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Real Estate Predictions 2022

Driving into the future of Real Estate

The impact of autonomous vehicles on Real Estate and infrastructure



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The rise of Autonomous Vehicles (AVs) and ridesharing technology is likely to revolutionize urban transportation. Also, the impact on Real Estate is likely to be profound and far-reaching. What is going to happen during the coming revolution and what could be the effects on urban spaces and Real Estate?

The coming urban transportation revolution *Autonomous vehicles*

In addition to electrification, the majority of large vehicle manufacturers are also heavily investing in autonomous driving technology¹. However, even though there has been talk of driverless cars for several years, the actual implementation to date on our roads has been limited. This will likely change in the near future, with manufacturers rapidly progressing their vehicles towards full self-driving capability. In fact, the highest levels of progressive automation are now being tested in locations across the world².



When automated vehicle technology is proven, and governments sanction its roll-out, the level of change and impact on society will be exponential and profound.

Predictions vary, but autonomous vehicles could account for as much as 40% of personal mileage in Europe alone by 2030³.

If full automation is indeed coming in the following decade, obstacles around safety and legislation can be successfully navigated⁴.

¹ Some of the largest technology firms based largely in the Silicon Valley are spending heavily on automation and ridesharing with around \$23 billion in total funding in the last 20 years (Goldman Sachs). It is estimated to grow well beyond \$96 billion by 2025 and to \$290 billion by 2035. This investment would mean that global market capitalization would total an estimated 17%, and approximately 27% of vehicle miles travelled will be done in AV by 2035 (Cushman & Wakefield). 2 We can already see nations from almost every continent investing in this technology and preparing their roads for the introduction of AV within the next decade (the Verge 2020).

³ PWC, Five trends transforming the Automotive, 2017.

⁴ Troy Baltic, A. C., Russell Hensley, And Nathan Pfaff. How sharing the road is likely to transform American mobility, 2019.

Ridesharing is omnipresent

Over the past few years, ridesharing has become omnipresent across global urban centers. Companies like Uber and Lyft are now household names, and considered as genuine alternatives to other forms of transport, including personal vehicle ownership and public transport. Because of their long-term strategies, they are considered highly valuable by shareholders. These companies are continuously collecting and analyzing data on how to optimize vehicle usage and customer service. Ultimately, their goal is to leverage the full potential of Autonomous Vehicles (AVs) by eliminating the need for their largest overhead—the driver⁵.

More space, lower costs

The benefits of full vehicle automation, in conjunction with ridesharing, will mark the biggest change in urban transportation since the invention of the internal combustion engine. Some of these changes will include the elimination of congestion of our roads when substantial automation is achieved. Vehicle size and required driving space will reduce as they will be able to "communicate" and therefore travel at closer distances. This will reduce road sizes in urban areas, providing new space that is no longer required for vehicles⁶.⁷

The shift to full automation will probably almost immediately impact consumer costs for AV travel. This in turn will increase AV utilization, and decrease the usage of public and private transport services⁸. A continued knock-on effect would take place within other service industries such as delivery, logistics and distribution sectors. The changes in cost will increase accessibility and convenience, which will prove an attractive alternative to public transport and personal vehicles. To access the service, users will only require a pickup/drop-off location before moving on to collect the next user. With fewer vehicles on the road, physical resource waste, including CO2 emissions9, will drop dramatically. As electric vehicles only offer a marginal improvement in whole life carbon emission over internal combustion engines (ICE), there would still be concerning levels of emissions and raw material damage from the metal production and energy required to make and run vehicles for personal use¹⁰.

Increased productivity from AV will likely play a determining factor in the rapid expansion of driverless vehicles in major cities. As we begin spending our future commute with the aid of AV and ridesharing, we could be significantly more productive and have more time to focus on other tasks. Across an entire population, this will have a direct effect on a country's economy. For example, in the US, with an average yearly time spent commuting estimated at a total of 9 days, leading to a vast waste of time across an entire working population¹¹.

Implications for Real Estate

The desire to live in central locations could decrease as commuting times drop and proximity loses value. As the urban sprawl continues, the opportunity to change the excess land—available because of AV—will become increasingly important. We will need to make decisions on how we design parks and green spaces, and manage housing, services, production, and the logistics of a wide combination of our everyday needs.

Consequence of AV on property & land use

To understand the impact of AV we must look at the coming changes in the development and redevelopment of buildings and their surrounding spaces. As the need for parking spaces diminishes, what will we choose to do with those spaces? It is estimated that London alone would gain an area equivalent to 5 Hyde Parks (approx. 7.1km2) from developing all its car-parking space, although some of this space would be needed for pick-up and drop-off points¹².

All this new space as well as the simplification of roads would allow for new developments, expansion of established buildings, and the creation of more green and public-use spaces. Lastly, this shift to AV would enable governments to provide more affordable homes, drive down the inequalities between owners and renters, and provide solutions to issues like the current housing crisis in many countries¹³.

Real Estate future value

In other words, the introduction of AV will impact the value of property and the importance of where individuals choose to live. As the connection time to key amenities and the workplace drops, being close to central locations loses significance. Properties located within proximity to public transport will inevitably lose their competitive advantage and market value.

⁵ Uber's self-driving cars are a key to its path to profitability, 2020

⁶ Shetty, S, The new economy, Cars take up way too much space in cities, 2021.

⁷ Stokes, N. Can today's car parks become tomorrow's housing developments?, 2017

⁸ Transport & Environment, Does sharing cars really reduce car use?, 2017

⁹ Privately owned cars are not in use for 95% of their life cycle (World Economic Forum) highlighting a profound inefficiency in the way cars are used and interacted with.

¹⁰ Transport & Environment, Batteries, 2021.

¹¹ The Washington Post, Average commute time reached a new record last year, 2019.

¹² Sidders and Shankleman, A Driverless Future Threatens the Laws of Real Estate, 2018.

¹³ Breach, Planning for the future: How flexible zoning will end the housing crisis. Centre for Cities, 2020.

It is predicted that this will encourage urban areas to take use of new unused parking spaces. This will transform residential areas, increase the ability to create greener spaces, expand current and new properties and drive commercial development¹⁴. As AV evolves and becomes fully operational, property values will naturally fluctuate again—unused spaces will become more attractive to investors and re-development will take place. Central locations will again have a new lease of life as they become a hub for new opportunities, and the demand for property and services will increase.

Requirements for successful change

All these developments will need careful planning and management, with sufficient consideration for socio-economic needs. Governments must play a role to prevent vast privatization of new available land, as well as consider the infrastructure required to manage this change. If the correct measures are put in place, we will likely be able to manage employment, and improve our general well-being and our surrounding environment.

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¹⁴ Planners Press, Chicago, Shoup, 'The high cost of free parking', 2005.

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