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 5 JANUARY 2022

## Are China's OEMs ready for the smart-car revolution?

On 19 December 2021, NIO unveiled the new ET5 during its annual 'NIO Day' event. The model has a starting price of CNY258,000 (excluding the battery system) and will be equipped with NIO's latest automatic driving technology, dubbed NAD, which stands for NIO Autonomous Driving. The ET5 will be pitted directly against the Tesla Model 3.

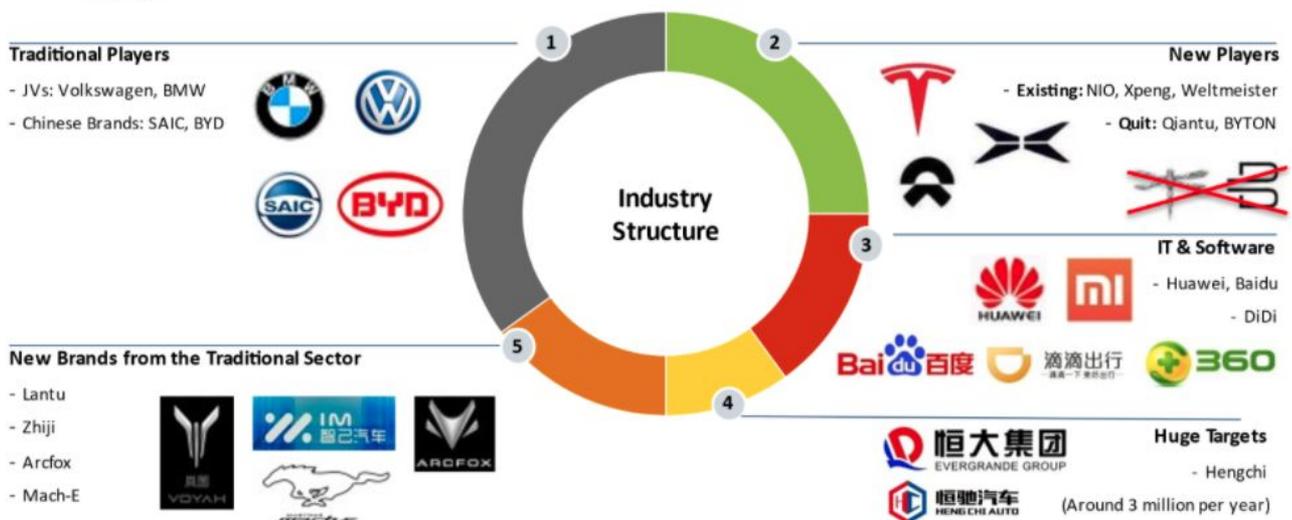
NAD features the NIO Aquila Super Sensing stack and Adam SuperComputing platform. The latter features NVIDIA Orin chips, offering computing power of 1,016 TOPs – the highest level in the industry. The ET5 is also equipped with ultra-long-distance high-precision LiDAR, four surround-view cameras, a millimetre-wave radar (5 mm), 12 ultrasonic radars, two high-precision positioning units, vehicle-to-road cooperative sensing, enhanced driver sensing and other sensing equipment as standard.

When compared to the Tesla Model 3 and Xpeng P7, among others, the ET5 is effectively the first mass-production model to be equipped with LiDAR. In short, its arrival heralds the start of the smart-car revolution in China's Passenger Car market.

In addition to NIO, a number of tech giants, such as Huawei, Baidu, Xiaomi, Alibaba and DiDi, have devised ambitious blueprints to conquer the intelligent vehicle arena. They, along with a raft of new startups, are driving the commercialisation of autonomous driving technology in the Chinese vehicle market – so much so, in fact, that the sector is poised for rapid acceleration. This intelligent revolution has presented the traditional industry supply chain with numerous challenges as it strives to keep up with the necessary developments.

## China's IT Giants Push 'Software Defined Vehicles'

- The traditional automakers' share of NEV sales fell from 92% in 2019 to 87% in 2020
- The second wave of auto production, represented by Baidu, Huawei, Xiaomi, Evergrande etc., will greatly impact the overall industry



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At OEM level, only sizeable enterprises like SAIC, Great Wall, BYD, Geely and FAW have the financial clout to develop their own software/hardware control units. Second-tier enterprises lack the necessary technology or capital to compete in this area. Indeed, it remains to be seen whether even the leading OEMs will have the requisite knowhow to rival the likes of Alibaba, Huawei and others. Will they survive the revolution? Only time will tell.

Meanwhile, China's increasingly strict data protection laws, together with an array of technical obstacles, will make it more difficult for foreign-funded autonomous driving technology to gain a foothold.

The rapid emergence of the smart-car wave in China is, in essence, a metamorphosis rather than an advancement. What is yet to be determined is whether the traditional players are prepared to embrace the change.