

The Future Of Transportation

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With the fast-rising technological advances and urbanization, the need for ease of transport has also transpired, which has caused greater dependence on natural energy resources. However, the energy resources majorly comprise non-renewable ones such as fossil fuels, but since humans have already surpassed the sustaining capacity of the earth, it has become more difficult to generate power and energy through sustainable or environment-friendly resources (James Keirstead, 2013).

This has become a dilemma for the world because the existence of humans comes at stake if all the energy resources are wiped out. Even after the invention of high-speed rail and commercial flights, there has been no significant progress in the area of transportation, our reliance is still majorly on cars and trucks for the daily commute and airplanes, trains for long journeys. Ships are majorly used for the transportation of heavy materials and the fossil fuel mostly used is oil, however, this energy source is rapidly depleting causing the people to push towards alternatives.

Vehicles Currently In Development

Despite this, scientists are continually trying to design and invent new machinery that would ease the transportation facility for humans, for now, the capacity of transportation has only reached fueled aircraft, trains, ships or the most common, four wheelers that we know as cars. The rapidly decreasing energy sources are expected to push people towards making the sources of transportation, and now the future of transportation is being discussed widely (Folsom, 2011). It is expected that the world will gradually shift towards automated transport systems that will function very quickly and efficiently and will also be more secure and reliable than the options we have today. When the vehicles are automated, it is imminent that the high systems will be automated. These automated systems would be more efficient in terms of delay and other management problems that occur when the trains are driven manually (Folsom, 2011). The aim is, therefore, to improve the infrastructure so that it can synchronize with future vehicles.

Maglev is one of the alternatives being studied as of today. Maglev is short for [magnetic levitation](#), which functions by making the passenger train levitate above the rail with the help of a magnetic field. This train was created because the idea was to reduce the friction that usually causes problems in normal railway lines. Reduced friction then helps in increasing the speed of the vehicle, too, and it has been said that the vehicle is capable of reaching speeds of six hundred kilometres per hour (Krieger, 2012). The Maglev train began functioning in Shanghai in 2003 and is reported to be quite efficient and a step ahead in technology than it was before.

Another technology in development is the Hybrid cars, although some are already functioning full-fledged on the roads. There are two kinds of motors being used in these cars. One is the normal

engine, which is widely known, and the other is the electric motor. Both engines are present in the car, and the use of the electric motor comes when the driver wants to save fuel. It is also expected that diesel will play a big role in future vehicles because it can be extracted from many organic fuels. If this happens, then dependence on oil will be significantly lowered. The interest in biofuels is also increasing because they are relatively more environmentally friendly than coal or crude oil (James Keirstead, 2013). Biogas and cooking oil are only a few of the biofuels that are being used. Public transit in Cincinnati, for example, uses cooking oil as its fuel, which makes the transit areas smell like French fries being cooked. In addition to this, fuel cells have also become a trend now which is on the rise because they exert, again, relatively low damage to the environment and environment-friendly substances are now a need of the times since the ozone layer has already been damaged for years due to carbon emissions and greenhouse gases (Krieger, 2012). Even though the transition of the vehicles is slow, and it is difficult to imagine the acceptance level each vehicle would get, it still is progress towards a better and more comfortable future.

Future Transportation Technologies

As mentioned before, the focus of the world is now on more autonomous transportation that would create ease for passengers. Hence, driverless cars or autonomous cars are getting much more attention than ever before, but the focus behind such cars is to increase the greenery of the cities, which were previously brought to their knees because of pollution and overcrowding.

Drones are familiar to people nowadays because of their use in the media. They are quite low-end devices (Folsom, 2011). However, their use is being investigated on a broader spectrum, such as in delivering parcels, which would not only save fuel but would also be less expensive than the delivery services of today. The involvement of logistic companies would bring the machine closer to normalcy in terms of everyday use and would be convenient for them as many areas with tough terrain are unable to receive deliveries because of the problems trucks and vans have to endure.

Moreover, a step up from conventional transport is the 'Hyperloop', which is one of the most intriguing and exciting innovations which have been envisioned (Ross, 2016). The concept is to design a train on airless tubes which would presumably transport an individual from Los Angeles to San Francisco in just thirty minutes, which is, of course, a luxury to be waited upon since several people have to commute for long hours in trains if they are unable to afford a plane ticket. This concept, which was merely a rough draft before, is moving towards a solidified vision as time passes. The concept is liked by people, too, because it is said to be cheaper and quieter than the average train, which is seen on the subway.

Furthermore, another vision for the future is autonomous vehicles, which haven't been created before. The world does have its fair share of automatic cars, however, in huge brand names such as Tesla, but they too aren't completely autonomous, that is, they depend on the human driver when the traffic and the speed have to fluctuate (Folsom, 2011). Therefore, the vision of having completely

autonomous cars is so that the robotic driver takes full control of the vehicle, which is said to be safer for humans since a robot can think smarter and faster than a human and can also scan all the directions at one time. The company Ford has announced the project for this called the traffic jam assist, which is yet to be worked on.

Another future vehicle envisioned by enthusiasts is the smart car, which has the underlying agenda of resolving transportation problems in cities that are now being overcrowded with time due to urbanization. Smart cars have been envisioned to run on electricity and have been conceptualized as being smaller and smarter (Mehdi Mrad, 2014). Companies such as Nissan and BMW have already introduced so-called smart cars, and the process is underway.

Another very interesting development in the transportation area is the concept of having 'moving pods' that have, for now, only been seen in science fiction movies and movies based on the future. The concept is very attractive because of the same reason that attracted smart cars, which is urbanization. Hence, the pods, if ever become, are envisioned to be called specifically 'urban transport pods' since they would make life easier for individuals in overcrowded cities. These pods could also become a great replacement for the old-school yellow taxis that are seen today, and although they would reduce employment and would work on their own, such as in the case of autonomous cars, they would, however, be very luxurious and user friendly since the idea behind it is to have a touchpad inside the pod with which the user could easily interact with as in the case of smartphones (Mehdi Mrad, 2014). The interactive screens would offer entertainment and many other services such as the internet, checking on current affairs, etc.

The uber-luxury provided to consumers would make life easier for the working classes, too. Presumably, as of right now, only the elite classes have the affordability to manage such luxurious travelling experiences (Mehdi Mrad, 2014). The user-friendly transportation would also make navigation easier for newcomers in any city, keeping in mind the growth rate of population in metropolitans due to in-migration.

The details are still being worked upon; however, it is a certainty nonetheless that the future transportation envisioned today will have ease of access and will be highly autonomous. Because of their automation, however, it will be important to ensure that system checks and privacy checks are undertaken with proficiency since the rise in cybercrime and theft could possibly be then on the rise unbeknownst to the consumer who would be under deception.

Conclusion

Even though pessimists would try to find problems in the devised concepts of future transportation basing their arguments on 'unemployment', 'inflation' and other reasons, there is no denying the fact that such kind of transport would be immensely beneficial for the human population in general as would bring ease of transport to everyone without discrimination. However, a question to consider

here is whether or not the human population is near its goal. The ideas for transportation for the future are being tried out, but they are still a while away from being implemented with full force and brought into the market for the ease of the consumers. Despite all of the possible 'evil' outcomes that could come out from the future, there is no denying the fact that the journey to the future of transportation would be an interesting one.

References

Folsom, T. C. (2011). Social ramifications of autonomous urban land vehicles. *Technology and Society (ISTAS), 2011 IEEE International Symposium on* (pp. 23-25). Chicago, IL, USA: IEEE.

James Keirstead, N. S. (2013). *Urban Energy Systems: An Integrated Approach*. Routledge.

Krieger, R. S. (2012). Diesel Engines: One Option to Power Future Personal Transportation Vehicles. *1997 SAE Future Transportation Technology Conference and Exposition* (pp. 1-25). SAE Technical Paper.

Mehdi Mrad, O. C. (2014). Synchronous Routing for Personal Rapid Transit Pods. *Journal of Applied Mathematics, vol. 2014, Article ID 623849*, 1-8.

Ross, P. E. (2016). Hyperloop: No pressure. *IEEE Spectrum*, 51-54.