

Autonomous Vehicles: The Bridge Between Hype and Reality

The autonomous vehicle race has changed.
The biggest opportunity this decade isn't robotaxis.
It's what happens before cars are driverless.





The autonomous vehicle race is spearheaded by robotaxis, and the pursuit of fully autonomous driving, but large-scale deployment will come further down the road.

Right now, the OEMs that can deliver semi-autonomous technology, communicate the technology clearly, bring customers along that journey and meet safety expectations, are the ones best positioned to meet the market where it is today.

The decisions OEMs make today on sensors, compute platforms and software architectures are likely to shape competitive advantage long before fully autonomous vehicles become mainstream.

The bridge to autonomy

Many original equipment manufacturers (OEMs), suppliers, and technology companies have heavily invested in high-level autonomy (L3-5), yet enhanced Level 2 systems (2++) continue to be the market's immediate commercial priority:

- Enhanced L2+/L2++ systems are experiencing unprecedented growth in fitment rates
- Despite growing L4 robotaxi numbers, broader consumer impact of full self-driving is likely to emerge in the next decade
- More widely applicable semi-autonomous driving offers the most immediate, scalable benefits for OEMs and consumers

It is clear that semi-autonomous driving isn't an interim stage, but a foundation for mainstreaming advanced vehicle automation now. L2++ may bridge the gap between technological ambition and what can be delivered to customers today.



Three disconnects: tech, regulation, and consumer demand

The technology for fully autonomous driving is making its way into the public eye with robotaxi trials expanding throughout 2026. In the robotaxi market for Level 4 driverless vehicles, the combined operational fleets from the likes of Waymo, WeRide, and Zoox could exceed 20,000 by the end of the year. More impactful fleet volumes are expected to reach the wider market in the 2030s.

At GlobalData, we track the robotaxi market closely due to its potential long-term implications for private vehicle demand, ownership trends, and its shared supplier technologies with passenger cars. However, narrow Operational Design Domains (ODDs) for Level 3–4 systems, combined with lagging regulation, corners full-autonomy as a niche market in the near-term.

Meanwhile, with a global reach of 90 million light vehicle sales, L2+/L2++ systems in passenger cars are likely to dominate OEM strategy well into the next decade.

Critically, the driver-supervised nature of enhanced Level 2 systems is what enables far broader deployment across customer use cases.

While full self-driving is not yet “solved”, enhanced L2 is likely where the market is technologically good enough, regulated enough, and trusted enough to achieve the highest levels of adoption.

Observability is critical to responsible AI at scale

The commercial appeal of L2++ is also being reinforced by broader market conditions. This comes at a time when global demand for light vehicles is facing extended downward pressure in mature markets. Expensive vehicles, longer ownership cycles, weaker economies, and declining long-term populations are some of the reasons behind expectations for tepid growth in global light vehicle sales. In contrast, the L2+/L2++ market has been booming and still has plenty of room to grow.

Regulation for autonomous vehicles is not fully ready, but it is beginning to shift from reactive, patchwork responses toward more proactive and harmonized rules. A recent milestone came when UNECE’s WP.29 approved the first global framework that legally enables fully autonomous driving systems (ADS).



This is a decisive milestone toward uniform international safety requirements for validating autonomous driving systems, however, countries still need to adapt or create a broader set of laws and regulations covering liability, insurance, and road-use rules. As a result, countries (and in some cases individual states) will still need to do their part to ensure autonomous functions can be used safely and legally on their roads.

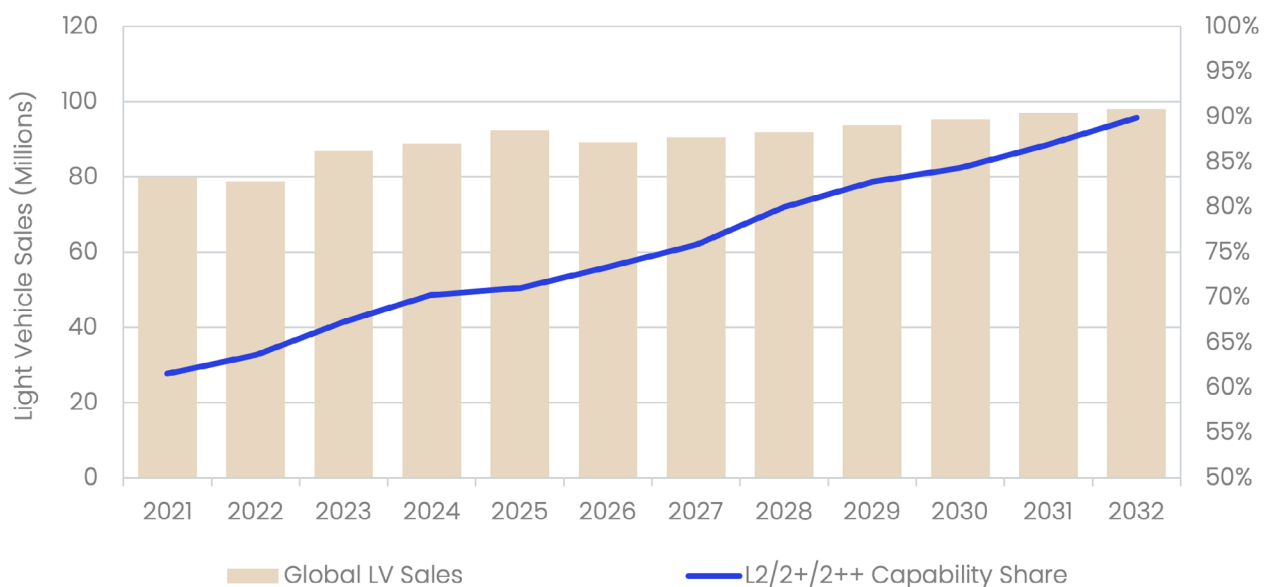
Customer readiness remains divided... unsurprising, given that trust is central to consumer adoption of ADAS functionality and trust takes time to build.

A lack of standardization is also slowing the customer journey toward familiarity with ADAS features. For some brands, intrusive ADAS becomes more of an

annoyance—most people know someone who turns off warning features as soon as they get into their car. In contrast, for brands specializing in autonomy (such as Tesla, Rivian, Li Auto, and XPeng) the perceived competence of their autonomous driving features is becoming a primary purchase driver.

Incoherent ADAS feature naming and inconsistent performance across brands can erode trust. Yet trust is required to build demand, and demand underpins the business case for OEMs to roll out higher levels of autonomy. Specifically, demand for Level 3 systems is not yet strong enough for most manufacturers to commit. BMW and Mercedes-Benz paused Level 3 offerings to instead focus on enhanced Level 2 (L2++) systems, which offer more real-world applicability, albeit with driver supervision.

Global light vehicle sales vs L2/2+/2++ Growth





How do you decide where to place resources?

For OEMs, suppliers and investors, the challenge is no longer simply predicting when autonomous driving will arrive. It's understanding which technologies, suppliers and regional markets are likely to shape that journey over the next decade.

Understanding the autonomous vehicle market today means looking beyond autonomy levels alone. Technology choices, supplier ecosystems, regulation and consumer adoption are increasingly interconnected.

GlobalData's upcoming Autonomous Vehicle Forecast brings these perspectives together, helping stakeholders understand OEM strategies, supplier ecosystems, regulatory developments and autonomous technology adoption by region, brand and model.

Learn to navigate the road ahead

Stay ahead of the technologies, supplier ecosystems and market dynamics shaping autonomous vehicles.

Register your interest to be among the first to hear about the launch of GlobalData's new Autonomous Vehicle Forecast module and receive updates.

Register your interest

