

06 CASE STUDY

Automotive Manufacturer



Wes-Tech takes on the challenge to automate the impossible in record time.

It would be difficult to overstate the value of the right solution, particularly to a client who is known for developing revolutionary products and processes. When the Wes-Tech team was asked to step up to the challenge of automating in a way that has never been done before, we knew that the right solution would require creativity, brainstorming, and out-of-the-box thinking to go beyond what the client was expecting—as well as the commitment to get it done in record time.

Challenge

"We're going to do it unlike anyone has ever done before."

A new automotive industry client needed a strong factory automation team to help create fully automated production line to assemble the front and rear fascias for a new vehicle that would launch in just a year, rather than the traditional 3- to 5-year timeline for this type of project. They were looking for someone who could become truly integrated partners, acting as part of their team, but who could bring a fresh perspective, creative solutions, and proposals for processes they hadn't already thought of themselves.

Solution

"When this machine works, it's going to be more impressive than anything we've done before."

From the very beginning, the entire project was unusual for the automotive industry, and the Wes-Tech team needed to think differently, to do what needed to be done rather than what would usually be done. The main component, a painted front fascia for the vehicle, needed to move along the line so that the manufacturing operations (placing, driving, welding, adding pushpins, etc.) could be completed. However, the fascia was made of plastic, much more dynamic than metal parts on traditional automotive lines. The Wes-Tech team understood immediately that traditional methods used on metal components wouldn't work, so we had to take control of the part and move it to where it needed to be.

We followed our process to define the problem and develop solutions, and we were able to come back with 7 concepts in just a couple of days. Then we worked interactively and collaboratively with their team to determine the right concept to fit their needs, from footprint, height, and labor constraints, to finding and solving possible pain points before they became an issue. With our sense of urgency to operate at a pace one step ahead of their team, our creative thinking to go beyond what they asked for and to give them what they actually needed, our collaborative nature that makes us a part of the client team, and our drive and passion to get to the right solution, they realized Wes-Tech would be a great fit for the project and for their company culture.

To do this, we developed a way to utilize regional datum structures, which allowed us to move the part where it needed to be before the assembly process began. Unlike a traditional fascia assembly line where humans would do the assembly, this product line was designed to be fully automated with robotics. We brought new ideas to the table at every step along the way, transforming automated fascia assembly with innovative new processes.

Designing completely new production-critical equipment was already a challenge, but the tight timeline added even more pressure—if our machines didn't run properly, the model launch could not happen as planned. Our team met every challenge by maintaining strong collaboration and transparency, meeting frequently with the client team to work through the design process and ensure the right solution would be delivered on time.

RESULTS / RETURN ON INVESTMENT

Even while facing a variety of challenges along the way, the team solved our client's issues in new and revolutionary ways, kept the client in the loop throughout the process, and delivered on time. The benefits they've already realized from this project include:



Unique capabilities:

Building a product in a way that has never been done before creates a real competitive advantage, and Wes-Tech was able to help the client accelerate their goals



Flexibility:

This machine is re-deployable, and the extensive use of robots makes it easier to re-tool for future models



Cost savings:

When the fully automated line was put into full production they were able to realize significant cost savings



Loss reduction:

With no human intervention, the company has seen a reduction in losses from part damage, which has also resulted in dollars saved

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