

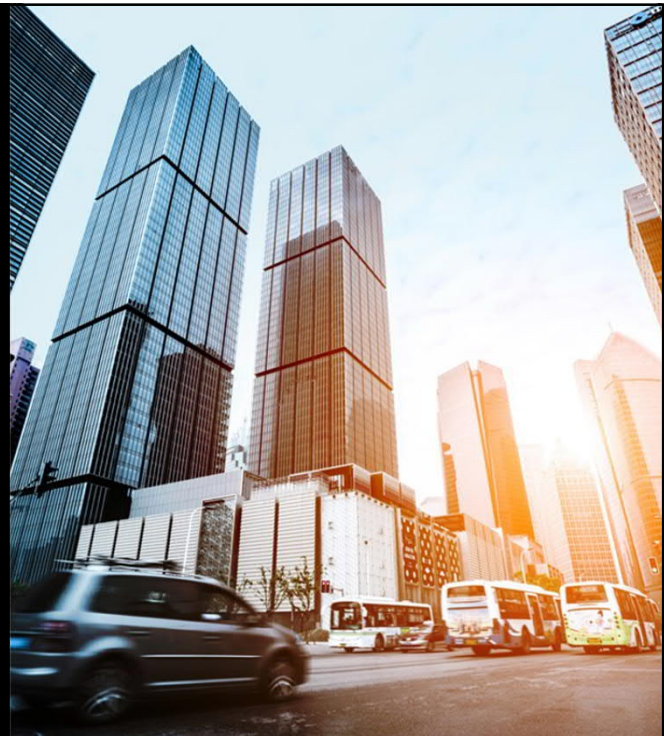
June, 2019

# APTIV AND AUTONOMOUS VEHICLES



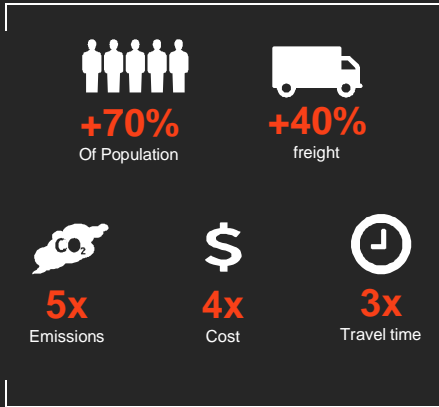
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We are a technology company that develops **safer**, **greener** and **more connected** solutions for a diverse array of global customers.



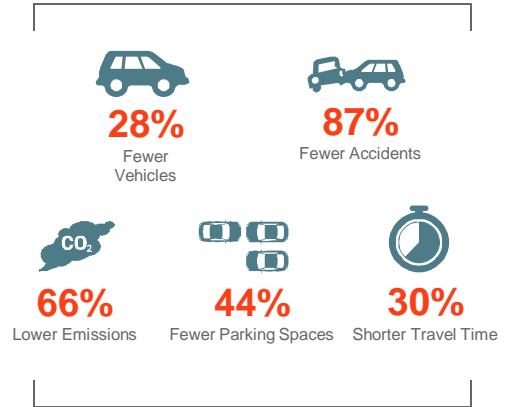
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### Urban Mobility CHALLENGES by 2050



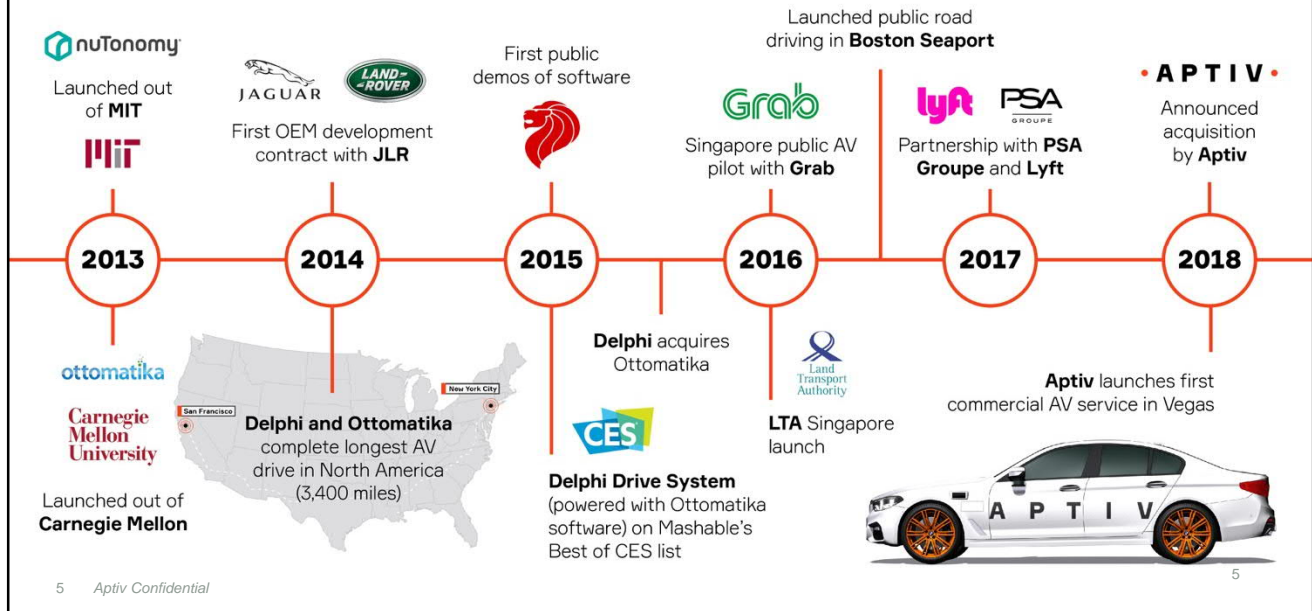
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### BENEFITS of mobility automation to cities



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# Our Heritage in Autonomous Driving

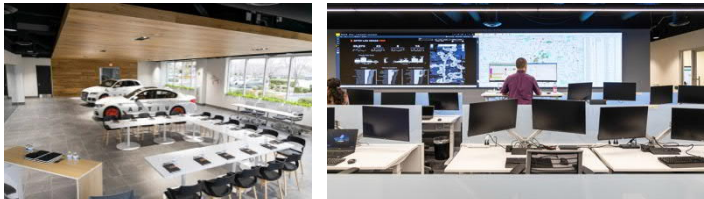


# Las Vegas Technical Center

300+ Employees

- OPERATIONS AND COMMAND CENTER**  
Hub for operational support, while also enhancing development and testing
- TECHNOLOGY SHOWCASE**  
Innovation and customer demonstration showcase
- DEPLOYING 30 APTIV AUTOMATED VEHICLES ON LYFT NETWORK**  
Multi-year agreement represents clear step toward commercialization

**250** vehicle operators  
**40** engineers  
**122k** Sq ft Facility (80k sq ft garage)

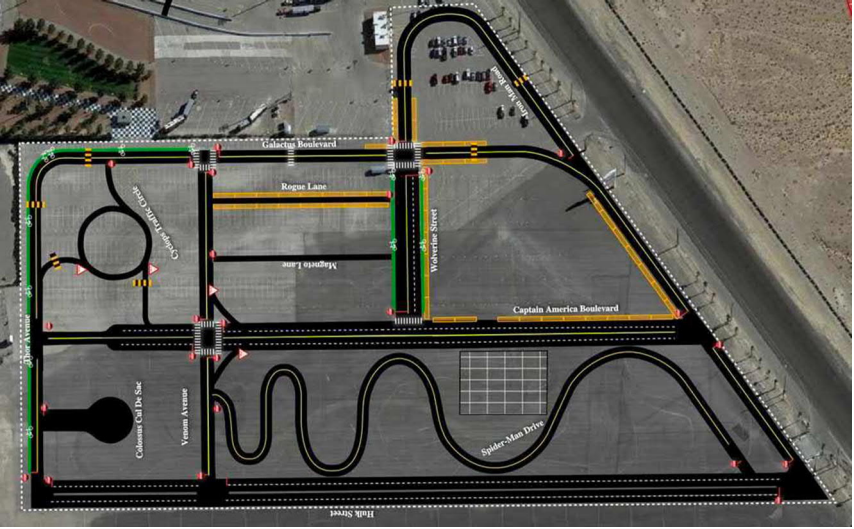




**50,000+** rides  
**100,000+** passengers  
**1 million** miles  
**4.95** out of 5 stars

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## Closed-Course Testing



Galactus Boulevard  
Rogue Lane  
Mystic Lane  
Wolverine Street  
Captain America Boulevard  
Spider-Man Drive  
Hulk Street  
Venom Avenue  
Colossal Col De Sue

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# Impact of Autonomous Vehicles on Urban Mobility

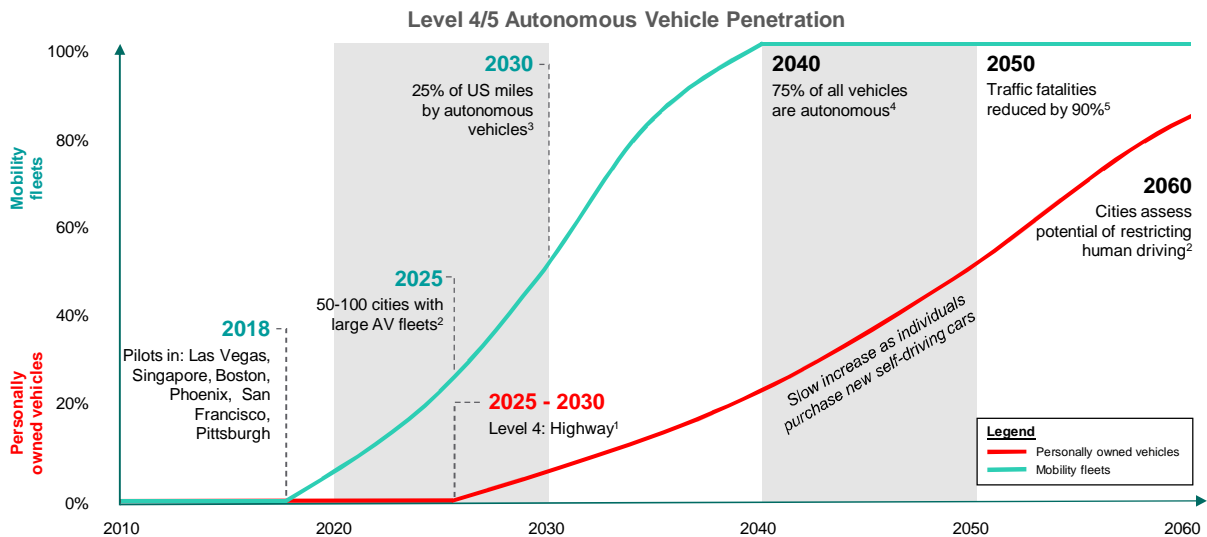
**~800,000 Passenger Vehicles → ~300,000 Shared Autonomous Vehicles**



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Year of study: 2014



# When Will Autonomous Vehicles Arrive?



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Sources: <sup>1</sup>Nissan, Toyota, Ford, BMW, etc.; <sup>2</sup>nuTonomy estimates; <sup>3</sup>BCG; <sup>4</sup>IEEE; <sup>5</sup>McKinsey

DISTRIBUTE ONLY WITH PERMISSION



## How do human drivers ensure safety?



# Key Challenges for AVs

- 1 We don't have **precise specifications** of how (human- or robotic-driven) vehicles should behave
- 2 Must systematically reason about **rules of the road, common practices,** and perhaps even **ethical decisions**
- 3 Decisions must be **explainable to developers and third parties**



• **A P T I V** •