

ENGINEER PRICE QUOTE: REPLACING TRADITIONAL CPQ SOLUTIONS

by SCOTT HEIDE

CPQ (Configure Price Quote) software is an unacceptable sales automation tool for companies offering highly configurable products. CPQ fails complex product manufacturers because the required engineering rules, geometry, and calculations far exceed the capabilities of traditional CPQ systems. An inordinate amount of potential profitability is lost reviewing, correcting, and re-engineering inadequate configurations. Companies manufacturing extraordinarily complex products experience these limitations (and the follow-on engineering costs) of CPQ.

Engineering-to-order (ETO) manufacturers currently live with the pain of creating a quotation. Quotes frequently demand weeks of unbillable work in complex product configurations, a delay that frequently derails a sale. Hours of expensive engineering time is the antithesis of Lean Manufacturing when a sales close rate rarely reaches fifty percent (50%).

The quotation process is the bottleneck

Salespeople can rarely increase the volume of quotes to increase the likelihood of winning projects due to the complexity of RFQs. Done manually, there is no way to deliver more quotes without simultaneously increasing risks of costly, inaccurate quotations. Misquoting configurations translates into pricing miscalculations that potentially kill profit.

Exacerbating this inefficiency are the multiple internal approvals during quote development – engineering, purchasing, operations, and more have to touch the quote draft. These added layers of approval slow the proposal process even more. By the time the prospective customer receives the proposal, a competitor may have already won the bid.

EPQ (Engineer Price Quote)

The solution is EPQ, Engineer Price Quote. It is the only workable approach for ETO manufacturers because it is specifically designed for the technical and procedural must-haves in complex manufacturing industries.

Some of the industries that frequently use EPQ include:

Commercial furniture, Commercial vehicles, Cranes, Curtain wall & building facades, Duct Systems, Elevator & elevator components, Home building, HVAC Systems, High pressure seals, Hydraulic pumps & motors, Logistics automation, Oil & gas equipment, Oil & gas facilities, Paint finishing systems, Plastic injection molding equipment, Playground equipment, Power generation & power distribution, Precast concrete, Refrigerated grocery merchandising, Refrigeration systems, Switchgears, Transformers, Turbines, Walk-in coolers, Warehouse rack systems, Windows and doors

The “E” in EPQ ensures that prices remain valid in real-time as a custom solution’s design comes together. Because EPQ can link design data to costs, it automatically escapes constant iteration of price-changing as custom configurations change during development. Instead, pricing updates automatically with each change in configuration, material, or process.

Expediting approvals and guaranteed margins

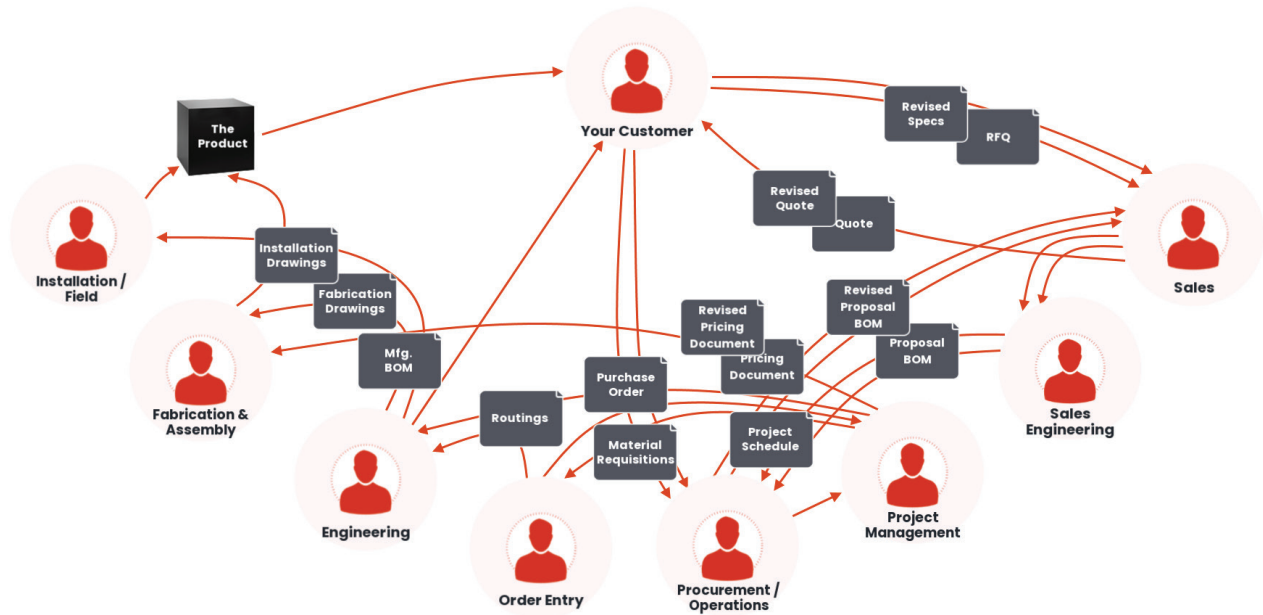
Too often salespeople offer discounts to win the job. In commodity (mass) manufacturing, margins are known, and acceptable levels of deal-sweetening can be pre-approved. That stable margin is why CPQ is fine for those types of off-the-shelf products.

In contrast, a change in an ETO bid often requires supervisory approval. Only an EPQ solution can truncate this approval process by 7 to 10 days by eliminating the delays in back-and-forth approvals, time-savings that frequently translate to winning the sale.

EPQ defines the approval process for ETO manufacturers

In EPQ, when engineers create valid configurations based on engineering standards, approval is literally built into the result. If the engineering and pricing are correct, supervisory approval should not even be required. This kind of automatic

What often happens



approval can be risk-free when technical and business rules from engineering, production, costing, and other departments are automatically applied. It is an outcome that ensures rapid, precise quotes buttressed by reliable margins. The quotation process shrinks to hours rather than weeks and the result is improved quote productivity, velocity, and revenue.

Closing percentage of sales is driven by EPQ
 EPQ goes beyond CPQ by applying engineering rules to highly configurable, complex products. CPQs cannot change material composition and designs based on structural calculations around load, temperature, volume, or other requirements – EPQ can.

When needed, EPQ can replace standard product assembly structures with fully custom ones in seconds. The result: new configurations that meet non-standard operating conditions. In EPQ, complex engineering calculations drive the selection of product options and geometries. Further, during development, engineering teams appreciate that EPQ allows a drag and drop repositioning of product elements – with every element still constrained by product performance and engineering rules.

EPQ allows a new level of automation
 ETO manufacturers often need to do even more with automation, such as generating customized, dimensioned, detailed drawings that give customers the information needed to make fully informed buying decisions.

ETO RFQs are complex, and prospective customers may ask that two or more configurations be provided, each one fully costing, documented, and detailed. The expectation from the prospect is that this bid will happen within days of the request – an expectation that can be met with EPQ.

Unlike CPQ solutions, EPQ is able to calculate the true cost of a proposed product configuration, using dead-on cost rollups that takes every design detail into consideration.

Author Profile



Scott Heide, Founder, CEO, Engineering Intent
 With more than 30 years of experience in knowledge-based engineering software, Heide has long been a key source for industry understanding of and application strategies for engineering and sales automation. Heide drove the development of Knowledge Bridge, a cloud-based comprehensive EPQ (Engineer Price Quote) and visual configuration platform. It offers tools and methods to automate custom engineering, technical sales, and business processes – the “To Order” in “Engineer To Order”. Heide holds a Bachelor of Science in Mechanical Engineering from Wichita State University and a Master of Science in Engineering from the Massachusetts Institute of Technology. Connect on LinkedIn.