

# SUCCESS STORY: INNOVATIVE PROSTHETICS & ORTHOTICS

## 2018 Innovation Business of the Year



Innovative Prosthetics & Orthotics is living up to its name by pioneering the use of 3D printing technologies to create prosthetics and orthotics devices that one day may be delivered not only to people in the U.S. but also to those in developing nations who cannot afford traditionally manufactured and expensive devices.

Founder and CEO Rakesh Srivastava has established the company's clinics in Omaha, Hastings, and Grand Island. Srivastava himself is a wearer of a prosthetic leg after being injured in a traffic accident in India 37 years ago.

He moved to the United States to attend the University of Nebraska at Kearney, where he earned a bachelor's degree in telecommunications management, and a master's degree in instructional technology with an emphasis in assistive technology.

He completed his residency and soon after became an American Board Certified Prosthetist and Orthotist. He opened his first clinic, in Hastings in 2006. The three clinics employ a total of nine people, while seven clinics in India managed by his brother Sailesh Kumar employ an additional 23 people.

Srivastava has worked with consultants at the Nebraska Business Development Center in Omaha and Kearney to obtain market research on exporting, as well as expertise from the technology commercialization team on prototype grant application and from the procurement technical assistance center (PTAC) on government contracting opportunities. He has used NBDC's services to prepare a loan package and business plan for his 3D manufacturing expansion project.

Prosthetic devices are used for lower and upper extremity needs. Orthotics include braces for the foot, knee and back. Patients visit the Innovative Prosthetics clinics to be fitted for these devices.

In 2012, the company introduced cranial remolding orthosis, a physician-approved helmet clinic for infants with head asymmetries. Three years later, Srivastava's company partnered with Creighton University on a \$50,000 prototype grant funded by the Nebraska Department of Economic Development to create a prototype of a medical grade 3D printed prosthetic device. Srivastava is also part of a research collaboration with the 3D Printing Laboratory and the Department of Biomechanics at the University of Nebraska at Omaha to develop low-cost 3D printed prostheses.

Based on the research, the team has successfully developed the first open sourced 3D printed partial hand prosthesis, the Cyborg Beast.

The high cost of prostheses for children, their weight, unattractiveness and complex fitting procedures often have a detrimental effect on use, retention and satisfaction. Srivastava wants to manufacture medical grade 3D printed prosthetic devices, including finger, hand and arm prostheses and cosmetic covers, that are capable of being remotely fitted, visually appealing to child

### REPORT DATE

- > March, 2019

### INDUSTRY

- > NAICS 423450: Medical Equipment

### CONSULTING

- > Market research
- > Prototype grant application
- > Loan package and business plan
- > Government contracting

### RESULTS

- > \$50,000 prototype grant
- > Research collaboration

CONSULTANTS: CHUCK BECK  
ADAMS COUNTY  
STATE SENATE DISTRICT 33  
CONGRESSIONAL 3