

# MOBILITY:

## Innovative services to drive change in how consumers use and power cars

### >> FROM PAGE 1

“China is now fast-tracking investments in artificial intelligence (AI) with strengthened focus on autonomous driving technologies, with new policies and zones already being announced,” said Namrita Chow, principal automotive research analyst with IHS Markit.

“China aims for 50 percent of all new vehicles to have at least partial self-driving capabilities by 2020, pushing automakers to integrate the technology,” she said.

“The overall aim is for China to showcase to the world that it is a leading player in new technology, and a promoter of things cleaner and greener. And the new focus is self-driving vehicles,” Chow said.

The *Financial Times* reported on Feb 7 that ride-hailing group Didi Chuxing has signed partnership deals with 12 automobile companies to provide marketing support for their car-sharing services and electric vehicles.

The deals are mainly with major Chinese carmakers such as Geely, Changan and BYD, but also include foreign companies like Kia and the Renault-Nissan-Mitsubishi alliance.

“The move by Didi, which provides an estimated 7 billion rides per year, is a sign of the increasing converging of interests between the auto industry and technology companies,” the *Financial Times* said.

In less than two decades, China has become the biggest automobile market on the planet, with a forecast 28 million car sales this year alone, according to IHS Markit data.

The question many analysts are now asking is whether China will skip the high concentration of private car ownership as experienced in the West — just as it did with land-line telephones — and move straight into “mobility” services.

Urbanist Bharat Dahiya said it was unimportant whether China skips the high private car ownership phase.

“What is more important, however, is how China increases car-based mobility services without further deteriorating its highly polluted urban environment,” said Dahiya, senior adviser and urbanist in the environment, development and sustainability program at Chulalongkorn University in Bangkok, Thailand.

“Driverless cars may work well on non-congested, wide roads and highways, with proper lane marking. However, their functioning will be marred particularly on narrow and congested roads and streets in many cities,” he told *China Daily Asia Weekly*.

“What is important is the rate of introducing new cars under the proposed car-based mobility services.



A visitor tries out a driverless car at the fourth World Internet Conference in Wuzhen, East China's Zhejiang province, on Dec 4. Driverless technology will lead to other changes, such as electric car adoption and mobility services growth.

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**50**  
percent

Proportion of all new vehicles in China to have at least partial self-driving capabilities by 2020

**12**  
carmakers

Number of automobile companies in marketing support deals signed with Didi Chuxing

**28**  
million

Number of cars expected to be sold in the China market in 2018

In other words, how many such cars will be added per year.

“If many such cars are added abruptly, they will further clog the already gridlocked urban roads and streets in Chinese cities, with a negative impact on the mobility of people. Further, worsened traffic congestion will result in higher levels of urban air pollution, unless the new cars run on clean energy,” Dahiya said.

“Therefore, it is essential to examine the impact — both positive and negative — of the proposed car-based mobility services on the urbanization process if China (seeks to) have sustainable cities.”

Huu-Hoi Tran, partner and head of the automotive sector at KPMG China, said: “Growing mobility needs, insufficient public transportation and a wider acceptance (of the) shared economy are driving innovation in intelligent mobility, new energy vehicles (NEVs) and autonomous driving.

“This is further boosted by central as well as local government support, which creates an attractive market for startups and tech players.”

Tran said: “Urbanization, traffic congestion and the slow development of public transportation in

some cities in China require innovative mobility solutions.

“Car-pooling, sharing and hailing services, for example, are already widely accepted and we expect to see even more innovation given the pace of digitalization in China,” Tran told *China Daily Asia Weekly*.

“China will maintain its fast pace in NEV development, while Internet Plus vehicles and intelligent mobility will also be key priorities. We expect Chinese players to achieve significant breakthroughs in these areas this year.”

IHS Markit's Chow said China's Ministry of Industry and Information Technology is working on a draft policy for autonomous driving.

The new policy is expected to be released later this year and will be followed by local, provincial and city governments announcing policies to enhance and fast-track the segment.

A first draft has already been reviewed by experts from the Ministry of Transport, the Ministry of Public Security and other institutions, which will play an important part in ensuring safe road tests of such vehicles, according to a report by *China Daily* on Jan 23.

In December last year, the municipi-

pal government of Beijing was the first to release policies for self-driving vehicles on the city's roads.

Fu Yuwu, head of the Society of Automotive Engineers of China, said in January: “No other governments are giving such strong and powerful support to the development of intelligent connected vehicles as the Chinese government. A strong automotive industry is a vehicle for innovation, and I think we have found the path to achieve core technological breakthroughs.”

The growth in mobility services is one of the major drivers of change in the automotive sector and is already transforming how consumers buy, use and power cars, according to insights from Reinventing the Wheel: Mobility and Energy Future, a new research service of IHS Markit.

New mobility services offer consumers the temporary use of a car they do not own, for a ride across the city or beyond. The most common way this is done today is via app-based ride-hailing or car-sharing services, such as Didi Chuxing in China, and Uber, Lyft and others elsewhere in the world.

Over time, it is expected that a growing array of mobility services

will emerge — from personal subscriptions for driverless car usage to the integration of car services into city transit systems.

“The growth of mobility services will lead to more miles traveled by cars and increased access to mobility via the car around the world. People will have greater access and other options than ever before,” according to Daniel Yergin, IHS Markit vice-chairman, Pulitzer Prize winner, and project head of the new research service.

“China is at the forefront of the automotive transformation due to its large and growing car market,” Yergin said.

Growth of mobility services is significant on its own, but the convergence of other factors will also bring change in the automotive sector.

“The combined impact of mobility services, driverless technologies, electric cars and government policies will propel a transformation in personal mobility,” said Jim Burkhard, vice-president and head of crude oil market research at IHS Markit.

“The spread of driverless technology will amplify the impact of other catalysts of change, such as electric car adoption and mobility services growth, as well as reducing traffic injuries and fatalities on the road.”

At present, the technologies used in driverless cars are expensive, although costs are falling over time, while the utility of a mobility service car has greatly increased. A car employed by a mobility services company will drive many more miles each year than a car purchased for personal use.

Mobility service cars, on average, will drive some 80,000 to 89,000 kilometers per year, around five times the annual mileage of a typical personally owned car, the IHS Markit analysis said.

Growth in mobility services will also attract regulatory oversight, which shapes how these will evolve at the city level.

Several districts in Guangzhou, in South China's Guangdong province, have already begun testing driverless cars, according to the *Financial Times*.

Rides were offered to the public by two Chinese startups, Jingchi and Pony.ai, for the first time in February. Until now, all testing had been carried out in California, but the roll-out of driverless cars in China itself will be a boost for the country's auto industry.

Getting driverless cars on the roads as quickly as possible will be a key aim for Chinese authorities with oversight of the industry, as accumulating road miles on public streets is crucial to the training of the AI software behind the technology, the *Financial Times* said.