

A Train Without Tracks Talking Points on the Impact of AV on Land Use

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The inevitable arrival of autonomous vehicles (AV), will be a game-changer for Cities and real estate developers. Here is my breakdown on some of the more interesting possible impacts:

On Construction:

Our pro forma analysis suggests that the cost of construction would be reduced by 20% to 25% if structural parking is eliminated, greatly improving feasibility. This is likely to be a direct, result of AV, because AV's do not need to be parked. Developers provide parking in buildings today not just because they have to (current zoning laws) but because they want to (it's a marketing thing—you can't fill the people space up nor at the highest lease rates without it). These motivations are sure to eventually diminish. In fact, we are working on projects today where we are considering both reduced parking needs, and the eventual conversion of parking spaces to people spaces, which requires new design approaches.

On Housing Development:

Because construction costs are reduced through the elimination of parking structures, expect higher land costs. This would ultimately increase housing production, which is so vitally needed. Communities which have been slow to redevelop because of high land prices are likely to see more projects, because deals are just more feasible when costs are reduced. We believe that this will be a major impact Downtown, where land prices have become quite problematic.

On Zoning

Because buildings can be denser, we can consider changing the philosophical basis for zoning from a ceiling (maximum height and density restrictions) to a floor (minimum height and density requirements). This is based on the proposition which comes with AV that more height and density will enrich and invigorate neighborhoods, not adversely burden them with more parking, street expansions and traffic.

On Streets

AV can travel faster and closer together, increasing the vehicle carrying capacity of existing streets. There will be substantially less demand for parking on the streets. This will expand street space for more vehicle movement, bicycles and pedestrians.

On Infrastructure

The feasibility of building structures will change dramatically with the elimination of parking requirements. There will be more money available to afford development in areas with higher land values, as well as creating new benefits for the communities. Some of this money can be deferred to infrastructure and impact fees, which is often cited by opponents to new development.

On Fixed Rail and Bus Systems

The elimination of the driver also dramatically changes the economics of public transportation. Buses of the future will also be dramatically more efficient, and ridership can be expected to increase. We expect different sized buses, which can instantly be rerouted to meet peak demands.

Conversely, slow intra-urban fixed rail systems like the San Diego Trolley, are doomed. Their already miniscule ridership counts are likely to continue to plunge. It will be difficult to justify the continued operation of these systems, and they most certainly will not be expanding them.

On Commuting

Longer commute times will be acceptable. Think of an AV as a “train without tracks”. Train commuters will recognize their behavior on a train: they talk on the phone, they text, they compute. Now, if a commuter can also engage in these work activities (or take a nap on the way home) then longer commutes, and with substantially less stress, will be acceptable. This will allow households to access less expensive housing in outer reaches of metropolitan areas.

On the Shape of our Metropolitan Areas

Here is an unexpected consequence of AV: our metropolitan areas may become even more horizontal --- more spread out ---as AV facilitates longer commutes. When one couples the advent of AV with the demographics of housing demand, it is not difficult to envision young families increasingly finding affordable housing in the outer edges of the metro. AV facilitates that.

At the same time, AV facilitates density, as my prior points have demonstrated. So, there is not likely to be a ‘one size fits all’ conclusion as to the impact of AV on the shape of our metropolitan areas, except to say that it will be a little like silly putty: AV offers to a metro the ability to both stretch and squeeze!

Conclusion

Whether the advent of AV is an evolution, coming gradually, or a revolution, coming soon, it is a technological advancement that is likely to be transformational. Its long-term impact on our daily lives, the safety of our citizens, the environments that we live and work in, on our streets and throughout our entire metropolitan areas will redefine our society and be more impactful than most any technology that has come before, including the very invention of the auto!