



A Manufacturer's Guide to Operating Lean with CPQ

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What's Inside

- How economic uncertainty is reshaping the business climate.
- What it means to operate lean and how manufacturers are doing it better than ever.
- Why top senior executives are harnessing configure-price-quote (CPQ) technology to leverage lean and the impact it's having on their businesses.



People are correctly asking with great concern if this cautious, skeptical business climate represents the “new” normal.

Welcome to the New Normal

While the memories are painfully fresh, the data would suggest that the Great Recession has come to an end. The housing market has finally addressed the huge inventories (peaking at 12.2 months in January 2009) left by the subprime mortgage market collapse¹, and the resultant lockup of credit and growth-killing pessimism has finally abated to some extent. For manufacturers, this could not come soon enough.^{2,3}

But, let’s not roll out the clown hats and noisemakers just yet. If there is one thing that distinguishes this recovery from other post-downturn recoveries, it is the almost apathetic, weak and tentative nature that this recovery displays.

People are correctly asking with great concern if this cautious, skeptical business climate represents the “new” normal. It is a valid question. Most of our economic

confidence indicators are based on risk aversion. They are measured in terms of how willing people and institutions are to take on new, long-range obligations. This can be you and I having confidence in our ability to make the payments for a new car, or it can be a bank or venture capitalist’s confidence in making a return on money loaned for a new business or product line.

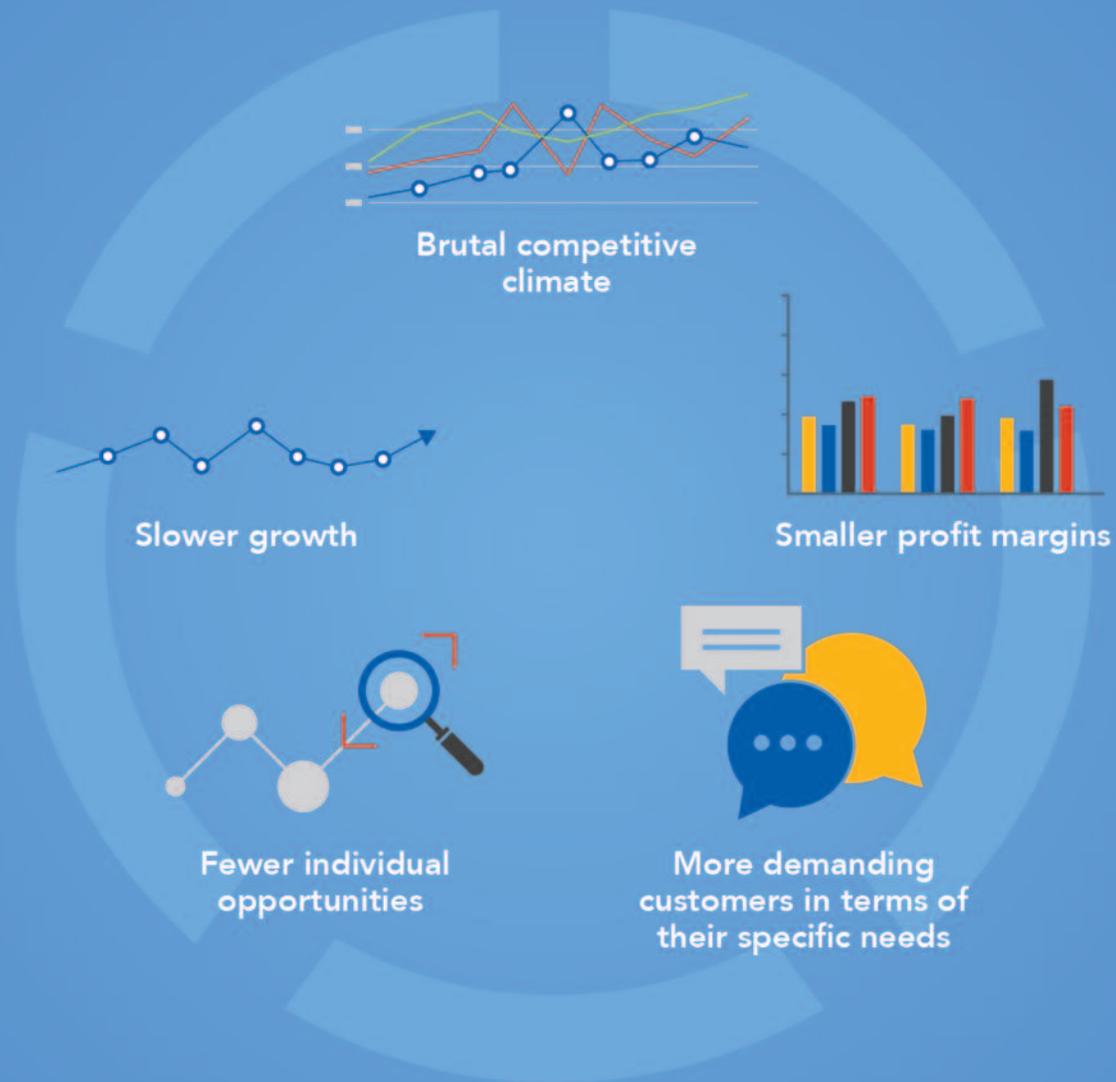
There is great uncertainty in the business climate these days. Many folks are still just a bit hesitant to reach for their wallets. The biggest culprits in terms of sowing seeds of uncertainty can be debated, but it definitely is putting a rather large wet blanket on the enthusiasm that we all would like to see in our day-to-day business activities.

Learn More about Lean on the Cincom Blog!

- ✈ Here’s What It Really Means to Be Lean in 2016
- ✈ Improving Operations with Lean

- ✈ Lean Selling: What You Need to Know about This Can’t-Miss Strategy

A new reality for business ...



The fact is, business can survive and thrive in this climate if it is willing to do some things differently. The forces that drive the economic realities of our world have manifested themselves into a new set of business dynamics. Recognizing these is critical to achieving success.

The above image shows the dynamics that drive business on a worldwide scale. These dynamics affect both seller and buyer as well as user and manufacturer.

Businesses must learn how to react quickly, accurately and correctly to any opportunity that might present itself in the market. Businesses must concentrate on the most important processes, relationships and opportunities in order to thrive in these conditions. Above all, businesses must equip themselves with tools that inform and enable their decision-making with accurate, timely and appropriate information.

In a word, it's time for businesses to get lean in the truest sense of the word.

Eight Forms of Waste

According to Six Sigma



“The core idea is to maximize customer value while minimizing waste. Simply, lean means creating more value for customers with fewer resources.”

“A lean organization understands customer value and focuses its key processes to continuously increase it. The ultimate goal is to provide perfect value to the customer through a perfect value creation process that has zero waste.”

– Lean Enterprise Institute

Two Keys to Operating Lean

Lean, in this case, is not referring to the misused, perverse lean that's fraught with layoffs and cutbacks. I'm talking about the use of Lean to re-allocate resources toward activities that deliver real value to your customers.⁴ Lean helps you execute efficiently, and more importantly, helps you execute the right things efficiently.⁵ If we take the Lean Enterprise Institute's definition to heart, there are two keys that you need to keep in mind when it comes to executing lean:

1. Make Good Choices Quickly

Executing in business is all about making the right choice quickly in response to the data and information you gather and analyze. Those choices cover a lot of territory including who you hire, where you locate, what you make and how you address the market you are courting.

Unfortunately, many companies tend to pour these assorted decision processes into isolated groups within their organizations. These siloes inhibit the ability of the company to make decisions and execute as a cohesive unit. Rather, decisions are made without regard for what is going on in the company and the business world at large.

To mitigate this, businesses implement process-automating software like ERP, warehouse automation, inventory control, CRM, performance management, CPQ and human

resources management systems. These systems all provide strong tools that enable managers to efficiently manage their turf within the corporate organization.

2. Integrate Systems with Processes

Most of these individual processes fall into one of three main groups: selling things, making things or delivering things. When you look at a business cycle through this lens, it is easy to see how companies can find themselves in trouble. Sales loves to say “yes!” to customers and prospects. Once that is done, it's up to the rest of the company to make the “yes!” promise come true.

Manufacturing is a complex process unto itself. Supplies and parts must be made available, and production schedules must be made that times the arrival of parts and supplies to the successive manufacturing cells that make up the assembly line. This is an intricate dance of event timing and resource planning.

Delivering a finished product to the customer is not just a matter of strapping it to a pallet and shipping it off to the right address. Customers have specific needs in terms of when the product should be delivered, where it should be delivered and how it should be packaged.

When an order is placed that interrupts or changes how these three processes work together, problems start, schedules collapse, deliveries are missed and money is lost.

Using CPQ for Lean Process Integration

CPQ systems may seem like an improbable hero in this scenario. After all, getting the configuration and price right is really just a sales function, isn't it?

Not really. The fact is that CPQ, with rules-engine-based technology, plays the vital role of bridging and connecting these three main business processes into a single integrated whole. This is more than making sure that the tire fits on the rim and is properly priced.⁶

Five Steps to Lean Implementation

Match orders to customer wants and needs

Customers have specific expectations. Some of these have to do with product functionality, some with delivery requirements and some with pricing limits. CPQ makes sure that the sales rep and the manufacturer are responsive to the specific needs of the customer. Right in the customer's office, the sales rep is wired into the configuration engine and pricing engine. Together, the rep and the customer walk through

the specifications. These are documented and plugged into the pending sales order.

This is really the lean philosophy in action. Delivering value to your customer is entirely based on delivering what your customer wants, when they want it and how they want it delivered.⁷

Assure correct pricing

By integrating the price list with the configuration system, the sales rep is able to provide the customer with a firm quotation for their specific finished product complete with all of the configuration-driven price changes. There will be no surprise when the invoice hits the customer payments desk.

pricing is able to link the delivered customer value to the price charged for the product. Lean would require the ability to document a value received linked with the price charged.

Regardless of the pricing model used, there should be some correlation between price and value delivered. Even cost-plus

Regardless of your pricing model, price should be linked to the value delivered. Even cost-plus pricing re-supposes correct pricing and has some correlation with an expectation of value returned realized by the customer. This is a central tenant of lean.

Identify delivery expectations

All special delivery requirements stated by the customer are included in the configuration information that is passed along with the sales order. Once the finished good is complete, the packaging and delivery schedule are adjusted to the customer's requirements.

Knowing the full extent of the customer's expectations should extend beyond the product itself. Lean looks at the entire customer experience as a quality metric. Nothing will spoil a customer relationship faster than ignoring deadlines, delivery hours or locations. The perfect product is useless if the delivery is not in compliance with the customer's needs and requirements.

Inform manufacturing as to what they need before the job starts

CPQ not only gives sales and the customer assurance that their product is correct, it also initiates the manufacturing process. Special needs in terms of supplies are addressed, and special manufacturing accommodations are built into the production schedule and resource planning for the actual build. The production line does not come to a screaming halt because it is noticed that a special paint color has

been requested at the last minute. The special product rolls through the production facility just like any regular stock item.⁸

This is basic to the lean methodology. You don't start something without knowing how the outcome will be accomplished. "Promise anything; we'll figure it out when the time comes," is a recipe for disaster in this world.

Assure quality

Knowing what is to be built beforehand assures that there will be less waste and fewer defects during the production process. CPQ facilitates this by defining acceptable tolerances and unique requirements in advance. Defects are fewer because the production line is anticipating the unique needs of the product build.⁹

Quality is whatever the customer decides it should be. A five percent failure rate for a given part might seem reasonable to an engineer, but a customer might find five percent to be unacceptable. This should never be a surprise, it should be well understood before the order is entered.



It's Time to Take Action

This is how CPQ bridges the gaps between the three pillars of selling things, making things and delivering things, and also how the company can review any special product or set of job requirements and make the intelligent decision to accept or reject the business. Saying “no” can be the smart thing to do in some cases. If a requirement is too far beyond the capabilities of the company, the pricing required may be prohibitive to the customer’s budget.

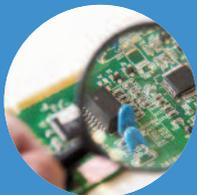
If this is the case, say “no” and move on. If it looks like a good opportunity, say “yes!” and proceed with the confidence that your customer and bottom line will be well served.

In light of our earlier discussion of the demanding economic business climate prevailing today, this type of integrated process is critical. Margins are thinner, delivery requirements are more stringent and customers are less forgiving of “almost” or “close enough” efforts.

CPQ eliminates much of the wasted effort, material and time. This means more money for the top line, better value for the customer and higher margins on the bottom line—perfect value, zero waste. That’s what being lean is all about in today’s economy.

Maximize effort, minimize error and deliver on time and on budget the first time and every time. This is how customers are satisfied and how CPQ turns your business activities into a single integrated, efficient and profitable business process.

Start by evaluating your processes, looking for areas of improvement, considering your options and always acting with an eye on the market. Be proactive, and don’t put “lean” off until it’s too late. That’s when you have to start making the really hard choices.



Must-Read Resource

“Beyond Sales: Why Manufacturers Need to Look at Sales through a New Lens”

[Read Now](#)



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Lou has had multiple roles in his 30 years in the manufacturing industry, including product management, field sales support and customer implementation, as well as pricing, contract management and product security in the software business. He currently works with Cincom, offering his expertise and perspective on issues relevant to complex manufacturers and enterprise businesses alike via the Cincom blog and other popular trade publications.

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End Notes

1. "Monthly Supply of Houses," Economic Research, Federal Reserve Bank of St. Louis, <https://research.stlouisfed.org/fred2/series/MSACSR>.
2. "When Did It End?" *The Economist*, April 10, 2010, <http://www.economist.com/node/15911334>.
3. Victoria Stilwell, "Housing Recovery in Full Swing as US Sales at Eight Year High," *Bloomberg Business*, July 22, 2015, <http://www.bloomberg.com/news/articles/2015-07-22/housingrecovery-in-full-swing-as-u-s-sales-at-eight-year-high>.
4. Michael Balle, "Why Are There So Many Opinions about What Lean Management Is and Isn't?" *The Lean Enterprise Institute*, <http://www.lean.org/balle/>.
5. "What Is Lean?" *Lean Enterprise Institute*, <http://www.lean.org/WhatsLean/>.
6. Nari Kannan, "Ten Key Technologies for Lean Process Improvement," *Lean Six Sigma*, Six Sigma.
7. Powell and Tower, "Putting Six Sigma to Work in Business-to-Business Sales," "Outside in Thinking: Sales Starts with the Customer," Six Sigma.
8. Kien Leong, "How Scheduling Can Co-Exist with Lean," "Production Scheduling, Production Planning and Scheduling by Spreadsheet," Production Scheduling.
9. Forrest W. Breyfogle III, "Acceptable Quality Level: Issues and Resolutions, Integrated Enterprise Excellence Volume III," "Improvement Project Execution: A Management and Black Belt Guide for Going Beyond Lean Six Sigma and the Balanced Scorecard," (Bridgeway Books/Citrus Publishing, Austin, TX, 2008).



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