# ORACLE PROJECT MANUFACTURING

- Mixed-mode manufacturing support
- Project driven sourcing and procurement
- Planning and scheduling optimized for Project based environments
- Materials management, control and transfer capabilities by Project
- Capabilities unique to contract based manufacturing environments such as Project Contracts, Project and Program Management and Project based cost tracking
- Sophisticated rule-based cost allocation
- Comprehensive Cost tracking and analysis
- Project portal providing a central view to all project related information
- Integration with Oracle Quality, Warehouse Management and Mobile Supply Chain Application
- Industry specific functionality such as model/unit effectivity, borrow/payback, group netting etc.

*Oracle® Project Manufacturing manages the construction of large, often unique, items or structures that require custom design. A comprehensive system that, especially if combined with Oracle Projects and Oracle Project Contracts, provides a robust solution for project or contract-based manufacturers in the Aerospace and Defense, Engineer-To-Order and Seiban industries. Oracle Project Manufacturing helps you control a broad range of product designs and quickly respond to changes that may impact contract planning, costing, and execution. Oracle Project Manufacturing is part of the Oracle E-Business Suite, an integrated set of applications that are engineered to work together.*

## Providing a Complete Solution for contract-based industries with Streamlined Processes

Oracle Project Manufacturing, Oracle Project Contracts and Oracle Projects provide a complete, seamlessly integrated business solution for contract management, configuration management, financial project management, project supply chain management, and business intelligence. Oracle Project Contracts provides support for complex contract management with unmatched functionality in the areas of contract document authoring, change and hold management, contract funding and billing, and, advanced deliverable tracking with integration to ERP functions using Oracle Project Manufacturing. Oracle Projects provides support for financial project management and reporting with extensive functionality in the areas of budgeting, project costing and tracking, project billing, project revenue recognition, project cash forecasting, and project cost collection, including multi-national features like multi-currency and tax regulations. Oracle Project Manufacturing provides robust functionality to support project supply chain management and execution in the areas of sales management, advanced supply chain planning, procurement, execution, and quality management.

Oracle Project Manufacturing is tightly integrated with Oracle® Business Intelligence to allow you to compare revenue and cost incurred globally, across organizational hierarchies, and drilldown capabilities to drill down from global company level to project level.

In addition to the business intelligence reports, Oracle Project Manufacturing provides a comprehensive Project Manufacturing Inquiry. The Project Manufacturing Inquiry's advanced search capabilities, Project and Task level views, and detailed drill-down links provide you with critical information to support your business decisions.
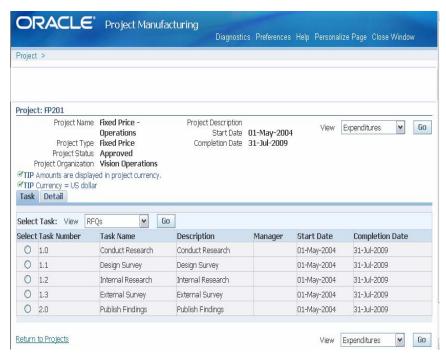
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**Fig 1: Project Manufactuirng Inquiry provides project specific information**

## Multi-mode Manufacturing Support

Oracle Project Manufacturing supports discrete, flow, assemble-to-order, pick-to-order, and hybrid manufacturing environments. At all times, the costs related to execution are collected for proper tracking and reporting.

When integrated with Oracle Flow Manufacturing, Oracle Project Manufacturing can be deployed in a lean manufacturing environment. Line scheduling and work order-less completions have visibility to project and task, allowing for easier tracking of important contracts during the flow scheduling and execution process.
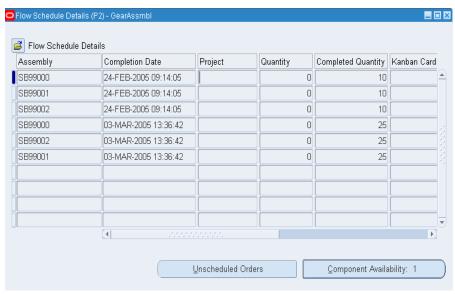


**Fig 2: Project Based Flow Schedules in a Lean Manufacturing Environment**

Oracle Work In Process, in combination with Oracle Project Manufacturing, allows support for project discrete work orders. Oracle Project Manufacturing also supports

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the requirements of complex configure-to-order environments. You can leverage both assemble-to-order and pick-to-order business flow processes, optionally using the industries' best configurator available.

## Optimized Sourcing through iProcurement Integration

In engineer-to-order environments, more than 75 percent of the components are often procured to contract. Therefore, it is essential to keep track of all procurement activities by contract and to use sophisticated sourcing and contract leakage analysis tools, as provided by industry leading Oracle iProcurement. Buyers are able to use sophisticated workbenches to enter and analyze purchase documents, combine purchases for multiple projects on one document, and even combine request for quotations for multiple projects on one RFQ. Advanced auto-create and copy functionality, work flow supported approvals, and advanced sourcing assures reduced data entry overhead and timely responsiveness to procurement problems.



**Fig 3: Procure Project Specific material using iProcurement**

## Optimized Project Planning and Scheduling

Oracle Project Manufacturing, in combination with Oracle Advanced Supply Chain Planning and other modules under Oracle's Planning umbrella, supports project forecasting, hard and soft project pegging, group netting, common supply netting, project-based planner workbench (with horizontal plans by project, task, and group), workflow-based project exception messages, and workflow-based project schedule exception messages and reports. Exception messages can optionally be routed to planners, buyers, project, and task managers to enable optimal internal collaboration. They can even be routed to external customers and suppliers enabling supply chain collaboration.
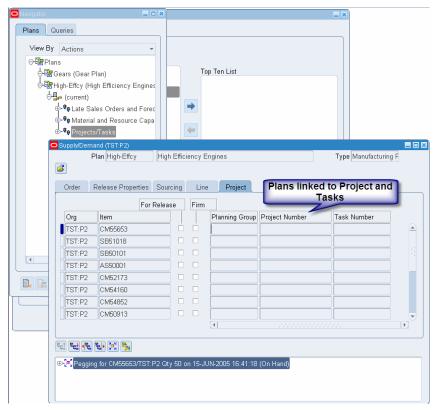
**Fig 4: Plan for Project specific material using ASCP**

## Control Material by Project

Contract manufacturers have special requirements for tracking and moving material. You need to be able to use permanent and temporary material transfers from one contract to another, respecting financial implications. Oracle Project Manufacturing supports project-to-project, common to project, and project to common permanent transfers, as well as temporary transfers (borrow payback) with full audit traceability. You can also perform project transfers also using the Mass transfers to move project material (item, item category or all) at the time of project closeout, cancellations. Contract pegged material is always kept segregated in inventory, and planners and project managers can view the on hand project material balance at any time in any detail. You can store contract and non-contract material in the same physical location, or keep them in separate locations.
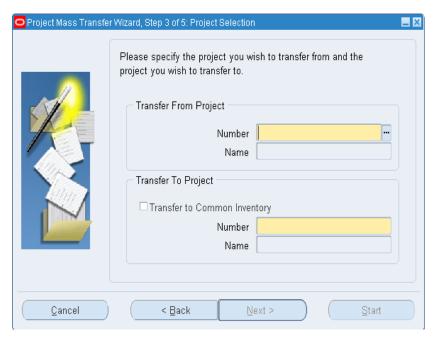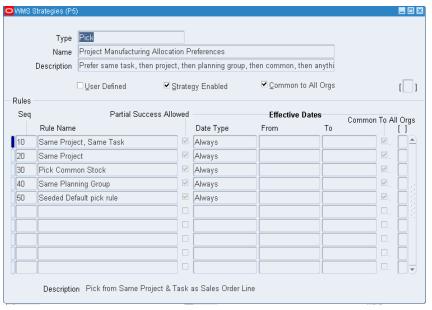
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**Fig 5: Transfer Material from one Project to another**

## Leverage Warehouse Management and Mobile Interface in a Project Based Environment

You can use warehouse management and mobile applications with Project Manufacturing.  Users can now receive, move, manufacture, pick and ship material owned by a project.  Project Manufacturing users can now leverage functionalities offered by WMS for warehouse resource management, warehouse configuration, productivity performance analysis, task scheduling, advanced pick methodologies, and value added services.  Project cost groups are respected in Project



Manufacturing scenarios with WMS.

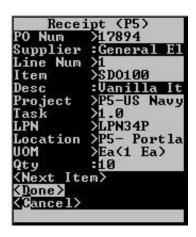**Fig 6: WMS Strategy: Define Project Picking Rules**

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**Fig 7: Perform PO Receipts with Project and Task references through Mobile Interfaces**

## Manage Project Based Quality

Aerospace and Defense, and Engineer-To-Order environments must typically manufacture to specific quality standards. In order to define, measure, and analyze quality by project, Oracle Project Manufacturing provides additional functionality in Oracle Quality. You can define project related quality specifications, collect quality data by project and task, capture nonconformances/corrective actions/dispositions by project task and use graphical charts to analyze quality across projects or for each individual project. You can also use project task as search criteria for skip lot or sampling setup

## Robust Cost Tracking and Analysis

Oracle Projects provides robust capabilities to define time-phased budgets (with versioning workflow-based approval processes), collect actual cost from a variety of resources (both manufacturing and non-manufacturing) in any currency, calculate project profit margin, track actuals and commitments, calculate revenue, and drive billing based on a wide variety of billing methods like fixed price, cost plus, and time and materials. When integrated with third-party project management systems, you can use project actuals to calculate and report earned value and percentage complete. Percent complete can then be used to drive progress-billing type of scenarios, common for a contract-based manufacturer.

You can optionally choose to post Inventory, WIP, and non-manufacturing transactions from Oracle Projects in order to produce a true project subledger that can be reconciled to the General Ledger. You can also use the Auto Accounting features in Oracle Projects or choose to send all accounts from manufacturing for posting to the General Ledger. You can choose to transfer manufacturing transactions to Oracle Projects and apply burden using various advanced features for Burdening in Oracle Projects. WIP related employee resource time could be included as 'hours' in billing calculations for a project in Oracle Projects
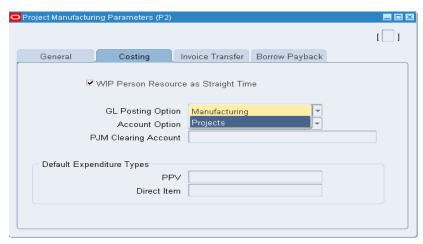
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Fig 8: GL Posting: Oprtionally choose Projects or Manufacturing as source for transactions

You can collect project costs from a variety of resources and costing methods. You can use Weighted Average, LIFO or FIFO Costing to manage manufacturing cost by item, by project or you can use Standard Costing to maintain costs by item at the organization level. You can use PJM Inquiry to view summarized manufacturing costs for a project in order to facilitate reconciliation with cost in Oracle Projects. Using this Inquiry, you can see project totals at the cost element level for on-hand inventory, work-in-process, and sales order issues as well as project level variances.



Fig 9: View Cost Activities by Project in the Project Manufacturing Inquiry

An automated dual cost tracking system allows you to track manufacturing cost using traditional manufacturing cost elements, as well as, to track these same costs by project expenditure types. Extensive expenditure inquiries in Oracle Projects allow you to effectively manage your overall bottom line and to perform root-cause analysis of cost problems across all contracts.

Oracle Project Manufacturing's Task Auto-Assignment Workbench provides unique capabilities for a project related industry. It allows you to manage your manufacturing operations at the project level, yet allocate costs to tasks in your project based on user-definable rules.

Oracle Project Manufacturing provides:

• A seamless bridge between supply chain management or operational activities and project management activities such as program management, costing and budgeting, ensuring that you can always execute to a contract or project and keep track of your costs as you make progress.

RELATED PRODUCTS
• Oracle Work in Process
• Oracle Flow Manufacturing
• Oracle Advance Supply Chain Planning
• Oracle Warehouse Management
• Oracle Quality
• Oracle Cost Management
• Oracle Projects
• Oracle Project Contracts

**Comprehensive Support for Industry Specific Requirements**

Oracle Project Manufacturing supports some key features for Aerospace and Defense industries. The features specific to Aerospace & Defense type industries include

• Model/unit effectivity (serial effectivity)

• Borrow payback

• Group netting

• Hard and soft pegging

• Program management

• Scheduling and optimization (respecting project pegging, unit effectivity, group netting, and borrow payback)

• Retroactive reburdening

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