

Monitor the Grid

A power grid monitoring company that's scaling up operations wants to consolidate manufacturing and have one company provide the hardware it depends on.



The Goal

Reduce the supply chain complexity while maintaining responsiveness and quality in critical hardware.

A power grid monitoring company, experiencing rapid growth, sought to simplify its supply chain while maintaining responsiveness and quality in its critical hardware. The company provides software and hardware to let electrical distribution companies monitor, analyze, and optimize their operations to safely and efficiently transmit power to where it needs to be.

The firm's software helps electrical utilities significantly reduce outage time and costs

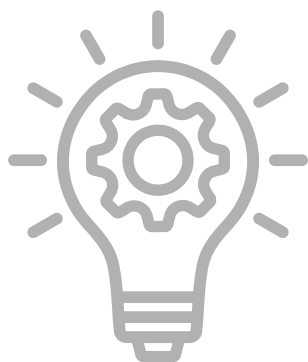
and is used by many of the largest distributors in North America. To deliver the value it promises, the company needs something from utilities: data. Sensors across entire electrical grids monitor conditions and deliver data about current levels and fault detections back to central locations for analysis and decision making.

While the company is an expert in software, it is not a hardware manufacturer. Instead, it has used a collection of vendors to create packages of sensors, transformers that can check line conditions through induction, and other equipment to relay the information through cellular phone networks back to the operational database and analytic tools.

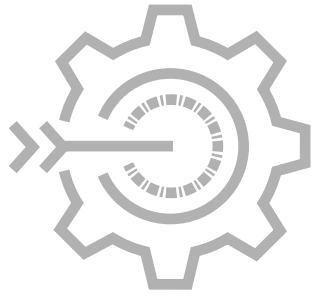
The Problem

All was working well, and the company was able to expand to meet increased demand from existing and new customers. But the buildup of interest was also concerning.

The growth was taking place at a time when supply chains were hurting from the COVID-19 pandemic — as many still are. The more steps from materials through subassemblies and then into final products, the more places there could be disruption. The loss of one component could render an entire unit unable to function. Also, the company had been working with a small contract manufacturer that didn't have the capacity for the high volume manufacturing the company's success would demand.

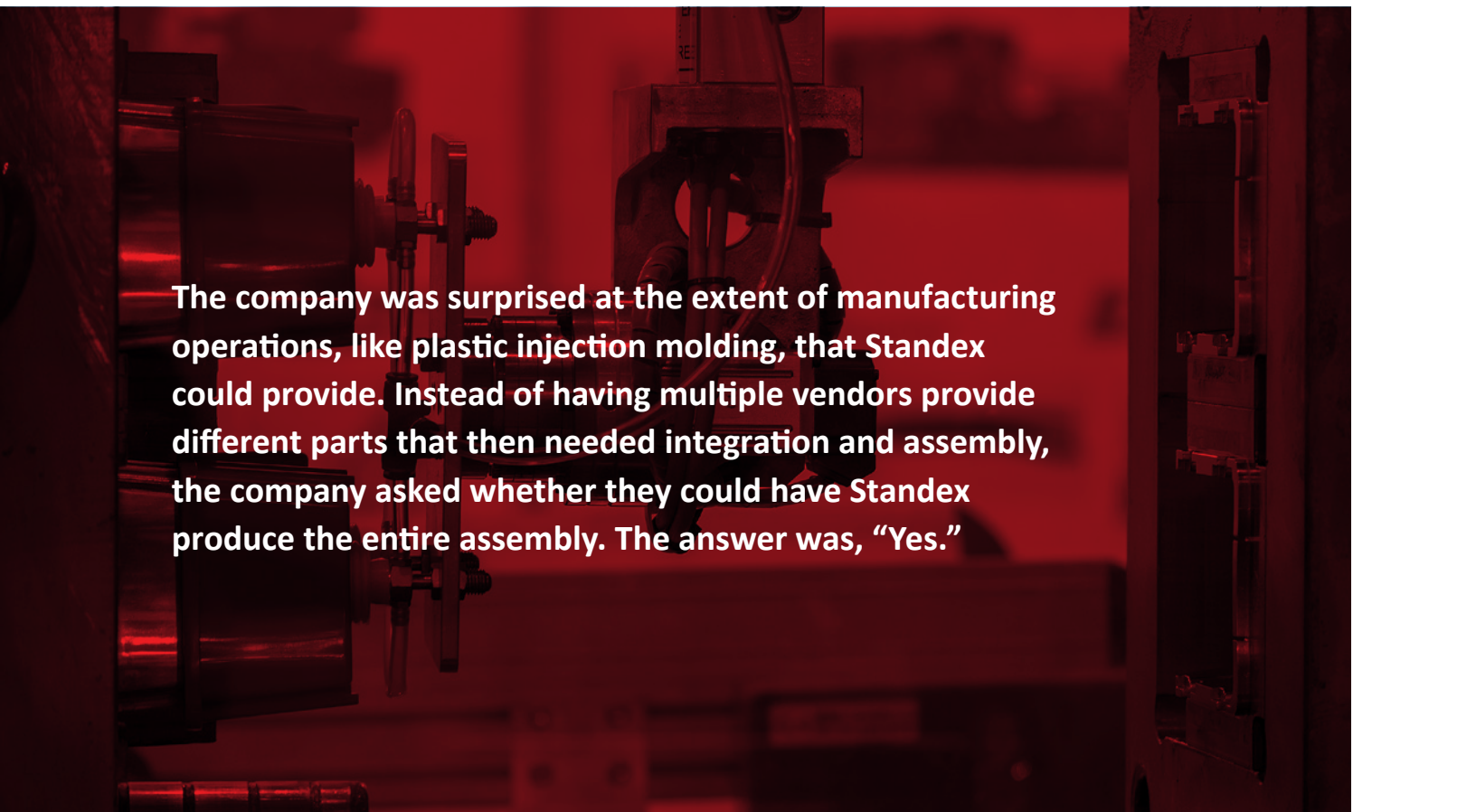


Ideally, the company would find manufacturing partners that could each do more of the work, concentrating efforts. The approach would also increase leverage with factories because of the greater amount of business in discussion. That is where a factory visit to Standex, which already provided the current transformer that helped gauge activity in power lines through induction, proved enlightening.



The Solution

Because of the nature of its business in magnetics and electronics, Standex has a wide set of capabilities, including thermoset molding, thermoplastic inset molding, injection molded part designs, potting and encapsulation, stamping, soldering, bobbin and toroid winding, stainless steel fabrication and laser welding, glass-to-metal sealing, CNC machining and tooling capabilities, and sensor and relay design and fabrication.



The company was surprised at the extent of manufacturing operations, like plastic injection molding, that Standex could provide. Instead of having multiple vendors provide different parts that then needed integration and assembly, the company asked whether they could have Standex produce the entire assembly. The answer was, “Yes.”



Standex worked with internal resources and external vendors to build more than a dozen different hard tools to do the manufacturing in injection molding machines that would be dedicated to the account. Standex acted as the design-for-manufacturing consultant to create three different complex monitoring assemblies. That involved detailed mold flow analysis to ensure a resulting high-quality part that could be manufactured in volumes of tens or hundreds of thousands. Every component down to the smallest detail was repeatable and manufacturable.

After a few months of transition time, manufacturing ramped up over several years. Through the process, Standex became a trusted partner and advisor to the company and has worked with them for five years to help ensure that everyone's lights remain on.

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