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SALES GROWTH PLAN;
THE MISSING LINK IN MOST LEAN STARTUPS
OR REVITALIZATIONS

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All case studies data and information have been altered to maintain the confidentiality and proprietary materials of the companies involved.

Introduction

The importance of sales growth for sustaining a successful Lean journey has not been addressed enough. Many Lean startups or revitalized Lean journeys begin because of a crisis, such as customer complaints, competition, excessive poor quality, or new leadership. Regardless of why most Lean leaders start or restart their Lean journey, they make a critical mistake by not creating a new sales growth plan. As the company begins implementing Lean improvements, they discover more employees than they need for their new Lean processes. The leadership team is forced to decide about the extra workforce, and most choose to lay off their employees. That has killed many Lean journeys. It generates a wrong perspective of Lean from the remaining employees. This article will show leaders how to: 1.) completely understand the current state marketing & sales and voice of the customers (VOC) at the beginning of the Lean journey, 2.) understand the impact of customer-driven innovations that lead to sales growth, and 3.) align VOC key performance indicators (KPIs), and key behavioral Indicators (KBIs) to guiding principles and performance appraisal for sustaining a Lean Culture for the long run. Real-world examples are provided for more facts and evidence.

Let me set the ground rules that operational excellence, continuous improvements, and Lean are the same operating environment with different names. Some companies even give them a unique name like Johnson & Johnson Operating Systems, Toyota Production Systems, Global Manufacturing Systems, or Lean Enterprise. In this article, I am going to refer to all of them as Lean. Lean is usually not introduced when sales are high. Leaders tend to hire more workers during sales growth periods, but a more intelligent approach would be to Lean out the entire operation during the sales growth for a better culture and more profits. A sales growth plan should be kick-off at the start of the Lean journey or revitalization. Before I answer how to implement the new sales growth plan, I must first address the why.

Why is a Sales Growth Plan Important to Lean Journey Startups?

I do not know how often a company leader has said to me, "don't use the word Lean here because it is a bad word in our company." One of the main reasons this happens is that the leadership team started a lean journey with a fabulous training program to educate their employees about Lean. Then the employees start providing their improvement ideas that eliminate waste from the process. The employees are happy because Lean made their job easier, and the leadership team is happy because the employees are more productive. It is a win-win scenario until the inevitable happens. Many processes have been Leaned out, and now the company has more employees than needed. The leadership team decides to layoff some employees. The remaining employees feel like their co-workers lost their jobs because of Lean, and the remaining employees stop making suggestions for improvements. Lean is now a bad word in the company. Many Lean consultants use this same approach when implementing Lean to their customers. I must admit that I have used this approach.

In 2009, I was asked by a Medical Device Original Equipment Manufacturer (OEM) to provide Lean Transformation consulting to one of their key component suppliers, a small Injection Molding Company. The company had sales of \$75M with 250 employees in two plants in West Chester, OH, and Phoenix,

AZ. In the beginning, like a good consultant, I told the executive leadership team (ELT) that once we started their Lean journey that they could not lay off anyone because it would kill the journey. If they wanted to lay off workers, they needed to do it before starting their Lean journey. They agreed, and we went forward. The ELT was comprised of the executive team and key members from the Ohio plant where we started. I set up some Lean "Train-Do-Train-Do" workshops with the ELT (See Figure 1). I asked them for their "worst-case" processing problem (WCP). After I evaluated their WCP, I organized their Lean training to resolve the WCP first. Once we solved that problem, I trained them on other Lean concepts to solve different problems. We were applying their setup reduction training when we discovered an unsafe practice during the review of videotaping of the setup. So not only did we improve the operation for the employees, we made it safer.

Lean Train-Do-Train-Do Workshop

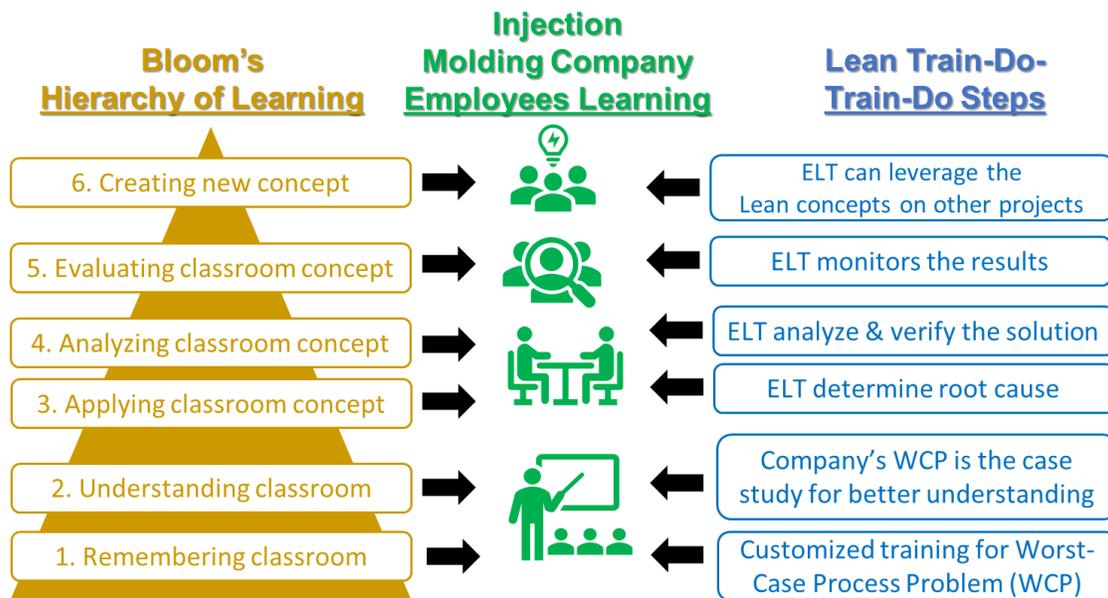


Figure 1 – Caldwell & Associates Train-Do-Train-Do Workshop Approach

I taught them Design for Manufacturing Group Technology and Cellular Manufacturing when one of their intelligent manufacturing engineers saw how those concepts could automate their main assembly line. The team worked on a couple of prototype concepts to prove his theory, and it did work. They designed a Lean Automated Cell. The current main assembly had 18 operators with 20 process steps and 20 days of work-in-process. The Lean Automation Cell had 2 operators with 2 process steps and 5 days of work-in-process. The improvement saved \$2.9 million (See Figure 2 & 3). This type of improvement is common when employees know their products and then learn Lean principles and concepts. The Lean Automation Cell was the "Big Win" to boost their Lean journey.

Medical Devices Injection Molded Component Parts Cell Layout Comparison Analysis

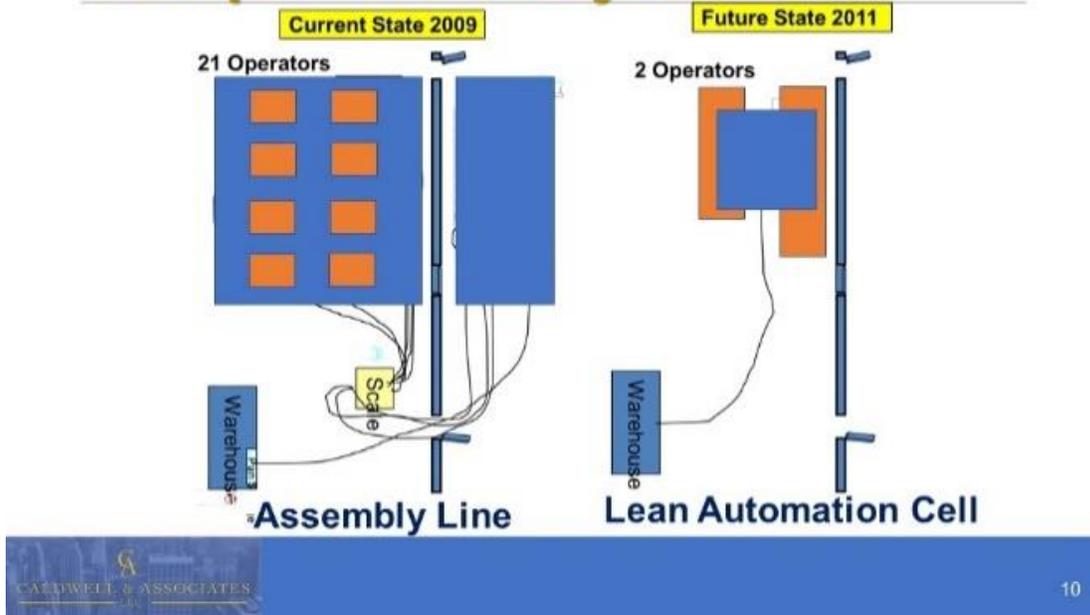


Figure 2 – Current State and Future State Layout Comparison

Medical Device Injection Molded Component Parts Cell Layout Comparison Analysis

Lean Automation Cell - 2011

	<u>Current State</u>	<u>Future State</u>	<u>Delta</u>	<u>% Improvement</u>
• WIP Inventory	20 days	5 days	15 days	-75% ↑
• Annual Travel distance	32 miles	2 miles	30 miles	-94% ↑
• No. of Transportation Steps	20	2	18	-90% ↑
• Number of Operators	18	2	16	-89% ↑

Lean Automatic Cell Annual Savings- \$2.9 million

**The Lean automation eliminated waste and made the job easier, which required fewer workers. Therefore, management must bring in more sales or new business to sustain a continuous improvement culture.*

Figure 3 – Current State and Future State Data Comparison

They continue making improvements and providing Lean training to all their employees. About six months in their Lean journey, the CEO and CFO inform me that they had to lay off some employees. It was inevitable. I started pushing them to increase their sales because they had not installed the Lean Automation Cell. They hired a new VP of Marketing and Sales, and the CFO implemented Lean accounting to align their cost structure with their Lean processes. They survived the layoff of some of the workforce, and continued their Lean journey. The following year the company won the OEM's Lean Supplier Award, and that was their first-ever award from that OEM. In 2012, they installed a second Lean Automation Cell, and their leadership team continues the Lean journey. About five years after that, they ran into a problem with the technological innovation of their products. I will discuss innovation in the next section of this article.

Sales Growth Plan Approach

My actions with the Injection Molding leadership team were a reaction to the layoff. It was too late for the laid-off people. That is when I realized how strong sales growth is necessary for a successful sustaining Lean journey. Now, when I start or revitalize a Lean journey for a client, I provide a Sales Growth Approach with our Lean Journey Approach. Both approaches are made simultaneously, and below I will depict the Sales Growth Plan Approach.

- **Current State Marketing & Sales Analysis**

The first step is to get the current state of the company's marketing and sales data. Fortune 500 companies have this information readily available, but small and medium-size companies may not have it available. If you didn't have current marketing and sales data, I recommend that the company hire a marketing research company to get it. In addition, the United States is starting to come out of the COVID-19 pandemic, and all markets are different and changing as we speak. Therefore, past years may not be beneficial for projections, but they still need to be evaluated. For Tier 1, Tier 2, and Tier 3 suppliers, I recommend surveying your customer base and potential customers.

The Current State Marketing & Sales analysis should consist of the following minimum data and information:

- **Current State Marketing & Sales Analysis Data**

- Past three annual sales performances with current year-to-date
- Past three annual market share performances with current year-to-date
- Recent data on customers likes and dislikes
- Current information on the latest innovation, technology, or trend in the market
- Information on next innovation, technology, or trend for the market
- Customer's unmet needs

A Current State Marketing & Sales Analysis should be conducted utilizing all the applicable information and data noted above. It is crucial not to solve problems or issues during the establishment of the current state because it may lead to incorrect actions or a quick patch fix that does not gain more customers. *Remember, the goal is to establish a thorough current understanding of the marketing, sales, and VOC then develop a practical Sales Growth Plan for the next three to five years.*

Once there is a clear understanding of the current state of Marketing, Sales, and VOC. It is time to evaluate innovation opportunities, product or service improvement options, better sales ads, improved price structure, and many other advantages. For example, information on customer's unmet needs can lead to new market segments, such as Tesla Model S. For many years, traditional automakers did not believe there was a US market for a luxury electric sedan. In fact, GM produced the first US electric production car, the GM EV1, in 1996 (See Figure 4). They leased 1,117 EV1 vehicles in California to meet the state law of zero-emissions and took them back in 1999. Many EV1 owners pleaded to GM

to buy the car, but GM refused. They gave about 40 vehicles to museums and educational institutes. The rest were destroyed, including the data and information. When the traditional automakers entered the electric car market in 2010, they produced compact and subcompact cars (See Chart 1). But, when Tesla Model S was introduced on June 22, 2012, it was the first production luxury electric sedan (See Figure 5). ***It changed the automotive world forever.*** The Model S filled the void of an unmet customer need and want. In one year, the Model S was the fourth highest sold electric car in the US from 2008 to May 2013 (See Chart 2). By April 2019, Tesla had sold three of the five highest number of electric vehicles in the US (See Chart 3). Now GM is selling an electric Hummer, an electric SUV Cadillac, and plans to offer 30 new electric vehicles by 2025. Ford introduced the Ford Mustang Mach-E, a five-door electric crossover SUV, on November 17, 2019, and the all-electric F-150 truck on May 19, 2021. Audi has an electric SUV, the e-tron, and is planning to launch a luxury sedan, e-ton GT, in 2022. All the traditional automakers are on board with selling future electric vehicles.

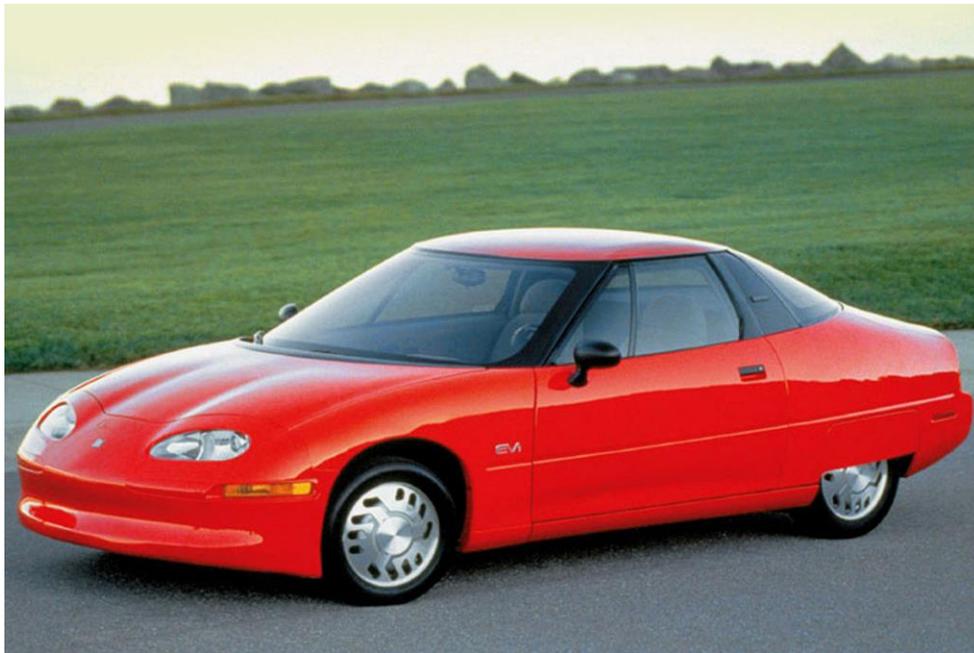


Figure 4 – GM EV1 introduced in 1996 – It was futuristic in 1996

Chart 1 – Electric Cars Sold in the United States 2008 – May 2012

Car introductions from 2008 through May 2012:

1. **Nov 2010 – Chevrolet Volt – 14,796 cars**
2. **Dec 2010 – Nissan LEAF – 12,218 cars**
3. **Sept 2011 – Toyota Prius PHV – 3,485 cars**
4. Feb 2008 – Tesla Roadster – 1,900 cars
5. Jan 2009 – Fisker Karma – 1,700 cars
6. **Nov 2002 – Ford Transit Connect – 550 cars**
7. **Nov 2011 – Mitsubishi i-MiEV – 325 cars**
8. **Dec 2011 – Ford Focus Electric – 7 cars**



Figure 5 – Tesla Model S – A Stylish Luxury Sedan Car introduced in June 2012

Chart 2 – Electric Cars Sold in the United States 2008 – May 2013

Car introductions from 2008 through May 2013:

1. Nov 2010 – Chevrolet Volt – 38,307 cars
2. Dec 2010 – Nissan LEAF – 26,406 cars
3. Sept 2011 – Toyota Prius PHV – 16,250 cars
- 4. Jun 2012 – Tesla Model S – 11,024 cars**
5. 2012 – Ford C-Max Energi – 4,315 cars
6. Feb 2008 – Tesla Roadster – 1,900 cars
7. Jan 2009 – Fisker Karma – 1,700 cars
8. Nov 2011 – Mitsubishi i-MiEV – 1,524 cars

Chart 3 – Electric Cars Sold in the United States 2008 – April 2019

Car introductions from 2008 through April 2019:

- 1. Jul 2017 – Tesla Model 3 – 175,785 cars**
2. Nov 2010 – Chevrolet Volt – 155,062 cars – Discontinued in 2019
- 3. Jun 2012 – Tesla Model S – 148,342 cars**
4. Dec 2010 – Nissan LEAF – 135,188 cars
- 5. Jun 2012 – Tesla Model X – 71,742 cars**
6. Dec 2016 – Chevrolet Bolt – 46,252 cars
7. Sept 2011 – Toyota Prius PHV – 16,250 cars – Discontinued in 2016
8. 2012 – Ford C-Max Energi – 4,315 cars

• Current State Voice of the Customers (VOC) Analysis

While the marketing team is working on the current state of the Marketing & Sales, the production team is working on the current state of the VOC data. It should consist of the following minimum data and information:

- Current State VOC Analysis Data**
 - Customers' complaints
 - Customers' returned products

- Customers' First Time Quality (FTQ) data
- Customers' non-conformances
- Customers' adverse events
- Customers' recalls

Most companies have KPIs but are they internal KPIs, customers' feedback KPIs, or both? The ideal state is to have both. The customers' feedback KPIs are also called VOC Key Behavioral Indicators (KBIs) data that is utilized throughout the company where applicable. For example, if ABC Company Plant #1 was producing widgets and Plant #2 was producing ridgets, then the Customers' First Time Quality (FTQ) for widgets would be displayed and provided to workers in Plant #1. The Customers' FTQ for ridgets would be displayed and provided to workers in Plant #2. Both plants should show the combined FTQ for both products as an overall quality measurement. The Customers' FTQ data could be from the receiving docks at distributor warehouses, stores, OEM, and consumers who purchase the widgets and ridgets. The Customers' FTQ data are directly linked to the quality performance of the management and workers in the plants. Now, the Customers' FTQ results can be connected to the company's guiding principles, such as "Assure Quality at the Source." The Customers' FTQ goals of 100% widget and Assure Quality at the Source must be put into every employee performance appraisal in plant as a VOC KPIs/KBIs. Therefore bonuses, pay increases, promotions, and other recognitions are aligned to every employee performance appraisal and linked to the company's guiding principles and VOC KPIs/KBIs. Every employee has several common purposes and goals from the customers' and guiding principles perspective. These VOC KPIs/KBIs will drive positive and high-performance behaviors from the employees sustaining the Lean culture. If an employee is not motivated by the guiding principles or VOC KPIs/KBIs then that employee may not be a good fit for the company. Other examples of KBIs are 1.) Number of Days without OSHA recordable; 2.) Gemba 5S audits; 3.) Number of Team Continuous Improvements (CI) Implemented, and others depending on the company (See Chart 5).

ABC Company - VOC Key Performance Indicators (KPIs) & Key Behavioral Indicators (KBIs)							
Type of KPIs	Category Description	Aug	Aug Goal	Aug Delta	YTD	YTD Goal	YTD Delta
Safety	Safety OSHA recordable/year	0	0	0	2	1	-1
Safety	Days without OSHA recordable	455	0	455	182	0	182
Safety	Days without COVID-19 Case	122	122	0	0	100%	
Quality	Customers' First Time Quality	95.60%	99.99%	-4.39%	94.75%	99.99%	-5.24%
Quality	Customers' FTQ Parts Per Million (PPM)	44,000	3	-43,997	52,500	3	52,497
Quality	Plant First Time Quality	98.05%	100.00%	-1.95%	97.93%	100.00%	-2.07%
Quality	Plant FTQ PPM	19,500	0	-19,500	20,700	0	-20,700
Quality	Customers' non-conformances	1	0	1	5	0	-5
Quality	Customers' adverse events or recalls	0	0	0	0	0	0
Delivery	Customers' Line Item Fill Rate (LIFR)	100%	100%	0	100%	100%	0
Delivery	Customers' Line Item Fill Rate (PPM)	0	3	3	0	3	0
Delivery	Inventory Turns	15	20	-5	12	20	8
Market Share	Market Growth	2%	10%	-8%	4%	10%	6%
Productivity	Ratio Sales to Work Hours	8	10	-2	9	10	1
Productivity	Number of Team CI Implemented						
Productivity	Gemba CDC 5S Audit Results	99%	100%	-1%	99%	100%	-1%

Chart 4 – ABC Company VOC KPIs & KBIs Sample

ABC Company - VOC Key Performance Indicators (KPIs) & Key Behavioral Indicators (KBIs)							
KPIs & KBIs	Category Description	Aug	Aug Goal	Aug Delta	YTD	YTD Goal	YTD Delta
Safety	Safety OSHA recordable/year	0	0	0	2	1	-1
Safety	Days without OSHA recordable	455	0	455	182	0	182
Safety	Days without COVID-19 Case	201	201	0	0	100%	
Quality	Customers' First Time Quality	95.6%	100.0%	-4.4%	94.8%	100.0%	-5.2%
Quality	Customers' FTQ Parts Per Million (PPM)	44,000	3	-43,997	52,500	3	52,497
Quality	Plant First Time Quality	98.1%	100.0%	-2.0%	97.9%	100.0%	-2.1%
Quality	Plant FTQ PPM	19,500	0	-19,500	20,700	0	-20,700
Quality	Customers' non-conformances	1	0	1	5	0	-5
Quality	Customers' adverse events or recalls	0	0	0	0	0	0
Delivery	Customers Line Item Fill Rate (LIFR)	100%	99.99%	0.01%	100%	100%	0
Delivery	Customers Line Item Fill Rate (PPM)	0	3	3	0	3	0
Delivery	Inventory Turns	15	20	-5	12	20	8
Market Share	Market Growth	2%	10%	-8%	4%	10%	6%
Productivity	Ratio Sales to Work Hours	8	10	-2	80%	10	80%
Productivity	Number of Team CI Implemented	45	50	-5	90%	50	90%
Productivity	Gemba CDC 5S Audit Results	99%	100%	-1%	99%	100%	99%

Chart 5 – ABC Company VOC KPIs & KBIs Sample with KBIs measurements in gold background

Aligning Key Performance Indicators (KPIs) must start with the customers' wants and needs provided in measurable data format. The dilemma is the customers do not have to provide feedback. Therefore, OEMs and service providers must ask the right questions about their products and services and make it easy and convenient for the customers. The most important thing is to get the customers' feedback to deliver world-class services or products to ensure business growth.

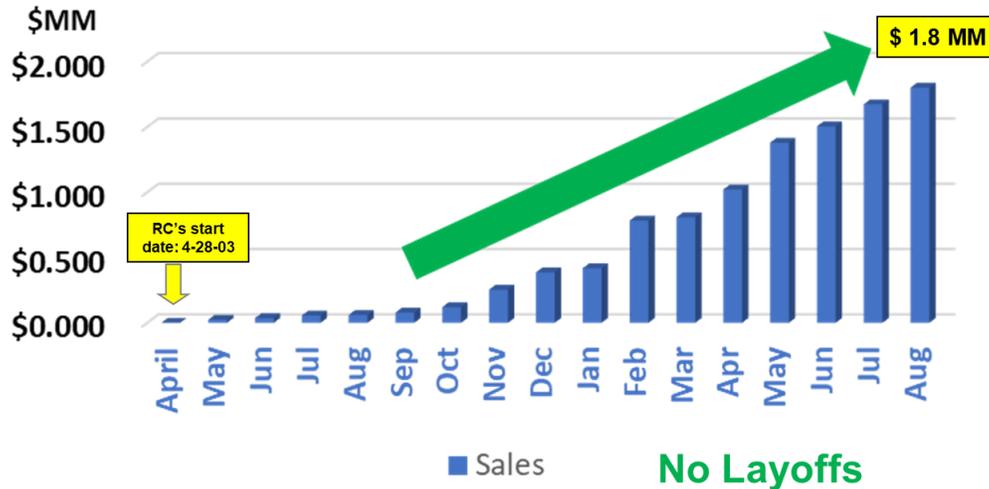
When I was working at Johnson & Johnson in 2017, it was a company with a positive and high-performance culture. One of the main reasons for the great culture was the majority of people that worked there believed and supported the J&J Credo. It was J&J's guiding principles or core values. From the CEO to the janitor, every employee has at least one Credo objective in their performance plan. We got a complaint from a nurse that one of our orthopedic medical devices was missing a screw during an orthopedic surgery in a US hospital. The medical device had three screws when it should have four screws. So, this was a Credo problem that must be fixed! In J&J Credo, the statement: *"Customer's orders must be serviced promptly and accurately"* matches the missing screw problem. We were able to trace the issue to a supplier in Geneva, Switzerland. We informed the supplier about the issue and that it was a Credo problem that must be corrected. So, we teamed-up with our supplier and started our investigation in the packaging and assembly lines, where we found the problem was more significant than we thought. That is usually the case, and the problem is more extensive or more complex than first presented because if it were easy, most people would have solved it. We utilized Pareto Analysis, Lean Six Sigma techniques, and determined the root cause of each problem, then installed a permanent solution for them. You must understand that this problem involved two companies, several departments, and many people working together to solve it, and could not be achieved without people believing in the Credo. It drove the behaviors of J&J employees as well as their suppliers. ***That is how powerful aligning guiding principles to customers feedback, KPIs/KBIs, performance appraisals, and rewards.***

Lean Journey Startup with Sales Growth Plan

On April 28, 2003, I was hired as a general manager of a small rotary die cutter machinery company where I utilized the Current State Marketing & Sales and VOC Analysis with Lean Journey Startup. It

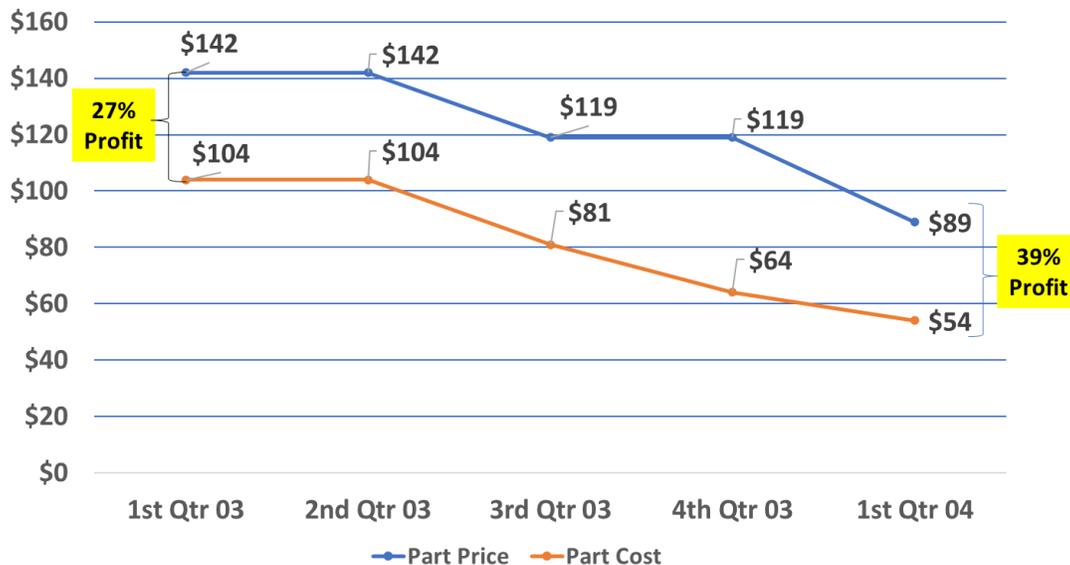
allowed me to build the company from bankruptcy and zero sales to profitability in 14 months with total revenue of \$1.8 million (See Graph 1). Our Marketing & Sales and VOC analysis indicated that we needed to improve our quality and pricing on all standard spare parts for corrugated machines. We aligned our quality key performance indicators (KPIs) with our goals, Leaned-out the standard spare parts product line, and lowered the price while increasing the profit margins. The results were more sales with higher profit margins and increase market share with no layoffs (See Graph 2). We later added a sales rep to help drive more sales.

Rotary Die Cutters Machine Company 2003 - 2004 Sales



Graph 1 – Rotary Die Cutters Machine Company 2003 – 2004 Sales

Standard Spare Parts Unit Price to Unit Cost Example



Graph 2 – Lean out: Unit Cost and Unit Price Lowered for Increased Profit Margins and Market Share

Several other methods to grow sales can be determined by fully understanding the Current State Marketing & Sales and VOC Analysis. Each company and organization can develop their own Sales Growth Plan unique and specific to their industry while building their Lean Culture. The executive

team must be committed to linking the guiding principles, KPIs/KBIs, customer feedback to performance appraisals, and rewards. They must provide real company examples to the employees of how the guiding principles play a significant role in high-performance results for the company. Their actions, delegations of responsibilities, and activities should reinforce productive behavior from the workforce and generate a sustaining Lean culture for the long run. For more information contact RC Caldwell at rc.caldwell@CaldwellAssociatesExcel.com.

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