

# 03 CASE STUDY

## Heavy Truck Transmission Control Modules Manufacturer



## Leveraging Wes-Tech's credibility and expertise for process automation to reduce perceived risk and gain business.

This case study is an example of one client that was able to satisfy their customer and gain more business by leveraging Wes-Tech's expertise. When your client needs you to prove your capability before they sign on the dotted line, you must ensure anyone you contract with will live up to your – and your client's – high expectations. This case study is an example of one client that was able to satisfy their customer and gain more business by leveraging Wes-Tech's expertise.



### Challenge

Wes-Tech was approached by a manufacturer of heavy truck transmission control modules. Their end-user customer was working to produce one of the most complex products they had ever designed, and they needed to do it within an aggressive time frame. The end-user had a relationship with Wes-Tech, and sent their control module supplier to us to get the help they needed to ensure their part was manufacturable on a large scale and could meet the tight timeline for delivery.

The challenge was a completely blank slate – they had created a prototype, but had no similar products to draw experience from, and needed help to determine the best way to lay out a scalable assembly process. The new product was in testing concurrently as Wes-Tech was designing the manufacturing equipment, so there was **room to work collaboratively with the client to make small changes to the design for improved manufacturability.**



### Solution

This was an extremely technically complex line, and the fully assembled unit was 80 lbs, making it difficult and dangerous to move around by hand. Working from these constraints, and drawing on our extensive and wide-ranging experience, Wes-Tech was able to invert our thinking by combining conveyors, robotics, and operators into an unusual solution.

The part-handling robot delivered the part from one manual lean cell to the next. Component kits for assembly were delivered by conveyor at each location as needed. This allowed the company to use the human operators to do the complex tactile and critical assembly work that is expensive to automate, and the robots to complete

the heavy, repetitive work. The line took advantage of human capital in the place where it would get the most return while reducing the risk of employee injury by leaving the heavy lifting to the robots.

The concept was created to be scalable. In the first year they could staff the line with anywhere from one to seven operators to meet production requirements during the initial ramp-up, but it was easy to add equipment and operators to meet increased production volumes, which happened much faster than was originally anticipated. In this way, they could **keep equipment costs lower until returns had already begun to pay for it.**

## RESULTS / RETURN ON INVESTMENT

The successful design allowed our client to leverage Wes-Tech's experience to lend them credibility with their end-user customer. By collaborating together, we were able to create an entire lifecycle solution for the product line, including design and manufacturing, which the client was able to deliver to their end-user as proof of manufacturability. The engagement resulted in:



A scalable and flexible solution that allowed the client to meet uncertain volume demands during initial production ramp-up, and spread capital expenses over the 2-3 year launch window



Reduction of health and safety risks by automating tasks with ergonomic concerns



A complete solution with a product design and manufacturing capability, including assembly and testing



Confidence from, and preferred supplier status with, their end-user client

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With decades of expertise solving complex manufacturing challenges, we will leverage more than 4,200 custom-engineered automation solutions to design the perfect one just for you. Experience the Wes-Tech difference.

[wes-tech.com](https://www.wes-tech.com) | 720 Dartmouth Lane, Buffalo Grove, IL 60089 | 847 541 5070 office | 847 541 0096 fax