



# Autonomous Vehicles: reality sets in

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Autonomous Vehicles (AVs), especially Shared Autonomous Vehicles (SAVs), have created a huge buzz over the last few years. An SAV is the transformative AV type that has the potential to revolutionise personal mobility and reduce the need, or desire, for people to own a car. We expect that SAVs will, in the end, achieve this outcome, but the industry appears to be aligning with our view that the race towards widespread AV provision is a marathon, not a sprint.

It is not quite true that all dreamers have abandoned hope of imminent upheaval. But the scale of the task of deploying commercially, safely and workably on a large scale has caused more than a pause for thought for those involved in developing AVs. A recent statement from the CEO of Ford indicated that there is still much to be done and it will likely take many years to launch in significant numbers, beyond test-status deployments. Others have also shied away from firm near-term commitments. OEMs, tier-one suppliers and autonomous technology leaders have started to form larger alliances in order to share the risk of delay and large development costs.

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Other nagging questions about AV deployment will not go away. A specific concern we have had for some time is how to introduce SAVs without causing an increase in congestion. An extreme example of this undesirable outcome would be creating relatively cheap SAV-enabled mobility that emptied bus and metro car passengers into robotaxis clogging the streets. We expect that most cities would not permit this to happen in

already overly congested urban centres. Integration with developing public transportation systems, of the kind envisaged by a pioneering Singapore government, appears to be a far more likely endpoint for most cities.

Where SAVs might become strong performers, with less risk of creating new and harmful congestion, is in the large and sprawling suburban peripheries of cities – in places where bus, rail and metro stops become more dispersed and the first-last mile problem has only, so far, been solved by using traditional cars and taxis.

Some locations may permit an SAV free-for-all, allowing user demand for cheap shared autonomous services to be the primary driver in development, leading to all-but inevitable congestion problems, but these are likely to be the exception and not the rule.

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All of this could ultimately change, however, when AVs are the only occupants of the road. When AV-only driving becomes possible, because near-Level-5 (SAE Level) autonomy has been technically achieved, then the science fiction dream could become a reality and AVs could truly be allowed to go anywhere in large numbers. This, however, is unlikely to be feasible for several decades, in our view, so AVs and SAVs will need to fit around and alongside public transportation systems for some time to come. Meanwhile, the industry will have to find a solution to funding the marathon to mainstream autonomous driving.