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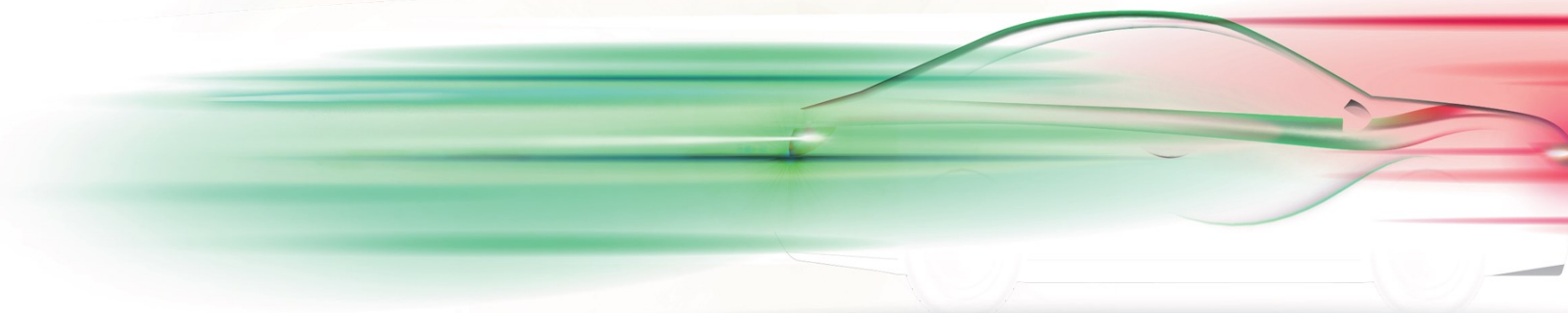
Ministero degli Affari Esteri
e della Cooperazione Internazionale



ITALIAN TRADE AGENCY

ICE - Agenzia per la promozione all'estero e
l'internazionalizzazione delle imprese italiane
意大利对外贸易委员会

China Auto Market Monthly Report 2024



ITA Guangzhou

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- **Analysis Report on China's Auto Parts Export Market**
- **Analysis Report on the Chinese Automotive Lighting Market**

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- **Analysis of Auto Color-Changing Film**
- **Current Status and Development Trends of Customized Modified Vehicles Consumption in China (2023-2024)**
- **Addressing Core User Needs, Accurately Identifying Issues, and Presenting Improvement Suggestions**
- **NEV Development Analysis & Auto Industry Investment Opportunities from Different Countries**

Charpter 1: China Auto Market Monthly Report- July & September

1: China Auto Market Overview

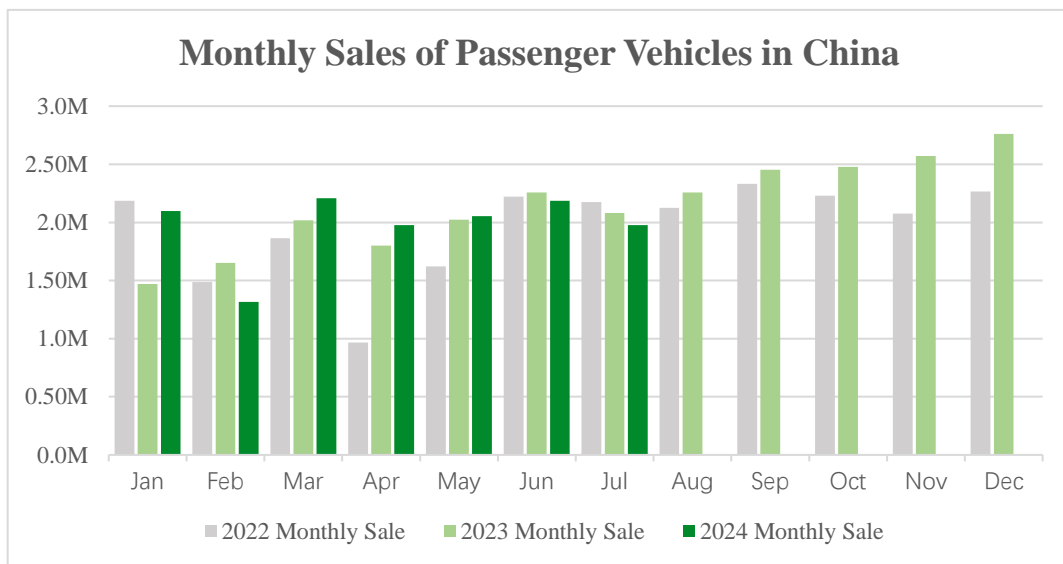
2: OEM & Auto Technology Market

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- **Analysis Report on China's Auto Parts Export Market**
- **Analysis Report on the Chinese Automotive Lighting Market**

China Domestic Automobile Market Data

Passenger Vehicles Market Data in China



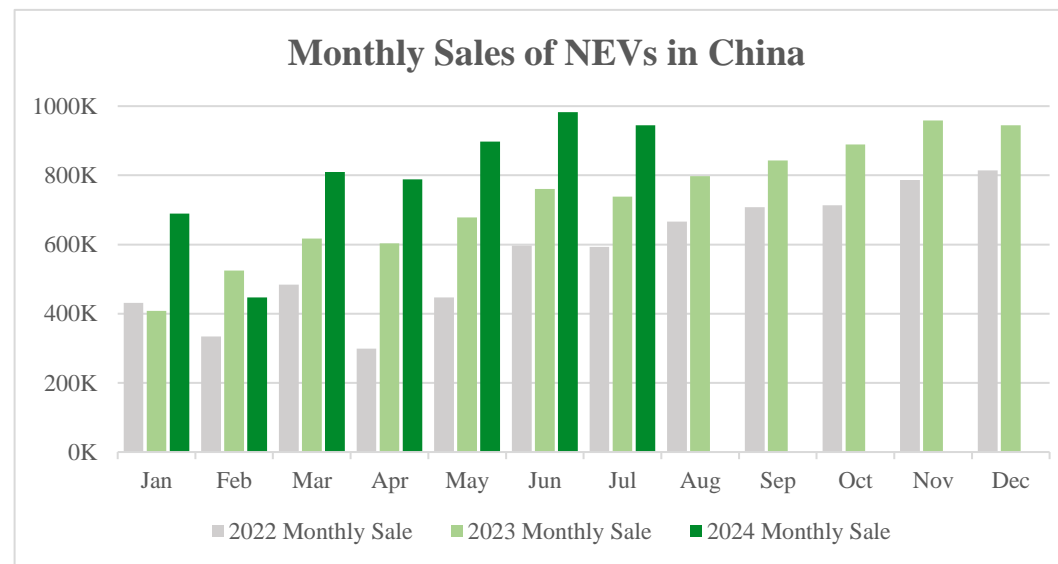
Monthly Sales Figure of Passenger Vehicles in China

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022 Monthly Sale	2.19M	1.49M	1.86M	0.97M	1.62M	2.22M	2.17M	2.13M	2.33M	2.23M	2.07M	2.27M
2023 Monthly Sale	1.47M	1.65M	2.02M	1.80M	2.02M	2.26M	2.08M	2.26M	2.45M	2.48M	2.57M	2.76M
2024 Monthly Sale	2.10M	1.32M	2.21M	1.98M	2.05M	2.19M	1.98M					

Comment

In July, the nationwide production of passenger cars was 1.992 million units, marking a year-on-year decrease of 5.7% and a month-on-month decrease of 7.5%. Sales totaled 1.976 million units, down 5.2% year-on-year and down 9.5% month-on-month.

NEVs Market Data in China



Monthly Sales Figure of NEVs in China

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022 Monthly Sale	431K	334K	484K	299K	447K	596K	593K	666K	708K	714K	786K	814K
2023 Monthly Sale	408K	525K	618K	604K	678K	761K	738K	798K	843K	889K	959K	945K
2024 Monthly Sale	689K	447K	810K	788K	897K	983K	945K					

Comment

In July, the production of new energy passenger cars reached 933,000 units, representing a year-on-year increase of 21.7% and a month-on-month increase of 0.0%. Sales totaled 945,000 units, up 27.6% year-on-year and up 3.6% month-on-month.

China Auto Market Overview

Passenger Vehicles Market Data in China

Jul 2024 Top 10 Retailed Selling Manufacturers of Passenger Vehicles

Rank	Brands	Sales	% YoY	% Share
1	BYD	312K	35.0%	18.1%
2	Geely	118K	3.8%	6.9%
3	FAW-VW	114K	-22.6%	6.6%
4	Chery	98K	51.0%	5.7%
5	SAIC-VW	88K	-11.8%	5.1%
6	Chang'an	86K	-27.2%	5.0%
7	FAW-Toyota	66K	4.7%	3.8%
8	GAC-Toyota	59K	-17.1%	3.4%
9	GWM	55K	-2.6%	3.2%
10	Li Auto	51K	49.4%	3.0%

Jan-Jul 2024 Top 10 Retailed Selling Manufacturers of Passenger Vehicles

Rank	Brands	Sales	% YoY	% Share
1	BYD	1700K	22.7%	14.7%
2	FAW-VW	886K	-10.2%	7.7%
3	Geely	877K	30.2%	7.6%
4	Chang'an	736K	-1.7%	6.4%
5	SAIC-VW	599K	-5.3%	5.2%
6	Chery	597K	67.5%	5.2%
7	GAC-Toyota	421K	-15.9%	3.6%
8	FAW-Toyota	390K	-9.6%	3.4%
9	BMW	368K	-6.4%	3.2%
10	NISSAN	365K	-6.9%	3.2%

China Auto Market Overview

NEVs Market Data in China

Jul 2024 Top 10 Retailed Selling Manufacturers of NEVs

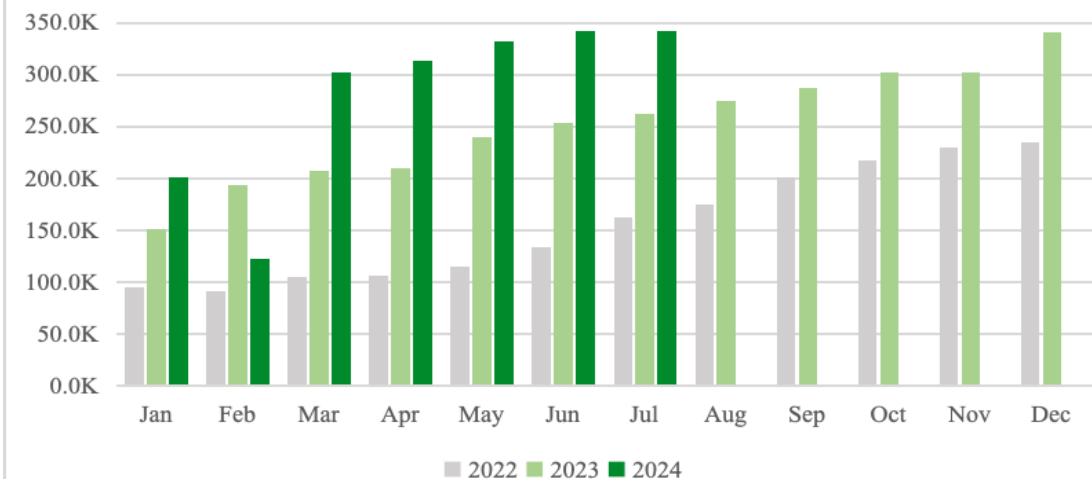
Rank	Brands	Sales	% YoY	% Share
1	BYD	312K	35.0%	35.5%
2	Geely	57K	62.8%	6.5%
3	Li Auto	51K	49.4%	5.8%
4	Tesla-CN	46K	47.1%	5.3%
5	Chang'an	44K	23.9%	5.0%
6	SGMW	42K	20.3%	4.8%
7	SERES	40K	826.7%	4.5%
8	Chery	34K	292.1%	3.8%
9	GAC-Aion	33K	-27.1%	3.7%
10	Leapmotor	22K	54.1%	2.5%

Jan-Jul 2024 Top 10 Retailed Selling Manufacturers of NEVs

Rank	Brands	Sales	% YoY	% Share
1	BYD	1700K	22.7%	34.1%
2	Geely	364K	107.1%	7.3%
3	Tesla-CN	325K	-0.3%	6.5%
4	Chang'an	308K	80.3%	6.2%
5	SGMW	254K	19.8%	5.1%
6	Li Auto	240K	38.5%	4.8%
7	SERES	220K	631.5%	4.4%
8	GAC-Aion	194K	-23.7%	3.9%
9	Chery	152K	205.2%	3.1%
10	GWM	140K	31.4%	2.8%

China's Major Domestic Manufacturers Data: BYD

Trending of BYD Monthly Sales



Monthly Sales Figure of BYD

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	95.4K	91.1K	104.9K	106.0K	114.9K	134.0K	162.5K	174.9K	201.3K	217.8K	230.4K	235.2K
2023	151.3K	193.7K	207.1K	210.3K	240.2K	253.0K	262.2K	274.4K	287.5K	301.8K	301.9K	341.1K
2024	201.5K	122.3K	302.5K	313.2K	331.8K	341.7K	342.4K					

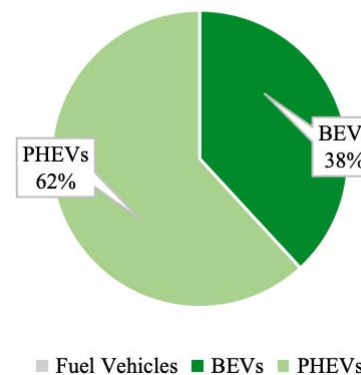


According to data released by BYD Group, the company sold 342,400 vehicles (including exports) in July 2024, reflecting a year-on-year increase of 30.6%. From January to July, BYD's cumulative vehicle sales reached 1,955,400 units, marking a year-on-year increase of 28.83%.

In July, BYD's total installed capacity for new energy vehicle power batteries and energy storage batteries was approximately 16.519 GWh, with a cumulative installed capacity of around 89.075 GWh for 2024.

In July, BYD's overseas sales of new energy passenger cars totaled 30,014 units.

Jul EVs % Share



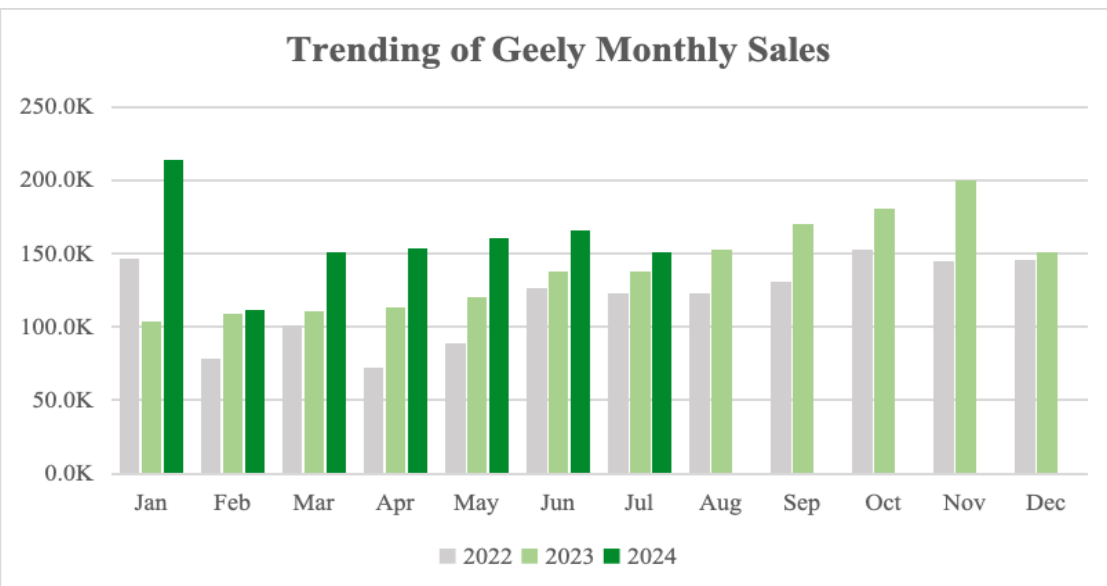
Jul 2024 Types of Passenger Vehicles

Types	May Sales	% Share
Fuel Vehicles	0	0.0%
BEVs	130.0K	38.1%
PHEVs	210.8K	61.9%

China Auto Market Overview

China's Major Domestic Manufacturers Data: Geely Group

Trending of Geely Monthly Sales



Monthly Sales Figure of Geely Group

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	146.4K	78.5K	101.2K	72.2K	89.1K	126.6K	122.6K	122.6K	130.5K	152.3K	145.1K	146.0K
2023	103.5K	108.7K	110.3K	113.6K	120.1K	137.9K	138.1K	152.6K	170.5K	180.7K	200.1K	150.5K
2024	213.5K	111.4K	150.8K	153.3K	160.7K	166.1K	150.8K					



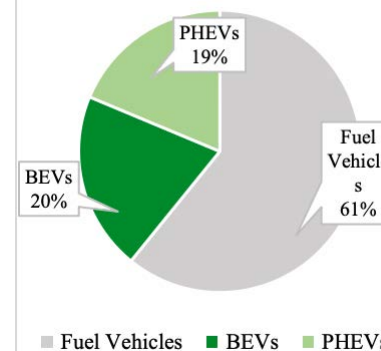
According to data released by Geely Group, the company sold 150,800 vehicles in July 2024, representing a year-on-year increase of 9.2%.

From January to July, Geely's cumulative vehicle sales reached 1,106,500 units, marking a 33% increase compared to the same period last year.

In July, Geely's vehicle exports totaled 32,382 units, up 65% year-on-year.

All of the Group's brands showed significant growth compared to the same period last year.

Jul EVs % Share



Jul 2024 Performance of Brands Under Geely

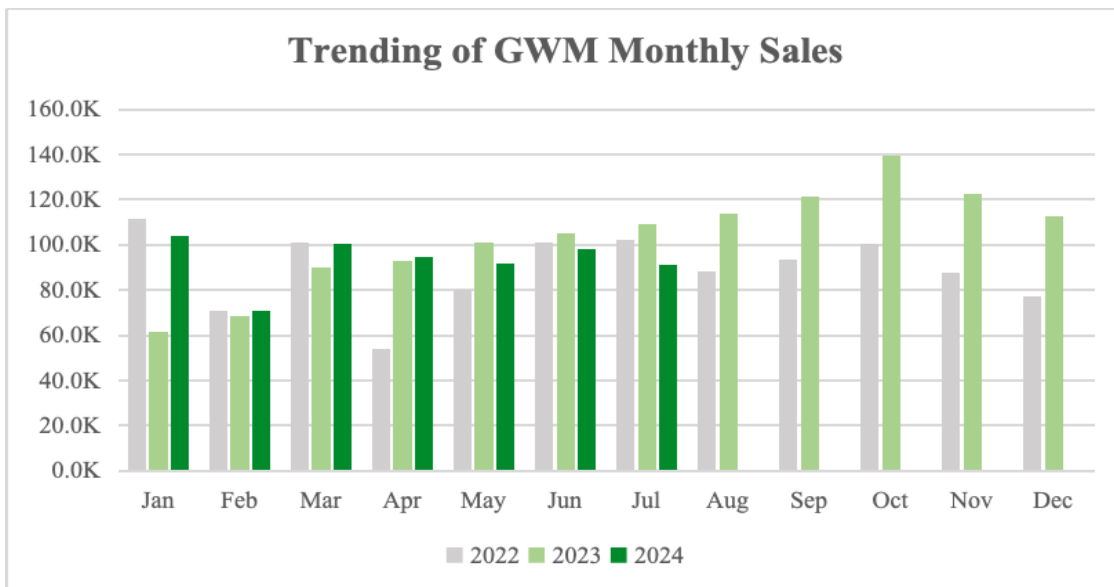
Brands	Sales	% YoY	% Share
Geely	113.9K	8.0%	75.5%
Lynk&Co	21.3K	24.0%	14.1%
Zeekr	15.7K	30.0%	10.4%

China Auto Market Overview



China's Major Domestic Manufacturers Data: GMW

Trending of GWM Monthly Sales



Monthly Sales Figure of GWM Group

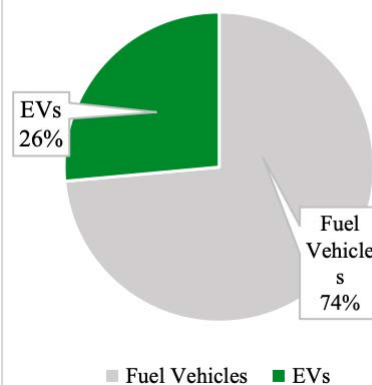
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	111.8K	70.8K	100.9K	53.8K	80.1K	101.2K	101.9K	88.2K	93.6K	100.2K	87.6K	77.4K
2023	61.5K	68.2K	90.2K	93.1K	101.0K	105.0K	109.1K	114.1K	121.6K	139.2K	122.8K	112.5K
2024	104.0K	71.0K	100.3K	94.8K	91.5K	98.1K	91.3K					

According to data released by Great Wall Motor Co., Ltd., the company's total vehicle sales in July 2024 amounted to 91,300 units (including exports), representing a year-on-year decrease of 16.32% and a month-on-month decrease of 6.93%. From January to July, the cumulative sales reached 651,000 units, reflecting a year-on-year increase of 3.6%.

In July, Great Wall Motor's sales of new energy vehicles totaled 24,145 units, with cumulative sales of 156,519 units from January to July.

In July, the company's overseas sales were 38,185 units, with cumulative overseas sales of 239,685 units from January to July.

Jul EVs % Share



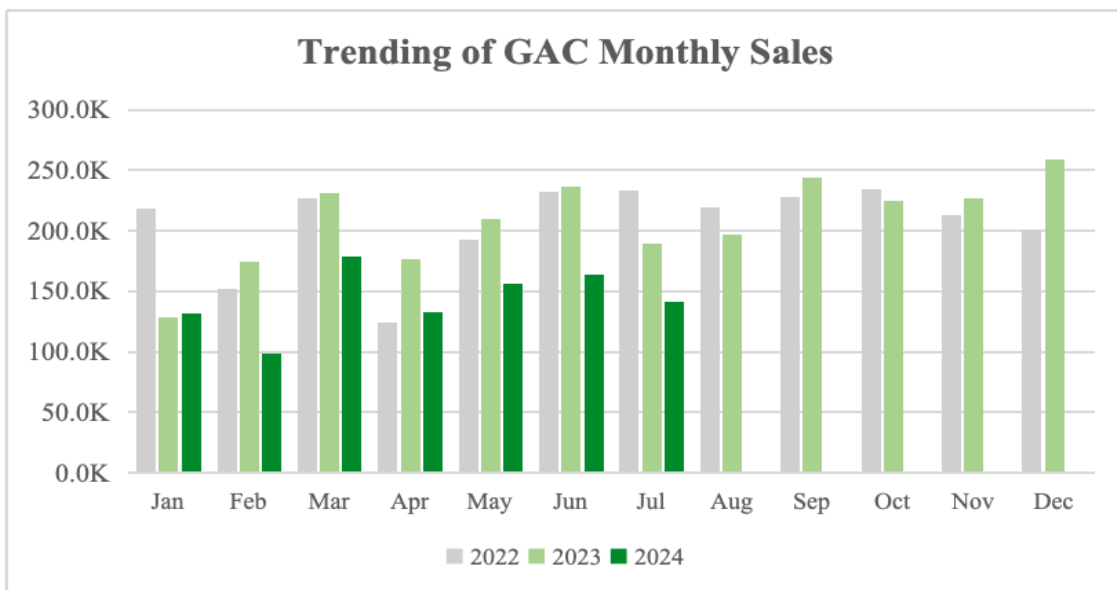
Jul 2024 Performance of Brands Under GWM

Brands	Sales	% YoY	% Share
Haval	52.9K	-15.9%	58.0%
WEY	2.8K	-58.4%	3.0%
GWM Pickups	12.0K	-24.1%	13.2%
Ora	4.8K	-52.8%	5.2%
Tank	18.7K	38.5%	20.5%
Others	0.1K	244.0%	0.1%

China Auto Market Overview



China's Major Domestic Manufacturers Data: GAC



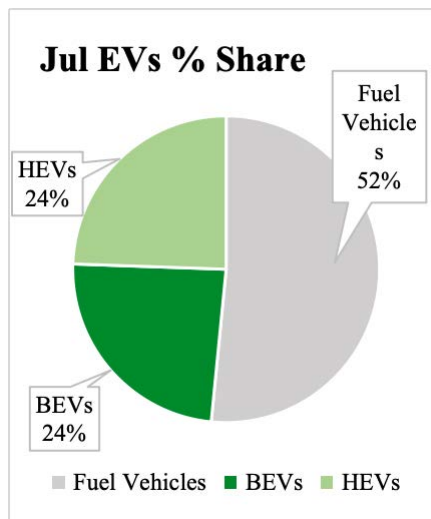
Monthly Sales Figure of GAC Group

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	218.6K	151.9K	227.5K	124.3K	192.4K	232.5K	233.6K	219.3K	228.1K	234.8K	212.7K	199.7K
2023	128.4K	175.1K	231.7K	177.2K	209.6K	236.2K	189.2K	196.8K	243.6K	224.4K	227.1K	259.1K
2024	132.0K	98.4K	179.3K	133.3K	156.5K	163.5K	141.2K					

According to data released by Guangzhou Automobile Group Co., Ltd., the company's vehicle production in July 2024 was 156,816 units, representing a year-on-year decrease of 9.14%. The cumulative production for the year to date stands at 1,016,286 units, down 25.79% year-on-year.

In July, vehicle sales totaled 141,196 units, marking a year-on-year decrease of 25.37%. The cumulative sales for the year to date reached 1,004,234 units, reflecting a year-on-year decrease of 25.83%.

In July, the combined sales of GAC Toyota and GAC Honda accounted for 61.6% of the total sales for the month.



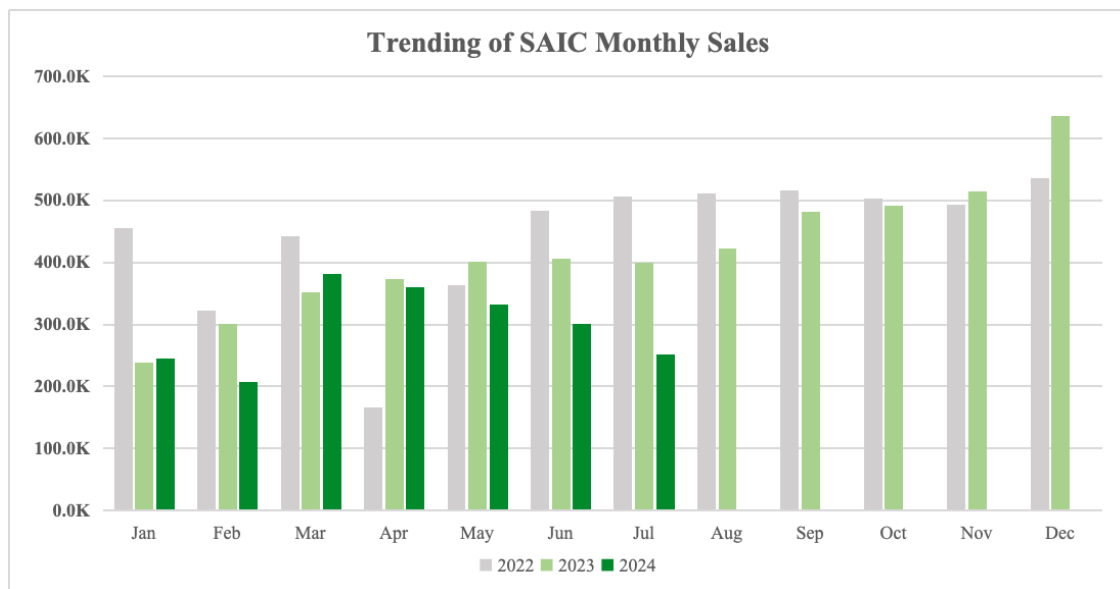
Jul 2024 Performance of Brands Under GAC

Brands	Sales	% YoY	% Share
GAC-Honda	33.3K	-20.8%	23.6%
GAC-Toyota	53.6K	-23.4%	38.0%
GAC-Trumpchi	25.8K	-17.7%	18.3%
GAC-Aion	28.3K	-37.2%	20.0%
Others	0.2K	-70.6%	0.2%

China Auto Market Overview



China's Major Domestic Manufacturers Data: SAIC



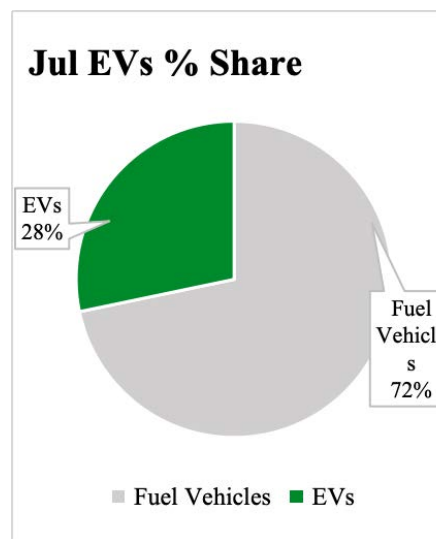
Monthly Sales Figure of SAIC Motors

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	455.6K	322.0K	443.0K	166.6K	363.6K	483.6K	506.8K	512.1K	517.1K	503.3K	492.7K	536.4K
2023	238.0K	301.3K	351.8K	373.9K	400.8K	405.7K	400.2K	423.3K	482.2K	491.4K	515.1K	637.0K
2024	244.9K	207.8K	381.4K	360.0K	332.2K	300.5K	251.5K					

According to data released by Shanghai Automotive Industry Corporation (SAIC), the company's vehicle production in July 2024 was 237,524 units, representing a year-on-year decrease of 42.57%. The cumulative production for January to July reached 2,050,814 units, down 18.64% year-on-year.

In July, vehicle sales totaled 251,484 units, marking a year-on-year decrease of 37.16%. The cumulative sales from January to July were 2,078,438 units, reflecting a year-on-year decrease of 15.92%.

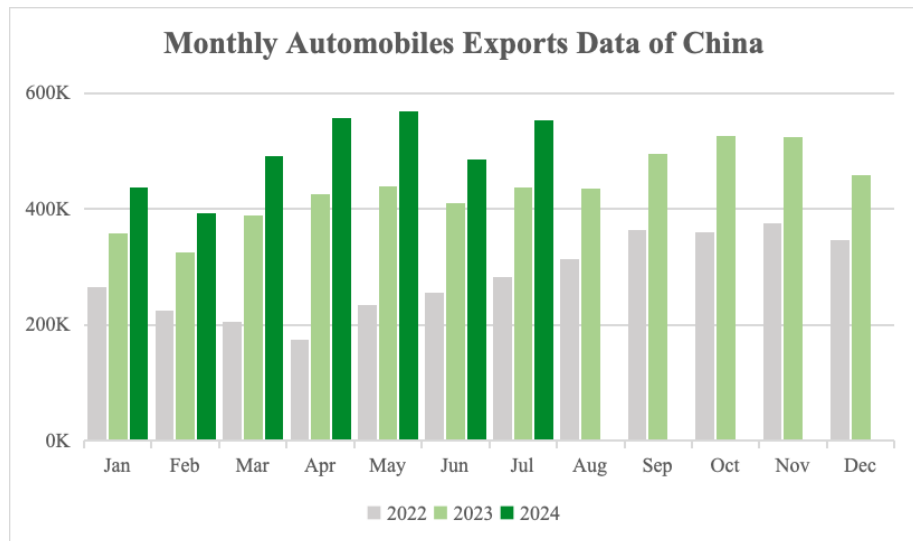
From January to July, sales of new energy vehicles totaled 532,133 units, an increase of 14.91% year-on-year. Overseas sales reached 569,634 units, a decrease of 9.65% year-on-year.



Jul 2024 Performance of Brands Under SAIC

Brands	Sales	% YoY	% Share
SAIC-VW	81.0K	-18.2%	32.2%
SAIC-GM	15.0K	-82.4%	6.0%
SAIC	50.3K	-30.0%	20.0%
SGMW	76.0K	-31.7%	30.2%
SAIC-Maxus	14.3K	-23.34%	5.7%
IM Motors	4.2K	142.7%	1.7%
SAIC Motor-CP	2.2K	2.0%	0.9%
PT SGMW Motor Indonesia	1.7K	-16.6%	0.7%
MG Motor India	4.6K	-8.9%	1.8%
Others	2.2K	-30.9%	0.9%

Exported Vehicles Data of China



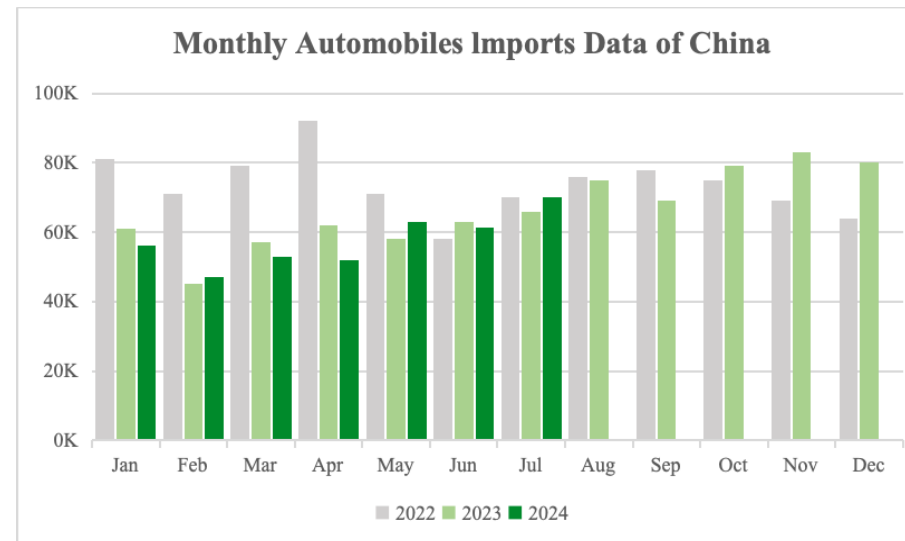
Monthly Automobiles Exports Data of China

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	266K	224K	205K	175K	234K	255K	283K	313K	363K	359K	375K	347K
2023	358K	325K	388K	425K	439K	410K	438K	436K	496K	526K	524K	459K
2024	437K	393K	491K	556K	569K	486K	553K					

Comment

In July, China's automobile exports totaled 552,518 units, representing a year-on-year increase of 26.4% and a month-on-month increase of 13.64%.

Imported Vehicles Data of China



Monthly Automobiles Imports Data of China

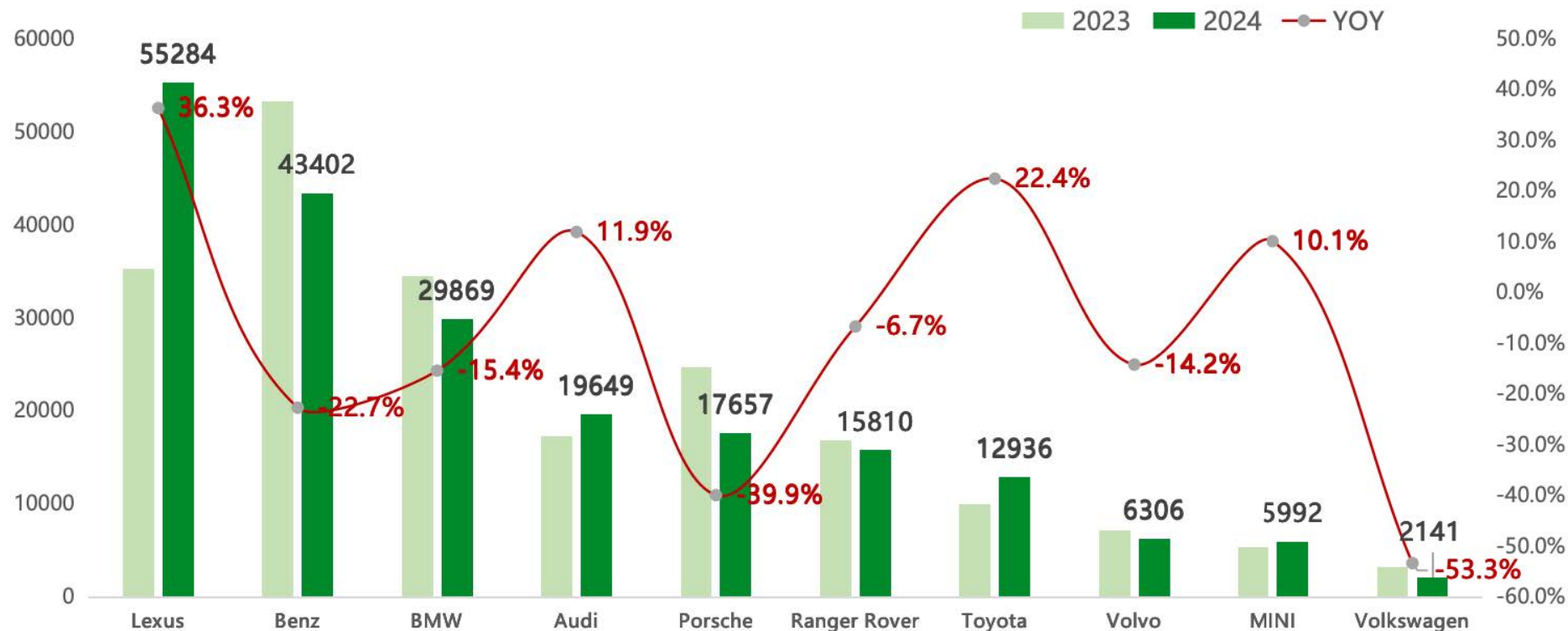
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	81K	71K	79K	92K	71K	58K	70K	76K	78K	75K	69K	64K
2023	61K	45K	57K	62K	58K	63K	66K	75K	69K	79K	83K	80K
2024	56K	47K	53K	52K	63K	61K	70K					

Comment

In July, China's automobile imports totaled 70,000 units, marking a year-on-year increase of 6.30% and a month-on-month increase of 14.83%.

China Auto Market Overview

Jan-Jul 2024 | Top 10 Passenger Vehicle Imports by Brand and YOY Growth Rate in China



From January to July 2024, among the top ten brands, only two brands—Lexus and Toyota—achieved positive growth. During this period, Toyota sold a total of 20,766 units, marking the highest growth rate at 30.2%. The domestic automotive market’s price war has also impacted the import car market; for example, Porsche experienced a 37% decline in sales from the beginning of the year to July compared to the same period last year. Meanwhile, the brand with the largest sales decline from January to July was Volkswagen, with a year-on-year decrease of 55.1%.

Government Policy Update

Central Government's Policies

National Development and Reform Commission: Encouraging the replacement of fuel-powered heavy-duty trucks with pure electric heavy-duty trucks and battery-swapping heavy-duty trucks in Inner Mongolia.

On April 3, the National Development and Reform Commission along with other departments, issued the "Notice on Several Policy Measures to Support the Green, Low-Carbon, and High-Quality Development in Inner Mongolia." Regarding hydrogen energy, charging stations, and new energy vehicles, the notice clearly states: Accelerate the green and low-carbon transformation of transportation. Support Inner Mongolia in building a low-carbon transportation system and implementing a public transportation priority development strategy, improving a modern transportation system that encourages green travel. Promote new energy and clean energy transportation tools as appropriate, encourage the replacement of fuel-powered heavy-duty trucks with pure electric heavy-duty trucks and battery-swapping heavy-duty trucks, and strengthen the construction of dedicated railways in mining areas. Support Inner Mongolia in improving the infrastructure system of charging and battery-swapping stations, hydrogen refueling stations, and enhancing the deep integration of transportation, power, and energy facilities.



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关于支持内蒙古绿色低碳高质量发展若干政策措施的通知(发改环资〔2024〕379号)

发布时间: 2024/04/03 来源: 环资司 [打印] 微博 微信

国家发展改革委等部门关于支持内蒙古绿色低碳高质量发展若干政策措施的通知

发改环资〔2024〕379号

内蒙古自治区发展改革委、工业和信息化厅、自然资源厅、生态环境厅、能源局、林草局:

为深入贯彻落实《国务院关于推动内蒙古高质量发展 奋力书写中国式现代化新篇章的意见》(国发〔2023〕16号), 支持内蒙古大力发展以绿色低碳为鲜明特征的新质生产力, 进一步推动内蒙古绿色低碳高质量发展, 提出以下措施。

一、加快能源绿色低碳转型

(一) 以更大力度发展新能源。以库布其、乌兰布和、腾格里、巴丹吉林沙漠为重点, 规划建设大型风电光伏基地, 同步开展规划环评, 切实发挥规划引领作用, 积极发展光热发电。重点在沙漠、戈壁、荒漠地区、边境地区、采煤沉陷区、露天矿排土场等合理布局新能源项目。鼓励央地企业合作、各类所有制企业开展合作, 联合建设运营风光基地。

Government Announcement Screenshot

OEM & Auto Technology Market

Central Government's Policies

The Ministry of Industry and Information Technology, along with six other departments, jointly issued the "Implementation Plan for Promoting Equipment Renewal in the Industrial Sector."

On April 9, the Ministry of Industry and Information Technology, the National Development and Reform Commission, the Ministry of Finance, and four other departments jointly issued the "Implementation Plan for Promoting Equipment Renewal in the Industrial Sector." The plan aims to achieve the following by 2027:

- The scale of investment in industrial equipment will increase by more than 25% compared to 2023.
- The adoption rate of digital R&D design tools and the numerical control rate of key processes in large-scale industrial enterprises will exceed 90% and 75%, respectively.
- The digital transformation of large-scale industrial enterprises will be fully covered in major industrial provinces, cities, and key industrial parks.

This plan proposes four main tasks: updating advanced equipment, transforming digitally, promoting green equipment, and improving safety levels. It clearly states that for industries with generally low to mid-level production equipment, outdated and inefficient equipment, as well as old equipment that has exceeded its service life, should be eliminated quickly. For industries with generally mid to high-level production equipment, such as aviation, photovoltaics, power batteries, and biological fermentation, companies are encouraged to update their equipment to more advanced, high-tech, efficient, and reliable options.



Screenshot of the Announcement from the Ministry of Industry and Information Technology

Central Government's Policies

The Ministry of Commerce, the Ministry of Finance, and five other departments jointly issued the "Implementation Details of the Subsidy Policy for Vehicle Trade-in."

On April 26, the Ministry of Commerce, the Ministry of Finance, and five other departments jointly issued the "Implementation Details of the Subsidy Policy for Vehicle Trade-in" (hereinafter referred to as the "Implementation Details"). This move is in alignment with the "Notice from the State Council on the Issuance of the Action Plan for Promoting Large-scale Equipment Renewal and the Trade-in of Consumer Goods" (State Council [2024] No. 7). In accordance with the "Notice from the Ministry of Commerce and 14 Other Departments on the Issuance of the Action Plan for Promoting the Trade-in of Consumer Goods" (Commerce Consumption [2024] No. 58), these measures aim to effectively implement the vehicle trade-in subsidy policy.



Screenshot of the Announcement from the Ministry of Commerce

Central Government's Policies

Four Departments: Promote the Integration of New Energy Vehicles into New Power Systems and Advance the Coordinated Development of Urban Smart Infrastructure and Connected Vehicles

On May 20, the National Development and Reform Commission, the National Data Administration, the Ministry of Finance, and the Ministry of Natural Resources jointly issued the "Guiding Opinions on Deepening the Development of Smart Cities and Promoting the Digital Transformation of Cities." The document proposes to coordinate the construction of urban computing power networks to efficiently match urban computing power demands with national hub node resources, effectively reducing the cost of using computing power. It also suggests building infrastructure for data circulation and utilization to promote trusted and controllable data flow between government departments, between the government and enterprises, and across different links in the industrial chain. Additionally, the document advocates for the integration of new energy vehicles into new power systems and the coordinated development of urban smart infrastructure and intelligent connected vehicles.



Screenshot of the Announcement from the National Development and Reform Commission

Central Government's Policies

The State Council: Gradually Remove Restrictions on the Purchase of New Energy Vehicles Nationwide

On May 29, the State Council website published the "Notice on Issuing the 2024-2025 Energy Conservation and Carbon Reduction Action Plan." The document highlights the need to accelerate the elimination of old vehicles and raise the fuel consumption standards for operational vehicles. It also proposes gradually removing restrictions on the purchase of new energy vehicles across various regions and implementing policies to facilitate the use of new energy vehicles. Additionally, it aims to promote the electrification of public sector vehicles, orderly introduce new energy medium and heavy-duty trucks, and develop zero-emission freight fleets. The plan includes phasing out old transport ships and initiating pilot projects for the electrification of coastal and inland river vessels. By the end of 2025, the carbon dioxide emission intensity in the transportation sector is expected to decrease by 5% compared to 2020.



Government Announcement Screenshot

Central Government's Policies

The central government has allocated 6.44 billion yuan in subsidies for vehicle trade-ins

The Ministry of Finance recently disbursed 6.44 billion yuan in fiscal interest subsidies and rewards for the 2024 vehicle trade-in program.

According to the notification issued by the Ministry of Finance regarding the allocation of central government subsidies for vehicle trade-ins in 2024, the funds are recorded under the 2024 government revenue and expenditure category “1100208 Settlement Subsidy Income,” with the project name “System Settlement – Vehicle Trade-In Subsidy.” The Ministry of Finance requires relevant local departments to strengthen fund and performance management, enforce strict controls, and ensure that the funds are promptly, safely, and effectively allocated.



Government Announcement Screenshot

Central Government's Policies

■ Four departments have systematically launched a pilot program for the admission and road use of intelligent connected vehicles

On June 4th, the Ministry of Industry and Information Technology, along with three other departments, initiated a systematic pilot program for the admission and road use of intelligent connected vehicles. Moving forward, these departments will advance the pilot program in line with its overall requirements and objectives. They will use the empirical data gathered from the pilot to build management experience, support the formulation and revision of relevant laws, regulations, and technical standards, and accelerate the development of a comprehensive system for intelligent connected vehicle production admission and road traffic safety management. This aims to promote the high-quality development of China's intelligent connected new energy vehicle industry.



Government Announcement Screenshot

Central Government's Policies

■ Notice from the Ministry of Transport and 12 other departments on the issuance of the “Action Plan for the Large-Scale Equipment Renewal in Transportation”

On June 7th, the Ministry of Transport, along with twelve other departments, issued the “Action Plan for the Large-Scale Equipment Renewal in Transportation.” The plan outlines several objectives to be achieved by 2028, including:

- Significant improvements in the structure of shipping capacity.
- Continued promotion and application of new energy buses.
- Phasing out of old locomotives in key areas, with large-scale replacement by new energy locomotives.
- Widespread adoption of intelligent security inspection equipment for mail and express deliveries, significantly enhancing security capabilities in the delivery sector.
- Further advancement in the application of Beidou satellite terminals.
- Continuous reduction in carbon emission intensity and pollutant emission intensity in the transportation industry, with a further decrease in total pollutant emissions.



Government Announcement Screenshot

Central Government's Policies

The National Development and Reform Commission (NDRC) and other departments: Expand new scenarios for automobile consumption and encourage cities with purchase restrictions to relax vehicle purchase limitations

On June 24th, the National Development and Reform Commission (NDRC) and other departments issued the “Measures for Creating New Consumption Scenarios and Cultivating New Growth Points in Consumption.” The measures include:

- Expanding new scenarios for automobile consumption.
- Encouraging cities with vehicle purchase restrictions to relax these limits and issue additional purchase quotas.
- Coordinating central and local government funds to support the scrapping and replacement of eligible old vehicles.
- Promoting vehicle replacement and upgrading in areas where conditions permit.



Government Announcement Screenshot

Central Government's Policies

The National Development and Reform Commission (NDRC) and other departments: Expand new scenarios for automobile consumption and encourage cities with purchase restrictions to relax vehicle purchase limitations

- Expanding the pilot scope for the full electrification of vehicles in the public sector.
- Steadily advancing the commercialization of autonomous driving and creating advanced intelligent driving scenarios.
- Implementing pilot projects for the integration of intelligent vehicle, road, and cloud technologies.
- Conducting pilot projects for urban automobile circulation and consumption reforms.
- Enriching the automotive aftermarket by integrating car events, self-driving camping, automotive culture experiences, car modifications, and car rentals, to further promote convenient and reliable transactions in the used car market.



Government Announcement Screenshot

Central Government's Policies

■ Four departments have issued the “National Comprehensive Standardization System Construction Guide for the Artificial Intelligence Industry (2024 Edition).”

On July 2nd, the Ministry of Industry and Information Technology, along with three other departments, issued the “National Comprehensive Standardization System Construction Guide for the Artificial Intelligence Industry (2024 Edition).” By 2026, the guide aims to achieve the following goals:

- Enhance the synergy between standards and technological innovation in the industry.
- Develop more than 50 new national and industry standards, accelerating the formation of a standard system that supports high-quality development in the artificial intelligence sector.
- Over 1,000 companies will implement and promote these standards, highlighting their effectiveness in driving innovation and development.
- Participate in the formulation of over 20 international standards to promote the global development of the artificial intelligence industry.



Government Announcement Screenshot

Central Government's Policies

Five departments have designated 20 cities (or city clusters) as pilot cities for the integrated application of intelligent connected vehicles, including vehicle, road, and cloud technologies

On July 3rd, the Ministry of Industry and Information Technology, the Ministry of Public Security, the Ministry of Natural Resources, the Ministry of Housing and Urban-Rural Development, and the Ministry of Transport announced the list of pilot cities for the integrated application of intelligent connected vehicles, including vehicle, road, and cloud technologies.

The 20 designated cities (or city clusters) are:

Beijing, Shanghai, Chongqing, Ordos, Shenyang, Changchun, Nanjing, Suzhou, Wuxi, Hangzhou-Tongxiang-Deqing City Cluster, Hefei, Fuzhou, Jinan, Wuhan, Shiyuan, Changsha, Guangzhou, Shenzhen, Haikou-Sanya-Qionghai City Cluster, Chengdu



Government Announcement Screenshot

Local Government's Policies

The General Office of the Guangdong Provincial Government has issued a notice regarding the “Several Measures for Empowering Various Industries with Artificial Intelligence in Guangdong Province.”

On June 6th, Guangdong Province released several measures for empowering various industries with artificial intelligence. The measures include:

- Supporting new energy vehicles with intelligent connectivity.
- Developing intelligent connected vehicle terminals that integrate functions such as safe travel, smart living, and mobile office.
- Advancing intelligent connected terminals like autonomous taxis, smart buses, and intelligent heavy trucks, and encouraging the application of integrated and intelligent transportation services.
- Aiming for an annual production of over 3.5 million new energy vehicles by 2027.

发布机构: 广东省人民政府办公厅 **成文日期:** 2024-05-26

标题: 广东省人民政府办公厅印发广东省关于人工智能赋能千行百业若干措施的通知

文号: 粤办函〔2024〕88号 **发布日期:** 2024-06-06

时间: 2024-06-06 08:59:34 来源: 本网 【打印】 收藏 【字体: 大 中 小】 分享到: 

广东省人民政府办公厅印发广东省关于人工智能赋能千行百业若干措施的通知

粤办函〔2024〕88号

各地级以上市人民政府，省政府各部门、各直属机构：

《广东省关于人工智能赋能千行百业的若干措施》已经省人民政府同意，现印发给你们，请认真贯彻执行。执行过程中遇到的问题，请径向省工业和信息化厅反映。

省政府办公厅
2024年5月26日

Government Announcement Screenshot

Local Government's Policies

Wuhan has introduced measures to support the high-quality development of the low-altitude economy

Recently, the Wuhan Municipal Government released the “Several Measures to Support the High-Quality Development of the Low-Altitude Economy.” The measures include:

- Supporting the establishment of major low-altitude economy projects.
- Supporting the construction of low-altitude infrastructure.
- Supporting the formulation of standards and regulations for the low-altitude economy.
- Supporting the establishment of low-altitude pilot routes.
- Supporting companies in enhancing their technological innovation capabilities.
- Strengthening financial support for the low-altitude economy industry.
- Supporting the recruitment and cultivation of talent in the low-altitude economy sector.
- Supporting investment in technological upgrades by low-altitude economy enterprises.
- Promoting the clustering of the low-altitude economy industry.

 武汉市人民政府规范性文件

市人民政府关于印发武汉市支持低空经济高质量发展若干措施的通知

(武政规〔2024〕8号)

各区人民政府，市人民政府各部门：

经研究，现将《武汉市支持低空经济高质量发展的若干措施》印发给你们，请认真遵照执行。

武汉市人民政府

2024年5月22日

Government Announcement Screenshot

Local Government's Policies

■ Wuhan has introduced measures to support the high-quality development of the low-altitude economy

Wuhan will provide a settlement reward of up to 10 million yuan, at 5% of the actual registered capital, to newly established low-altitude economy enterprises engaged in the research and development, manufacturing, and commercial operation of electric vertical take-off and landing aircraft and large and medium-sized unmanned aerial vehicles, provided their registered capital is above 10 million yuan and their output value (revenue) exceeds 20 million yuan in the second year.

 武汉市人民政府规范性文件

市人民政府关于印发武汉市支持低空经济高质量发展若干措施的通知

(武政规〔2024〕8号)

各区人民政府，市人民政府各部门：

经研究，现将《武汉市支持低空经济高质量发展的若干措施》印发给你们，请认真遵照执行。

武汉市人民政府

2024年5月22日

Government Announcement Screenshot

Local Government's Policies

Chongqing: By the end of 2025, more than 2,000 ultra-fast charging stations and over 4,000 ultra-fast charging piles will be built.

On April 3, the General Office of the Chongqing Municipal People's Government issued the "Notice on Issuing the Chongqing New Energy Vehicle Convenient Ultra-Fast Charging Action Plan (2024-2025)" (hereinafter referred to as the "Plan").

The "Plan" clearly outlines development goals: By the end of 2025, Chongqing aims to achieve the synergy between new energy vehicles and the ultra-fast charging network, integrating with the power grid. The city will establish a convenient ultra-fast charging ecosystem that is well-distributed, easy to access, intelligent, efficient, fully equipped, and technologically advanced, promoting the coordinated high-quality development of the new energy vehicle industry across the city. By then, more than 2,000 ultra-fast charging stations and over 4,000 ultra-fast charging piles will be built.

Chongqing will follow the construction principle of "intelligent and convenient, appropriately ahead of demand" to achieve dense distribution of ultra-fast charging infrastructure in the central urban area, with 1,340 ultra-fast charging stations built by 2025. In the new main urban areas and Wanzhou District, ultra-fast charging infrastructure will be reasonably distributed and cover all scenarios, with 430 stations built. In the northeastern and southeastern regions of Chongqing, basic coverage of ultra-fast charging infrastructure will be achieved, with 100 stations built. Ultra-fast charging infrastructure will be fully covered in highway service areas, with 170 stations built.



The screenshot shows the official website of the Chongqing Municipal People's Government. The header includes the government's name in Chinese and English, along with a search bar. The main navigation menu features links for Home, News, Government Openness, and Government Services. Below the navigation, there is a breadcrumb trail: Home > Government Openness > Government Information Openness Directory > Latest Policies > Other Documents. A table provides details about a specific document:

索引号:	11500000009275780L/2024-00049	主题分类:	其他		
发布机构:	市政府办公厅	成文日期:	2024-03-30	发布日期:	2024-04-03
标题:	重庆市人民政府办公厅关于印发《重庆市新能源汽车便捷超充行动计划（2024—2025年）》的通知				
发文字号:	渝府办发〔2024〕29号	有效性:	有效		

Below the table, the text of the notice is displayed in a large, centered font:

重庆市人民政府办公厅
关于印发《重庆市新能源汽车便捷超充
行动计划（2024—2025年）》的通知
渝府办发〔2024〕29号

Screenshot of the Announcement

Local Government's Policies

Shenzhen has Initiated the Formulation of 195 Standards to Foster New Productive Capacity, Involving Areas such as the Low-altitude Economy

On April 12, the 2024 Shenzhen Local Standards Project Plan was released, initiating 195 local standards projects. To support the "takeoff" of the low-altitude economy, the plan aims to establish and improve basic and management standards in the low-altitude field. It proposes the formulation of 18 local standards, including the "Specifications for the Designation of Civil Unmanned Aircraft Routes" and the "General Requirements for Low-Altitude Airspace Information Security." Additionally, to advance the construction of the "Ultra-Fast Charging City," the plan seeks to accelerate the development of new infrastructure integrating people, vehicles, charging piles, and networks. It includes the formulation of standards such as the "Electrical Design Specifications for Integrated Photovoltaic and Energy Storage Charging Stations" and the "Technical Requirements for Electrochemical Energy Storage Systems in Public Buildings."



Screenshot of the Announcement

Local Government's Policies

Guangdong is Accelerating the development of new Trillion-Yuan Industries and Creating the Nation's First Low-Altitude Economy Application Demonstration Island

On April 18, the People's Government of Panyu District, Guangzhou, and XPeng AeroHT signed the "Framework Agreement for Jointly Promoting the Application of Flying Cars." They jointly released a list of exploration scenarios for the application of flying cars and announced the commencement of infrastructure construction for flying cars.

It is reported that the first batch of four flying car take-off and landing points will be planned and constructed in University Town, along with supporting infrastructure for take-off and landing, parking, energy replenishment, and communication. This will lay a solid foundation for the next steps in the application demonstrations of "low-altitude + commuting," "low-altitude + tourism," and "low-altitude + emergency." The goal is to make Guangzhou University Town the nation's first low-altitude economy application demonstration island. Creating the first low-altitude economy application demonstration island in the country will also accelerate Guangdong's development in the new trillion-yuan "low-altitude economy" sector, positioning it to seize the strategic high ground in the global future industry development.



Screenshot of the Announcement

Local Government's Policies

Shenzhen's Autonomous Driving Open Road Mileage Exceeds 900 Kilometers

On April 28, the Shenzhen Municipal Transportation Bureau officially released the "Sixth Batch of Open Road Catalog for Road Testing and Demonstration Application of Intelligent Connected Vehicles in Shenzhen." This batch includes a total of 43 roads, with a combined length of approximately 106.01 kilometers. As of now, the total mileage of open roads for autonomous driving in the city has reached 944 kilometers, including 67 kilometers of high-speed roads.

The intelligent connected vehicle industry is one of Shenzhen's key development directions under the "20+8" industrial plan. Data shows that in 2023, the added value of Shenzhen's intelligent connected vehicle industry reached 76.31 billion yuan, a year-on-year increase of 38.2%. Currently, China has over 12,000 companies related to autonomous driving, with Shenzhen ranking first with over 1,300 companies. In August last year, the only intelligent connected vehicle specialized test field in the Guangdong-Hong Kong-Macao Greater Bay Area started operations in Pingshan. At the end of January this year, Bao'an District launched an unmanned commercial pilot for intelligent connected vehicles, becoming the first central urban area in the country to carry out an unmanned commercial pilot.

深圳市交通运输局关于印发《深圳市智能网联汽车道路测试与示范应用第六批开放道路目录》的通知

发布时间：2024-04-28 17:35 信息来源：深圳市交通运输局

各有关单位：

根据《深圳市智能网联汽车道路测试与示范应用管理实施细则》（深交规〔2022〕13号）及《深圳市智能网联汽车道路测试开放道路技术要求（试行）》要求，在前期充分调研、论证及征求相关单位意见基础上，我局制定了《深圳市智能网联汽车道路测试与示范应用第六批开放道路目录》，经深圳市智能网联汽车道路测试与示范应用联席工作小组同意，现印发给你们，请遵照执行。

特此通知。

深圳市交通运输局

2024年4月28日

相关附件：

Screenshot of the Announcement

Local Government's Policies

Shandong: Launch Pilot Program for Comprehensive Electrification of Public Sector Vehicles and Accelerate the Construction of Charging Infrastructure

According to news from the Shandong Provincial Government website on May 20, the General Office of the Shandong Provincial People's Government issued the "Opinions on Further Promoting Continuous Improvement in Consumption." The document proposes the following:

- Carry out vehicle trade-in programs, allocate relevant funds to support vehicle scrapping and renewal, and encourage cities with favorable conditions to implement vehicle replacement programs.
- Launch a pilot program for the comprehensive electrification of public sector vehicles and accelerate the construction of charging infrastructure, aiming to have over 700,000 charging piles across the province.
- Improve the time-of-use electricity pricing policy for residential electric vehicle charging piles and exempt operating centralized charging and battery-swapping facilities from basic electricity fees.



The screenshot shows the official website of the Shandong Provincial Government. The header includes the government logo, the name '山东省人民政府' (Shandong Provincial Government), and the tagline '全国一体化在线政务服务平台·山东' (National Integrated Online Government Service Platform · Shandong). Navigation links for '首页' (Home), '要闻动态' (News & Updates), '政务公开' (Government Openness), '政务服务' (Government Services), '政民互动' (Government-Citizen Interaction), and '走进山东' (Discover Shandong) are visible. A search bar is located in the top right corner.

The main content area displays a document titled '山东省人民政府办公厅关于进一步促进消费持续向好的意见' (Opinions on Further Promoting Continuous Improvement in Consumption) issued by the Shandong Provincial Government Office. The document number is '鲁政办字〔2024〕53号' and the date is '2024-05-20'. The text of the announcement is as follows:

各市人民政府，各县（市、区）人民政府，省政府各部门、各直属机构：

为深入贯彻省委、省政府关于加快消费与投资融合，推动内外贸一体化发展的工作部署，现就进一步激发消费潜能，扩大消费需求，促进全省消费持续向好，更多惠及消费者，提出如下意见。

一、总体要求

坚持以习近平新时代中国特色社会主义思想为指导，全面贯彻党的二十大精神，深入落实习近平总书记对山东工作的重要指示要求，坚持稳中求进、以进促稳、先立后破，坚持远近兼顾、协同发力，培育和壮大新型消费，稳定和扩大传统消费，加大优质商品供给，升级服务消费品质，完善消费促进机制，改善消费市场环境，在扩大有效需求上塑造新优势，更好满足人民群众美好生活需要。到2025年，全省社会消费品零售总额保持稳定增长，消费对全

Screenshot of the Announcement

Local Government's Policies

Shenzhen Introduces New Special Support Plans for New Energy Vehicles and Intelligent Connected Vehicles

On June 5th, the “Operational Guidelines for the Special Support Plan for High-Quality Development of New Energy Vehicles and Intelligent Connected Vehicles in Shenzhen” was released by the Shenzhen Municipal Bureau of Industry and Information Technology.

The guidelines will provide targeted support for projects related to industry public service platforms, automotive electronics certification, and industrialization, aiming to enhance the management level and usage efficiency of special funds. This initiative is designed to promote the high-quality development of Shenzhen’s new energy and intelligent connected vehicle industries and accelerate the creation of a “new generation of world-class automotive city.”

Specifically, for qualifying new platforms, funding will be provided up to 30% of the total project investment, with a maximum amount of 10 million yuan. For qualifying existing platforms, funding will be up to 20%-40% of the approved operating costs from the previous year, with a maximum amount of 5 million yuan.



Government Announcement Screenshot

Local Government's Policies

Guangzhou: By 2027, the city's regulated recycling and dismantling of scrapped vehicles is expected to increase twofold compared to 2023.

According to a June 19th announcement on the Guangzhou Municipal Bureau of Commerce's official website, the bureau has issued the "Guangzhou Action Plan for Promoting the Replacement of Old Consumer Goods." The plan aims to : Accelerate the retirement of registered vehicles meeting China IV emission standards and below by 2025. Increase the usage rate of efficient and energy-saving new energy vehicles and hybrid vehicles. Achieve a 50% increase in the regulated recycling and dismantling of scrapped vehicles compared to 2023, reaching 72,000 vehicles. Improve the recycling system by establishing or upgrading 10 green sorting centers. By 2027, the city's regulated recycling and dismantling of scrapped vehicles are expected to double compared to 2023, reaching approximately 80,000 vehicles, accounting for over 10% of the province's total scrapped vehicle recycling volume.



Government Announcement Screenshot

Local Government's Policies

Shandong Province has issued an action plan aiming to drive the scale of the lithium battery industry in the province to exceed 100 billion yuan by 2025.

Recently, the Shandong Provincial Department of Industry and Information Technology, along with other departments, jointly issued the “Action Plan for the High-Quality Development of the Lithium Battery Industry in Shandong Province.” The plan aims to focus on specialization, scaling, and internationalization. It seeks to address key core technologies in lithium batteries, strengthen collaboration with sectors such as new energy vehicles, energy storage, and consumer electronics, and promote the development of the lithium battery industry in the province. By 2025, the goal is to exceed 100 billion yuan in industry scale and establish an industry chain that includes the production of positive and negative electrode materials, separators, electrolytes, battery cells and manufacturing, end-use applications, and dismantling and recycling.



Government Announcement Screenshot

Local Government's Policies

Shenzhen: Build a comprehensive matrix of smart automotive products and accelerate the deployment of intelligent driving and other related products.

On July 30th, the Shenzhen Municipal Bureau of Industry and Information Technology released the “Action Plan for Accelerating the Development of Shenzhen as a Pioneer City in Artificial Intelligence.” The plan includes:

- Strengthening the innovation layout for smart products.
- Leveraging major technology projects to guide research and improve the “top-down” mechanism for artificial intelligence, supporting the research, development, and industrialization of more than five common technology products.
- Focusing on the development of smart products for high-frequency application scenarios.
- Creating a comprehensive matrix of smart automotive products and accelerating the deployment of intelligent driving and other related products.
- Achieving deep integration of electrification and intelligence.

法定主动公开内容 > 全部

索引号: 114403005907069935/2024-00357	分类:
发布机构: 深圳市工业和信息化局	成文日期: 2024-07-30
名称: 深圳市加快打造人工智能先锋城市行动方案	
文号:	发布日期: 2024-07-30
主题词:	

【打印】【字体: 大 中 小】 分享到: 

深圳市加快打造人工智能先锋城市行动方案

发布日期: 2024-07-30 浏览次数: 1998

一、构建人工智能生态系统, 打造全栈创新先锋

(一) 构建“一超多强总调度”智能算力体系。加快推进深圳先进算力基础设施建设, 推动“鹏城云脑Ⅲ”连接全国资源打造核心节点。推进深圳开放智算中心建设, 2024年建成并投入运营算力规模达4000P FLOPS(每秒浮点运算次数)。鼓励各区选取一批工业上楼项目配建智算中心。建设全光网络, 持续扩大深圳市智慧城市算力统筹调度平台、粤港澳大湾区一体化算力服务平台的调度规模, 加速推进粤港澳大湾区算力调度平台运营, 2024年年

Government Announcement Screenshot

Chinese Enterprises Oversea Investment Info Updates

■ Chery Subsidiary Reaches Joint Venture Agreement with Vietnam's Geleximco, Plans to Invest \$800 Million to Build a Factory

According to foreign media reports, on April 4, Vietnam's Geleximco Group announced that a subsidiary of Chery Automobile has reached a joint venture agreement with them to build an \$800 million factory in Thai Binh province, northern Vietnam. The factory will be constructed in three phases, with the aim of eventually achieving an annual production capacity of 200,000 vehicles. The first phase is expected to be completed in the first quarter of 2026. As the factory is being built, the Chery subsidiary will start selling imported Omoda and Jaecoo brand cars in Vietnam by the end of this year.

[\[News Link\]](#)

■ Chery May Build a Factory in Spain

The Spanish government and its chief negotiator, EV Motors, recently announced that they are close to reaching an agreement with Chery Automobile. Spain is expected to become Chery Automobile's first production base in Europe. Chery plans to establish a production base in Barcelona, Spain, by restarting the Nissan factory located there, which will restore 1,600 local jobs. Chery has not yet responded to this news.

[\[News Link\]](#)

Chinese Enterprises Oversea Investment Info Updates

■ NIO's European Smart Driving Technology Center Officially Launched

On April 8, NIO's European Smart Driving Technology Center was officially launched.. The center is located in Schönefeld, near Berlin, Germany, and is NIO's first smart driving-related technology center established overseas. According to official statements, the NIO Smart Driving Technology Center is adjacent to the NIO Berlin Innovation Center, which was launched in 2023. These two centers will work closely together to provide smart driving experiences for European market users, based on actual driving scenarios, user needs, and relevant European regulatory requirements, thereby enhancing user satisfaction.

[\[News Link\]](#)

■ Farasis Energy Signs Agreement with Battery Swapping Client in Southeast Asia

On April 30, the first Southeast Asia Two-Wheeler Professional Exhibition, "Asiabike Jakarta 2024," opened in Jakarta, Indonesia. Farasis Energy was invited to attend and globally launched the electric motorcycle standard batteries 7432/7455. Additionally, they signed a strategic cooperation agreement with Moli Power, a comprehensive battery swapping solution provider in Southeast Asia. This collaboration aims to improve the charging infrastructure for electric motorcycles in Southeast Asian countries and regions, addressing issues such as slow charging speeds and limited charging station availability.

[\[News Link\]](#)

Chinese Enterprises Oversea Investment Info Updates

■ Geely Automobile: Zeekr's IPO Price in the United States is Set at \$21 per Share

On the evening of May 10th, Beijing time, Zeekr Intelligent Technology Holding Limited (hereinafter referred to as "Zeekr") was officially listed on the New York Stock Exchange (NYSE) under the stock code "ZK". It is reported that due to oversubscription, Zeekr expanded the scale of its IPO, issuing a total of 21 million American Depository Shares (ADS) at the upper limit price of \$21 per share (each ADS represents 10 ordinary shares), raising approximately \$441 million. If the underwriters exercise their over-allotment option, the issuance size will further expand to 24.15 million ADS, raising approximately \$507 million, making it the largest IPO by a Chinese company in the U.S. market since 2021.

[\[News Link\]](#)

■ Israeli Automotive Safety Technology Startup Foretellix: Collaborates with Geely to Accelerate Autonomous Vehicle Development

On May 7th, Israeli automotive safety technology startup Foretellix issued a statement announcing the establishment of a strategic partnership with Geely Automobile. This collaboration aims to promote the large-scale safe deployment of autonomous vehicles, reduce Geely's R&D costs, and improve development efficiency. According to the statement, Foretellix and Geely will work together to integrate Foretellix's Foretify™ platform with Geely's development, verification, and validation processes, as well as advanced simulators.

[\[News Link\]](#)

Chinese Enterprises Oversea Investment Info Updates

■ Skyworth Auto Signs 10 Billion Yuan Strategic Cooperation Agreement with Saudi KAG Group

On May 9, Skyworth Auto announced that Saudi Arabia's KAG Group had engaged in a 10-year strategic cooperation negotiation with Skyworth Auto and signed a contract. The 10-year strategy signed by KAG Group and Skyworth Auto will be implemented in two phases. The first phase, spanning the first five years, plans for business cooperation worth 10 billion yuan. The second phase will be further developed based on the outcomes of the first phase. Additionally, KAG Group and Skyworth Auto have reached a comprehensive cooperation agreement on all new energy products, including passenger vehicles, ultra-fast charging stations, and smart living solutions. As part of the agreement, KAG Group will become Skyworth Auto's exclusive partner in Saudi Arabia.

[\[News Link\]](#)

■ Exploring New Territories! XPeng Motors Announces Entry into the Australian Market

On May 11th, XPeng Motors announced that it has reached an exclusive cooperation agreement with Australia's TrueEV company, officially entering the Australian market. TrueEV will serve as XPeng Motors' exclusive importer, distributor, and retailer in the Australian market, providing brand showrooms and comprehensive customer support. XPeng Motors plans to officially launch the XPeng G6 in the Australian market in the fourth quarter of 2024.

[\[News Link\]](#)

■ **The Hongqi EH7 and EHS7 are set to enter the European market soon.**

On June 1st, China FAW Import and Export Co., Ltd. and Norway's Motor Gruppen Group officially signed an authorization sales agreement in Drammen, Norway. Hongqi authorized Motor Gruppen to become the sales partner for the EH7 and EHS7 new energy models in Norway, laying a solid foundation for the subsequent entry of these new products into the European market.

[\[News Link\]](#)

■ **Geely Auto and STMicroelectronics have signed a long-term supply agreement for SiC (silicon carbide) technology, deepening their transformation into new energy vehicles.**

On June 4th, the WeChat official account of "STMicroelectronics China" announced that STMicroelectronics (ST) and Geely Auto Group have signed a long-term supply agreement for silicon carbide (SiC) devices. This agreement builds upon their existing collaboration and aims to further accelerate the integration of SiC devices. According to the agreement, ST will supply SiC power devices for Geely's mid-to-high-end pure electric vehicles across multiple brands. This collaboration is expected to enhance vehicle performance, accelerate charging speeds, and extend driving range, thereby advancing Geely's transition to new energy vehicles.

Additionally, Geely and ST will establish an innovation joint laboratory based on their long-term cooperation in various automotive applications. This lab will focus on exploring and exchanging innovative solutions in automotive electronics/electrical (E/E) architecture (such as in-vehicle infotainment and smart cockpit systems), advanced driver assistance systems (ADAS), and other related fields.

[\[News Link\]](#)

Chinese Enterprises Oversea Investment Info Updates

■ Zeekr has announced its entry into the Indonesian and Malaysian markets

On June 8th, Zeekr Auto announced that it has signed cooperation agreements this month with PT Premium Auto Prima in Jakarta, Indonesia, and Sentinel Automotive Sdn. Bhd. in Kuala Lumpur, Malaysia. This marks Zeekr's official entry into the Indonesian and Malaysian markets. The right-hand-drive versions of the Zeekr X and Zeekr 009 will be the first flagship models to enter these markets.

[\[News Link\]](#)

■ Geely-backed Proton has launched Malaysia's first domestic electric vehicle (EV) brand

On June 13th, Bloomberg reported that Proton Holdings, the Malaysian automotive manufacturer backed by Geely, has launched Malaysia's first domestic electric vehicle (EV) brand. Proton unveiled its EV brand, e.MAS, in Kuala Lumpur on Wednesday, with the first vehicles expected to roll off the production line by the end of 2025. These vehicles will be manufactured at Proton's existing plant in Selangor, north of the capital Kuala Lumpur, which is being transformed into an electric vehicle hub with support from Geely's \$10 billion investment. Proton CEO Li Chunrong stated that the company must adapt to remain competitive, as every major economy is transitioning from internal combustion engine vehicles to electric vehicle technology.

[\[News Link\]](#)

Chinese Enterprises Oversea Investment Info Updates

■ Leap Motor is producing electric vehicles at Stellantis' factory in Poland

On June 17th, Reuters reported that the management of Leap Motor announced that its joint venture with Stellantis has begun producing Leap Motor electric vehicles at Stellantis' factory in Tychy, Poland. The first batch of T03 mini electric vehicles rolled off the production line last week, with mass production scheduled to start in September. Additionally, the joint venture plans to start producing a second model, the Leap Motor A12 SUV, at the Polish plant beginning in the first quarter of 2025.

[\[News Link\]](#)

■ The Beijing Times Battery Manufacturing Base has begun construction

On June 18th, the groundbreaking ceremony for the Beijing Times Battery Manufacturing Base project was held. This project, jointly invested in by CATL, BAIC Group, Beijing Energy Group, Xiaomi Group, and others, will utilize CATL's high-frequency, highly automated, and flexible production lines. Once completed, the base will provide stable, high-quality battery products for automotive clients in the Beijing-Tianjin-Hebei region, including BAIC and Xiaomi.

[\[News Link\]](#)

Chinese Enterprises Oversea Investment Info Updates

■ Chery and Jaguar Land Rover Sign Strategic Cooperation Memorandum, Aiming to Advance a New Cooperation Model

According to a June 19th announcement on the “Chery Automobile” WeChat official account, Chery and Jaguar Land Rover have recently signed a strategic cooperation memorandum. The two companies aim to advance a new cooperation model to further strengthen the product matrix of their joint venture, Chery Jaguar Land Rover. The joint venture will introduce and manufacture a series of electric products using Chery’s electrification platform and featuring the “Freelander” brand licensed by Jaguar Land Rover. The revived “Freelander” will be distinct from Chery’s existing product lines and Jaguar Land Rover’s four new modern luxury brands, marking a new strategic development phase for Chery Jaguar Land Rover.

[\[News Link\]](#)

■ BYD has launched its third electric vehicle in Japan

According to Reuters, on June 25th, BYD launched its third electric vehicle in the Japanese market. Starting from June 25th, BYD began accepting orders for the BYD Seal EV (known internationally as the “Seal EV”) in Japan. The suggested retail price for the rear-wheel-drive version of the BYD Seal EV in Japan is 5.28 million yen (approximately 240,000 yuan).

[\[News Link\]](#)

Chinese Enterprises Oversea Investment Info Updates

■ SAIC and Volkswagen Sign Series of Agreements to Collaborate on Developing Multiple Plug-in Hybrid and Electric Vehicles

On the afternoon of June 27th, Volkswagen Group, SAIC Motor Corporation, Volkswagen (China) Investment Co., Ltd., Volkswagen (China) Technology Co., Ltd., and SAIC Volkswagen signed several technical cooperation agreements in Shanghai concerning new product projects of SAIC Volkswagen. The agreements include technical collaboration to develop three plug-in hybrid models and two pure electric models in China. Both parties aim to jointly “empower” the joint venture with advanced technology, marking a new chapter in their partnership. Multiple plug-in hybrid and electric vehicle models developed through this collaboration are expected to be launched sequentially starting from 2026 and extending through 2030.

[\[News Link\]](#)

■ BYD and French Car Rental Company Ayvens Sign Strategic Cooperation Memorandum of Understanding

On July 2nd, French car rental company Ayvens announced that it has signed a memorandum of understanding with BYD at BYD’s headquarters in Shenzhen. The agreement focuses on distributing electric passenger cars and light commercial vehicles to European customers. Ayvens will leverage BYD’s dealer network to provide leasing services to small and medium-sized enterprises as well as individual customers. Initially, operational leasing services will be available in France, the Netherlands, Belgium, and Luxembourg, with plans to expand to other European countries.

[\[News Link\]](#)

Chinese Enterprises Oversea Investment Info Updates

■ GAC Aion's smart factory in Thailand has been completed and is now operational, with the second-generation AION V rolling off the production line globally.

On July 17th, GAC Aion's smart factory in Rayong, Thailand, was officially completed and began operations. The second-generation AION V was simultaneously launched at both the Thai and Guangzhou smart factories in China. The event was attended by Thai Minister of Industry Phongpat Vechakun, Rayong Governor Dilap, BOI Secretary-General Narit Thesathirach, representatives from the Chinese Embassy in Thailand, GAC Group Chairman Zeng Qinghong, and GAC Aion General Manager Gu Huinan in Thailand. GAC Group General Manager Feng Xingya and other leaders attended the event at the Guangzhou factory.

[\[News Link\]](#)

■ XPeng Motors Officially Enters the Singapore Market

On July 28th, XPeng Motors announced via its official WeChat account that on July 25th, the company officially entered the Singapore market by opening a pop-up store at the UOB Building in Singapore's central business district. The pop-up store offers test drives of the XPeng G6, allowing visitors to experience the vehicle's space, intelligent interactions, and advanced driving systems firsthand.

[\[News Link\]](#)

Large Models and Intelligent Cockpits

Large Model is Rapidly Penetrating the Market

Since the launch of the groundbreaking large model product, ChatGPT, large model technology has become widely accepted and rapidly developing in the intelligent automotive industry. The rapid advancement of this technology is leading a new industrial revolution.

The in-car chips of intelligent vehicles face limitations in computing power. Even with chips like the Qualcomm Snapdragon 8295, their computing power can only match that of the Qualcomm Snapdragon 8 Gen 1 from a few years ago in the consumer sector. Therefore, the approach of "stacking computing power" is not viable, as the ceiling in the chip industry is easily reached. However, the introduction of AI large models is different, as they offer the efficiency, high accuracy, and high versatility that intelligent cockpits urgently need. With the help of AI large models, the task processing capability of intelligent cockpits can be elevated to unprecedented levels.

Currently, the automotive industry is actively adopting and implementing large model technology. Whether it is AI giants like Baidu and SenseTime announcing collaborations with multiple automakers, leading intelligent vehicle companies such as NIO, Li Auto, and XPeng publicly revealing plans to develop their own large models, or tech giants like Huawei announcing the integration of the Pangu large model in their AITO M9 model, large model technology is rapidly infiltrating the Chinese intelligent automotive industry.



SenseTime Expands Intelligent Cockpit Applications Under its Jueying AGI Framework



Geely's Xingrui AI Large Model

Expert Insights: Practices and Reflections on Large Models in Cockpits

The Future of Intelligent Cockpit Interaction is the Smart Butler

From a market perspective, it is predicted that the market share for intelligent cockpits could reach over 200 billion yuan by 2025, while the market size for voice interaction in passenger cars surpassed 2.2 billion yuan in 2022. From the consumer's perspective, they are willing to pay for functional modules in intelligent cockpits, such as dedicated modules for children, multi-modal interaction modules, and in-car voice modules. These are areas where large models can play a significant role. The future of intelligent interaction will trend towards intelligent and multi-modal interaction methods, requiring a "central control brain." This central control brain, composed of multi-modal large models and significant computing power, can achieve autonomous decision-making interactions. It can be divided into regions based on emotion and intelligence, encompassing safety, convenience, and the smart butler. Currently, voice interaction in intelligent cockpits is still in the convenience stage, but the smart butler is undoubtedly the future development trend.

Desay SV's Technical Solutions and Plans

Based on intelligent voice interaction in cockpits, among the three tasks of voice acquisition, semantic understanding, and voice recognition, semantic understanding is the most challenging. Large models can precisely address this deficiency due to their decision-making and reasoning capabilities, making interactions more convenient and intelligent. Desay SV's solution includes using a cloud platform with a B/S architecture, a precise knowledge base, slot technology to achieve contextual understanding and multi-turn dialogues, and streaming data output to improve response speed. Desay SV has the following plans for AI large models in the future. The first is perceptive intelligence, where AI technology perceives the physical and mental state of life in the cabin, allowing the large model to supervise the state of life in the cabin and provide better and healthier information. The second is digital emotion, where AI technology is used to rationally express warm emotions, making the intelligent cockpit not cold but warm and emotional. The third is embodied communication, which involves deep integration of AI technology with personal physical and mental states, ultimately creating a seamless human-machine integration.



Li Nanshan

Large Model Technology Expert at Desay SV Technical Center

Special Topic: From Single-Domain Breakthroughs to Integrated Solutions in Intelligent Vehicles

Phase 1.0: 2020-2022

Chassis+Body+Power

Tier 1 suppliers such as Continental, Bosch, and ZF have introduced integrated products encompassing chassis, body, and power domains



Phase 2.0: 2022-2025

Chassis+Intelligent Driving

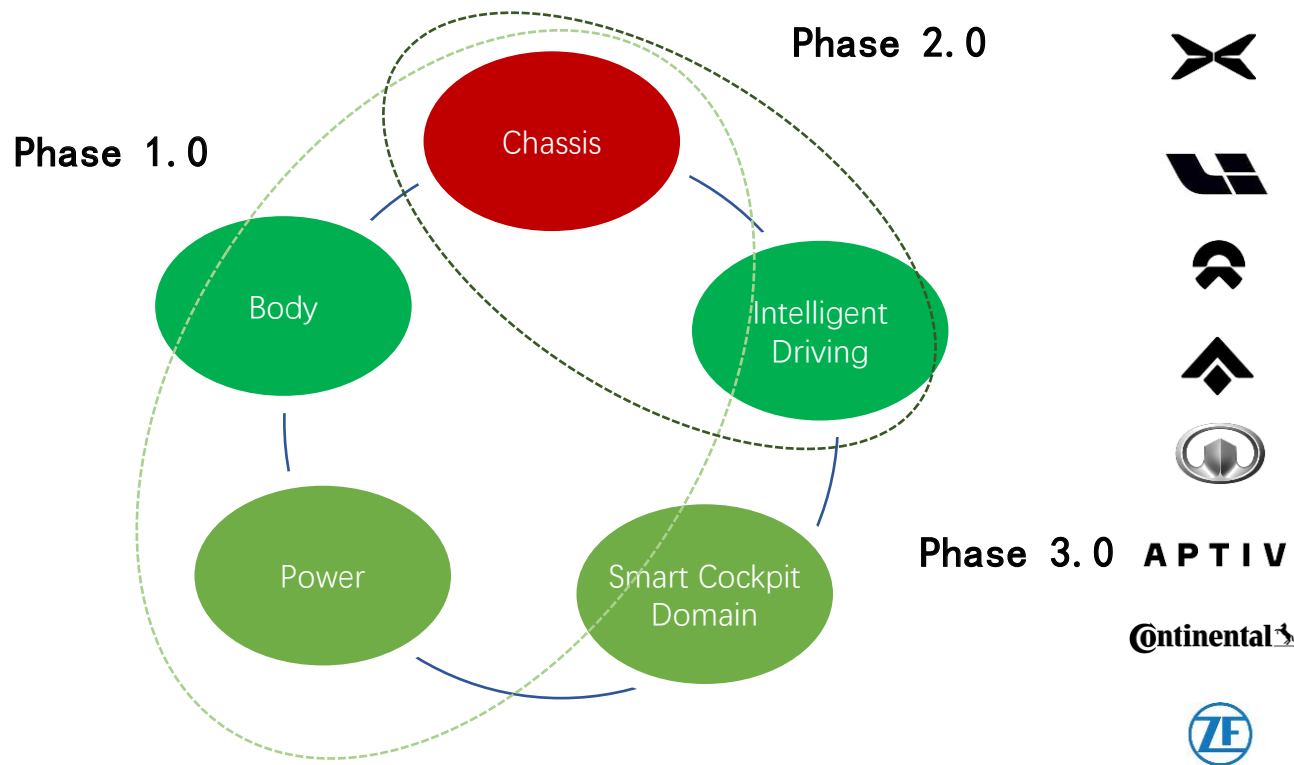
The integration of chassis and intelligent driving domains, led by OEMs' in-house development, has become the mainstream trend in smart chassis cross-domain integration.



Phase 3.0: 2025-2030

Five-Domain Fusion

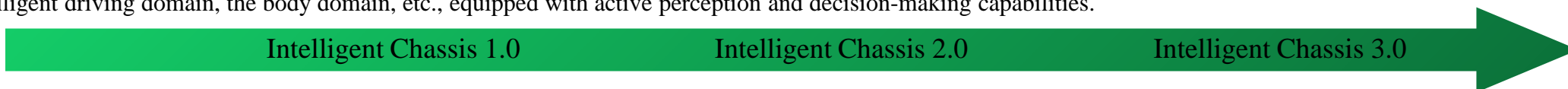
With the advancement in chip computing power, the chassis domain, intelligent driving domain, body domain, power domain, and cockpit domain will achieve integration across all five domains.



- XPeng X-EEA3.0: Hardware Architecture: Utilizes a central supercomputer (C-DCU) combined with zonal control units (Z-DCU). Central Supercomputer (C-DCU): Integrates vehicle control, intelligent driving, and cockpit functionalities. Zonal Control Units (Z-DCU): Manages left and right domain controls.
- LEEA3.0: Central Computing: Integrates intelligent driving, intelligent cockpit, and vehicle control functions. Zonal Control: Manages various regional controls.
- NIO ADAM 2.0: Central Computing: Integrates the five major functional domains. Zonal Control: Manages regional controls.
- AION Starlink Architecture: Central Computing Platform: Includes the new energy control module and body control module. Modules: Intelligent driving module and intelligent cockpit module. Zonal Control: Manages regional controls.
- Great Wall GEEP 4.0: Central Computing Platform: Covers multiple domains including advanced driver assistance, powertrain, chassis, body control, vehicle status, and mode management. Modules: Intelligent driving module and intelligent cockpit module. Zonal Control: Manages regional controls.
- Aptiv Central Computing Platform (CVC): Integration: Combines ADAS, body functions, gateway, and VCU (Vehicle Control Unit), including chassis controllers.
- Continental: Integration: Merges body control and chassis control functions. Features: Includes body control, vehicle gateway functions, and chassis control functions.
- ZF: Integration: Merges body control, powertrain control, and chassis domains. Features: Vehicle Motion Domain (VMD) controller, integrating cross-domain functionalities including body and powertrain system management.

Special Topic: The Three Phases of Intelligent Chassis

Intelligent chassis represent the latest technological development in the "electronic control" and "domain integration" of the chassis. Compared to traditional vehicle chassis, the intelligent chassis gradually replace mechanical or hydraulic devices with electronic ones, achieving independent control through the interaction of the chassis domain with the intelligent driving domain, the body domain, etc., equipped with active perception and decision-making capabilities.



	Intelligent Chassis 1.0	Intelligent Chassis 2.0	Intelligent Chassis 3.0
Chassis Structure	Driving Model	Front/rear axle single motor drive, front and rear	Single motor drive, front/rear dual motor drive, three-motor drive, four-motor drive
	Steering and Braking	Basic ESC, EPS, equipped with OTA functions	ESC, redundant EPS, RWS, DAS, IBS, RBU, EMB, supports OTA, centralized chassis signal control, actuator redundancy
	Electronic Control Framework	Air suspension for mass-produced passenger cars: domestic production of key components such as electronic control shock absorbers, standardization	Domestic production of multi-scenario air suspension and continuous variable electronic control damping application: products reach mass production levels
	Level of Smart Control (Drive-by-Wire)	Partial drive-by-wire and coordinated control in X, Y directions	Drive-by-wire and coordinated control in X, Y, Z directions
Key Technologies for Chassis Control	New Electronic Architecture	Complex power models with precise calculations, high bandwidth, high-speed real-time (around 100M, including Ethernet) in-vehicle networking technology, CANFD, FlexRay	High bandwidth, high-speed, real-time (>100M, including Ethernet) in-vehicle networking technology
	Domain Control Technology	Drive-control integration, domain control systems, intelligent driving unified interface	Achieve highly integrated control of four-wheel drive vehicles' chassis (4WD + ESC + EPS + air suspension), support software-defined chassis
	Intelligent Chassis Electronic Control System Functional Safety	Improve the design process for intelligent chassis functional safety, establish a predictive function safety design and analysis process, build a functional safety	Achieve functional safety and predictive safety standards demonstration applications in intelligent chassis, implement the information security protection system
			Highly integrated wheel-end drive model (wheel hub motor), intelligent wheel technology applications
			Supports OTA, centralized chassis signal control, actuator redundancy, high-speed network communication rate, network security, electronic architecture
			Active electronic control framework domestically produced, complete industrial chain ecosystem
			Intelligent chassis with fully autonomous control, adaptability, and self-learning capability
			Common deployment of Ethernet
			Achieve four-wheel drive with highly integrated control, support software-defined chassis
			Fully implement functional safety and predictive safety standards, fully implement information security protection system

Special Topic: 2024 Becoming a Booming Year for Intelligent Chassis Products

In the capital-intensive and high-barrier automotive supply chain, vehicle manufacturers have started to gain dominant positions in the downstream of the software-defined vehicle space. In recent years, some OEMs like Chang'an, BYD, and Geely have transitioned from traditional Tier 1 suppliers to Tier 0.5. In 2024, intelligent chassis products are expected to enter a booming phase, where OEMs will enhance vehicle competitiveness and brand premium by adopting intelligent chassis.

Company	Intelligent Chassis R&D Layout
Great Wall	<ul style="list-style-type: none"> Through cooperation with Valeo, conducting independent R&D on wire-controlled driving technology, breaking away from traditional research methods for wire-controlled steering technology. In June 2021, Great Wall released its intelligent wire-controlled chassis, integrating wire-controlled steering, wire-controlled braking, wire-controlled suspension, and wire-controlled throttle. The wire-controlled system covers five chassis subsystems, realizing full vehicle decoupling and meeting the requirements for L4-level and above advanced autonomous driving.
BYD	<ul style="list-style-type: none"> Conducting independent R&D on wire-controlled driving technology through cooperation with Valeo. Launched the intelligent body control system "YunNian," which integrates the suspension system with steering, braking, driving systems, and intelligent driving systems for unified coordination.
Chang'an	<ul style="list-style-type: none"> In April 2023, Chang'an released the "New Four Modernizations" and its new brand "ChenZhi Technology," focusing on intelligent chassis system R&D, covering braking, steering, suspension, lightweighting, and chassis integration. In February 2024, Chang'an Group's intelligent wire-controlled chassis base in Mianyang will begin trial production, mainly focusing on the production of wire-controlled braking, wire-controlled steering, and other automotive components.
Geely	<ul style="list-style-type: none"> Formed a joint venture company with Bethel (Zhejiang Double-Ring) to develop intelligent chassis products. In March 2024, Geely will release AI-based digital chassis, integrating intelligent chassis with AI models and advanced intelligent driving capabilities.



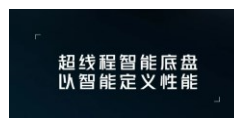
Huawei's Tuling Intelligent Chassis: Core technology includes multi-sensor fusion systems, HUAWEI DATS dynamic adaptive system, HUAWEI xMotion intelligent body coordination control system, mass-produced and installed on the Smart Screen S7.

IM Motors VMC Intelligent Digital Chassis: The core of the technology lies in the intelligent algorithm that enables vehicle-wide coordination through the central control system, achieving full-vehicle posture coordination and control in six degrees of freedom (X, Y, Z axes). It is installed in the IM L6 model.



NIO SkyRide Chassis System: This system includes rear-wheel steering, rear-wheel drive, and fully active suspension as its three core components. It enables high-level intelligent driving capabilities and will first be installed on the NIO flagship ET9 model, which is planned for release in 2025.

BYD Cloud Chassis X: This system is currently BYD's most advanced body control system, achieving fully active suspension and body posture control. It can adjust the vehicle's posture in real-time and will be installed in the luxury U9 model.

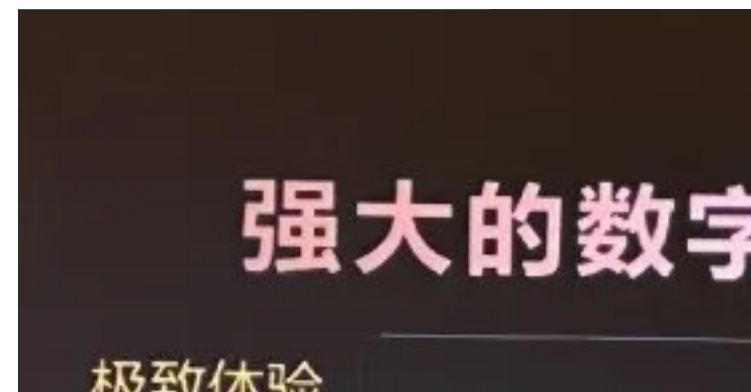


Xpeng Super-Connected Intelligent Chassis: Composed of full-vehicle vision, chassis perception, central domain, and chassis control, as well as intelligent dual-chamber air suspension and adaptive damping modules. It will be installed in the 2024 Xpeng G9 model.

Special Topic: Huawei Intelligent Chassis-Turing

In November last year, with the release of the Huawei Smart Screen S7, the newly upgraded "Tuling Intelligent Chassis" also made its debut. Huawei's Tuling Intelligent Chassis represents the application of its latest integrated system, equipped with a powerful digital base, enabling multi-domain coordinated control. By leveraging intelligent sensing and intelligent control technology, it enhances the driving and riding experience. Simply put, the core of the Tuling Intelligent Chassis lies in its full-range ability to sense road conditions and vehicle status. Through the HUAWEI DATS dynamic adaptive system and HUAWEI xMotion intelligent vehicle body coordinated control system, it performs real-time analysis and adjustments for vehicle status and performance output. In essence, the Tuling Intelligent Chassis functions as a "smart brain" for the chassis, not only receiving control from the driver but also actively thinking and making decisions to assist the driver in completing driving tasks.

Traditional chassis typically focus on four of the six major performance indicators of vehicles, while Huawei's Tuling Intelligent Chassis covers all six indicators, including dynamics, economy, handling safety, operational stability, smoothness, and passability. Compared to traditional chassis, the Tuling Intelligent Chassis not only solves the problem of insufficient intelligence and integration but also offers a comprehensive solution for improving component coordination, control deficiencies, and OTA upgrades.



OEM & Auto Technology Market

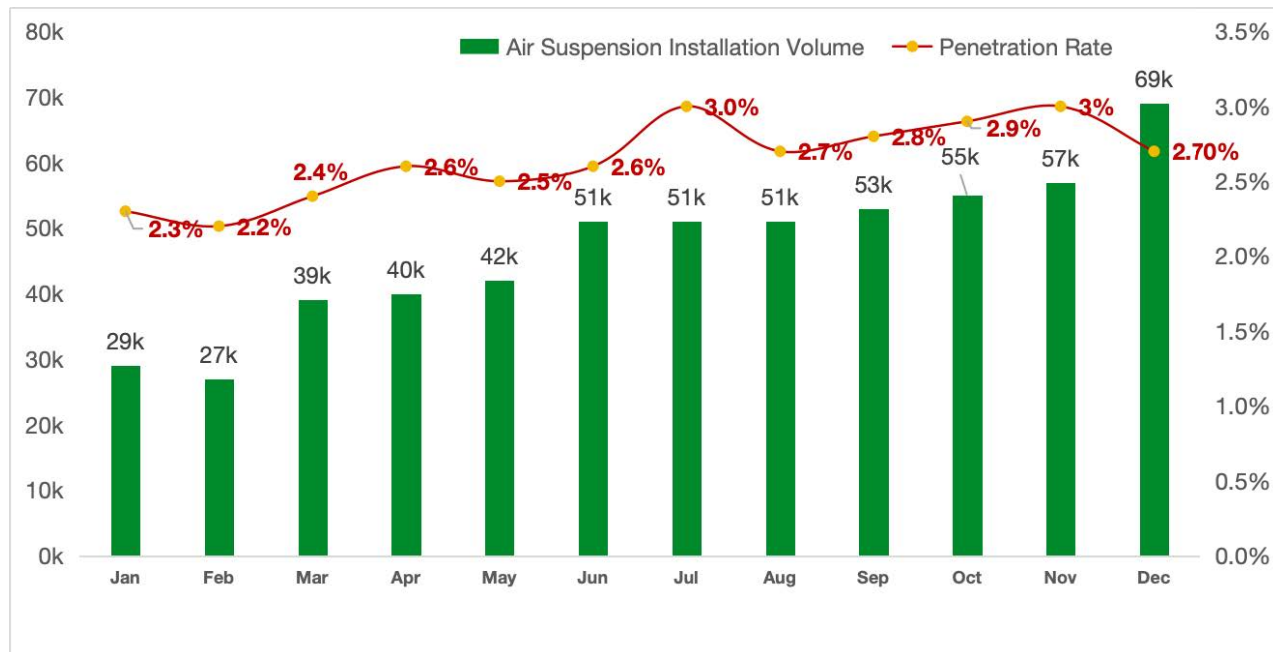
Special Topic: Representative of 2024 Intelligent Chassis Supply Enterprise

BBW	Steer By Wire	Domain Controller			
Active suspension					

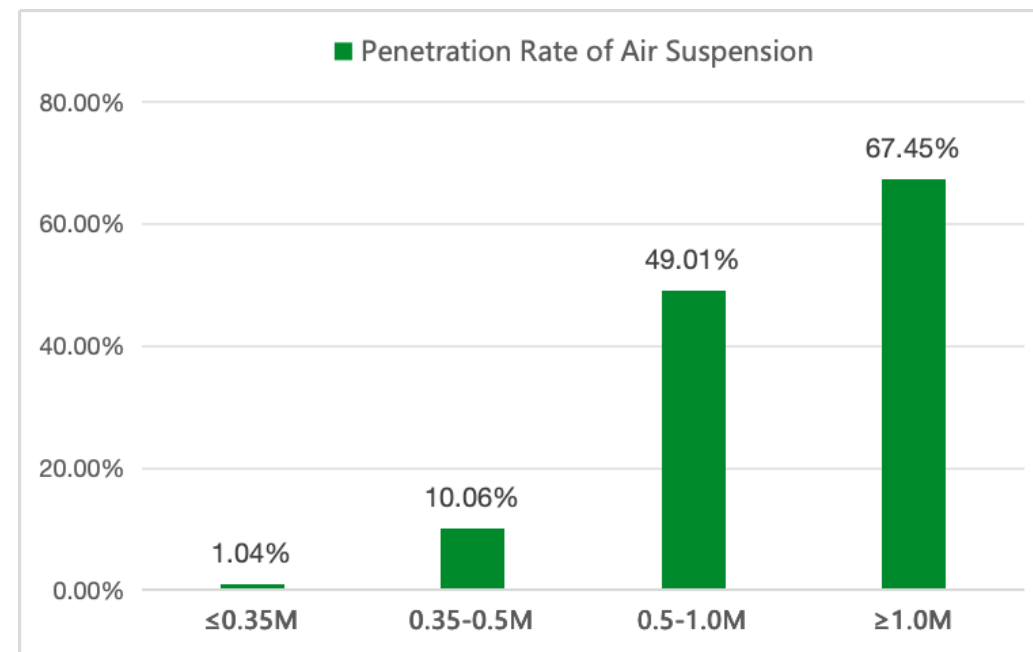
Special Topic: Market Situation of Air Suspension Systems for Passenger Cars

According to relevant data, the sales volume of new cars equipped with air suspension systems in China in 2023 is approximately 564,000 units, with a penetration rate of 2.67%. In 2022, there were only 238,000 units, with a penetration rate of just 1.2%, marking a year-on-year increase in the number of installations by 137%. In 2023, the penetration rate of air suspension systems in mid- to low-priced passenger cars remains relatively low, but with the improvement of domestic alternatives and manufacturing capabilities, the penetration rate in mid- to low-priced passenger cars is expected to increase rapidly.

2023, Market situation in China

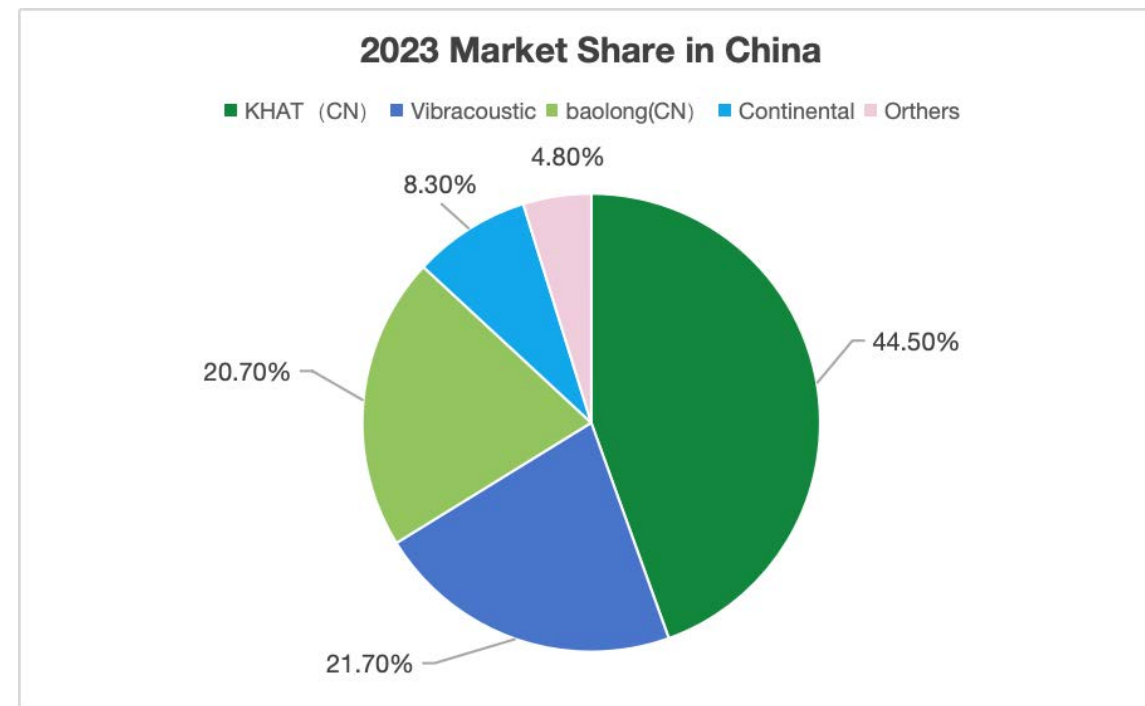
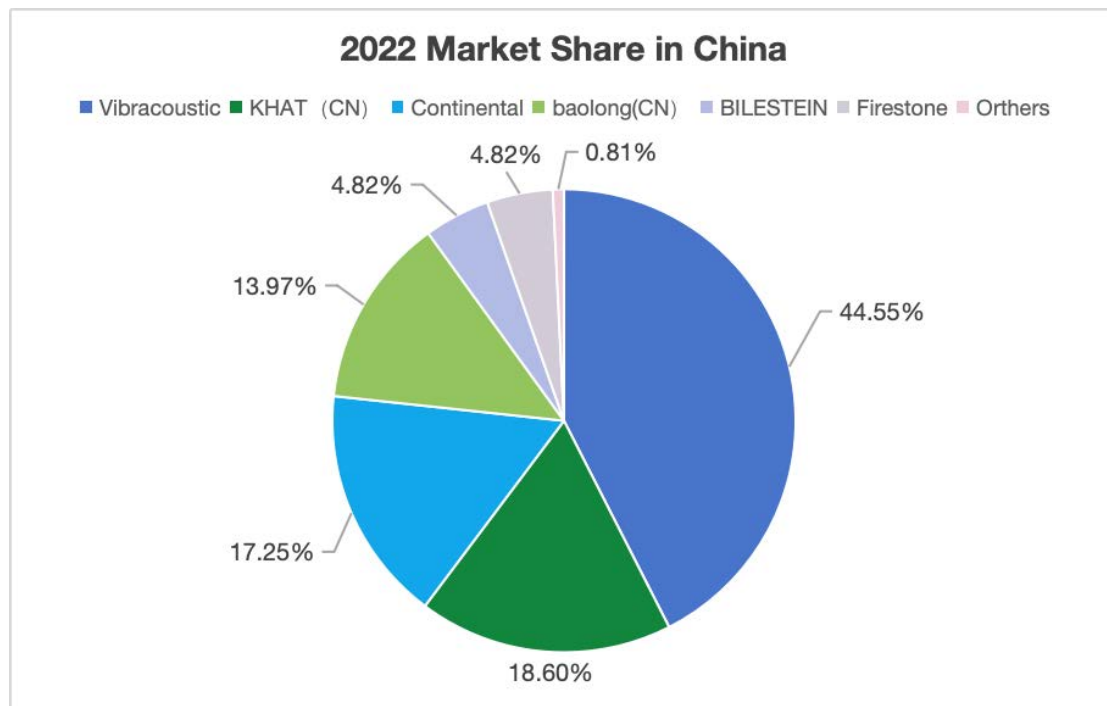


2023, Penetration Rate Across Different Price Segments in China



Special Topic: Market Situation of Air Suspension Systems for Passenger Cars

The current price of overseas air suspension systems is between 12,000 and 15,000 yuan, while the price of domestic air suspension systems is between 8,000 and 9,000 yuan. Compared to overseas systems, domestic air suspension systems are at least 30% cheaper. In 2022, the market share of domestic air suspension (air spring) systems accounted for 32.57% domestically and 67.43% internationally. In 2023, the market share of domestic manufacturers in the air suspension market reached nearly 70%, with Konghui Technology and Baolong Technology delivering over 250,000 and 110,000 sets, accounting for 44.50% and 20.70%, respectively. As domestic manufacturing capabilities and cost advantages improve, the price of air suspension systems is expected to continue to decrease, and domestic manufacturers will continue to expand their market share.



Analysis Report on China's Auto Parts Export Market

I. Introduction

With the expansion of the automotive market and the rapid growth of global procurement, China's auto parts industry supply system has gradually improved, forming the world's largest, most comprehensive, and fully integrated industrial system. In the context of globalization, China's automotive parts exports occupy an important position in the global market. Their competitiveness is not only reflected in scale but also in product quality, technological level, cost advantages, and policy environment.

We have recently conducted research on the current state of China's automotive parts export market. This report will analyze and summarize the development status of the Chinese automotive parts export market from several aspects, including industry policy support, export market scale, export channels, future development trends of the parts industry, and the situation of major exporting companies.



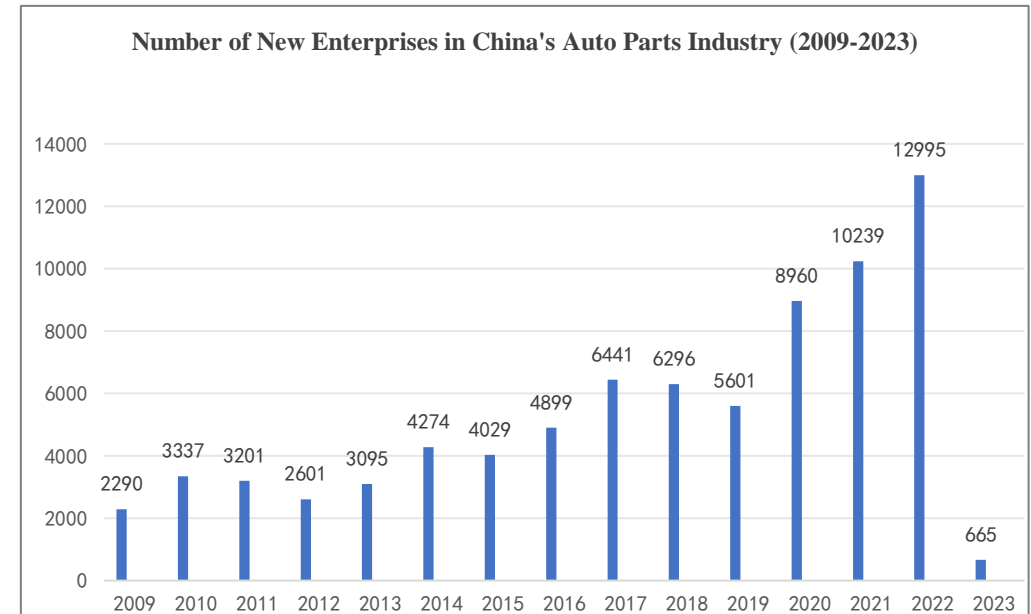
II. Scale of the Domestic and Export Markets for Chinese Auto Parts

1. The Domestic Market Scale of Chinese Auto Parts Continues to Rise

According to statistical data, from 2017 to 2023, the market size of China's auto parts industry has grown from 3.7 trillion yuan to 5.6 trillion yuan. It is expected to reach 7.8 trillion yuan by 2027. The data indicates that China's automotive parts industry is not only large in scale but also maintains strong growth momentum.

According to data from the International Organization of Motor Vehicle Manufacturers (OICA), the Asia-Pacific region produced 55.1158 million vehicles in 2023, accounting for 58.91% of the world's total automotive production. This makes it the largest automotive production base globally. As a significant economy in the Asia-Pacific region, China holds an important position in the global market for auto parts production.

As a crucial global production base for auto parts, the number of companies in China's auto parts industry has rapidly increased, reaching 214,200 registered enterprises in 2022. In 2023, China had 13 companies listed among the top 100 global auto parts suppliers.



2. Transformation of China's Auto Parts Export Model

Auto parts are the foundation of the development of the automotive industry and an important component of the automotive industry. According to the degree of specialization, the output value of auto parts accounts for approximately 50% to 70% of the total vehicle output value. China is a major country in the automotive industry, with ample production and supply of automotive-grade parts. Chinese auto parts mainly rely on export trade.

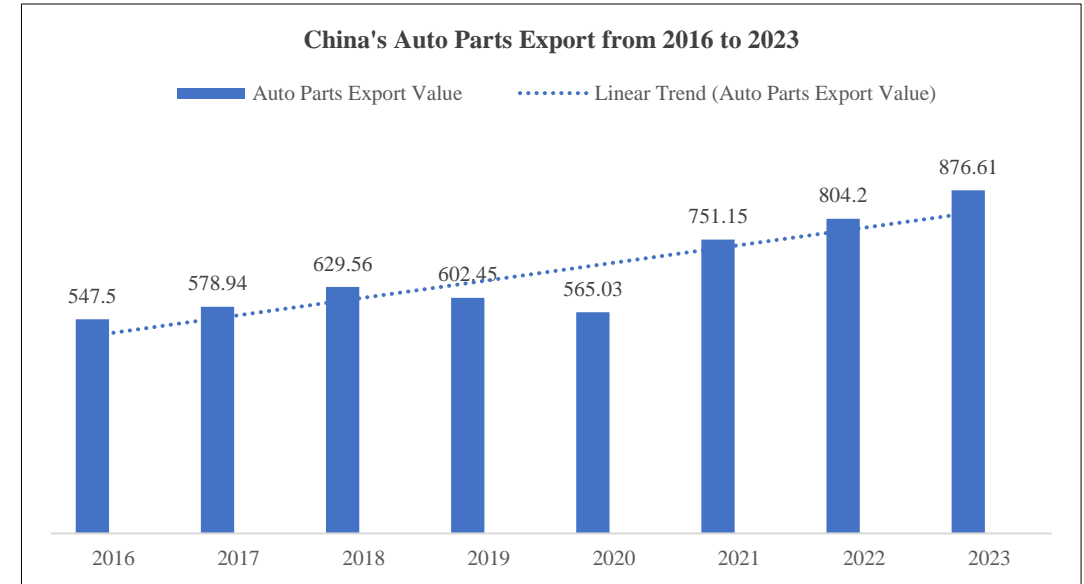
The export of Chinese auto parts has undergone a transformation from simple product trade to full industry chain cooperation. Initially, Chinese auto parts manufacturers mainly focused on product exports. By leveraging cost advantages and quality assurance, they undertook product processing tasks for overseas clients and gained a foothold in the international market. Subsequently, with the growth and development of the Chinese automotive market and industry, some parts manufacturers emerged as leaders in their respective segments and began to expand their global business. Due to technological advancements and increased competitiveness, Chinese parts manufacturers started to shift towards an industry-wide output model for their overseas expansion. This transformation is marked by Chinese suppliers taking on more responsibilities in research and development, production, sales, and services in the international market. They not only provide parts but also offer technical solutions and after-sales services to customers.

	Phase One 1990-2009	Phase Two 2009-2019	Phase Three 2019-Present
Background	China's low manufacturing costs have led to a phase of global automotive manufacturing shifting to China. As a result, Chinese companies have begun exporting in large quantities.	Several Chinese parts manufacturers have rapidly grown to become leaders in their respective niches and are engaging in overseas acquisitions in line with global trends.	The pandemic, combined with escalating trade tensions, has disrupted global supply chains. In response, Chinese parts manufacturers are leveraging their advanced experience in new energy to establish overseas factories.
The Path to International Expansion	Export	Overseas Mergers & Acquisitions	Overseas Manufacturing
Representative Companies	Fuyao Glass	JOYSON ELECTRONIC, Zhongding	Tuopu Group, Xinquan, Daimay, IKD

The Path to International Expansion for Chinese Auto Parts Manufacturers

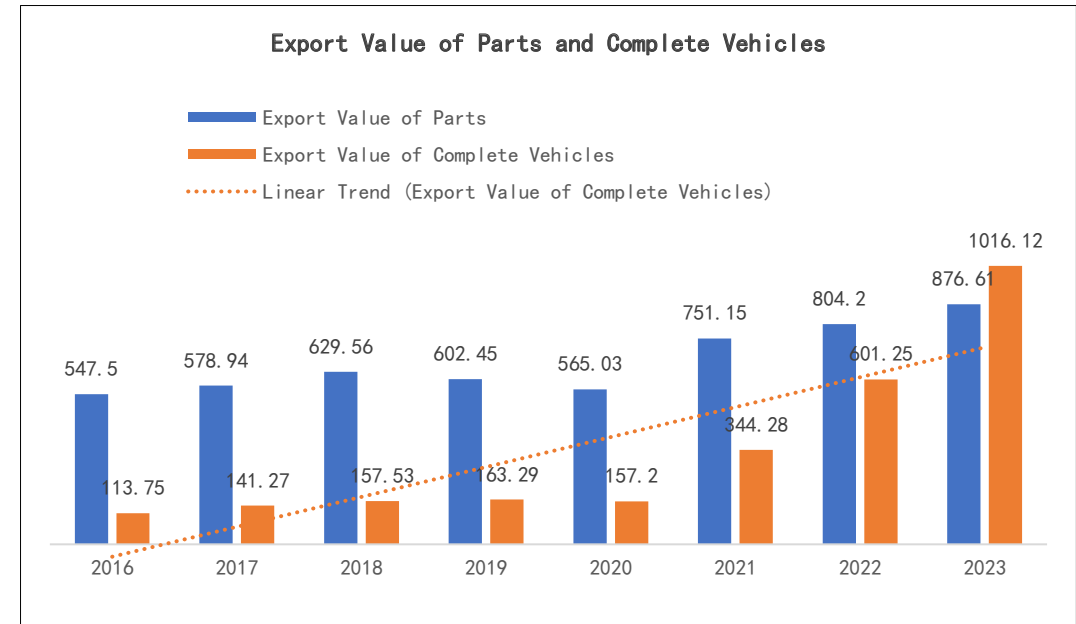
3. Steady Growth in China's Automotive Parts Export Market

With the gradual recovery of the automotive consumer market and the rapid growth in sales of new energy vehicles, the auto parts industry revenue has been steadily rebounding, and the scale of China's auto parts exports has stabilized. Data shows that China's auto parts export value has been continuously increasing, reaching \$81.09 billion in 2022, up 7.3% year-on-year, marking a historic high. In 2023, China's auto parts export value reached \$87.661 billion, up 9% year-on-year. The compound annual growth rate (CAGR) from 2020 to 2023 is 16.1%. The rapid growth in the export value of auto parts reflects the increasingly close connection and cooperation between the global market and Chinese automotive supply chain enterprises.



III. Current Status of China's Auto Parts Export Market

In 2023, the export value of components was surpassed by that of complete vehicles, indicating that China's automotive industry chain is at a critical transition period. The rise of independent brand vehicles and the continuous improvement in the quality of supporting auto parts suggest that the overall export of Chinese automobiles is poised for stronger growth. Auto parts companies are increasingly collaborating closely with vehicle manufacturers, accelerating their overseas expansion to provide local support. Consequently, the export market for auto parts is expected to experience a new surge.



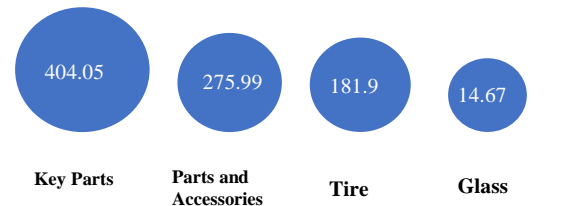
1. Key Components and Parts Account for a Large Proportion of Automotive Parts Exports

In 2023, China's auto parts export composition was as follows: key components accounted for 46%, accessories for 31.4%, automotive glass for 1.7%, and automotive tires for 20.7%. Automotive glass was primarily exported to automotive powerhouses such as the United States, South Korea, Germany, and Japan, while tires were mainly exported to the United States, Mexico, Russia, and Saudi Arabia.

Among key components, the main categories were chassis and braking systems, accounting for 25.4% and 18.6% respectively, with major export destinations including the United States, Germany, Japan, and Mexico. Suspension systems made up 10.1%, while steering systems, transmissions, and radiators accounted for 8.05%, 7.24%, and 5.88% respectively. Transmissions were primarily exported to South Korea, the United States, and Belgium.

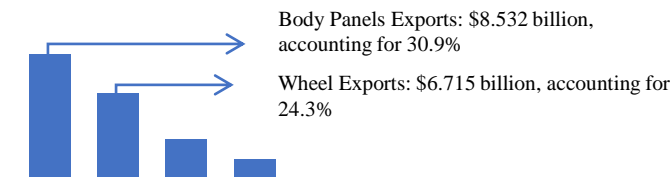
In terms of parts, body panels and wheels were the main export categories, accounting for 30.9% and 24.3% respectively, with wheels mainly exported to the United States, Japan, Mexico, and Thailand. Electrical lighting devices and wiring harnesses accounted for 12.86% and 10.92% respectively.

Key Parts Account for Nearly 50% of Exports



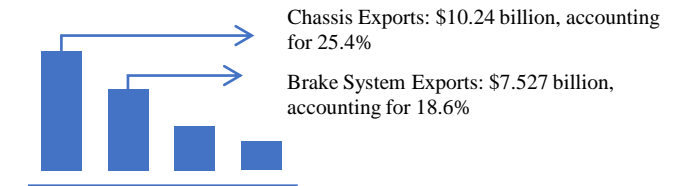
China's Auto Parts Export Values by Category in 2023 (in billion USD)

Body Panels and Wheels are the Main Categories of Parts and Accessories Exports



Distribution of China's Auto Parts Exports by Product in 2023 (in billion USD)

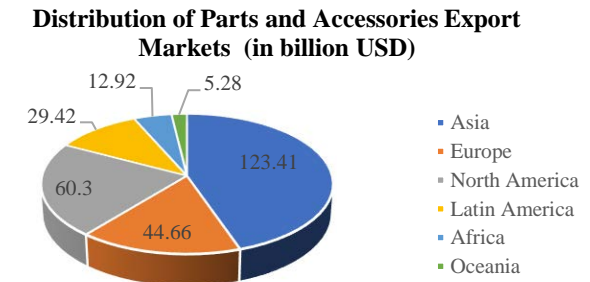
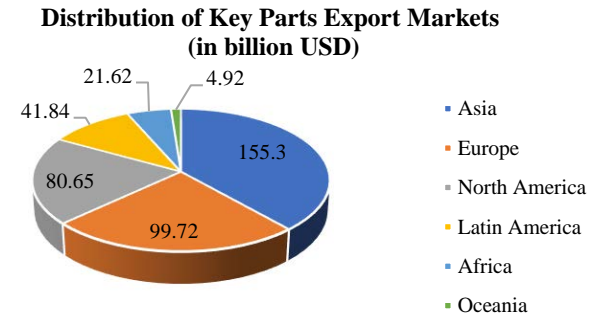
Chassis and Brake Systems are the Main Categories of Key Parts Exports



China's Auto Parts Export Values by Category in 2023 (in billion USD)

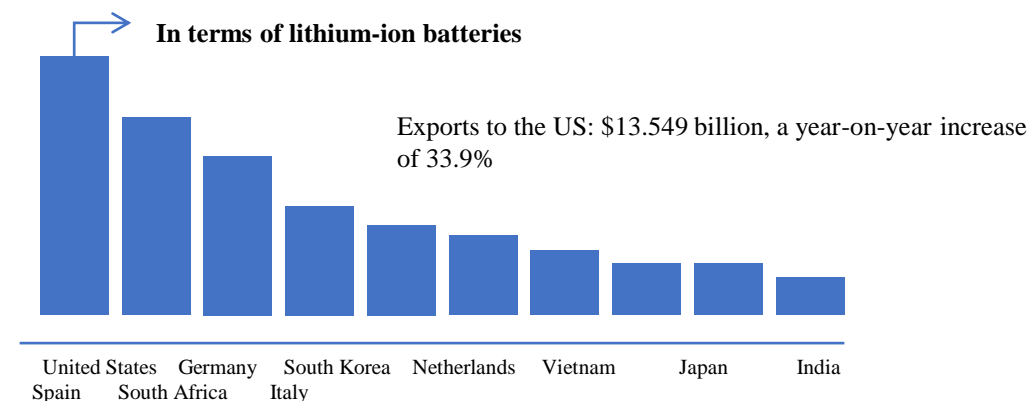
2. The Export Market for Key Parts is Concentrated in Asia, North America, and Europe

- The export market for key automotive parts is primarily concentrated in Asia (excluding China), North America, and Europe. Asia ranks first, accounting for 36.0% of the exports. North America is second with 23.8%, and Europe is third with 23.6%. Additionally, exports to Latin America reached \$3.791 billion, a year-on-year increase of 21.94%. Exports to Africa amounted to \$1.840 billion, growing by 14.96% year-on-year, and exports to Oceania were \$515 million, an increase of 5.04% year-on-year.
- In terms of accessories, the main export markets are also Asia, North America, and Europe. Asia ranks first, accounting for 43.9%; North America is second with 24.0%; Europe accounts for 15.0%. Additionally, exports to Latin America reached \$2.883 billion, a slight year-on-year decrease of 0.69%; exports to Africa reached \$1.128 billion, a year-on-year increase of 14.55%; exports to Oceania reached \$531 million, a year-on-year increase of 11.36%.



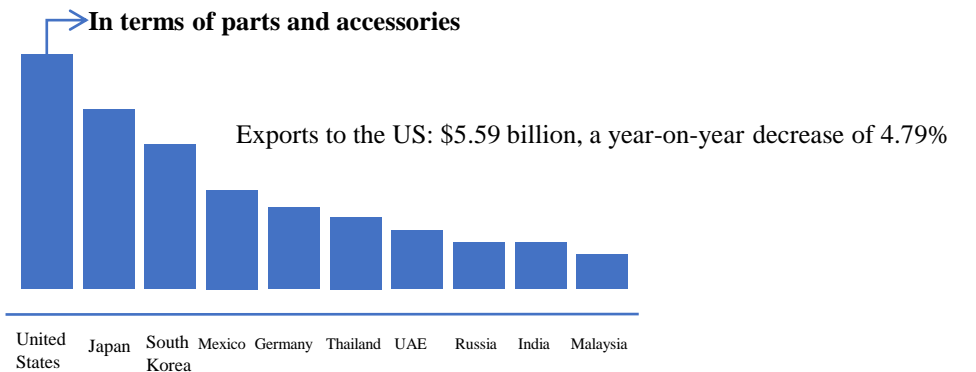
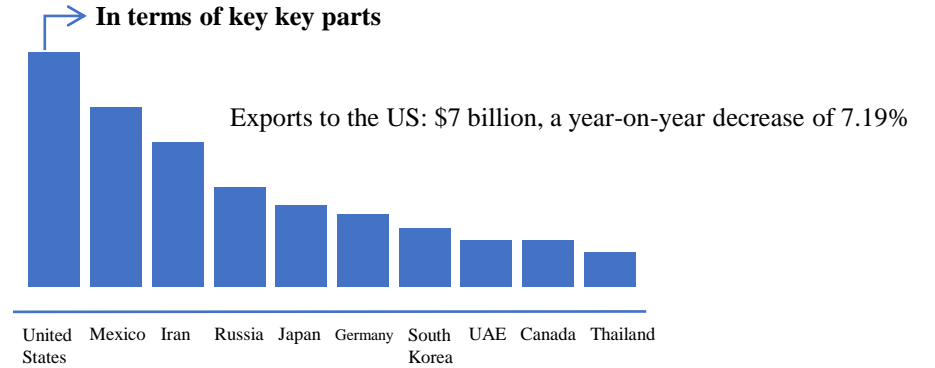
3. Lithium-ion batteries are primarily exported to Europe, Asia, and North America

- Lithium-ion batteries are primarily exported to Europe, Asia, and North America, with export shares of 41.7%, 32.3%, and 20.3% respectively. Additionally, exports to Africa and Oceania have increased by over 100% year-on-year, while exports to Latin America have grown by 52.52% year-on-year. The top countries for lithium-ion battery exports are the United States, followed by Germany and South Korea.



4. The United States is the largest export destination for Chinese Auto Parts

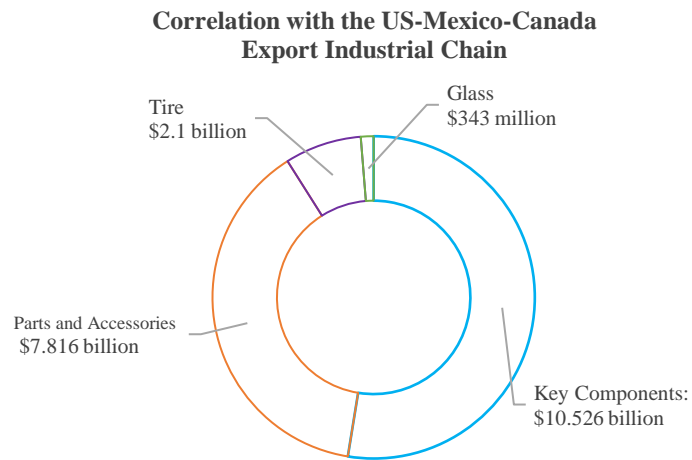
- The United States is the largest export destination for Chinese Auto Parts, with key components accounting for 20.8% of exports. The main exported products are brake systems, transmissions, and suspension systems. Mexico, Germany, and Japan rank 2nd to 4th respectively. The United States also accounts for 22.2% of China's automotive parts and accessories exports, with the main exported products being aluminum alloy wheels and electrical lighting devices. Japan, South Korea, Mexico, and Germany rank 2nd to 5th respectively. Exports to Malaysia, India, and the UAE have also grown rapidly.



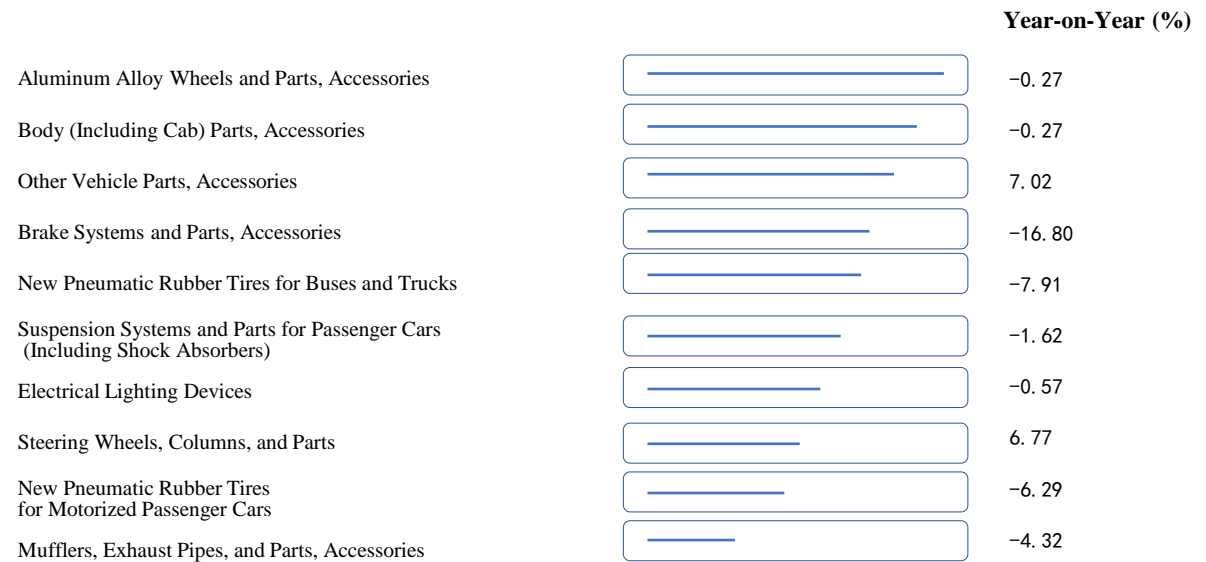
IV. Analysis of China's Auto Parts Export Markets by Region

1. Americas Market: Leading the Way, Core Components Drive the US-Mexico-Canada Market

North America is a crucial strategic area for China's Auto Parts exports, with the United States being the largest importer of Chinese components due to its strong demand and preference for Chinese key components. Chinese automotive component companies are leading trends through technological innovation and accelerating localization processes. The main export categories include key components such as brake systems, transmissions, and suspension systems. Chinese component companies are implementing localization strategies and forward-looking layouts in North America. They are enhancing China's influence in the North American market through a trade export model combined with technology output by establishing production facilities in Mexico, continuously meeting the market's demand for technological innovation.



Composition of Auto Parts and Accessories Exports to the US, Mexico, and Canada in 2023



Top 10 Categories of Chinese Auto Parts Exports to the US, Mexico, and Canada in 2023

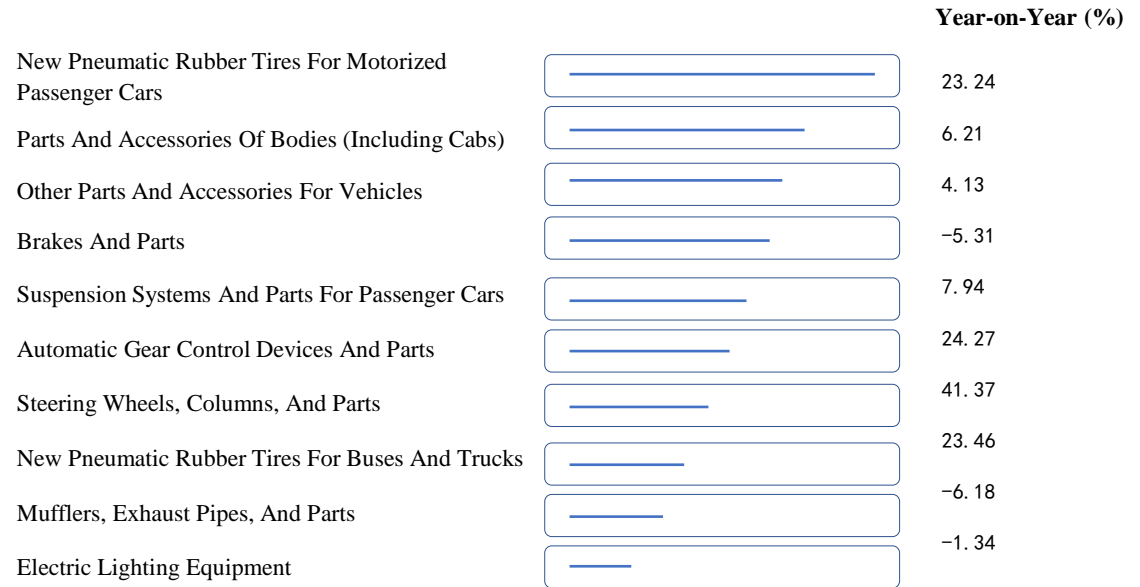
2. EU Market: Green Drive, Comprehensive Expansion of New Energy Vehicle Components

The EU market is a key area for exports, especially to countries such as Germany, the UK, and Italy. Europe is currently undergoing a green transition, with export demand continuously growing, particularly in the new energy vehicle sector. In the cooperation between China and the EU in the new energy vehicle sector, China not only provides products but also participates in standard-setting. Lithium-ion batteries are an important product exported to the EU market. Regarding the EU market, due to the trade export of China's independent new energy vehicle brands and the transfer of production capacity by overseas car companies to China, the EU is expected to become the fastest-growing and largest export market. Chinese new energy vehicle companies are going overseas through the "Western and Northern Europe trade export + Eastern Europe factory establishment" model, deeply binding parts with car companies, accelerating the overseas expansion to achieve localized support.

Top Eight Countries in 2023 for China's Exports of Key Parts and Spare Parts to the EU (in Billions USD)

Germany	Poland	Italy	France	Czech Republic	Netherlands	Belgium	Spain
29.17	10.41	8.76	7.73	6.26	6.13	5.76	4.86

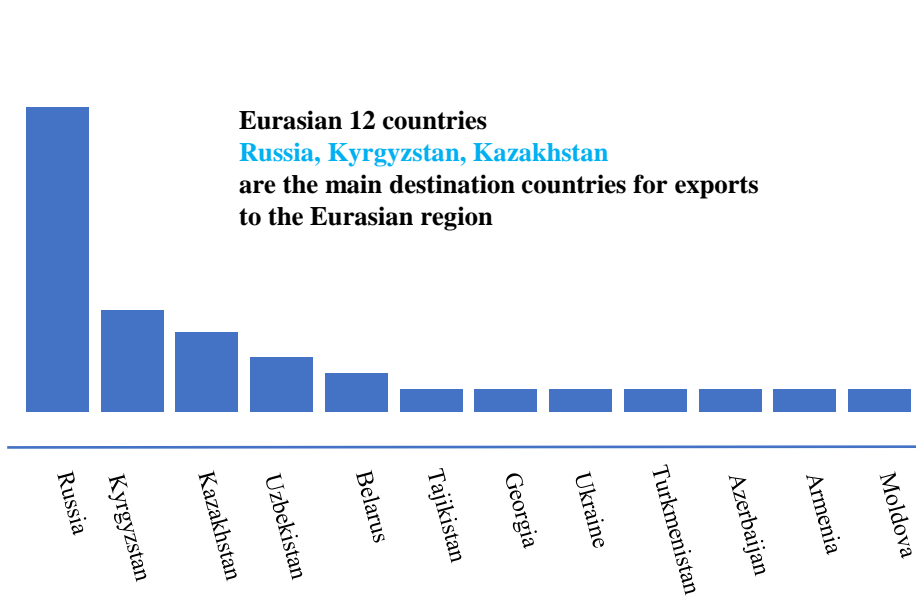
Relevance to the EU Automotive Supply Chain Exports



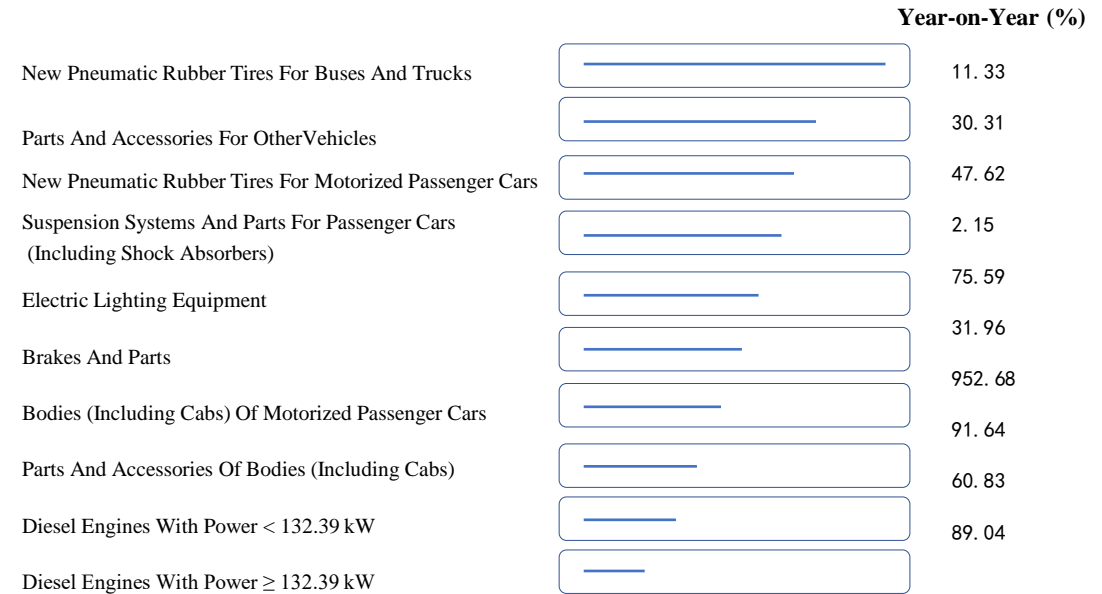
Top Ten Categories of Chinese Auto Parts Exports to the EU in 2023

3. Eurasian 12-Country Market: Regional Coordination, Supply Chain Advantages

The Eurasian 12 countries have always been key destinations for China’s automotive exports. Chinese independent automakers primarily go overseas through the “trade export + KD production” model and have begun establishing production bases in these countries. Chinese parts manufacturers, as a core part of the vehicle supply chain, hold an important position, with export categories including high-cost-performance products such as automotive tires. In Russia, due to market gaps, parts companies are also experiencing extensive opportunities for domestic substitution development.



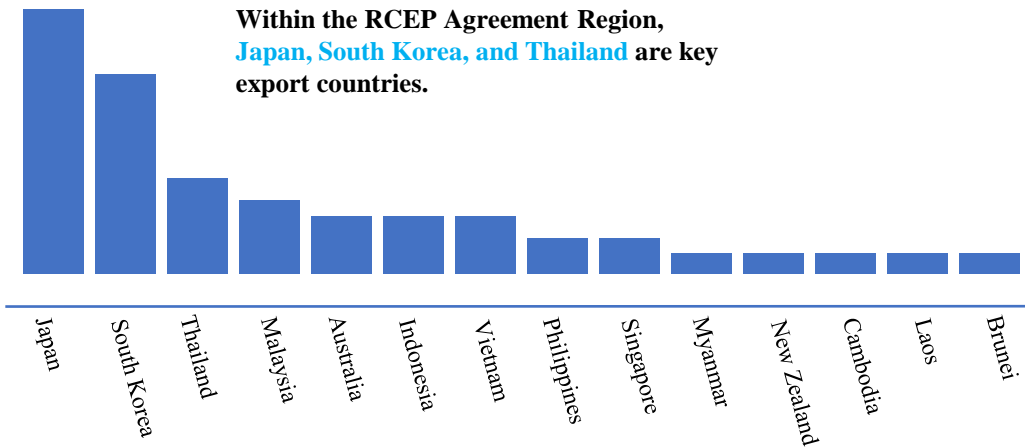
Relevance to the Automotive Supply Chain Exports to the Eurasian 12 Countries



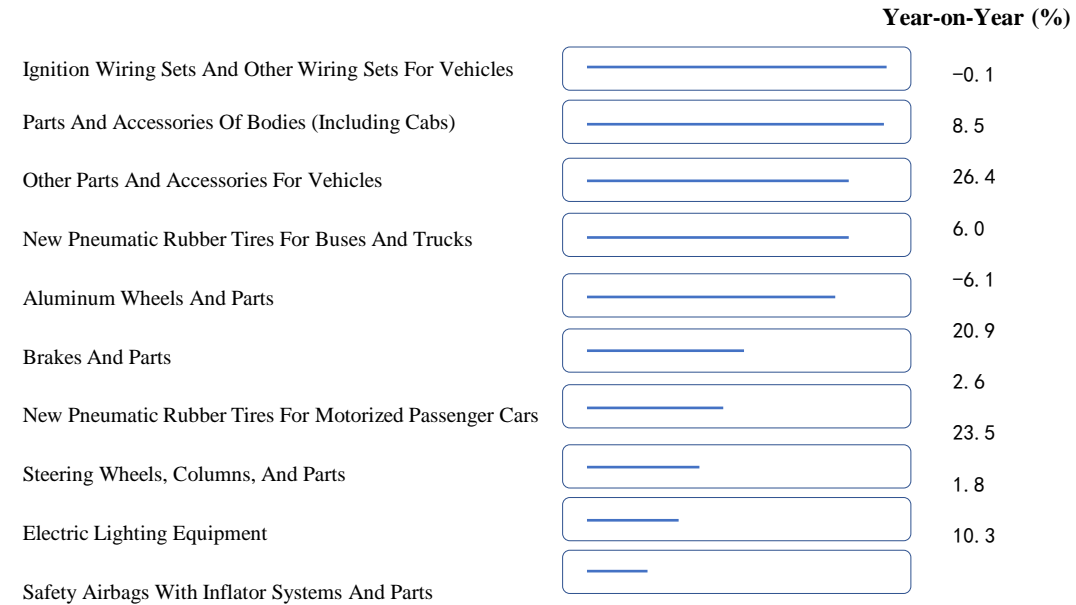
Top Ten Categories of Chinese Automotive Parts Exports to the Eurasian 12 Countries in 2023

4. RCEP Agreement Regional Market: Strong Export Performance, Leading Industrial Chain Upgrades

As countries with advanced automotive industries, major car companies in Japan and South Korea have established joint ventures in China, resulting in frequent trade exchanges of automotive parts. Most of the regions covered by the RCEP agreement are key areas for China’s vehicle and parts exports. After the signing of the RCEP agreement, the advantage of zero tariffs will undoubtedly drive the export trade of the automotive supply chain. The implementation of the RCEP will help Chinese automotive companies accelerate their development in the region, speed up capacity layout, and increase market share. Overseas investment is expected to expand further. Chinese parts companies, as a core part of the supply chain within the agreement region, hold an important position, with parts exports showing a strong growth trend. The industry influence of Chinese automotive parts is continuously expanding.



Relevance to the Automotive Supply Chain Exports to the Eurasian 12 Countries



Top Ten Categories of Chinese Auto Parts Exports to RCEP Countries in 2023 (in Ten Thousand USD)

5. Forecast of China's Auto Parts Export Market

- Amid the global automotive industry transformation, China's automotive parts industry is moving from product export to the stage of value chain export, including "**research-production-sales**," indicating that China's role in the global automotive supply chain is gradually deepening and expanding.
- In the context of constant market fluctuations, production flexibility is crucial for overseas car companies. Automakers need to adjust their production strategies based on market demand. Inventory accumulation of parts can occupy the company's cash flow, and under the dual pressures of finance and operations, OEMs naturally need to enhance local supporting facilities to shorten the supply radius as much as possible. At the same time, it is expected that high interest rates may lead to a cooling of the overseas complete vehicle market, with revenue growth of overseas car companies slowing down. Cost reduction and efficiency improvement may become one of the main demands of overseas car companies, making them more likely to pass on cost reduction pressure to upstream suppliers, demanding higher cost-performance parts suppliers, thereby providing opportunities for Chinese parts suppliers to go overseas and substitute, leading to a new round of supply chain rebalancing.
- At present, the penetration rate of new energy vehicles in China has reached a high level, and it is expected that the penetration rate of new energy vehicle sales in China may continue to slow down in the future. However, driven by new energy vehicle incentive policies in North America and Europe, the overseas new energy vehicle market is expected to still have broad development space. China's advantageous position in the global new energy vehicle supply chain is expected to drive the exports of globally competitive Chinese automotive parts companies to maintain rapid growth.

V. Opportunities and Risks in the Chinese Automotive Aftermarket Parts Export Market

1. Opportunities and Risks in the Chinese Auto Parts Export Market

Opportunities

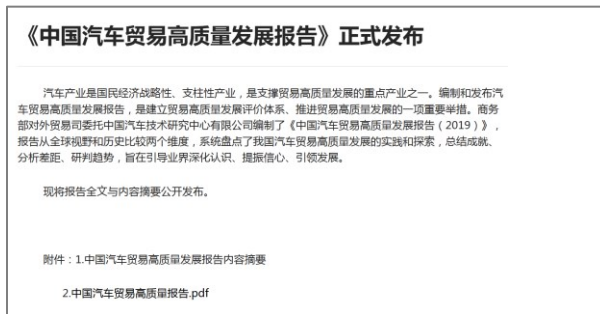
- **Globalization Opportunities:** The Chinese automotive industry is gradually transitioning from a growth phase to a period of stable growth. Major automotive markets such as North America and Europe are accelerating their transition to new energy vehicles (NEVs). The rapid increase in NEV sales and penetration rates overseas presents vast development opportunities for Chinese auto parts companies looking to expand internationally.
- **Technological Advancements:** The development of new energy vehicles and intelligent driving technologies is driving demand for high-value-added components.
- **Government Policy Support:** The Chinese government has introduced a series of policies to support the development of the auto parts industry, such as tax incentives and export subsidies.
- **Competitive Advantages:** Chinese auto parts companies possess significant competitive advantages in the global market. These include cost advantages stemming from a complete industrial chain that spans raw material procurement, parts production, and vehicle assembly. Additionally, continuous progress in technology R&D, quality control, improved logistics efficiency, and the rapid growth of e-commerce platforms have all enhanced the competitiveness of their products.

Risks

- **Intensified International Competition:** Global sales may fall short of expectations due to increasing competition from Japan, South Korea, and Europe, particularly in the high-end components market.
- **Trade Barriers:** There are risks associated with overseas policy uncertainties, and trade protection measures implemented by some countries and regions pose challenges for Chinese enterprises. For instance, the U.S. Inflation Reduction Act might lead to similar measures in other regions, potentially increasing economic barriers among international organizations and member states.
- **Cost Pressures:** Rising raw material prices and labor costs are driving up production expenses for companies. The EU's "Foreign Subsidies Regulation" increases compliance costs for companies investing in Europe.

2. Summary of China's Auto Parts Export Policies

- In December 2019, the Ministry of Commerce released the "[Report on the High-Quality Development of China's Automobile Trade](http://m.mofcom.gov.cn/article/jiguanzx/201912/20191202925949.shtml)," which for the first time suggested that new energy vehicles could become a new driving force for automobile exports. From 2020 to 2022, the Ministry of Commerce repeatedly stated in public that it would accelerate the promotion of automobile product trade. (Link: <http://m.mofcom.gov.cn/article/jiguanzx/201912/20191202925949.shtml>)
- In December 2023, the Ministry of Commerce and nine other departments issued the "[Opinions on Supporting the Healthy Development of New Energy Vehicle Trade Cooperation](http://m.mofcom.gov.cn/article/zwgk/gkzcfb/202402/20240203472074.shtml)," providing comprehensive and multi-level support and guarantees for new energy vehicle trade cooperation from six major aspects, and encouraging the support of foreign trade cooperation in new energy vehicles. (Link: <http://m.mofcom.gov.cn/article/zwgk/gkzcfb/202402/20240203472074.shtml>)
- In February 2024, the Ministry of Commerce and five other departments issued the "[Announcement on Matters Related to the Export of Used Cars](https://wms.mofcom.gov.cn/zcfb/wmgl/art/2024/art_52f62edf8132411fa206542d851edfc7.html)," fully opening up the export of used cars from March 1, to promote the healthy and orderly development of used car exports. Starting in 2024, local governments have introduced specific policies to encourage automobile exports. For example, the Shenzhen government issued the "2024 Work Plan for Promoting Automobile Export," proposing 24 specific measures to seize the development opportunities of automobile exports; the Wuhan government issued the "Implementation Plan for Promoting Innovation and Capacity Enhancement of Foreign Economic and Trade Carriers," clearly supporting the export of new energy vehicles and other businesses; and the Xinjiang government officially launched the operation of the Kashgar Section of the China (Xinjiang) Pilot Free Trade Zone Export Automobile Industrial Park. (Link: https://wms.mofcom.gov.cn/zcfb/wmgl/art/2024/art_52f62edf8132411fa206542d851edfc7.html)



Report on the High-Quality Development of China's Automobile Trade



Opinions on Supporting the Healthy Development of New Energy Vehicle Trade Cooperation



Announcement on Matters Related to the Export of Used Cars

18 Key Measures for Chinese New Energy Vehicles to Go Global in 2024

- ① Enhance international business capabilities: Encourage overseas R&D cooperation; Strengthen overseas maintenance and after-sales service capabilities; Improve overseas compliance capabilities; Actively cultivate international talents; Strengthen cooperation with overseas-related enterprises according to local conditions
 - ② Improve the international logistics system: Optimize transportation management; Strengthen transportation security and services
 - ③ Strengthen financial support: Enhance enterprises' awareness and ability to hedge against exchange rate risks; Optimize credit support methods; Fully utilize the role of export credit insurance to facilitate cross-border RMB settlement
 - ④ Promote and optimize trade activities: Actively support enterprises in conducting business activities; Strengthen public platform support
 - ⑤ Create a favorable trade environment: Promote the internationalization of standards and mutual recognition of conformity assessments; Fully leverage the effectiveness of free trade agreements; Improve import and export management policies
 - ⑥ Enhance risk prevention capabilities: Fully utilize the role of multilateral and bilateral mechanisms; Actively and appropriately respond to foreign trade restriction measures
- On June 5, 2024, to better explore overseas markets and meet local regulatory requirements, 15 departments, including the Ministry of Ecology and Environment, the National Development and Reform Commission, and the Ministry of Industry and Information Technology of China, issued the "Implementation Plan for Establishing a Carbon Footprint Management System" (hereinafter referred to as the "Implementation Plan"), officially putting the carbon footprint management system on the agenda. As the attention to carbon footprints increases domestically and internationally, companies throughout the automotive industry chain are carrying out related work. Consequently, Chinese automotive parts companies, represented by power batteries, have begun to establish carbon footprint management systems to certify their low-carbon status and strive for smooth overseas expansion. The release of the "Implementation Plan" will serve as a powerful guide and boost. The "Implementation Plan" proposes 22 key tasks in four main areas. From establishing system standards, increasing financial support, promoting international mutual recognition, to strengthening capacity building, the "Implementation Plan" outlines the basic framework of the carbon footprint management system. This is especially true for key foreign trade products such as lithium batteries, photovoltaics, new energy vehicles, and electronic appliances, which are developing rapidly both domestically and internationally and face increasing requirements for carbon footprint accounting. Actively participating in the formulation of international standards for product carbon footprints will also provide more influence in the future international carbon market.

关于建立碳足迹管理体系的实施方案

为深入贯彻《中共中央 国务院关于完整准确全面贯彻新发展理念做好碳达峰碳中和工作的意见》《中共中央 国务院关于全面推进美丽中国建设的意见》，落实国务院《2030年前碳达峰行动方案》，加快建立碳足迹管理体系，形成绿色低碳供应链和生产生活方式，推动新质生产力发展，助力实现碳达峰碳中和目标，根据国务院关于碳足迹管理工作部署和分工意见，制定本方案。

Link: <https://imgs.h2ochina.com/news/2024/07/1720157133389518.pdf>

VI. Trends in the Development of Auto Parts Products

1. Electrification and Lightweight Development

- Although automobiles have primarily relied on mechanical technology, the potential for creating added value through mechanical technology alone is now relatively limited. The application of electronics and information technology in the automotive industry has opened up new avenues for creating high added value. In countries with advanced automotive industries, automotive electronics technology is widely applied in engine, chassis, and body control, fault diagnosis, as well as in audio, communication, and navigation systems. This has greatly improved the safety, emission performance, economic performance, and comfort of vehicles. The future automotive parts industry is expected to integrate more emerging technologies, leading to continuous improvement in the level of electrification.
- Lightweighting is an important means for traditional vehicles to save energy and for improving the cruising range of new energy vehicles. It aims to reduce the curb weight of vehicles as much as possible while ensuring vehicle strength and safety, thus achieving vehicle lightweighting. In essence, vehicle lightweighting translates to the lightweighting of parts. The extensive use of aluminum castings, aluminum-magnesium alloy parts, and automotive plastic parts will be a significant trend.

2. Integration and Modularization Development

- Under the trends of lightweighting and electrification of parts, the automotive parts industry will gradually implement product upgrades, shifting towards integrated and modular supply. The integration and modularization of automotive parts manufacturing involve new designs and processes that combine functions previously achieved by multiple parts into one module component, thereby replacing multiple parts with a single module component.
- Integrated and modular components have many advantages compared to single parts. They are lighter, contributing to the lightweighting of the entire vehicle and achieving energy-saving and emission reduction goals. They occupy less space, optimizing the spatial layout of the whole vehicle and improving overall performance. Compared to individual parts, integrated and modular components reduce installation procedures, enhancing assembly efficiency.
- The integration and modularization of automotive parts systems have become significant trends in the automotive parts industry, particularly for passenger vehicle parts. This trend will help parts companies enhance their competitive position in the global automotive parts industry and form long-term sustainable development momentum in an increasingly competitive market environment.

VII. Recommended Chinese Auto Parts Companies to Focus On:

- European and American countries, emphasizing supply chain security and protecting the development of key industries, have implemented a series of policies and agreements in the field of new energy vehicles to promote the localization of the industrial chain and increase the proportion of local production by car manufacturers. This encourages Chinese parts companies to seek more supporting opportunities overseas. For parts companies with market competitiveness, going overseas to seek more development opportunities has become an inevitable choice.
- The wave of electrification and intelligent transformation in the Chinese automotive industry will continue. Parts companies are expected to achieve steady domestic business development by following the growth trend of the new energy vehicle industry and high-quality customers. Meanwhile, with the further coordination and optimization of overseas factories, Chinese parts companies are likely to enter the new energy vehicle supply systems of European and American car manufacturers by expanding product categories, models, and customers. Consequently, Chinese parts companies are expected to develop into global supporting parts companies.

Top A-Share Auto Parts Companies by Overseas Revenue in Hong Kong, Macau, Taiwan, and Other Foreign Regions in 2023							
Order	Stock Code	Stock Name	2023 Revenue from Overseas Operations (Billion RMB)	Year-over-Year Growth of Overseas Revenue (%)	Market Capitalization (Billion RMB)	Sub-industry (Level 3)	Main Revenue Composition
1	000338.SZ	Weichai Power	1137.52	19.67%	92.66	Chassis and Engine Systems	Foreign: 53.17%, Domestic: 46.83%
2	600699.SH	JOYSON ELECTRONICS	421.6	11.51%	236.41	Automotive Electronic and Electrical Systems	Foreign Regions: 76.22%, Domestic Regions: 23.78%
3	600741.SH	Huayu	310.8	8.52%	526.82	Body Accessories and Trim	Domestic: 80.52%, Foreign: 19.48%
4	4600660.SH	Fuyao Glass	147.92	15.25%	1083.29	Body Accessories and Trim	Foreign: 54.7%, Domestic: 45.3%
5	002984.SZ	SENTURY	68.12	23.25%	157.73	Tires and Wheels	Overseas Sales: 86.99%, Domestic Sales: 13.01%
6	000901.SZ	CASC	49.01	34.05%	66.01	Automotive Electronic and Electrical Systems	Foreign: 72.3%, Domestic: 28.59%, Internal Offset: -0.5%
7	603013.SH	Yapp	32.38	1.93%	82.37	Chassis and Engine Systems	Domestic: 61.06%, Foreign: 38.94%
8	002870.SZ	Senssun	30.22	11.76%	36.22	Automotive Electronic and Electrical Systems	Foreign Sales: 52.6%, Domestic Sales: 48.15%
9	605088.SH	GSP	28.28	5.99%	35.98	Chassis and Engine Systems	Europe: 40.67%, North America: 20.25%, Asia and Africa: 20.01%, Internal Lock: 10.67%, South America: 8.4%
10	000599.SZ	Qingdao Doublestar	25.31	26.22%	46.55	Tires and Wheels	Foreign: 54.36%, Domestic Sales: 45.64%
11	603109.SH	Senci Electric Machinery	17.41	2.23%	34.33	Other Auto Parts	Foreign Regions: 67.37%, Domestic Regions: 32.63%
12	600841.SH	New Power	16.43	47.10%	51.78	Chassis and Engine Systems	Domestic: 81.07%, Foreign: 18.93%
13	002906.SZ	Foryou	16.32	15.55%	134.1	Automotive Electronic and Electrical Systems	Domestic Sales (within Mainland China): 77.52%, Foreign Sales (outside Mainland China): 22.98%
14	603596.SH	Bethel	8.69	6.10%	241.23	Chassis and Engine Systems	Domestic: 87.96%, Foreign: 12.04%
15	002766.SZ	Soling	8.12	87.99%	38.4	Automotive Electronic and Electrical Systems	Overseas: 64.44%, Domestic Sales: 35.56%
16	002283.SZ	Tianrun	7.89	23.42%	55.21	Chassis and Engine Systems	Domestic Sales: 80.3%, Foreign Sales: 19.7%
17	00694.SZ	Wuxi Lihu	6.97	-4.81%	22.13	Chassis and Engine Systems	Domestic: 56.49%, Foreign: 43.51%
18	000880.SZ	Weichai Heavy Machinery	6	5.35%	14.45	Chassis and Engine Systems	Domestic: 84.05%, Foreign: 15.95%
19	603179.SH	Xinquan	5.03	16.83%	209.3	Automotive Electronic and Electrical Systems	Overseas: 1.38%, European Regions: 0.01%
20	300304.SZ	Yunyi Electric	4.75	20.61%	51.9	Automotive Electronic and Electrical Systems	Domestic Sales: 71.56%, Foreign Sales: 28.44%
21	300695.SZ	Zhaofeng	4.4	30.41%	32.37	Tires and Wheels	Foreign: 54.52%, Domestic: 45.48%
22	301298.SZ	Dongli	4.36	6.61%	11.55	Other Auto Parts	Overseas: 76.4%, Domestic: 23.6%

Key Focus Companies: Chinese Auto Parts Companies' Expansion in Europe and Production Value Estimates (Billion RMB)

Order	Company	Content	Investment Amount	Production Start Time	Production Capacity	Output Forecast	2022 Revenue	Elasticity Estimate of European Production Value
1	Yinlun	August 2022, increased investment by 110 million RMB in Shanghai Yinlun for Poland base production	110 million RMB	Q3 2023	Supporting North American customer's German factory and Jaguar Land Rover's mid-volume models later building heat pump plates, energy storage liquid cooling units, battery liquid cooling plates, etc., to support more local European customers		84.8	2.60%
2	Tuopu Group	December 2020, established a wholly-owned subsidiary in Poland; July 2021, increased investment in Polish subsidiary	Estimated total investment not exceeding 30 million EUR	/	/		159.93	; 2.2%;
3	Sanhua	April 2022, established a joint venture with Minth, invested 51 million RMB, holding 51% equity; June 2023, raised 3.5 billion RMB through overseas issuance of global depository receipts to invest in the Polish factory	401 million RMB	2019	Purchased production lines for plate heat exchangers (oil coolers), solenoid valves, electronic water valves and integrated components in Tychy Logistics Park, Poland, and supporting auxiliary production equipment, with an annual capacity of 1.3 million plate heat exchangers, 1.7 million oil coolers, 1.12 million solenoid valves, 430,000 electronic water valves, and 430,000 integrated components			3.80%
4	Baolong	February 2022, officially started construction of a sensor production park in Hungary with an investment of 15 million EUR	15 million EUR	Early 2023	/	2.34	47.78	4.90%
5	Xingyu	August 2019, invested in a factory in Serbia	60 million EUR	December 2022	Annual production of 5.7 million car lights, including 3 million taillights, 1.7 million small lights, and 1 million headlights		82.48	11.30%
6	Xinquan	October 2023, invested in a factory in Slovakia	20 million EUR	/	/	3.12	69.47	4.50%
7	IKD	January 2024, invested in a factory in Hungary	Not exceeding 86 million EUR	/	/	10.062	42.65	23.60%
8	Desay SV	March 2022, second European factory officially opened	/	/	/			

Key Focus Companies: Multiple Chinese Auto Parts Companies Embarking on Overseas Expansion to Mexico

Order	Company	Content
1	Fuyao Glass	The company's overseas revenue has steadily grown since 2013, and it now has a global footprint. Fuyao Glass has developed an integrated full industry chain, covering multiple global car manufacturers. The company's overseas business layout has created a new growth curve, driving revenue growth. By the end of 2023, the company's global market share exceeded 30%, with over 65% market share in China.
2	IKD	As the leading Chinese small and medium aluminum die-casting parts company, the company is transitioning its product structure towards new energy. The main products are new energy vehicle structural parts and three-electrical system products. In 2022, the new energy vehicle projects of the aluminum alloy die-casting segment are expected to account for about 70% of the new sales revenue over the life of the project; of which, new energy vehicle body structural parts account for about 5%, new energy three-electrical system accounts for about 40%, intelligent driving system projects account for about 12%, and thermal management system projects account for about 10%. Major customers are international Tier 1 parts suppliers such as Valeo, Bosch, Magna, etc. In the first half of 2023, overseas revenue accounted for 1.52 billion RMB, representing 58.4% of the company's total revenue.
3	Yinlun	Specializing in the automotive thermal management field, the company's global layout is gradually improving. The main products are thermal management modules and oil coolers, and the Monterrey production base in Mexico is expected to generate sales revenue of 1.675 billion RMB in 2025.
4	Rongtai	Deeply rooted in the aluminum die-casting industry, the company primarily produces steering system housings and has established strong ties with leading global Tier 1 companies. Founded in 2000 and headquartered in Yangzhou, Jiangsu, the company's products mainly focus on steering systems. It has recently acquired 9000T die-casting equipment to expand its integrated die-casting business. Its customer base includes renowned global auto parts giants such as Bosch, BorgWarner, Nexteer, and other new energy vehicle companies like BYD and XPeng.
5	Xiangshan	The company's main products include automotive interior components and new energy vehicle charging and power distribution systems. Its business covers luxury brands such as Mercedes-Benz, BMW, Audi, and Porsche, and it continues to expand to new market players and independent brands. Its global layout is steadily advancing, with the production capacity of overseas production bases being gradually expanded, and the overall overseas production capacity is expected to reach 3.5 billion RMB.
6	Daimay	The main products are sunshades, seat headrests, armrests, and central controllers for car roofs. The company has high-quality customer resources, covering international OEMs such as Mercedes-Benz, BMW, Audi, and domestic OEMs such as SAIC, Great Wall, FAW, etc. The company holds about one-third of the global passenger car sunshade market. In 2022, overseas business achieved revenue of 4.212 billion RMB, up 26.4% year-on-year, accounting for 83.3% of the company's total revenue.
7	Xinquan	The company specializes in the design, manufacturing, and sales of automotive interior and exterior parts and molds. It has developed the ability to support the automotive interior and exterior system, expanding from dashboards to overhead cabinets, door panels, column assemblies, and bumper assemblies, continuously increasing the value per vehicle. Its Mexican subsidiary has an initial production capacity of 250,000 sets of dashboards and 1.7 million seat back panels.
8	Tuopu Group	As an automotive parts platform supplier, the company has established manufacturing plants or storage centers in the US, Canada, Brazil, Malaysia, etc. The Polish factory has already started mass production, achieving revenue of 15.993 billion RMB in 2022, up 39.5% year-on-year.
9	Bethel	Founded in 2004, the company started with disc brakes and has been deeply involved in the braking system for 20 years. The company's products are upgrading towards integrated chassis control systems, with mass production of wire-controlled brake systems (WCBS), advanced driver assistance systems (ADAS), electronic parking brake systems (EPB), and vehicle stability control systems (ESC).

Analysis Report on the Chinese Automotive Lighting Market

Introduction

In the automotive parts sector within the Chinese market, the development of the automotive lighting industry is particularly prominent, and the progression of lighting technology is distinctly evident. This report aims to provide a comprehensive analysis of the Chinese automotive lighting market, with a specific focus on headlights. It will explore the types, historical evolution, policy context, and future trends of automotive lighting. The goal of this analysis is to elucidate the dynamics of the automotive lighting market in China, including the scale, trend directions, and potential market demand in both the original equipment (OEM) and aftermarket segments.



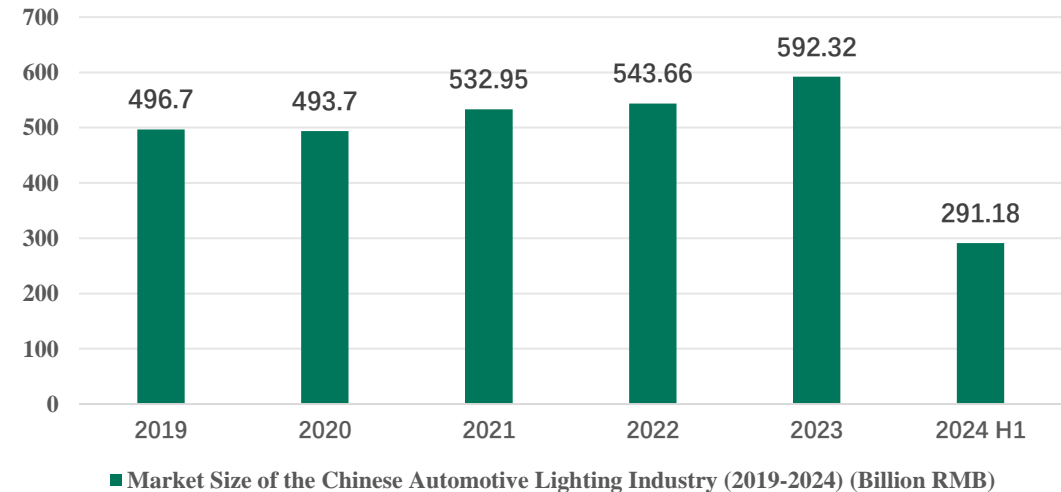
I. Current Status of the Automotive Lighting Market

1. Industry Market Size

In 2023, the market size of the automotive lighting industry in China reached 59.232 billion RMB.

- Statistical data shows that in 2019, the market size of the automotive lighting industry in China was 49.670 billion RMB, and by 2023, it had increased to 59.232 billion RMB.

Market Size of the Chinese Automotive Lighting Industry (2019-2024)

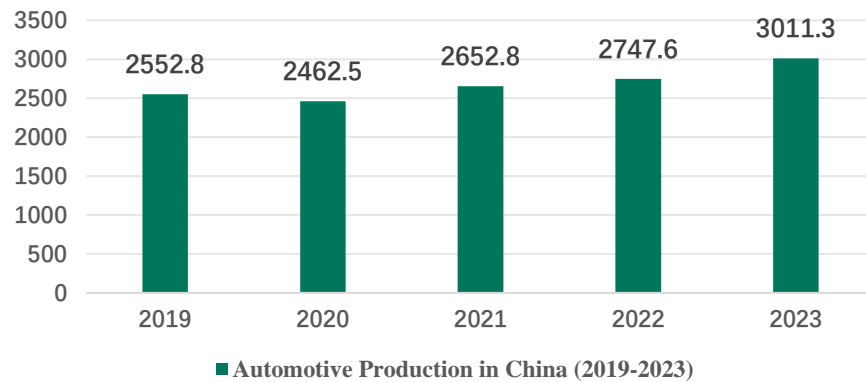


In 2023, China’s automotive production and sales both exceeded 30 million units.

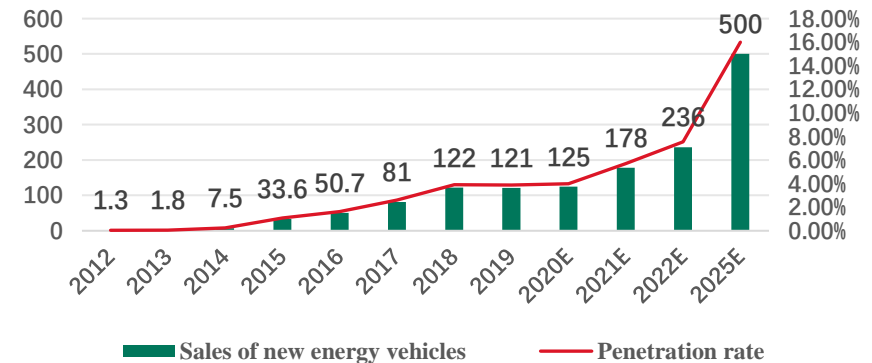
- According to relevant data, China has maintained the world’s largest automotive production and sales for 15 consecutive years. Both the new vehicle market and the total vehicle fleet are the largest globally. In 2023, China’s automotive production and sales each surpassed 30 million units, setting new historical highs.

- With the increase in automotive sales, the number of vehicles in China has also been continuously rising, reaching 336 million units in 2023. The robust growth of the automotive industry and the promotion and adoption of new energy vehicles have led to a surge in demand for automotive lighting components, providing a favorable environment for the development of the automotive lighting market.

Automotive Production in China (2019-2023)



Domestic New Energy Vehicle Sales and Forecast



II. Definition and Development Overview of Automotive Lighting

1. Overview of Automotive Lighting

(1) Automotive lights are primarily categorized into halogen lights, xenon lights, LED lights, and laser lights.

- Automotive lights are crucial components of a vehicle, used for illumination, signaling, and enhancing visibility. They play a vital role in night driving, adverse weather conditions, and various traffic situations. In particular, front lights (also known as headlights) are key indicators of a vehicle’s safety performance, with their functionality and quality being critical factors in assessing overall vehicle safety.

Main Types of Automotive Lights and Comparative Overview				
Category	Halogen Lights	Xenon Lights	LED Lights	Laser Lights
Light Intensity	Approximately 1000 lumens for a 55W halogen bulb	Approximately 3200 lumens for a 35W xenon bulb	Approximately 3000-4000 lumens for a 20W LED bulb. The brightness decay is much lower compared to halogen lights	Approximately four times greater than LED headlights
Durability	Average lifespan of 500 hours at maximum brightness.	2500-3000 hours	30,000-50,000 hours	Over 100,000 hours
Illumination Effect	Provides uniform light distribution	The light is relatively concentrated, with dimmer illumination on the sides.	Minimal light distortion and no need for additional filters	Minimal light distortion and no need for additional filters
Energy Efficiency (Power)	Typical Halogen Headlight (55W)	standard 35W xenon headlights	typically around 20W: for daytime running lights, LED components consume only 1/20th of the energy compared to halogen lights.	Over 30% more energy-efficient compared to LED headlights
Beam Width	Approximately 4.4 meters.	About 5.2 meters	About 6.1 meters	About 12 meters

II. Definition and Development Overview of Automotive Lighting

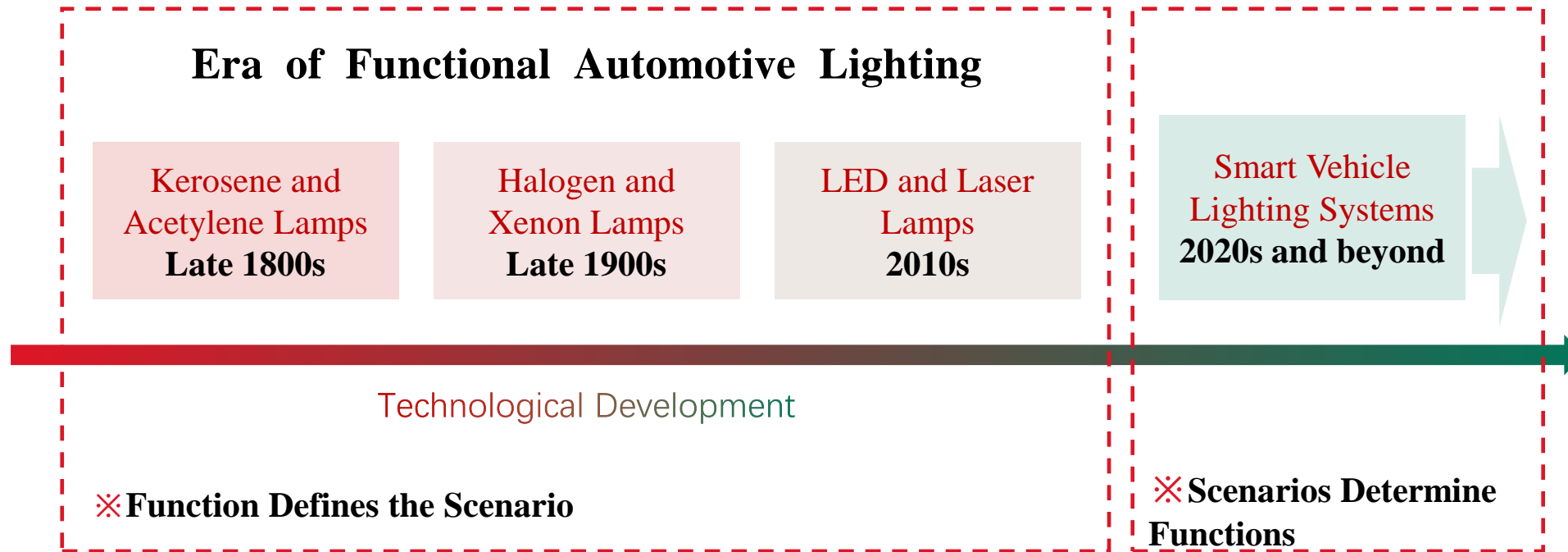
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Main Types of Automotive Lights and Comparative Overview				
Category	Halogen Lights	Xenon Lights	LED Lights	Laser Lights
Advantages	Relatively easy to produce, lower cost, brightness is easy to control, high luminous efficiency, and strong penetration	High brightness, energy-efficient, and long lifespan.	Energy-efficient and environmentally friendly, high brightness, long lifespan, low voltage safety, and diverse design options. Additionally, LED headlights support intelligent lighting features such as adjustable height, automatic high/low beam switching, adaptive steering, and cornering illumination assistance	Combines all the benefits of LED lights with a smaller size and double the beam distance
Disadvantages	High energy consumption, relatively low power efficiency, and tends to be dimmer. Halogen bulbs generate significant heat, leading to high energy waste, and the light source is not easily focused	Higher cost, high color temperature, less effective penetration in rain, snow, or fog compared to halogen lights, and slower start-up time	High heat output can lead to potential damage, and the cost is relatively high	Extremely high cost

- From the perspective of light source technology, automotive lighting has evolved through various stages, including fuel lamps, incandescent lamps, halogen lamps, and xenon lamps.
- Currently, LED headlights are widely used in the Chinese automotive lighting market. Laser headlights are expensive and are mainly used in high-end luxury vehicles for high beams. The primary types of headlights used on existing roads are halogen lamps, xenon lamps, LED lamps, and laser lamps.



Automotive Lighting Technology Development Path

III. Policy Environment for Automotive Lighting Development

1. Policy Background

• The automotive industry is a significant component of China’s economy and has received considerable national attention due to its substantial impact on economic development. In recent years, various industry regulatory authorities have issued a series of related policies and guidelines, creating a favorable environment for the development of the automotive lighting sector.

Policies such as the “Automobile Industry Growth Stabilization Plan (2023-2024),” “Several Measures to Promote Automobile Consumption,” “Notice on Revitalizing Automobile Distribution and Expanding Automobile Consumption,” “Opinions of the General Office of the State Council on Accelerating the Development of Circulation to Promote Commercial Consumption,” and “Implementation Opinions on Expanding and Upgrading Consumption to Accelerate the Formation of a Strong Domestic Market” have been introduced. These policies aim to stabilize and expand the automotive market, unleash the potential of automobile consumption, and positively influence the development of the automotive parts industry, including automotive lighting.

Relevant Policies for the Automotive Lighting Industry		
Time	Policies	Content
January 2022	“14th Five-Year Plan” for Modern Energy System Development	Actively promote the application of new energy vehicles (NEVs) in urban public transportation and other areas. By 2025, the proportion of new energy vehicles in new car sales is expected to reach approximately 20%.
June 2022	Implementation Plan for Technological Support for Carbon Peak and Carbon Neutrality (2022-2030)	Establish major projects specifically targeting technological innovation for carbon peak and carbon neutrality. The National Key R&D Program will implement a series of key initiatives in areas such as renewable energy, new energy vehicles, circular economy, green buildings, and Earth system and global change, significantly enhancing support for low-carbon technological innovation.
February 2023	Outline for Quality Improvement and National Strength	Accelerate the intelligent transformation of traditional equipment and vigorously develop high-quality general-purpose intelligent equipment. Implement a reliability enhancement plan to improve the reliability levels of machinery, electronics, automotive products, and their fundamental components and parts, promoting quality upgrades.
July 2023	Several Measures to Promote Automobile Consumption	To further stabilize and expand automotive consumption, optimize the management systems and market environment for vehicle purchase and use, and more strongly promote the continuous and healthy development of new energy vehicles, measures include optimizing vehicle purchase restrictions, supporting the replacement and consumption of old vehicles, and enhancing the construction of supporting infrastructure for new energy vehicles.

III. Policy Environment for Automotive Lighting Development

• Among these policies, the development of new energy vehicles (NEVs) has received significant support. As NEVs require advanced lighting technologies and intelligent features, and LED headlights are most widely used in the field of intelligent connectivity, LED lighting has seen broader application in the current automotive lighting market. As the NEV market continues to grow, the LED headlight market is also expanding.

Relevant Policies for the Automotive Lighting Industry		
Time	Policies	Content
August 2023	Automobile Industry Growth Stabilization Work Plan (2023-2024)	In 2023, the automotive industry is expected to maintain a stable and improving development trend, with an aim to achieve annual vehicle sales of approximately 27 million units. The industry's operation is projected to stay within a reasonable range, and the quality and efficiency of industrial development are anticipated to further improve.
May 2024	Notice from Five Departments on Launching 2024 New Energy Vehicle Rural Promotion Activities	Select suitable new energy vehicle models that are well-regarded, reliable, and appropriate for rural markets to conduct focused exhibitions, test drives, and related activities. Enrich the consumer experience and provide diverse options. Organize charging and battery swapping services, as well as financial services such as insurance, claims, and credit for new energy vehicles, alongside maintenance and after-sales services to complement rural infrastructure and address existing gaps in support facilities.

4. Relevant Policies Overview

- ① Automobile Industry Growth Stabilization Work Plan (2023-2024) (link: https://www.yn.gov.cn/ztgg/lqhm/lqzc/gbhqwj/202309/t20230906_285203.html)
- ② Several Measures to Promote Automobile Consumption (link: https://www.gov.cn/zhengce/zhengceku/202307/content_6893476.htm)
- ③ Notice on Revitalizing Automobile Distribution and Expanding Automobile Consumption (link: https://www.gov.cn/zhengce/zhengceku/2022-07/07/content_5699701.htm)
- ④ Opinions of the General Office of the State Council on Accelerating the Development of Circulation to Promote Commercial Consumption (link: https://www.gov.cn/zhengce/content/2019-08/27/content_5424989.htm)
- ⑤ Implementation Opinions on Expanding and Upgrading Consumption to Accelerate the Formation of a Strong Domestic Market (link: https://www.gov.cn/zhengce/zhengceku/2020-03/13/content_5490797.htm)
- ⑥ Notice on Measures to Stabilize and Expand Automobile Consumption (link: https://www.gov.cn/zhengce/zhengceku/2020-05/03/content_5508575.htm)



Automobile Industry Growth Stabilization Work Plan (2023-2024)



Several Measures to Promote Automobile Consumption



Notice on Revitalizing Automobile Distribution and Expanding Automobile Consumption



Opinions of the General Office of the State Council on Accelerating the Development of Circulation to Promote Commercial Consumption



Implementation Opinions on Expanding and Upgrading Consumption to Accelerate the Formation of a Strong Domestic Market



Notice on Measures to Stabilize and Expand Automobile Consumption

IV. Development Trends in Automotive Lighting

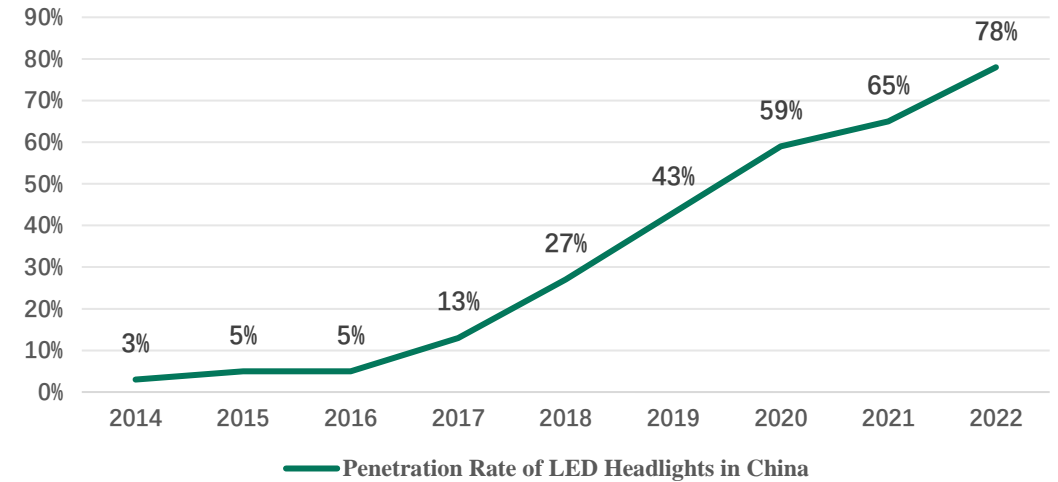
With ongoing technological advancements and increasingly diverse consumer demands, the development trends in automotive headlights are shifting towards **intelligence, energy efficiency, and personalization.**

1. Mainstream Trend: LED Lights Continue to Dominate, Market Expansion Ongoing

·Data shows that the market for LED headlights is gradually expanding. From 2017 to 2022, the penetration rate of LED headlights in China increased from 13% to 78%. In the coming years, LED headlights are expected to penetrate both high-end and lower-end markets further. The global automotive LED lighting market is projected to reach \$8.97 billion by 2024 and \$14.34 billion by 2030, indicating strong growth potential.

·Compared to traditional light sources, LED lights offer multiple advantages, including high efficiency, energy savings, and long lifespan. The key reasons for LED lights becoming the core trend in automotive lighting upgrades are their compact size and fast response: As traditional cars evolve into smart vehicles, the performance of lighting control modules is increasingly enhanced. LED lights, with their small size and quick response, are ideal for achieving zone control. Additionally, since headlights are often referred to as the “eyes” of a vehicle, their design significantly impacts the overall aesthetics of the car. The compact size of LED lights allows for more flexible design options, meeting diverse styling needs. While laser lights excel in volume, luminous efficiency, and beam distance, their high cost and limited applicability mean they are not yet widespread. In comparison, LED lights are the most suitable choice for future automotive lighting development.

In recent years, the penetration rate of LED headlights in China has rapidly increased, reaching 78% in 2022.



2. Technological Upgrades: Digitalization and Intelligence Enhance Driving Experience

With the advancement of automotive intelligence, headlight systems are continuously evolving. Digital headlights use advanced sensors and camera systems to dynamically adjust the shape and intensity of the light beam in real time, adapting to varying driving conditions and environments. Intelligent headlight systems, such as Adaptive Front-Lighting Systems (AFS) and Adaptive High Beam Assist (ADB), automatically adjust the beam to avoid dazzling oncoming drivers while providing optimal illumination. High-resolution digital headlight technologies, such as matrix LED, Digital Light Processing (DLP), and laser headlights, offer more precise lighting control and complex beam patterns. These technologies enable pixel-level adjustments to the lighting, further enhancing safety and comfort during nighttime driving.

3. Environmental Trends: Increased Awareness and Reduced Automotive Energy Consumption

With rising environmental awareness, headlight technology is advancing towards greater energy efficiency. New lighting technologies, such as LED and OLED, are more energy-efficient compared to traditional halogen and xenon lights. These advancements help reduce vehicle energy consumption and emissions, contributing to environmental sustainability.

4. Exterior Upgrades: Personalization and Customization Enhance Vehicle Identification

As consumer demand for automotive personalization grows, headlight technology is evolving to meet these preferences. For example, some vehicle models now offer customizable light colors and illumination modes, and can even display specific signals or patterns, enhancing the vehicle's unique characteristics. The development of LED technology has greatly expanded the design possibilities for headlights. The compact size and flexibility of LED lights allow for more unique and innovative headlight designs, enhancing both the vehicle's aesthetic appeal and brand identity. Additionally, LED headlights enable more complex lighting effects and dynamic features, such as dynamic turn signals and welcome lights. These features not only improve the vehicle's appearance but also increase its functionality and interactivity.

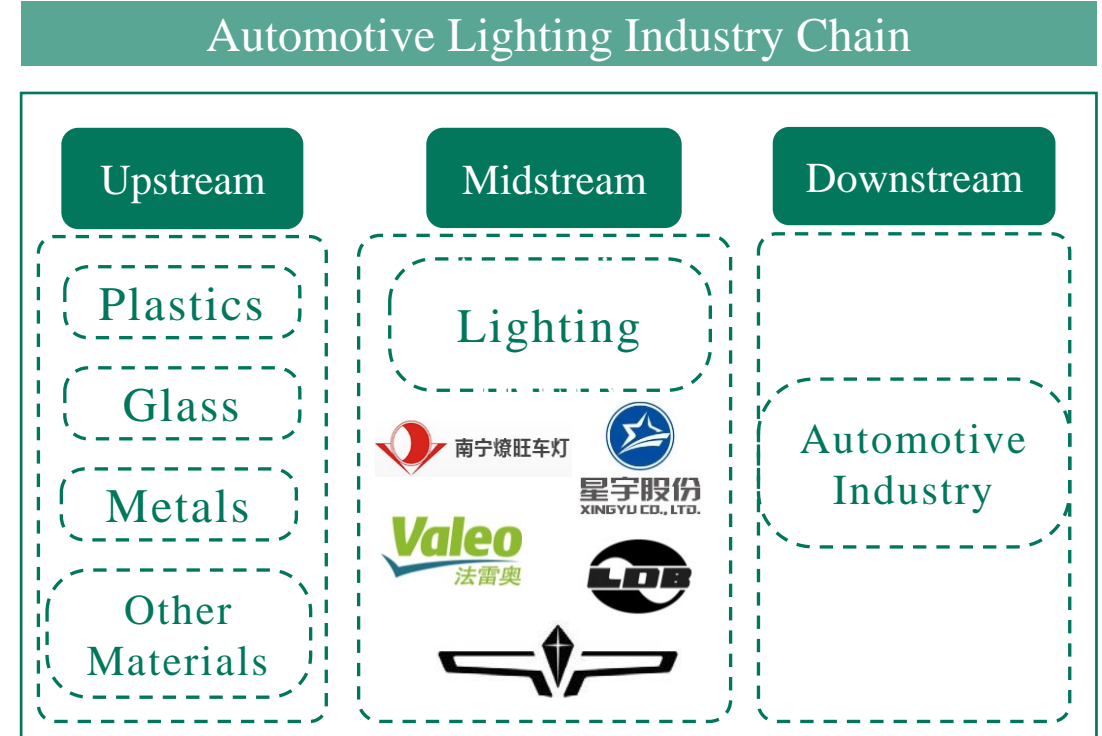
V. Competitive Landscape of the Automotive Lighting Industry

1. Automotive Lighting Industry Chain Analysis

In the upstream segment of the automotive lighting industry chain, core materials include plastics, glass, various metals (such as aluminum and steel), and electronic components. Suppliers of these raw materials primarily come from the chemical industry, metal smelting sector, and electronic component manufacturing. They ensure a stable and high-quality supply of raw materials for headlight manufacturers.

In the midstream segment, headlight manufacturers are responsible for the precise integration and assembly of various components, including optical modules, controllers, and plastic housings, to produce a complete headlight product. This process involves rigorous performance testing and quality inspection procedures. Headlight manufacturers primarily serve major automotive manufacturers, providing lighting products that match the specific models produced by these automakers.

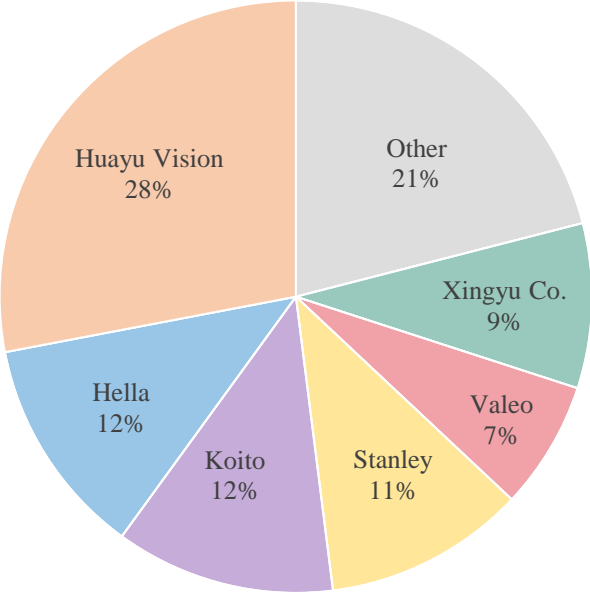
With the continuous increase in global vehicle production and sales, the demand for automotive lighting is also showing a steady upward trend.



2.Competitive Landscape of the Chinese Automotive Lighting Market

(1) Original Equipment Manufacturer Market:

The OEM market refers to the automotive lighting market for new vehicle fittings. With the rise of independent Chinese vehicle brands, the trend of automotive intelligence, and the localized industrial layout of automotive components, Chinese auto parts companies have obtained a favorable development environment for many years. Consequently, the OEM automotive lighting market has also expanded.



Market Share Distribution of the Competitive Landscape in the Chinese Automotive Lighting Market

In this context, although multinational companies such as Koito, Valeo, and Faurecia Hella still maintain a certain technical advantage due to their early market entry and continue to lead in forward-looking technology research, Chinese domestic automotive lighting manufacturers have been strengthening their modular supply and flexible response capabilities.

The Competitive Landscape of China’s Automotive Lighting Industry	
Companies	Business Introduction
Huayu Vision	The main business focuses on the research and development of automotive lighting and signal system technology, electronic technology, visual technology, intelligent technology, and the production and sales of automotive electronic equipment systems and lighting electronic components. Huayu Vision is one of the leading enterprises in the industry, with major clients including SAIC Volkswagen, SAIC General Motors, SAIC Passenger Vehicles, FAW-Volkswagen, FAW Toyota, Dongfeng Nissan, Changan Ford, BMW Germany, Audi, and other automobile manufacturers.
Xingyu Co.	The main business focuses on the research and development, design, manufacturing, and sales of automotive lighting (mainly for passenger vehicles). Major clients include FAW-Volkswagen, SAIC Volkswagen, SAIC General Motors, Daimler, BMW Germany, Dongfeng Nissan, Geely Auto, GAC Passenger Vehicles, NIO, Li Auto, and Xpeng Motors, among other automobile manufacturers.

Aftermarket News

With continuous improvement in research and development capabilities and ongoing technical breakthroughs, domestic automotive lighting products are increasingly penetrating mid-to-high-end car brands. Domestic manufacturers, represented by Huayu Vision and Xingyu Co., have grown to become the two companies with the highest market share in China's automotive lighting market.

The Competitive Landscape of China's Automotive Lighting Industry	
Companies	Business Introduction
Foshan Lighting	The main business focuses on the research and development, production, and sales of high-quality green energy-saving lighting products, motor vehicle lighting products, and electrical products. It also provides customers with complete lighting and electrical solutions as well as motor vehicle lighting design solutions. The main products include LED lighting, traditional lighting, motor vehicle lamps, switches, sockets, and more.
Fuwei Hella	The main business focuses on the design, testing, development, production, and sales of various types of automotive lamps and electronic components for installing automotive lamps. Fuwei Hella is one of the key enterprises in the industry, with major clients including FAW-Volkswagen, Brilliance BMW, Shenyang Jinbei, SAIC Volkswagen, Dongfeng Nissan, Wuhan Shenlong, FAW Toyota, Geely Auto, Chery Auto, and Fiat, among other automobile manufacturers.
Hongli Zhihui	The main business focuses on the research and development, production, and sales of LED semiconductor packaging and LED lighting products. Hongli Zhihui's subsidiary, Danyang Yishan Vehicle Lighting Equipment Manufacturing Co., Ltd., focuses on the production of vehicle lighting. Its main clients include Juegai Guli Auto, NETA Auto, BAIC Group, Great Wall Motors, and other vehicle manufacturers.

(2) Aftermarket:

The aftermarket refers to the market where consumers replace or upgrade automotive lighting after the vehicle has been sold. As the number of vehicles in use increases and the duration of vehicle usage extends, the demand for automotive lighting in the aftermarket is also growing. Consumers' needs for performance and aesthetic upgrades of automotive lights, as well as the need to replace damaged lights, are providing continuous growth momentum for the aftermarket. The competitive concentration in the aftermarket is relatively low, with a wide variety of brands.



Automotive Lighting

Attachment - List of Major Automotive Lighting Companies in the Chinese Aftermarket:

Category	No.	Companies	Business Scope
Chinese Automotive Lighting Companies	1	Dongguan Xianzhi Electronic Technology Co., Ltd	Main Products: LED automotive headlights, research and development, production, and sales; electronic products, automotive lighting, flashlights, automotive supplies, lighting products, outdoor lighting, household electronics, etc.
	2	Guangzhou Jushun Automotive Supplies Co., Ltd	Main Products: Large spotlights, rear fog lights, warning lights; research, production, sales, and service of integrated automotive electronic solutions.
	3	Shenzhen Ronglong Electronic Co., Ltd	Main Products: 3535 series LEDs, CSP series LEDs, imitation bright series LEDs, high-brightness series LEDs, and more.
	4	Dongguan Huaxin Automotive Supplies Co., Ltd	Main Products: LED automotive lights, production and sales of automotive products, lighting products; import and export of goods and technology.
	5	Wenzhou Yongzhong Automotive Parts Co., Ltd	Established in 1995, the company specializes in the processing and manufacturing of professional LED automotive lights and related innovative applications.
	6	Zhongshan Ideal Electronic Technology Co., Ltd	Headlights, work lights, long-range lights, automotive lights, high-beam lights, work lights for trucks and buses, scientific control and management systems.
	7	Zhongshan Chengxi Electronic Technology Co., Ltd	Main Products: LED daytime running lights, fog lights; processing and manufacturing, sales of automotive electronics, lighting products, household lighting, household appliances, and other related products.
	8	Dongguan Senbo Lighting Electronics Factory	Main Products: LED double-lens projectors, LED aluminum reflector electronic products.
	9	Guangzhou Guangyang Electronic Technology Co., Ltd	Main Products: LED automotive lights, professional automotive lighting solutions, LED lighting products and commercial lighting production.
	10	Wenzhou Changying Electronics Co., Ltd	Main Products: LED automotive headlights, electronic rearview mirrors, signal lights, work lights, flashlights, special high-power automotive lights, automotive LED lights, household LED lights, light accessories, and sales.
	11	Haining Huashun Lighting Co., Ltd	Dedicated to the research, development, production, and sales of automotive lighting.

Attachment - List of Major Automotive Lighting Companies in the Chinese Aftermarket:

Category	No.	Companies	Business Scope
Chinese Automotive Lighting Companies	12	Foshan Zhiqiang Technology Co., Ltd	LED automotive headlights.
	13	Guangzhou Carlox Technology Co., Ltd	Main products: LED automotive headlights, electronic product sales, online sales; lighting equipment sales, lighting equipment manufacturing, electronic component development, and electronic component manufacturing.
	14	Shenzhen Jintong Electronic Technology Co., Ltd	Main products: LED automotive headlights, electronic products, automotive accessories, and automotive supplies sales.
	15	Zhongshan Zhonghua Electronic Technology Co., Ltd	Main products include: truck taillights, special vehicle warning lights, electronic product sales, household appliance development, household appliance sales, household appliance manufacturing, daily appliance sales, lighting equipment manufacturing, and lighting equipment sales.
	16	Shenzhen Jinfengwei Technology Co., Ltd	Development and technical consultation of IoT and vehicle networking technologies; research, development, and sales of IoT products and vehicle networking products; LED products, automotive lighting products, communication products, and electronic product development and sales; operation of e-commerce; domestic trade; import and export of goods and technology; research and sales of medical products and equipment for the elderly, etc.
	17	Shenzhen Yongxiu Plastic Products Co., Ltd	Various vehicles, motorcycle lighting accessories, automotive headlights, glass headlights, various lamp holders, lenses, reflectors, and multi-shaped reflectors.
	18	Guangzhou Lianjie Lighting Technology Co., Ltd	LED automotive lights are used for: automobiles, motorcycles, electric vehicles, ATVs, industrial machinery, lifting equipment, outdoor machinery, and other lighting products.
	19	Zhuhai Shengneng Energy Technology Co., Ltd	The company's products include: LED automotive headlights, motorcycle lights, taillights, turn signal lights, and other LED automotive lighting products.
	20	Guangzhou Jingqi Technology Co., Ltd	Main products include color-changing automotive LED headlights, motorcycle LED lights, and turn signal lights, etc.

Chapter 2: China Auto Market Monthly Report – March & May

1: China Auto Market Overview

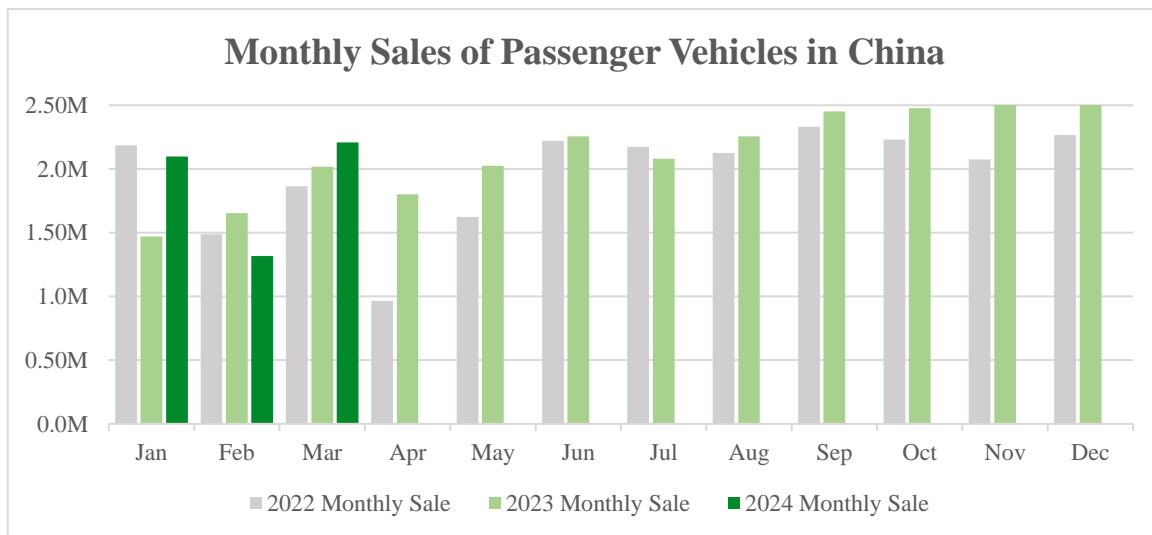
2: OEM & Auto Technology Market

3: Aftermarket News

- **Analysis of Auto Color-Changing Film**
- **Current Status and Development Trends of Customized Modified Vehicles Consumption in China (2023-2024)**
- **Addressing Core User Needs, Accurately Identifying Issues, and Presenting Improvement Suggestions**
- **NEV Development Analysis & Auto Industry Investment Opportunities from Different Countries**

China Domestic Automobile Market Data

Passenger Vehicles Market Data in China



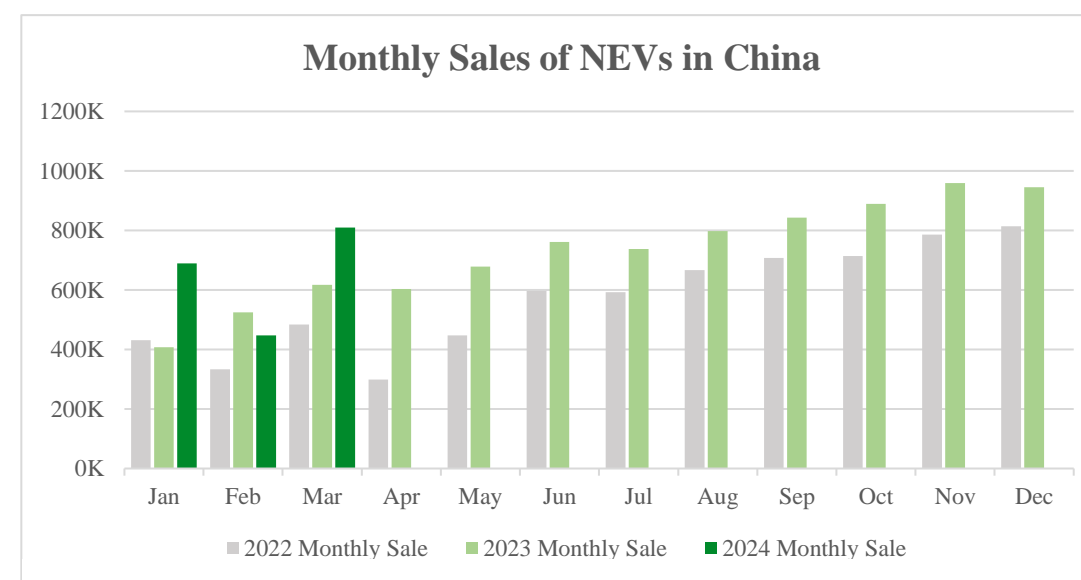
Monthly Sales Figure of Passenger Vehicles in China

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022 Monthly Sale	2.19M	1.49M	1.86M	0.97M	1.62M	2.22M	2.17M	2.13M	2.33M	2.23M	2.07M	2.27M
2023 Monthly Sale	1.47M	1.65M	2.02M	1.80M	2.02M	2.26M	2.08M	2.26M	2.45M	2.48M	2.57M	2.76M
2024 Monthly Sale	2.10M	1.32M	2.21M									

Comment

In March, the national production of passenger vehicles reached 2.192 million units, reflecting a 5.3% increase compared to the same period last year and a significant 77.5% increase compared to the previous month. Sales reached 2.189 million units, showing a year-on-year growth of 10.1% and a substantial month-on-month increase of 68.0%.

NEVs Market Data in China



Monthly Sales Figure of NEVs in China

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022 Monthly Sale	431K	334K	484K	299K	447K	596K	593K	666K	708K	714K	786K	814K
2023 Monthly Sale	408K	525K	618K	604K	678K	761K	738K	798K	843K	889K	959K	945K
2024 Monthly Sale	689K	447K	810K									

Comment

In March, the manufacturing of new energy passenger vehicles reached 788,000 units, marking a 25.2% increase compared to the previous year and a notable 84.9% surge from the previous month. During the same period, sales of new energy passenger vehicles reached 810,000 units, indicating a year-on-year rise of 31.1% and a month-on-month increase of 81.3%.

China Auto Market Overview

Passenger Vehicles Market Data in China

Mar 2024 Top 10 Retailed Selling Manufacturers of Passenger Vehicles

Rank	Brands	Sales	% YoY	% Share
1	BYD	260.3K	35.4%	36.6%
2	FAW-VW	140.6K	-4.2%	8.3%
3	Geely	114.4K	28.9%	6.8%
4	Chang'an	103.5K	11.2%	6.1%
5	SAIC-VW	87.3K	3.9%	5.2%
6	Chery	75.3K	62.6%	4.5%
7	Tesla-CN	62.4K	-18.6%	3.7%
8	BBAC	60.5K	22.2%	3.6%
9	FAW-Toyota	57.8K	-7.2%	3.4%
10	SAIC-GM	57.5K	-11.5%	3.4%

Jan-Mar 2024 Top 10 Retailed Selling Manufacturers of Passenger Vehicles

Rank	Brands	Sales	% YoY	% Share
1	BYD	586.0K	15.2%	33.1%
2	FAW-VW	395.3K	7.2%	8.2%
3	Geely	388.7K	46.2%	8.0%
4	Chang'an	384.6K	27.0%	8.0%
5	SAIC-VW	265.7K	11.4%	5.5%
6	Chery	239.4K	89.2%	5.0%
7	GAC-Toyota	170.5K	-9.7%	3.5%
8	GSMW	164.1K	8.9%	3.4%
9	BMW	159.6K	-2.9%	3.3%
10	NISSAN	157.5K	4.0%	3.3%

China Auto Market Overview

NEVs Market Data in China

Mar 2024 Top 10 Retailed Selling Manufacturers of NEVs

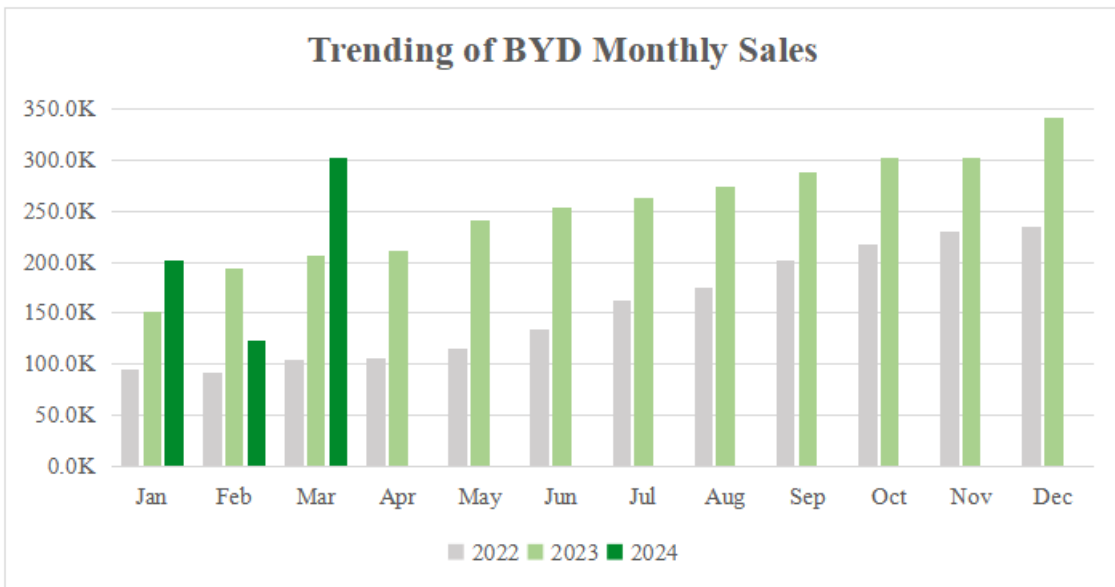
Rank	Brands	Sales	% YoY	% Share
1	BYD	260.3K	35.4%	36.6%
2	Tesla-CN	62.4K	-18.6%	8.8%
3	Chang'an	47.0K	97.6%	6.6%
4	Geely	41.8K	61.2%	5.9%
5	SGMW	36.1K	29.5%	5.1%
6	GAC-Aion	30.7K	-23.3%	4.3%
7	Li Auto	29.0K	39.2%	4.1%
8	SERES	24.4K	544.4%	3.4%
9	GWM	19.7K	132.2%	2.8%
10	Chery	17.8K	184.1%	2.5%

Jan-Mar 2024 Top 10 Retailed Selling Manufacturers of NEVs

Rank	Brands	Sales	% YoY	% Share
1	BYD	586.0K	15.2%	33.1%
2	Geely	137.5K	143.2%	7.8%
3	Tesla-CN	132.4K	-3.6%	7.5%
4	Chang'an	126.8K	109.1%	7.2%
5	SGMW	105.1K	35.2%	5.9%
6	SERES	82.4K	600.5%	4.7%
7	Li Auto	80.4K	52.9%	4.5%
8	GAC-Aion	65.0K	-17.0%	3.7%
9	GWM	54.3K	159.5%	3.1%
10	Chery	35.3K	118.7%	2.0%

China Auto Market Overview

China's Major Domestic Manufacturers Data: BYD



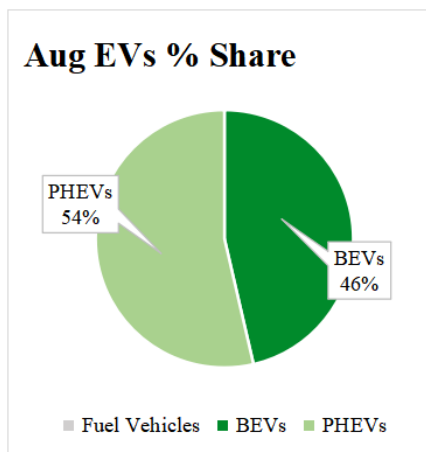
Monthly Sales Figure of BYD

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	95.4K	91.1K	104.9K	106.0K	114.9K	134.0K	162.5K	174.9K	201.3K	217.8K	230.4K	235.2K
2023	151.3K	193.7K	207.1K	210.3K	240.2K	253.0K	262.2K	274.4K	287.5K	301.8K	301.9K	341.1K
2024	201.5K	122.3K	302.5K									

According to the data released by BYD Group, in March 2024, BYD sold 302,500 vehicles (including export data), representing a year-on-year increase of 46.06%. From January to March, BYD sold a total of 626,200 vehicles, with a cumulative year-on-year growth of 13.44%.

In March, the total installed capacity of BYD's new energy vehicle power batteries and energy storage batteries was approximately 11.762GWh, with a cumulative installed capacity of about 29.736GWh in 2024.

At the same period, BYD's overseas sales of new energy passenger vehicles totaled 38,434 units.

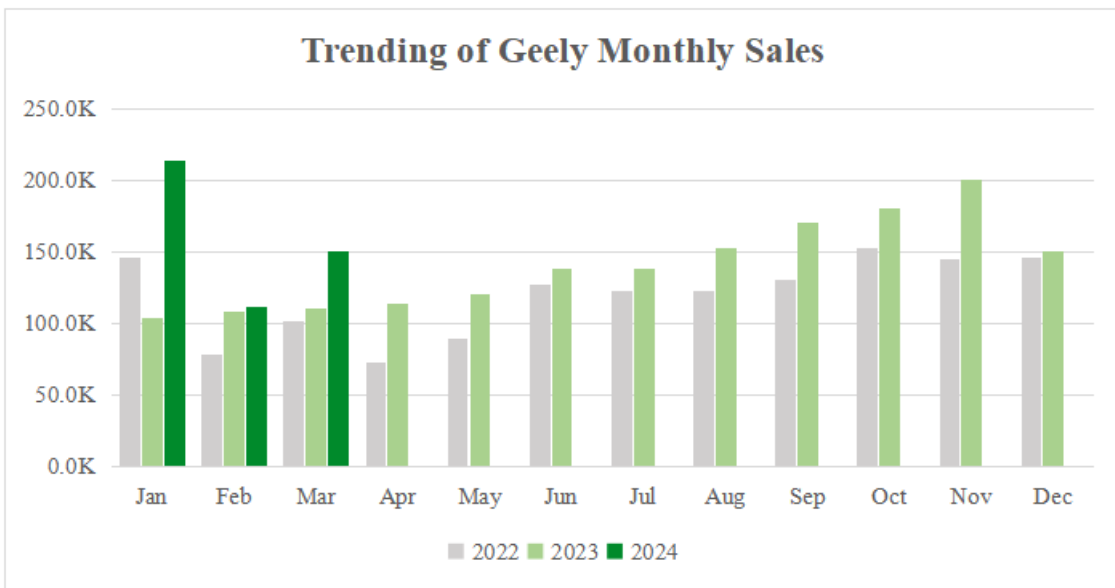


Mar 2024 Types of Passenger Vehicles

	Aug Sales	% Share
Fuel Vehicles	0	0.0%
BEVs	139.9K	46.4%
PHEVs	161.7K	53.6%

China Auto Market Overview

China's Major Domestic Manufacturers Data: Geely Group



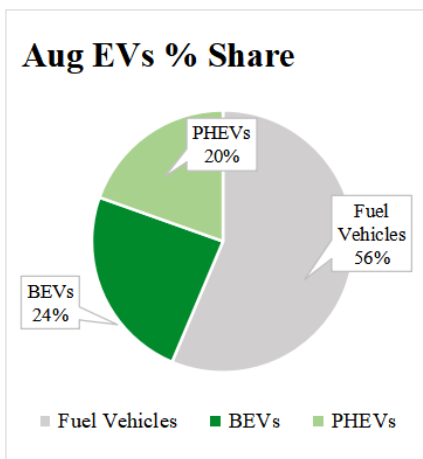
Monthly Sales Figure of Geely Group

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	146.4K	78.5K	101.2K	72.2K	89.1K	126.6K	122.6K	122.6K	130.5K	152.3K	145.1K	146.0K
2023	103.5K	108.7K	110.3K	113.6K	120.1K	137.9K	138.1K	152.6K	170.5K	180.7K	200.1K	150.5K
2024	213.5K	111.4K	150.8K									



According to the data released by Geely Group, in March 2024, Geely Group sold 150,800 vehicles, representing a year-on-year increase of 34%. From January to March, Geely sold a cumulative total of 381,600 vehicles, showing a significant increase of 44% compared to the same period last year.

In March, Geely exported 36,400 vehicles, marking an 81% increase compared to the previous year. All subsidiary brands within the Geely Group experienced significant year-on-year growth in sales volume.

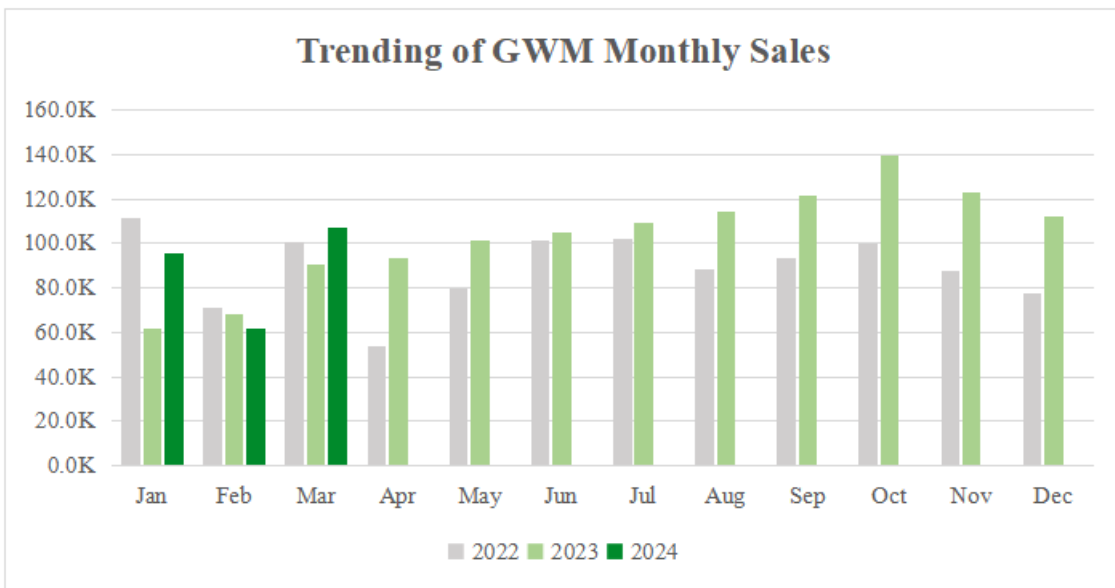


Mar Performance of Brands Under Geely

Brands	Sales	% YoY	% Share
Geely	118.2K	34.0%	78.3%
Lynk&Co	19.7K	40.0%	13.0%
Zeekr	13.0K	95.0%	8.6%

China Auto Market Overview

China's Major Domestic Manufacturers Data: GMW



Monthly Sales Figure of GWM Group

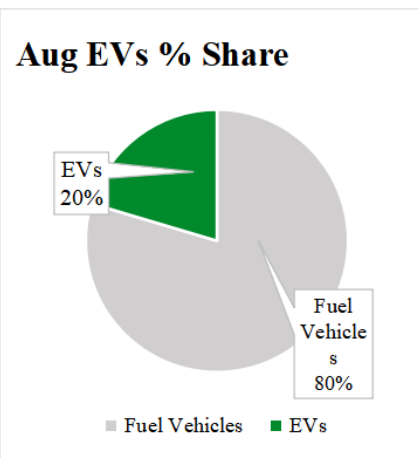
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	111.8K	70.8K	100.9K	53.8K	80.1K	101.2K	101.9K	88.2K	93.6K	100.2K	87.6K	77.4K
2023	61.5K	68.2K	90.2K	93.1K	101.0K	105.0K	109.1K	114.1K	121.6K	139.2K	122.8K	112.5K
2024	95.9K	62.0K	107.2K									



According to the data released by Great Wall Motor Company Limited, in March 2024, Great Wall Motor's total sales reached 107,200 vehicles (including export data), representing a year-on-year increase of 18.82%. From January to March, cumulative sales amounted to 265,000 vehicles, showing an annual growth of 18.23%.

In March, Great Wall Motor sold 21,882 units of new energy vehicles, with a cumulative sales of 59,182 units from January to March.

In March, Great Wall Motor's overseas sales reached 35,815 units, with a cumulative sales of 92,778 units from January to March.

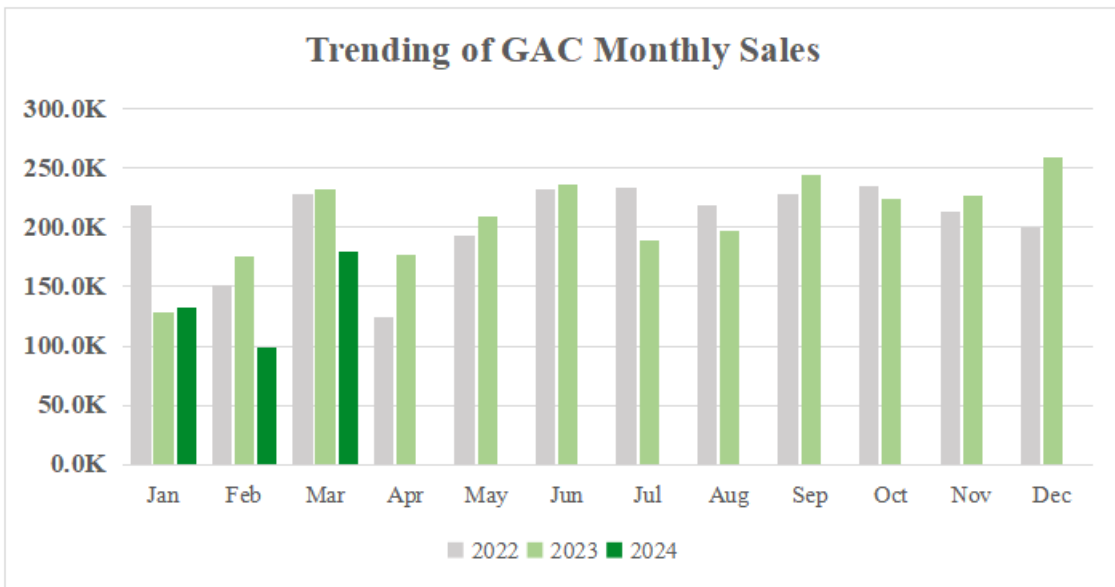


Mar 2024 Performance of Brands Under GWM

Brands	Sales	% YoY	% Share
Haval	56.5K	9.5%	52.7%
WEY	4.1K	215.4%	3.9%
GWM Pickups	19.3K	-2.8%	18.0%
Ora	6.2K	-33.3%	5.8%
Tank	21.1K	75.8%	19.7%

China Auto Market Overview

China's Major Domestic Manufacturers Data: GAC



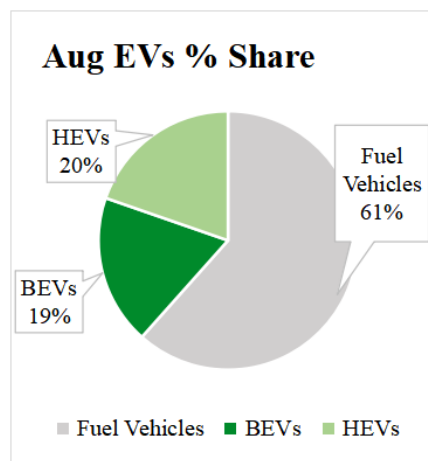
Monthly Sales Figure of GAC Group

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	218.6K	151.9K	227.5K	124.3K	192.4K	232.5K	233.6K	219.3K	228.1K	234.8K	212.7K	199.7K
2023	128.4K	175.1K	231.7K	177.2K	209.6K	236.2K	189.2K	196.8K	243.6K	224.4K	227.1K	259.1K
2024	132.0K	98.4K	179.3K									



Based on the data provided by Guangzhou Automobile Group Co., Ltd., the automotive production figures for March 2024 stood at 160,534 vehicles, indicating a decrease of 38.36% compared to the same period last year. Cumulatively, the production for the year totaled 402,803 vehicles, marking a year-on-year decline of 28.57%. Regarding sales. In March, a total of 179,327 vehicles were sold, reflecting a decrease of 22.62% year-on-year. The cumulative sales for the year amounted to 409,698 vehicles, down 24.11% compared to the previous year.

Sales of all brands under Guangzhou Automobile Group have declined compared to 2023.

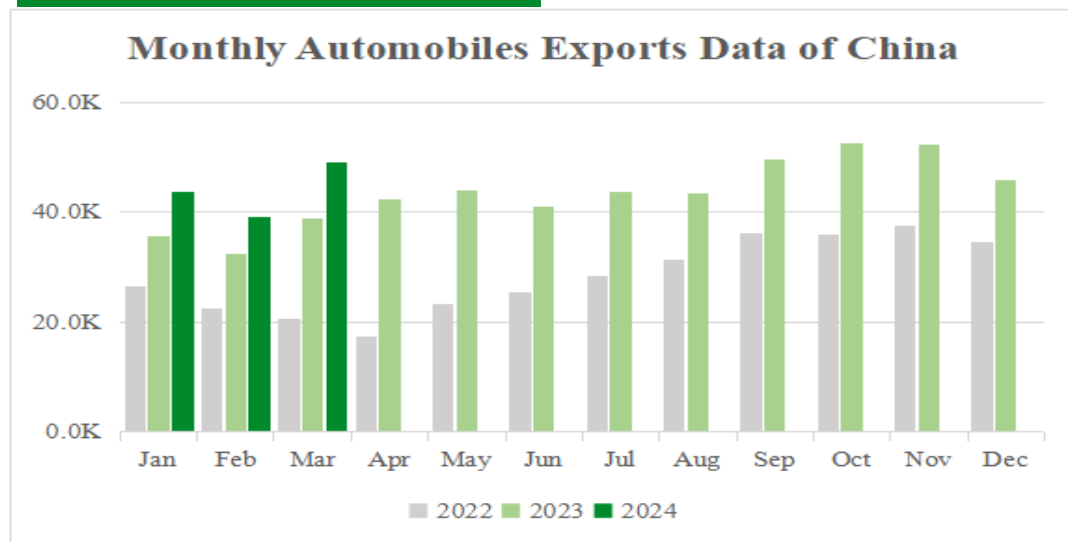


Mar 2024 Performance of Brands Under GAC

Brands	Sales	% YoY	% Share
GAC-Honda	52.6K	-25.0%	29.3%
GAC-Toyota	65.0K	-20.1%	36.2%
GAC-Trumpchi	33.2K	-5.6%	18.5%
GAC-Aion	27.9K	-30.4%	15.5%
Others	0.7K	-86.9%	0.4%

China Auto Market Overview

Exported Vehicles Data of China



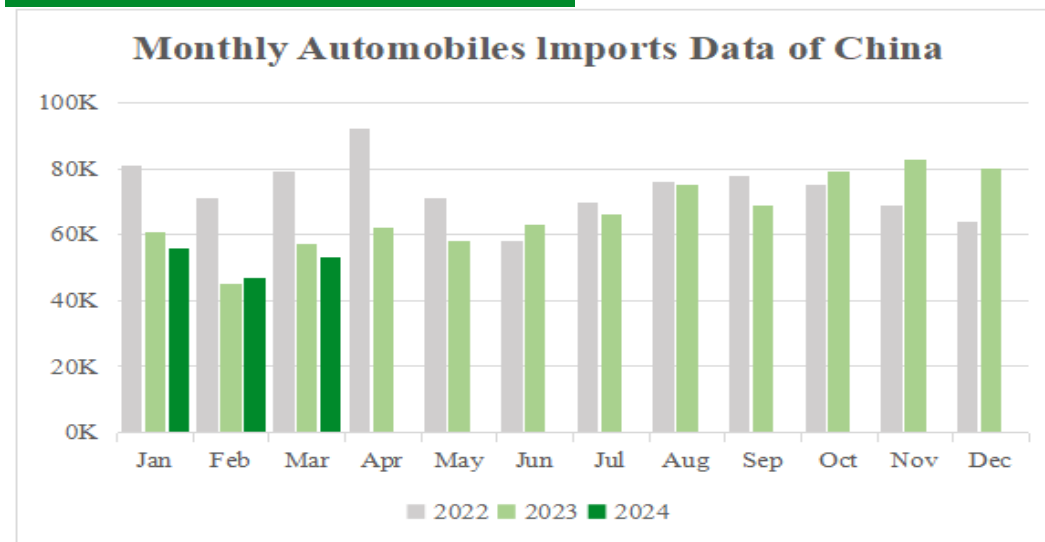
Monthly Automobiles Exports Data of China

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	26.6K	22.4K	20.5K	17.5K	23.4K	25.5K	28.3K	31.3K	36.3K	35.9K	37.5K	34.7K
2023	35.8K	32.5K	38.8K	42.5K	43.9K	41.0K	43.8K	43.6K	49.6K	52.6K	52.4K	45.9K
2024	43.7K	39.3K	49.1K									

Comment

In March, China's automotive exports reached 49,100 vehicles, indicating a year-on-year increase of 26.55% and a month-on-month growth of 25.94%.

Imported Vehicles Data of China



Monthly Automobiles Imports Data of China

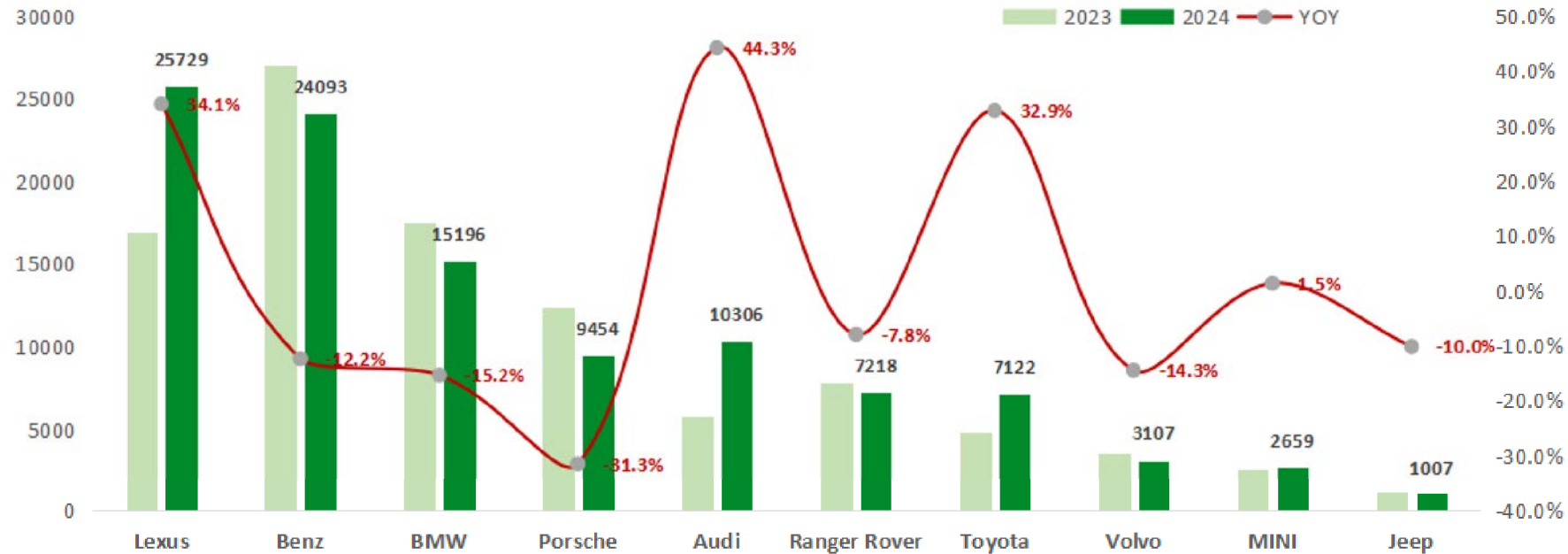
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	81K	71K	79K	92K	71K	58K	70K	76K	78K	75K	69K	64K
2023	61K	45K	57K	62K	58K	63K	66K	75K	69K	79K	83K	80K
2024	56K	47K	53K									

Comment

In March, China imported 53,000 vehicles, showing a 7.2% decrease compared to the previous year, while exhibiting a 12.77% increase compared to the preceding month.

China Auto Market Overview

Jan-Feb 2024 Top 10 Imported Brands in China



From January to February 2024, four prominent automotive brands, namely Lexus, Audi, Toyota, and MINI, demonstrated positive growth among the top ten contenders. Audi and Toyota experienced sustained sales escalation, with notable increases of 44.3% and 32.9% respectively. The leading brand, Lexus, secured sales of 25,729 units, reflecting a significant year-on-year surge of 34.1%. The competitive pricing dynamics prevalent in the domestic automotive sector have also impacted the import car market. Porsche, adhering to its policy of maintaining guidance prices, encountered a decline in sales by 31.3% during the first two months of this year in comparison to the corresponding period last year.

China Auto Market Overview

China Automobiles Exports & Imports Data Update

Exported Vehicles Data of China

Monthly Automobiles Exports Data of China



Comment

In December 2023, China's automobile exports were 499K. The month-on-month growth rate was 3.53%, and the year-on-year growth rate was 54%. China's automobile exports in 2023 will be approximately 4.85M, an increase of 56% from the previous year. Sales of Chinese cars overseas are growing rapidly. As overseas markets are currently disrupted by various political factors, insufficient supply, and the competitiveness of Chinese automobiles continue to improve, it is expected that the overseas performance of Chinese automobiles will remain good in 2024.

Imported Vehicles Data of China

Monthly Automobiles Imports Data of China









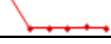


Comment

In December 2023, China's automobile imports will be 80K. It dropped 3.51% month-on-month and increased 25.6% year-on-year last year. China's automobile imports in 2023 will be approximately 799K, a decrease of 9% from the previous year. China's imported car imports have continued to decline at an average annual rate of about 10% from 1.24 million units in 2017 to 790,000 units in 2023, but imported high-end cars are continuing to grow.

China Auto Market Overview

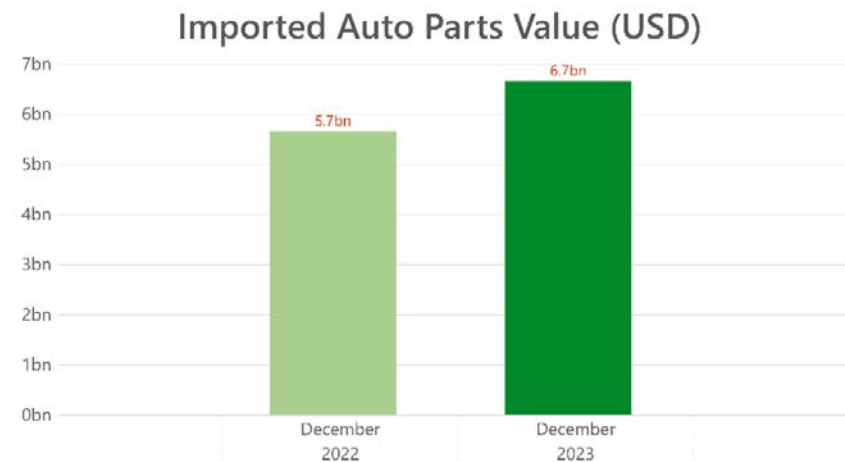
China Imported Vehicles Data from European Nations

Country	2020	2021	2022	2023	Trends	Growth 2023	2023-Dec	Growth 2023-Dec
Germany	253.3K	269.4K	258.9K	231.1K		-10.7%	12.5K	-28%
Slovakia	76.5K	80.6K	80.7K	85.2K		5.6%	7.1K	24%
UK	56.8K	61.3K	56.5K	51.7K		-8.6%	4.3K	-8%
Sweden	22.0K	23.5K	24.4K	23.6K		-3.2%	4.2K	23%
Hungary	8.1K	15.7K	12.0K	5.3K		-56.2%	0.5K	-46%
Austria	6.9K	12.7K	16.7K	12.7K		-23.8%	0.9K	-28%
Italy	5.9K	11.7K	11.2K	4.0K		-64.7%	0.2K	-69%
Netherlands	7.6K	7.5K	6.2K	2.5K		-59.4%	0.1K	-86%
France	0.0K	0.1K	0.2K	0.1K		-50.0%	0.0K	-47%

Comment

Most European countries' export data to China have declined slightly. Slovakia's exports to China in 2023 were 85.2K, a month-on-month increase of 5.6%. In December 2023, except for Slovakia, Sweden's exports to China increased by 23% year-on-year. In addition, the export data of Italy and the Netherlands to China dropped significantly, with both falling by more than 50% year-on-year and month-on-month.

Imported Auto Parts Data of China



Comment

In December 2023, the amount of parts imported into the Chinese market was US\$6.7B. An increase of 17.7% compared with the same period last year. Compared with the continued slump in vehicle imports, the imported parts and components sector has grown significantly. Although the global economy is affected by many uncertain factors, the production link of China's automobile industry is increasingly closely related to the global industrial chain.

Government Policy Update

Central Government's Policies

Government Encourages Innovation: Flying Car Technology Research and Commercialization Explored

The Ministry of Industry and Information Technology, the Ministry of Science and Technology, the Ministry of Finance, and the Civil Aviation Administration of China have jointly released the "General Aviation Equipment Innovation Application Implementation Plan (2024-2030)".

This plan outlines the vision for the general aviation industry to transition towards a new paradigm characterized by high-end sophistication, intelligent integration, and environmental sustainability by the year 2030. It aims to establish a robust infrastructure that supports and ensures the safe and efficient operation of the "short-haul transportation + electric vertical takeoff and landing" passenger network. Moreover, it seeks to facilitate the comprehensive integration of general aviation equipment into various sectors of production and daily life, positioning it as a pivotal driver of economic growth at lower altitudes, with a projected market scale reaching the trillion-dollar mark.

Key priorities highlighted in the plan include the advancement of Smart Air Mobility (SAM) equipment and the facilitation of airworthiness certification for emerging consumer general aviation technologies such as electric vertical takeoff and landing aircraft (eVTOL). Additionally, it emphasizes the encouragement of research and development endeavors in flying car technology, as well as the validation of products and exploration of commercial application scenarios.



Government announcement screenshot

Central Government's Policies

■ Fostering Healthy Growth: Interdepartmental Support for New Energy Vehicle Trade Cooperation

On February 7th, according to an announcement from the Ministry of Commerce, with the approval of the State Council, nine government agencies, including the Ministry of Commerce, jointly issued the "Opinions on Supporting the Healthy Development of New Energy Vehicle Trade Cooperation" (hereinafter referred to as the "Opinions"). These opinions encompass 18 policy measures across six dimensions: enhancing international operational capabilities and standards, strengthening international logistics systems, enhancing financial support, optimizing trade promotion activities, fostering a favorable trade environment, and bolstering risk prevention capabilities. The aim is to promote the healthy development of trade cooperation in the new energy vehicle sector.

Specifically, regarding the enhancement of international operational capabilities and standards, the "Opinions" explicitly encourage new energy vehicle enterprises and their supply chain partners to efficiently leverage global innovation resources. They advocate for the establishment of research and development centers overseas in compliance with relevant laws and regulations. Additionally, the document emphasizes the proactive establishment of strategic partnerships with foreign research institutions and industrial clusters, enabling integration into the global innovation network for new energy vehicles. The objective is to elevate China's innovative capabilities in new energy vehicle design, research and development, and engineering technologies.



Ministry of Commerce announcement screenshot

Central Government's Policies

■ Revolutionizing Transportation: Carbon Reduction Technologies Spearhead National Low-carbon Agenda

In a recent development, the Ministry of Ecology and Environment, in conjunction with several governmental bodies, has issued the "National Key Low-carbon Technology Solicitation and Promotion Implementation Plan" (hereafter referred to as the "Implementation Plan"). This strategic framework aims to target carbon reduction potential effectively by selecting and promoting cutting-edge demonstration technologies and scalable promotion technologies based on their maturity and advancement levels.

The "Implementation Plan" advocates for leveraging a combination of "Internet of Things + Big Data + Artificial Intelligence" to enhance industry efficiency. It encompasses a range of sophisticated solutions, including intelligent energy and carbon emission management, smart operation of environmental governance equipment, advancements in smart manufacturing and digital agriculture, intelligent transportation and logistics systems, as well as key technologies facilitating energy asset trading platforms through blockchain. Additionally, the plan emphasizes the importance of simulation optimization and control technologies for coordinating pollutants and greenhouse gas emissions in industrial production processes.



Ministry of Transport announcement screenshot

Central Government's Policies

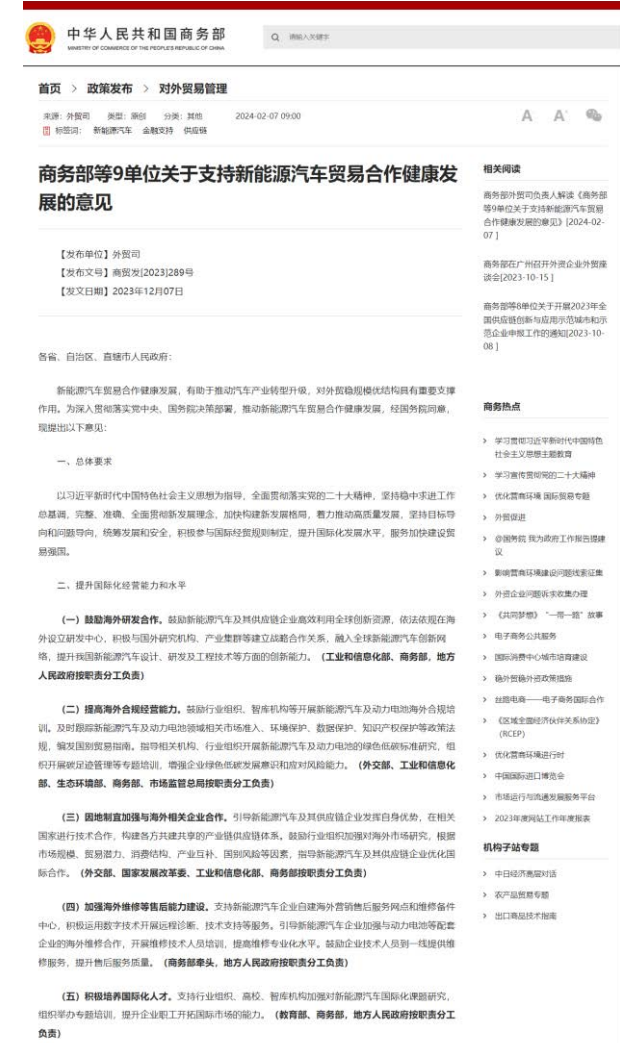
Ministry of Commerce: Opinions on supporting the healthy development of new energy vehicle trade cooperation

On February 7, the official website of the Ministry of Commerce announced the "Opinions of the Ministry of Commerce and other 9 units on supporting the healthy development of new energy vehicle trade cooperation", guiding and promoting the healthy development of new energy vehicle trade cooperation. Industry experts said that the new policy will not only help promote the growth of China's automobile exports, especially new energy vehicles, but also help promote the upgrading and development of the automobile industry and help the manufacturing industry develop toward high-end, intelligent, and green development.

Comment:

China's new energy vehicle exports are supported by the policy, helping entering the global green travel era.

The recent policy introduced by the Chinese government to support the export of new energy vehicles is not only a strong support for domestic car companies, but also a positive contribution to the global green travel era. This move will accelerate the layout of China's new energy vehicles in the international market and promote the green transformation of the global automotive industry. The detailed policy measures are highly targeted, which not only improves the international operation capabilities of car companies, but also optimizes the international logistics system, providing a solid guarantee for the overseas journey of new energy vehicles. This move is expected to further enhance the international influence of China's new energy vehicles and bring more green and smart travel options to global consumers.



商务部公告截图

OEM & Auto Technology Market

Central Government's Policies

■ Guangdong: Guangdong Province's Action Plan to Cultivate New Energy Strategic Emerging Industry Clusters

On January 22, 2024, six departments including the Guangdong Provincial Development and Reform Commission jointly issued the "Guangdong Province Action Plan to Cultivate New Energy Strategic Emerging Industry Clusters (2023-2025)". In terms of the aspects like hydrogen energy, and charging piles, the "Plan" clearly states: accelerate the construction of Guangdong fuel cell vehicle demonstration application city cluster; by 2025, a total of about 30,000 charging stations, about 450,000 public charging piles, and more than 200 hydrogenation stations will be basically built to foster a charging and hydrogenation facility system that adapts to the Pearl River Delta region and the nearby areas; initially establish a safe, reliable, green and efficient smart grid system.

Comment :

The New Energy Action Plan released by Guangdong Province draws a grand blueprint for the hydrogen energy and charging pile industries, which not only promotes the construction of industrial parks but also strengthens the improvement of infrastructure, demonstrating Guangdong Province's determination and foresight in the new energy field. This move will effectively promote the vigorous development of the new energy vehicle industry in Guangdong and even the country, and help accelerate the arrival of the green travel era.



Screenshot of the Energy Bureau of Guangdong Notice

OEM & Auto Technology Market

Central Government's Policies

■ National Energy Administration: Notice on Key Points of Energy Supervision in 2024

On January 22, 2024, the National Energy Administration issued a notice on the "Key Points of Energy Supervision in 2024" (referred to as the "Key Points"). The "Key Points" make it clear that new energy sources and new entities must be connected to the power grid. Supervise grid companies to provide grid connection services to new energy projects fairly and without discrimination, carry out special supervision on the progress of distributed photovoltaic registration and grid connection, and focus on tracking the status of distributed photovoltaic registration, grid connection, transactions, settlement, etc. Guide grid companies to further optimize the grid connection process, improve the grid connection timeliness, and promote the "Shagehuang" wind and photovoltaic base, distributed power supply, energy storage, charging piles, etc. to be connected to the grid.

Comment :

The implementation of this policy will promote the optimization and upgrading of the energy structure and promote the development of the energy industry in a greener and more sustainable direction. At the same time, this also requires power grid enterprises to strengthen technological innovation and upgrading, and improve the intelligence and flexibility of the power grid to better adapt to the high proportion of new energy and the access needs of new entities. In short, this policy initiative of the National Energy Administration will provide a solid guarantee for the development of new energy and clean energy and promote the high-quality development of the energy industry.



Screenshot of the National Energy Administration Notice

OEM & Auto Technology Market

Central Government's Policies

The National Development and Reform Commission issued implementation opinions on strengthening the integration and interaction of new energy vehicles and power grids.

On January 4, the National Development and Reform Commission, the National Energy Administration, the Ministry of Industry and Information Technology, and the State Administration for Market Regulation jointly issued the "Implementation Opinions on Strengthening the Integration and Interaction of New Energy Vehicles and the Power Grid" to vigorously promote intelligent and orderly charging and encourage the development of vehicle charging. The pilot demonstration of two-way interaction between the Internet and the Internet was carried out, and specific work arrangements were put forward in terms of technical research, standard improvement, electricity price and market mechanism optimization.

It is planned that by 2025, the vehicle-network interaction technology standard system will be initially established, the peak and valley time-of-use electricity prices for charging will be fully implemented and optimized, and important progress will be made in the construction of market mechanisms and pilot demonstrations; by 2030, my country's vehicle-network interaction will achieve large-scale application, and intelligent and efficient Sequential charging will be fully promoted, and new energy vehicles will become an important part of the electrochemical energy storage system, striving to provide the power system with bidirectional flexible adjustment capabilities of tens of millions of kilowatts.

Mission:

- Collaboratively promote core technology research on vehicle-network interaction
- Accelerate the establishment of a vehicle-network interaction standard system
- Optimize and improve supporting electricity prices and market mechanisms
- Explore and carry out comprehensive demonstration of two-way charging and discharging
- Actively improve the interaction level of charging and swapping facilities
- Systematically strengthen the support capabilities of power grid enterprises



中华人民共和国国家发展和改革委员会
National Development and Reform Commission

热门搜索：油价 产业结构调整指导目录

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首页 机构设置 新闻动态 政务公开 政务服务

首页 > 政务公开 > 政策 > 通知

国家发展改革委等部门关于加强新能源汽车与电网融合互动的实施意见

发改能源〔2023〕1721号

各省、自治区、直辖市、新疆生产建设兵团发展改革委、能源局、工业和信息化主管部门、市场监管部门，北京市城市管理委员会、上海市交通委员会，国家能源局各派出机构，国家电网有限公司、中国南方电网有限责任公司：

新能源汽车通过充电设施与供电网络相连，构建新能源汽车与供电网络的信息流、能量流双向互动体系，可有效发挥动力电池作为可控负荷或移动储能的灵活性调节能力，为新型电力系统高效经济运行提供重要支撑。车网互动主要包括智能有序充电、双向充放电等形式，可参与削峰填谷、虚拟电厂、聚合交易等应用场景。为深入贯彻中央全面深化改革委员会会议有关精神，积极落实《国务院办公厅关于进一步构建高质量充电基础设施体系的指导意见》（国办发〔2023〕19号）有关要求，充分发挥新能源汽车在电化学储能体系中的重要作用，巩固和扩大新能源汽车发展优势，支撑新型能源体系和新型电力系统构建，现提出以下意见。

一、总体要求

（一）指导思想

以习近平新时代中国特色社会主义思想为指导，全面贯彻党的二十大精神，扎实推进中国式现代化建设，完整、准确、全面贯彻新发展理念，加快构建新发展格局，着力推动高质量发展，坚持系统观念，强化创新引领，完善标准体系，加强政策扶持，大力培育车网融合互动新型产业生态，有力支撑高质量充电基础设施体系构建和新能源汽车产业高质量发展。

Local Government's Policies

■ Shanghai's Vision: Pioneering Integrated Infrastructure for Key Zones

Shanghai Municipal Communications Administration and ten other departments recently issued the "Shanghai Municipality Smart Computing Infrastructure High-Quality Development 'Computing Pujiang' Smart Computing Action Implementation Plan (2024-2025)". This plan aims to expedite car-road collaborative facility construction in key areas like Lingang New Area and establish a dedicated edge computing pool. It also emphasizes advancing innovation in L4 and above autonomous driving, 5G-V2X technologies, and enhancing autonomous driving training dataset construction and large-scale vision model training. Additionally, it seeks to promote the application of intelligent infrastructure integrating "vehicle, road, cloud, and network" technologies.



The screenshot shows a webpage from the National Electronic Government Affairs Network (国脉电子政务网). The page displays an announcement from the Shanghai Municipal Communications Administration and 11 other departments, dated March 21, 2024. The announcement is titled "Shanghai Municipal Communications Administration and 11 other departments jointly issue the 'Shanghai Smart Computing Infrastructure High-Quality Development 'Computing Pujiang' Smart Computing Action Implementation Plan (2024-2025)'". The document number is沪通信管发(2024) 12号. The page also includes a search bar, navigation menu, and a share button.

Announcement screenshot

Chinese Enterprises Oversea Investment Info Updates

■ CATL Collaborates with Tesla on Fast-Charging Battery Development and Equipment Provision for Nevada Factory

On March 25th, CATL Chairman Zeng Yuqun announced the provision of equipment by CATL to Tesla's Nevada factory. This collaboration extends to battery technology advancement, particularly in novel electrochemical structures to enhance charging speed. Zeng expressed confidence in CATL's model of licensing battery manufacturing technology, charging royalty fees, and offering services. He noted CATL's cash flow stability, signaling a deliberate approach to fundraising and equity preservation despite plans for a second listing.

[\[News Link\]](#)

■ Chery Set to Launch Car Sales in Italy by Year's End

Chery's Italian Market Manager, Allen Jean, announces plans to commence sales of Omoda and Jaecoo brand cars in Italy during the third quarter. This move marks Italy as Chery's second European market. By the end of 2025, Chery aims to introduce three distinct SUV models for each brand, featuring different fuel systems tailored to diverse regions across Europe.

[\[News Link\]](#)

Chinese Enterprises Oversea Investment Info Updates

■ EVE is in Talks to Invest in Building Electric Vehicle Battery Factory in the UK

According to The Times, EVE is in talks to invest at least £1.2 billion (equivalent to 10.907 billion yuan) to build a new electric vehicle battery factory in the UK. The negotiations are in the advanced stages. The initial investment will be used to construct a 20 GWh factory on the outskirts of Coventry, with the potential to expand to 60 GWh, making it the largest gigafactory in the UK. It is expected that relevant agreements will be signed in the coming weeks.

[\[News Link\]](#)

■ GWM and STMicroelectronics Signed a Strategic Cooperation Agreement

On March 13th, a subsidiary of GWM, Xindong Semiconductor Technology Co Ltd, signed a strategic cooperation agreement with STMicroelectronics for SiC chip business. It is reported that SiC chips, known for their high-voltage endurance and high-temperature applications, are widely utilized in critical components such as electric drive inverters, on-board chargers (OBCs), and DC-DC converters for electric vehicles.

[\[News Link\]](#)

Chinese Enterprises Oversea Investment Info Updates

■ **Pony.ai signs Memorandum of Understanding on Autonomous Driving Cooperation with Luxembourg**

On March 12th, Pony.ai announced that it has recently signed a Memorandum of Understanding on Autonomous Driving Cooperation with Luxembourg. This signifies the formal collaboration between Pony.ai and the Luxembourg government to promote research, development, and deployment of autonomous driving in the region. With the support of Luxembourg's national innovation agency, Luxinnovation, Pony.ai plans to establish a regional research and development center in Luxembourg.

[\[News Link\]](#)

OEM & Auto Technology Market

Special Topic: Xiaomi SU7 Unveiled at Beijing Auto Show

On April 25th, Xiaomi held a press conference at the 2024 Beijing International Auto Show. Lei Jun announced that 28 days after the official release of the Xiaomi SU7, there were 75,723 locked orders, with 5,781 deliveries made, setting a new industry record for the delivery volume of the first model of a new brand in its first month on the market.

It is understood that the Xiaomi SU7 achieved comprehensive "PO QUAN" upon its release. Among the locked orders, 28% were directly purchased by women. According to preliminary research, considering factors such as gifting or purchasing for family members, it is estimated that female car owners will account for 40%-50%. Additionally, impressed by its advanced smart technology and driving quality, 29% of the locked orders for the Xiaomi SU7 came from users of BBA (BMW, Benz, Audi) brands. With support for wireless CarPlay and compatibility with iPads, the Xiaomi SU7 has become the first choice for many Apple users when purchasing a car, with Apple users accounting for as much as 51.9%. According to the research, many Apple smartphone users are also users of Xiaomi's smart home products.

In addition, the Xiaomi SU7 Max has officially entered the Zhejiang Speedway's "Track Lap Time Ranking," the most prestigious domestic racing circuit in China. It achieved a lap time of 1 minute 42.163 seconds, surpassing the Taycan Turbo S and the Model S Plaid, making it the fastest electric vehicle under 500,000 RMB on the Zhejiang Speedway. To further explore the SU7 Max's maximum performance, with the installation of a high-performance package featuring Michelin PILOT SPORT CUP 2R semi-slick tires currently under development by Xiaomi, the SU7 Max achieved a lap time of 1 minute 38.043 seconds, rivaling the performance of million-dollar luxury cars like the Lotus Eletre R+.



OEM & Auto Technology Market

Special Topic: Supply Chain of Xiaomi SU7

Power Battery		
Battery cells	CATL / FinDreams Battery	
PACK	CATL / Xiaomi	
Motors	UAES / INOVANCE Automotive	
Gearbox	INTELLIGENT POWER	
OBC+DC-DC	EVTECH	
Low-voltage Start-stop Battery	COSMX	
High-voltage Connector	KSHG	
Booster Assembly	JASON	

Intelligent Connected Vehicle (ICV)		
IMU	ACEINNA	
In-car camera	O film	
HUD	NEWISION	
Infotainment system	Xiaomi	
Cabin chip	Qualcomm	
ADAS chip	NVIDIA	
LiDAR	HESAI	
ZCU	JINGWEI HIRAIN	

Interior and Exterior Parts		
Switches	BITRON	
Seat covers	LEAR CORPORATION	
Reading lights, luggage compartment light guide strips	FUERDA	
Front luggage compartment lock	MAGNA	
Speakers	AAC Technologies	
Car lights	MARELLI	
Seat belts	ZF	
CCB (Carbon-ceramic brakes)	Yanfeng	
Door trim panels	XINQUAN	
Electric tail wing, electric tailgate lock	INGIN	
Front and rear bumpers	BMPT	
Tires	BRIDGESTONE	
Pedal rubber	BORGE RUBBER & PLASTICS	

Thermal management		
Compressor	SSB	
Coolant reservoir	SANHUA	

Others		
Low-voltage wiring harness	LEONI	



Chassis		
EPS (Electric Power Steering)	nexteer AUTOMOTIVE	
Front and rear air springs	TOUPU	
Front calipers, EPB (Electronic Parking Brake)	Continental	
Shock absorbers	MTSSANS	
Subframe and linkages	BENETELER Automotive	
Wheel hub bearings	SCHAEFFLER	
Inner and outer tie rod assemblies	GREAT WALL PRECISION	
Front subframe	Gestamp	
ABS (Anti-lock Braking System)	BOSCH	
Door sill beams, rear longitudinal beams	UNISONAL	

OEM & Auto Technology Market

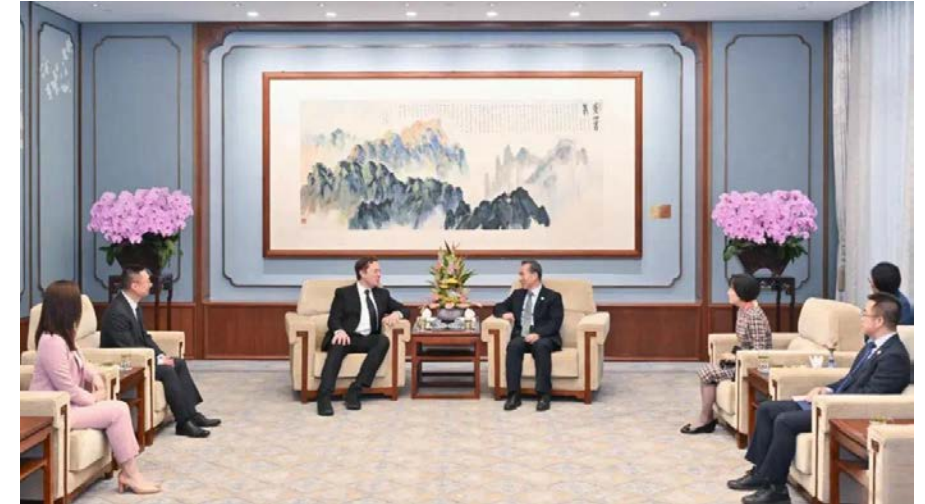
Special Topic: Tesla CEO Elon Musk Visits China During Beijing Auto Show

CCTV News: Chinese State Council Premier Li Qiang met with Elon Musk, CEO of Tesla, in Beijing on April 28th.

Li Qiang stated that Tesla's development in China serves as a successful example of Sino-US economic and trade cooperation. The facts show that equal cooperation and mutual benefit best serve the fundamental interests of both countries. He hopes that the US side will engage more with China and follow the strategic guidance of the two countries' leaders to promote the sustained and stable development of US-China relations. China's vast market will always remain open to foreign companies. China's words must be followed by actions, and efforts will continue to be made to expand market access and strengthen service guarantees, providing foreign companies with a better business environment and comprehensive support, allowing them to invest in China with peace of mind.

Musk stated that Tesla's Shanghai Gigafactory is Tesla's best-performing factory, thanks to the hard work and intelligence of the Chinese team. Tesla is willing to further deepen cooperation with China and achieve more win-win results.

On the same day of Musk's visit, Tesla took another step towards compliance with intelligent driving regulations. The China Association of Automobile Manufacturers and the National Computer Network Emergency Response Technical Team/Coordination Center issued a notification on the testing results of four security requirements for automotive data processing (first batch). All models produced at Tesla's Shanghai Gigafactory meet compliance requirements, making Tesla the only foreign carmaker to meet compliance requirements. Public opinion believes that through this national authoritative data security monitoring, Tesla complies with domestic regulations on automotive data processing security and privacy protection. This paves the way for the lifting of usage restrictions on Tesla vehicles in various parts of China and lays a foundation for Tesla to advance its Full Self-Driving (FSD) system in China.



Special Topic: Intelligent Drive & FSD

Special Topic: Intelligent Drive & FSD

In August 2021, the Ministry of Industry and Information Technology (MIIT) released the "Classification of Automotive Driving Automation (GB/T 40429-2021)." Based on the extent to which automated driving systems can perform dynamic driving tasks and the role allocation and presence of design operational range restrictions during the execution of dynamic driving tasks, automated driving functions are classified into levels 0 to 5. This standard establishes a classification criterion for domestic automated driving functions in China.

The trend of intelligent driving in the automotive industry continues, with China's automotive production and sales volume maintaining year-on-year growth in 2023, including an increase in the production and sales volume of new energy vehicles. Globally, Level 2 (L2) and above intelligent driving accounted for 26.43% of the total in 2021, and it is expected to increase to 47.11% by 2024. In China, the penetration rate of Level 2 and above intelligent driving in automobiles has gradually increased in recent years, reaching 40.80% by the end of 2023. On the policy front, multiple countries and regions are accelerating the establishment of policies and regulations to support the innovative development of the intelligent driving industry. This includes clear requirements on vehicle standards, on-road driving, and safe operation, which promote the application scenarios and commercial operation of intelligent driving, facilitating the positive development of the intelligent driving trend.

Classification Standards for Intelligent Driving in China

Classification	Name	Vehicle Horizontal and Vertical Motion Control	Target and Event Detection and Response	Dynamic Driving Task Handover	Design Operational Range
Level 0	Emergency Assistance	Driver	Driver and System	Driver	Restricted
Level 1	Partial Driving Assistance	Driver and System	Driver and System	Driver	Restricted
Level 2	Integrated Driving Assistance	System	Driver and System	Driver	Restricted
Level 3	Conditional Automated Driving	System	System	Dynamic Driving Task Handover User	Restricted
Level 4	High-Level Automated Driving	System	System	System	Restricted
Level 5	Fully Automated Driving	System	System	System	Unrestricted

Data Source: Ministry of Industry and Information Technology "Classification of Automotive Driving Automation (GB/T 40429-2021)"

Special Topic: Intelligent Drive & FSD

The face-off between FSD and Chinese intelligent driving

Currently, there are two dominant intelligent driving approaches: the first is pure vision-based intelligent driving, represented by Tesla; the other is laser radar + multi-sensor intelligent driving, represented by Chinese car companies such as NIO, XPeng, and Li Auto. With the release of Tesla's FSD v12 version and its leading performance in the intelligent driving industry, pure vision-based intelligent driving with AI has gained more recognition in the industry. Meanwhile, domestic intelligent driving technology is gradually entering a stage of competition and comparison. Led by cost and trends, a new batch of pure vision-based intelligent driving suppliers is emerging, such as DJI Automotive, SenseTime Jueying and iFLYTEK. Several car manufacturers are also accelerating their exploration of pure vision-based intelligent driving. For example, Huawei and Chery jointly developed the Zhiji S7 (LUXEED), and Geely and Baidu jointly created the Jieyue, among others.

As Tesla meets the authoritative standards and requirements for national vehicle data security, restrictions on the use and parking of Tesla and other intelligent vehicles (such as government agencies, airports, highways, etc.) are expected to be lifted. This also paves the way for the introduction of FSD (Full Self-Driving) technology in China. If Tesla can address platform data issues in the future, there will be a positive "collision" between domestic intelligent driving and FSD.

Representative Models of Pure Vision-Based Intelligent Driving



Tesla

Newly Emerging Pure Vision-Based Intelligent Driving Models



LUXEED S7 Pro



JIYUE 01

Special Topic: Intelligent Drive & FSD

Panoramic Review of Intelligent Drive Industry Chain

Enterprise Representation at the Perception Level

Laser Radar



Millimeter Wave Radar



In-Car Camera



Infrared Sensor



Navigation System



Enterprise Representation at the Decision-Making Level

Vehicle-Mounted Chips



Onboard Storage Device



High-Definition Maps



Enterprise Representation at the Execution Level

Electronic Steering



Electronic Braking



Special Topic: Intelligent Drive & FSD

Classification of Intelligent Drive in China

Production Evolution Path in the Automotive Field	
① Basic Level 2:	The system utilizes devices installed in the vehicle such as sensors, communication equipment, decision-making, and execution devices to achieve assisted driving functions, including LKA (Lane Keeping Assist), AEB (Automatic Emergency Braking), ACC (Adaptive Cruise Control), LCC (Lane Centering Control), ALC (Automatic Lane Change Assist), HWA (Highway Driving Assist), and others.
② High-Speed NOA:	The system utilizes devices installed in the vehicle such as sensors, communication equipment, decision-making, and execution devices to achieve intelligent driving in closed or semi-closed scenarios such as high-speed expressways, roundabouts, urban expressways, etc. Functions include autonomous on-ramp and off-ramp maneuvers, proactive lane changes, overtaking, and others.
③ Urban NOA:	The system utilizes devices installed in the vehicle such as sensors, communication equipment, decision-making, and execution devices to achieve intelligent driving in urban open road conditions. It can perform functions such as unprotected left turns, unprotected U-turns, traffic signal recognition, proactive lane changes, overtaking, and more. It can autonomously handle various urban road conditions and interact with other vehicles, pedestrians, and traffic elements in everyday traffic scenarios.

Production Evolution Paths in the Parking Field	
① Automatic Parking Assistance:	The system utilizes vehicle body sensors for both side-to-side and front-to-back control of the vehicle during parking operations. Simultaneously, the driver is required to maintain continuous monitoring and effective takeover to ensure parking safety. Additionally, it supports drivers to use remote control devices (such as a smartphone app or remote key) within a certain visual range outside the vehicle to control the vehicle, enabling automatic parking or calling/requesting functionality around parking spaces.
② Smart Parking Assist:	The system utilizes vehicle body sensors to learn, record, and store users' frequently used drop-off locations, parking spots, and parking paths. It establishes environmental feature maps of commonly used parking routes. When the vehicle passes through these locations again, the system reproduces the user's parking path to assist the driver in completing the final low-speed driving and parking within the parking lot, with the driver required to take over if necessary.
③ AI Valet Parking:	In the absence of occupants inside the vehicle, the system utilizes sensors, communication equipment, decision-making, and execution devices installed in the vehicle to automatically perform low-speed autonomous driving, autonomous obstacle avoidance, intelligent parking space search, and vehicle parking and exiting within smart parking lots. This is equivalent to fully autonomous driving in parking scenarios.

Special Topic: Intelligent Drive & FSD

2023 Intelligent Drive Echelon in China



Special Topic: Intelligent Drive & FSD

Principle and Development of FSD

Tesla's Autopilot and Full Self-Driving (FSD) are advanced autonomous driving systems developed by Tesla. This system aims to ultimately achieve the capability for vehicles to drive autonomously in most situations without the need for human intervention, although currently, it requires driver supervision during practical use. FSD includes various features such as automatic navigation, lane changing, autonomous parking (automatically parking the vehicle), and recognition of traffic lights and parking signs. It is important to note that despite being named "Full Self-Driving," Tesla's current FSD does not achieve truly unrestricted autonomous driving; drivers must remain attentive and ready to take control of the vehicle at all times. As of the latest information, Tesla released the FSD V12 version to some users in the United States on March 31, 2024, and continues to improve and test the software.

Up to now, the development of Tesla's autonomous driving can be divided into three stages:

2013-2016: Infrastructure Construction Period - During this stage, Tesla used Mobileye's pre-installed intelligent driving products.

2016-2019: Self-research Transition Period - Tesla's core processor used Nvidia products, and sensor configuration was improved.

2019-Present: Comprehensive Self-research Period - From underlying hardware to upper-level software, Tesla achieved comprehensive self-research.

Project	HW1.0	HW2.0	HW2.5	HW3.0	HW4.0
Date	2014.9	2016.1	2017.8	2019.3	2023.3
Front-facing camera	1 pc		3 pcs		3 pcs
Side-facing camera	0		2 pcs		4 pcs
Rear-facing side camera	0		2 pcs		2 pcs
Rear-facing camera	0		0		1 pc
Millimeter-wave radar	Radar*1(160m)		Radar*1(170m)		PhoenixHigh-precision radar
Ultrasonic radar	Lidar*12(5m)		Lidar*12(8m)		0
Core processor	Mobileye EyeQ3*1	Nvidia ParkerSoC*1 NvidiaPascal GPU*1 Infineon TriCoreMCU*1	Nvidia ParkerSoC*2 NvidiaPascal GPU*1 Infineon TriCoreMCU*1	FSD Core*2	FSD Core2.0*2

Special Topic: Intelligent Drive & FSD

The impact of FSD implementation in China

From an industry-wide perspective, the introduction of Full Self-Driving (FSD) technology to China can accelerate the penetration rate of advanced intelligent driving systems. Simultaneously, it can stimulate the domestic intelligent driving industry, encouraging local automotive companies to invest in intelligent driving technology. This, in turn, drives the accelerated development of technology across the entire industry, a phenomenon often referred to as the "catfish effect."

In addition, Tesla's software subscription model may also achieve higher acceptance in China through Full Self-Driving (FSD). In addition, many companies in the market that focus on intelligent driving systems often bundle their software with hardware, selling them through a "selling hardware, giving software" approach. This approach is influenced by the habits of Chinese consumers, who have historically preferred paying for hardware rather than software. With the introduction of FSD and the promotion of brand awareness and technology, it is highly likely that FSD will lead the way in popularizing the subscription-based business model for autonomous driving software in the Chinese market.

The introduction of FSD into China presents more advantages than disadvantages for local car manufacturers and intelligent driving solution providers who have long been dedicated to developing intelligent driving functionalities. However, for car manufacturers lacking in-house intelligent driving capabilities, this may trigger a new round of industry restructuring.



FSD:Coming soon



FSD:launching shortly



Overall Development of Color Changing Film in 2023

Since 2022, the penetration rate of modified parts in China's modification market has further increased, especially the penetration rate of products such as automotive film. In the field of automotive films (Paint Protective Film, Color-Changing Film), the penetration rate has increased to 12.5%, an increase of approximately 60% compared to 2021. The automotive film project has become the most popular product among China's comprehensive modification projects. In 2022, although the valuation of Color-Changing Film in the automotive film market will only account for about 3%, which is far lower than the share of mature industry chains such as Paint Protective Film, it is precisely because of this that Color-Changing Film has shown tremendous development potential and broad market prospects. With consumers' increasing demand for personalization and the continuous innovation of industry technology, Color-Changing Film is expected to become an emerging growth point in the automotive film market in the future.

Product Description

Color-Changing Film is a new type of automotive protective film. It is made of high-performance environmentally friendly polyurethane material, which has good wear resistance, weather resistance and stretchability, and can effectively protect the car body from scratches, acid rain, ultraviolet rays and other external factors. The automotive film market is mainly dominated by Paint Protective Film and Color Changing Film. These two types of products have formed relatively stable consumer groups and market shares in the market. However, in recent years, as an emerging category of Car Body Film, Color Changing Film are gradually gaining favor among consumers for their unique visual effects and personalized customization advantages. In fact, colored car wraps have become the automotive film category with the greatest development potential in the Asia-Pacific and Chinese markets, indicating that the automotive film market will usher in a new competitive landscape.

(This article mainly analyzes the development status and prospects of China's Color-Changing Film market based on survey data.)



Aftermarket News

Selling Price

The selling price of Color-Changing Film for new energy vehicles varies depending on factors such as brand, material, size, sales channel, etc. Generally speaking, new energy vehicle Color-Changing Film with high brand awareness, high-quality materials and suitable sizes are relatively expensive.

Recently, according to relevant data, Tesla's official online store in the United States sells seven colors of colored packaging at the prices ranging from \$7,500 to \$8,000. The price includes materials and installation costs. Tesla says the self-healing polyurethane-based film, available in seven unique colors, protects the underlying paint from chips, scratches and more.



Place order directly in the mall



TESLA Except black, each add 8,000 yuan



Add 10,000 yuan/individual colors



Add 10,000 yuan/individual colors

Sales Valuation-Color-Changing Film

The market valuation of the Color-Changing Film is rising, with domestic wholesalers leading the growth.

As the automotive market continues to expand, the Color-Changing Film market is also booming. According to the latest data, sales of Color-Changing Film have increased year by year from 2017 to 2024, and as of 2021, the market share of Color-Changing Film has increased by an average annual rate of approximately 109%. Since 2020, domestic wholesalers have accounted for more than 50% of the market, occupying a dominant position in the market and leading the growth of the color-changing film market.

Domestic Color-Changing Film brands have won wide recognition from consumers with their high quality, innovative technology and reasonable prices. The rise of domestic wholesalers not only increases the market share of domestic Color-Changing Film, but also provides consumers with more choices. At the same time, domestic brands have further enhanced their competitiveness in the market by cooperating with imported brands.

Sales Valuation-Paint Protective Film

The market valuation of Paint Protective Film continues to grow, and factory brands are emerging.

In recent years, with the prosperity of the automobile market and the increasing consumer demand for automobile beauty, the paint film market has shown a booming development trend. According to the latest data, the sales volume of the Paint Protective Film market has increased year by year from 2017 to 2024. Among them, factory brands have accounted for more than 50% of the market since 2020 and are expected to account for more than 90% in 2024, occupying an absolute dominant position in the market.

Domestic Paint Protective Film brands have emerged in the market and have gradually won the recognition of consumers with their high quality, innovative technology and reasonable prices. Compared with imported brands, domestic Paint Protective Film has obvious advantages in price and supply, and can better meet the needs of the domestic market.

Future Direction

Color-Changing Film has shown a strong growth trend from 2017 to 2033, especially when their market share reaches a peak around 2025, reflecting consumers' pursuit of personalization and aesthetics. Color-Changing Film first increased and then decreased, probably is affected by market saturation. The paint film market is relatively stable, showing that it has entered a mature stage.

Overall, Color-Changing Film has become a new favorite in the market due to its unique charm and is expected to continue to maintain growth momentum in the future. Color-Changing Film and Paint Protective Film also need to be constantly innovated to adapt to market changes. In the competition in the car body film industry, Color-Changing Film is expected to become a leading company and lead the market trend. Therefore, companies should pay close attention to market dynamics, seize changes in consumer demand, increase investment in research and development, and launch more colorful car coverings products in line with market trends to consolidate and expand market share.

Current Status and Development Trends of Customized Modified Vehicles Consumption in China (2023-2024)

Since 2021, China's passenger car sales have shown a year-on-year recovery, returning to positive growth. By 2023, the overall scale of the Chinese automotive market has returned to pre-pandemic levels, with year-on-year growth rates revert to normal level. Alongside the rise of the new energy vehicle market, there have been corresponding shifts in consumer structure and demand.

Confronted with an increasingly mature, selective, and younger user base, the trend towards simplified and uniform product designs has made it difficult to sustain competition based solely on attractiveness and value for money. Currently, as smart technology and connectivity continue to advance, they are seen as the primary competitive edge for future products. Concurrently, to meet the increasingly diversified, personalized, and youthful consumer demands, a growing number of original equipment manufacturers (OEMs) are introducing officially customized and modified vehicle models.

Currently, the development of customized and modified automobiles is presenting in diversify directions:

Consumption Modification: The act of modifying a vehicle's exterior, interior, or performance through channels such as 4S dealerships or modification shops after the vehicle has been manufactured and delivered.

Custom Modification: Before the vehicle leaves the factory, the automobile manufacturer makes changes to the vehicle's exterior, interior, or performance parts.

Authorized modification: The act of specialized vehicle manufacturers modifying vehicles to fulfill specific usage functionalities.



Consumer Modification
Vehicle modifications made post-factory through channels such as 4S dealerships or modification shops, including alterations to the vehicle's exterior, interior, or performance



Customized Modification
Pre-production vehicle modifications made by automotive manufacturers to alter aspects such as the vehicle's exterior, interior, or performance.



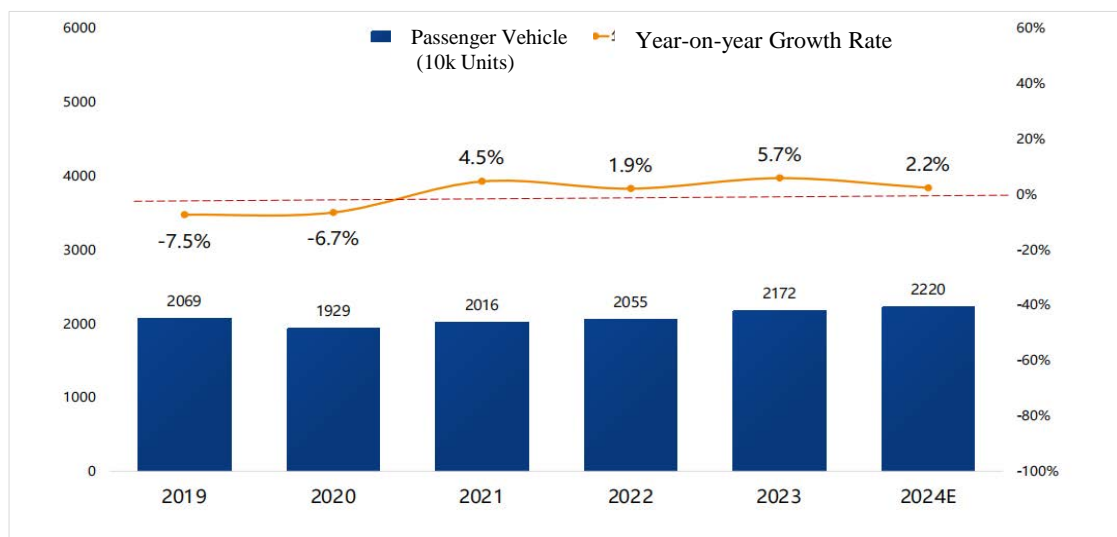
Authorized Modification
Specialized vehicle manufacturers modifying vehicles to fulfill specific usage functionalities.

Aftermarket News

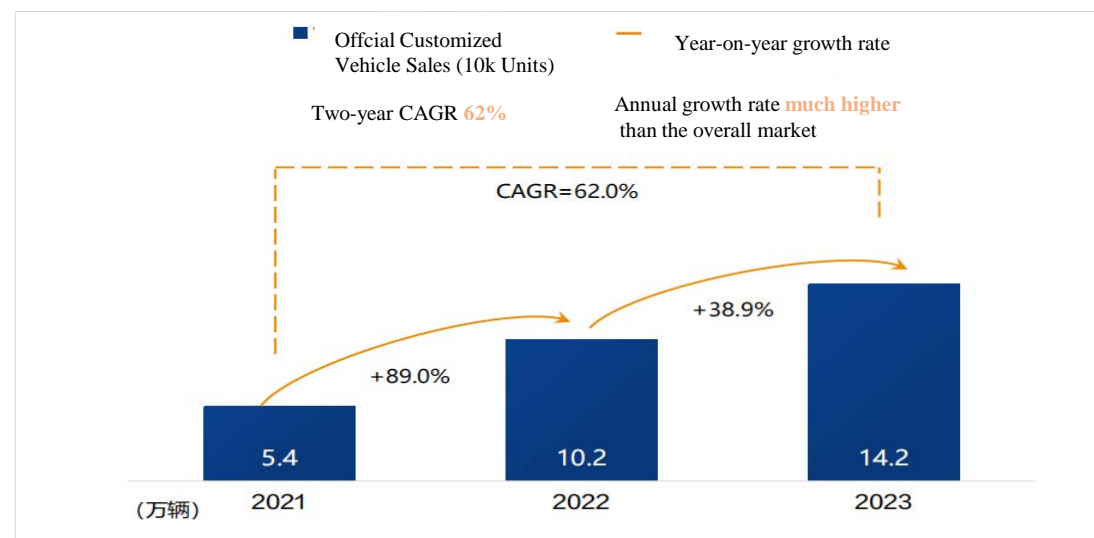
1. Current Status of OEM’s Customized and Modified Vehicle Market

The data indicates that starting from 2021, the sales of passenger vehicles in China have been recovering year-on-year, reaching a point by 2023 where the overall scale of the Chinese automotive market has essentially returned to pre-pandemic levels, although the year-on-year growth rate has slowed down. Meanwhile, the customized and modified market has shown a significant trend of rapid advancement.

From 2021 to 2023, the annual growth rates of customized and modified passenger vehicle sales reached 89.0% and 38.9%, respectively, far exceeding the overall market. The compound annual growth rate for these two years reached 62.0%. The market is rapidly rising.



Trend in Customized and Modified Passenger Vehicle Sales at Terminal from 2021 to 2023

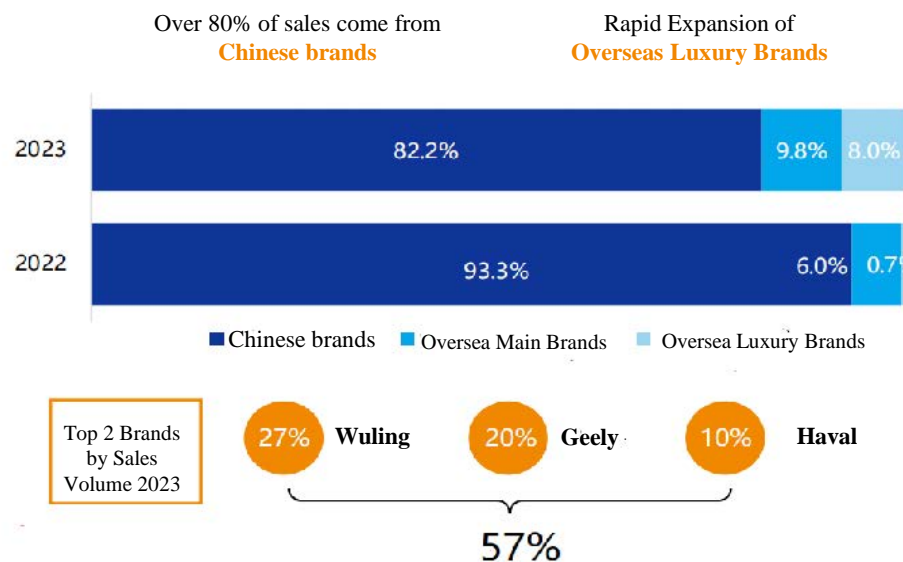


Passenger Vehicle Market Sales and Growth Rate from 2021 to 2023

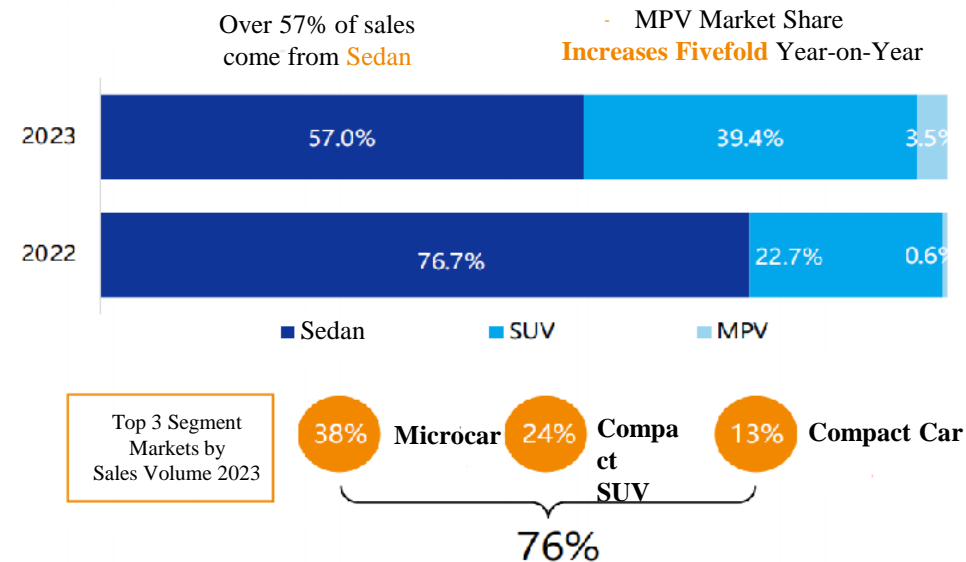
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According to brand types, in 2022, over 90% of sales came from Chinese brands. Although there was a slight decrease in market share in 2023, it still reached 82.2%. Overseas luxury brands have rapidly expanded, with their market share increasing from 0.7% to 8% by 2023. Looking at individual brand, the top 3 in terms of sales volume are all Chinese brands, with their combined share reaching as high as 57%.

Looking at different vehicle segments, in 2023, sedans contributed the highest proportion at 57% of the market. However, their share decreased by nearly 20% compared to 2022. SUV also show a significant increase in market share, the compact SUV sales accounting for 24%. Although the MPV has relatively low market share, its growth rate is significant, with sales volume share increasing fivefold in 2023 compared to the previous year. Overall, 76% of sales come from the top 3 segmented markets, indicating significant market concentration at the top.

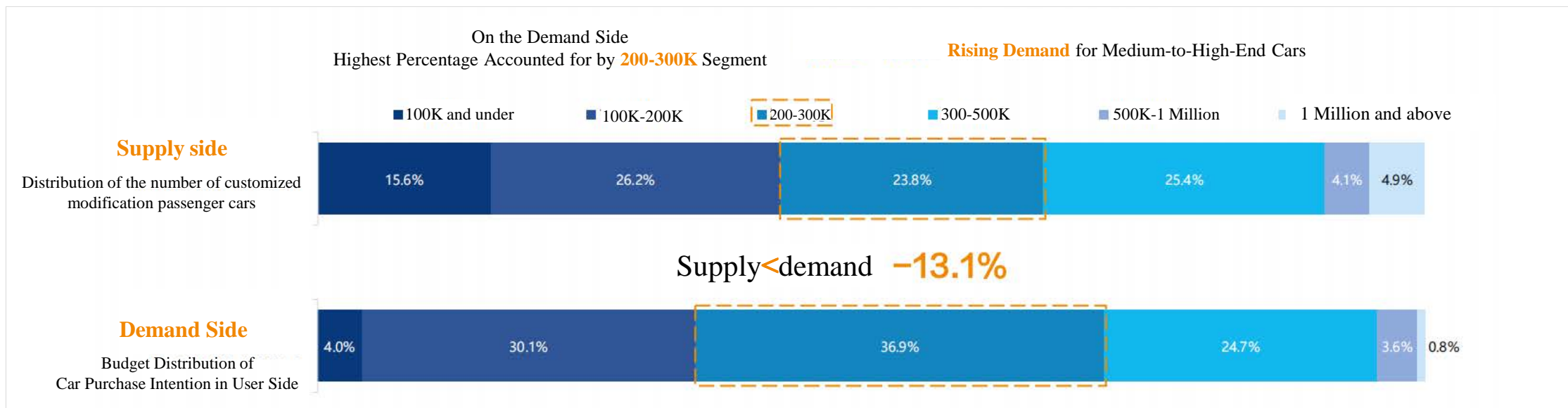


Sales Distribution of Official Customized Modified Passenger Cars by Brand Type



Sales Distribution of Official Customized Modified Passenger Cars by Vehicle Type Category

The supply-demand comparison of OEM's build customized and modified vehicle in 2023 reveals that the budget range for intended buyer is between 200,000 to 300,000 RMB. However, the data indicates a significant shortage in supply, highlighting the necessity for offering more mid-to-high-end vehicle models.



Comparison of Supply and Demand for OEM's Build Customized and Modified Vehicle in 2023



Mainstream vehicle models from Chinese brands in the price range of 300,000 to 500,000 RMB

2. Distribution of OEM's Customized and Modified Vehicle Customers

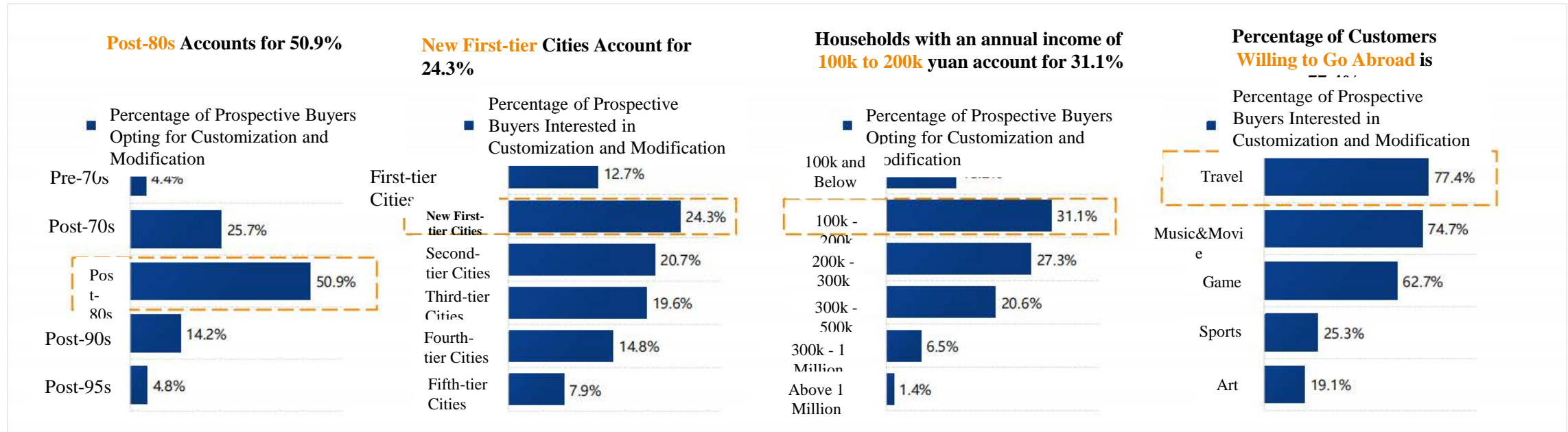
From Autohome research, the proportion of users interested in car modification has reaches 81.6%, and 75.2% express significant interest in customized and modified models. At the intention stage, 71.3% users consider to purchasing customized and modified vehicles.



Interest Level of Users in OEM's Customized and Modified Vehicle

Aftermarket News

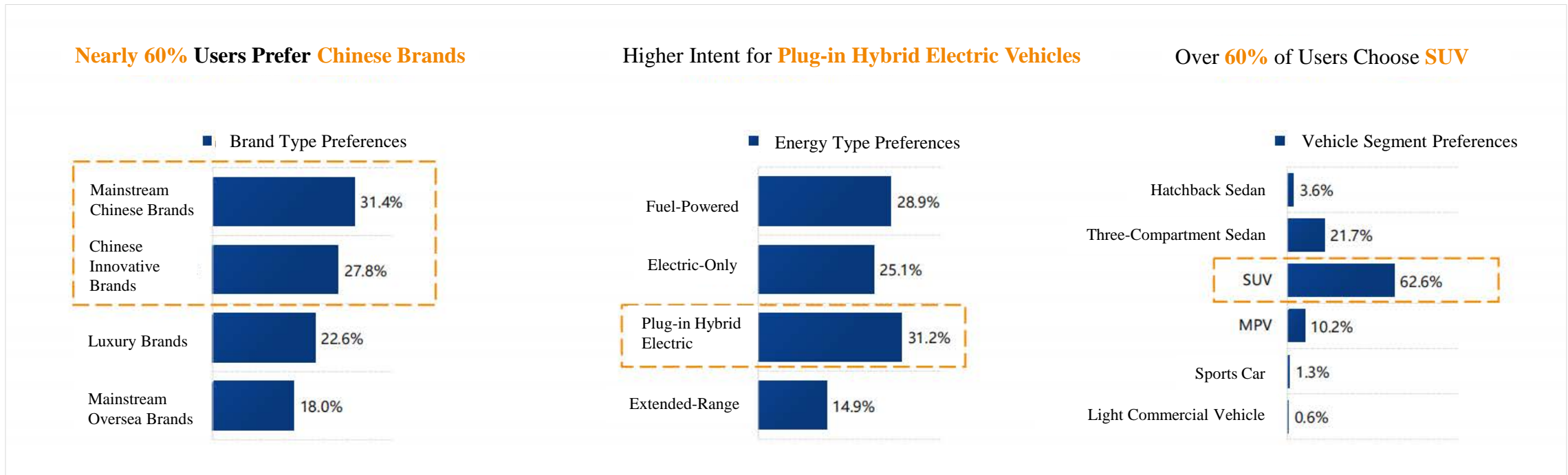
The profile of intended users to buy OEM’s customized and modified vehicle shows that those born in the 1980s (post-80s generation) have the highest proportion of interest, reaching 50.9%. Among cities, users from new first-tier cities have the highest proportion to buy customized vehicle. Looking at family income levels, those with incomes between 100,000 to 200,000 RMB have the highest proportion of interest to buy customized vehicle. In terms of hobbies, those who enjoy traveling have the highest proportion of interest, to buy customized vehicle.



Intended Users of Customized Modified Vehicle Models

Aftermarket News

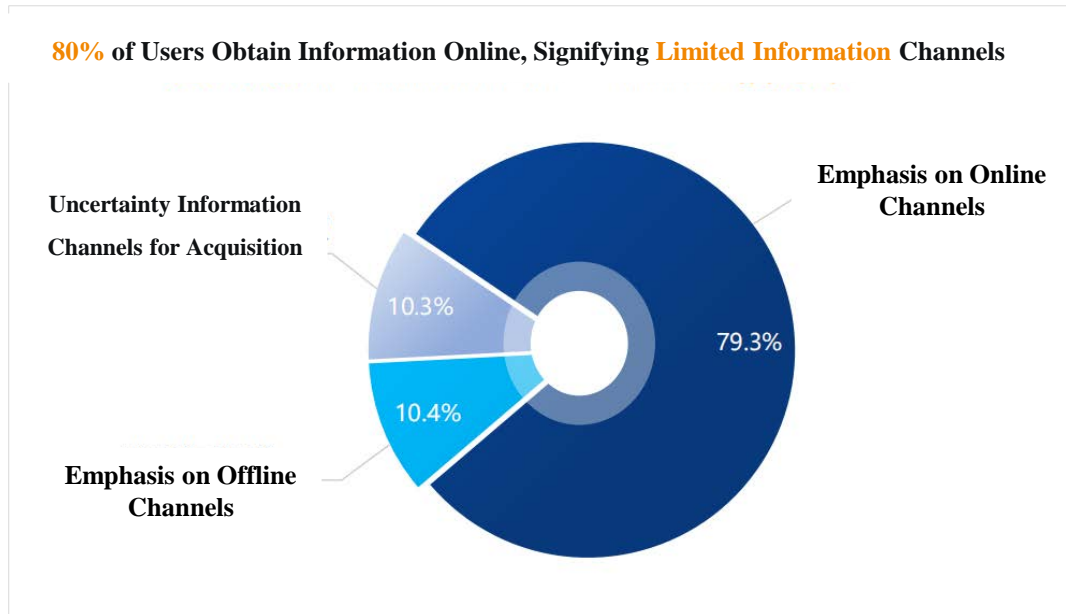
In terms of car purchasing preference, 60% of users would choose Chinese brands, 31.2% users intend to buy plug-in hybrid cars when considering the types of energy. Looking at the vehicle segment, SUV is the top choice among the others.



Preferences of Intended Users for Customized Modified Vehicle Models

3. Awareness of OEM’s Customized and Modified Vehicle Culture

Online platforms serve as the primary source for users to acquire information, with nearly 80% users relying on them. Offline is the preferred channel for young users. Users born in the 90s and 95s prefer offline communication.



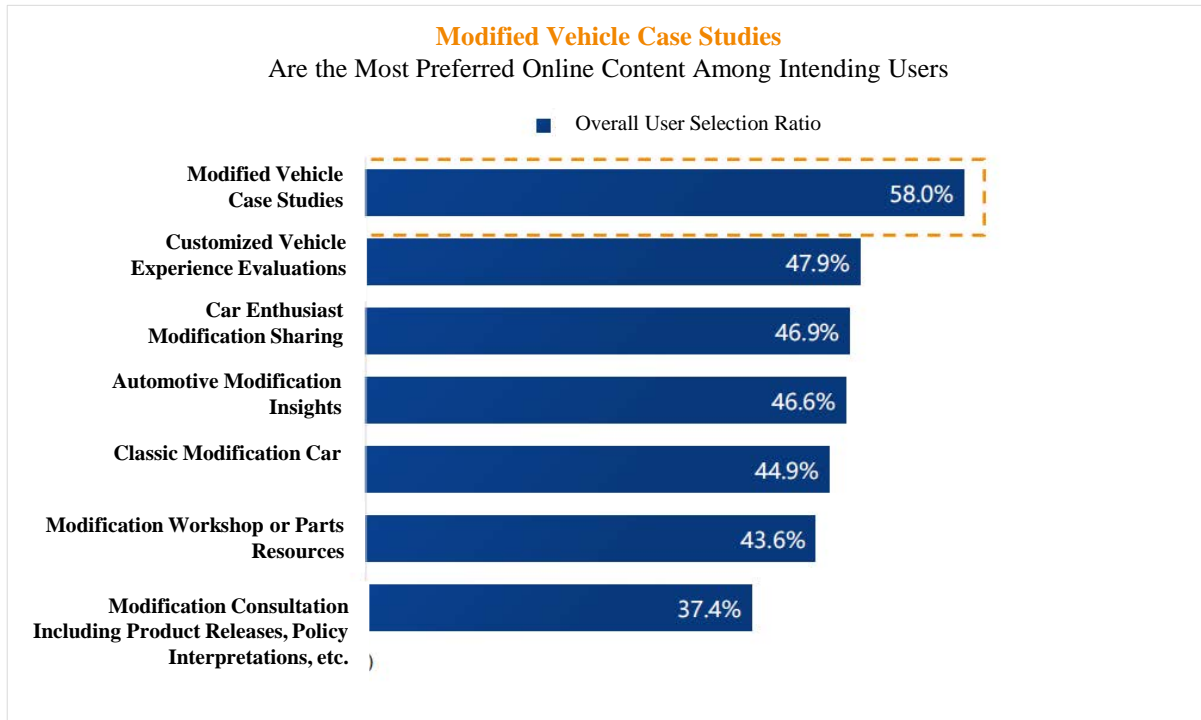
Overall Preferences of Intended Users for Information Channels

Post-90s & Post-95s Prefer Offline Channels

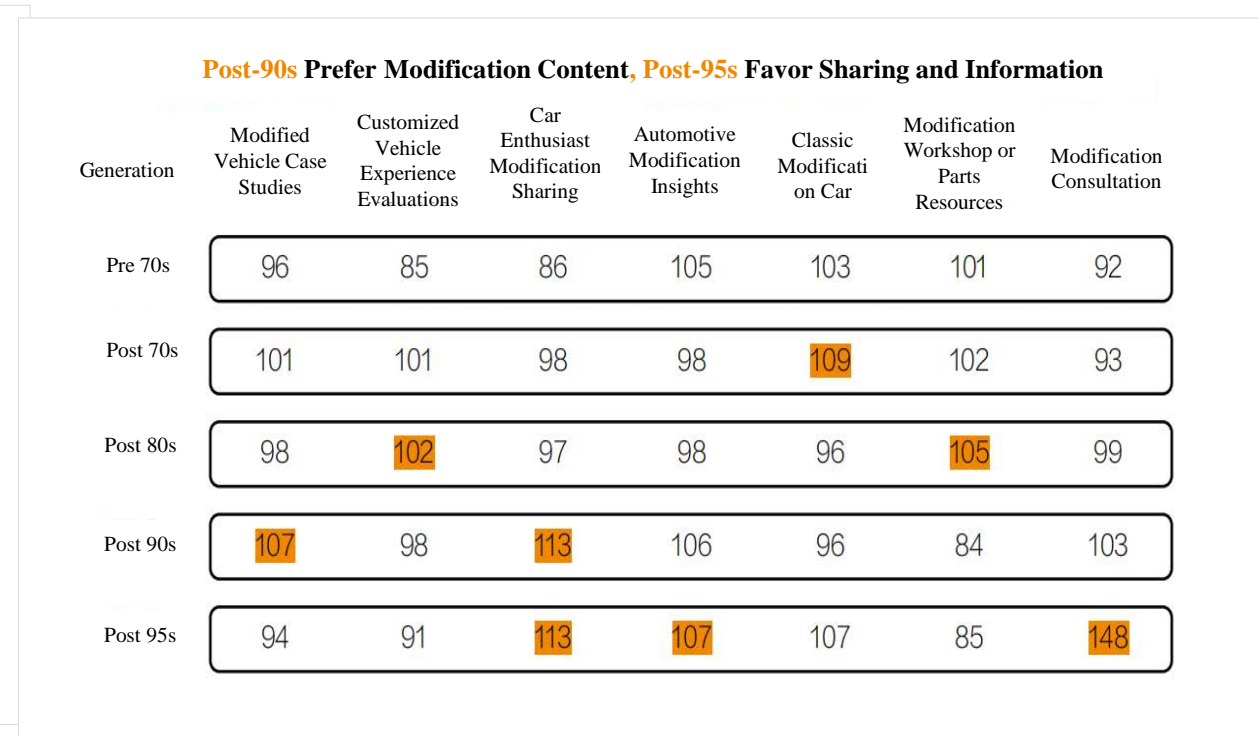
Generation	Emphasis on Online Channels	Emphasis on Offline Channels	Uncertainty Information Channels
Pre 70s	105	103	58
Post 70s	105	90	74
Post 80s	99	98	114
Post 90s	97	120	104
Post 95s	97	112	114

Intergenerational Preferences of Intended Users for Information Channels

Online Content: Car modification case studies are the favorite among young generation, accounting for 58%. Those born in the 1990s prefer content shared by the car enthusiasts, while those born in the 1995s are more interested in car modification news and knowledge.



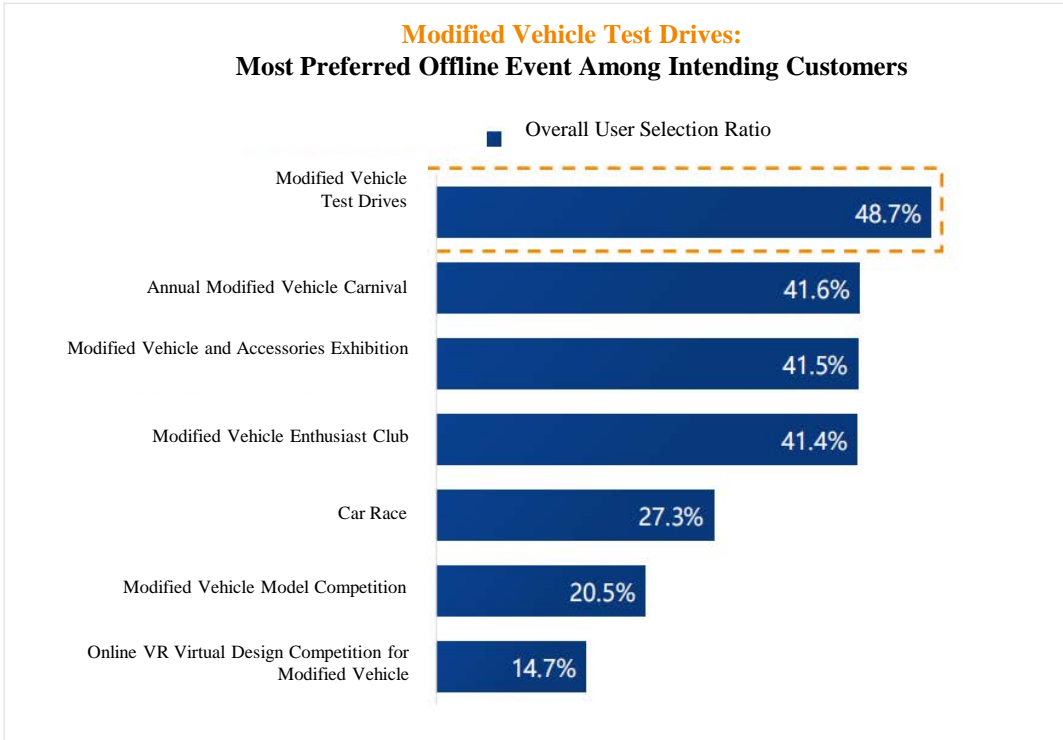
Overall Preferences of Intended Users for Online Content



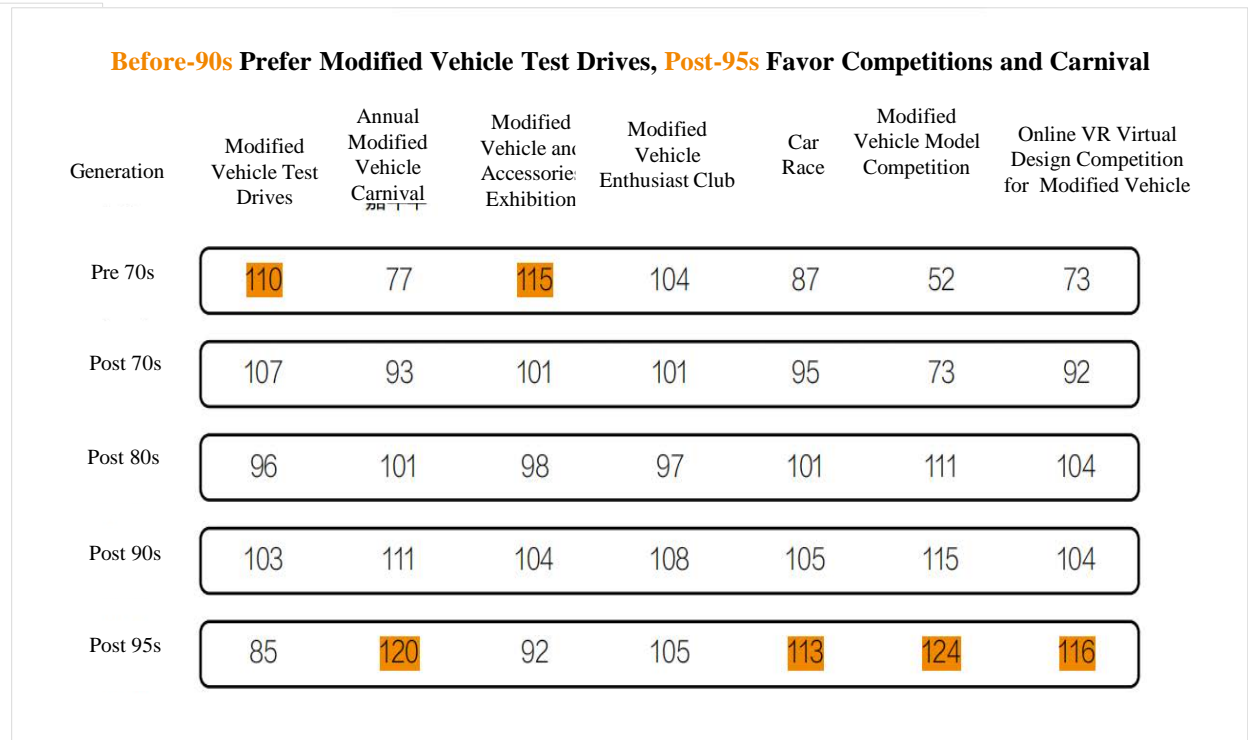
Intergenerational Preferences of Intended Users for Online Content

Aftermarket News

Offline Events: Modified Car Test Drive Event is the most popular offline events, with 48.7% users express keen interest. Across generations, those born before the 1970s show a higher preference for customized or modified car exhibitions and test drive events, while those born after 1995 prefer modified car carnivals, modified car competitions and online VR virtual design competitions.



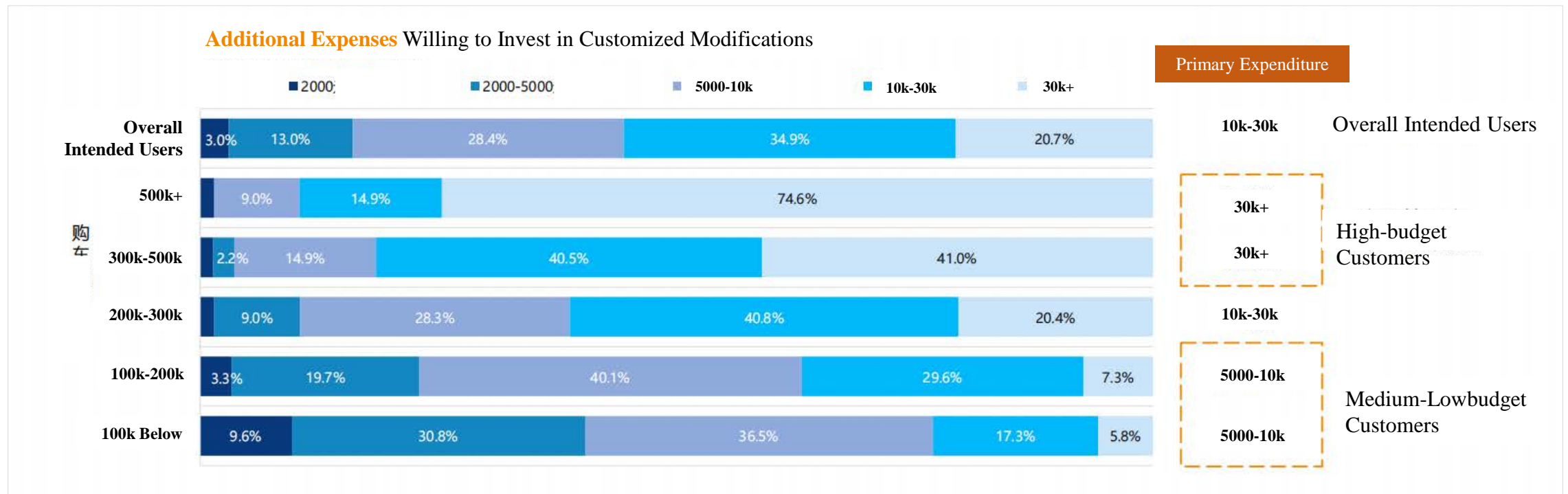
Overall Preferences of Intended Users for Online Content



Intergenerational Preferences of Intended Users for Online Content

4. Preferences in OEM’s Customized and Modified Vehicles Consumption

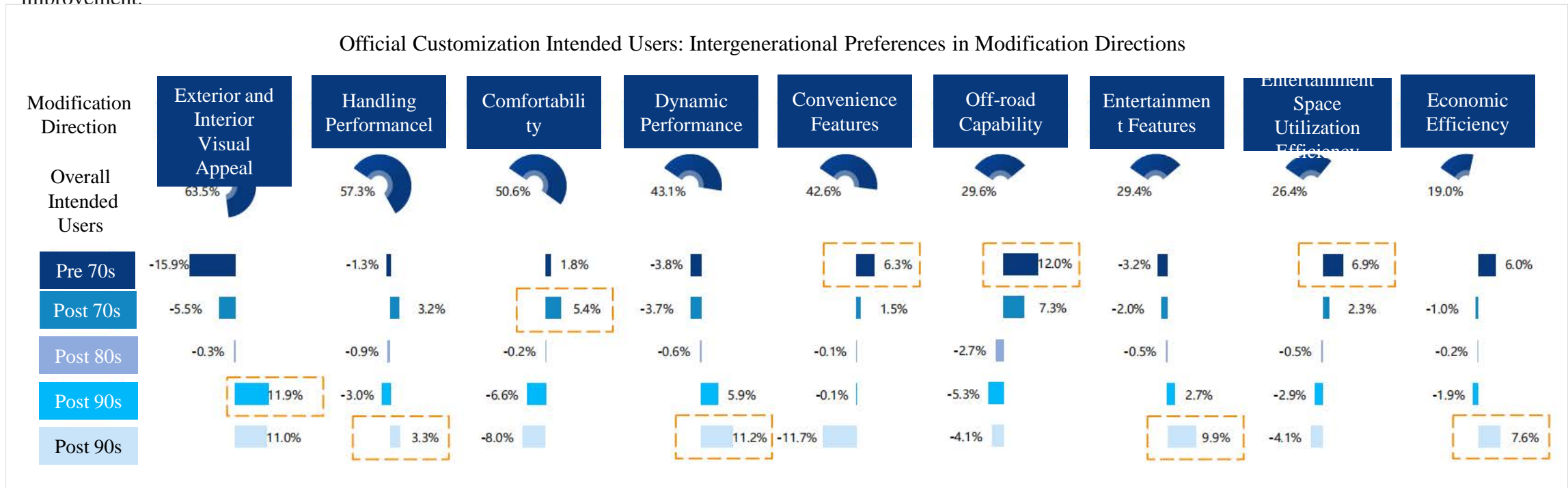
Overall, users are willing to pay additional costs to buy customized and modified vehicle parts, 34.9% of user is willing to pay additional cost from 10,000 to 30,000 RMB. Looking at purchasing budgets, users with budgets over 200,000 RMB demonstrate a stronger capacity for premium payments, with their tolerance of 30,000 RMB and above. Users with budgets below 200,000 RMB can accept 5000 to 10,000 RMB premium payments.



Overall Preferences of Intended Users for Information Channels

Aftermarket News

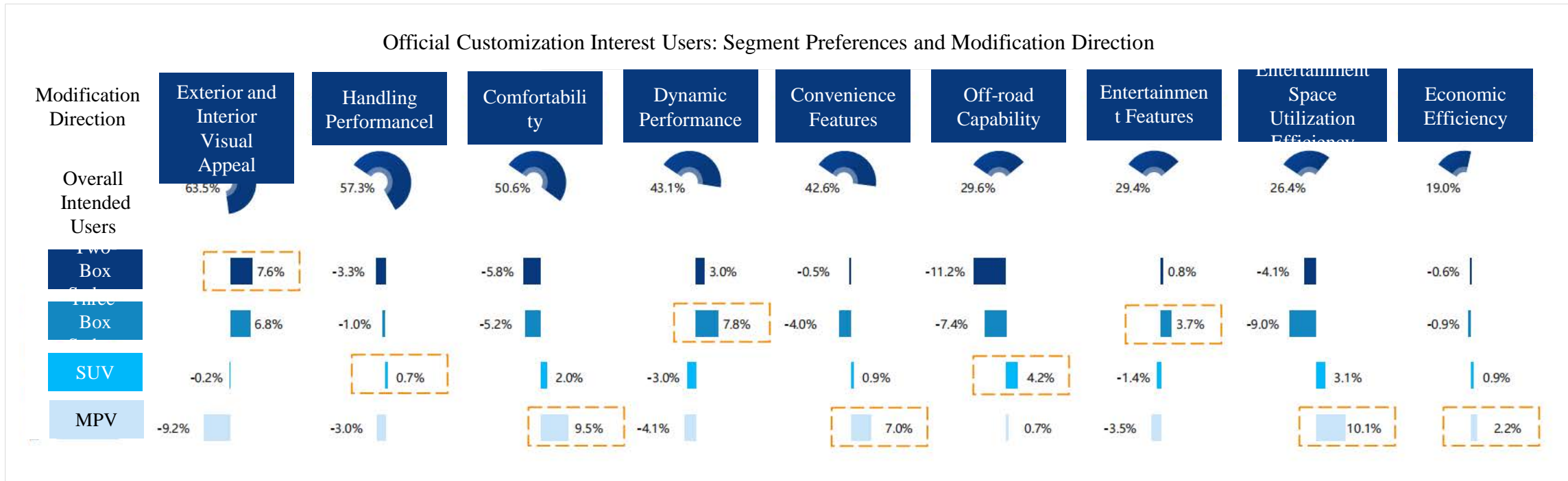
Among users born in 1990s and 1995s, car exterior and interior are the top pick for modification preference, followed by performance modification and comfort improvement.



Preferences for Modification Directions among Intended Users of Official Customized Modifications across Generations

Aftermarket News

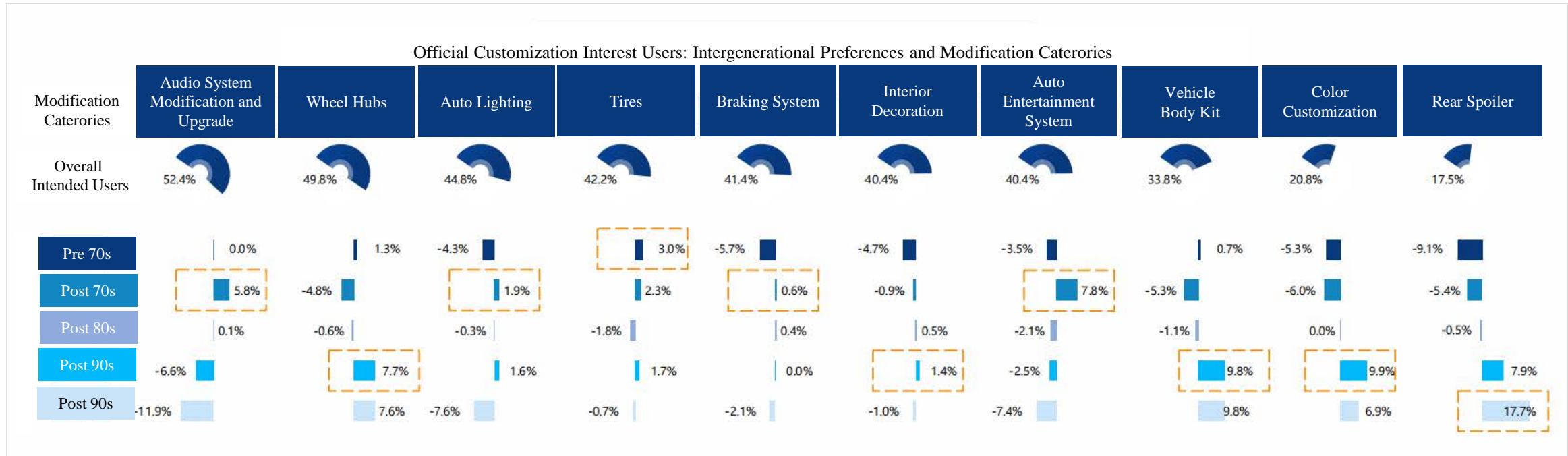
looking at vehicle segments, hatchback users prioritize aesthetics, exterior and interior modification is preferred. Sedan users focus more on power and performance upgrade, while SUV users prefer vehicle off-road capability. MPV users have high demand on space utilization and comfort upgrade.



Preferred Modification Directions among Intended Users of Official Customized Modifications by Vehicle Type Category

Aftermarket News

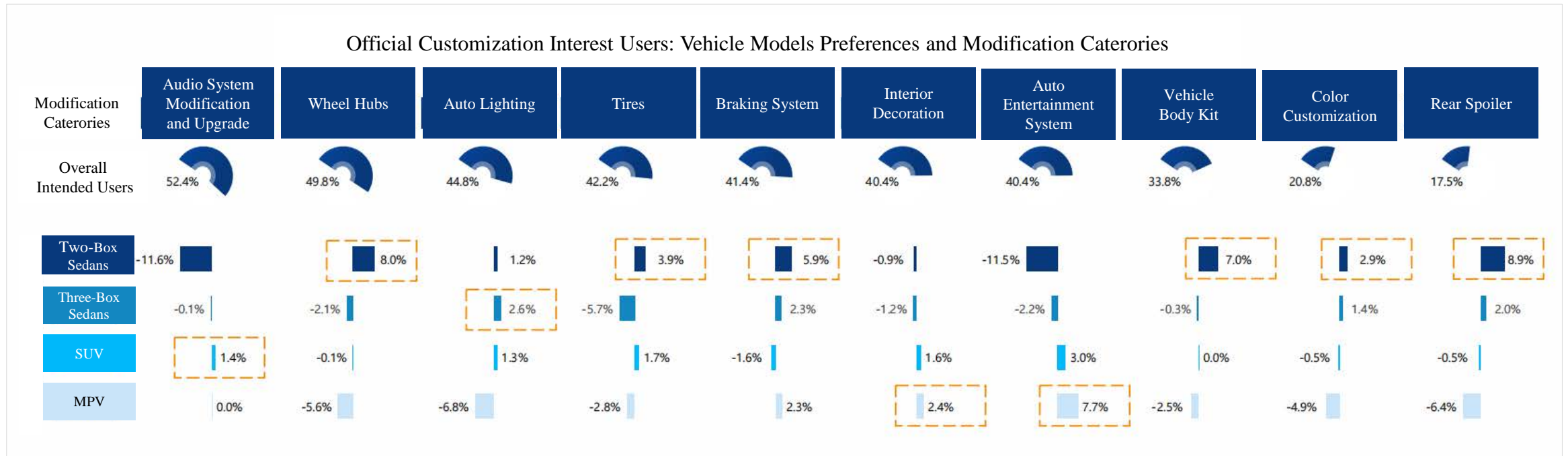
In terms of auto modification projects, auto audio upgrade or modification is most popular for the intended users, followed by the tire and wheel hubs, and auto light modifications. Looking at generational differences, those born before the 1970s are most interested in in-car entertainment systems and auto audio upgrades, while those born in the 1990s are more inclined towards installing body kits and custom paint jobs. Users born in the 1995s show a preference for installing rear spoilers.



Preferred Modification Projects among Intended Users of Official Customized Modifications by Generation

Aftermarket News

When considering vehicle segments, hatchback car users tend to prefer installing rear spoilers and replacing wheels, while sedan users lean towards headlight modifications. SUV users are more inclined towards auto audio system upgrades or modifications, and MPV users prioritize upgrading in-car entertainment systems.



Preferred Modification Projects among Intended Users of Official Customized Modifications by Vehicle Type Category

5. The future development trends for the industry

Four Major Industry Challenges Await Resolution:

Consumer Apprehension: Despite over 71.3% of users expressing interest, the actual transaction rate is a mere 0.54%, indicating significant consumer reluctance towards making purchases.

Supply-Demand Disparity: The market faces an imbalance between demand and supply. While the intention ratio of users for the median and high range car model stands at 36.9%, the supply ratio of car models in this range is only 23.8%. **Market Concentration:** Market dominance is highly concentrated, with the top three brands accounting for half of the overall market sales.

Similarly, the top three vehicle categories delineate approximately 70% of the total market. **Limited Information Channels:** Access to information remains restricted, with nearly 80% of users primarily relying on online platforms for information acquisition.

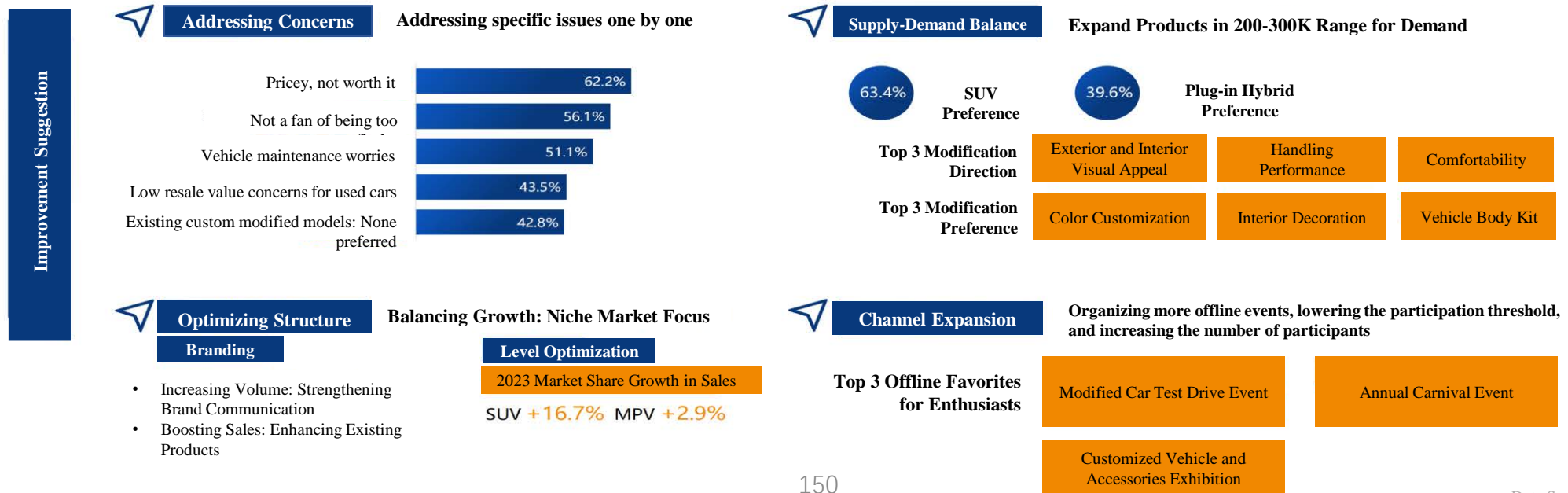
Concerns with User Transactions		Supply-Demand Imbalance		Excessive Market Concentration		Information Access Limitation	
Intended User Ratio	Transaction User Ratio	High Market Demand 200K-300K	Intended User Ratio 36.9%	By Brand	Vehicle Classification	Online Channel Focus 79.3%	80% Prefer Online for More Info
71.3%	0.54%		Type Quantity Ratio 23.8%	Top 3 Market Share 57%	Top 3 Market Share 76%		

Main Problems in 4 Major Industries

Addressing Core User Needs, Accurately Identifying Issues, and Presenting Improvement Suggestions

- Addressing Apprehensions:** Starting from specific concerns, address the most pressing issues for users, including pricing, aesthetic appeal, efficiency of post-maintenance costs, and resale value of used cars.
- Balancing Supply and Demand:** In the 200,000 to 300,000 yuan price range, introduce more products that meet user needs, with a focus on SUVs and plug-in hybrid models. Prioritize modifications related to exterior/interior aesthetics, handling, and comfort. Emphasize modification projects such as custom paint jobs, interior decor, and body kits.
- Optimizing Structure:** Focus on high-growth segmented markets to balance market dynamics. Strengthen brand communication efforts to increase visibility and enhance existing products to expand sales. Concentrate on SUV and MPV vehicle markets, which are experiencing rapid market share growth.
- Expanding Channels:** Organize more offline events and reduce participation barriers to increase engagement. Events like modified car test drives, annual celebrations or carnivals, as well as customized modified car and accessory exhibitions, are offline activities that interest users.

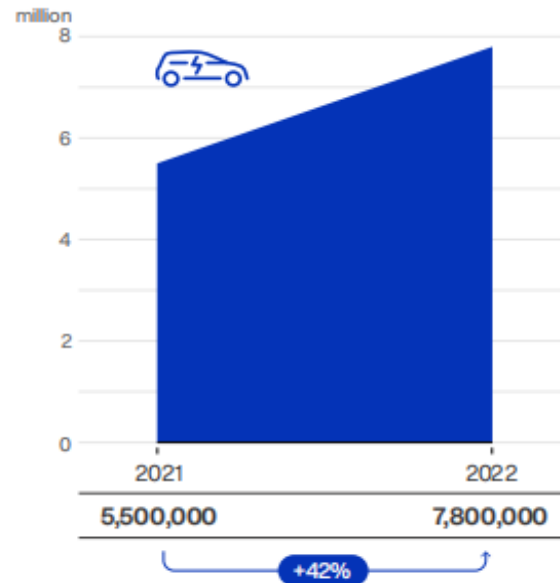
These strategies aim to enhance user satisfaction, align product offerings with user preferences, and improve overall market dynamics.



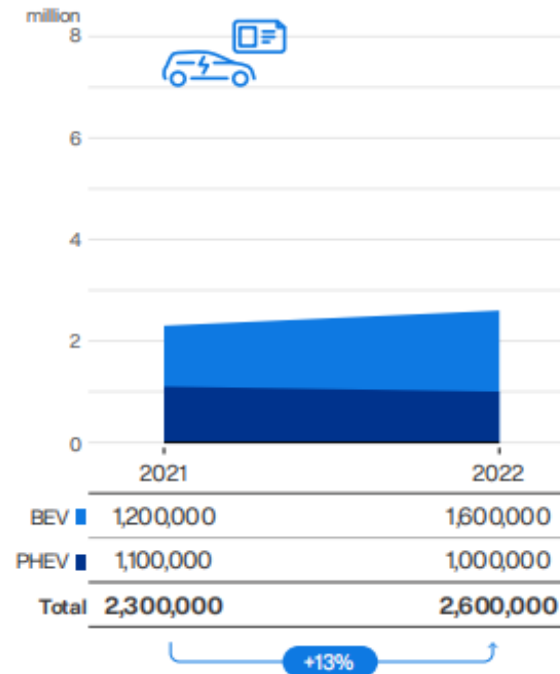
E-mobility market in Europe and Poland

European e-mobility in numbers

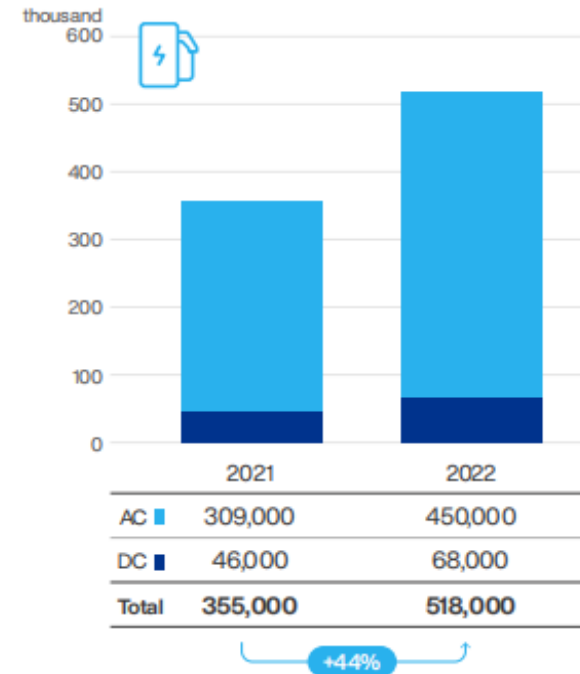
Number of electric passenger cars (BEV + PHEV)



Number of newly registered electric passenger cars (new and used)



Number of public charging Points



Source: IEA

pspacom.pl pspa

E-mobility market in Europe and Poland

Background: EU EV Charging Legislations



European Green Deal and Climate Law

- "European Green Deal" as main project of von der Leyen Commission
- 2021 "Climate Law" inscribes 2050 carbon neutrality into law, and adds 2030 interim target of 55% reductions compared to 1990



Fit for 55

- Major legislative package presented throughout 2021 in two parts to translate Climate Law into concrete actions
- Many key files currently in the late stages within Parliament and Council





RePower EU

- 2022 plan to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition
- Includes additional measures on corporate fleets and freight transport

E-mobility market in Europe and Poland

Background: EU Legislations

			
<p>Alternative Fuels Infrastructure Regulation (AFIR)</p> <p>Sets a framework for the rollout of public recharging infrastructure in the EU, including binding rollout targets for Member States and requirements on payment and pricing</p>	<p>Energy Performance of Buildings Directive</p> <p>Modernizes the EU's framework climate legislation on buildings, notably including targets to roll-out pre-cabling and charging infrastructure in residential and non-residential buildings, either new or renovated</p>	<p>Renewable Energy Directive (RED III)</p> <p>The Renewable Energy Directive establishes common rules and targets for the development of renewable energy across all sectors of the economy, including transport. Fuel-neutral credit trading provides a great potential revenue opportunity for CPOs and users</p>	<p>The Recovery and Resilience Facility</p> <p>RRF supports Member States through loans (EUR 385.8 billion) and grants (EUR 338 billion) in implementing reforms and investments that align with the EU priorities and that address the challenges identified in country-specific recommendations under the European Semester framework of economic and social policy coordination. RRF will provide around EUR 72.2 billion for sustainable and green mobility</p>

Polish Automotive and Electric Vehicle Industry Data

Automotive industry – the backbone of the Polish economy

The automobile industry accounts for 8% of GDP and approximately 13.5% of exports. Automotive industry exports reach record 39.7 billion euros in 2022, 21% more than the previous year以上。

The world's leading auto parts exporter

Poland is one of the world's top ten exporters of auto parts.

The export value in 2022 is approximately 14.3 billion euros (a year-on-year increase of 18.7%).

Lithium battery production and technology cluster

We are a world leader in the production of lithium-ion batteries. In September 2022, the European Commission decided to invest 70 million euros from the European Regional Development Fund in Poland

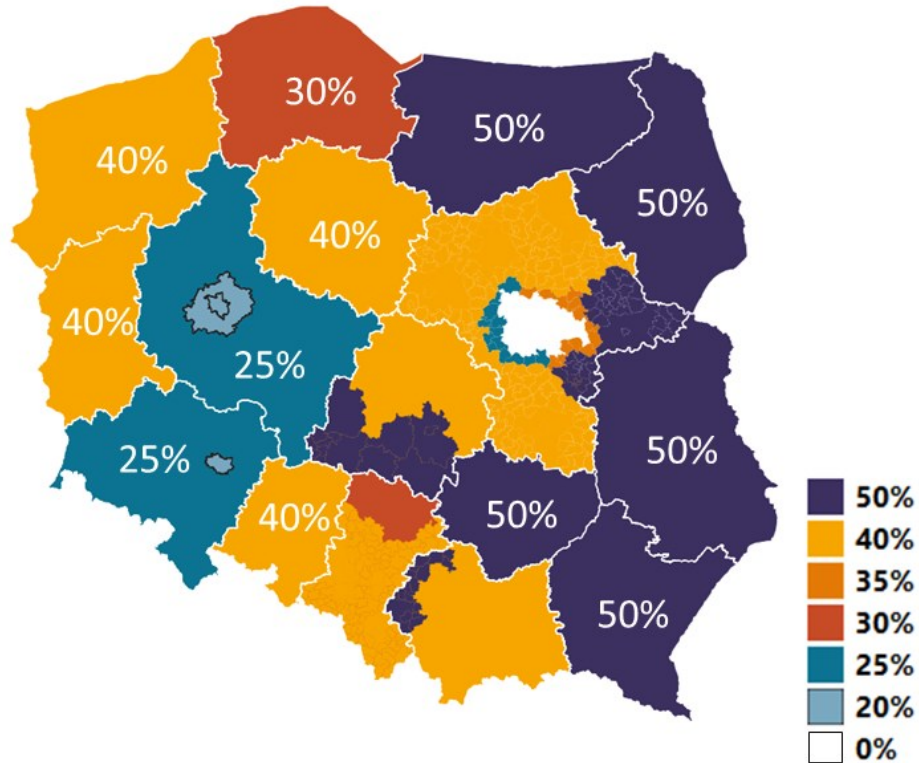
Lithium-ion battery recycling research conducted in southern Silesia.






Highly qualified staff

Poland leads the region in the number of employees with technical education. The talent pool contains nearly 1.5 million students, more than 300,000 of whom are engineering students.

Poland's Regional Preferential Policies to Support New Investment

Highest level of support in 2022-2027 by different regions of Poland (large companies)*



-  Corporate income tax exemption, tax-free for 10 to 15 years
 } National incentives
-  Cash grants for strategic projects up to a maximum of 15% of the investment cost
 } National incentives
-  Property tax exemption for up to 5 years
 } local /regions incentives
-  Funding and training support from local unemployment offices
 } local /regions incentives
-  EU funds - available for innovation and R&D projects
 } EU Funds

Wielkopolskie and Dolnośląskie regions:
large entrepreneur can obtain aid only for an initial investment in favour of a new economic activity (i.e. not the same or a similar activity to the activity previously performed).

Łódzkie region:
50% of support available in parts of Piotrkowski and Sieradzki regions;

SMEs:
Medium companies can benefit from 10% more of support
Small companies can benefit from additional +10% (+20% in total)

Applies to the whole of Poland

CIT exemption



10 - 15 years CIT exemption

according to different locations

DURATION OF SUPPORT	Aid intensity	10-25%	35%	50%
	Years of exemption		10	12



Qualitative Criteria

4 to 6 points, depending on location

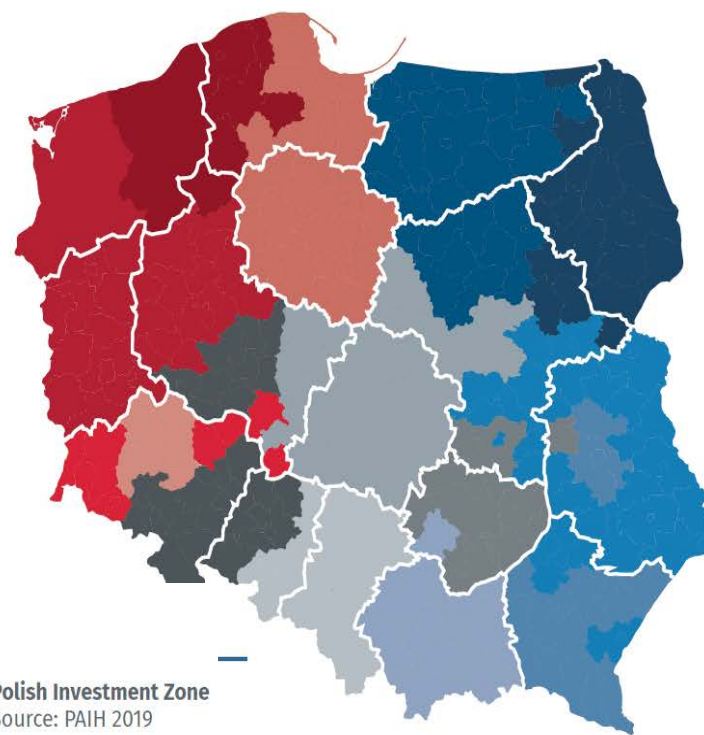


Quantitative Standards

Minimum investment amount PLN 0,2 to 100 million, depending on location

14 special economic zones

The amount of CIT exemption subsidy is determined by the location of the special economic zone



Polish Investment Zone
Source: PAIH 2019

Name of zone

- Kamiennogórska SSE Małej Przedsiębiorczości
- Katowicka SSE
- Kostrzyńsko-Słubicka SSE
- Krakowski Park Technologiczny
- Legnicka SSE
- Łódzka SSE
- Pomorska SSE
- Słupska SSE
- SSE "Starachowice"
- SSE Euro-Park Mielec
- Suwalska SSE
- Tarnobrzaska SSE EURO-PARK WISŁOSAN
- Wałbrzyska SSE Invest-Park
- Warmińsko-Mazurska SSE

German Automotive Industry Development

The Automotive Industry in Germany.

The World's Automotive Innovation Hub.

1 in 5

cars that roll off the international production line is German OEM made

1/3

of global automotive R&D spending made by German OEMs

3.1 m

Passenger vehicles produced in 2021 – making Germany Europe's leading production site

24%

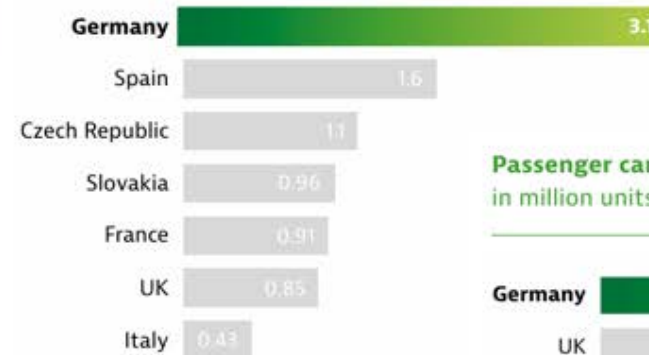
of total domestic industry revenue generated by automotive industry

77%

of cars manufactured in Germany in 2021 destined for export markets

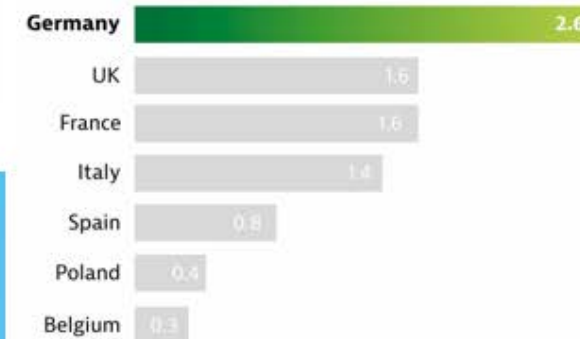
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Passenger car production in Europe 2021
in million units



Sources: VDA, ACEA 2022

Passenger car registrations in Europe 2021
in million units



The Automotive Industry in Germany.

The World's Automotive Innovation Hub.

German Automotive OEM and Supplier Density

No other country in Europe can boast a comparable concentration of auto-related R&D, design, supply, manufacturing and assembly facilities. Accordingly, no other country in Europe provides the same market opportunities as those offered by the German auto industry.



Source: GTAI 2022

OEMs

- 1 Audi
- 2 BMW
- 3 Ford
- 4 Iveco
- 5 MAN
- 6 Mercedes
- 7 Neoplan
- 8 Opel
- 9 Porsche
- 10 Volkswagen

Suppliers (only German headquarters)

- | | |
|------------------------------|----------------------------|
| 1 Bosch | 12 Eberspaecher Holding |
| 2 Continental | 13 Getrag |
| 3 ZF Friedrichshafen | 14 Leoni |
| 4 Thyssen Krupp | 15 KSPG |
| 5 BASF SE | 16 Freudenberg |
| 6 Mahle | 17 Webasto SE |
| 7 Schaeffler | 18 Infineon |
| 8 Bentheler Automobiltechnik | 19 Leopold Kostal |
| 9 Hella KGaA | 20 Trelleborg Vibracoustic |
| 10 Brose Fahrzeugtechnik | 21 Kautex Textron |
| 11 Draexlmaier | |

Facts and Figures about Bavaria

Automotive industry.

Pole position in Europe. Economic dynamism.

247,910

employees in the automotive sector (Germany: 774.339, 32%)

€ 165.6 bn

sales (Germany 2022: 506.2 bn. Euros, 32.7%)

74.4%

export quota (2022)

[invest in bavaria](#)



40

% of companies and institutions with the most patent applications in 2021 in the automotive industry come from Bavaria

1,100

companies in the automotive industry

21,104

Engineering Graduates

Slide 10

Facts and Figures about Bavaria

Welcome to Bavaria.

Some facts and figures about Bavaria.



About 470 Chinese companies already set up in Bavaria.

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Slide 7

Motor Vehicle Market

5.148.653 + 7,4%
2023

	2019	2020	2021	2022	2023	AVG 5 Years
Brasil	2.787.850	2.058.437	2.119.851	2.104.461	2.308.689	2.275.858
México	1.360.008	977.650	1.046.732	1.125.756	1.413.921	1.184.813
Argentina	459.753	342.285	383.663	405.414	444.731	407.169
Chile	389.220	272.107	434.347	445.937	329.588	374.240
Colombia	263.684	188.665	250.497	262.595	186.826	230.453
Perú	168.647	125.090	174.751	177.543	181.812	165.569
Ecuador	132.208	85.818	115.371	135.250	132.402	120.210
Uruguay	42.488	36.841	52.329	55.997	61.674	49.866
Bolivia	51.945	29.958	42.693	45.723	51.012	44.266
Paraguay	31.603	24.529	31.798	32.677	30.685	30.258
Venezuela	1.723	988	1.794	3.992	7.313	3.162
TOTAL MARKET	5.689.129	4.142.368	4.653.826	4.795.345	5.148.653	4.885.864



Colombia

Four-Wheels and over Electric and Hybrid market

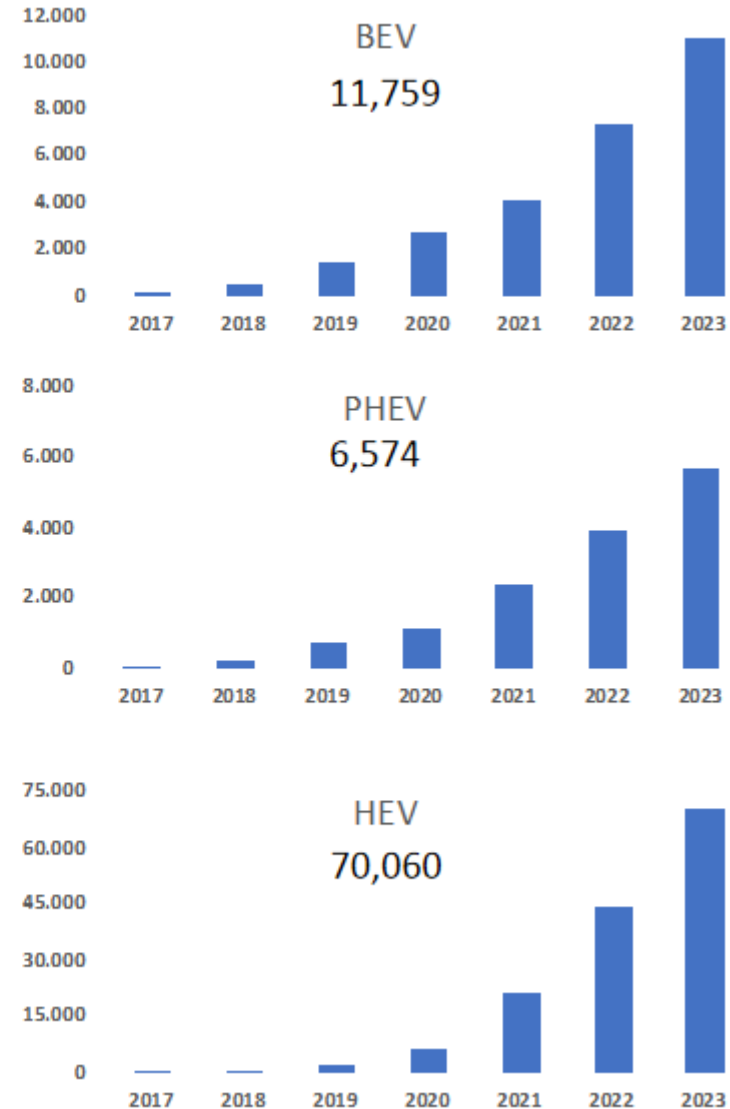
	Vehicle Population As of 2023	SOM
ICE	6,795,802	96.9%
NGV	131,701	1.9%
BEV	11,759	0.2%
PHEV	6,574	0.1%
HEV	70,060	1.0%
TOTAL	7,015,896	100.0%

Source: ANDEMOS

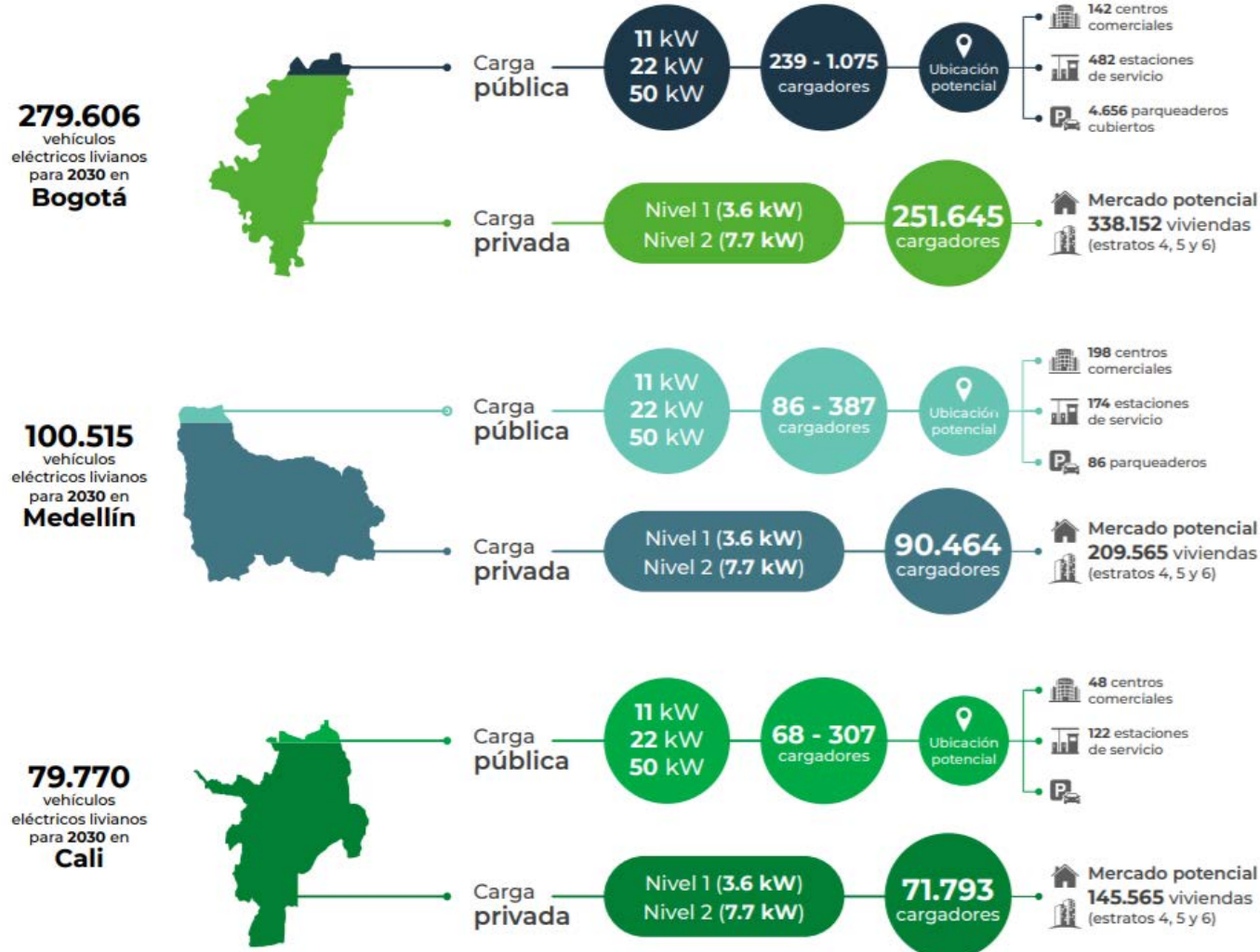
For more detailed market figures for Colombia
you can access our website

www.andemos.org

under the Interactive Reports tab



Outlook for Public Freight Infrastructure in Major Colombian Cities



It is estimated that by 2030, there will be 1.5 million electric vehicles (including cars, motorcycles, taxis, etc.) in Colombia, accounting for 6.7% of the total number of vehicles.

Charging piles can be set up in shopping malls, service stations, parking lots and supermarkets.

Importance of Latin America in the Electric Mobility Trend

Harnessing Latin America's Potential in the Global Electric Mobility Trend

Harnessing Latin America's potential in the global electric mobility trend is not just an opportunity; it's strategic.

The region's **abundant resources** and increasing environmental awareness position Latin America as a key player in shaping the future of transportation.

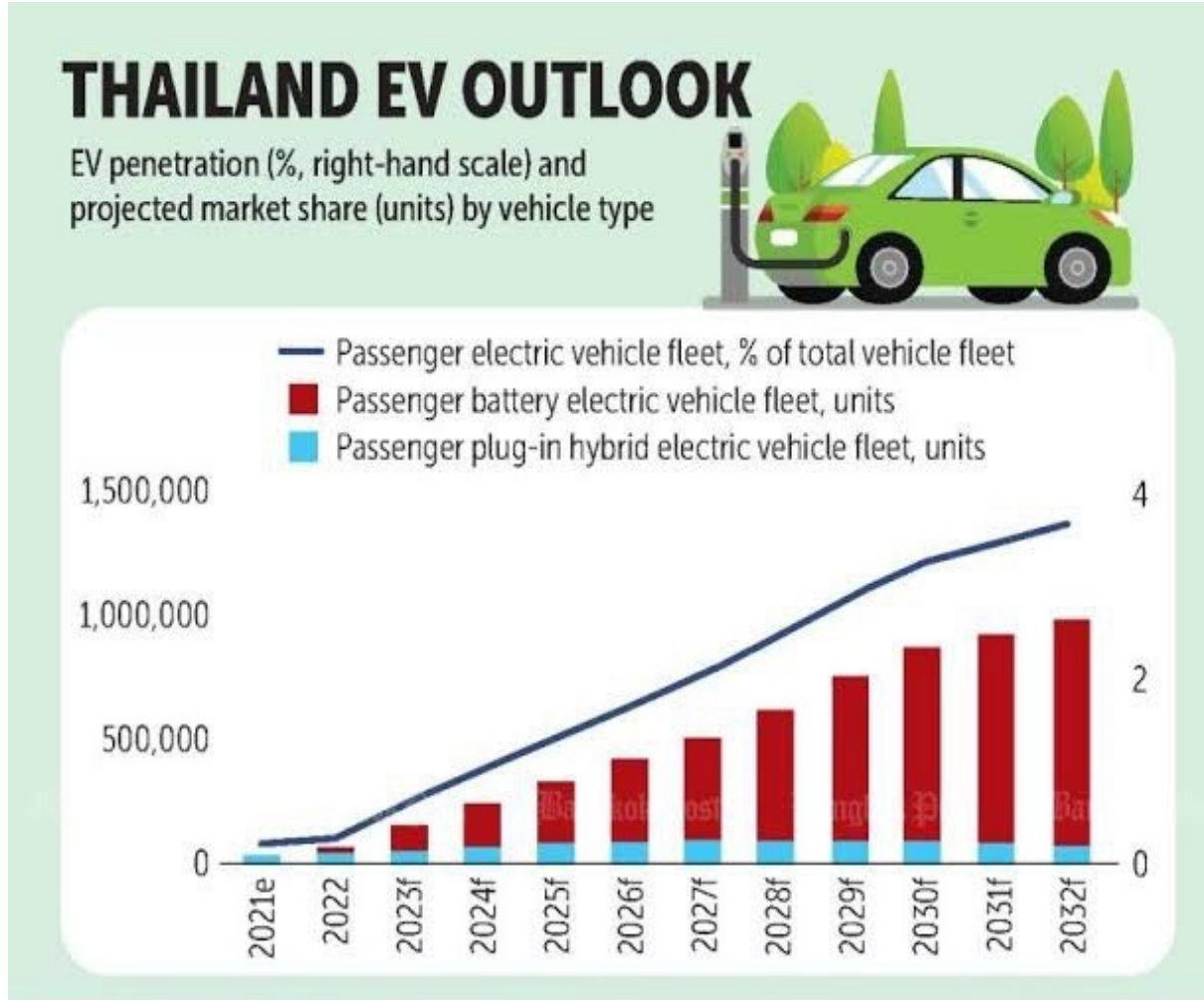
Latin America's vehicle **market potential** opens new expansion opportunities for Chinese in the electric segment.

China and Colombia-Unlocking Collaboration Opportunities

- ✓ Colombian reindustrialization program includes the assembly of electric vehicles, offering opportunities for collaboration.
- ✓ Market potential to electrified in Colombia
 - Buses: 118,000 units**
 - Taxis: 238,800 units**
 - Two and Three-Wheeler: 12,5+ million units**
- ✓ China can benefit by transferring advanced electric vehicle technologies, fostering innovation in Colombia's electric mobility sector.
- ✓ Colombia's strategic location makes it an ideal hub for electric vehicle manufacturers and suppliers in Latin America.
- ✓ Collaboration with China in the energy mobility sector is a win-win, stimulating trade, economic growth, and sustainable development.
- ✓ The partnership addresses regional emission reduction goals, positioning Colombia as a significant global player.

The collaboration between Colombia and China not only promotes economic growth but also establishes a sustainable ecosystem, leveraging Colombia's strategic location and contributing to global environmental goals.

Thailand EV Outlook



Source: Department of Land Transport, BMI

BANGKOK POST GRAPHICS

Auto market BEV...more compelling options

sales in 2023 are expected to double from 2022

KResearch

Survey results of car buying options

29% of respondents prefer to buy BEVs

- 48% Battery Electric Vehicles (BEV)
- 13% Plug-in Hybrid Electric Vehicles (PHEV)
- 10% Hybrid Vehicles
- 29% Traditional Fuel Vehicles

Source: The preliminary survey conducted by Kasikom Research Center on the trend of car buying options of focus groups on 1-5 December 2022, which may not necessarily be the final choice of consumers.

Factors supporting the purchase of a BEV and consumer concerns.

- BEV with an affordable price
- Confidence in use of batteries, etc.
- Sufficient public charging points that are easily accessible
- After-sales service such as credit service, insurance
- Maintenance centers, the used car market, etc.

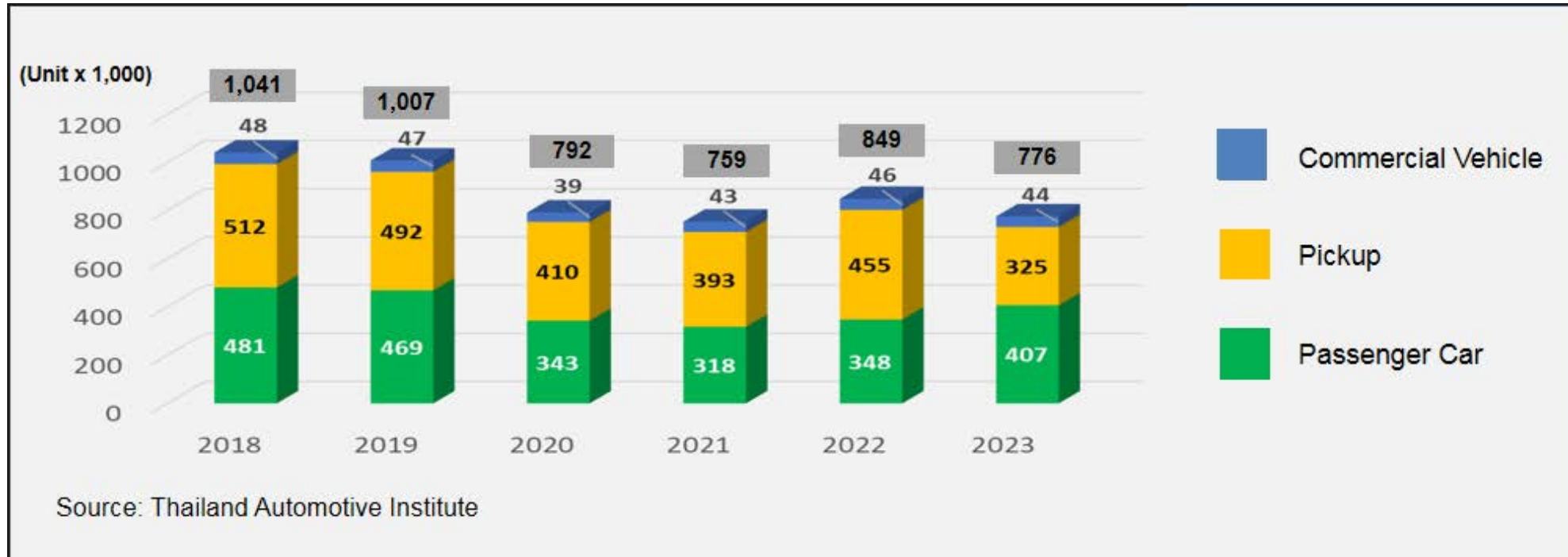
www.kasikomresearch.com

ASUL&S ทีมคำปรึกษา ที่ KResearch

www.kasikomresearch.com f y t KResearchCenter

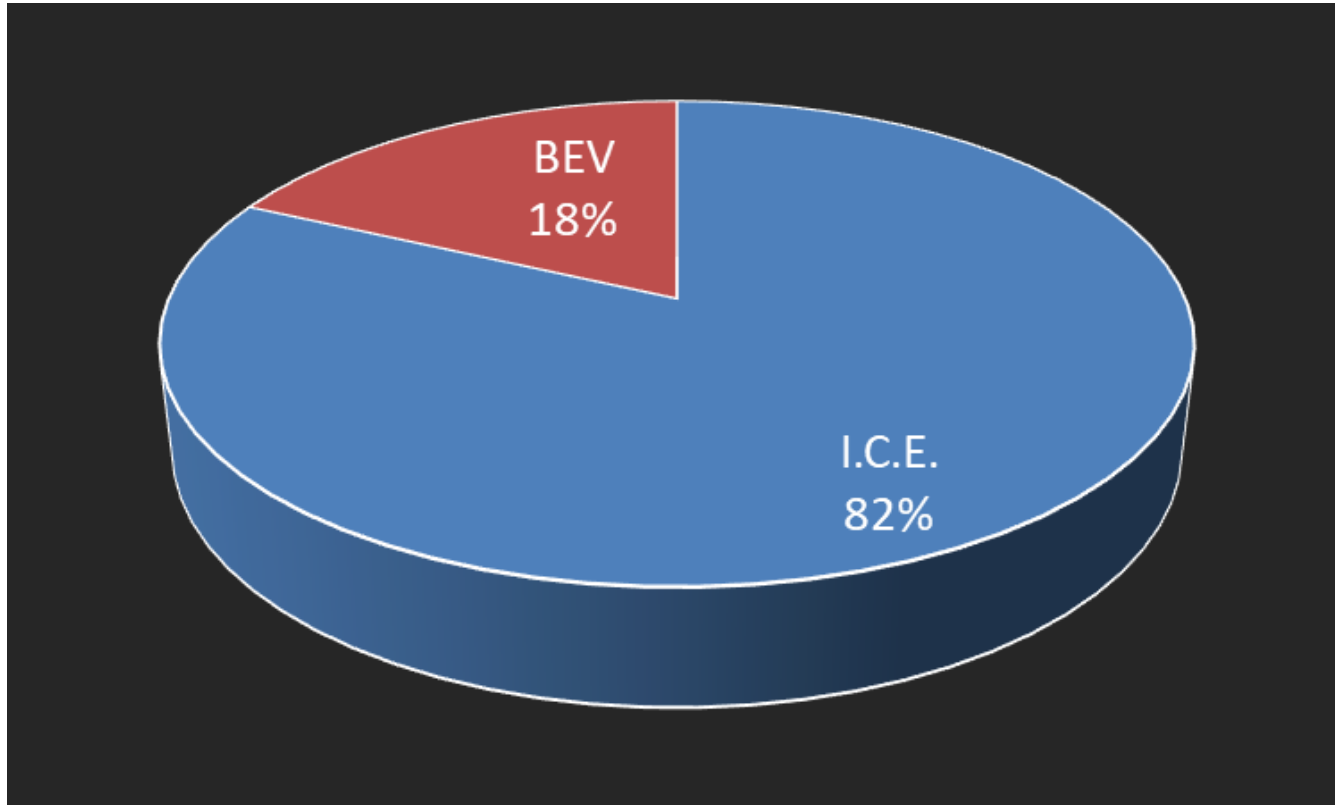
Source: Thai Chamber of Commerce

Thailand Vehicle Domestic Sales



Thailand's domestic car sales totaled 0.849 million in 2022, up 12% from a year ago. The 2023 figure is estimated at 0.776 million. Pickup 1 Ton accounted for 42% of domestic sales, while passenger cars at 52% and other commercial vehicles (trucks, vans and buses) at 6%.

Thailand Domestic Passenger Car Sales 2023 by Power Sources

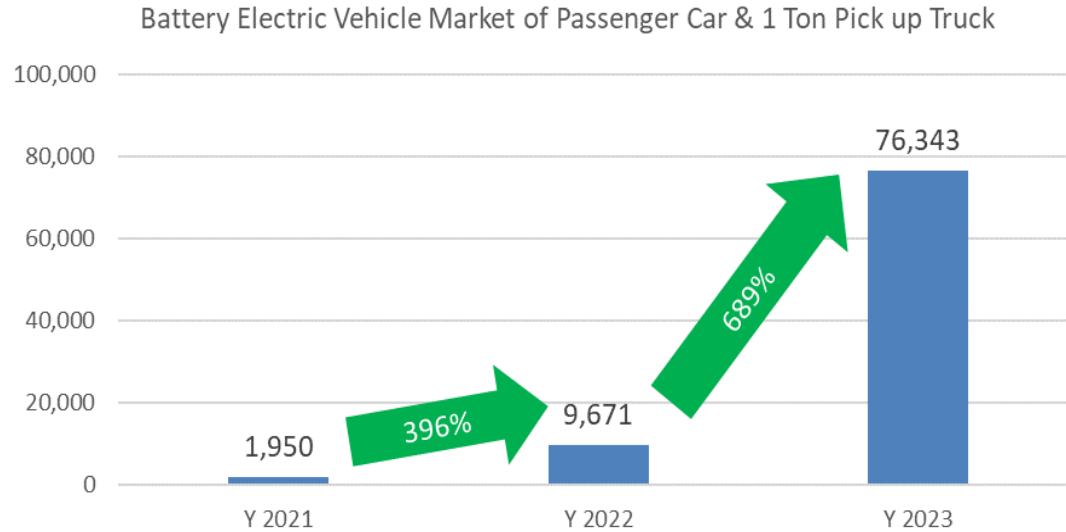


Thailand's domestic passenger car sales totaled 0.407 million in 2023. I.C.E. accounted for 82% of domestic passenger car sales, while BEV at 18%

Thailand Vehicle Market Share by Brand

Brand	2023			2022			2021		
	Sales Unit	MKT. Share	Rank	Sales Unit	MKT. Share	Rank	Sales Unit	MKT. Share	Rank
Toyota	265,949	34%	1	288,809	34%	1	239,723	32%	1
ISUZU	151,935	20%	2	212,491	25%	2	184,160	24%	2
Honda	94,336	12%	3	82,842	10%	3	88,692	12%	3
Ford	36,483	5%	4	43,628	5%	5	32,388	4%	6
Mitsubishi	32,668	4%	5	50,385	6%	4	47,188	6%	4
BYD	30,432	4%	6						
MG	27,311	4%	7	27,293	3%	7	31,005	4%	7
Mazda	16,544	2%	8	31,638	4%	6	35,384	5%	5
Nissan	16,423	2%	9	22,521	3%	8	29,696	4%	8
Neta	13,856	2%	10						
GWM	13,003	2%	11	11,616	1%	11			
Suzuki	12,151	2%	12	20,083	2%	9	22,378	3%	9
Hino				14,339	2%	10			
Other	64,689	8%		43,743	5%		48,505	6%	
Total	775,780	100%		849,388	100%		759,119	100%	

Thailand BEV Car Registration



BEV car registration continued to rise with an increase of 689% in 2023. Almost BEVs for domestic sales were imported particularly from China. Although newly-registered BEV cars surged when compared with the previous year’s figure, its share to total cars newly registered in Thailand was at about 9.6%

Thailand BEV Car Registration Market Share

Brand	2023			2022			2021		
	Sales Unit	MKT. Share	Rank	Sales Unit	MKT. Share	Rank	Sales Unit	MKT. Share	Rank
BYD	30,662	40.2%	1	404	4.2%	5			
MG	12,782	16.7%	2	3,203	33.1%	2	1,068	54.8%	1
NETA	12,777	16.7%	3	69	0.7%				
TESLA	8,206	10.7%	4	422	4.4%	4	222	11.4%	2
ORA	6,746	8.8%	5	3,828	39.6%	1			
VOLVO	1,707	2.2%	6	614	6.3%	3			
BMW	1,407	1.8%	7	312	3.2%	6			
WULING	491	0.6%	8						
VOLT	405	0.5%	9						
PORSCHE	243	0.3%	10	289	3.0%	7	194	9.9%	3
MINI	205	0.3%	11	223	2.3%	8	83	4.3%	
MERCEDES BENZ	192	0.3%	12						
AION	88	0.1%	13						
Other	432	0.6%		307	3.2%		383	19.6%	
Total	76,343	100%		9,671	100%		1,950	100%	

Thailand Government Support Policy for EVs

SUPPORT POLICY FOR EVS

Starting Jan 1, 2024

EV cars priced less than 2 million baht			
Subsidy		Tax benefits	
Battery sizes from 10 to 50 kWh	Battery sizes from 50 kWh and up	• Excise tax reduced from 8% to 2% (2024-27)	
Year	Amount	Year	Amount
2024	50,000 baht	2024	100,000 baht
2025	35,000 baht	2025	75,000 baht
2026-27	25,000 baht	2026-27	50,000 baht

EV cars priced 2-7 million baht	
Subsidy	Tax benefit
No subsidy	• Excise tax reduced from 8% to 2% (2024-27)

EV pickups priced less than 2 million baht	
Subsidy	Tax benefit
2024-2027: Battery sizes from 50 kWh and up 100,000 baht if produced domestically	• Excise tax reduced to 0% in 2024-25 and 2% in 2026-27

EV motorcycles priced less than 150,000 baht	
Subsidy	Tax benefit
2024-2027: Battery sizes from 3 kWh and up 10,000 baht if produced domestically	• Excise tax reduced to 1% in 2024-27

Source: Excise Department BANGKOK POST GRAPHICS

DETAILS OF THE EV PACKAGE, 2022-2023

- ✓ Subsidy offered of 70,000 baht per unit for passenger cars with a battery of 10-30 kilowatt-hours (kWh), and 150,000 baht per car with a battery of more than 30 kWh for completely knocked down (CKD) and completely built up (CBU) units
- ✓ 150,000 baht subsidy per unit for CKD pickups with a battery size of more than 30 kWh
- ✓ EV motorcycles priced up to 150,000 baht receive an 18,000 baht subsidy per unit for both CKD and CBU units
- ✓ Reduction of customs duty by as much as 40% for battery electric vehicles (BEVs) with a retail price of up to 2 million baht
- ✓ Reduction of customs duty by 20% for BEVs with battery size exceeding 30 kWh and a retail price of between 2-7 million baht
- ✓ Reduction of excise tax to 2% from 8% for BEVs

BANGKOK POST GRAPHICS

Thailand Government Support Policy for EVs

Tax Incentives

- Exemption of corporate income tax for up to 13 years
- Reduction of corporate income tax by 50% with maximum of 5 years
- Exemption of import duties of machinery
- Exemption of import duties on raw materials used in production for export
- Exemption of import duties on items used for R&D projects

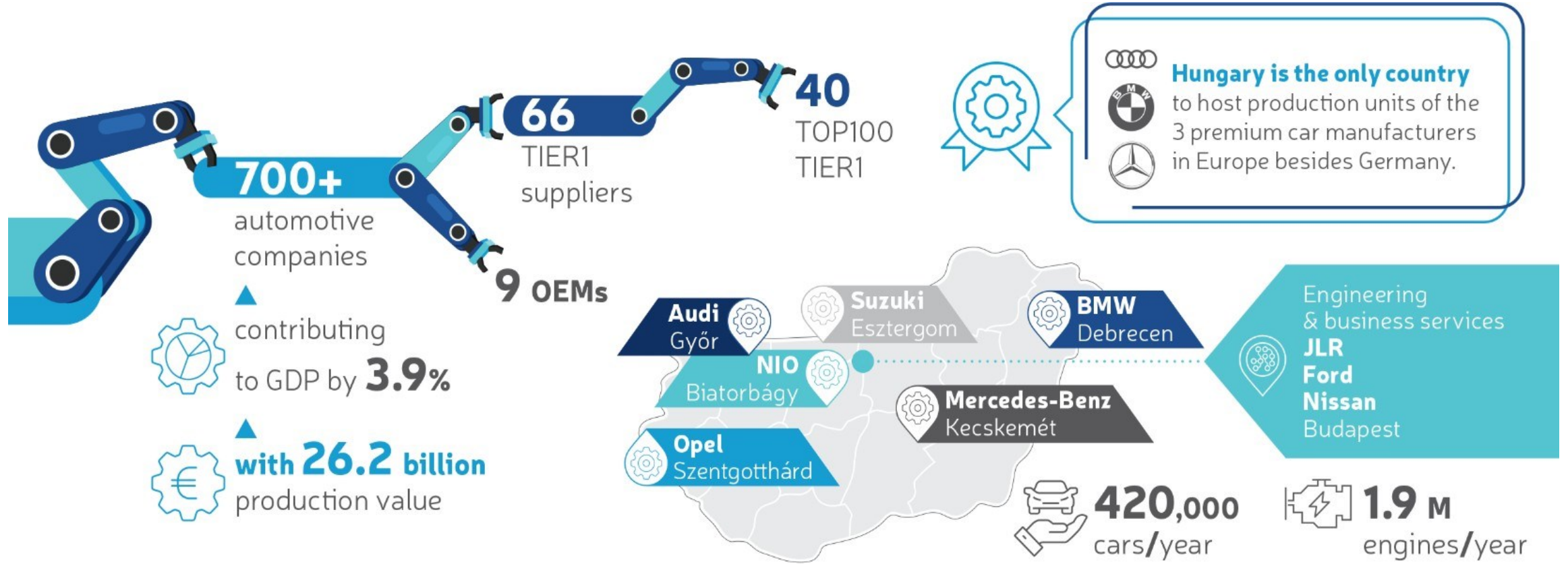
Non-tax Incentives

- Permission for 100% foreign shareholding (except projects prescribed in the Foreign Business Act's List One or other laws that provide specific exceptions)
- Permission to bring in foreigners to research on investment opportunity in Thailand
- Permission to bring in foreign technicians and experts to work in Thailand
- Permission to remit funds in foreign currency

ASEAN-China Free Trade Agreement

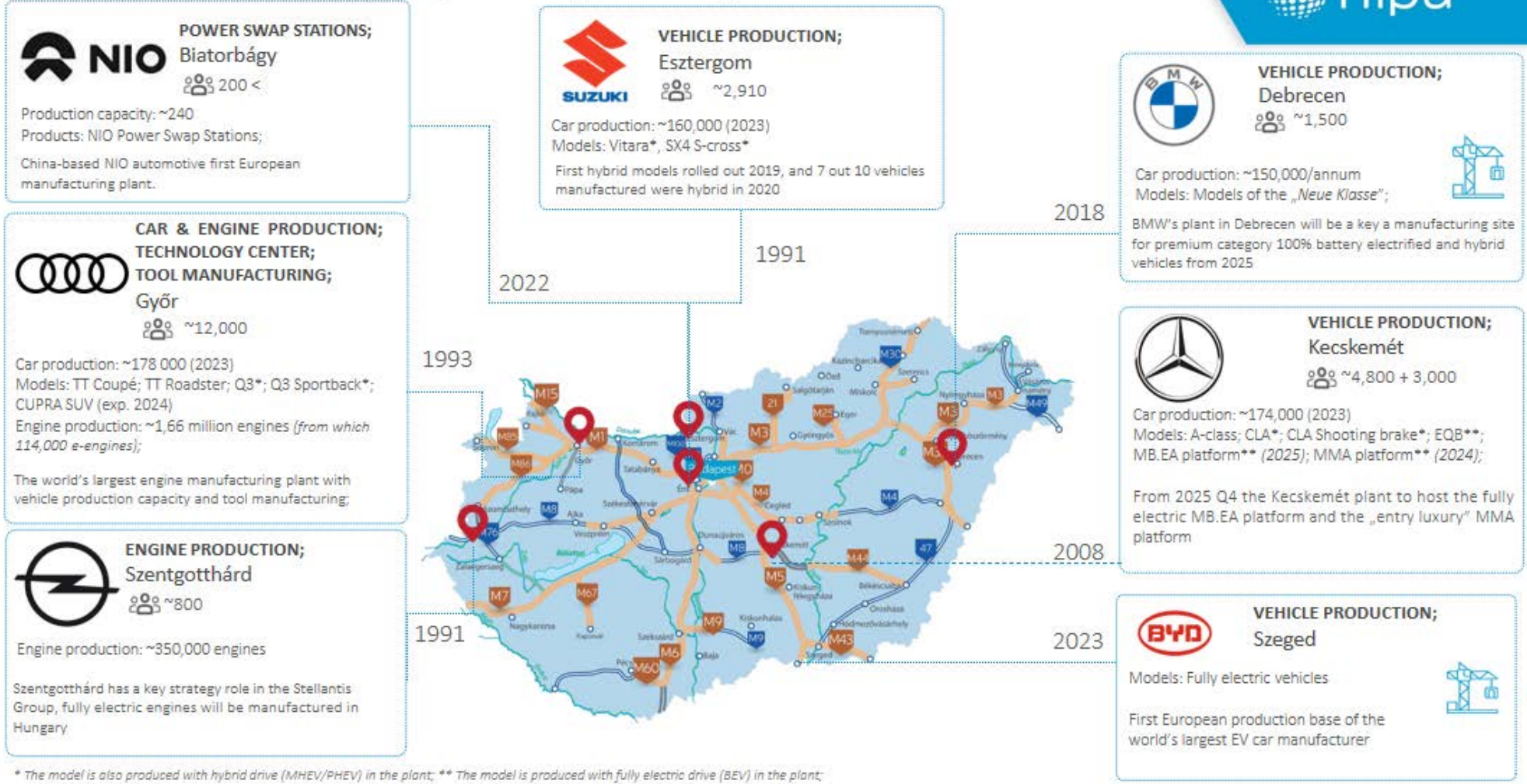
- 0% Import Duty for EV cars

Automotive Industry in Hungary

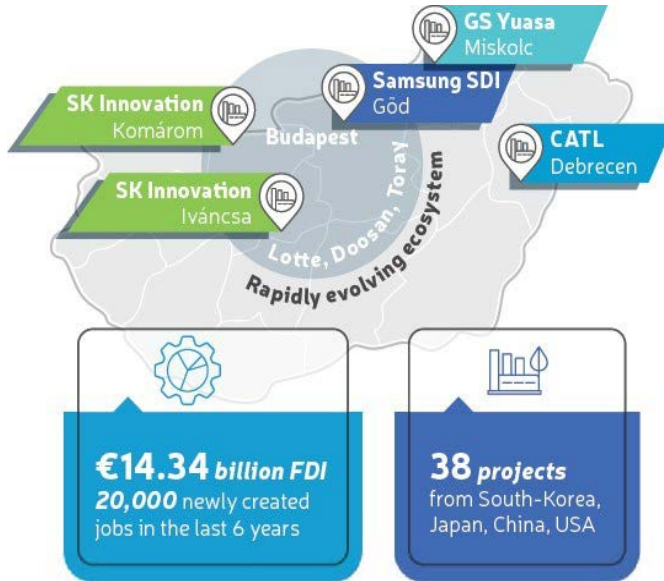


148 700 FTE
3.1% total employment

OEMs in Hungary are getting electrified



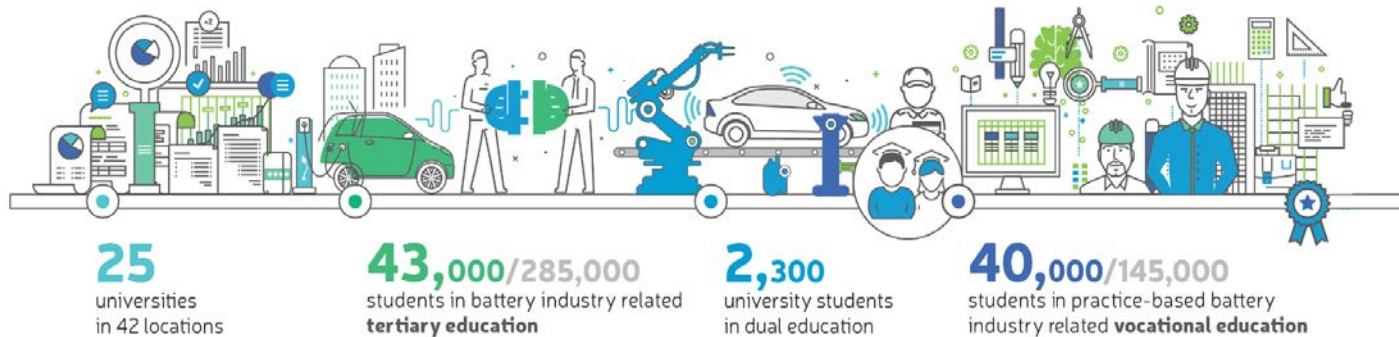
Battery Industry in Hungary



Our partners in stepping into the future



Battery related studies propelling the industry



The battery industry is developing rapidly in Hungary with a planned 300 GWh manufacturing capacity until 2030

Hungarian-Chinese Cooperation

Investments worth € 9.0 billion decided by Chinese companies until 2023



China is Hungary's third largest import partner.

Source: Hungarian Central Statistical Office

China took the lead in 2020 in the volume of FDI (flow) in Hungary and kept the pace in 2023 as well.

It is expected that Chinese enterprises keeps momentum.



"One Belt, One Road" initiative economic cooperation since 2015.



Direct flights from Budapest to Beijing, Shanghai, Ningbo and Chongqing.



Chinese companies made investment decisions about a total volume of € 9.0 billion and nearly 14,900 new jobs between 2014 and 2023.



Confucius Institute and Chinese-Hungarian Bilingual School in Budapest to sustain cultural exchange.

Largest Chinese companies in Hungary





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