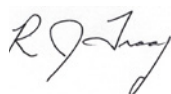## Personal Note:

From Rob Tracy

Welcome to Issue #5 of The Manufacturing Leader. It seems that the tumult of 2020 spilled over into January of 2021, but we're going to stay focused on providing information to help you grow a healthy, vibrant business.

This month we're covering 5 timely, relevant and diverse topics:

- 10 Core Systems in Operations that must be working to support growth
- Linking CI to Your Customer Value Proposition
- Marketing nearsightedness - some marketing investments have a long-term payoff
- Covid-19 Vaccine and HR Policies
- Supply Chain Automation - & Simple Material Movement Options.

Last month I announced that I was launching a podcast in January, and I need to backpeddle on that a bit. I've laid much of the groundwork for it, but I'm going to postpone the launch until the 2nd quarter to ensure that it is a quality product.

We're now in our 2nd quarter of publication, and it's a learning venture. Please share your thoughts and feedback with me.

R J Tracy

The Key to Going Faster - 10 Core Systems that Must be Healthy

By Rob Tracy

Intro

A couple of weeks ago, I received a call from a large manufacturer preparing for their annual sit-down with their suppliers. They were concerned about their suppliers' ability to keep up with demand. I'm paraphrasing, but they essentially said, "We just know that when we grow, some of our suppliers will hit the ceiling and break."

I've seen this phenomenon throughout my career – good events happen, and there is an inflow of orders. The plant responds by pressing the gas pedal to make more stuff, and it works for a while. However, just like a redlining car, it overheats and starts breaking down.

I have found that weaknesses in 10 core systems are the root cause of most "ceilings" and "redlines." If you are in the enviable position of expecting growth this year, consider reviewing these 10 core systems and ask the question, "If our volumes increase by 10%, 20%, or 30%, will the performance of these systems impact our ability to meet our customer's expectations?"

The 10 Core Systems

1. Talent System

   The talent system is responsible for ensuring that there is a correct number of fully qualified people needed to meet production goals.

   Redline conditions: High number of temps, inadequate staffing, high overtime

2. Clean and Safe Factory System

   A clean and safe factory is a requirement for modern factories. A factory that is not clean and safe will struggle to hire and retain enough people. It is also a strong indicator that management is lacking disciplined processes.

   Redline conditions: Low acceptance rate of offers, high turnover of new hires, high injury rates

3. Management System

   The management system is the leadership structure from the plant manager to the workers, and it ensures adequate management resources and robust management processes to run operations.

   Redline conditions: Leaders immersed in getting product out the door and not doing essential activities like training employees, safety audits, planning, coaching

4. Equipment Reliability System

   The equipment reliability system is responsible for ensuring that critical pieces of equipment have high uptime and consistently produce quality products.

   Redline conditions: Machine breakdowns affecting production throughput, delayed maintenance

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Customer Focused Improvement – Where to Start *By Joe Molesky*

Lean and Continuous Improvement initiatives often have a predictable and disappointing start. Tools are implemented like Gemba walks, tier boards, and 5S, and there appears to be positive change, but 12 months later the changes are not reading out in meaningful ways. This is usually a symptom of starting in the wrong place. The right place to start in your organization is at the intersection of the customer's needs and your organization's competency. This is critical to a successful improvement initiative.

Regardless of the tools you use: EOS, Lean, 6-Sigma, Automation - you must be crystal clear about your value proposition to your customers. Lean calls it Voice of the Customer and EOS™ weaves it in with the 3-uniques. In all cases, it clarifies what the company defines as "The key things that our target customers consider important".

Toyota produces automobiles known for quality and reliability. LSI makes "Fun" in a fast-paced, high mix/low volume environment, well-known for innovation and short lead times. Both companies have benefited from being clear about where they add value on how that value intersects with their improvement journey.

Toyota – Quality and Reliability – Beginning with stabilizing and standardizing

Toyota did not always have the reputation that they have today. In the late 1940's Toyota determined that by reducing overburden, inconsistency, and waste they would be able to deliver a better car. So, that is where they started their journey. Over the years they developed what is now known as the Toyota Production System. The tools and ideas developed at Toyota include level production schedules, empowered employees, takt time, standard work, and just in time inventory. Toyota studied their business, identified the key problems that were impacting results, and set off to eliminate them. Toyota was clear with regard to what needed to change and developed the system and leaders to make that happen.

Landscape Structures – Innovation and Speed – Beginning with flexibility and velocity

Landscape Structures is THE innovator in the playground design and manufacturing space. LSI has an enterprise-wide Continuous Improvement culture rooted in speed and flexibility. As with Toyota, this was not always the case. Customers were constantly demanding new designs and colors, and shorter lead times. LSI's's manufacturing system was designed around large batch sizes and a growing finished goods inventory waiting to be picked for shipping.

The leadership team embarked on a strategy to reduce lead time and increase flexibility in the production system. LSI started by aligning their value streams, reducing batch size, and eliminating changeover time on all equipment. By focusing on the reduction of batch sizes and set up reduction, LSI was able to meet the needs of their customers, and their production system supported their goals of innovation and speed.

LSI and Toyota are different companies that have very different value propositions. Toyota invented the system that LSI used as a reference. LSI needed a production system that could handle variability in both demand and product mix, while Toyota required a production system that was level and eliminated variation to drive improvements in quality and reliability. Naturally, they started their journeys with differing focus areas.

Every improvement journey has a starting point. I challenge you to take your time to insure you choose the right place to start. If you focus on implementing canned lean tools and do what so many others have done, you are likely to be disappointed. It is critically important that you understand what your customers value, understand how you create that value, and relentlessly improve the processes that support those value drivers.

Remember, your company has a unique value proposition, which means your approach to CI must be unique as well.

Joe Molesky is the VP of Operations at MultiSource Manufacturing. Over his 20 year career, Joe has led Operations teams in both Field Service and Manufacturing. Joe has an MBA from Saint Cloud State University and is a former board member with the North Central Chapter of AME, and Functional Industries. Joe enjoys speaking on the topics of Leadership and Change Management.

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How to Avoid Marketing Nearsightedness *By Joe Sullivan*

A few months ago, I wrote an article for this column titled "How (and When) Manufacturers Can Measure Marketing ROI".

This one is its much less beloved (but equally important) counterpart.

First, a little context…

The insanely fast acceleration of information technology over the past two decades has driven us to a place where we, unfortunately, feel inclined to measure absolutely everything. And that includes marketing analytics.

We live in a world of instant gratification. If we spend $X, we want to know it's returning $Y. And we want $Y now. Or at least by next week, right?

What I've observed as a Marketing Consultant serving midsized manufacturers for over 10 years is that this thirst for immediate ROI is creating three issues:

1. We're avoiding initiatives that take months to bear fruit
2. We're focusing too heavily on quick wins with the wrong types of customers
3. We're unwilling to run experiments because they could fail

Let's break down these three issues:

1) We're avoiding initiatives that take months to bear fruit

Some of the marketing decisions we make simply won't produce results we can hold in our hands after three or six months.

That may be tough to stomach, but think about the brand power of household names like Rockwell Automation, FANUC, Grainger or Siemens.

It's hard to imagine building a powerful trademark like these on the back of a pay-per-click campaign.

And frankly, the same applies to a midsized B2B manufacturer as well.

The reality is that things like creating and publishing thought leadership content, producing an educational webinar series or launching a podcast all take time to produce results. But along the way, you're building an audience while showcasing your expertise.

Do you really want to trade in that value just to hit this month's sales target?

2) We're focusing too heavily on quick wins with the wrong types of customers

Just about every manufacturing organization I talk to has a wide variety of customer types and product lines. For big-ticket CapEx equipment manufacturers, it's often the twelve-month sales cycle, complex, custom solution with a $500K+ price tag that moves the needle.

But twelve-month sales cycles take, well twelve months. So that means literally everything you do on the marketing front to build awareness, establish trust and open up sales conversations with those buyers in 2020 will return 0% ROI by December.

So does that mean we should just revert to focusing marketing efforts on low-margin products for often wrong-fit customers simply because they'll close more quickly?

3) We're unwilling to run experiments because they could fail

OK, so that trade show you go to every year produces 10 or 20 sales qualified leads. Better keep doing it, right? This year's virtual show promises to be exhilarating!

There's an opportunity cost at play here.

I can almost promise you that reinvesting that spend into a digital strategy targeting specific buying process influencers from a defined industry vertical will produce a far greater return.

But if you're stuck on maintaining the more certain status quo, you'll never run the experiments that are likely to outperform the old school playbook exponentially.

In conclusion, I'm not advocating for throwing out the marketing scorecard. No way. But I am advocating for balance – some level of short-term sacrifice in favor of the playing the long game.

Joe Sullivan is a Cofounder of the industrial marketing agency Gorilla 76 and host of The Manufacturing Executive podcast. Visit gorilla76. com/learn for an ever-expanding collection of articles, videos, guides and tools to help midsized manufacturers identify, attract, engage and drive sales with ideal-fit customers. Joe is a frequent contributor on LinkedIn, and don't forget to listen to his show at themanufacturingexecutive.com.

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Employer Required Covid-19 Vaccination – To Be or Not To Be *By Kara Sime*

Vaccinations through the decades have provided significant public health benefits and prevented widespread illness. However, in these modern times, talking about vaccinations gets a variety of reactions, strong emotions, and technical debate. Many people have some fear and skepticism about side-effects or just wonderings about what the vaccination contains and what is going into their body.

For employers, HR professionals and business owners, we now must talk about vaccinations and their importance to the businesses we run. It is possible this conversation is short and your business does not need to concern itself with whether employees get vaccinated. But if employees are routinely exposed to the public, others more vulnerable to disease, or work in close quarters in the workplace so exposure could cause business disruption, then employers need to consider vaccination conversations and have a plan with guidance for employees.

Start by asking your employees what their current views are about vaccinations. This will gather base-line information to help guide decisions and communication necessary with employees.

Determine your business case for why COVID vaccinated employees are necessary or not for your business. To require vaccination of employees, an employer must demonstrate a "direct threat" due to the risk of substantial harm to the health or safety of the employee or others. Make sure your rationale is job-related and consistent with business necessity.

Evaluate the risk of having your employees unvaccinated. Maybe they work closely with the public or vulnerable populations and this fact could weigh heavily in needing vaccinations or not being allowed to be in contact with clients. Consider if staff are routinely exposed to others not vaccinated or if exposure absences decrease the ability to continue operation.

Communicate and educate employees about the value of immunization to the business and risks if not done. Help employees understand the company's needs through on-going and frequent communication about health, wellness, prevention, and company policy. Some employees may see others getting the vaccine with no reactions or complications and find that eases their mind and garners employee cooperation.

Exceptions for medical and religious needs must be allowed if businesses require vaccines. For anyone requesting an exception, you now must enter the "Interactive Process" to provide medical or religious accommodation. The EEOC requires this next step, and you will want to work with an attorney or qualified HR professional to ensure you have a strong and detailed vaccine policy and accommodation process. Consistency is key. For these exceptions, discuss

job modifications like providing a different job that allows work from home permanently. Consider asking the employee to continue to work under existing COVID safety protocols (masks, distancing, etc.). All of this must be discussed and documented. If an exhaustive look at accommodations cannot find a way to make things work without undue hardship to the business, then the employee may not be able to continue employment. And if an employee just does not want the vaccine for secular or medical beliefs about vaccines, these reasons do not need to be accommodated.

Consider offering incentives to employees for getting the vaccine. But provide alternative incentive options for those medically/religiously not able to get the vaccine. Also, make sure your vaccination or documentation process is confidential and follows all HIPPA requirements.

Employers may want to verify if there are additional protections for employees in their state. However, in Minnesota, if an employer has a legitimate business need to require immunization, they may do so, and must work toward accommodation for the medical and religious exemptions.

Kara Sime is an experienced Human Resources Consultant and Coach providing strategic and technical guidance to leaders at all levels, making HR work for the business. She can be contacted at kara@yourhrnavigator.com, 612-968-9682, or LinkedIn.

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Practical Supply Chain Automation for the Small Manufacturer*by Tim Allen*

In December's newsletter, the topic of practical supply chain automation presented the concept of gravity flow racking to automate the movement and transfer of stored materials. Another practical and affordable method of material transfer small manufacturers can utilize is using basic mechanical conveyor systems.

What are the common types of conveyor systems?

There are two basic types of conveyor systems the smaller manufacturer can take advantage of including:

1. Electric motor-driven systems using either belt or chain drive
2. Non-motorized gravity-based systems

Electric-powered conveyor systems use an electric motor that drives a rubber belt or a chain attached to sprockets on metal rollers. Electric Conveyors can run continuously, be operated or controlled by an employee (by switch), or triggered automatically by the weight of a product or component using a pressure switch. Gravity based conveyors take advantage of an elevation change to allow gravity to move product or components from one location to another over a set of metal rollers.

Creative uses of conveyor systems

Small manufacturers can deploy conveyor systems in a variety of configurations to solve a wide variety of material transfer needs. Conveyor systems can relieve material flow congestion, reducing the need for forklifts and manual material transfer. These systems can be configured in a variety of shapes including linear, serpentine, U-shaped, with 90 degree turns, cantilevered, and spiral configurations.

Some systems are temporary and can be folded or collapsed when not in use.

If you have the benefit of vertical elevation such as when a product is produced on a mezzanine, a higher floor, or elevated platform, a spiral gravity flow conveyor can be used to easily move materials to another, lower location. Spiral conveyors also have the added benefit of a low footprint to conserve space.

If the elevation is not available and your facility is on a single level then an electric conveyor system using a belt or chain drive can be utilized. A common lean application is using a conveyor system configured in a "U" fashion to allow a single employee to operate several assembly stations from a single position saving both labor and motion.

Cantilevered conveyor configurations are useful for applications where unused vertical space is available such as when a product is painted and requires adequate drying time before reaching the next operation destination. In this age of COVID, conveyors can be deployed for small-batch material movements between work stations to aid social distancing.

Other components can also be added to a conveyor to carry out various functions such as bar code readers to automate tracking of an item movement or load cells to weigh an item for a simple quality check feature when it passes over a location on the conveyor system.

Where to find good quality, affordable conveyors

Affordably priced, used conveyor systems in good working order are readily available and can be found with a search on the internet or through the many used manufacturing equipment auction houses. New conveyor equipment dealers can also be a good source of used equipment and can often refer you to customers that are looking to sell their used systems.

Conveyor systems are another simple automation solution for material handling challenges with many possible practical applications. If you would like to discuss this or other material flow challenges please feel free to call or email me.

Tim Allen is the VP of Management Consulting at Pragmatek and specializes in helping small and mid-size manufacturers improve business profitability. Contact: (214)-493-9111, tim.allen@pragmatek.com, and LinkedIn

10 Core Systems that must be healthy

Continued from Page 1

5. Quality System

In this context, I am not referring to the broad context of a quality system, such as ISO 9000. I am speaking of merely having processes that ensure that acceptable materials are received, produced, and shipped.

Redline conditions: Rework and remakes are impacting production throughput, on-time delivery, and management attention

6. Supply System

The supply system is responsible for getting the right materials to the shop at the right time. This covers areas like supplier selection, purchasing transaction flow, supply-side logistics.

Redline conditions: Supply shortages impacting production throughput and schedule adherence

7. Inventory System

The inventory system ensures that inventories are well-organized, transacted accurately, and stocked with appropriate quantities.

Redline conditions: Order points not adjusted to new volumes, inadequate space for increased inventory, staffing not prepared for increased flow of material, inventory accuracy increasing.

8. Sales and Operations Planning System

The sales and operations planning system ensures alignment of the sales function and operations function concerning forecasts, production targets, and scheduling priorities.

Redline conditions: Orders placed on the factory above capacity. Operations not adjusting capacity in anticipation of future demand.

9. Data and Measurement System

The data and measurement system is a broad category that refers to the measures used in operations. It ensures that the right things are being measured and that the data is accurate. The intent is to ensure that facts, rather than opinion, drive decisions.

Redline conditions: Key measurements affecting the customer, such as on-time delivery, quality, and production throughput, are not accurate, timely, or used as part of daily management

10. Operating System

The operating system is the holistic system that ties everything together across the business. The Entrepreneurial Operating System® (EOS™) is an example of an operating system.

Redline conditions: Lack of alignment and focus among the leadership team, infighting, and finger-pointing

Wrap up

When a factory struggles to keep up with customer demand, the natural reaction is to press the gas pedal further. It often starts with overtime, which may lead to hiring people or offering incentives. These measures push the existing systems harder, but it won't be effective if there are significant issues in one of the 10 core systems. I encourage you to take time with your team and take stock of the readiness of your 10 core systems.

If you'd like to discuss the 10 core systems, please reach out to me at 651-398-9280 or rob@robtracy.net.

About the author: Rob is a consultant that focuses on helping leaders of small and mid-size manufacturers address their biggest challenges and achieve their goals. He specializes in custom-tailored operating systems and strategic consulting. He can be reached at 651-398-9280 and rob@robtracy.net

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