



IMPLEMENTATION  
**ENGINEERS**<sup>®</sup>

CASE  
STUDY

## Supply chain strategies befuddle manufacturer

*Company seeks to gain control, reduce costs*

An Implementation Engineers Engagement



## Multiple strategies fail to deliver results

Our client is in the business of assembling durable commercial goods that contained both purchased and engineered components. The client owned the business for many years and as a result, there were numerous strategies for procuring many of its engineered components. At first, the strategy was to outsource everything possible for cost reductions and lower overheads. Then the strategy was changed to insourcing to gain control. Next, cellular manufacturing was going to cure all the problems. After that, it was investing in new technology. After more than 10 years of wrestling with the issue of procuring the lowest cost, the client called us for an unbiased, data-driven assessment of identifying and implementing the least cost strategy for each component.

## Holistic structure, manufacturing assessment prove valuable

We used the data from current and previously outsourced components, as well as current manufacturing practices and demand volumes. Through a specially designed, proprietary methodology, we constructed a matrix that restated the true costs of making and buying various categories of parts. Our process goes well beyond the standard cost elements, and included end-to-end short-term and long-term support costs, as well as current and ideal future state manufacturing design.

We started by assessing the current in-house manufacturing capability and found that our client had a good investment, but they were using their resources incorrectly. The equipment was very good at making high-volume components but not good at short runs. They had outsourced most of these high-volume parts (because it was easy for purchasing to do) and kept most of the low-volume parts in-house.

We chose 20 representative components for a pilot – some made in-house, others outsourced – and sent drawings to suppliers for quotes. There were two categories of suppliers: one group was made up of those suppliers who currently was making parts for our client, the other group was possible new suppliers with good reputations. Once all the quotes came in, we used our algorithm to analyze and compare them to current and future in-house manufacturing design. We also analyzed the quotes for consistency and worked with suppliers to make adjustments where necessary. Our algorithm generated the best cost strategy for each part, as well as balancing manufacturing resource for in-house components.

## Systemic approach generates positive cash flow

What we found was that our client's method of applying the make/buy formula was faulty. First, for the sample parts that were already outsourced, the current supplier was frequently higher in cost than quotes coming in from the others, as well as higher than the in-house manufacturing cost. Even though the intent was to make these parts in-house and push the lower volume parts outside, it did indicate that some current suppliers could do better across the board. This gave purchasing the opportunity to renegotiate the contracts on other components or go with another supplier. In addition, for the sample parts that were strictly made in-house, we were able to optimize internal costs, or in some cases, identify new suppliers whose facilities were adept at making shorter runs.

In short, IE delivered a new systemic approach to determine the best long-term, lowest cost combination of purchasing and manufacturing components. Our initial pilot provided over \$5 million of annual ongoing cost reductions. The capital investment was approximately \$260,000 to accommodate new fixtures and tooling for purchased components.

# NEXT STEPS >

- > Schedule a meeting with our team to learn about our enCompass® methodology and how IE can improve your operations.
- > Interested in learning more about the topic covered in this case study?  
Call us at 1-312-967-4162 and reference the paper you're interested in. We would love to discuss your initiatives.
- > Visit [www.implementation.com](http://www.implementation.com) to find out more about our services.



At our core, Implementation Engineers is a data-driven, global firm with a razor-sharp focus on enhancing mining and manufacturing operations.

We have volumes of success stories, and they can all be attributed to our revolutionary enCompass® methodology. This industry-first approach gives us not only the knowledge to inform you of what needs to be done, but the power to actually implement those solutions for lasting impact.

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