



Global and China HD Map Industry Report, 2018

January 2019

STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

REPORT OBJECTIVES

- ◆ To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- ◆ To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- ◆ To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- ◆ To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- ◆ To help company to succeed in a competitive market, and

METHODOLOGY

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications. Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

INFORMATION SOURCES

The primary information sources include Company Reports, and National Bureau of Statistics of China etc.

Abstract

The autonomous driving industry is developing by leaps and bounds, facilitating the evolution of the HD map market. The higher level autonomous driving is, the more accurate HD map is required. It is predicted that global HD map market will be worth over \$9 billion in 2025. The HD map industry is now in its infancy, with key players including map providers, start-ups, autonomous driving chip vendors, Tier 1 suppliers, automakers and mobility service firms. They are seeking for cooperation to jointly boost the industry while they are competing fiercely. Those who are the first to finish production of HD map will rule the roost in the market. Players of all levels thus shun their counterparts in cooperation.

Map providers: they are generally grown from conventional navigation map providers, dedicating themselves to collecting data to produce base map for HD map, updating data and rolling out total HD map solutions. Major players include Here, TomTom, Waymo, AutoNavi (Amap), NavInfo and Baidu Maps.

These map giants are now busy with data acquisition. Among them, Here, TomTom, AutoNavi and Baidu Maps have collected an average of more than 300,000km apiece.

In China, map providers must acquire “Class A Digital Navigation Map Production Qualification”, which means foreign firms are all ineligible for producing map in China, so they often team up with local qualified peers.

Start-ups: they are currently in the majority in HD map market, providing map providers with crowdsourcing data, map updates, and software and hardware technologies for high precision positioning. But they can be direct providers of HD map solutions as long as they get the qualification. For instance, Momenta became the first start-up qualified for map production in late 2018, before which qualifiers were largely entities and conventional map providers. So it is expected that issuing licenses to start-ups will be a tendency in China.

Automakers and mobility service firms: as the end users of HD map, they will not only offer HD map updates but help producers with crowdsourcing.

In the future, as finished HD map products are launched, data update (often done by start-ups, chip vendors, automakers and mobility service firms) will be a focus, and crowdsourcing update grows a trend.

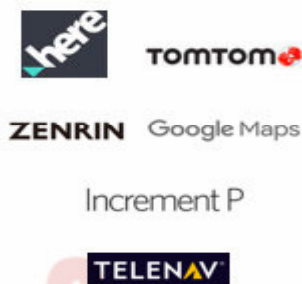
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HD Map Industry Chain Distribution (As of the end of 2018)

Domestic Map Provider



Foreign Map Provider



Domestic HD Map Start-ups



Foreign HD Map Start-ups



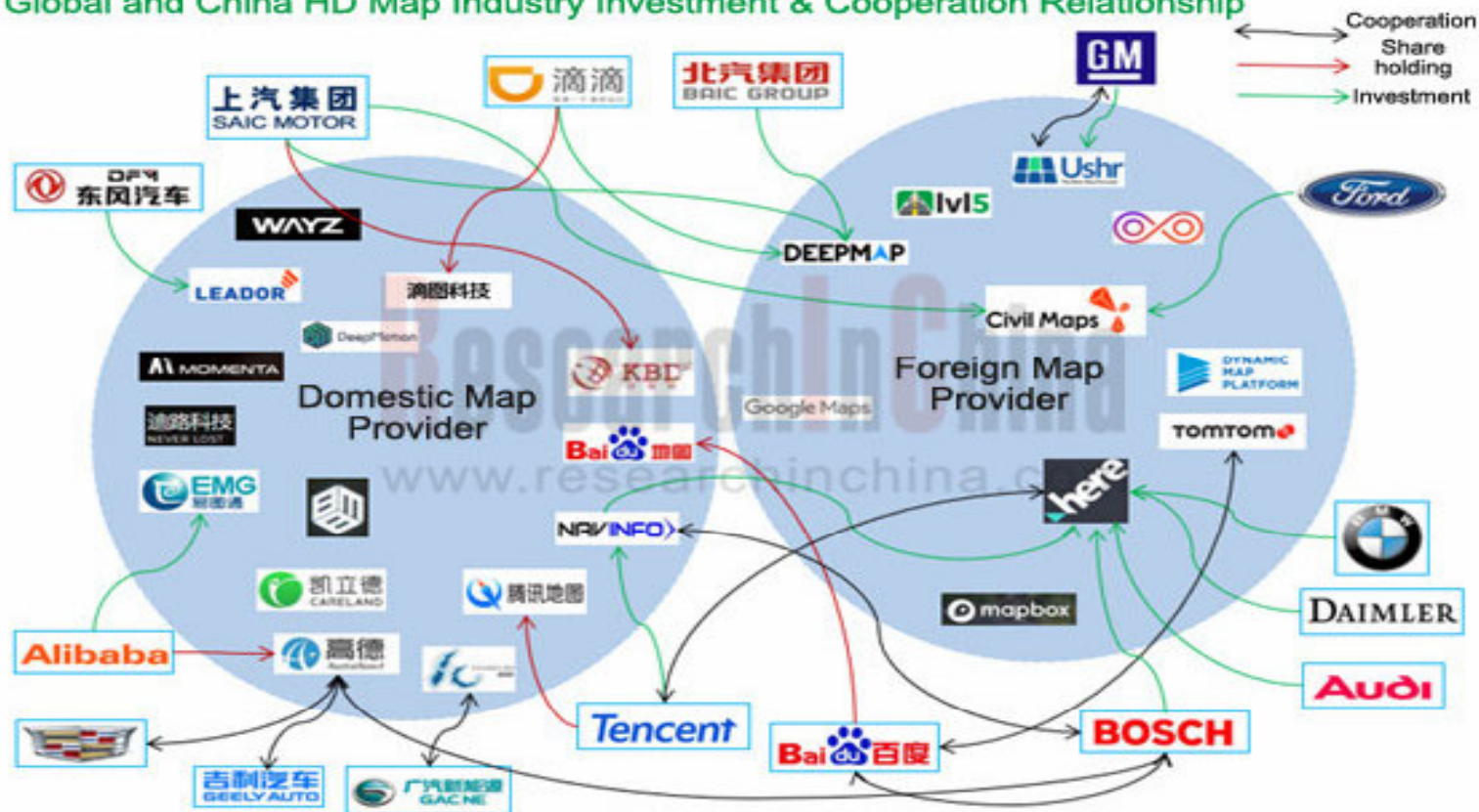
HD Map Technology & Data Support

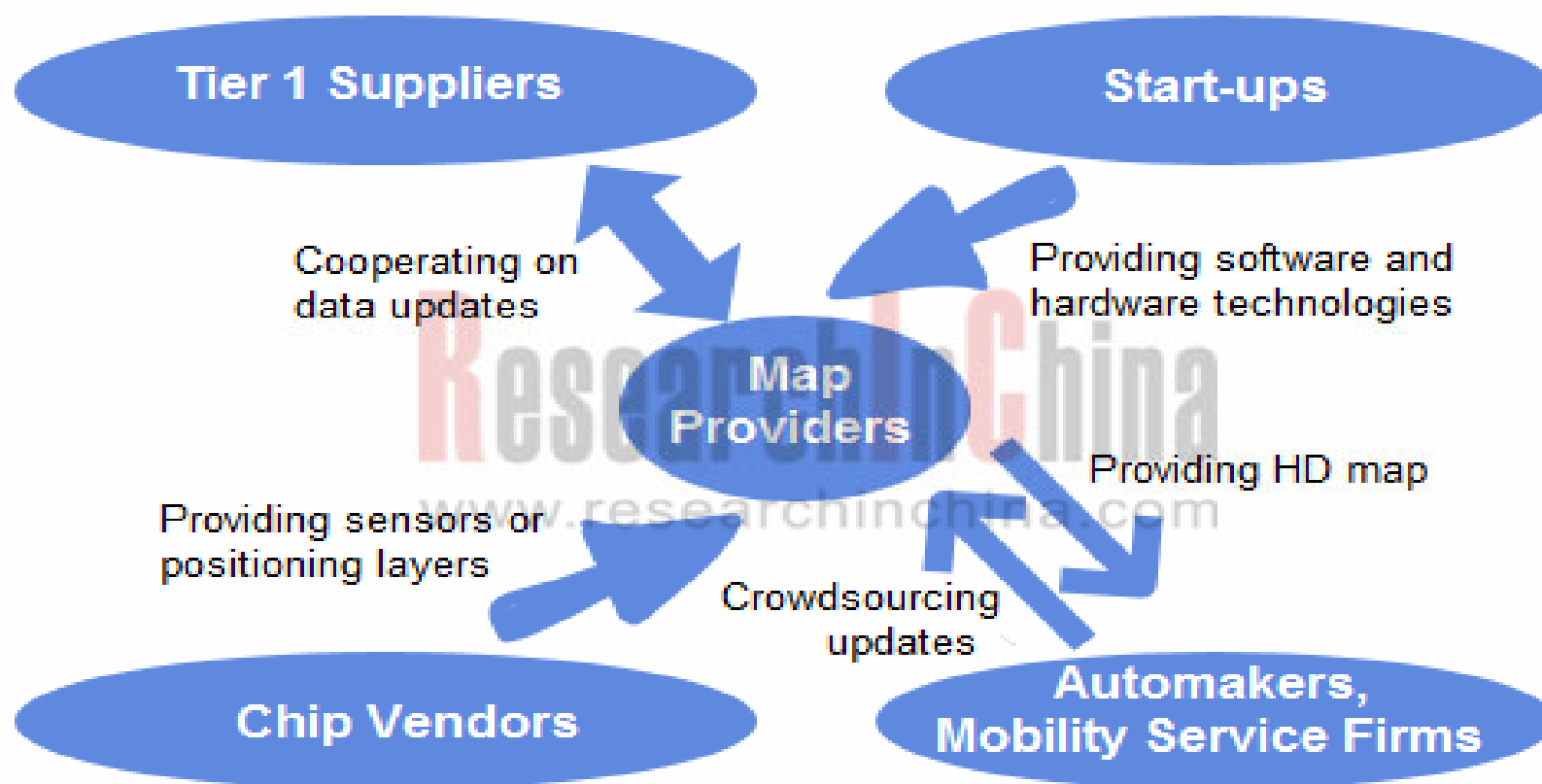


Industry Standard Organization



Global and China HD Map Industry Investment & Cooperation Relationship





1. HD Map Industry

- 1.1 Definition and Basic Technology
- 1.2 Role of HD Map
 - 1.2.1 Vehicle Positioning
 - 1.2.2 Path Planning and Perception
 - 1.2.3 Assistance Decision
- 1.3 HD Map-related Standards
 - 1.3.1 Autonomous Driving Data Chain and Ecology
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- 1.7 HD Map Collection Mileage of Major Companies
- 1.8 Challenges for Development of HD Map
- 1.9 Development Trend of HD Map

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6.6 CAICV HD MAP WG

Summary

Comparison between Foreign HD Map Companies

Comparison between Chinese HD Map Companies

Distribution of Foreign and Chinese HD Map Companies

HD Map Industry Investment and Cooperation Relationship

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