With high tech manufacturing playing such a fundamental part of the global economy, key stakeholders and policy makers alike are placing a higher priority on increasing efficiency. This is made even more important in an environment where developing industrialized countries can use their low-cost, highly skilled labor to grab a growing piece of the global demand for technology manufacturing. Meanwhile, highly developed countries—particularly the US—are losing ground in innovation performance, according to The Brookings Institute. Due to cost and other factors, the competitive edge of first-world nations now lies in the way they sell products to consumers and industrial customers.

Selling high tech products often requires complex configuration, price quoting, and delivery estimation. To make this happen, your sales process must be powered by deep knowledge of, and integration with the supply chain. A configure-price-quote (CPQ) solution can deliver this power with a reach that spans multiple supply chain tools, such as CRM and ERP systems. CPQ technology simplifies, automates, and speeds configuration, pricing, and quoting—which can help shorten lead times, assure delivery dates are met, grow revenue, and reduce costs. It’s no wonder that CPQ software has become an effective competitive solution for many high tech companies.
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Building the case for CPQ in high tech

Selling technology products to industrial customers has long involved a high degree of customization, since these customers are often original equipment manufacturers (OEMs) or integrators who seek to differentiate their products with unique physical or functional attributes. In the consumer space, companies such as Dell® and Motorola® have made mass customization the new norm through convenient customization of personal computers and mobile phones. But in a sector that’s fueled by the “the latest new thing,” buyers have little patience to wait longer for a highly customized product, either in B2B or B2C. Nor are customers willing to pay a premium to get exactly what they want.

As a result, high tech companies must be able to customize more efficiently, shorten lead times, and price more competitively in order to meet the growing demand, expected time frames, and costs for make-to-order (MTO) and engineer-to-order (ETO) products. Here are some of the challenges that high-tech companies face with product customization:

**Waves of demand**

Global online product marketing can result in unprecedented (and sometimes unexpected) surges in demand, which means that you and your suppliers must be ready to deliver on very short notice. Parts and assembly suppliers have very little time to respond to requests for quotes, so they must be able to instantly identify constraints, variables, and dependencies that affect their ability to deliver the requested configurations in the specified time.

**Increasing complexity**

Complexity is an unavoidable aspect of the technology industry; thousands of part numbers are often required to identify all of the unique combinations and permutations of product features, options, and accessories. This complexity increases when you factor in the growing demand for product customization, as well as changes in product lines that can result from shifting marketing strategies or acquisitions of other technology companies.

Unfortunately, this can become a hindrance to competitiveness if your sales processes can’t scale to meet the increased complexity. In your salespeople rely exclusively on their own knowledge of configurations and prices to produce competitive quotes, even the smartest of them will not be able to keep up with the changes as your company evolves. Your salespeople would more likely tend to offer product bundles with which they are familiar, rather than the ones that are potentially more profitable or have the best lead times. Complex configuration, pricing, and quoting can also result in longer learning curves for new hires and require significant guidance from experienced reps (who have their own sales quotas to meet).
Fleeting product knowledge

Another challenge stems from limited knowledge-sharing among employees. Without a structured company-wide system for documenting configuration options, pricing rules, and quotation formats (including legal provisos), individuals tend to devise their own templates, resource documents, and spreadsheets—refining them as they gain experience. Additional configuration and quoting knowledge exists only in their heads. Some of this expertise is passed on to new hires. But just as often, companies lose valuable process, policy, and product knowledge when experienced employees leave the company or retire, which remains one of the manufacturing industry’s major challenges. Organized, accessible knowledge and documented procedures are key competitive assets.

As senior employees retire or move on to other positions, both consumer and industrial technology companies seek to fill their ranks with highly educated, innovative Millennials. These “digital natives” expect to be able to access all the information they need online, in an intuitive, efficient manner—in both the B2C and B2B worlds. They have little tolerance for information silos and any process that is needlessly manual or convoluted. Prospective employers need to provide tools that automate repetitive, lower-level processes, so employees can focus on providing added value.

Being easy to do business with—a key differentiator

With brand commoditization a growing concern, customer satisfaction is becoming increasingly important to high tech companies. Everywhere in manufacturing, production cycles are shorter and competitive advantages are becoming more challenging to maintain. But the ease of business relations is now vital to customers, whether they’re large distributors or retailers. A CPQ solution with 2D or 3D image functionality can present thousands of product options quickly and accurately (with all constraints accounted for). Users can explore each option on the screen and receive accurate pricing information. When the CPQ system is linked with your CRM system, special discounts and value-added services can be reflected automatically. In addition, CPQ solutions can automatically generate all sales and manufacturing documentation needed to accelerate an order, enhancing the customer experience and helping to deliver a faster time to value.

A CPQ solution can help

make it easier

to do business with a company by allowing its customers to explore thousands of product options quickly and accurately.
Case study: Seneca
Taking advantage of a recognized sales-enablement tool

The success of CPQ in sales departments has been documented, with analysts taking notice. For instance, a report from Aberdeen Group noted that **when using CPQ solutions, 26% more sales reps achieved their quota, aided by a 17% higher lead conversion rate.** Their average deal size was twice as big as that of non-CPQ users, CPQ users generated an average of 49% more RFP responses per month, and they reduced average sales cycle time by 27%. It’s important to note that the gains from implementing CPQ depend on concurrent optimization of a company’s business processes and organizational structure. However, when these efforts are made, a CPQ solution can be a catalyst for business growth.

The CPQ engine acts a template for the configuration process, built on business rules and data from past projects. As you and your customer proceed through the configuration process, the solution displays subsequent options based on what has already been selected. If the calculated lead time for a certain configuration is not acceptable, the customer can quickly review alternatives to optimize product specs, lead time, and price, as well as other conditions of the sale. A CPQ solution also gives you the tools to promote specific configurations that reduce targeted inventories or support marketing promotions.

Deciding what to look for in a CPQ solution

To reap the full business benefits of increased sales, lower costs, shorter lead times, and greater customer satisfaction, you should implement a CPQ solution that can:

- **Promote step-by-step consultation and problem solving**—Your sales reps can work with customers and explore configuration options in a clear and simple way. They can solve potential problems on the spot while consulting with the customer, and then branch to the next set of needed information with just a click. CPQ solutions guide the customers and reps through contingencies and dependencies for different versions of products, and both parties can see relevant technical specifications and the impact on schedules. This reduces errors and promotes deeper customer engagement.

- **Provide a greater range of choices, more quickly**—In addition to centralizing all possible permutations of products, a CPQ solution can capture core configurations for components, such as power supplies and cooling units, for later use. For instance, sales reps don’t have to start from scratch to build a complex bid for a telco switch. And with automated documentation, some companies have been able to reduce hundreds of bills of materials (BOMs) to just a few, which helps expedite the post-production process.

- **Use 2D and 3D images**—A CPQ solution should be able to dynamically generate 2D and 3D product representations to reflect customers’ exact specifications. When your buyers can compare detailed images rather than written descriptions, they can evaluate options and confirm choices much faster.
A computer manufacturer procuring PC cabinets, for instance, can see all dimensions and cutouts clearly labeled, so that he or she can easily confirm that the requirements have been captured. An engineer can dynamically generate 3D CAD models to walk a buyer through the differences in a product family for faster approval.

- **Integrate with the ERP system to shorten cycles**—A CPQ solution should be easy to integrate with a wide range of ERP applications. Such a connection helps speed fulfillment and get orders right the first time, which can improve your reputation, encourage word-of-mouth referrals, and even help generate new contracts.

- **Generate automated documentation**—To help streamline the sales and manufacturing process, a CPQ solution should be able to automatically generate compelling quotes, comprehensive contracts, accurate orders, and complete BOMs and routings—all personalized to customer and company needs. For example, if a smartphone manufacturer seeks a new supplier for its casings or camera lenses, it may prefer the supplier who is able to deliver accurate, detailed documents immediately using an integrated CPQ system.

- **Simplify training, administration, and security**—With an intuitive user experience, your sales reps can be up-and-running quicker and require less training. A CPQ solution should guide your reps through best-practice approaches step-by-step, expedite the training of new team members, and empower them to consult rather than sell. To simplify system administration, business users should be able to make changes to the configurator without IT help. And for security, there should be role-based access.

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**Creating benefits throughout your business cycle**

A CPQ solution does more than just streamline complex product configuration and contract management. It can also give your top executives an opportunity to transform the workflow of the entire business. When linked to detailed data of ERP and CRM systems, a CPQ solution can simplify order entry and billing, while accelerating support and service.

Manual administrative work is replaced by a complete and convenient user experience that provides high visibility into all product options, up-to-the-minute cost and availability data, and detailed customer information to help strengthen relationships and take advantage of upsell opportunities. CPQ solutions can deliver multiple benefits to different individuals both inside and outside your organization:

- **High tech customers** can provide better specifications because it’s easier to see how dependencies, rules, constraints, and variables affect lead times. Your customers can gain greater knowledge of options and components for current and future orders, and gain an increased sense of ownership of design due to a more collaborative quoting process that guides them through the creation of their products.

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**With the right CPQ solution, you can**

**increase sales,**

**lower costs, shorten lead times, and increase customer satisfaction.**
- **Salespeople** can respond to bids faster, and focus more on relationships and problem solving, rather than on selling. They can see margin information, which is continually updated as different choices for materials, fittings, and subsystems are made. This can help your sales force achieve profitability targets.

- **Sales executives** can capture the strategies and approaches of your best sales reps, and use this information to help simplify training for new reps. For instance, a CPQ solution can show the best way to guide a buyer of industrial foot switches through hundreds of combinations of attributes, applications, and accessories.

- **Engineers** can be less involved in sales support because a CPQ solution can capture and approve engineering expertise up front. This can shorten lead-to-quote time. For example, if an order of customized sensors is needed for a new use case, a rep can use an existing order or quote as a template. Since all specifications are captured and already approved by engineering, the order can move more quickly onto manufacturing.

- **Marketers** can showcase innovations more quickly. A CPQ solution can highlight new features to your customers, such as better power management, in context, as your salespeople walk customers through the sales and quoting process. Your marketers can also access real-time data on customer needs and trends, which can help them enhance product development and planning. More importantly, they can drive customer behavior by suggesting more profitable product options over less profitable ones, while still meeting customer needs. All these capabilities help create a critical competitive edge in meeting customer demands and enhancing product differentiation.

- **Dealers and distributors** can integrate CPQ solutions with their own customer-facing systems, and take advantage of multi-tier capabilities for complex sales channels. Their customers can use visual catalogs to facilitate faster, easier searching, and be exposed to options and contingencies automatically. A manufacturer of semiconductor test equipment, for instance, can use a CPQ solution as an intuitive, dynamic ordering interface that presents only the available options of subsystems, instrumentation, and other items. Dealers and distributors may also find it easier to collaborate because a CPQ solution can dynamically generate BOMs for the manufacturer without needing manual order entry and duplication of information.

- **IT departments** can have more time for innovation and new projects because a CPQ solution allows sales, marketing, and engineering teams to make CPQ changes quickly and easily, without IT assistance.

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A CPQ solution can deliver **multiple benefits** to individuals and departments throughout an organization, as well as outside the organization, such as to dealers, distributors, and customers.
Forging deeper customer partnerships

Click by click, an advanced CPQ solution can guide your high tech customers through an empowering array of options. Not only can your customers watch their dynamically configured products take shape, they can view and plan for the lead times of different choices, and map paths to delivery dates that best fit their needs. With CPQ, your customers will feel more empowered, which translates into a deeper sense of partnership with you.