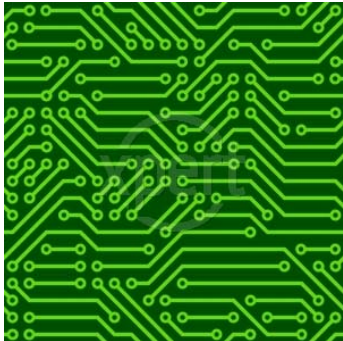


# Custom design manufacturers face unique business concerns

Thomas R. Cutler

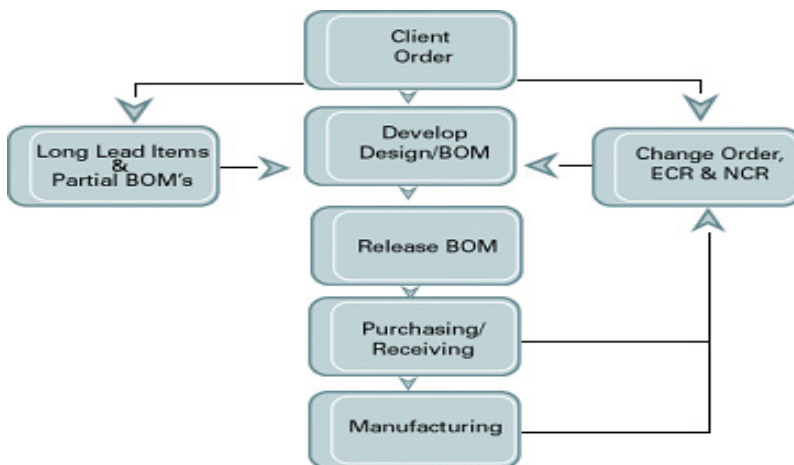
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Customer design manufacturers are unique. Often labelled ETO (engineered-to-order), these manufacturers are typically project oriented and create estimates for each project. These one-of-a-kind manufacturers design products to client specifications, often adding significant engineering to each project while tracking actual costs to estimates. Previous designs are used whenever possible; however there are constant changes because:

- Clients make changes after the order
- Design releases the BOM in stages
- Production requires BOM changes

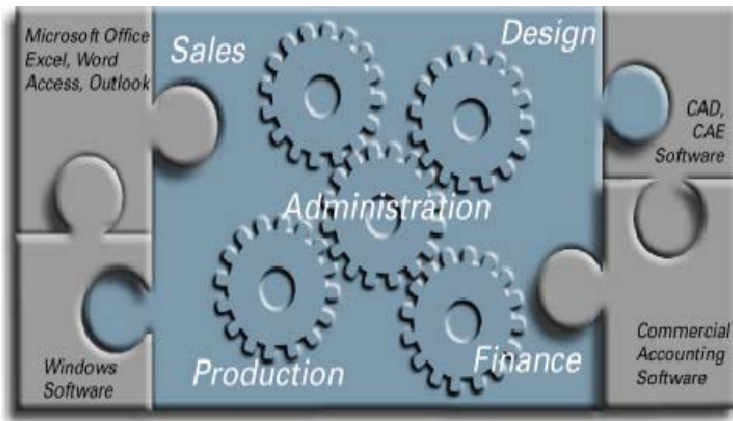
All these changes cause a stream of releases from Engineering.



## Islands of Information Harm the ETO Manufacturer:

Tying together the various islands of technology information is not easy. Few solutions allow all the concerns of the ETO enterprise to integrate and interact smoothly and seamlessly. Contact Management Software and Commercial Accounting Software have countless subsets. Sales issues range from Prospecting, Project Tracking, Estimating, Quoting, and Order Entry.

Finance includes Project Costing, Labour Collection, Materials, Collection WIP, and Payables. CAD and CAE Software must also interface with the design elements including Bill of Materials and Design reports. All these elements must also tie together with Microsoft Office (Word, Excel, Access, and Outlook) to deliver specific ETO Production issues from Purchasing, Receiving, Inventory Control, and Manufacturing. Basic Administrative concern must also be address and integrated including Resource administration and Management queues.



Dennis Parass, of Burlington, Ontario-based Questica, suggested that, “ETO manufacturers must have both Project and Job Hierarchy since typical orders contain many jobs to be properly arranged and grouped as well as rollup cost reporting at all levels within the hierarchy.” Parass also articulated the specific needs of Engineering, specifically displaying a structured BOM in a flexible GUI screen along with a separate engineering screen for the entire project and individual jobs.

#### **Other ETO Technology Solutions considerations:**

Few ETO enterprise solutions have Integration with Solidworks and Autocad 2D and Inventor; even fewer are registered partners with Solidworks and Autodesk. Some provide just an import/export of these files, rather than fully integrated.

Purchasing in an ETO manufacturing environment requires a separate purchasing screen, not to create a burden on designers to make purchasing decisions. All BOM information for all projects and jobs must come to a central purchasing screen and still provide flexible grouping, sorting by any criteria. RFQ's must convert to purchase orders.

Because time is money there must be a separate expediting screen which flows from purchasing and tracks what is ordered but not received. There must be quick identifying of what is overdue allowing easy expediting of orders and flexible grouping and sorting.

Previous designs are used whenever possible making document linking essential; no need to reinvent. Technology solutions must provide linking of all documents related to a project and individual jobs while allowing users to return to a job and find all documents including the drawing links to the item master for each part. Historical Information must be accessible via templates and search wizards to find historical data allowing users to identify prior designs and locate estimates and actual costs.

Parass urged, “ETO manufacturers will grow business without having to hire additional staff with the right technology solutions. Achieving improved efficiencies by eliminating clerical work and providing everyone accurate information in real-time, means that all departments when equipped with accurate information are then free to spend more time refining their skills and getting the job done right.”

#### **Author Profile:**

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