
Synchronous Car Sharing

Raúl Rojas

Freie Universität Berlin

Fachbereich Mathematik und Informatik

Dahlem Center for Intelligent Systems

The past of transportation

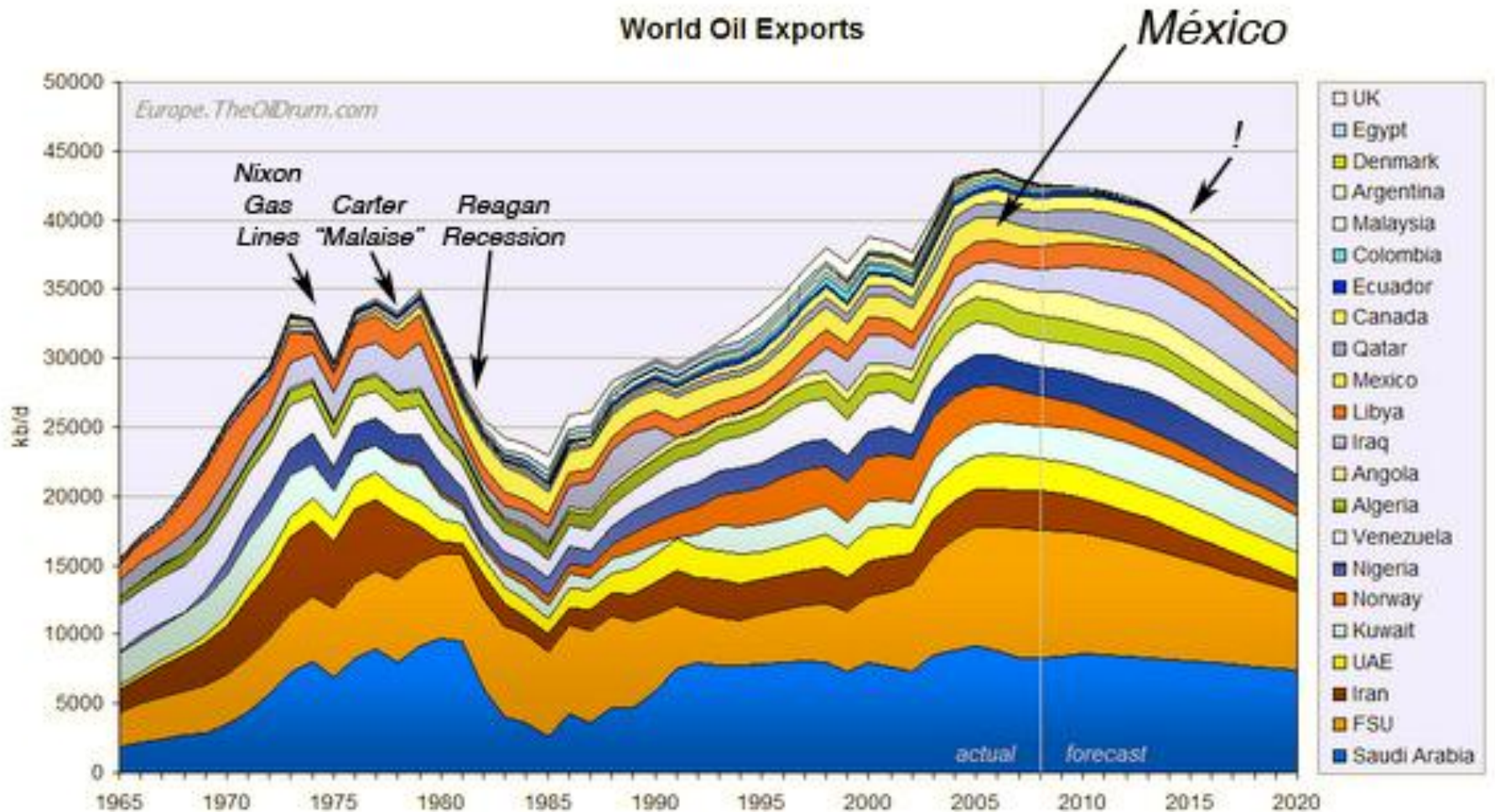


The Great Horse-Manure Crisis

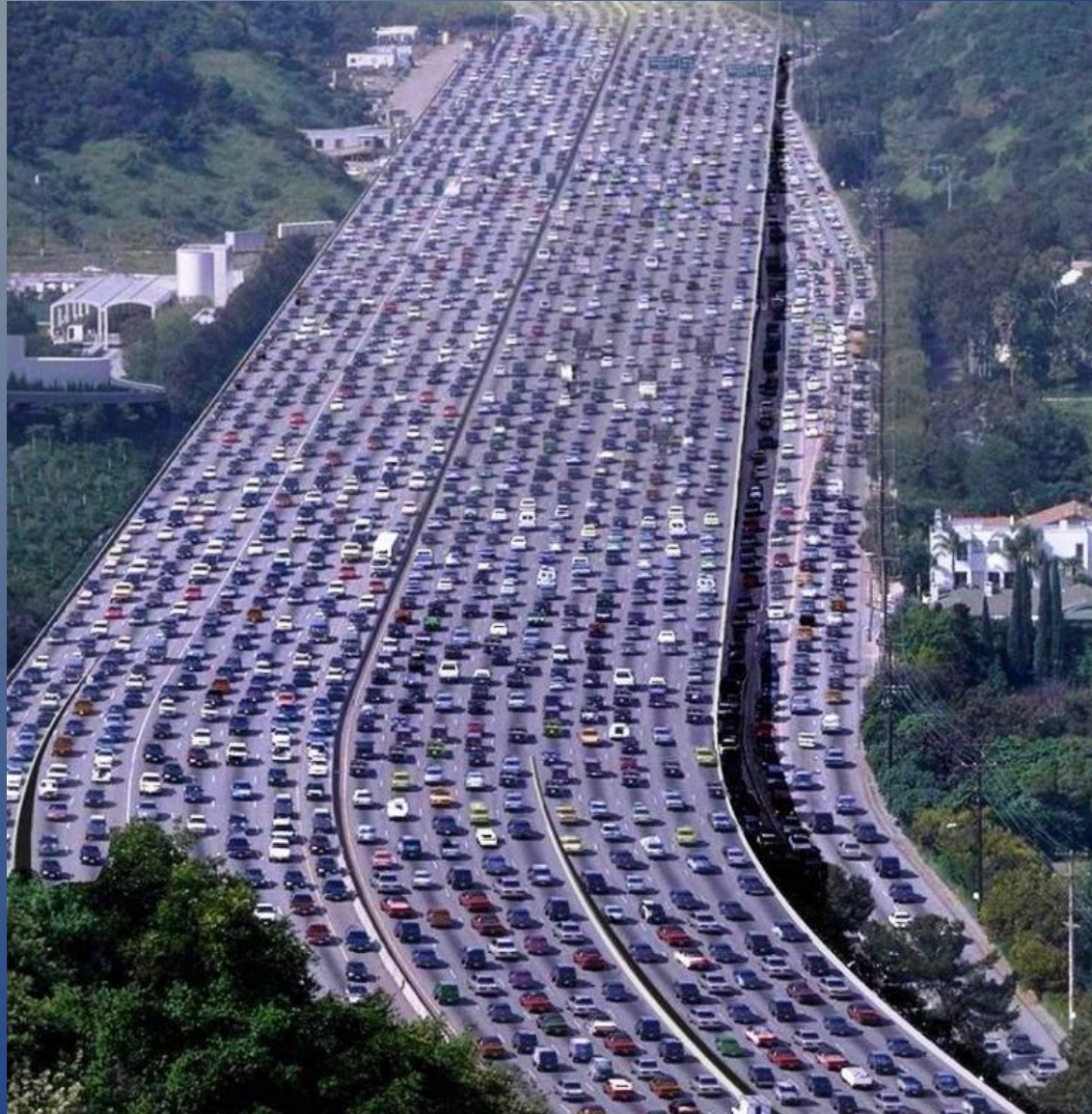
In New York in 1900, the population of 100,000 horses produced 2.5 million pounds of horse manure per day

Green Cars: The End of Cheap Oil

World Oil Exports



Buy your Nightmare



German Electromobility Plan

43 Million gas and diesel cars

One million electric cars in 2020

But only 6000 Electric cars in 2012

Reasons

- Electric cars are expensive
- The life expectancy of batteries is unknown
- Batteries lose capacity over time
- Charging an electric car is difficult
- The energetic efficiency is problematic
- It makes sense if alternative energy sources are used

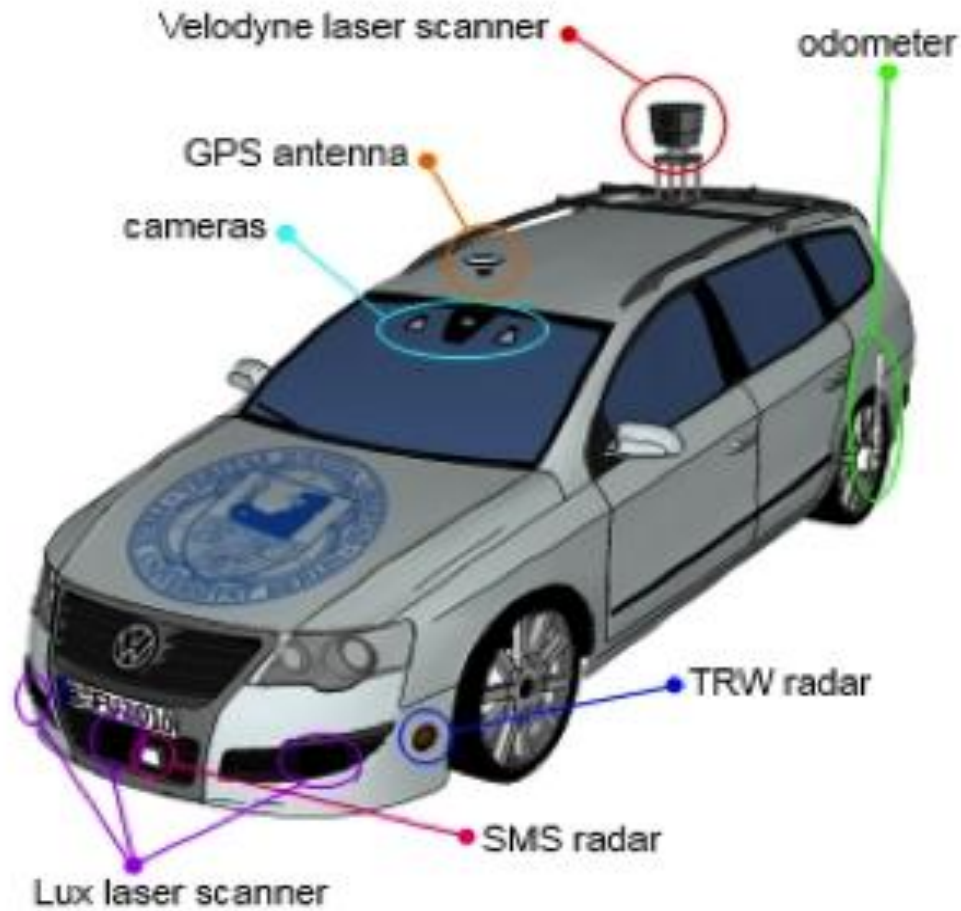
Synchronous Car Sharing



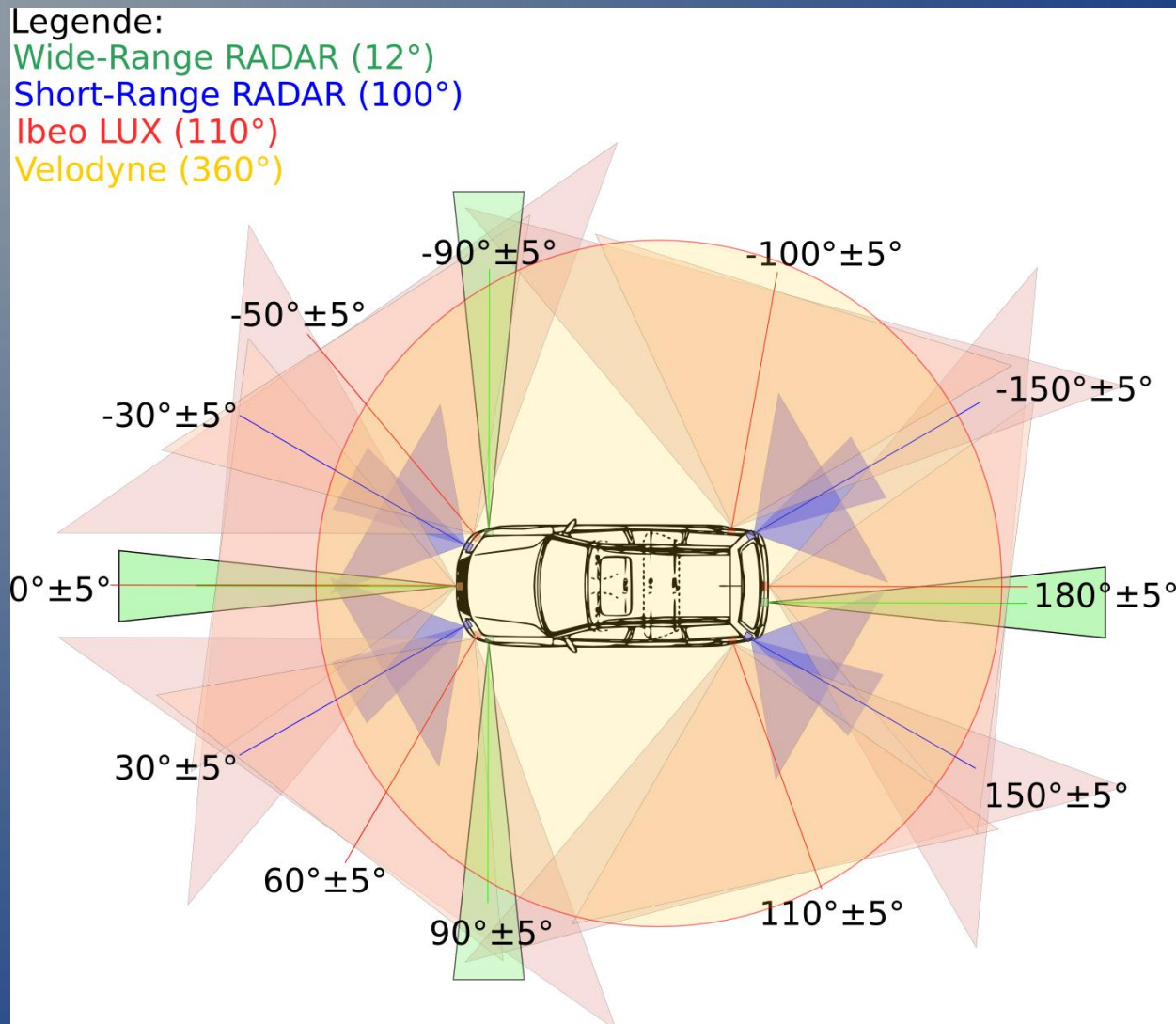
MadeInGermany



MIG Sensors



Sensors in MadeInGermany



e-INSTAIN: electric & intelligent



Electronics in the trunk

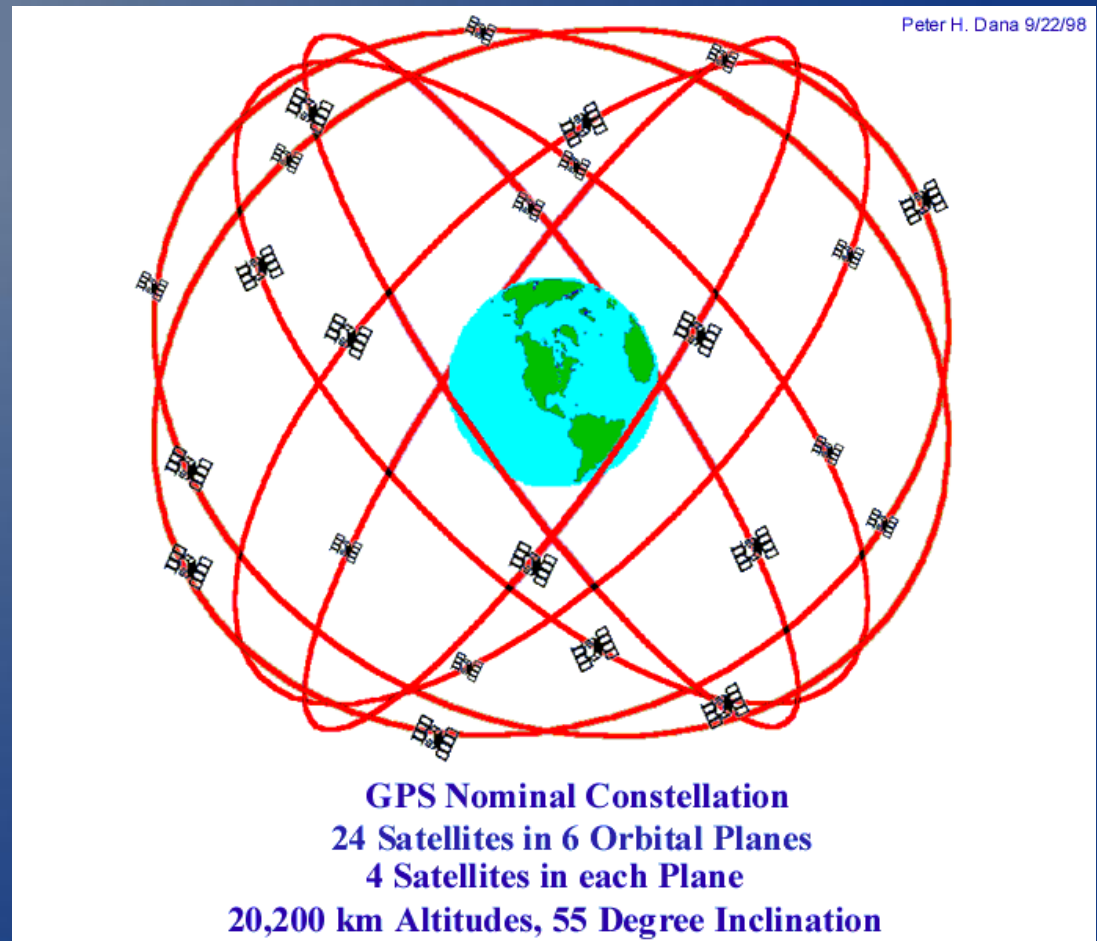
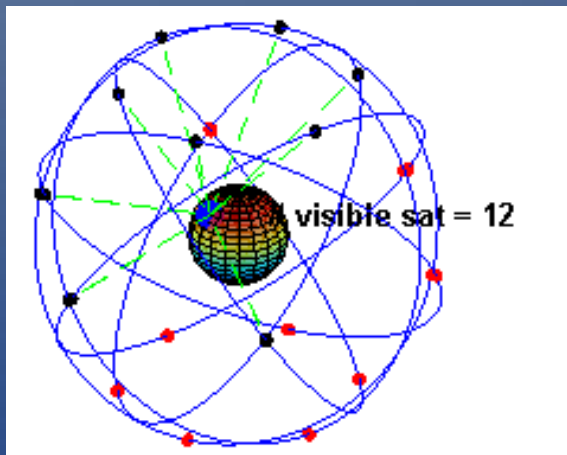


iPad Remote Control



GPS Positioning

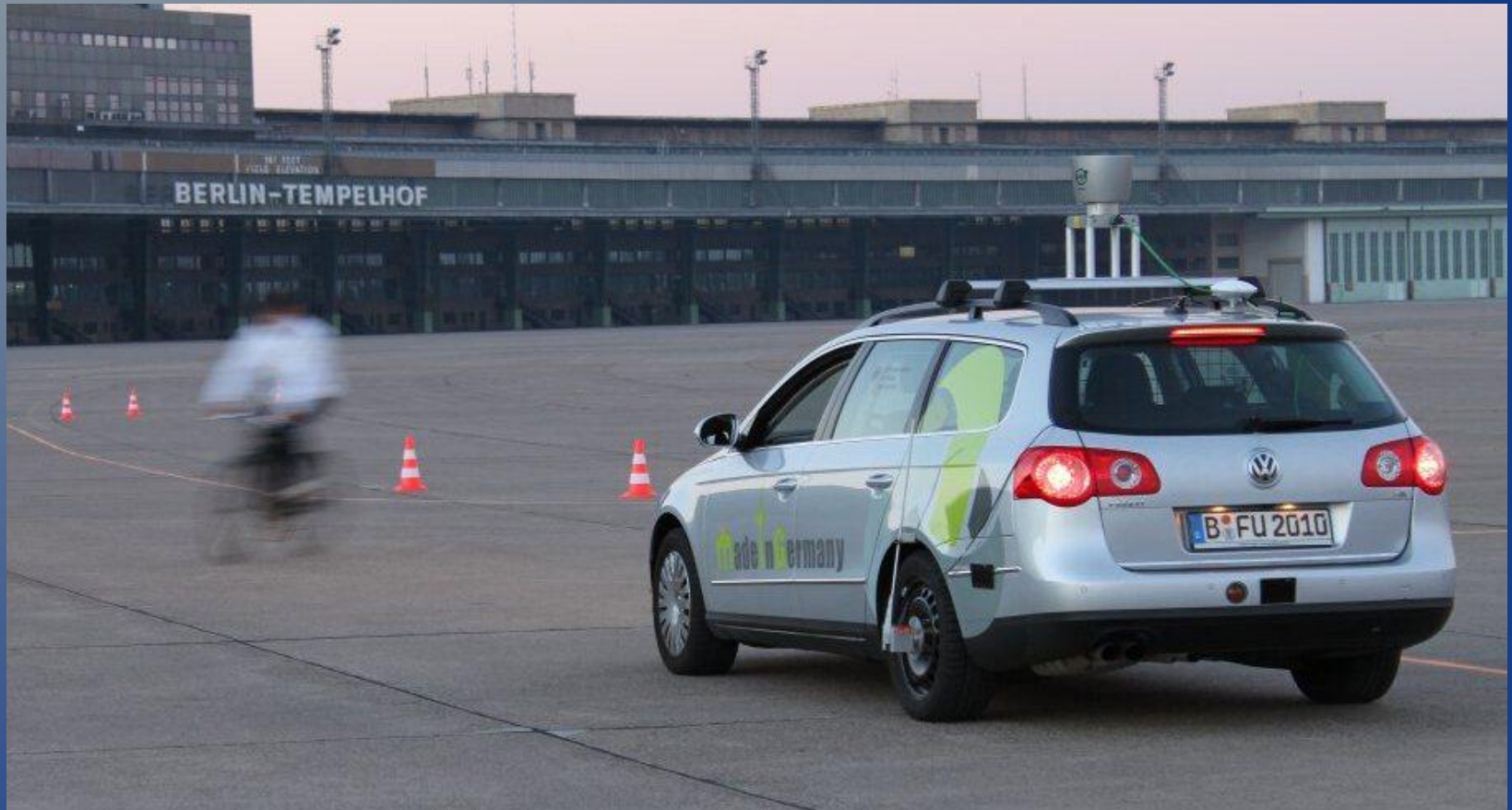
- **IMU:** Inertial Measurement Unit generates a true representation of vehicle motion in all three axes



Interior / Front Cameras



Traffic rules are followed



Pedestrians are Detected

