The Eight Deadly Sins of Manufacturing

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You've got to give yourself a chance to win.

We've all heard that plenty of times and probably said it a few times too. In golf, you must keep the ball in play. In football, you can't turn the ball over. In baseball, throw strikes. In tennis, no unforced errors. Translation: no mistakes. Error-free play won't guarantee that you'll win, but error-plagued play will ensure that you lose.

Manufacturing is no different. If the goal is to be a world-class manufacturer, the all-important first step is "keeping the ball in play" — not making obvious errors that doom you before you even begin. You've got to give yourself a chance to win.

At Strategex, our experience has shown that there are eight of these obvious errors. We call them "The Eight Deadly Sins," the eight "sins" that always get in the way of profitable growth and a world-class customer experience that you just can't make. As in sports, avoiding those mistakes won't guarantee that you'll be a world-class manufacturer, but failing to prevent them will guarantee that you won't be in the playoffs.

1. Failing to Prioritize Safety, Quality, Delivery, and Cost – IN THAT ORDER.

It's safety, then quality, then delivery, then cost. Period. Say it aloud: SQDC.

It's a tollgate system: get safety right, then we can work on quality. Get quality right, and then we can work on delivery. Do all of that, and THEN (and only then) we can attack cost. Of course, it is tempting to look to shave costs when our performance falls short of our expectations. But doing that before our house is in order will crush us in the end. Never compromise SQDC.

A bit of detail:

- Safety: Nothing destroys a company more quickly than safety issues. So, we keep it simple: there is no job we do that isn't worth the time to do it safely. Any associate, at any time, is authorized to stop a process if they believe it is unsafe.

- Quality: A business can stay in business for a long time if it has a reputation for outstanding quality. There are plenty of restaurants that cost a lot and make you wait for a table. The ones that stay in business are the restaurants where the quality is so good that it's worth it. So, what's the definition of quality? Whatever the customer says it is.
- Delivery: Once safety and quality are covered, get the product to the customer on time. There are two types of on time delivery (OTD): on time to the promised date, and on time to the requested date. The latter is more challenging. So, get 100% on time to promised date first, then work on your on time to the requested date. It's essential to get it there on time. The impact of on time delivery? A recent manufacturing client increased its OTD for their top, critical customers from 78% to 100% and won an additional $30 million of business.
- Cost: Do not reduce cost by sacrificing safety, quality, and delivery. Get SQD right, and then you can work on cost. There are myriad ways to do it, but here's a little secret: very few companies with excellent SQD have C problems. Get SQD right, and it all seems to fall into place.

2. Having a Bloated Product Line/Way Too Much Product Variation

We have a truism here: “Sell what you make. Don’t make what you sell.”

An overly complex product line is almost always a root cause for companies with manufacturing problems – especially for companies overly focused on revenue, not profit. These companies offer too many options and manufacture too many different things. The result is inefficient manufacturing, poor SQDC, and confused and upset customers.

Do not try to sell anything and everything; do not throw multitudes of custom orders over the proverbial wall to be manufactured. Gain an understanding of what products are strategic and profitable, then simplify and standardize. Be the best at less. The quickest and best way to improve manufacturing dramatically is to simplify the product line.

It's not easy. But you can't win without doing it.

3. Mixing Long-Run Production with Short-Run Production

World-class manufacturers have a key advantage: They don't do changeovers very often. They set up their production to make standard products and "standard configurations" in long runs, and they just...let it run. They've learned that SMED

(Single Minute Exchange of Dies) isn't nearly as powerful as not "changing the die" very often. Thus they master flow manufacturing.

We worked with a food equipment manufacturer who seldom built the same product twice. The combination of accessories and customizable parts was endless. We standardized their product – and reduced configurations by eliminating the underperforming options. Instead of manufacturing to order, they manufactured a standard product that came with all the options. The customers received all the options to customize themselves. Sure, they built and shipped extra parts and pieces. But at the end of the day, they gained 5x from the efficiency of long-run standard.

Of course, some of your best customers will require some special items in small quantities (classic short run manufacturing of strategic items). You will need to make them, but first, confirm that there is no standard configuration acceptable to the customers. If, in the end, you must make the item, it should be manufactured in a special, short run area that never touches any aspect of the long run line.

4. Poor Measurement...The Wrong KPIs, Too Few of Them, or Too Many

That which gets measured gets better, even if you don't do anything. Hence, it's essential: get the key data, and let that data tell you what to do. At the same time, if everything is important, then nothing is. So, choose wisely. Choose the measures that matter. Usually, that means three to five Key Performance Indicators (KPIs) per area.

Here are a few KPIs to consider:

- ISOTIF – An acronym for "In spec, on time, in full." This covers a lot of crucial ground, and as such, it's one of the KPIs chosen universally. Step one: Get it to 100% for your top accounts.
- Lead Time – Use industry benchmarks and be best-in-class for your top accounts.
- Parts-Per-Million (ppm) – What is the defect rate, and how can you improve the trend towards Six Sigma? Six Sigma is 3.4 defects ppm.
- Cycle Time – Simplify your product line and decrease your cycle; then measure it and lower it.
- Quote Time – For top accounts, you should be able to deliver world-class turnaround times.

- Response Time – For top accounts, dedicated support should respond within the hour. Technology can support this initiative, but customer service should be real human interaction. Also, reduce the number of rings/wait time it takes for your top customers to reach sales and service.
- Turnover – Lower your rate. Otherwise, you will spend more time recruiting and training and less time optimizing. If turnover is high, it is an indication that something is wrong with your system or culture.
- Downtime – It's expensive. If you can reduce changeovers, you can minimize downtime.

5. Poor Visual Management

The best way to develop valuable visual management at a company is to envision your car's dashboard. All it takes is a glance at your dashboard, and you have all the information you need about your car's status. If no lights are flashing, there are no emergencies.

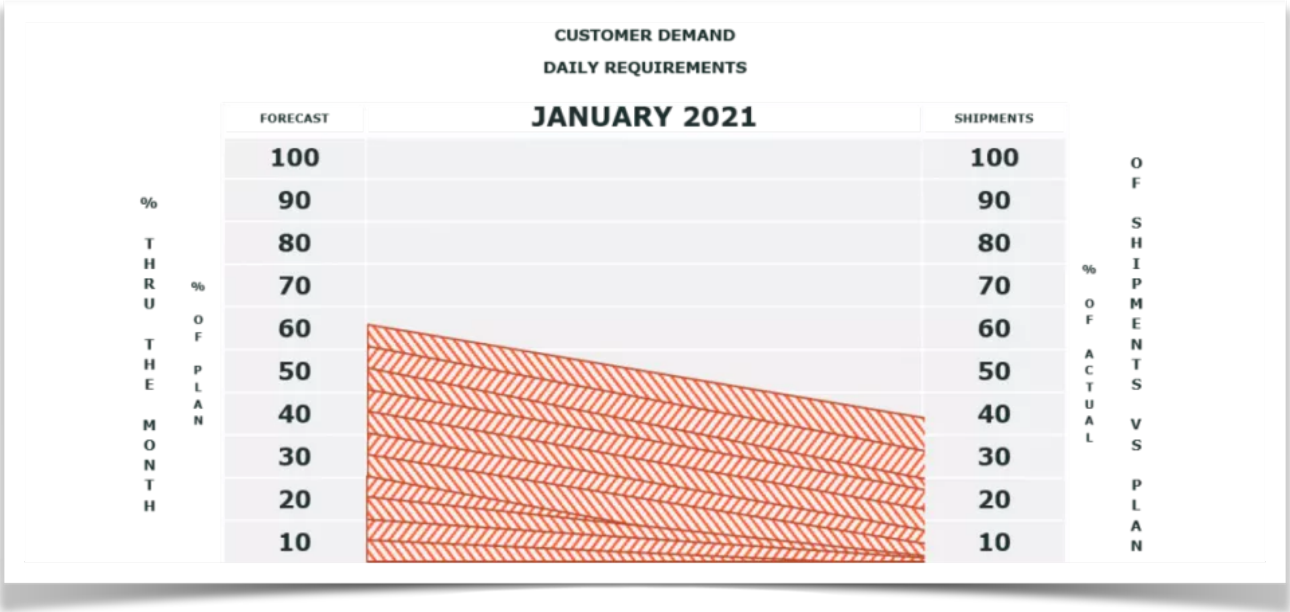
That's what great visual management is all about. If you can walk the floor and get all the information you need about the shop status (without talking to anyone, merely by looking at boards and lights, at a glance, at a distance), you have excellent visual management. If not, you don't; and you'll pay the price for that sin eventually.

Traffic signals (and on lights), simple and clear KPI boards, even whiteboards that tell you what is being made and when the run started, all provide good information. Visual management helps to eliminate mistakes and defects quickly, so it's an essential discipline to develop.

Bad visual management includes messy boards, boards that are out of date, and pieces of paper posted with tiny fonts and charts that require a magnifying glass and a legend to decipher them. Bad visual management is often worse than no visual management at all.

At a minimum, use visual management to communicate SQDC status. The best visuals combine KPI metrics with SQDC information and can be read at a glance and a distance.

Once you get the basics right, you can take it to the next level. It might be appropriate to watch customer demand by daily requirements. You can display daily inventory and shipment against demand. This will ensure a constant delivery flow and save you from everything being shipped at the end of the month.



Example of daily inventory and shipment against demand (courtesy of Strategex)

6. No Daily Management Meetings

What? MORE MEETINGS? We've got to STOP MEETINGS!

Yes, we've heard all of that. And, in truth, those day long meetings with 20 people where 18 people are forced to listen to things that don't relate to them from two people who dominate the proceedings are exactly those meetings you're talking about. But that's not what we're talking about.

We're talking about getting key people together, once per day, for 20 minutes maximum without PowerPoint or chairs. All you need is one central SQDC board focused on key customers and key orders, key facts about key metrics, and "to do" items written on post-it notes that stay on the board until reported on and removed at the next daily management meeting.

Make this part of the culture, and things will improve, and improvement is fun (and often profitable). Fail to do this, and things will get missed—as they assuredly are right now if you haven't developed this discipline.

7. No Postmortems

You want to do more of what works and fix what doesn't. There is no better teacher than experience. Conduct regular postmortem discussions to share experiences, learn from and fix mistakes, and celebrate successes.

Schedule post-mortems in advance of a process, project, or campaign ending. You can have them about any major issue (e.g., large opportunities, major investments, KPIs) or anything that is not right for your top customers. Invite a cross-functional team to conduct root-cause analysis and practice blameless problem-solving. Postmortems can also be celebratory. When you celebrate success, you repeat it!

We get it. It's no fun to talk about things that didn't go as well as we expected them to. Lots of people hate doing this. But remember the definition of discipline: doing what you hate and doing it so that it looks like you love it.

8. No Build Plan

A common statement we've all used is "plan your work, then work your plan." That's really all a build plan is about. It's the discipline to detach yourself from the daily whirlwind and put a game plan together. Most NFL teams "script" their first 15 plays; it keeps them on track, keeps them from getting distracted and away from their game plan before it has a chance to work.

A proper manufacturing plan or build plan ensures the appropriate technology and processes are in place to meet sales goals. A good plan helps identify where constraints exist and highlight areas to improve efficiency.

This sin is especially bad for seasonal and cyclical businesses. We know it's tough to generate a sense of urgency in the off-season – but the need is critical. For example, we worked with a lawn and garden equipment manufacturer whose busy season was June and July. By correcting their build plan and starting blade manufacture in September, we were able to decrease their overtime cost by millions.

It's essential to get your build plan down to the machine level, by day, for top accounts.

"You don't win once in a while, you don't do things right once in a while, you do them right all the time. Winning is habit." – Vince Lombardi