ABOUT FROG LEGS INC. Frog Legs produces a variety of front and rear suspensions, casters, and accessories for wheelchairs. Based in Ottumwa, Iowa, the company was founded in 1996 by Mark Chelgren after he befriended a quadriplegic rugby team and discovered how much minor obstacles translate through the wheelchair, resulting in an uncomfortable and bumpy ride that risks causing injury. Chelgren developed Frog Legs to enhance the wheelchair experience and enable riders to go places a base model wheelchair simply cannot. The company has since grown to around 15 employees.

THE CHALLENGE. Frog Legs wanted to reduce the weight of its wheelchair products while maintaining or increasing their strength. The company reached out to the Iowa Center for Industrial Research and Service (CIRAS), part of the MEP National Network, for assistance with testing and vetting new production methods.

MEP CENTER'S ROLE. CIRAS connected Frog Legs with a Minnesota-based plastics firm that uses a relatively new method of adding carbon fibers to plastic. That connection helped the company to figure out how to reduce the weight of its original products by almost one-third, while doubling their strength.

The engagement with CIRAS encouraged Frog Legs to invest in new products while minimizing the cost of the testing and vetting process. The company now includes carbon fibers in the plastic injection molding process it uses to create its new wheels and forks. Frog Legs managed to achieve the incredible strength of carbon fiber without leaving its main area of manufacturing expertise, and the new products are positively impacting sales.

"CIRAS helped us tremendously in testing the process and vetting the way that the products are made." -Mark Chelgren, Owner

RESULTS

- Reduced product weight by 30%, increased strength by 100%
- Invested $500,000 in carbon fiber and other improvements
- Increased/retained sales of $1,050,000
- Obtained $37,500 in cost savings

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