

The Age of Automobility: Enjoy the Ride

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For over a century, car companies have taken for granted that vehicles will be driven by people, powered by combustion engines and owned primarily by individuals. These presumptions are now being challenged by a stunning convergence of new technology and innovative business models.

Over the next decade, *autonomous electric vehicles supplying transportation services* will usher-in the “new age of automobility”. This transformation promises more people greater freedom in how they move around and how they live their lives. The implications for the automobile industry are profound.

The new age of automobility includes both shared-use and personal-use transportation services. Shared-use entails fleets of vehicles that can be virtually hailed by customers. Driverless vehicles arrive in minutes and transport riders door-to-door. They then get assigned optimally to serve others.

Personal-use is akin to having your own vehicle and subscribing to a service that handles its parking, fueling and maintenance when you’re not riding in it. Think of your vehicle as a personal valet that not only takes you door-to-door when you want, but also can be dispatched by you to run errands or transport family and friends.

Autonomous vehicles dramatically reduce the cost of transportation services, which sell miles, trips and experiences, not cars and trucks. Such services focus vehicle design and engineering on delivering compelling riding experiences (vs. driving experiences), optimizing total cost per mile (vs. vehicle cost), and tailoring vehicles to the types of trips people prefer to make.

Future vehicles will be the “ultimate riding machines.” They will have fewer parts because of the inherent simplicity of electric drive and because they do not require driver interfaces. They can be tailored to different types of trips, especially one- and two-person trips, which account for 80% of U.S. auto travel today. This makes vehicles much lighter and even more amenable to electric drive.

The new differentiating know-how includes total customer experience design, transportation service operations, machine learning, sensor fusion, perception, big-data management, advanced analytics, sophisticated simulation, and cybersecurity. This is quite different from what auto companies are good at today.

The new age of automobility will free us from driving, looking for parking, and pumping gas. It will free us from shuttling our kids around and worrying about them as inexperienced drivers. It will free us from losing our independence when we reach an age where we are no longer able to drive safely. And, it will free future generations of the enormous and unsustainable waste of today's automobile transportation system (including the 1.3 million deaths per year on the world's roads).

The next ten years will be quite a ride. It'll be thrilling for those who reach out and grasp what's now possible, and terrifying for those who hesitate and cling to the past. It is a journey that will be led by those who get in front of the inevitable, deeply understand the potential of digital technology, know how to design compelling transportation experiences and are capable of flawlessly operating transportation services. The destination of the new age of automobility is unprecedented transportation freedom and independence for a lot more people and a sustainable transportation future. Enjoy the ride.

Current Age of Automobiles

- Human Driven
- Combustion Powered
- Oil-Based Energy
- Personal Ownership
- General Purpose Vehicles
- Designed for Drivers
- Optimized Vehicle Cost
- Attractive Cars & Trucks

New Age of Automobility

- Autonomous
- Electric
- Diverse Energy
- Transportation as a Service
- Tailored Vehicles
- Designed for Riders
- Optimized Cost Per Mile
- Compelling Transportation Experiences

