

TECHNOLOGY

The Most Important Self-Driving Car Announcement Yet

Autonomous vehicles will transform urban life by 2020, if Waymo's time line is correct.

By Alexis C. Madrigal



The announced Jaguar I-PACE, outfitted with self-driving technology by Waymo. (Waymo)

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On Tuesday, Waymo announced they'd purchase 20,000 sporty, electric self-driving vehicles from Jaguar for the company's forthcoming ride-hailing service.

Waymo, Google's sister company within Alphabet, held a press conference in New York for the unveiling of the vehicle, and most of the stories revolved around the luxury SUV's look and feel.

But the company embedded a much more significant milestone inside this supposed announcement about a fancy car. With orders now in for more than 20,000 of these vehicles and thousands of minivans that Chrysler announced earlier this year, Waymo will be capable of doing vast numbers of trips per day. They estimate that the Jaguar fleet alone will be capable of doing a million trips each day in 2020.

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You could quibble with their math (will it really be that many daily trips per car?) or their overall utilization rate (how many cars will be lost to maintenance per day?), but if Waymo is even within 50 percent of that number in two years, the United States will have entered an entirely new phase in robotics and technology.

The company's autonomous vehicles have driven 5 million miles since Alphabet began the program back in 2009. The first million miles took roughly six years. The next million took about a year. The third million took less than eight months. The fourth million took six months. And the fifth million took just under three months. Today, that suggests a rate on the order of 10,000 miles per day. If Waymo hits their marks, they'll be driving at a rate that's *three orders of magnitude* faster in 2020. We're talking about covering each million miles in hours.

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