New tech from Pittsburgh robotics startup aims to speed things up at baggage claim

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Journey Robotics technology

Aviation leaders are in Pittsburgh this week for a global summit that looks toward the future of air travel, featuring the latest technology that could change how we fly.

Some of that technology was developed here. Pittsburgh's Action News 4 has an exclusive look at one company's prototype that would make baggage claim faster.

"You get off the plane in Orlando, and you want to get to Disney. Sitting there for an extra 30, 40 minutes waiting on your bag with all the little ones -- I've experienced it. That can be frustrating for parents," said Journey Robotics CEO Reeg Allen, a father of three.

Journey Robotics has a prototype of a vacuum-powered baggage lifter. Instead of someone having to physically lift each bag from the cart to the conveyor belt, the robotic arm does it for them.

"Our patent-pending technology is all about using vacuum and mechanical support together," Allen said. "So, just like a human hand, we use a vacuum head that goes and grabs the bag, is able to pull it onto a support tray, and then move it very quickly over to the belt."

Allen said the average bag weighs 40 pounds, so that means if a person has to unload 200 bags from a flight, they are moving about four tons.

"Imagine having to throw four tons in 20 minutes, a half hour. Lots of injuries, lots of bad things can happen, and they do," Allen said. "So, a lot of turnover and hard to keep consistent operations when you have that kind of turnover and injury."

Allen said the injury rate for these workers is 10% per year. The nature of the job also lends itself to slowdowns, which Allen said his technology would fix.

"If we have a robot that the driver can come, maybe drop those containers, open them up and allow the robot to sit there, he can now go get the next load. And now you're having more of that continuous process," Allen said.

Airlines lease their baggage claim spots from airports, meaning each individual airline would decide whether they want to purchase this technology.

That's part of the reason Journey Robotics rushed to get it set up at Pittsburgh International Airport before this week's FTE World Innovation Summit.

"Pittsburgh is a global innovation hub for all the robotic companies, autonomous companies here, and CMU and Pitt," said Deepak Nayyar, executive vice president and chief information officer at Journey Robotics.

In 2020, the Pittsburgh airport started the xBridge program, which allows tech startups to test their technology in a real-world setting.

"If you think about that, since 2024, we have 30 different organizations, local organizations, startups that we have worked with to develop new technologies and stuff," Nayyar said.

Journey Robotics is one of 30 companies trying out their technology, saying they're confident that their approach, developed in Pittsburgh, will take off with airline leaders.

"We're projecting to, we could be selling tens of millions of these in the next couple of years, so really improving jobs and expanding here and in our hometown," Allen said.

Meanwhile, Pittsburgh International Airport says travelers won't have to wait for this tech to get bags out quicker.

When the new terminal opens next year, the distance bags travel from plane to baggage claim will be reduced from about nine miles to four miles. With that, the airport says wait times at baggage claim will be cut in half.

Link: Robotics startup unveils new tech for baggage claim at Pittsburgh International Airport