Autofacts®

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Look Mom, No Hands!

Forging into a brave new (driverless) world

With two states allowing testing of autonomous vehicles on the road, driverless cars are now a tangible, self-driving reality. If we are indeed on the cusp of a revolution, what should OEMs and suppliers do to secure their place in this pivotal and lucrative change in landscape?

90% **Estimated benefits of autonomous vehicles**

Traffic Accidents	Commute Time and Energy	Vehicle Fleet
10.8 million	1.9b gallons	245 million
↓	↓	↓
1.1 million	190m gallons*	2.4 million

Source: Google, NHTSA, 2012 TTI Urban Mobility Report, Dept of Transportation

*Congestion-based "wasted fuel"

An autonomous future

The auto industry has, as a business model, been relatively static since its creation. The economic theory of creative destruction posits that new economic development arises out of the destruction of a prior industry... sound familiar? With autonomous vehicles already amongst us, the auto industry would be well suited to begin preparing for the transition – and of course, the potential fallout – to such a radically different transportation model. What's driving the push toward autonomous vehicles? The answer is two-fold: first, there would be compelling societal gains with regards to safety and environmental benefits when human error is significantly reduced. Secondly, consumers would enjoy considerable savings with a reduction in commute time and a freeing up of capital currently devoted to car ownership. So what are the risks and rewards for an industry switch to autonomous vehicles?

Risks

Consumer expenditures on motor vehicles and parts has hovered around $400 billion annually according to the Bureau of Economic Analysis. While automakers may see an initial boost in sales as buyers transition to autonomous vehicles, contraction in the market would be felt in an entirely new context of greater efficiency and drastically lower likelihood of accident-related damage. Related sectors such as auto finance captives would experience the effects of reduced originations, and auto suppliers would feel the impact of reduced assembly demand, and having to adjust to the radical shift in vehicle technology and design.

Rewards

With risk comes rewards, and automakers have the opportunity to strategically re-position themselves in this new vehicular landscape. While technology companies in Silicon Valley are credited with the bulk of the progress when it comes to driverless technology, the auto industry has been devoting research and development toward this concept for years. With the technical expertise in auto and manufacturing engineering, OEMs have a golden opportunity to develop strategic partnerships to share technology and innovation. Detroit could be re-imagined into a tech capital that creates the hardware and the software that drives the world.

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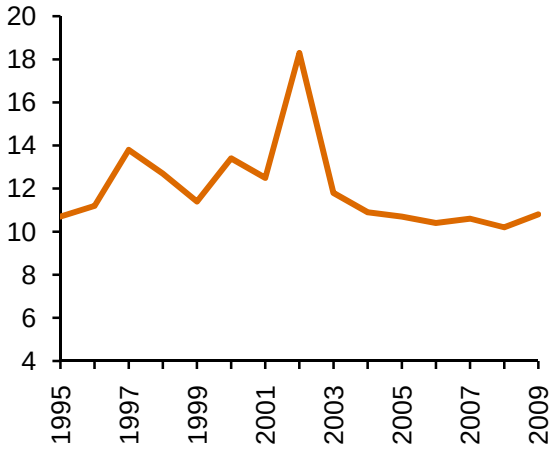
One step at a time

The reality remains that a vast and complicated range of moving pieces stand in the way of the formation of a true critical mass towards autonomous vehicles. Infrastructure investments, communication protocols, as well as a host of political and legislative issues await, including:

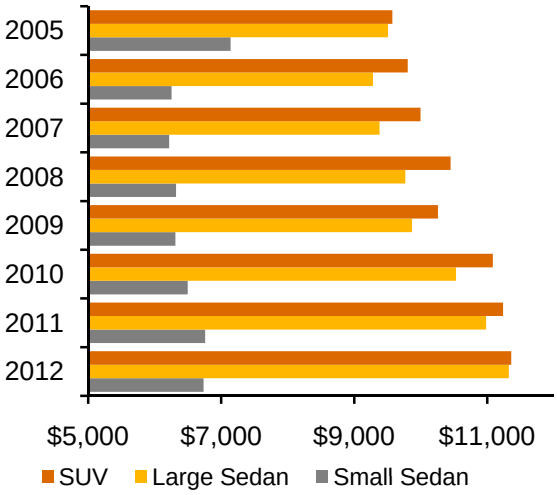
- Testing to understand how driverless cars will interact with non-autonomous cars.
- Determining where the onus of legal liability lies, whether it's with the automaker or involved parties, or perhaps a hybrid of both in tandem with a new insurance model.
- Defining how infrastructure would need to be revamped for driverless cars.

These variables only further exacerbate the broad spectrum of risks and rewards for automakers and suppliers, and while the data discussed herein has been US-centric, this emerging technology will certainly have global implications. There seems to be little doubt that the future of the auto world involves the shift towards autonomous vehicles, and OEMs and suppliers would be remiss if they don't strive to stay ahead of the curve. Now with the interest of both Silicon Valley experts and the next generation of tech-savvy drivers, the stalwarts of the auto sector have an extraordinary chance to revolutionize not only the way consumers drive, but shape and pave the path ahead for the industry as a whole.

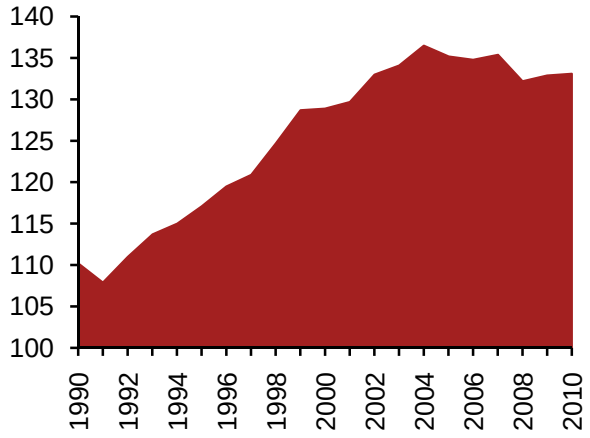
US: Total Motor Vehicle Accidents
1995 – 2009 (millions)



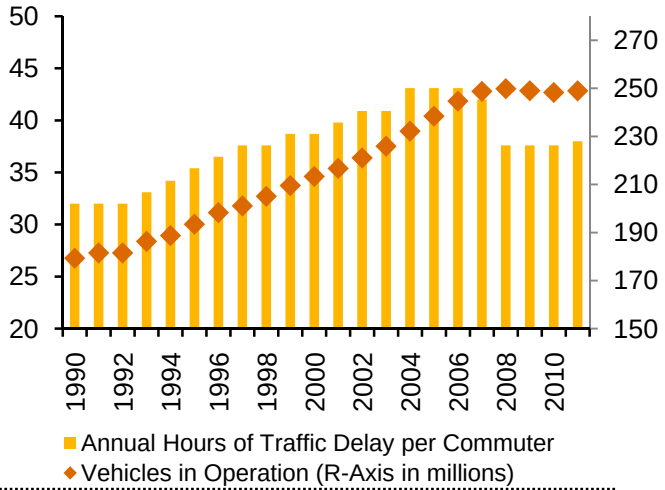
US: Average Cost of Car Ownership
2005 – 2012



US: Total Highway Gasoline Consumption
1990 – 2010 (billions of gallons)



US: Traffic Delays vs. Vehicles in Operation
1990 – 2011 (hours)



Sources: US Census Bureau, Federal Highway Administration, American Automobile Association, 2012 TTI Urban Mobility Report, Dept of Transportation, Wards Automotive Reports