset management because they focus on only one or two aspects of the asset life cycle; maintenance management cannot be an insular process. Since each phase of an asset's life requires information from some phases and provides information to others, enterprises must supplement incomplete systems with manual work procedures or custom integration that is costly to create and support. **For an ERP vendor, developing an asset management system is a natural part of realising the life-cycle vision. A "best of breed" solution can never match the functionality of a comprehensive approach.**
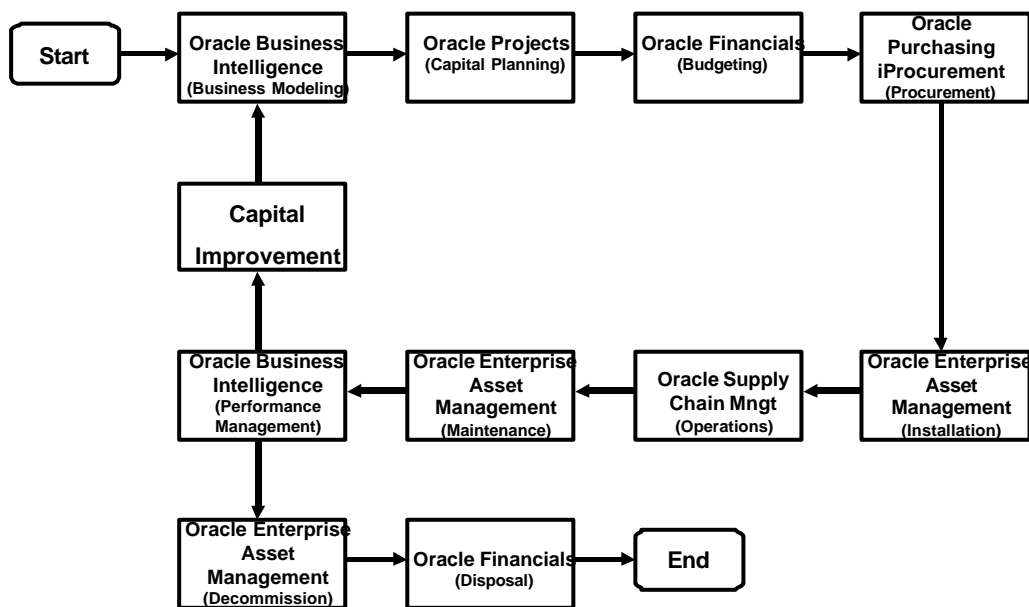
Oracle Asset Management

Oracle Enterprise Asset Management (eAM) enables organisations to create optimal asset management strategies that can increase revenue and decrease costs. By effectively monitoring operational data such as maintenance history, performance trends, meter readings, and operating conditions, organisations can proactively manage available resources such as inventory, equipment, and skilled personnel and match them to asset maintenance demand.

Oracle eAM eliminates the need for spreadsheets and disparate data repositories by enabling companies to manage reactive, planned and preventative maintenance and adopt a centralised proactive strategy for managing asset maintenance across the enterprise.

Oracle eAM enables an organisation to:

- Create a Preventive Maintenance Strategy
- Maximise Resource Availability
- Optimise Scheduling and Resource Efficiency
- Integrate into Oracle's E-Business Suite for Enterprise Wide Solutions

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┌─────────┐   ┌──────────────────┐   ┌──────────────────┐   ┌──────────────────┐   ┌──────────────────┐
│  Start  │──→│ Oracle Business  │──→│ Oracle Projects  │──→│ Oracle Financials│──→│     Oracle       │
└─────────┘   │   Intelligence   │   │(Capital Planning)│   │   (Budgeting)    │   │   Purchasing     │
              │(Business Modeling)│   └──────────────────┘   └──────────────────┘   │   iProcurement   │
              └──────────────────┘                                                  │  (Procurement)   │
                       ↑                                                            └──────────────────┘
              ┌──────────────────┐                                                           │
              │     Capital      │                                                           │
              │   Improvement    │                                                           │
              └──────────────────┘                                                           ↓
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   ┌──────────────────┐  ┌──────────────────┐  ┌──────────────────┐  ┌──────────────────┐
   │ Oracle Business  │←─│ Oracle Enterprise│←─│   Oracle Supply  │←─│ Oracle Enterprise│
   │   Intelligence   │  │      Asset       │  │    Chain Mngt    │  │      Asset       │
   │  (Performance    │  │   Management     │  │   (Operations)   │  │   Management     │
   │   Management)    │  │  (Maintenance)   │  └──────────────────┘  │  (Installation)  │
   └──────────────────┘  └──────────────────┘                        └──────────────────┘
              │
              ↓
   ┌──────────────────┐  ┌──────────────────┐  ┌─────────┐
   │ Oracle Enterprise│──│ Oracle Financials│──│   End   │
   │      Asset       │  │    (Disposal)    │  └─────────┘
   │   Management     │  └──────────────────┘
   │  (Decommission)  │
   └──────────────────┘
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e-businesssuite

Supports the Complete Asset Life Cycle

Oracle E-Business Suite ensures cost-effective management of an asset's life cycle. The suite approach enables the sharing of vital statistics for the asset using a common data model; without full access to such information, uninformed decisions will be made that might jeopardise the company. Consider the well-being of your entire company when selecting an enterprise asset management system.

Additional Information

To learn more about Oracle's solution see our Web Page at:

http://www.oracle.com/applications/eam

About the Author

Michael is a Principal Sales Consultant responsible for the Supply Chain Suite of products for Oracle in NZ. He has been with Oracle NZ four and a half years. Prior to joining Oracle, Michael had his own business selling CAD/CAM and related solutions to manufacturing companies throughout Australia and New Zealand.