China: Government and municipalities pushing progress

Driven by the need to solve two persistent problems, pollution and congestion, China is investing heavily in smart mobility. The 2019 Urban Mobility Readiness Index ranked Shanghai 4th and Beijing 8th in cities leading the mobility revolution, because of their commitment to advanced technologies and investment in infrastructure. Now the results are beginning to show.

In 2017, the Ministry of Science & Technology assigned the first wave of AI technology R&D leads to four companies: Baidu (AV), Alibaba (smart cities), Tencent (digital healthcare) and iFlytek (voice recognition), adding SenseTime (intelligent vision) in 2018.







Automotive is one of China's key industries and highly focused on AI and AV. Unlike the US, where private companies are driving AV research, it's municipalities who support and fund public-private sector AV research in China. In 2018 Shanghai was the first Chinese city to open a 50-km pilot zone for open-road AV testing. Today, AV is being tested by 35 companies on designated roads across 16 cities, including Beijing, Shanghai, Hangzhou and Chongqing. Of 109 licenses issued by the government, nearly half went to Baidu.

'Android for AV'

Baidu, China's equivalent to Google, has filed more AI patent applications than any other Chinese company. The company focused on four key research areas: natural language processing, smart search & recommendation, speech recognition and AV. The company created Apollo, an open-source platform for AV solutions, along with the €1.38 billion Apollo Fund, as part of a plan to invest in 100 AV projects over the next three years. This makes Apollo one of the world's largest AV ecosystems, with over 100 partners, including national and international carmakers, China's top universities and government tie-ups. Apollo nowadays can be seen as the 'Android for the AV industry'.

Apollo 1.0 was launched in July 2017 and was focused on closed-venue AV. Apollo 5.0 covers highway driving, valet parking, AV minibuses, robo-taxis and smart traffic signal solutions. Smart traffic solutions have already been implemented in Baoding, where it has reduced rush-hour traffic congestion by 20-30%.

Decongestion

Alibaba's Cloud Intelligence Brain is an AI platform with several sector-based 'brains' that provide solutions to complex business and social problems, increasing sustainability and efficiency in areas like agriculture, manufacturing and city management.

Its City Brain is an urban traffic-management system designed to address areas like traffic congestion and signal control. It uses AI to analyse traffic conditions based on integrated real-time data from the Chinese navigation app AutoNavi, traffic police Weibo accounts and video. Following a two-year trial, Alibaba's home town of Hangzhou has gone from China's 5th to 57th most congested city; fire and ambulance service response times have halved and illegal parking is being tracked in real-time.



The Apollo opensource platform is one of the world's largest AV ecosystems and 'Android for the AV industry'

Netherlands Innovation Network China

Though Netherlands Innovation Network China follows local AI developments closely and keeps interested Dutch public and private sector parties up-to-speed, China's focus on getting an edge in AI makes facilitating any large-scale Sino-Dutch collaborations difficult.

The network has organized a bootcamp for Dutch AI startups to help them explore the Chinese market; runs local seminars that promote Dutch values regarding AI ethics; and helps Dutch companies and research institutes find partners in China.

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