

Clear signs that the automotive industry is ready for a serious revolution to tackle mobility problems

AUTHORS

HENRICH RICAR

HENRICH.RICAR@EDHEC.COM

Further reading recommended
by the author:

**DISRUPTIVE TRENDS THAT WILL
TRANSFORM THE AUTO INDUSTRY**
BY PAUL GAO, HANS-WERNER
KAAS, DETLEV MOHR, AND
DOMINIK WEE

MCKINSEY, JANUARY 2016

[Link to the online report](#)

Already back in 2011, Bill Ford claimed in his Ted Talk that automotive will be undergoing a major mindset shift. One of the biggest problems in the future of automotive is going to be a well-functioning concept on how to move people from A to B rather than how to sell more cars. The great-grandson of Henry Ford said the company's future will depend upon cooperation with cities and start-ups to design transportation solutions for metropolitan areas. He characterized this as "optimizing roads for the number of people on them, not the number of vehicles on them". An interesting but at the same time striking quote by someone whose business' revenues rely on the highest possible number of cars sold?! So, what is it all about? Why do we have to care about well-established, interconnected and "smart" mobility solution in the first place? Do we see any strategic moves from major automotive players?

According to Bill Ford, at a certain point "we will face problems to deliver food and healthcare to people" living in mega-cities. Knowing this, we realize that we face some serious issues, but how comes? The UN Population Fund claims that the current population counts to around 7.5bn and will grow to nearly 10bn by 2050 if fertility remains at a medium level. It could grow up to about 1bn if fertility declines by less than assumed or 'only' up to 9bn if fertility falls by more than assumed. In any case, this is a lot of people. We further observe a tremendous urbanization trend, so UN. Since 2008, more people have been living in cities than in rural areas for the first time ever. Not only is the ratio of people living in cities to people living in rural areas going to increase further (6.3bn people living in cities by 2050), the trends predict that the cities are going to become larger, more crowded and unfortunately traffic is going to get even worse - Yes it still can get worse! Megacities, with at least 10mio inhabitants totalled 23 in 2011 and are going to increase to 37 by 2025, according to the UN. During Bill Ford's Ted Talk, he used a cruel scenario for every car driver, a nearly 100km (62 miles) long traffic jam in China (August 2010) that took 12 days to clear. Obviously, considering the population trends explained above, we are soon going to face worse mobility problems due to which basic human needs such as food delivery to retailers, getting on time to the hospital after an accident or during the last days of pregnancy, could certainly be threatened.

So why don't we build more roads then?! Bill Ford holds the view, that the solution is not as clear cut as building more roads. If we believe his views "we need an integrated system that uses real time data to optimize personal mobility on a massive scale without hassle or compromise for travellers [to create a sustainable future of personal mobility]". It must be clear to every car maker - there won't be enough space for all the cars and the sales of cars are going to grow at a much slower pace than it currently does. McKinsey, in its report 'Automotive Revolution - perspective towards 2030', claims that "the annual growth rate is expected to drop from the 3.6 percent of the last five years to ~2 percent annually by 2030". The automotive industry needs to dramatically reshape and find other revenue streams to grow sustainably. Ford addresses this with its strategic plan called 'Blueprint for Mobility'. It is trying to shape the business model stitching all parts - Autonomous Driving, Connected Cars, Car Sharing, Parking and Data Collection - together. An integral part of Ford's strategy is the partnership model. Ford makes it an essential requirement to partner with cities,

municipalities and start-ups to develop the future of transportation as a service. One of the most exciting details from my perspective could be the “vehicle-to-cloud” approach. Here, cars collect real time data, upload them into the cloud and share them with each other in real-time. This could help prevent other cars from driving into traffic jams or being rerouted to the same route as everyone else. Beside this, it would contribute to getting rid of unnecessary traffic by suggesting car sharing or other transportation services. It could also find parking spots before you even arrive, eliminating the hated 30min-detective-alike searches for a parking spot. Furthermore, this technology would make sure that ‘high-priority’ cars such as ambulances or firefighters will make it to their destination quicker. This may sound like science-fiction. However, Ford already has been investing in projects using cars to help solve problems. One of them, is transmitting health data of pregnant mothers to hospitals in urban areas in India, which already is in place so Bill Ford.

However, where are the other car makers? Is there maybe more than just Ford’s initiative? Frankly, just about a month ago (Friday, April 28th) Elon Musk, Founder and CEO of Tesla unrevealed a foretaste of Tesla’s plan to tackle this issue in a different way. In Elon Musk’s utopia, we will travel in a high-tech, multi-layer underground tunnel-system, which he presented via a short video during the TED Conference that Friday. He, similarly to Bill Ford, also claimed that currently “one of the most soul-destroying things is traffic”. Tesla’s solution is, however, very different and this approach seems to be the one Bill Ford claimed as not right; “to build more roads”. However, a deeper look into the idea from Elon Musk reveals that he doesn’t want any human interaction in the tunnels. He wants only the electric elevators called ‘car skate’ to move in those tunnels. Clearly a computer based solution or as Bill Ford would say: “an integrated system that uses real time data to optimize personal mobility on a massive scale without hassle or compromises for travellers” would suit the picture better. So, if this is the suggested solution by Tesla, why doesn’t Elon Musk focus most of his energy on solving this issue instead of, as he readily claimed during the conference, only about 2-3% of his time? As stated in Tesla’s 2016 annual report, they “design, develop, manufacture and sell high-performance fully electric vehicles, and energy storage systems, as well as install, operate and maintain solar and energy storage products”. Clearly, Tesla does not follow a typical automotive player strategy. Additionally, it doesn’t say anything about mobility problems. There is no doubt that we have to build our future on solutions around sustainable energy for example by developing electric-cars but this doesn’t help to solve the mobility problems within urban areas at all. Has Elon Musk missed the mega trends or is he not focusing on the necessary long-term changes in the automotive industry? The answer is somehow blurred. Tesla differs from the usual automotive manufacturer in several ways. Among others, Tesla very clearly leverages its strengths in technology. Tesla’s partnerships with telecom operators, content providers and ecommerce platforms make the company unique in the market. For instance, the company has collaborated with AT&T in the US and Telefonica and TeliaSonera in Europe to provide Machine-to-Machine connectivity for its Model S vehicle. Therefore, the answer in this case is that Elon Musk either unwillingly or without openly communicating stepped into the ‘connected car’ approach by connecting the drivers to the cars 24/7 by 4G. An approach that could be further developed to integrate the cars into an overall mobility solution system. This integration of information technology sets Tesla apart as a more technologically advanced automobile company very well aiming to build the car of the future.

Many other examples of either global, well-established car manufacturers or new entrants show approaches to change the core business model of automotive. Examples such as Daimler with its Car2Go solution and partnership with Europcar proved the car sharing business model to be sustainable and successful additional business for a car manufacturer. Similarly, BMW approached the car sharing market by a joint-venture with Sixt, called

DriveNow, offering electric BMW cars for long, one way trips in Germany and US. Uber, RelayRides, Wheelz, Zipcar, GM's One Star and many more, they all have one in common: They disrupt the automotive sector in many ways.

While implementing all those mobility approaches, we also observe a paradigm shift, mostly within the generation Y and the millennials. Especially those generations have lost interest in cars as status symbols or valuable assets. Cars are rather seen as articles for everyday use, whereby the younger generations would prefer buying an older car and spend the rest of their money on electronics, leisure activities or traveling. Smartphone first, car second - a clear choice for young people as it provides them with all the potential features. Navigation, public transport apps via which you can buy tickets online, as well as car-sharing solutions that are easy to use let us conclude: Smartphones are going to become the central hub of mobility solutions and the critical point of contact with the customer. As for the strategy of Ford, everything is going to be smart: Smart roads, smart cars, smart parking, smart transportation systems that communicate with each other... In a nutshell, we need one well-integrated solution that can share real-time data rather than many decentralized systems. Clearly, Tesla's tunnels and other automakers' approaches would then have to be integrated together into one solution. But how is this going to work out is another problem, as it is not easy to answer essential questions such as: Who is supposed to be responsible for the integrated solution? Will governmental regulation and involvement be required or can various competitors and industries partner to create an efficient solution? Nevertheless, in the end, sharing real-time data without letting the customers know, will finally has to provide potential passengers with the best solution for getting from destination A to destination B most effectively. The solution won't just be a simple rerouting or finding the best parking spot once on the way. It is going to start in your office, when you shut-down your laptop while getting suggested - of course on your smartphone - whether you are going to take an Uber, share a ride with a stranger, use Tesla's tunnels with your own car, travel in hyperloop, or maybe fly home in a flying car owned by someone, who is currently on holiday.

DISCLAIMER

About the article

This Article has been compiled by the author mentioned above and published by him via the EDHEC Student Finance Club (“Club” or “ESFC”) platform. The club confirms that the author is an active member at the time this article is published, but emphasizes the fact that opinions and views given by the author in this article are his/her own views. ESFC takes no responsibility for the completeness or correctness of information provided. No investment advice is given with the text above and the reader should not take any financial position based on the information published in this article. The Club recommends extensive research by the reader before investing in any financial asset.

General

The article may be based on the information extracted from various sources including but not limited to various companies’ and statistical agencies’ websites, online portals, third-party research, annual reports etc.

No representation or warranty of any kind is or may be made with respect to the accuracy or completeness of, and no representation or warranty should be inferred from, any projections or futuristic statement contained herein or any underlying assumptions.

This article may include descriptions, statements, estimates and projections/futuristic statements with respect to current and anticipated performance of the underlying.

Such statements, estimates and projections reflect various assumptions and best estimates made by the participants concerning anticipated results, which assumptions and estimates may or may not prove to be accurate or correct. There are no assurances whatsoever that any statements, estimates or projections contained in this article, including without limitation any financial or business projections, accurately present in all material respects the underlying’s financial and/or business position as of the respective dates specified and the results of its operations for any respective periods indicated.

No copyright or trademark infringement is intended in any form.

© Copyright 2017. EDHEC Student Finance Club