

# **Automotive Industry Themes: Autonomy, shared mobility, solid state batteries, vehicle light weighting and M&A**

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## **Abstracts**

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### **SUMMARY**

The automotive industry is being pushed and pulled in multiple directions at present, effected by powerful global trends. Auto makers are rushing to develop new technology and get their products aligning with tough new regulation, while at the same time trying to remain profitable in difficult trading conditions. Some of the biggest themes in the industry are autonomous vehicles, solid state battery development, vehicle light weighting, shared mobility and mergers & acquisitions.

### **KEY HIGHLIGHTS**

The leader is Google's pioneering Waymo, with more than nine years and 10 million miles of autonomous driving experience behind it and with Google's industry-leading software and AI at its disposal. Tesla claims parity with Waymo with its Autopilot, while Uber's aggressive advance has been somewhat slowed by the fatal March 2018 accident in Tempe, Arizona. Baidu Apollo, Nvidia DRIVE, Aptiv's NuTonomy, Intel's Mobileye, GM's Cruise, and NXP are all in serious contention. A clutch of AI start-ups are developing innovative technology, including Aurora in the US and Horizon Robotics in China.

This emerging field of energy storage devices seeks to replace the potentially volatile liquid electrolyte in today's lithium-ion (Li-ion) batteries with more stable solid materials.

If perfected, these batteries promise greater storage, faster charging times, enhanced fire safety and reduced production costs compared to current Li-ion technology. They are yet to reach widespread production, however, due to difficulties in identifying the ideal chemical blend and production method. Nevertheless, the number of companies working in the field, and the amount of money being invested indicate that solid-state batteries are likely to be the energy storage method of choice for electric vehicles (EVs) in the future. GlobalData's estimates expect worldwide fitment of advanced batteries to jump from slightly less than 6m units in 2018 to more than 65m by 2033. Of these fitments, a growing proportion could feature solid-state technology.

Vehicle light weighting's importance to the automotive value chain has been de-emphasized recently due to the emergence of the CASE (connected, autonomous, sharing and electrified) framework for the industry's megatrends. As the industry tries to adapt to much heavier powertrains and the demands of Co2 reductions, automotive manufacturers are needing to get creative in order to reduce the weight of their products.

## **SCOPE**

Examine the key themes in the automotive industry

See how these themes are changing the nature of the industry and the players themselves

understand the pressures that the automotive players are adapting to

See future opportunities and get a picture of future development

## **REASONS TO BUY**

What mergers and acquisitions opportunities are emerging?

Who are the leading players in autonomous vehicles?

Who are the leading shared mobility players and how will this affect car ownership?

Why could solid state batteries help to energize the EV industry?

Why is lightweighting so important to manufacturers at present?

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