FUELING FOR THE FUTURE

Unveiling the Truly Mobile Connection.
One car could fly, although that’s never fully explained. And, they were both powered by some sort of supernatural forces. Then there was the Batmobile, which has stayed awesome through the years, going back to the 60’s. But, it wasn’t until the 1980s that we saw the first autonomous, fully-connected, AI-powered car: KITT from Knight Rider. It spoke, solved crimes, and gave David Hasselhoff a hard time. As a bonus, it was a sweet-looking Pontiac Trans Am.

Often when artists conceptualize the cars of the future, they imagine sleek, low-riding, high-speed capsules of carbon fiber that resist wind and conserve energy. But that vision conflicts with one stark reality: cars are taking on more utilitarian functions, and personal car ownership is waning. Is the Batmobile the best model for a shared mobile platform on wheels?

The truth is, the way we think about cars and car ownership is changing dramatically. Consider this: After housing, transportation represents most families’ second biggest expenditure, which includes gas, oil changes, tires and everything else. And despite that, cars sit idle 95% of the day. Soon, you might not even own one.

The Vision.

To understand why car ownership is on the decline, imagine it’s morning in 2027 in a New Jersey suburb. A mother, let’s call her Donna, is getting ready for work. She says, “Hey, Alexa, I need a car in 20 minutes.” There’s no Amazon Echo® in the room. A small chip in Donna’s wrist receives and relays the command.

Eighteen minutes later, as Donna finishes dressing, the room’s hip-hop music is interrupted by a digital car horn—a two-minute warning for the kids. When the car arrives, it is driverless and autonomous, and it features the logo of companies like Ford, Lyft, Amazon, or Apple. Donna’s company leases the service for a fraction of the cost of giving her a personal car.

As she and her kids pile inside, her favorite Starbucks® drink and a bagel are waiting for her. It’s a gift from Starbucks for being a loyal customer, and it was retrieved minutes before when Starbucks used contextual analysis to divert the car to the nearest drive-thru. The car senses the extra, smaller passengers inside, so it adjusts its route to drop off the children at school. The Spotify® channel also changes from the hip-hop tune playing in Donna’s room to a family-friendly channel.

Everyone buckles up. Accidents are rare, and even “dumb” cars have sensors that help cars avoid collisions. And, because speed limits and traffic patterns are coordinated, travel times can be predicted down to the minute.

Inside, the seating looks like a small conference room, with monitors and tablets for everyone. Because Donna’s company pays for the lease, she’s expected to be “productive” while she rides. But she puts that off for a few minutes to help her youngest with a homework problem.
First Data is in a unique position to connect carmakers with new partners because of the thousands of relationships it already has. Shown on their shared screens, one that “follows” them from their home to the breakfast table, to the car, and to the classroom without the need for separate connected devices. When school drop-off is done, Donna’s children wave goodbye, and they see Mom pulling away in a car that looks like an oversized Volkswagen Beetle. Its dome is energy efficient and allows for maximum roominess. Alone now, and headed to the train station, Donna begins her work, answering emails and confirming appointments from her connected device. An alert pops up, and Donna quickly connects to her phone and starts her SpeedPass® app into its SYNC 3® system. Drivers use voice commands to access ExxonMobil stations. They can then tell the vehicle to pay for their gas with whichever payment method they choose. And the number of payment options is growing. First Data’s ConnectPay gives drivers the ability to use ACH “Pay-Without-My-Bank” transactions without the normal wait-time for deposits to clear. Alain Barbet heads First Data’s TeleCheck business, which oversees the project. “Since businesses are charged much less to process ACH transactions than credit or debit cards, businesses can use this service to keep more of their profit margins,” he says. With a touch, the driver links to that location for directions, menus, and payment options.

First Data is in a unique position to connect carmakers with new partners because of the thousands of relationships it already has. “When merchants want to reach customers in new ways, vehicle manufacturers are already looking to First Data,” says First Data’s Head of Marketing for Global Commerce and Enterprise Sales. Klein points out the first railroad companies never realized the value of their land until after they’d led telegraph and telephone companies put up poles along the tracks for free. She says it was the telephone companies that thought they had it all. Eventually, two-way communication can be used to reroute autonomous cars to less-congested areas and optimize public transportation routes. Cities can also save energy costs by dimming streetlights when no vehicles are nearby, and limit pollution by routing cars to open street parking or to specific spaces in parking garages so that drivers don’t need to circle, looking for available spots.

Small changes can have a big impact. UPS became a pioneer in using algorithms to lay out the best routes between pickup and drop-offs. By eliminating most left turns, it saved $300 to $400 million annually in fuel, wages and vehicle running costs. Using these same methods, city workers can be alerted only when garbage cans are full. Trucks can then be routed more efficiently. Eventually, they will become autonomous too, hunting city streets for pick-up opportunities. In South Bend, Indiana, sewers are outfitted with dynamic water-pressure sensors that prevent flooding and can sense and relieve backups before problems arise. City officials estimate they’ve saved $100 million in sewer expansion costs while creating a safer, cleaner environment. First responders are also detecting crime earlier and responding more quickly. Dozens of U.S. cities now use microphones on rooftops to identify gunshots. They relay the exact location to city police, who can respond immediately. Soon, firefighters and police could carry sensors that monitor vital signs and send out alerts in medical emergencies.

As other technologies emerge, additional forms of efficiency will benefit both city workers and citizens. Ultimately, it could be the residents of the cities who have the final word. Like everything else in the Internet of Things, connectivity must bring them tangible benefits before they buy into the process. If it all works, they’ll download the apps and drive further demand. If not, city planners could have a difficult time trying to convince consumers to change.
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