

## STARSHIP TECHNOLOGIES

### Robot Food Delivery



### A revolution in local delivery.

We believe our robots will revolutionize food and package deliveries, offering people convenient new services that improve everyday life. Our proven ability to harness technology combined with our experience providing services to millions of people make this a reality. Launched in 2014 by Skype co-founders, Ahti Heinla and Janus Friis, Starship Technologies today operates in several cities across the world. Our business headquarters are in San Francisco with our main engineering office in Estonia.

## Facts and Figures

Jul 2014	Company founded
Aug 2014	First robot prototype created
Nov 2015	Launch out of stealth
Jun 2016	5,000km of driving
Aug 2016	One million people encountered
Jan 2017	Starship announces \$17.2m in funding
May 2017	50,000km of driving
August 2017	100 cities tested in
September 2017	Twelve million people encountered
October 2017	100,000km of driving
April 2018	Service launched in Milton Keynes
June 2018	Starship announces \$25m in funding and new CEO, Lex Bayer
January 2019	Service launched in George Mason University campus
February 2019	30,000 deliveries completed

Link: <https://www.starship.xyz/company/>

# The Telegraph

Technology Intelligence

## Delivery robots to replace takeaway drivers in London trial



Starship's delivery robots will be delivering takeaways in the UK later this month CREDIT: STARSHIP

[Cara McGoogan](#)

6 JULY 2016 • 12:01AM

Your next Saturday night takeaway could be brought to you by a robot after a major food delivery company announced plans to use automated vehicles to transport meals.

Europe's biggest online takeaway food company Just Eat has partnered with Starship Technologies, makers of slow moving pavement droids, to deliver food with robots on the streets of London later this month.

"Nobody has ever done deliveries with land-based robots," said Allan Martinson, the chief operating officer of Starship, a two-year-old Estonian company created by former Skype co-founder Janus Friis and developer Ahti Heinla.

The robot courier is a six-wheeled automated trolley that can travel up to 4 mph for roughly 10 miles. It uses a GPS signal and nine cameras to navigate and avoid obstacles. Half a dozen Starship robots will deliver food for Just Eat and meal on-demand startup Pronto in a UK trial due to start in London later this month. The exact areas they will run is still to be decided.

Instead of a person arriving at their door, customers could find themselves receiving a notification on their phone that says a robot is on its way and a code to unlock the automated courier. "Put the code in, the robot opens up, and there's your food," said David Buttress, chief executive of Just Eat.

The Starship robot can carry up to 10 kilograms or three shopping bags at a time and is designed to transport packages, groceries and takeaway meals.

"In busy times there's a shortage of supply drivers," said Buttress. "These will enable restaurants to meet the demand."



The public has reacted nonchalantly to seeing the robot CREDIT: STARSHIP

The robot, which has so far been tested in Greenwich, Milton Keynes and Glastonbury, is cheaper than the average human delivery, costing £1 to transport within a 3 mile radius, compared with the £3 to £6 it costs for a human courier.

To date 30 robots have driven nearly 5,000 miles without getting into an accident or finding themselves picked on by passersby. They have driven in more than 40 cities around the world, including London and Tallinn, Estonia.

"We haven't lost a single robot in eight months, or been involved in any accidents that resulted in loss or injury," said Martinson.

An initial worry was how the public would react to the robots. But Martinson said the public has been unfazed when passing the delivery machine on the streets. "The most surprising reaction has been the lack of reaction," said Martinson. "But kids love it."

We've seen them try to chase it, hug it. One person tried to feed it a banana."

Another significant fear was that people would interfere with the robots, or try to steal them and their contents. To prevent this, the robot is fitted them with nine cameras, two way audio, and movement sensors that send an alert if it is lifted off the ground. And it only opens with a passcode provided to the customer via a notification. "It's much easier to shoplift than it is to steal a robot," said Martinson.

In the long term the robots could collect groceries for people on a daily basis. "We're talking about giving people the one hour back that they spend shopping for groceries. That's probably the biggest gift," said Martinson.

If the trial goes well Just Eat is ready to adopt the delivery droids quickly. Buttress said that they could increase their fleet of robotic couriers across the country as early as 2017.

But before then, Starship needs to improve the machines' autonomy and navigation, according to Martinson. "At the moment we're doing all of the testing under human control. We need to further the seamless self-driving capability."

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## Starship Technologies trial robot delivery system in Greenwich, London

Published on Mar 24, 2016

The Starship Enterprise, Starship Troopers now Starship Technologies, the company launched by the co-founders of Skype, is hosting trials of its self-driving delivery robots in Greenwich, London.

YouTube: <https://www.youtube.com/watch?v=JtxxeWWKSHE>

### WSJ Video

3/9/2017 6:02AM

### Food-Delivery Robots Rolling in D.C.

Delivery by aerial drone may still be a dream, but down on the ground in Washington D.C. a fleet of robots is already rolling with what its creators call the first fully robotic food-delivery service.

<https://www.wsj.com/video/food-delivery-robots-rolling-in-dc/302B33EA-06B2-4E51-B992-03D2CB752FC5.html>

## BUSINESS INSIDE Australia

### Tech founders take their self-driving food-delivery robots out of San Francisco to focus on cities where they feel more welcome

Starship appears to be doing fine without San Francisco's approval. Its robots are already operating in other cities in the Bay Area, including Palo Alto and San Jose, as well as some in Europe.



Read more at <https://www.businessinsider.com.au/starship-responds-to-san-francisco-regulations-on-delivery-robots-2018-5#VU6UUg6dAQ5zelqQ.99>

**LINK:** <https://www.businessinsider.com.au/starship-responds-to-san-francisco-regulations-on-delivery-robots-2018-5>

## SFGATE

### Tech founders take their self-driving food-delivery robots out of San Francisco to focus on cities where they feel more welcome

Melia Robinson,  
provided by  
**BUSINESS INSIDER**

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**In San Francisco, people are fed up with startups trying to disrupt transit.**



**As a result, San Francisco officials last year passed some of the US's most restrictive regulations for delivery robots. The founders of Starship Technologies say the company has pulled its robots from San Francisco to focus on cities where they're welcome.**

**LINK:** <https://www.sfgate.com/technology/businessinsider/article/starship-technologies-robots-san-francisco-food-12901221.php>