

tréxō robotics



Trexo Robotics is unleashing children's inner superheroes with their wearable walking device



Challenge

Trexo Robotics needed a law firm partner with experience in the robotics and healthcare space to prepare their PCT national stage patent applications before the filing deadline.

Outcome

Cognition IP conducted a technical analysis to revise Trexo Robotics' claims and filed the PCT national stage patent applications in the U.S., Canada, and EU. The quick filings gave the startup a competitive advantage during its seed funding round.

Introduction

Trexo Robotics is a medical device startup that builds wearable robotic devices. The company's flagship product, the Trexo, is designed specifically for children with mobility limitations and is used both in healthcare and household settings. Trexo can be used by healthcare providers and physiotherapists to deliver supported gait therapy and leveraged by families to strengthen their child's legs and improve their gait.

The Trexo consists of robotic legs that attach to a walker. The device is adjustable, easily scaling for size and height, and the legs are wearable. The legs fasten with only three buckles each and enable foot-ground contact and muscle activation when used for walking. The mobile design allows children to safely and independently explore their surrounding environment, while medical professionals and caregivers deliver precise training and view real-time session progress using the tablet app. In addition to improving overall mobility, Trexo users have reported a wide variety of benefits, including improvements to posture, trunk and head control, body and limb awareness, bowel movements, appetite, and sleep quality. For these

reasons, the Trexo demonstrates great promise for many impairments, such as cerebral palsy, traumatic brain injury, spinal cord injury, hemiplegia and paraplegia, muscular dystrophy, Rett syndrome, stroke, and neuromuscular conditions.

Close to home: from uncle to entrepreneur

"We are on a mission to redefine mobility solutions for people of all ages and abilities," says Manmeet Maggu, CEO of Trexo Robotics. The vision of the company is deeply personal to its founder whose nephew, Praneit, was diagnosed with cerebral palsy in 2011. At the time, Manmeet was pursuing his undergraduate degree in Mechatronics Engineering at the University of Waterloo. Upon graduating, he enrolled in the Entrepreneurship Studies MBA program at the University of Toronto. Outside of his graduate degree program, the MBA candidate spent the majority of his free time researching mobility solutions for his young nephew. Manmeet's family was told that Praneit would be unable to walk, but they refused to accept this as truth, even as they exhausted what few options were available to them.

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Manmeet Maggu
- Founder and CEO, Trexo Robotics

“Having vetted many law firms, I would recommend Cognition IP above all. The team is experienced, technical, and meticulous - and this is reflected in the quality of their work.”

In 2016, Manmeet founded Trexo Robotics. His family had been unable to identify a solution suitable for Praneit’s needs, and Manmeet grew more concerned about his beloved nephew as he continued to read about the adverse health outcomes related to sitting. Manmeet asked his good friend, Rahul Udasi, to help him build a robot that would allow his nephew to get exercise and stay active. Explains Manmeet of his request, *“We knew about Ironman and both studied robotics at the University of Waterloo, so building a robot to help Praneit made a lot of sense!”* What began as an extracurricular project quickly turned into a full-time endeavor and Rahul became the co-founder of Trexo Robotics. The company’s co-founders spent three years perfecting the design and function of their robot, culminating in the creation of the Trexo. Says Manmeet, *“At the end of the day, our goal is to create technologies that physical therapists trust, parents can afford, and children love.”*

Years of co-creation yield the perfect robotic wearable for children

Years of collaborative work led to the unique design of the Trexo, and its performance was validated by users. Trexo Robotics’ co-founders acted quickly to make sure that the design of their device could not be copied by others. They partnered with a traditional law firm to file an international (PCT) patent application. As the deadline to enter the PCT patent application into the national stage was approaching, Trexo Robotics’ co-founders knew they wanted a law firm partner with more technical knowledge to better analyze their invention and explain to the patent office why it was patentable.

Cognition IP revises Trexo Robotics’ claims to strengthen patent applications based on the company’s technology

Trexo Robotics hired Cognition IP to review and update the claims for the national stage of the PCT patent application. Cognition IP conducted a detailed technical analysis of the claims submitted in the international application and examined the prior art and arguments provided by the patent office. Developing a detailed understanding of the invention as compared to the existing prior art was something that had been lacking from the prior law firm. Following this analysis, Cognition IP revised the claims to put Trexo Robotics’ national stage applications in a much stronger position to be granted, with filings in the United States, Canada, and the European Union. Manmeet describes his satisfaction with the company’s new law firm partner, saying *“The Cognition IP team has deep technical knowledge. They fully analyzed and understood our invention and came up with an approach to not only enhance the claims we had but add on additional claims based on the product that we had not even anticipated. I would highly recommend Cognition IP to every startup looking to protect their IP.”*

The speed of the national stage filings gave Trexo Robotics a competitive advantage during fundraising. The startup was accepted to Y Combinator’s Winter 2019 batch and successfully raised a seed round after the YC Demo Day, based in part on their IP. Seed investors were impressed by Trexo Robotics’ global patent portfolio. Says Manmeet, *“We needed to get our IP checklist completed before talking to investors, and Cognition IP did this for us. Investors brought up IP protection in almost every meeting we had, and we could show them our patent applications.”*

Trexo Robotics champions its partnership with Cognition IP. The company’s founder says, *“Having vetted many law firms, I would recommend Cognition IP above all. The team is experienced, technical, and meticulous - and this is reflected in the quality of their work.”*