

Question 1: Estimate how much of the road surface can be covered by autonomous vehicles if they drive closely together. Consider the following aspects:

- all vehicles brake at same rate or different vehicles break at different rates
- vehicles can communicate without latency or vehicles communicate with latency or vehicles cannot communicate at all
- all vehicles are robotic or 50% of all vehicles are driven by humans
- vehicles can stay in lane with high lateral accuracy

Question 2: Do research to understand the legal and economical barriers to the introduction of robocars (shared cars that come to you without a driver inside) in the US. Also consider different regions / markets / cultures such as:

- US, Germany, Japan, China, India, and Saudi Arabia.

Question 3: Consider US transportation, and let us know what fraction of energy could be saved if all cars were autonomous and shared? Consider energy reductions through effects like:

- wind drag in close convoys
- weight reduction for vehicles that never crash
- no traffic congestion
- reduced production of new cars (how many fewer?)

You might also want to consider energy increase by extra miles driven to deliver car where requested, without driver.

Question 4: How much money could the average US family save if all cars were autonomous and shared, as projected by Brad Templeton? Consider the following aspects:

- Impact on car sharing / car pooling models
- Time saved because of more efficient transportation
- Fewer vehicles per household because of "autonomous soccer kid drop-off" etc.