

Innovation in Transportation: The Case for Self-Driving Cars

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Summary

- The Status Quo
 - Safety
 - The Environment
 - Quality of Life
- The Promise of Autonomous Vehicles
- Ecosystem Approach

The Status Quo - Safety

1.4 million

36,750

4.5 million

94 percent

18 percent

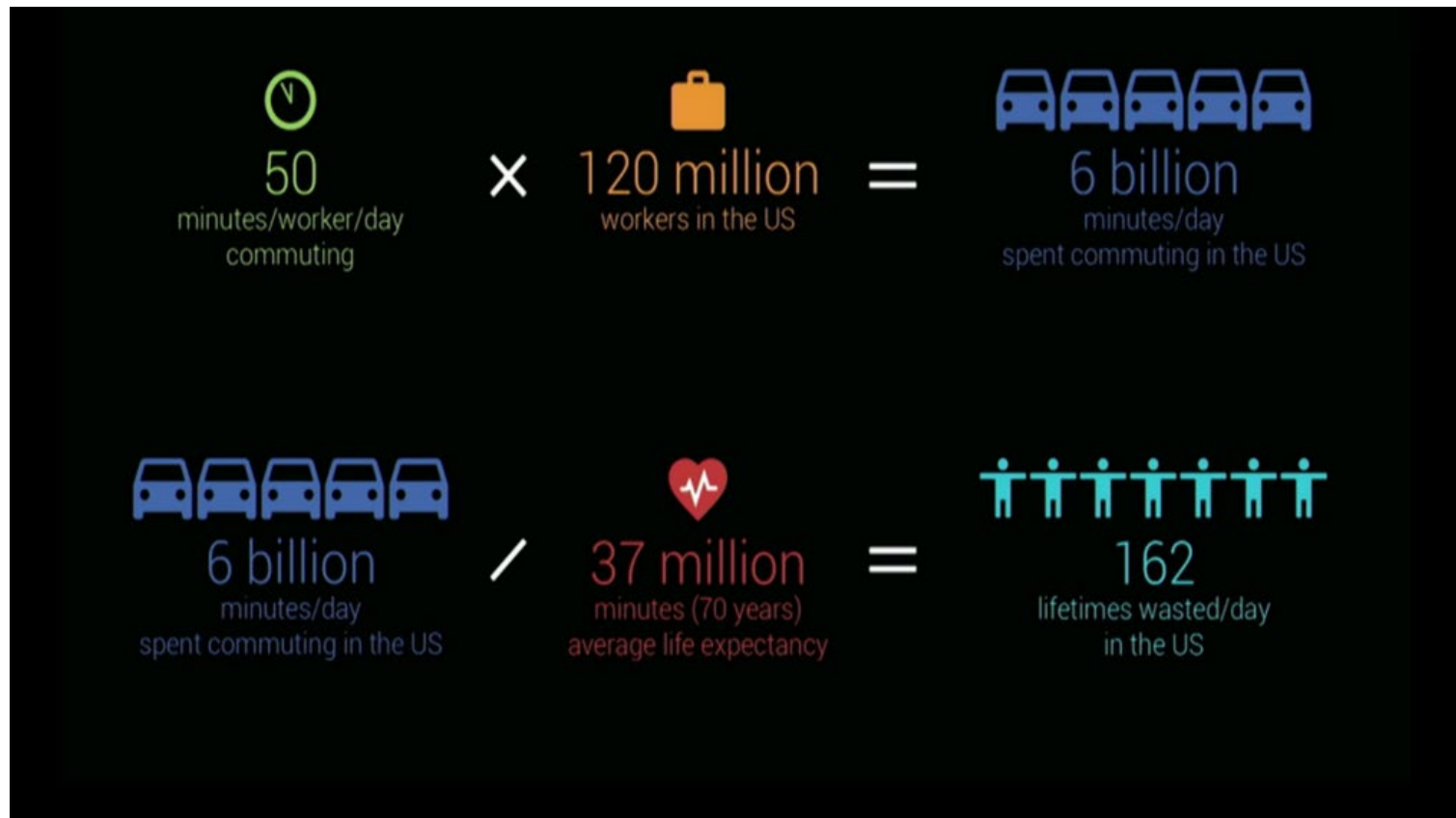
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The Status Quo - The Environment

- Gasoline for ICEs account for 45% of all US oil consumption
- Transportation sector account for at least 40% of California's GHG emissions—and this is trending upward



The Status Quo - Quality of Life



Citation: Chris Urmson, "How a driverless car sees the road." TED Talk. (June 25, 2016)
<https://www.youtube.com/watch?v=tiwVMrTLUWg>



The Status Quo is AWFUL!!!!



The Promise of Autonomous Vehicles

What are AVs?

- SAE has identified 6 levels of vehicle automation
 - Level 0: Fully manual vehicle
 - Level 1: Driver assistance
 - Level 2: Partial automation
 - Level 3: Conditional automation
 - Level 4: High automation
 - Level 5: Full automation



Automated
Vehicles

The Promise of Autonomous Vehicles

- A momentous opportunity to make our streets safer and improve quality of life for everyone
- Greatest potential: fleets of shared vehicles
 - EV/AV convergence
 - ADS's never tire, never get angry, are never intoxicated—and lessons can be shared across a fleet
 - Affordability and Accessibility
 - Roadway efficiency
 -

An Ecosystem Approach

- Self-driving cars are not a silver bullet
- Solution must be multimodal
 - Micromobility
 - Biking and walking
 - Mass transit
 - MaaS



Thank You!

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