

Autonomous Vehicles – Impact on Real Estate

August 2025

IN A NUTSHELL

- Autonomous vehicles (AVs) have the potential to significantly alter and improve urban living, reducing congestion, improving air quality and opening up new areas for development.
 - AV use is increasing rapidly, but the transition is unlikely to be smooth as cities move at different paces and adoption could be fragmented. Some may sprawl, others may not, while some locations may experience a period of relative decline.
 - As with all new transport innovations, the impact would be felt differently across cities depending on everything from history to geography, economics to politics.
 - This technology creates risks and opportunities for real estate investors, from changing land values to emerging residential neighbours, repositioning of parking spaces, and an increasing need for urban logistics.
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Since the dawn of civilisation, there have been few closer geographical relationships than that of transportation, urbanisation and real estate. From the invention of the wheel to the domestication of pack animals, from rivers to roads to railways, from boats to cars to aeroplanes, transport has fundamentally shaped our urban environment, allowing cities to expand, connect and thrive. The relationship is seen across the globe, cities clustering near waterways and ancient trade routes, expanding with railway networks and suburbanizing via highways.

And with growth of cities, comes demand for real estate. Whether the development of central business districts, retail destinations, logistics corridors or residential neighbourhoods, access to transport is key. We firmly believe that real estate investment should always be made with at least some consideration of transportation and access – access to employees, employers, customers, stock and amenities.

The development, and rollout of AVs has the potential to change transportation and the built environment. In this paper we will look at the impact AVs could have on the urban environment, on risks and investment opportunities, and, using London and the metropolitan area of Phoenix Arizona as our case studies, we consider how these impacts could differ across cities.

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1.1 A Very Brief History of Autonomous Vehicles

Vehicle autonomy is not a new concept. The idea of self-driving cars has been evident for over a hundred years, with the first successful journeys on public roads undertaken in the late 1980s. But over the past decade the technology has reached a new level, moving well beyond the conceptual and reaching a point where AVs are, in some form, driving across large parts of the globe. From driver-supported cars to fully autonomous robotaxis and self-driving buses, these vehicles are an increasingly common sight. By March 2025, robotaxi operator Waymo reported that its vehicles alone, operating across just six US cities, had driven a total of 71 million miles – equivalent to 300 trips to the Moon.¹

Autonomous vehicles are rapidly transforming transportation across multiple sectors. Autonomous cars and taxis, such as those operated by Waymo and Cruise, are already navigating urban environments, offering ride-hailing services without human drivers. Autonomous buses and shuttles are being deployed in controlled environments like business parks, airports and university campuses, providing short-distance, low-speed transit with high safety standards, while in cities such as Stavanger in Norway and Matsuyama in Japan they have already been integrated into the public transport network.²

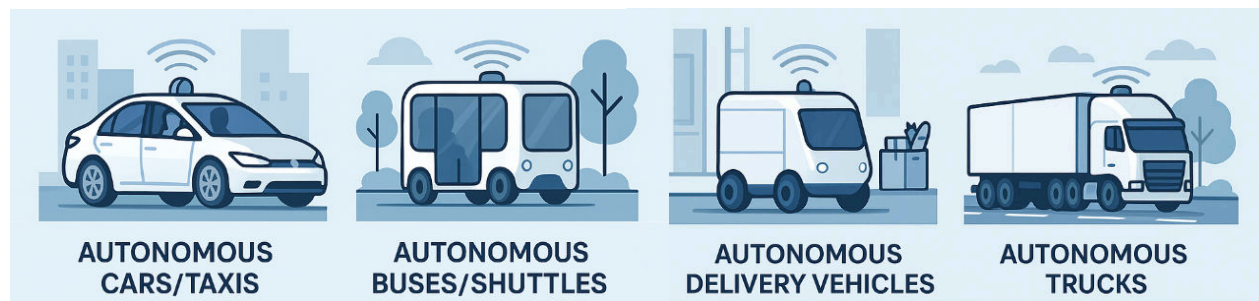
Autonomous delivery vehicles, including small street-roaming pods like those from Starship Technologies, could change last-mile logistics by delivering groceries and parcels directly to consumers. Meanwhile, autonomous trucks are being tested for long-haul freight, with the potential to operate in platoons or convoys, where a lead truck is followed by others in close formation, reducing drag and improving fuel efficiency.

The path to autonomy has not always been smooth. Concerns over safety and instances of public protest have brought negative headlines, while regulatory restrictions have at times hampered progress. And while the technology has the potential to substantially reduce road traffic accidents and fatalities, this is not yet the case.

But despite hype not always living up to reality, there are few signs that the rollout is slowing. Usage is growing at a very fast pace as vehicles are added to fleets, routes are accurately mapped, regulatory and legal frameworks are agreed, and cities permit usage. The US may be leading but countries such as China are close behind, and while Europe's tendency towards greater regulation may delay progress, governments including Germany and the UK have already passed autonomous driving acts, paving the way for the self-driving cars to be on the streets – from as early as next year in the case of the UK.

It may feel like getting to this point has been slow progress – a classic example of the Gartner Hype Cycle, with high expectations followed by disillusionment – but with adoption, progress and the establishment of best practice, AVs may be on the precipice of radically altering transport and accessibility, and with it the built environment.

Types of Autonomous Vehicle



Source: Copilot, DWS, July 2025

¹ Waymo website, June 2025

² Forbes (Development Of Autonomous Transport As A Promising Business Direction), March 2025

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1.2 Impact on Urban Areas

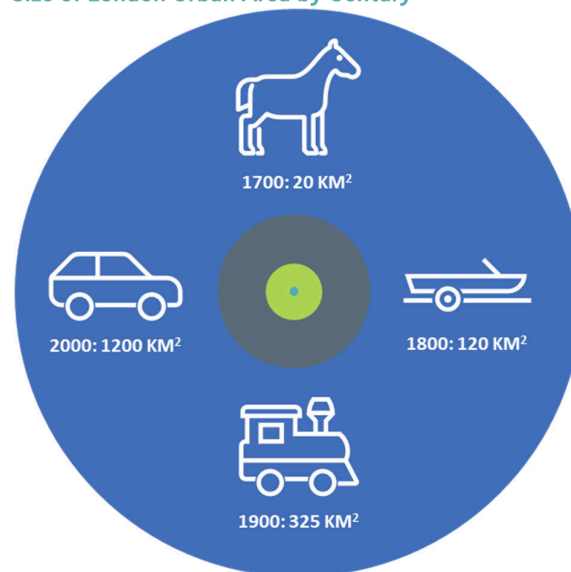
In the years before 1700, urban areas were often geographically small and densely populated. People and commerce clustered in close proximity, constrained by the time and cost of travel. However, the expansion of canal networks and the coming of the railways saw the beginning of urban sprawl as new transport links opened large tracts of land across a wide geographical area. Sustained by the introduction of the car, many cities are today unrecognizable from 300 years ago, covering larger and less dense geographical areas, despite strong population growth.

While the population of London grew twelvefold from the start of 18th to the end of 20th centuries, the built environment expanded around sixty times over the same period.³

You can see the effects of new transport links throughout London, particularly in suburban areas like Edgware in north London. With a population of just 1,500 in 1921, this largely rural area saw the rapid development of low-density housing following the opening of Edgware underground station in 1924, pushing the population to 20,000 people over the next 25 years.⁴ This process continues today, particularly across developing markets such as India where rapid economic growth has been accompanied by mass transit networks and car usage.

The advent of AV technology could again reduce the cost of travel, once more encouraging further outwards migration. According to some research, journey times are forecast to fall anywhere between 18% to 32%,⁵ as cooperative driving, reduced human error, automated and continuous freight, platooning, and other dynamic traffic management systems lower congestion and improve traffic flows.

Size of London Urban Area by Century



Source: GLA, ONS, LSE, Open Culture, Copilot, July 2025
Note: Circles are illustrative of London but are not to scale

This may not be the only cost saving. Full automation could allow travellers to engage in other work or leisure activities during their journey, greatly reducing the perceived cost of each journey. Furthermore, urban areas could see a positive social impact from both reduced pollution – particularly if vehicles are electrified – as well as increased accessibility for disabled and older residents, an important consideration given the demographic outlook.

However, the timing of widespread AV adoption remains uncertain, and paradoxically the initial impact may increase congestion as AVs mix with traditional vehicles, while less public transport use in some cities may reduce the frequency, quality or even viability of service. The shift could also disrupt parking operations, reducing the need for car parking spaces, freeing up urban land for redevelopment, with on-street parking giving way to drop-off areas, and some large parking garages becoming stranded.

AVs also won't operate in isolation. They'll compete with e-bikes, scooters and possibly aerial transport. If AVs increase congestion, cities might focus on alternative modes, reducing demand for car-centric infrastructure. While AVs promise cleaner, more efficient cities, planners must stay agile, recognising that the future could be diverse and dynamic. Public response, regulatory readiness, and infrastructure investment will all influence how smoothly cities transition. The long-term benefits appear promising, but short-term disruptions and equity concerns must be carefully managed.

³ Marron Institute of Urban Management (The Urban Expansion of London), September 2012

⁴ London Borough of Barnet, July 2025

⁵ Transportation Research (Will autonomous vehicles change auto commuters' value of travel time?), Zhong, Li, Burris, Talebpour, Sinha, June 2020
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Overall, we believe AVs could be a net positive for urban areas. By improving mobility, reducing pollution, and enabling more productive use of travel time, AVs can enhance urban productivity and unlock agglomeration benefits, drawing more people into cities and amplifying network effects. However, it would be wrong to conclude that all cities could follow a similar pattern, sprawling as a reduced cost of travel leads to more and more migration out to the city fringe. Modern cities are highly dynamic, and some areas could gain more than others, but overall, we believe urban hubs could emerge as clear winners, attracting talent, investment and innovation as AV infrastructure builds scale.

1.3 Urban Zoning

The impact of improved transport links on urban geographies may seem simple: faster and cheaper transport resulting in urban sprawl as new transport links open up the option to live in lower density neighbourhoods, with more space, less pollution and larger houses. But this assessment lacks nuance. The interaction between accessibility and place is exceptionally dynamic, differing both within and across metropolitan areas. What is true for a historic and constrained city in Europe, would certainly not be true for one of the fast-growing, less constrained metros in the US Sunbelt.

Transport innovation could indeed encourage urban sprawl. Commuters can travel further, using the time for work or leisure, potentially at a significantly reduced cost in terms of both time and money. And while current modelling doesn't suggest an exodus to the outer suburbs, a survey in the US showed that around 30% of people would consider moving further out from their current location if AVs were widely adopted.⁶

This decentralization could increase sprawl, lowering the relative advantages of central locations, moderating the gradient in land values between centre and suburbs, and opening up viable development land at the edge of metropolitan areas. Indeed, there is a well-documented but complex relationship between transport accessibility and land values.

But if successfully implemented, autonomous taxis and shuttle buses could encourage more people to live in urban areas, increasing densification and leading to higher land value growth. For example, fewer city centre car parks, less on-street parking, reduced congestion and less pollution could improve urban living and provide opportunities to reimagine urban spaces – redeveloping car parks, pedestrianizing business districts, adding bike lanes or developing land previously allocated to roadways.

There is a tension here which could play out at different speeds and in different ways across cities. It would be wrong to conclude that any one of these outcomes becomes reality. When we look at cities across the globe it is clear that the advent of previous transport innovations has not led to a uniform outcome. History, geography, politics and economics have all helped to determine why some cities spread over vast swathes of land, while others are held within a tight geographic boundary. And while there may be common traits across different city types, we should always consider each city individually in order to determine areas of opportunity and risk.

City Centre: As already mentioned, city centres could benefit from considerable lifestyle improvements, seeing reduced traffic and the redevelopment of car parking spaces. However, we need to be careful about overstating this. Not only could redevelopments take time, but many cities have already moved towards a low traffic, reduced parking model, through the introduction of congestion charging or actively removing parking spaces. While car focused cities such as Phoenix, Los Angeles and Houston allocate 25-35% of city centre land to parking, in London, Paris and New York this falls to just 5%.⁷

In addition, AVs have the potential to increase access into some city centres. As we showed in our 2018 paper,⁸ historically we've seen a strong correlation between access to labour and office rents, and as such, increased access to the city centre, either directly by AV or through improved access to mass transit nodes, could further elevate demand in some city centre locations. This relationship could hold for both office and retail but may only be the case in cities with a dominant city centre.

⁶ MIT Potential Impacts of Autonomous Vehicles on Urban Sprawl: A Comparison of Chinese and US Car-Oriented Adults, July 2021

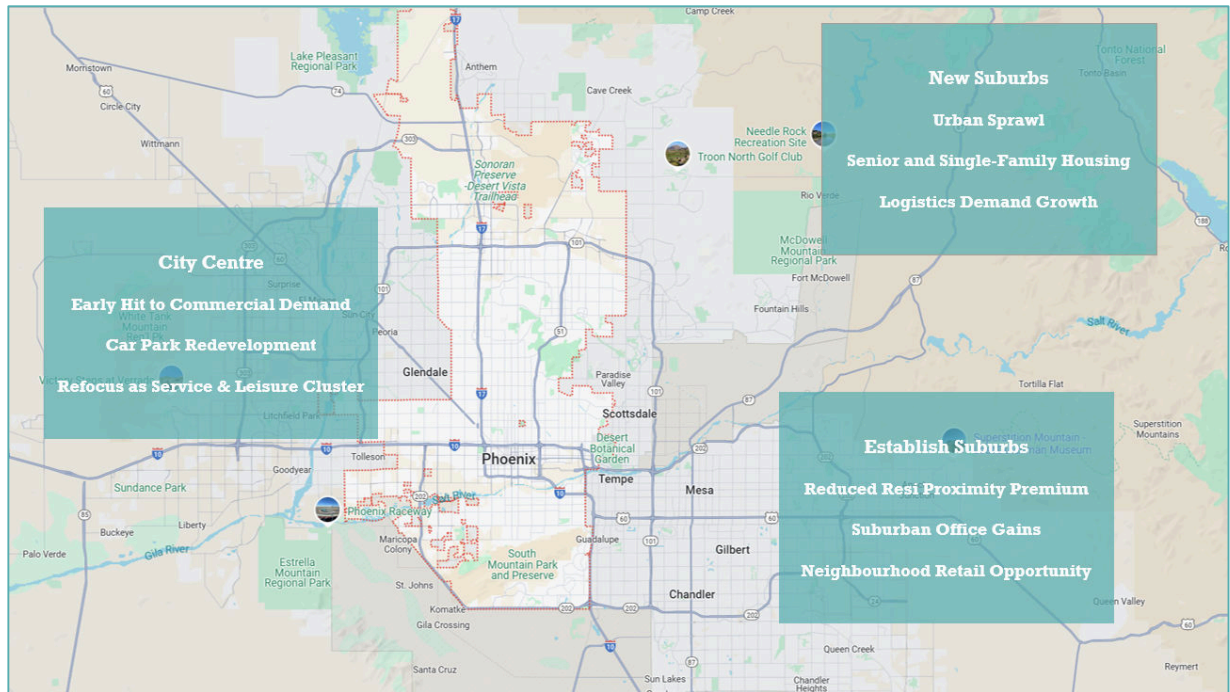
⁷ Parkingreform.org, July 2025

⁸ DWS, Accessibility and Office Rents, August 2018

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In traditionally car-focused metros with less public transport like Phoenix, where out-of-town malls and suburban campus style offices are the norm, the opposite may indeed be true. If employees and shoppers can now easily access these suburban locations, particularly if the city spreads, the proximity premium of being close to the centre falls. It would be important for somewhere like Phoenix to pro-actively adapt to these changes, using the opportunity to remove car parking space to increase density, building upon attractions such as the city's major sports arenas and Arizona State University.

Autonomous Vehicle Impact: Phoenix



Source: Google Maps, DWS, July 2025

Suburbs: Some inner suburban locations may lose out, no longer favoured for their close proximity to the city centre. Offering neither the employment prospects nor the excitement of the city centre, relative residential demand may fall in favour of more affordable, and now more accessible outer suburbs. However, in London, although not immune, most commuter journeys are expected to remain on public transport, and this may also open up opportunities. Well-connected inner suburbs such as Elephant & Castle, Peckham and Finsbury Park could transform into urban villages as less pollution, less on-street parking and more alternative road uses allow for vibrant communal spaces, offering a point of difference and attraction.

Outer suburbs, however, do look to be a clear winner across both cities. Phoenix may continue to sprawl, bringing fringe neighbourhoods into the metropolitan area. But as journey times fall and the pain of travel reduces, land values in these outer suburbs could rise quickly, with residential demand competing against uses such as urban logistics, AV parking, charging lots, out of town retail and even suburban office.

Polycentric Phoenix, with job clusters in places like Scottsdale, Deer Valley area and Mesa, could also see established suburban locations strengthen, as employees from all over the Valley are more easily within reach. Chandler, where Intel and other tech firms are located, and where Waymo is already active, could become one of the first “AV-served” business hubs, drawing in more firms as talent can be reached from across the metro.

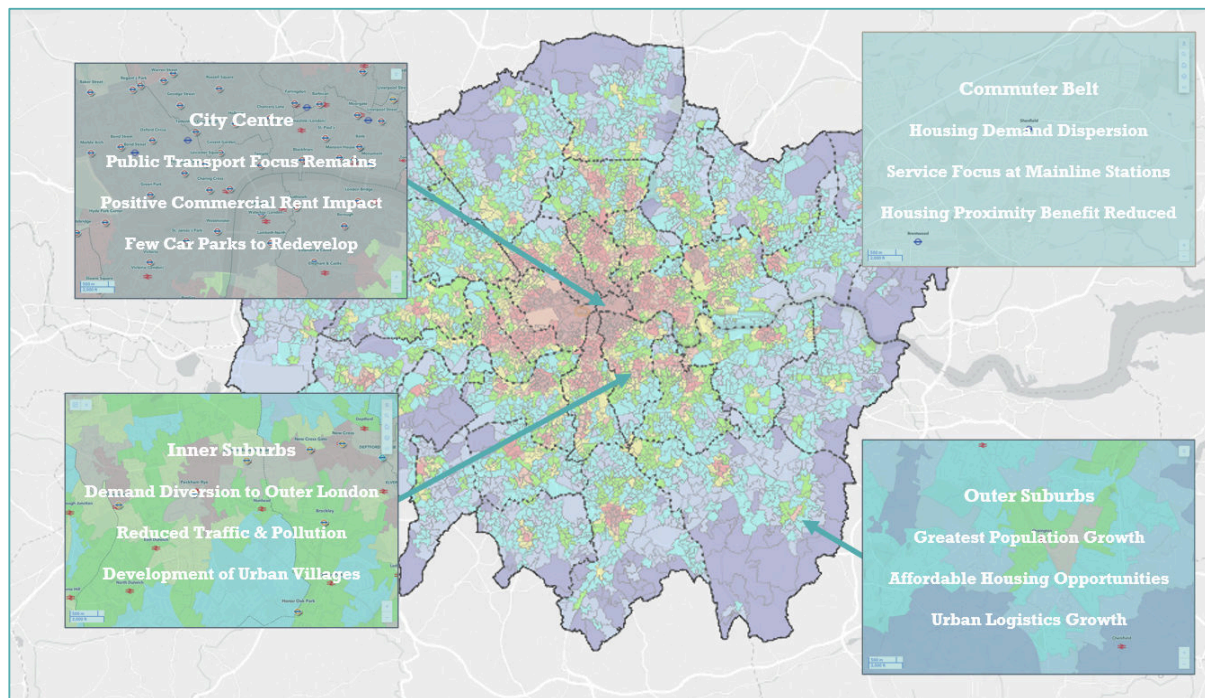
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Even in London with its strong public transport networks, outer suburbs such as Bromley or Croydon could benefit. With greater distances between public transport nodes, gaps could be closed with AV taxi and bus networks. And while this may reduce the relative attractiveness of residential space within the immediate vicinity of a suburban train station, it could strengthen these locations as centres of services and leisure. Given greenbelt constraints, sprawl here looks less likely, but as access improves and land values rise, this could open up residential development and densification opportunities across a wider area.

Commuter Towns: Commuter towns feature less prominently in Phoenix but are a major part of the London ecosystem. Here the outlook is more mixed. Long shaped by rail and road links, towns like Sevenoaks on the edge London, with its high house prices owing much to a fast connection into the city, are at risk of losing their *raison d'être*. With people tending to move to these locations in search of larger, more affordable family housing, demand may broaden into the surrounding towns and villages, no longer constrained by poor branch line access or parking charges at mainline stations.

However, some commuter towns like Reading and Milton Keynes, which already boast a strong mix of office, education, leisure, and retail infrastructure, appear well-positioned to benefit from the rise of autonomous vehicles. Unlike London, these towns face fewer spatial and regulatory constraints, making them more adaptable to the infrastructure changes AVs require. Additionally, their suitability for urban logistics and AV-friendly layouts could attract new investment, encouraging them to evolve into more self-sufficient urban hubs. Over time, they may even begin to resemble sprawling, car-oriented cities like Phoenix, growing outward while developing their own distinct identities and economic ecosystems.

Autonomous Vehicle Impact: Greater London



Note: London Map colour reflects TfL public transport accessibility score (Red = highly accessible, Yellow / Green = medium, Purple = Low)
Source: Transport for London (TfL), DWS, July 2025

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1.4 Investment Opportunities

The investment impact of AVs is expected to be gradual but extensive. Adoption and the adjustment of urban areas will likely occur over a long period of time, gradually altering the physical environment and real estate demand. However, real estate investors may wish to factor this technology into their plans already. Core assets held over a 5-to-10-year period could be increasingly exposed to this disruption, particularly when considering exit strategies and the next buyer. But timing will be a challenge. Overestimate and demand may be lacking; underestimate and opportunities may be lost, or assets stranded. Outside of opportunistic strategies, investors could look to build in flexibility, closely monitoring AV trends to avoid costly missteps.

We've discussed in some detail the potential geographic implications of AVs. While overall we see the technology as being positive for major urban agglomerations, no two cities will be the same. Within densely populated, public-transport-reliant metros we would expect to see relative gains in the **city centre, transport nodes** and the **outer suburbs**, with a more mixed outlook for today's high value inner suburbs and commuter towns. But for low density, car-reliant metros, we see them expanding further, opening up development opportunities in the **outer suburbs** and **urban fringe**. In both cases the need to respond and adapt to these changes could create value-add opportunities such as repurposing car parking and developing new residential districts.

We see opportunities across all sectors. Residential in particular could provide considerable opportunities for real estate investors. Improved accessibility in suburban and some commuter locations could open up the possibility to deliver a large volume of new homes, including **single family housing, social housing, and multifamily blocks** in more densely populated cities. We also see opportunities in **senior housing**; greater mobility for those that can no longer drive or feel less comfortable using public transport mean cities that adopt the technology could attract older people, supporting demand for senior housing.

Looking beyond residential, demand for **urban** and **fringe urban logistics** space, located along major arterial roads, may also increase as a result of AV delivery. Established delivery hubs could gain, not only in response to land competition from expanding suburbs, but also as a result of autonomous delivery over a longer period in the day, increasing the need for urban fulfilment centres. Building on an already growing trend for faster, more convenient delivery, these assets could see a considerable increase in demand over the coming decade.

The picture for retail is less certain in the face of changing catchments and reduced car parking revenue. New suburbs, commuter towns and road/rail interchanges may require additional retail space, and in general **retail parks, out-of-town shopping centres** and **leisure** look best positioned. And while the appeal of free parking may reduce, these locations should be well placed to adopt drop off points and adapt today's car parking for other uses such as additional retail and leisure, urban logistics or even housing.

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CBD offices at the heart of cities with a dominant, public transport-focused core, could also do relatively well. In cities such as London, we continue to believe that office requirements will be heavily focused around major transport nodes, as improved public realm and increased access to employees elevate occupier demand. However, in polycentric cities like Phoenix, **suburban offices** may gain in favour. With the relative draw of the CBD reducing, campus style locations may gain from being able to draw employees from a wider catchment.

For active investments, underused car parking or out-of-favour inner suburbs could offer value add opportunities for **repositioning**. Potentially requiring the support of government, the history, amenities and inherent infrastructure in these locations lend themselves to repurposing – particularly if the entry price has fallen to a relatively attractive level. Finally, value-add strategies may look to **develop** real estate assets directly supported by the rollout of AVs, from fleet service hubs, EV charging stations or large-scale edge-of-town parking to store AVs during off-peak hours.



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