

Lean on the Coater

Can lean transformation start at the coating line?

You're a paint line engineer; a supervisor; an internal technical services associate. You are becoming familiar with lean manufacturing. You have read a bit on lean principles and maybe attended a seminar or two on lean transformation. You see how what you have learned can be used to improve your employer's business performance and its ability to serve the needs of the marketplace.

You would love to initiate a lean journey; you dream of reducing inventory, improving plant wide product flow, and decreasing external quality rejects. But let's face it, you're just the paint guy; the one who has shared his big ideas with others outside the Coatings operation but is getting nowhere. So you resign yourself to a quiet work life of disappointment, frustrated by the knowledge that things could be so much better, if only others could see it your way.

Get off it.

Generally, the most practical starting line for improving product flow is at the end-user of a manufacturer's products—understanding final customer demand and preferences and then arranging the supply chain in a fashion that delivers on these factors. Next, change is driven upstream from the customer by holding continuous improvement events in preceding

the rest of the organization to go along, there are huge benefits to initiating your lean journey at the coatings line.

Begin by altering the paradigm that the operations who follow paint in the supply chain are "departments" to which parts are sent after paint. Coatings operations have a "customer"—the operation in the supply chain that immediately follows

Coatings. Often this is an assembly operation (assumed for the rest of this discussion) but could also be a packaging operation, shipping and receiving operation or a separate business entity that receives coated product directly from the coatings line.

The goal of the Coatings operation should be to deliver product to the next operation in a manner that helps that operation reduce the seven deadly wastes (waiting, motion, transportation, inventory, overproduction, over-processing and rework) while simultaneously controlling or reducing this waste in Coatings.

Coatings needs to listen to the voice of its customer assembly. My quintessential lean example is Subway, an organization that became one of the fastest growing franchises on the planet, not by figuring out what was easiest for Subway, but by determining how to meet a demand that existed in the marketplace (i.e. listening to the voice of the customer); namely affordable, tasty sandwiches made quickly and exactly the way the customer wants them.

Likewise, Coatings can determine how its customer Assembly likes its parts and find a way to provide them accordingly. When asked how it would like to receive its parts, Assembly will likely respond that it wants conforming product and 100 percent of the subcomponents required to build a finished unit, for if even 1 percent of the parts to build a finished unit are unavailable when needed, the end product cannot be completely assembled. This in turn leads to work in process inventory (WIP) and hinders production. Likewise, receiving parts too soon (i.e. before they are needed to meet a customer order) also creates WIP.

Next, Assembly might ask whether parts can be delivered in kits (i.e. the exact quantity required to build a single unit) rather than batches of like parts. Could Coatings deliver a



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order of manufacturing operations and then focusing on how each operation can efficiently deliver parts to the following operation in a way that optimizes that operation's efficiency and yield.

While this approach is effective, it is not the only way to drive lean change. In fact, often the best place to begin an organization's lean journey—especially if other parts of the organization are lukewarm on the idea of lean—is right at the coatings line. Since so much product from so many upstream operations often require paint, the

Coatings operation frequently becomes a bottleneck that slows the entire supply chain's ability to satisfy end-user demand. Thus, lean efforts conducted in Coatings can pay huge dividends to the entire organization. Further, since Coatings either receives product from or sends it to other operations, the lean successes gained in Coatings can often be contagious.

So, paint line guy or gal, despair not! Even if you can't get

kit instead of a batch? On racks or carts that minimize injury risk and motion waste? Listen to the voice of the customer and respond with action.

Perform an informal customer satisfaction survey. Speak with the folks on the assembly line and entertain yourself with the shocked looks you get when you ask them whether Coatings is performing to their expectations and what Coatings could do to help them do their jobs with less effort.

Of course, once “customer” expectations are established, Coatings must modify its practices in order to optimize its ability to match the needs of Assembly. Changing the way coatings delivers to Assembly likely forces coatings to make some changes; improving yield, perhaps increasing the frequency of color changes; and getting away from batching like parts and instead running kits.

This leads to the next step. Not only is Coatings a “supplier” to its “customer” Assembly, but it is also a customer itself. Perhaps the most critical supplier to Coatings is the manufacturing operation immediately preceding it; for example a Fabrication, Stamping, Welding or Machining operation. Let’s assume a Welding operation.

In order for Coatings to service the needs of its customer Assembly it needs some help from its supplier Welding. So the question becomes: How can Welding deliver product to Coatings in a fashion that optimizes Coatings’ ability to service Assembly?

Granted, getting an upstream operation to change its ways will take time and effort. However, the tone of the discussion changes when placed in the context of: “This is what I need to meet the needs of my customer, Assembly,” as opposed to: “This is what I want you to do.” Further, as other operations see the benefits Coatings is reaping from its lean transformation (less rework, lower cost, fewer employee injuries, less chaos, cleaner work areas and so on) they may be more apt to jump on board.

Patience is key. Lean transformations can take time, cultures are slow to change and reluctance on the part of the upstream operation to change its ways should never prevent coatings from changing what is in its control

from making changes that benefit its customer.

Improving performance in Coatings has a huge impact on the rest of the operation, as Coatings sits right in the middle of the supply chain, and nothing can be assembled before the proper parts are coated. Further, Coatings likely touches more upstream and downstream operations than any other part of the overall supply chain, so improvements in Coatings can improve the performance of multiple operations. For these reasons, Coatings may be among the best places to begin your organization’s lean journey. ■■

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