ORACLE®

FUSION APPLICATIONS
Supply Chain Management

Oracle SCM Cloud Support for Contract Manufacturing

An Overview

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Introduction

Contract manufacturing enables OEMs to focusing on their core competencies, extend production capability, reduce manufacturing costs, and service global and diversified markets. It also enables the contract manufacturing service providers to develop deep manufacturing capabilities and use economy of scale to control cost and quality.

To leverage the benefits of outsourcing manufacturing and distribution, OEMs have built sophisticated multi-tier, multi-enterprise supply networks that consist of contract manufacturers, component suppliers, distribution centers, and 3PLs. These networks also pose a new challenge in visibility, coordination, and execution. Oracle SCM Cloud enables you to meet these challenges by integrating contract manufacturing capabilities throughout the suite, supported by state of the art user interface and action-enabling analytics

Contract Manufacturing Execution

Oracle supports two flavors of contract manufacturing, depicted in Table 1, that align with the level of visibility and control an OEM wants on the operations of the contract manufacturer .

TABLE 1 – CONTRACT MANUFACTURING FLAVORS AND ASSOCIATED TRANSACTIONS

	PO-Based "Buy End Item"	WO-Based* "Buy Build Services"
OEM Objective	Simplified relationship	Detailed tracking and control
OEM Tracks	Delivery status	Supply, Work Orders and Delivery
OEM Buys	End item	Build services + Key components
Contract Manufacturer provides	Updates on purchase orders	Production progress report on contract manufacturer's work order
Execution documents if shipped (first) to OEM	Back-to-Back Purchase Order or Standard Purchase Order	Work Order + Purchase Order + Transfer Order
Execution documents if shipped directly to Customer	Drop Ship Purchase Order	Work Order + Purchase Order + Sales Order

* Supported only for standard items, not supported for Configure-to-order items

For outsourcing mature products to a proven contract manufacturer, the OEM could outsource the product entirely by simply buying the end item. In this type of Contract Manufacturing process, the OEM and the contract manufacturer agree on product specifications, and then the OEM releases a purchase order to the contract manufacturer for the item. In this case, the OEM has visibility and control only at PO level, but the relationship is simplified and the cost of managing the subcontractor is low. Depending on how the OEM wants to fulfill its sales orders, OEM could create a standard, a drop ship, or back-to-back purchase orders. If an OEM wants to have a higher level of visibility into its contract manufacturer's operations, consign standard or lot-/serial-controlled components to the contract manufacturer, and have the ability to independently cost contract manufacturer's work orders, they would use the WO-Based Contract Manufacturing process (Figure 1).
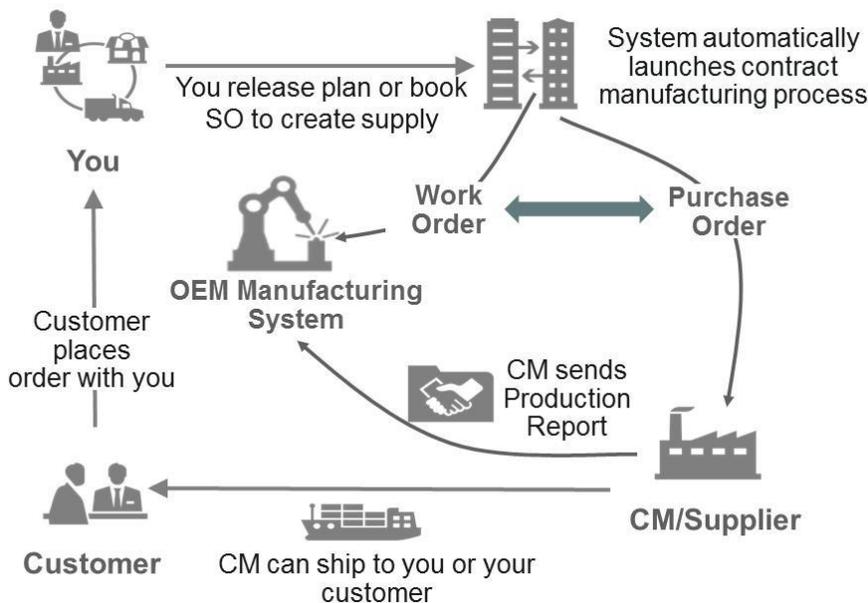

Figure 1 – WO-Based Contract Manufacturing Process

This contract manufacturing process is launched automatically, based on setup in the SCM Cloud, for products that are contract-manufactured. It creates a manufacturing work order in the OEM's enterprise and creates a matching, linked purchase order for the manufacturing services. The work order is proxy for the work order in the CM plant that would fulfill the purchase order. Automated change management is performed to ensure that the purchase order and the work orders are synchronized

When manufacturing starts, the contract manufacturer sends production reports to the OEM at an OEM-defined level of granularity and frequency. The system updates the proxy work order in OEM's enterprise to provide operation-level visibility into contract manufacturer's operations. The production progress report carries information at milestone operations level on work order completions, consumption of OEM-consigned components and their lot/serial information. Upon completion, the contract manufacturer can ship the final assemblies to OEM's warehouse or directly to an end customer.

Multi-tiered Contract Manufacturing Planning Collaboration

Oracle SCM Cloud also supports multi-tiered forecast commitment in a network of contract manufacturers and component suppliers to contract manufacturers.
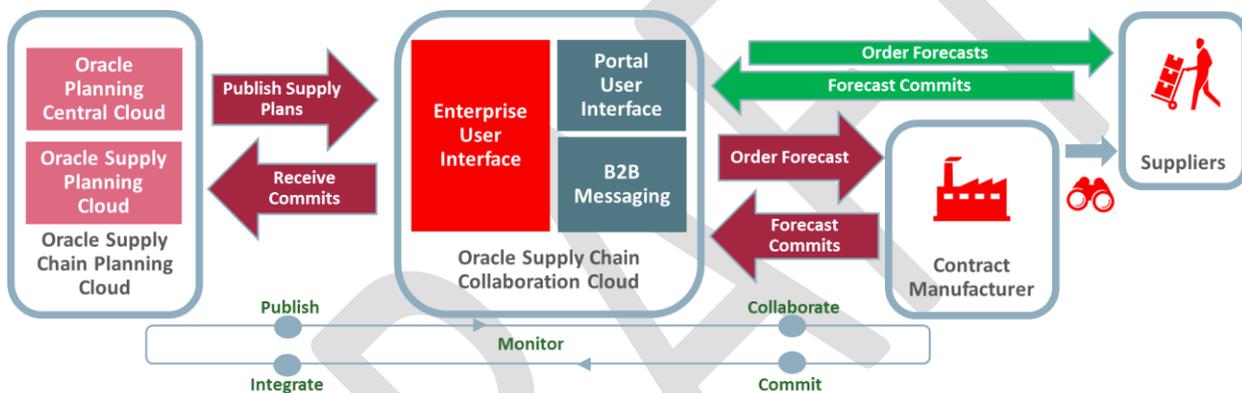

Figure 2 – Multi-level forecast and commitment

A collaboration portal notifies contract manufacturers and their component suppliers when Oracle Supply Chain Planning Cloud publishes a supply plan as a forecast to them. The contract manufacturers and the component suppliers can then independently commit to the forecasts, but the contract manufacturer has visibility to the forecast sent to the component suppliers, as well as their commitments. The contract manufacturer can modify the forecast on its component suppliers or modify its own commitments based on the quantity of components that suppliers have committed to provide.

Commitments made by the contract manufacturers and component suppliers are tracked in the Supply Chain Planning Cloud as supplier capacity.

Multi-tiered Supply Planning Visibility into Contract Manufacturer

Insight into the availability of contract-manufacturer-owned components in a contract manufacturer's plant enables OEM's to improve the accuracy of sales order promising and enables them to time the release of orders to the contract manufacturers. Using Oracle's File-based Data Integration (FBDI) capabilities, contract manufacturers and component suppliers can load their on-hand and in-coming supplies. Supply Chain Planning Cloud uses this data to independently evaluate the schedule of supply and to identify and rectify bottlenecks

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