

THE DIFFERENCES BETWEEN ENGINEER-TO-ORDER AND CONSTRUCTION PROJECTS FROM AN ERP SYSTEM PERSPECTIVE



ENGINEER-TO-ORDER

CONSTRUCTION

Unique finished product - with standard inventory items usually occurring at lower levels on the BOM.



PROJECTS

Projects for almost everything.

Ultimately, when the design is completed, a finished product BOM will exist in the ERP system.



MATERIALS

Materials and labor purchased and expensed for the job.

Planning uses a combination of project activity network and MRP.



PROJECT ACTIVITY

Planning only done through project activity network, no MRP.

Production orders are used for manufacturing and assembly activities.



PRODUCTION ORDERS

Typically, no production orders are used. Uses contracts, purchase orders, and sub contracts for jobs.

Semi-finished products created on intermediate BOM levels. Possibly shared inventory between separate projects.



SEMI-FINISHED PROJECTS & INVENTORY

Typically, no inventory. No semi-finished products and rarely any sharing of materials across separate projects.

Project results in one or more actual shipments.



SHIPMENTS

Project does not result in an actual shipment.

Billing partly coinciding with actual shipments.



BILLING

Billing is mostly down payment, progress or milestone billing, percent complete or fixed fee.

Higher level of repetitiveness across projects, materials, activities.



REPETITIVENESS ACROSS PROJECTS

Similar activities across projects, but lower level of repetitiveness. Variability around materials and labor.

Subcontracting usually results in a sub-assembly that is incorporated into the end product.



SUBCONTRACTING

May have extensive use of subcontracting.

Inventory costing / Production costing / Project costing.



COSTING

Job costing.

Standard labor rates applied based on time worked, with labor variances captured at P&L level. Analysis focuses on correcting standard rates.



LABOR RATES

Adds complexity related to unions, prevailing wage, and other regulatory issues.