

By Michael Kamphuis, Director of Marketing, Background Brass, Conn-Selmer, Inc.



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My marketing career began back in 2001 as a telemarketing manager in the manufacturing side of the band instrument industry. Since that time, I've held multiple positions in the area of product management and currently am a director of marketing for Background Brass instruments at Conn-Selmer, Inc.

Owned by Steinway Musical Instruments, Inc., Conn-Selmer is the nation's largest domestic manufacturer of brass, woodwind, and percussion musical instruments and is best known for its collection of famous brand-name products that include the finest band instruments in the world. Bach, Selmer, King, Holton, and C. G. Conn instruments, along with their percussion brand Ludwig Drums, have been played by musicians like Ringo Starr, Louis Armstrong, Dizzy Gillespie, Benny Goodman, and Maynard Ferguson.

Conn-Selmer began its journey into LeanSigma® in April of 2003 and has successfully improved its manufacturing process and product development through the use of lean processes. We've done more than 100 week-long or point events up to this point. A true telling point of our progress is shown when we give numerous tours in our Elkhart and Eastlake factories. Guests who toured our facilities before 2003 see a remarkable difference. Comments are

made about the visual benchmarks, the hour-by-hour charts, and the overall organization of the cells and how focused everyone looks.

Although we've had success with the initial steps of our lean journey, at some point you realize that there's more to LeanSigma than just improving processes on the shop floor or in the back offices. In July 2006 I was first exposed to something that was very foreign to me at that time: Design for LeanSigma (DLS). Just the year before I had gone through my first product development cycle as a product manager, and from concept to launch, it took one year without using the DLS model. This was on a new marching tuba. We realized that we needed to be able to get new products to market more quickly and reliably, and with two new projects on the table, decided to seek outside help. Ashwin Badve from TBM came to Conn-Selmer to train our marketing department on the fundamental aspects of DLS and what its capabilities are. The process was then put to use on the Bach 182 trumpet and Bach LT142BO trombone.

After going through the training session and studying the process and how it related to Six Sigma, I immediately recognized that DLS is something that needed to become a part of who I am as a marketing professional.





No doubt all marketing people come to realize at some point during their careers that it's a major challenge to achieve success in the three fundamental aspects of business: price, quality, and availability.

DLS addresses all three issues by using a lean process to take a concept to market in the shortest time possible, at the expected quality, for the lowest cost, and at the required volume level. Sounds too good to be true doesn't it? Well believe it!

How did this help me? Well, with the phase-gate process that DLS follows, it helped me regiment myself to not jump ahead of where I am at in the process until all aspects have been dialed in. The phases are as follows:

- Phase 0—Market feasibility/business case
- Phase 1—Concept feasibility, voice of the customer (VOC)
- Phase 2—Product design
- Phase 3—Production preparation
- Phase 4—Launch
- Phase 5—Post-launch review

Phase 0—Market Feasibility

In this phase, we create a business plan that shows why an idea or concept we have developed should be looked at further. In the business case we show target costs, financials, market trend data, and potential market share to determine the initial return on investment.

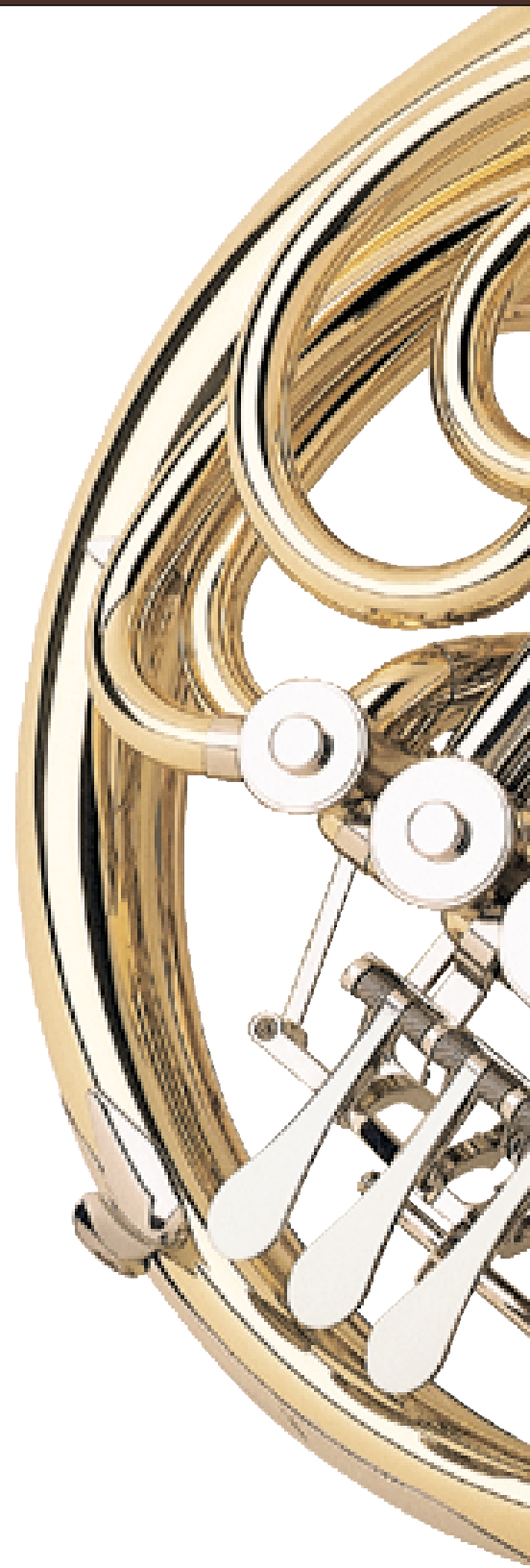
Also in this phase, we propose a cross-functional project team to take the concept to fruition. We include team members from all areas within the company: finance, procurement, manufacturing engineering, sales/customer service, and quality.

Phase 1—Concept Feasibility

After a Phase 0 approval, we hold a DLS Kickoff Team Meeting. This meeting is where we pull together the newly formed team and explain the business plan and also begin forming a VOC strategy.

VOC by far is the one piece that I've found can truly make or break a project. The more time spent gathering and understanding VOC, the better. To capture VOC, the team must identify the following:

- Who is our target market?
- Where is our opportunity for the most growth?
- Who are the individuals we need to talk to gain the most knowledge?





Once these answers are established, we create a VOC questionnaire consisting of 9–12 questions related to the information that we need to properly design a product. This is in preparation for interviewing end users. The questions asked are open-ended, and we’ve found that any number greater than 12 questions tends to lead to more than an hour of conversation and is not conducive to good feedback.

The questions tend to revolve around the product. For example, on one project for a professional trombone, some of the questions asked included the following:

- What cosmetic characteristics of the instrument are important to you? What changes would you make to the appearance if any?
- What functional characteristics of the instrument are important to you? What changes would you make if any?

After the questionnaire is put together, we create an interview matrix and target 50 people. The interview matrix consists of all the different channels that impact the sale of our products and includes teachers, students, dealers, professional players, and others.

Once the questions are established and the interview matrix is created, the team puts names to the matrix and interviews are assigned to each team member. The interviews are done both in person and over the phone. We try to record every conversation to obtain accuracy that is not possible when information has been filtered through an interviewer.

When we have gathered all the information, we hold a week-long event during which we put the data we’ve gathered into a “House of Quality.” The main tool that the house brought our team is the understanding of what the customer’s needs are and how we accomplish this. One of the key pieces that our market depends on is the sound of our

instruments. The descriptive sound tendencies that came through our interviews helped us determine which direction to go. In this case, the customers described to us that the Bach sound was the most desirable in their minds.

Once all the data has been compiled, we then create a concept and present it to the officers for approval. Also, as in every phase gate, we make sure that the financials match the business plan.

Phase 2 – Product Design

At the end of this phase, we’ll have narrowed our design down to a preliminary bill of material, have more solid financial information, and know the scope of the tooling needed for us to be prepared for setting up production. “Requests for Expenditures” will be submitted for approval.

Phase 3 – Production Preparation

In this phase, we hold “Design Failure Mode Effects Analysis” (DFMEA) events, and advanced quality planning events to help set up the production cells.

The DFMEA event is a time when we go through the entire process and determine what parts of the manufacturing process are keeping us from an adequate end result. An example of this pertaining to musical instruments would be some of the mechanics of the trumpet. With trumpets for example, the three pistons that are used to play the instrument must have fast action, yet maintain good compression. Based on the VOC, if we do not meet this demand, the customer will



not be satisfied. If our end result during our testing at the event shows great action, but poor compression, we call that out and identify the parts within the piston-fit process that would solve this problem.

Also, at this point, I've finalized the marketing strategy and the message that will be used to support this product in the market place. I highly recommend getting this done prior to Phase 4 so that you are well prepared to train your sales force and also allow for lead times on Web, print, trade show planning, and other projects to be completed before launch.

Phase 4 – Launch

At launch the production line is set up and we have completed a pre-production run in order to have inventory on the shelf prior to launch.

Phase 5 – Post-Launch Review

Post-launch review is the time to go over lessons learned and to immediately fix any issues that have become apparent with the project. We also review any items that have come up that may also apply to other projects in process in order to avoid the same shortcomings with those projects.

A Different Tune

Now, getting back to the first project that I was involved with, the marching tuba—we could have avoided many issues had we used DLS. Although the marching tuba went to market, it was five months later than expected. The reason this occurred was because of “feature creep,” dreaded words that will cause any product manager to

cringe. Although we had identified what the core design needed to be and what the expectations of the customer were, we failed to do DFMEAs and the validation involved up front to determine if some of our ideas were indeed 100 percent valid. So when we were in the prototype phase, certain parts of the design failed and we had to go back and make many alterations before launching the tuba. This also then impacted the manufacturing cost and final result prior to launch. Luckily, we were able to pull it together and had a successful launch after all; however, the stress, headaches, conflict, and worries throughout the team during that period could largely have been avoided had we completed the proper steps up front.

With the two Bach instruments, we launched on time and at a cost within 5 percent of our goal and delivered successfully to the marketplace. The overall process and feel of designing and launching those two instruments was quite different from that of the marching tuba.

After walking through the DLS process with three projects, I've found that DLS has become a part of who I am as a marketing professional. As a department, we have taken a lot of the tools from DLS and used them for business process type kaizen events, and even for creating a sales catalog for accessories based on the VOC.

I've had the opportunity to train in DLS people who have joined our company over the past few years and also train those who were not yet versed in the practice. It becomes almost infectious as more people understand the process within our organization.

Over the coming year, I expect to see five new DLS projects on my plate and I'm anxious to get these started. Together, the innovation that comes out of the process and the involvement from the marketplace creates a new feel for our customers about who we are as a company. For companies that want to deliver new products to their respective markets on time, with the right quality level and at the right price, there is no better tool than DLS. ■