KPMG

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BOVAG

Impact of Chinese OEMs in Europe

The road is paved for Chinese OEMs to enter the European EV market

Market entry research paper for international EV manufacturers

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April 2022

Management summary

The shift towards digitalised and green electric mobility has opened up the international car market to Chinese OEMs. In particular, Europe has proven to be an attractive market for Chinese EV manufacturers considering its favourable and frontrunner position.

Chinese EV manufacturers are increasingly assessing the possibility of entering the European market which is the most attractive market globally for EVs and is undergoing a major transformation (from ICE vehicles to EVs).

Over the past 2-3 years, 11 Chinese OEMs have entered the European market with EVs of quality on par with established European brands against affordable prices. The entrance of Chinese OEMs appears to be lasting and will impact the (Dutch) retail landscape.

Europe is forecast to become the largest region globally (alongside Asia) for EVs in the coming decade, as the share of ICE vehicles will decline significantly and the share of different types of EVs will dominate the majority of the market.

European countries are expected to be the frontrunners in terms of the mainstream adoption of EVs and the establishment of supporting charging infrastructure. Europe currently has ~220,000 charging stations and is expected to strongly expand its infrastructure in order to facilitate the transition towards electric vehicles. Europe is expected to outpace the other continents with an expected CAGR of 43% towards 2025.

Currently, Norway and the Netherlands are considered frontrunners in terms of EV adoption (9% and 5% of total cars, respectively) and charging infrastructure (19.6 and 47.5 charging stations per 100 km of road, respectively).

Other larger European car markets (e.g. Germany, the UK and France) are expected to follow in the coming years. The adoption of EVs is supported by targets set by the European Union towards net zero emission vehicles, which are being translated into national law in individual EU countries.

In addition, strong competition and a saturated automotive home market with lower growth is forcing Chinese OEMs to expand to other regions.

Recent entrants have demonstrated that Chinese brands have a right to play in the European market, being able to quickly enter the market with qualitative cars against affordable prices. This will impact the Dutch retail and aftersales landscape but also provides opportunities for partnerships depending on the type of business model selected by the OEM. Chinese brands – in particular (greenfield) privately-owned enterprises (POEs) – are evaluating their business models, focusing more on digital sales and distribution models and reducing their reliance on the (traditional) dealership model to establish closer customer relationships. Also, the low maintenance requirement for EVs is forcing service & maintenance companies to re-evaluate their aftersales model. Retailers will need to adapt to these evolving business models to capture some of the value of the Chinese EV market entry and remain relevant in the Dutch automotive market.

The expected growth of the EV market in Europe is attracting a significant number of Chinese EV manufacturers. The strong development of Chinese EV brands has been supported by the Chinese government which implemented a strategy to accelerate the development of new energies ~15 years ago (e.g. New Energy zones and set targets for the transition towards zero-emission vehicles.

Currently, ~11 Chinese OEMs are active in the European market across a broad range of segments. Chinese brands are typically able to offer cars against lower price levels than their European EV counterparts.

Despite some manufacturers also targeting the more premium segments, the expectation is that Chinese brands will be primarily competitive in the low-end and mid-range segments in the future due to the lack of strong brand reputation in the premium segment.

Chinese car manufacturers active in Europe are currently concentrated in the B-, C- and D-segments of the EV market. Currently, 9 are active in either the B- or C-segments while 4 are active in the D-segment or above. Chinese OEMs typically target the European market with cars that are already sold in their current main markets in Asia and North America, which also includes a number of SUV models. In the future, the low-end and mid-range segments are expected to become target segments as most Chinese players lack the brand reputation and legacy to target the premium segment and targets set by headquarters in China are typically focused on volume generation. Independent car dealers working primarily with volume brands (e.g. Renault, Ford, Hyundai, Kia) will therefore be most impacted by the entrance of new Chinese players.

Price levels of Chinese brands are on average lower than their European peers. In more luxurious segments (D-E), the price difference is even higher. These Chinese brands (e.g. Hongqi, a FAW label) will compete with the likes of Tesla or BMW.

Current presence of Chinese OEMs in Europe (average EV price in €000)

	A-segment	B-segment	C-segment	D-segment	E-segment	F-segment
Aiways			40	TBA		
BAIC						
BYO	32		60			
Changan						
Chery						
Dongfeng			38			
FAW					59	
GAC Motor						
Geely Auto	15		39-59	50	75	
Great Wall		30				
JAC Motors		30				
NIO				49		
SAIC	9	33	34-46	60		
Skywell			50			
Xpeng			34	42		
Avg. EV price in NL	28	37	47	66	142	

Average EV price in NL, 2021: ■ Comparable price levels to EU average ■ Low price levels vs. EU average (30% below EU average).
Source: Company data; LMCA; BOVAG-RAI.

Based on our analysis, 10-15 Chinese OEMs will distribute cars in Europe in the coming years. Although not all are expected to become successful, the Chinese OEMs' share in Dutch EV sales is expected to remain stable at ~8% towards 2030 while EV sales are expected to increase from 16% to 83% of total Dutch car sales.

This provides new partnership opportunities for Dutch car retailers, but this also depends on the business model chosen by the Chinese OEMs. Overall, the dealership model provides most opportunities for local partners while the D2C model only provides limited opportunities, mainly driven by the customer touchpoints.

The Chinese OEMs entering Europe are most likely to compete on price, standard offering and digital services. However, some Chinese brands will compete with the budget brands like Dacia. It is not expected that Chinese brands will compete with the premium brands like BMW, Audi and Mercedes.

Chinese OEMs will need to set up a retail network from scratch. Our estimation is that nearly all Chinese OEMs will need local partners to support them in doing so. The majority will focus on the agency retailer model to keep a level of control, while some will rely completely on retailing and aftersales partners. Particularly digital-savvy OEMs will introduce D2C models. The level of attractiveness for Dutch retailers differs greatly per type of retail model. In general: the more D2C sales the OEM is doing, the lower the attractiveness of the model for Dutch retailers.

In general, Chinese OEMs will likely need support with physical stores, delivery of new cars and service of vehicles (as their installed base will be low in the short to medium term). In selecting partners in the local market, Chinese OEMs will likely look for partners that have the following capabilities (non-exhaustive):

- Large geographical coverage, rather then a dense network;
- Sufficient skills and experience with electric vehicles in both sales and aftersales;
- The ability to offer adjacent products and services (e.g. like leasing, charging infrastructure);
- An understanding of Chinese business practices and culture;
- A proven track record with new innovative retail concepts.

Dutch retailers need to re-evaluate their current positioning to determine their partnership readiness and potential. In order to do so, local collectives could strengthen their position to e.g. offer a geographical network, knowledge of EV offerings, scale their operations for (multi-)brand operations and provide a complementary products and service offering. In addition, they will need to gain an understanding of the possible support they could offer to OEMs depending on their chosen retail strategy, culture and strategy, in order to negotiate potential partnerships. The level of digital savviness is a good indicator for the model the OEMs will start with; volume-focused brands that are not (yet) very digital-savvy are likely to be more open to dealership partnerships whereas digital-savvy OEMs are more likely to choose D2C models with only limited support from external partners.

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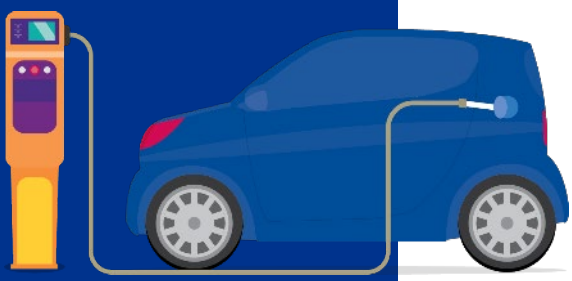
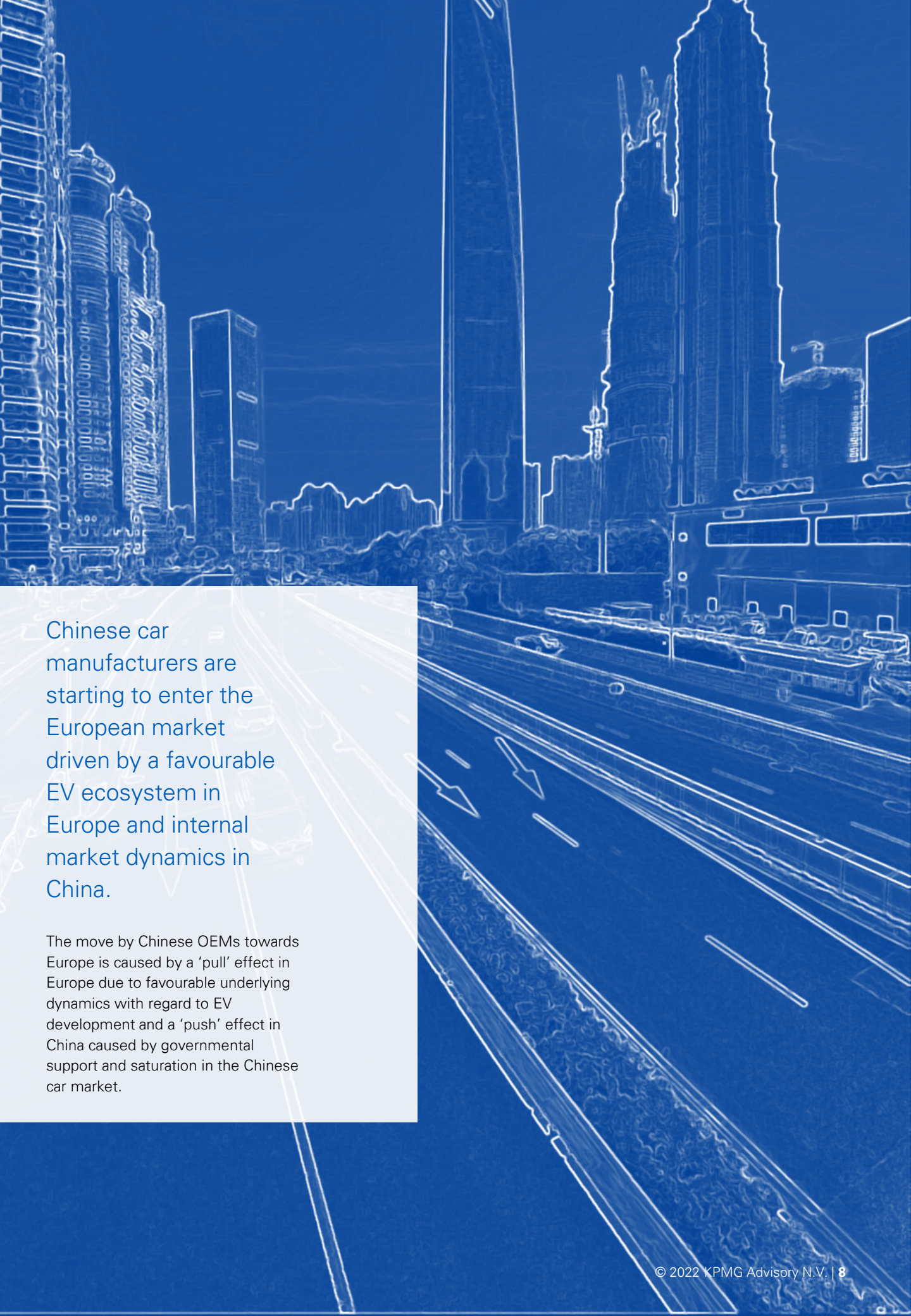


Gamechangers driving Chinese OEMs to enter the European market



Chinese car manufacturers are starting to enter the European market driven by a favourable EV ecosystem in Europe and internal market dynamics in China.

The move by Chinese OEMs towards Europe is caused by a 'pull' effect in Europe due to favourable underlying dynamics with regard to EV development and a 'push' effect in China caused by governmental support and saturation in the Chinese car market.

Pull effect

Key aspects of the European EV market

Market dynamics

- Europe is the number 2 market in terms of size and growth of (electric) vehicle sales and is expected to outpace other regions
- Economic factors, e.g. GDP growth and disposable income
- Trade relations between China and Europe in comparison to the US market

Regulatory, policy and tax

- Ambitious green agenda on a European level, e.g. the Green Deal
- National subsidy programs to incentivise the transition towards zero-emission vehicles
- Tax benefits when using EVs

EV landscape

- Highest EV penetration forecast across different regions
- Frontrunner in public charging infrastructure
- Consumer behaviour towards sustainable innovations like EVs
- Highest standards related to EV cars, i.e. selling in the European market enables sales to other regions

Push effect

Internal market dynamics China

Governmental strategy & support

- Strategic plans like Made in China 2025 and the mid-to-long-term Automotive Plan focus on driving growth in the Chinese automotive sector
- National and regional support through state-backed loans, state-owned banks, subsidies for R&D facilities and even equity investments

Internal market development

- Car sales peaked in 2017 in China but have been declining since then
- The number of (electric) car manufacturers has grown rapidly in China (currently ~132 brands)
- Entering Europe allows OEMs to boost their brand image in China
- Relaxation on foreign ownership restrictions opens up China's car industry and increases competition

Policies and trade agreements

- China focuses on free trade agreements (FTAs) and its access to the European market
- The EU-China Investment Agreement further supports investments into China's EV sector and upgrading its position on the global value chain
- For this reason, it may have a major impact on domestic and international OEMs alike

Source: LMCA; Mercis; KPMG analysis.

The European car market will have the highest penetration of EVs in 2030, resulting in the highest number of electric cars together with Asia.

Globally, sales of EVs have grown by a CAGR of 58% (2016-2021) and are expected to continue to grow by a CAGR of 49% mainly driven by government incentives and an increased focus on sustainability from both consumers and automotive OEMs. Europe is the second-largest market for personal vehicles and car sales are expected to outpace other continents towards 2030, especially with regard to EVs.

The share of EV sales as a percentage of total personal vehicle sales grew from 0.5% in 2016 to 5.6% in 2021. In particular, the growth of EV sales in Europe has been high with a CAGR of 64% between 2016 and 2021, while other continents still lag behind (North America: 43%, Asia-Pacific: 61%). Although the 'rest of the world' has also experienced a significant increase in sales of EVs, they represent a much smaller market volume, divided across three continents, resulting in relatively reduced attractiveness for OEMs.

The increased adoption of EVs in Europe is mainly driven by increasing consumer focus on sustainability and, more significantly, by government incentives focused on stimulating the energy transition in order to meet emissions targets. The EU and all its member states signed and ratified the Paris Agreement on climate change in 2016 (committing to the goal of net zero emissions by 2050). Following this, the European Green Deal was announced in 2019 wherein the EU committed to a roadmap which was designed to ensure that the goals set out in the Paris Agreement are achieved.

The European Commission has further sanctioned the 'Fit for 55' package in 2021, which is even more ambitious than the previous agreements regarding timelines (with the goal of reducing greenhouse gas emissions by 55% by 2030). The package also outlines policy initiatives to drive the development and adoption of EVs. The package outline aims to reduce CO2 emissions from cars and vans by 100% by 2035 (in effect, this would result in an EU-wide ban on ICE vehicles such that all new cars registered from 2035 onwards will be zero-emission vehicles if the proposed legislation is ratified) and includes measures to expedite the development of charging infrastructure.

As a direct result of the government initiatives, the share of EVs is forecast to significantly increase further towards 2030 (up to over 60% of all personal vehicle sales in Europe). Currently, EVs are often more expensive than ICE vehicles, resulting in governmental (financial) aids as one of the driving forces for their adoption.

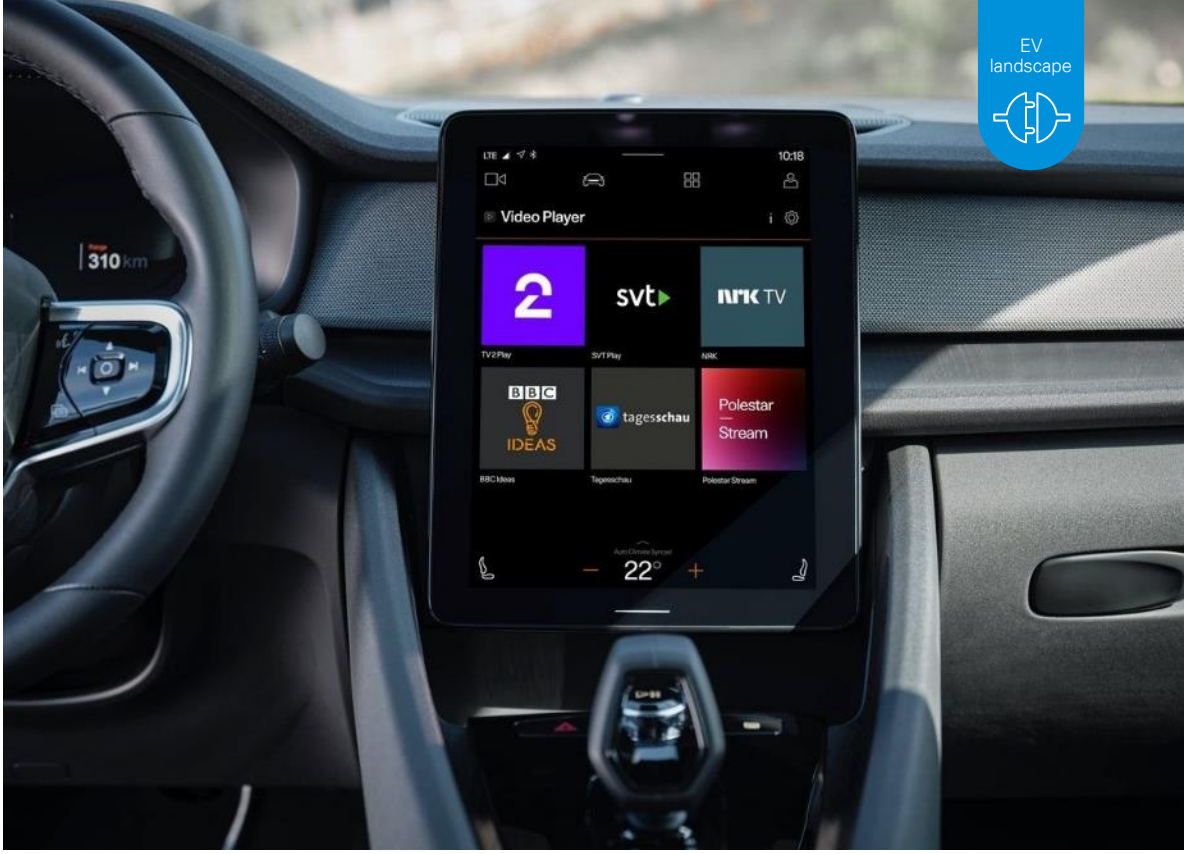
Moreover, some EVs are already at cost parity with 'traditional' ICE vehicles while others are expected to follow coming years (as a direct result of economies of scale and further innovation), and this is expected to significantly boost their further adoption.

Global development of personal (EV) car sales

	New cars sold (#000)			CAGR '21-'30	
	2016	2021	2030E	Non-EV	EV
Europe	19,866 / 101 / 19,765	16,683 / 1,215 / 15,468	24,507 / 12,315 / 12,192	-2.6%	29.3%
Asia	36,357 / 249 / 36,108	32,509 / 2,752 / 29,756	44,097 / 12,697 / 31,400	0.6%	18.5%
North America	21,031 / 77 / 20,953	17,638 / 464 / 17,175	21,024 / 6,383 / 14,642	-1.8%	33.8%
Rest of the world	15,721 / 33 / 15,689	14,230 / 137 / 14,092	21,852 / 2,068 / 19,784	3.8%	35.2%

Covid-19 impact

Legend: EV Non-EV
Source: LMCA; KPMG analysis.



Penetration of EVs is currently highest in the Netherlands and Norway but significant adoption is expected in other more sizeable countries in the coming years.

Current frontrunners in EV adoption are largely a result of governmental financial and regulatory incentives encouraging EV purchases. European EV markets becoming more mature attracts Chinese OEMs, hence their relatively high sales volumes in these markets. Going forward, EU directives and local regulatory incentives will drive EV adoption in other more sizeable countries.

The highest penetration of EVs in total new car sales is in Norway (56% in 2021), followed by the Netherlands (16%), which is mainly due to favourable government incentives and consumer awareness.

Despite these high shares of EVs in new sales, the absolute number of EV sales is relatively small (~63,000 in the Netherlands and ~116,000 in Norway) vs. other more sizeable countries like Germany (343,000), the United Kingdom (183,000) and France (164,000).

Norway is the world's leading market in EV transition, as Norway's government strongly supports addressing climate change and offers incentives to drive environmental sustainability. As the electricity produced in Norway is already carbon-free, the local government is focusing on decarbonisation in the transport sector and the oil and gas manufacturing industries.

Norway exempts battery EVs from registration tax in order to promote the adoption of EVs. The country acts as a frontrunner in Europe and other countries are expected to follow its lead in the transition.

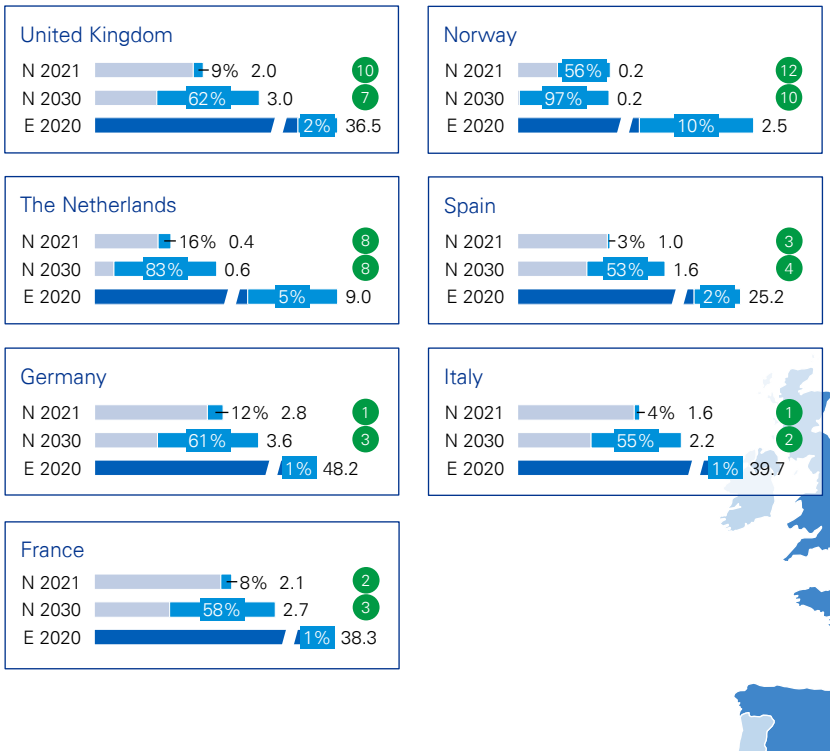
Several countries in Europe have also implemented zero-emission zones that are expected to further drive the adoption of EVs. For instance, the Netherlands aims to implement zero-emission zones in 40 cities by 2025 to limit the use of ICE vehicles.

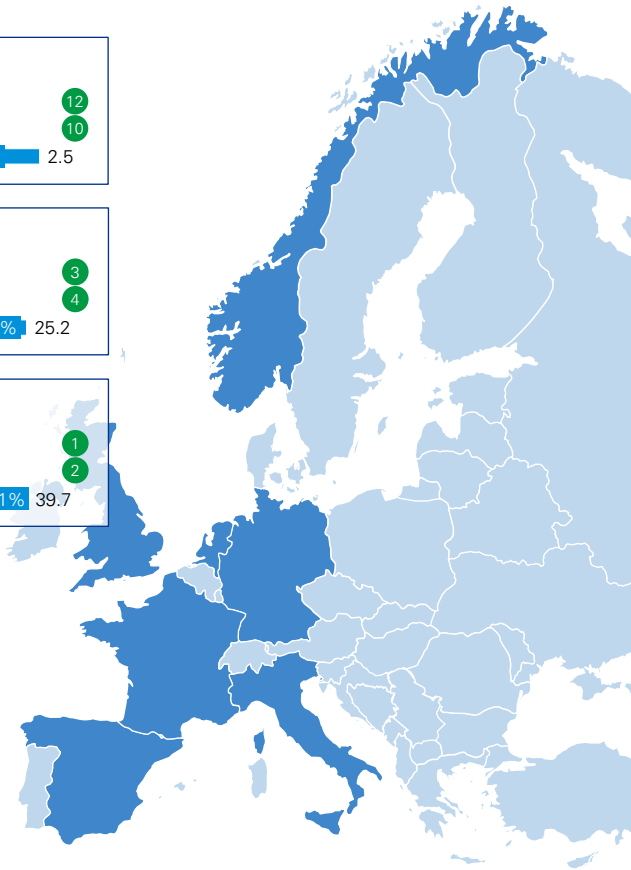
EU directives and local legislation will drive penetration of EVs in other more sizeable countries. EV penetration growth is expected to be strongest in Germany and the UK due to a combination of stricter legislation, higher consumer awareness and strong investments in EV infrastructure. The number of new EV sales is expected to grow to 8.4m in 2030 vs. 1.0m in 2021.

Note that the penetration of EVs in the existing fleet is significantly lower and also depends on the duration of the average buy cycle. Customers in the Netherlands typically switch cars more frequently on average due to a relatively large share of business lease cars. There is therefore a relatively high penetration of EVs in the existing fleet vs. the new fleet.

Share of EVs in total new sales (N) and existing fleet (E) for personal vehicles

2021-2030 (#m)[(a)(b)]





Legend: Non-EVs EVs Total fleet EV share of Chinese OEMs (%).

Note: (a) Existing fleet data for 2021 considered to avoid reflecting unique 2020 dynamics.

(b) EVs including BEVs (battery electric vehicles; fully electric) only.

Source: IEA; LMCA; ACEA; KPMG analysis.

The charging infrastructure network is currently concentrated in the Netherlands and Norway but further rollout is expected in other countries to enable pan-European charging infrastructure.

The Netherlands has the most extensive charging infrastructure network to support its EV fleet with 47.5 chargers per 100 km of road. The vast majority of these are slow chargers (96%). However, this is suitable considering the small geographical footprint and high population density, as fast chargers are more important for less densely populated areas with longer driving distances.

The Nordic countries have the highest number of fast chargers, with the most installations in Norway, Iceland and Denmark. Norway currently has the highest share (28%) of fast chargers as part of the total charging infrastructure compared to the key countries.

The European Commission's 2014 directive on alternative fuels infrastructure (AFID) recommends a ratio of one public charging station for every 10 EVs. This ratio is currently only met by the Netherlands and France. Going forward, a further densification of the charging station infrastructure is expected in all countries.

The European Green Deal sets a target of 1 million charging stations by 2025. Currently, approximately ~206,000 stations have been developed in the EU up to 2020, of which fast chargers comprise approximately 12%.

The rollout of fast chargers in the EU has been faster compared to slow chargers over the 2015-2020 period. As the adoption of electric vehicles is growing in Europe, the demand for publicly accessible fast chargers is increasing, not just in order to facilitate longer journeys, but also to cater for rising adoption rates leading to increasing EV fleets.

The EV charging infrastructure network in Europe is expected to grow by another ~1.3 million stations by 2025 (totalling ~1.6 million) and grow further to ~2.9 million stations by 2030.

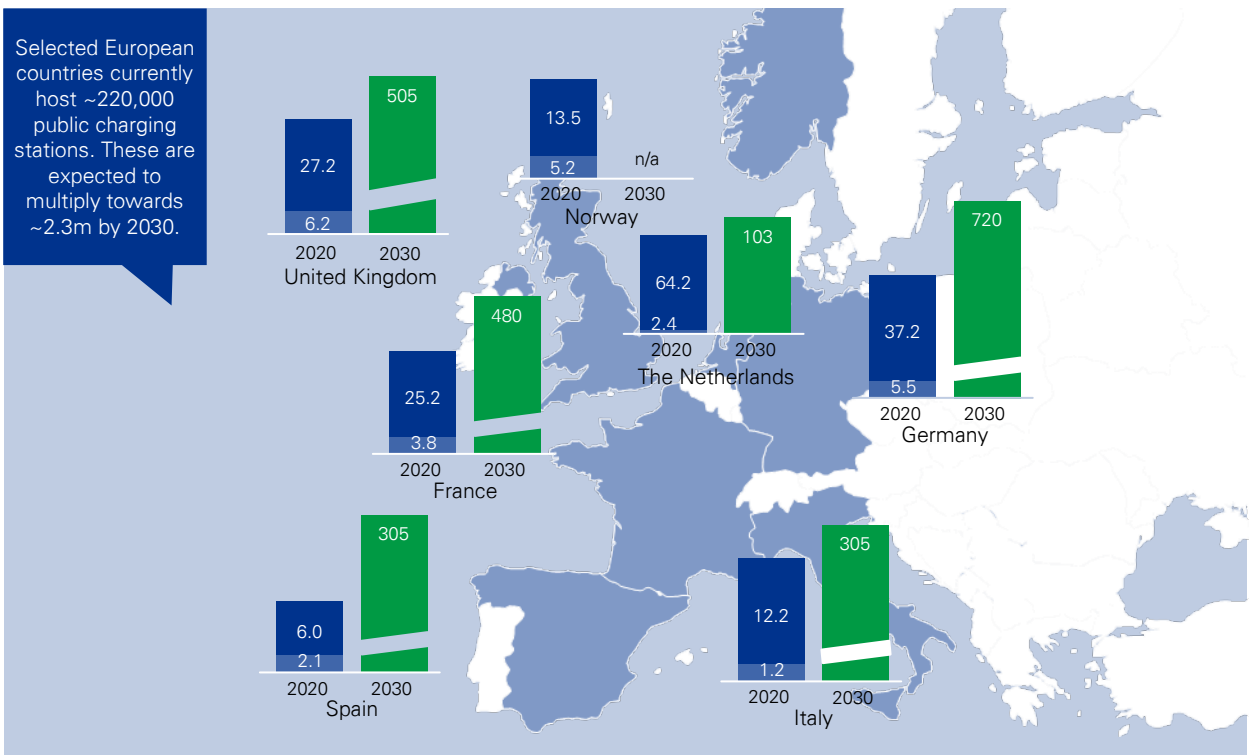
Top European countries in comparison

2020[(a)(b)]

#	Total public chargers (#000)	EVs/charging station	Chargers/ 100km road	Chargers/ 100km road
	2020	2020	2020	2030
Germany	44.7	15.0	19.4	312.5
UK	33.5	23.1	7.9	119.1
France	29.0	7.9	4.1	67.9
Italy	13.4	26.6	5.1	116.1
Spain	8.2	49.0	1.1	40.9
Netherlands	66.7	6.2	47.5	73.3
Norway	18.7	26.5	19.6	n/a

EV public charging infrastructure in key European countries

(#000)



Legend: Slow charging point (<22kW) Fast charging point (>22kW) Total public charging points.

Note: Europe includes the EU, the UK, the EFTA and Turkey.

(a) Includes motorways, state, provincial and communal roads.

(b) Assumed that total km of road per country remains equal in 2030.

Source: IEA; EAFO; Euromonitor; Transport & Environment; KPMG analysis.

European central and local governments offer multiple incentives to further boost the transition towards electric vehicles and have set targets for 100% of new cars to be zero-emission in the future.

The EU has pledged to meet the climate neutrality goal (zero greenhouse gas emissions) by 2050.

Recently, the EU proposed legislation for an effective ban on sales of internal combustion engine (ICE) vehicles from 2035, with the objective of speeding up the adoption of zero-emission vehicles (ZEVs). This includes increasing the target for the reduction of overall CO2 emissions from new vehicles by 2030 from 37.5% to 50%, up to a 100% cut by 2035.

Various member states have established their own targets for 100% of new cars to be zero-emission, with Norway committing to the earliest timeline of 2025.

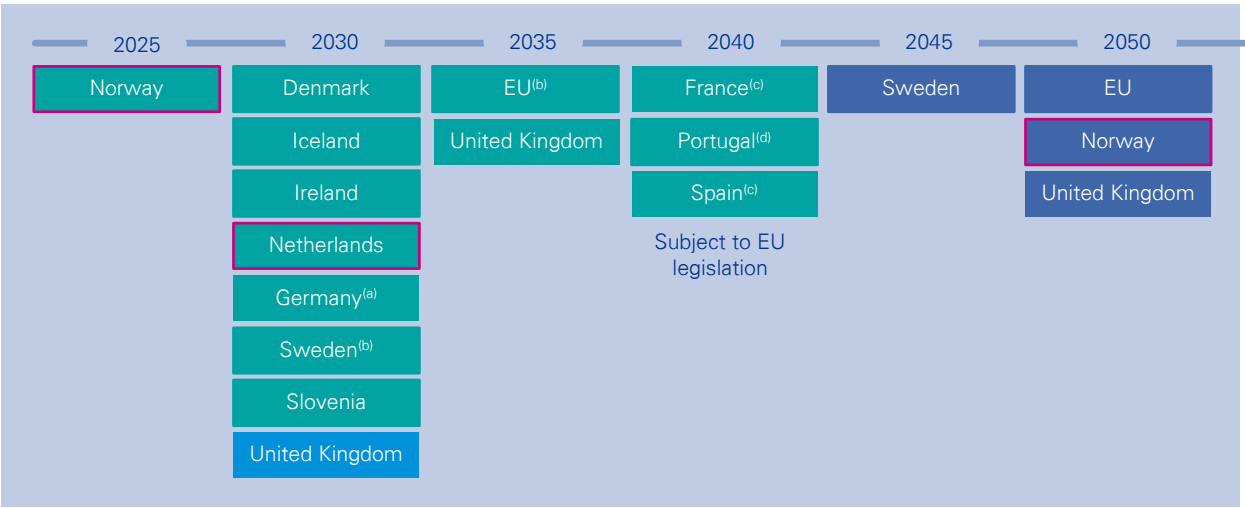
Most governments are currently offering support incentives to facilitate a swift transition towards EV adoption.

Governments often revise their incentives, based on the demand and budget potential, with the majority of the key countries offering average subsidies of approximately €6,000. However, the subsidies are also likely to be phased out once adoption of EVs becomes mainstream and EVs achieve cost parity with ICE vehicles.

Selected European countries	Regulatory & tax
	EV purchase subsidy (up to €000)
Germany	9.0
UK	1.8
France	6.0
Italy	8.0
Spain	7.0
Netherlands	3.3
Norway	n/a[e]

Electrification targets for key European countries

as at November 2021



Key: 100% electrified vehicle sales (i.e. BEVs, PHEVs, fuel cell EVs and hybrids (HEVs)) 100% zero-emission vehicle (ZEV) sales (i.e. BEVs, PHEVs and fuel cell EVs) Net-zero pledge on total fleet Frontrunner in EV adoption in Europe.

Note: BEV: battery electric vehicles (fully electric); MHEV: mild hybrid including extended range (IC and electric motors in parallel); PHEV: plug-in hybrid; FHEV: full hybrid (IC and electric motor in parallel).(a) Proposal from the new coalition government in November 2021.

(b) Proposed legislation from the European Commission.

(c) National targets as at June 2021.

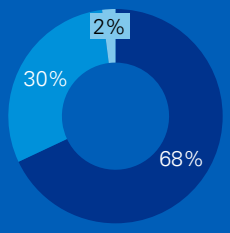
(d) National target as at April 2021.

(e) No direct purchase subsidies, instead there are incentives such as no registration/import tax and 25% VAT exemption.

Source: EIU; IEA; ACEA; ICCT; KPMG analysis.

Changing consumer behaviour towards D2C EV purchases, potentially via subscription models, provides opportunity for Chinese OEMs to enter the European market with new business models.

Key insights from KPMG's 22nd Annual Global Automotive Executive Survey (GAES) 2021[a]



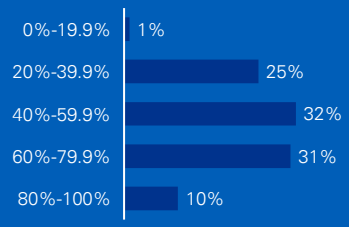
Overall outlook

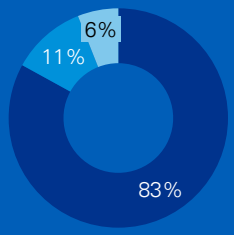
Do you believe battery electric vehicles can achieve widespread adoption in the next 10 years without government intervention?

Yes No Don't know

Consumer purchase behaviour

In 2030, what percent of new cars will be sold directly to consumers by automakers in your home market? – Sales outside of traditional physical dealerships?





Alternative business models

By 2030, do you think vehicle subscriptions will be a competitive offering to traditional purchases and leases?

Yes No Don't know

Note: (a) Insights from respondents from Western Europe.

Source: ACEA; IEA; KPMG's 22nd Annual Global Automotive Executive Survey 2021; BloombergNEF; KPMG analysis.

Europe's favourable focus on 'green solutions' will drive the mainstream adoption of EVs by 2030. Simultaneously, the share of online sales will increase, allowing OEMs to enhance D2C models. Lastly, subscription models are expected to become competitive alternatives to traditional sales.

Many EU member states currently support the transition towards EVs via various purchase incentives and additional benefits, e.g. parking privileges. These policies further build on changing customer demand towards green energy. Often, the speed of transition towards EVs is correlated with such government policies and incentives for buyers, as demonstrated in Norway. A majority of the respondents (85%) from Western Europe support such subsidies in order to stimulate the transition, according to findings from KPMG's Automotive Executive Survey (GAES) 2021. In addition, subsidies and the declining cost of batteries due to economies of scale and new technologies increasingly make EVs affordable and competitive compared to ICE vehicles.

In addition to production and price levels, the technical aspects of EVs are also continuously evolving and improving, such as improved range as a result of improved energy management and charging technology improvements to reduce charging time. This will ultimately increase the driving experience and convenience for the consumer. Furthermore, as more and more OEMs are fully committing to EVs (e.g. Volvo and Mercedes plan to only offer electric cars from 2030) and new (start-up) OEMs solely focus on EVs, the variety of vehicle options will increase across different segments and price levels.

According to the GAES, 70% of executives believe that the majority of new car sales will be completed online by 2030 following changing consumer behaviour. This trend is driven by the likes of Tesla, one of the pioneers of the online sales channel, followed by others like Polestar and NIO. Through this omnichannel strategy, consumers can complete the purchase of new vehicles online instead of at physical locations. This provides the opportunity for OEMs to launch online D2C models and develop customer relationships. The D2C model provides new entrants in the European market the option of entering the market directly without the need to find local representative(s). In addition, it gives them direct control over the sales channels, pricing and access to valuable customer data.

Subscription models are projected by a vast majority (83%) of the respondents to become mainstream by 2030 and a key competitive alternative to traditional outright ownership of a vehicle (through purchase/leasing). With new pay-per-use models such as ride-hailing and mobility services, the alternatives to outright purchase have so far been limited to rental or leasing. These typically incentivise long-term commitments and can often be more expensive in the long term. Subscription models are expected to gain popularity as the next evolutionary trend.

Chinese OEMs have a right-to-play in the international EV market and are entering Europe with an aggressive commercial strategy focused on fast go-to-market.

Chinese OEMs have entered the European market in recent years with a strong EV proposition, offering qualitative EVs against affordable price levels. Decent quality and a focus on fast go-to-market have enabled them to sell a sizeable number of EVs in a short period of time in target markets.

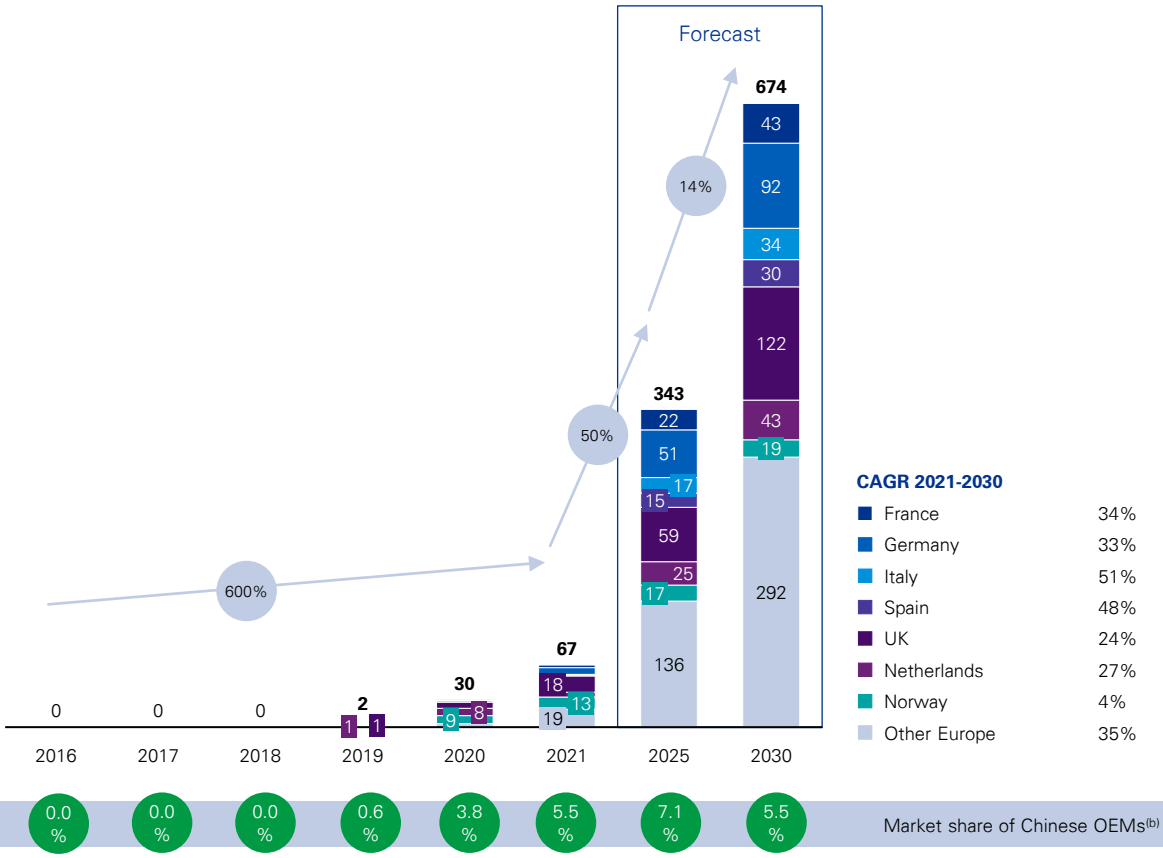
EVs sold in Europe by Chinese OEMs have been growing by ~67,000 since 2016 and currently comprise roughly ~5.5% of the total EV sales market in Europe. The strong growth and presence of Chinese OEMs appears to be sustainable as the quality of their vehicles is on par with European (conventional) OEMs. Historically, quality and brand image issues hampered the adoption of Chinese ICE cars in Europe, partly due to strict regulations around combustion engines (pollution) and safety in Europe. Chinese car manufacturers are better able to comply with (less complex) standards around EVs which has consequently opened the market to Chinese OEMs.

The main goal when entering the European market is to quickly gain volume market share for most Chinese car manufacturers. Chinese OEMs operating in Europe are typically steered by aggressive targets set by HQs in the Chinese mainland. To comply with these targets, these players cooperate with advisors and dealers to enable fast go-to-market execution and broad presence, sometimes at the expense of control. In addition, entering Europe also allows these OEMs to boost their brand image in China, since Europe has higher quality and safety standards.

Recent market entries by Chinese OEMs demonstrate their ability to quickly sell cars through an aggressive commercial strategy with short (operational) set-up times. Chinese OEMs like NIO and Xpeng have been able to sell their first EVs within a few years after their first announcement. Most parties typically cooperate with sales agents to leverage their broad network for car sales and gain brand awareness. Differences in sales model do, however, exist between OEMs, with greenfield private players moving more towards a D2C model while state-owned enterprises (SOEs) typically still focus on the conventional dealer model to sell their cars.

The competitive position of Chinese OEMs has improved due to the lack of EV legacy for European brands and the strategy implemented by the Chinese government 10-15 years ago that was focused on new energies development (e.g. through New Energy zones) and setting targets for zero-emission vehicles. This boosted the development of fuel cells and EVs by Chinese manufacturers.

Vehicle sales of Chinese OEMs in Europe
(#000)



Note: (a) Insights from respondents from Western Europe.
(b) Please note: the potential of more (new) models coming to Europe is currently not reflected in the forecast.
Source: ACEA; LMCA; IEA; KPMG's 22nd Annual Global Automotive Executive Survey 2021; BloombergNEF; KPMG analysis.

Fierce competition in combination with declining sales volumes in China are making OEMs increasingly assess the possibility of expanding to other regions.

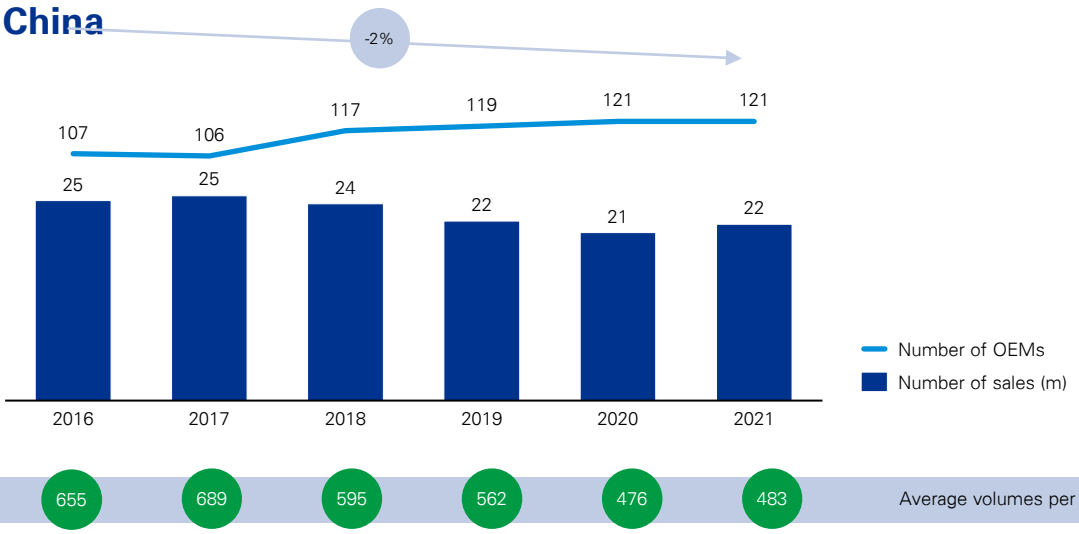
After a period of strong growth, the Chinese automotive market has been experiencing declining sales since 2017. At the same time, the market is saturated with a large number of (electric vehicle) OEMs that entered the market in recent years, resulting in roughly 132 brands currently actively in production. Declining sales and fierce competition are forcing OEMs to expand their activities to other regions.

Sales volumes have declined by ~2% since 2016 after a peak in 2017. The decline is partly explained by the impact of Covid-19 but volumes were starting to decline even pre-Covid-19. As the automotive market in China has matured, the used car market has emerged at the expense of new car sales. Also, the new car market appears saturated as those Chinese consumers who are able to buy new cars have purchased one in recent years, especially in the larger cities. The huge expansion of urban mass transit within China and a declining car-buying population (age 18-60) have further contributed to declining sales in China.

Despite declining sales volumes, the number of makes has increased by 3% over the past five years which has resulted in a highly competitive market with declining average sales per brand. The relaxation on foreign ownership restrictions will further open China's auto industry to foreign brands resulting in more competition for home brands.

Declining sales volumes in combination with fierce competition has forced Chinese OEMs to re-evaluate their current geographical presence. International expansion is considered vital for some OEMs to secure sales volumes.

Number of new car sales and OEMs active in China



Source: LMCA; interview feedback.

The Chinese government actively incentivises the expansion of Chinese OEMs (to other regions) through subsidies and standardisation complying with EU EV regulations.

Governmental ties & influence

State-owned enterprises (SOE) in China are often owned by municipalities and provinces and are deeply rooted in the local economy and provide a backbone to local employment. An example is Beijing Automotive Industry Holding (BAIC) which is owned by the municipality of Beijing since its establishment in 1958. Its board is directly appointed by the municipal government. In addition to SOEs, privately-owned enterprises (POEs) also have close ties to the government due to common economic interests, which can lead to conflicts of interest. The success of OEMs, and the income generated through their business taxes, often determines career opportunities for local officials. As a consequence, there has been over-production due to the governmental push and decreased demand in recent years.

The central government interferes frequently with local governments on their SOE policies. It has set overarching targets (e.g. the Made in China 2025 plan) for the global expansion of and exports from the Chinese manufacturing sector. In addition, it seems likely to decide on the consolidation of its car manufacturing sector due to sheer size and to allow for global competition. On a more local level, this consolidation has already started through local governments selecting 'champions'.

Governmental support

Strategic government plans often include governmental support through, e.g. economic development zones, free land, natural resources, below-market credit, preferential taxes, guidance for international expansion and R&D centres. Combined, these measures have supported the car manufacturing industry for tens of billions of dollars in the last two decades.

Examples include both the SOE SAIC and the POE NIO where local governments (Shenyang and Hefei) helped the enterprises to scale their production through subsidies for R&D and asset acquisitions. In the case of NIO, this even helped the company to avoid bankruptcy through six state-owned bank loans in 2020.

Chinese governmental support includes establishing an environment that enables Chinese OEMs to export abroad. The China Automobile Engineering Research Institute (CAERI) has set up two testing facilities in China to test for the NCAP safety rating, reducing testing costs and improving time-to-market.

Governmental policy making

Overarching Chinese policies have been designed to support local OEMs. Examples include:

- The 15-year New Energy Vehicle Development Plan for the period 2021-2035, aimed at both attracting foreign OEMs to China and supporting both local and foreign OEMs in exporting;
- The Dual Circulation Strategy, aimed at developing the Chinese car industry through technology, natural resources and infrastructure to reduce high-end imports and start exporting;
- The mid- to long-term development plan for the automotive industry (2017), aimed at utilising EVs and autonomous cars to upgrade the Chinese automotive industry and start exporting and compete globally;
- The NEV Plan 2021-2035 (2020), aimed at expanding and integrating China's EV manufacturers into the value chain and globally;
- The Technical Guideline (2020), aimed at supporting Chinese EV manufacturers in understanding the technical and regulatory requirements of developed markets (EU, US and Japan).

Chinese OEMs in the European market

11 Chinese OEMs are already active in the European market; differences exist between established players and privately-owned OEMs.

Established players consist of state-owned enterprises (SOEs) and privately-owned enterprises (POEs). State-owned enterprises include some of China's largest car OEMs including SAIC, FAW Group and Dongfeng. These companies are usually owned by local provinces or municipalities and have long-term and tight governmental regional relationships. Privately-owned players include well-established Chinese OEMs like Great Wall Motor and BYD.

Rising national competition and lower market growth rates in China are forcing these OEMs to sustain their sales volumes by expanding to other regions. EVs have provided a window of opportunity to enter Europe given the less complex regulatory requirements and favourable market conditions. This is also caused by the governmental push (and support) for its car industry to compete on a global level. Entering Europe also allows these OEMs to boost their brand image in China, since Europe has high quality and safety standards. Compared to greenfield private players, established enterprises OEMs typically have the opportunity to utilise their existing EU networks (e.g. BYD's electric buses, Geely's Volvo network).

Greenfield (private) players are considered new start-ups that focus on technology enhancement and solely on EVs. These include independent brands like NIO and Aiways but also Geely's Lynk & Co and Polestar. These firms often attract large investments and have to prove their scalability. They tap in to the current favourable EV culture in Europe including its infrastructure and consumer purchasing powers. Greenfield OEMs more often focus on new technology to distinguish themselves since they have no legacy. They focus on becoming successful through rapid expansion through partnerships or providing premium customer experiences.

Chinese OEMs active in Europe by type of player

	Chinese OEM	# of European countries	Sales model	Aftersales model	% of EVs in global production	Key proposition
Greenfield – POE	Aiways	9	Agency	Sales partner & third party	100%	— EV disruptors focusing on becoming successful through international expansion to European markets with favourable EV conditions. No legacy sales organisation and a very digitised distribution setup. — There is a split between selecting efficient partnerships focusing on rapid growth (Aiways/Skywell) vs. aiming for partially self-managed, unique and premium customer experiences (NIO/Xpeng).
	NIO	5	D2C	D2C and sales partner	100%	
	Skywell	4	Agency	Sales partner & third party	100%	
	Xpeng	4	D2C and Agency	Sales partner	100%	
Established – POE	BYD	1	Agency	Sales partner	81%	— Large and experienced OEMs who envision the European market as an opportunity to leverage EU quality standards to boost their brand image in China. In addition, they want to keep up with EVs in China and abroad. — Despite Geely's new brands, these POEs have experience with (legacy) dealership models and prefer similar setups in Europe.
	Geely	37	Agency, D2C and Dealer	Sales partner (dealer network)	29%	
	Great Wall Motor	1	To be announced	To be announced	15%	
Established – SOE	Dongfeng	12	Agency	Sales partners	17%	— Traditional OEMs usually owned by provinces and municipalities that both focus on maintaining production levels and boosting their brand image through European expansion. — Hierarchical decision-making from HQs and a desire to leverage experience with dealership models in China in Europe.
	FAW Group	1	Agency	Sales partners	23%	
	SAIC	15	Dealer & Agency	Sales partners	33%	

Source: Interview feedback; company websites; KPMG analysis.

Chinese OEMs active in Europe primarily focus on low-end to mid-range cars and will therefore be direct competitors for incumbent European and Korean brands.

Chinese car manufacturers active in Europe are currently concentrated in the B-, C- and D-segments of the EV market. Currently, 9 are active in either the B- or C-segments while 4 are active in the D-segment or above. Chinese OEMs typically target the European market with cars that are already sold in their current main markets in Asia and North America, which also includes a number of SUV models. In the future, the low-end and mid-range segments are expected to become target segments as most Chinese players lack the brand reputation and legacy to target the premium segment and targets set by headquarters in China are typically focused on volume generation. Independent car dealers working primarily with volume brands (e.g. Renault, Ford, Hyundai, Kia) will therefore be most impacted by the entrance of new Chinese players. Price levels of Chinese brands are on average lower than their European peers. In more luxurious segments (D-E), the price difference is even higher. These Chinese brands (e.g. Hongqi, a FAW label) will compete with the likes of Tesla or BMW.

Current presence of Chinese OEMs in Europe (€000)[(a)]

	A-segment	B-segment	C-segment	D-segment	E-segment	F-segment
Aiways			40	TBA		
BAIC						
BYO	32[(b)]		60[(b			
Changan						
Chery						
Dongfeng			38			
FAW					59[(b)]	
GAC Motor						
Geely Auto	15		39-59[(e)]	50	75	
Great Wall		30[(d)]				
JAC Motors		30				
NIO				49		
SAIC	9[(b)]	33	34-46[(f)]	60		
Skywell			50[(d)]			
Xpeng			34[(b)]	42[(b)]		
Avg. EV price in NL	28	37	47	66	142	

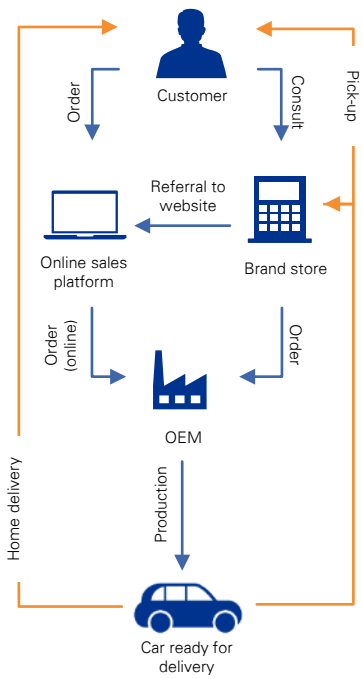
Key: Average EV prices in NL, 2021: ■ Comparable price levels to EU average ■ Low price levels vs. EU average (30% below EU average).

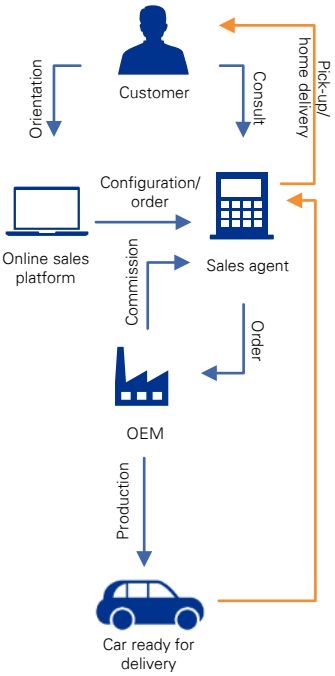
Note: (a) Prices consist of starting prices for standard models, without options (5%-10% addition) or discounts.
(b) Norwegian prices.
(c) Spanish prices.
(d) German prices.
(e) Range of 3 Geely models: Lynk & Co 01, Volvo C40 and Volvo XC40.
(f) Range of 4 SAIC models: MG Marvel R, MG EHS, MG5 and Maxus eDeliver 3.

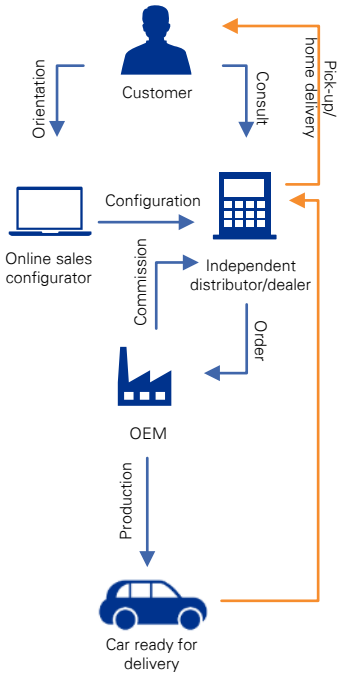
Source: Company data; LMCA; BOVAG-RAI.

The European market can be roughly divided into three different retail models, including the traditional dealership retail model that is predominantly used by existing OEMs.

Direct-to-consumer (D2C)	Agency retail model	Distributor / Dealership retail model
LONG-TERM POSITION		FAST GO-TO-MARKET







- In the **D2C** model, OEMs sell directly to customers via their own online website and physical flagship or popup stores.
- Some D2C models still include the (self-managed) dealership for online purchase processing or final delivery pickup.
- The direct online sales channel and subscription models are key elements of this strategy.
- This model enables OEMs to establish closer (digital) customer relationships through apps and physical stores. OEMs control and define pricing and manage upsell opportunities (e.g. charging) directly to their customers.

- In an **agency retail model**, the role of dealers or non-automotive retail partners is that of sales agents, acting on behalf of OEMs, in exchange for a sales commission.
- OEMs define the prices and manage operations centrally, including marketing and sales delivery fulfilment. Agents do not own the cars of the OEM, allowing for less capital-intensive business for the agents.
- This model enables OEMs to combine the strength of the independent dealer network with the benefits of direct customer access.

- The **dealership retail model** is the traditional strategy adopted by established OEMs, with the majority of legacy players relying on independent, physical dealerships. This includes both exclusive and multi-brand dealers.
- In this model, the dealers purchase vehicles from the OEMs and resell them to customers.
- The dealers retain control over the pricing, customer relationship, marketing and sales.
- This model makes it easy for OEMs to benefit from lower inventory and distribution costs and faster time to market.

Key: → Process flows → Delivery flows.

Source: KPMG 'The Future of Automotive Retail Strategy in Europe'; Europe Autonews; Electrive; other secondary sources; KPMG analysis.

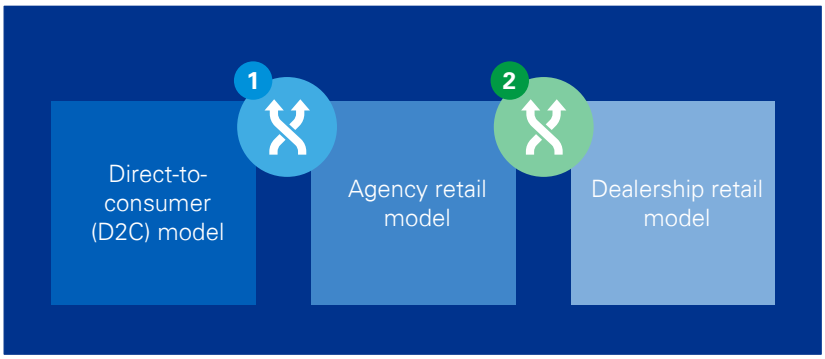
Chinese entrants in Europe are experimenting with hybrid sales and distribution models across European countries.

To tailor to their needs, OEMs have started mixing characteristics of distribution models to meet their desired level of control, financial risk and speed-to-market. This has resulted in different intermediate sub-models between adjacent models.

1. Managed D2C brand experience centres

OEMs aiming to launch D2C experience stores (e.g. Xpeng experience centres or Polestar spaces) could leverage the local knowledge, experience and manpower of sales agents by providing them with the opportunity to manage their experience stores:

- Agents set up, finance and run the operations of the experience stores locally, following tight OEM standards. Demonstrators are funded by the OEM.
- Experience stores solely provide customers with a local experience and consult on the OEM's models. The purchasing process takes place separately online through the OEM's website or application.



— Based on the total national sales, local store managers (agents) receive a fixed fee (not a commission) per sale based on the customer's proximity to a particular experience store.

Usually, agents simultaneously provide the aftersales service of the OEM's brand locally through their existing independent car dealers (e.g. Polestar is serviced through Volvo dealers).

Examples include the Dutch Polestar spaces, e.g. the space in Eindhoven is managed by van Roosmalen car dealers, and the Xpeng experience stores which are managed by Emil Frey.

2. Genuine vs non-genuine agency model

Genuine

The OEM (principal) authorises the agent to sell cars owned by the OEM. The agent receives a commission.

The sales agent is limited to the pre-determined price of the OEM and only mediates in the sales process. The billing and invoicing process takes place through the principal.

The principal is responsible for the financial investments, stock, debtors and the involved entrepreneurial risks.

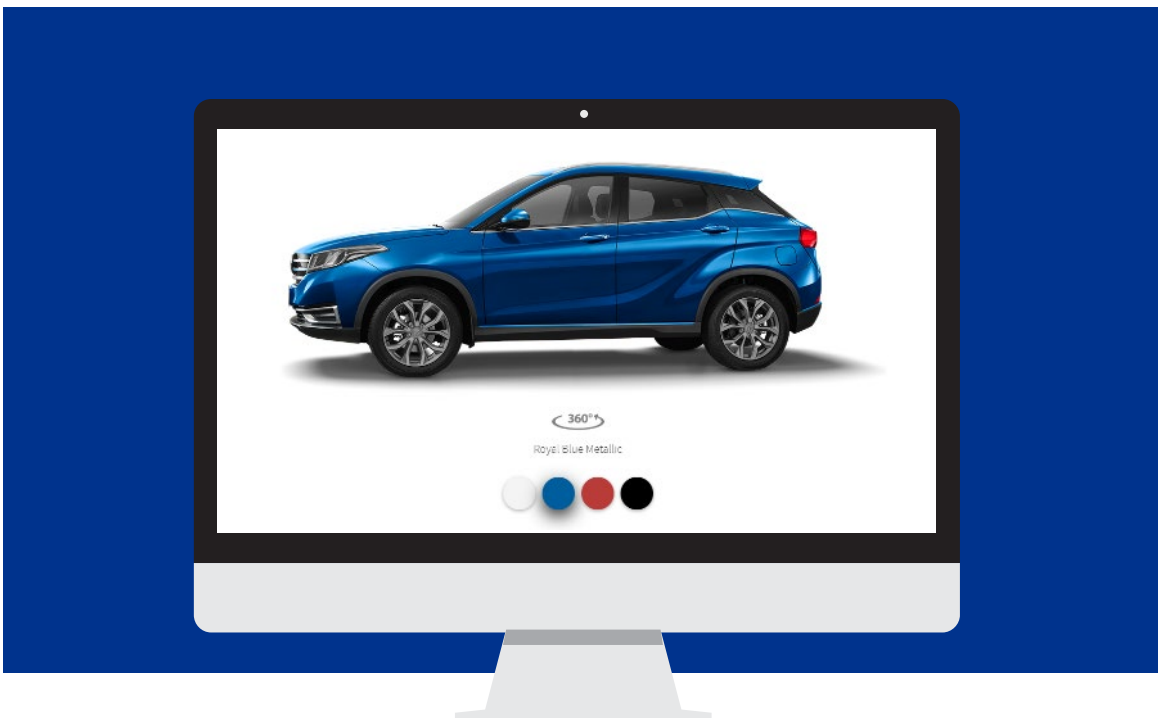
Non-genuine (dealership blend)

The OEM (principal) authorises the agent to sell cars owned by the OEM. The agent receives a commission. This (could) require regulatory approval due to the competition law (cartel ban).

The OEM pre-determines the sales price but the agent is allowed to discount, e.g. by converting their own commission to a discount. The billing and invoicing process takes place through the principal.

The principal and sales agent, to a certain extent, share responsibility for the financial investments, stock, debtors and the involved entrepreneurial risks, e.g. through lowering the agent's commission on late cancellations or defaulted debtors.

Overall, the non-genuine model allows OEMs to transfer a part of their risk to sales agents and enables sales agents to fluctuate their pricing in order to stimulate sales, making it more similar to a dealership model.



Innovation around new business models is driving opportunities for Chinese OEMs to strengthen their (D2C) customer proposition.

OEMs are looking for opportunities to further enhance their relationship with customers through a broad service offering. In particular, private greenfield players with a focus on the D2C sales model usually]offer adjacent services to their proposition to improve and control the customer experience. In addition, additional services can compensate for lower revenue potential from aftersales activities as a result of EV penetration as EVs generally require less maintenance. Gaps in the adjacent services portfolio of Chinese OEMs can provide opportunity to third parties for potential partnerships, especially around basic services that are a minimum requirement for selling EVs, e.g. charging stations or charge cards.

	Vehicle-based				Aftersales			Other services	
	OTA	Battery production	Smart mobility	Autonomous driving	Charging stations (ACC)	Battery swapping	Charge card	Hardware assets (PV, battery, etc.)	Smart charging
Greenfield – POE									
Aiways	●	●	●	●					●
NIO	●	●	●	●	●	●			●
Skywell	●		●						
Xpeng	●			●	●	●			●
Established – POE									
BYD	●	●	●	●					●
Geely	●	●	●	●	●		●		●
Great Wall	●	●	●	●					
Chery	●		●	●					
Established – SOE									
Dongfeng	●	●	●	●					
FAW Group	●		●	●					
SAIC	●	●	●		●		●		
BAIC	●	●		●					●
Changan	●	●	●						
GAC Motor	●	●	●	●					
JAC Motors	●	●		●					

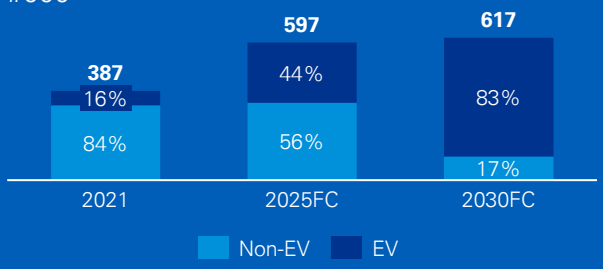
Key: ● Active ● Active through partnership/JV
Source: Company websites; interview feedback.

The Netherlands is an attractive market for Chinese OEMs to roll out a D2C EV strategy due to strong digital infrastructure and tech-savvy customers with an interest in ancillary services

The attractiveness of a D2C model depends on market characteristics related to EV infrastructure and consumer behaviour. Strong EV infrastructure and digital capabilities make the Netherlands an attractive market for Chinese OEMs to play in. In addition, consumers in the Netherlands increasingly demand mobility flexibility and buy their products and services online which provides opportunity for over-the-air (OTA) D2C business models.

Attractive EV infrastructure

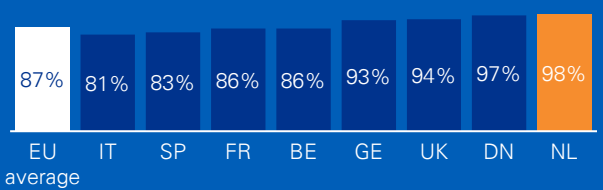
New car sales in the Netherlands, #000



- ✓ High penetration of EVs and dense charging infrastructure makes the Netherlands an attractive market for Chinese EV OEMs
- ✓ Favourable regulation and subsidy schemes further drive EV penetration in the Netherlands

Strong digital infrastructure

Percentage of households with internet connection, 2021,%

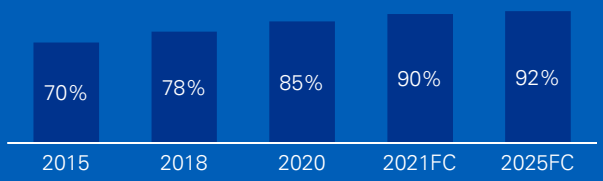


- ✓ Increasing connectivity and faster and better internet connections pave the way for further rollout of over-the-air models for automakers
- ✓ ~98% of households are connected to the internet which is the highest in Europe

Source: Eurostat; interview programme; CBS; Arthur D Little; KPMG analysis.

Changing consumer behaviour

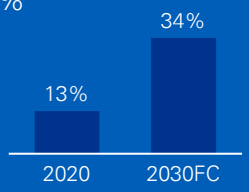
Percentage of Dutch population buying online, %



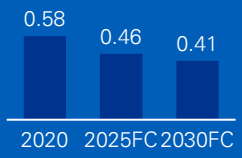
- ✓ Consumers are spending more of the customer journey online, which offers car manufacturers opportunities for (full) digital sales
- ✓ Flexibility of mobility is increasing in NL, which makes the rollout of subscription models and short-term (private) leases possible

Demand for ancillary services

PV penetration in Dutch households, %



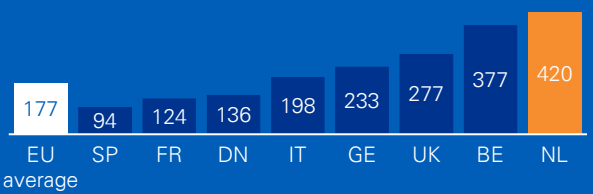
Dutch home charging connections per EV[(a)]



- ✓ High demand for ancillary (EV) services supports the D2C model in enabling the sale of these services (e.g. PV, ACC, battery)
- ✓ 60% of EV owners have their own charging station in NL
- ✓ Penetration of solar panels is the highest in Europe

Demographics

Capita per km2, #

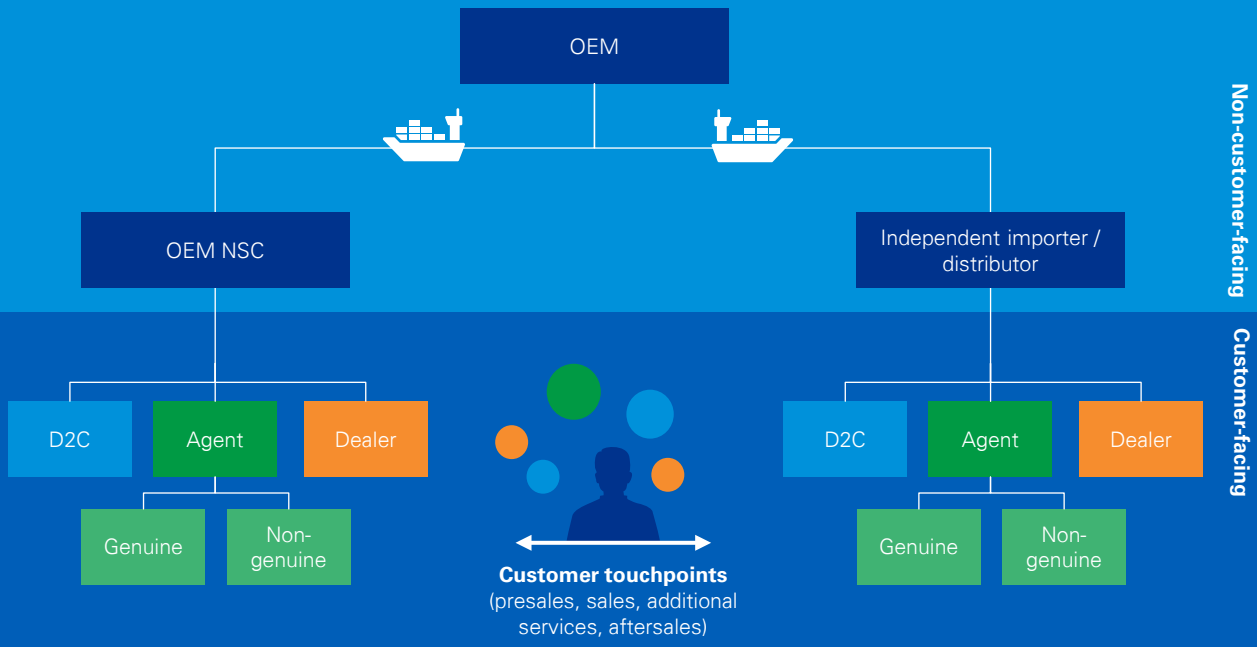


- ✓ The dense population in the Netherlands (especially in cities) increases attractiveness of investments in D2C experience stores
- × Population and – as such – market volumes are relatively small which reduces the attractiveness of investing in D2C infrastructure

Note: (a) Home charging penetration will go down when EV penetration increases to households without parking spaces.
Source: Eurostat; interview programme; CBS; Arthur D Little; KPMG analysis.

Having local import, sales and marketing operations determines the degree of freedom for the OEM in choosing the preferred sales channel and its setup.

Importers are responsible for the distribution of vehicles and recording the related positions on their balance sheet. Following the importer agreements and specified terms and conditions, the go-to-market channels could be established and detailed. In general, OEMs with their own importing company have a stronger negotiation position with agents and/or dealers.



Source: KPMG analysis.

Go-to-market model implications on OEM

	Potential impact for OEM						
	Margin	Investment	Time-to-market	Importer	Customer centricity (OEM)	Control (OEM)	Description
D2C	●●●	●●●	●○○	OEM			— Direct-to-customer sales allows OEMs to reduce costs in the value chain by cutting out the middle man (agent/dealer) and thereby improve their margins. All aspects in the sale of vehicles is managed by the OEM. — In order to control the OEM-to-customer relationship, OEMs need to control the entire value chain or set up detailed agreements with independent importers to create an Independent importer-to-customer relationship on the behalf of the OEM. — OEMs seeking a D2C customer interaction yet missing out on local experience and organisations could partner with agents to manage their stores (e.g. the Polestar space is operated by Volvo dealer Van Roosmalen, the Xpeng brand store is operated by multi-brand dealer Emil Frey).
				Independent			
Agent	●●○	●●●	●●○	OEM			— Agents provide an extension to the OEM's digital customer interaction through their physical stores. OEMs remain the owner of vehicles and take responsibility for the pricing and transaction. Agents receive a commission for sales activities (e.g. consulting the customer or arranging a test drive). — In the event of having an independent importer, the agent's vehicles are owned by the independent importer. This reduces the ability of OEMs to control and influence final pricing levels.
				Independent			
Distributor / Dealer	●○○	●○○	●●●	OEM			— Dealers purchase vehicles from the OEM and independently sell these to customers. Their set pricing determines their margin. In addition, they manage the customer relationship and interact, consult and sell the customer a vehicle. — Independent importers in general provide more flexibility to car dealers in terms of running their operations and pricing vehicles.
				Independent			

Key: ● Low margin potential ●●● High margin potential ● Low investment required ●●● High investment required ● Low speed-to-market ●●● High speed-to-market.
● High ○ Low.
Source: KPMG analysis.

Chinese OEMs are generally moving away from the traditional dealership retail models in their home country.

Direct-to-consumer (D2C)	Agency retail model	Distributor/Dealership retail model
LONG-TERM POSITION		FAST GO-TO-MARKET
Pros — Ensures consistent experience — Long-term customer relationship — Once operational, cost-efficient for OEMs — OEM keeps control over price and sales channels	**Pros** — Leverage the network of (existing) car dealers or retail partners (e.g. Euronics) and quickly gain geographical exposure — Customer relationship-building — OEM keeps control over price — Easier to roll out than D2C	**Pros** — Leveraging sales partners and local market knowledge — Requires less investments in retail/working capital allocation — Certain level of volume certainty — Shorter time-to-market
Cons — Requires setup of customer service organisation and brand stores/service station, i.e. long implementation time, limited exposure and high investment — Comes with a relatively higher risk of failure for new entrants — Less volume certainty — Requires legacy and strong brand name	**Cons** — Less cost-effective then D2C for OEM — Less volume certainty — Requires investments in retail/working capital allocation (less than D2C), depends on type of agency contracts (genuine or non-genuine)	**Cons** — Least cost-effective for OEM — Customer relationship is with dealership — Omnichannel retail model difficult for OEM as it cannibalises the dealer revenue pool
Chinese OEMs in Europe NIO LYNK&CO XPENG Sweden	**Chinese OEMs in Europe** BYD, polestar, AIWAYS, HONGQI, SERES, LEVC, MG, JAC MOTORS, XPENG, SKYWELL	**Chinese OEMs in Europe** MG

Source: KPMG 'The Future of Automotive Retail Strategy in Europe'; Europe Autonews; Electrive; other secondary sources; KPMG analysis.

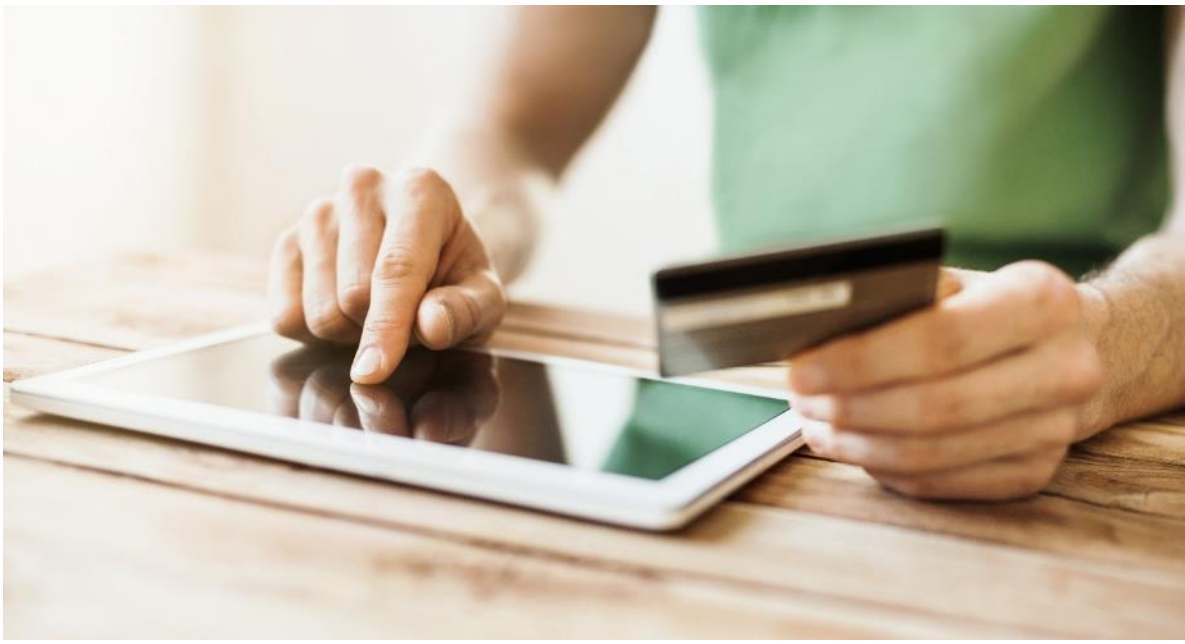
Both public and private OEMs entering Europe are shifting towards the agency and direct-to-consumer models. Only acquired European brands rely on their existing dealership retail model.

Both the direct-to-consumer (D2C) and agency retail models are gaining significant traction (in line with the findings of the KPMG Global Automotive Executive Survey 2021) as they enable OEMs to reduce their cost of sales and provide the ability to build on (digital) customer relationships. Chinese OEMs, both public and private, are following this trend when entering Europe. The agency model in particular is frequently used and for some even in contradiction with the D2C model used in China, e.g. Aiways and Xpeng (except for its self-managed Swedish experience store).

The agency model allows for a fast and large geographic exposure by partnering with the importer's dealer networks or independent car dealers. In addition, it allows new entrants to build on customer relationships and gain relevant experience with the European market. Another benefit of working with agents is to provide a certain level of trust through the brick-and-mortar presence of well-established independent car dealers (agents). This supports Chinese OEMs in building a trustworthy image through agents who understand customer purchasing behaviour in their local market. This also relates to European customers who still remember the unsuccessful entries of Chinese OEMs in the early 2000s that were due to safety failures (e.g. BMW Brilliance or Landwind).

D2C models are currently only being launched by greenfield OEMs who aim to tap into the early adaptor market. They generally seek control of the customer journey and cost-efficient distribution.

Dealership retail models are only used by Geely (Volvo). This is a (legacy) network that simultaneously supports the aftersales of other brands. SAIC (MG) decided to use the dealership model driven by the desire to avoid the risks deriving from a D2C model.



In the long term, a (combined) agency and D2C model appears to be the preferred model to enable a customer-centric delivery model with sufficient geographical coverage.

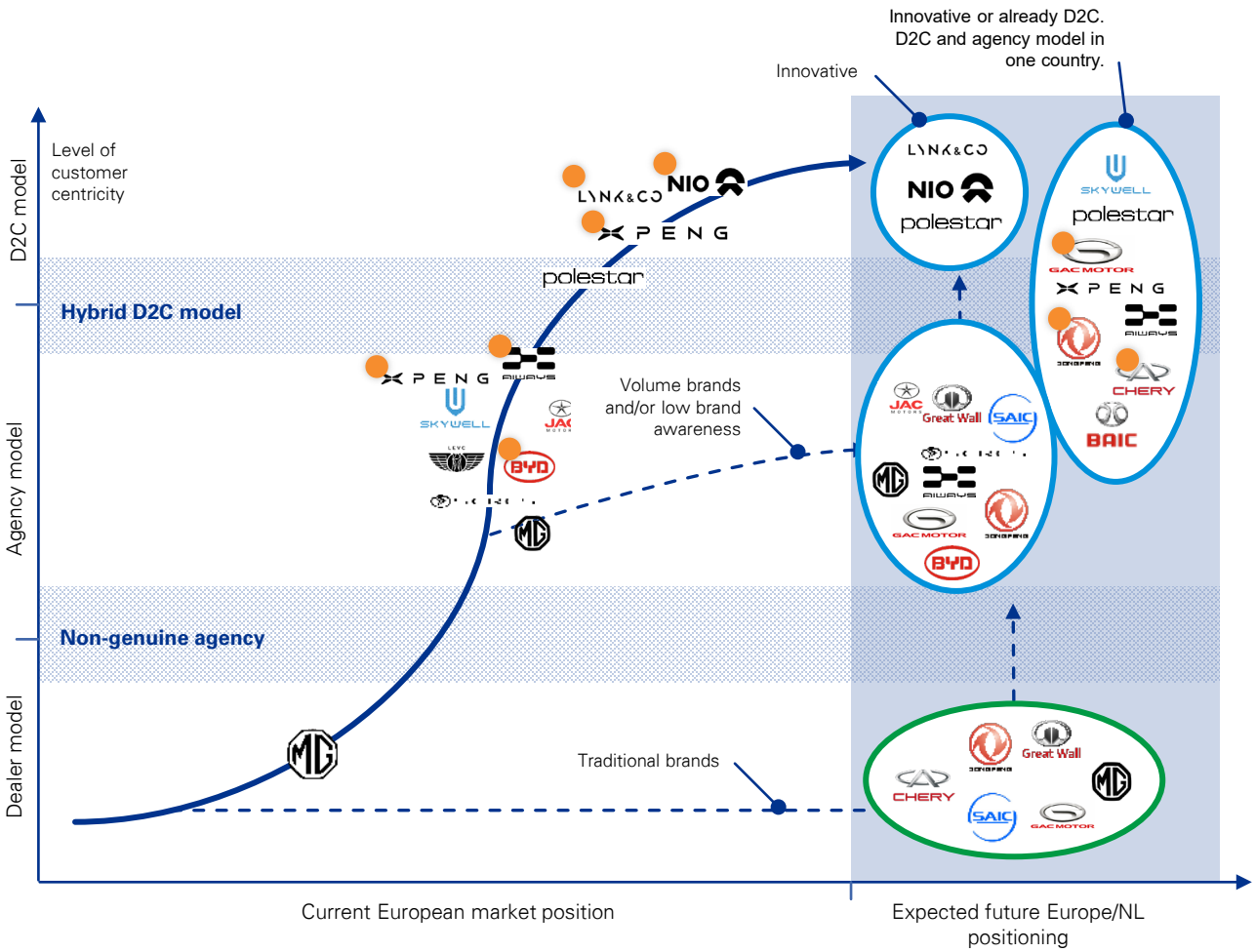
Chinese OEMs typically enter European market through partnership with agencies to quickly gain geographical and volume share. OEMs will likely continue to look for a more customer-centric delivery model to optimise the customer experience and control the pricing and sale of adjacent services. The preferred distribution model can differ per country and type of OEM and also depends on market and customer characteristics. The agency partnership model is expected to remain attractive to most Chinese OEMs in the foreseeable future to gain local knowledge and increase volumes and brand reputation.

Greenfield players without legacy but with their own (digital) ecosystem to create an online local presence will remain frontrunners in the rollout of the D2C model. D2C players are typically relatively higher-priced to compensate for higher opex spending on digital infrastructure and therefore also have lower volumes that can be covered with (only) D2C stores. Other players are also expected to move towards a more customer-focused business model, often through a combination of agency and own customer experience stores. The speed of transition depends on the ownership structure and brand position of the OEM, i.e. volume brands with low brand awareness can use partnerships to generate volumes and create brand awareness.

Established SOEs currently not yet active in Europe – with dealer legacy and experience (e.g. SAIC, Dongfeng) – are expected to remain focused on the dealer model in specific countries. However, many OEMs are already exploring the D2C model for specific car models in China which is subsequently expected to be implemented in European countries.

The preferred distribution model can differ per country and also depends on market and customer characteristics. Markets with dense populations, strong digital and EV infrastructure and customers that require mobility flexibility and are open to online purchases are attractive for the D2C model, e.g. the Netherlands.

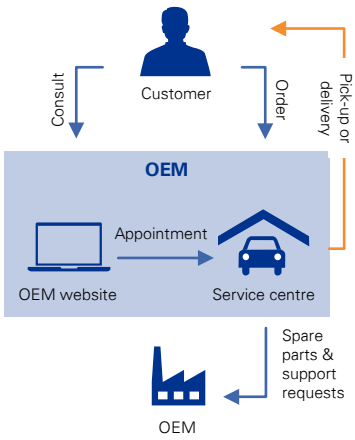
Indicative (future) go-to-market model of Chinese OEMs



Key: ○ Most applicable to Dutch market ○ Less applicable to Dutch market (long-term) ● D2C experience in China.
Source: Interview programme; Secondary sources; KPMG analysis.

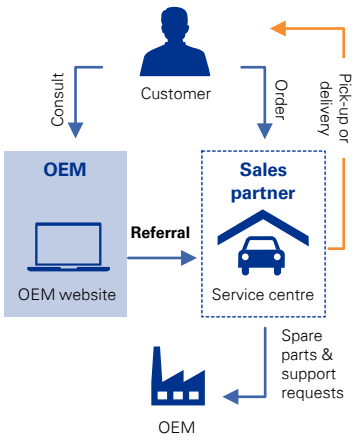
There are three aftersales models seen in the European market, including the traditional sales partner model that is predominantly used by Chinese OEMs.

D2C service centres



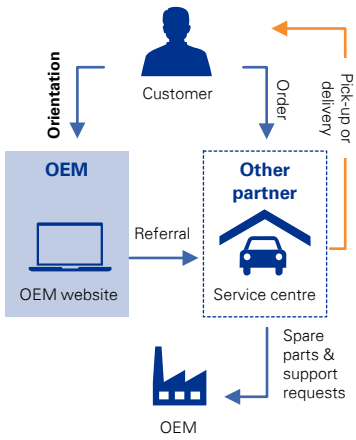
- In the **D2C** aftersales model, OEMs service customers directly. Car owners can book service appointments directly with the OEM at their service locations via their website or service centres.
- This D2C model allows for control of the fully-branded customer experience and relationship, e.g. NIO enables customers to book service appointments through its app or at a NIO clubhouse. In addition, to add value to its proposition it also uses mobile service teams to assist its customers on location.
- The initial investment and implementation time is higher compared to the other two models but in the long run this model could be more cost-efficient.

Sales partners



- In the **sales partner** model, the OEM partners with its sales agents and dealers.
- Customers will be referred to authorised external service centres through the OEM's website or could connect with these service specialists directly.
- The (after)sales partners liaise with the OEM on the rate structure of warranties and service appointments.
- Optionally, 'other partners' could be added to service a larger geographical area.
- In the example of Polestar NL, the aftersales service is arranged through the Polestar dealers (7 locations) and an additional network of ~80 Volvo dealers (other partners) in NL.
- Spare parts are distributed by the OEM or local distribution partners (e.g. Hostettler Autotechnik for JAC Switzerland) to the agents.

Third-party partners



- In the **third-party partner** model, the OEM partners with local independent car dealers or 'fast-fitters' to arrange (solely) the aftersales for its customers.
- Through the website of an OEM, customers are referred to the fast-fitter's aftersales services or could connect with the fast-fitter directly.
- The partnered aftersales fast-fitters liaise with the OEM on the rate structure of warranties and service appointments.
- An example is Aiways France which works with a fast-fitter for its aftersales service while a distributor takes care of the sales.
- Spare parts are distributed by the OEM (e.g. Aiways' spare parts and distribution centre in NL) or a local distribution partner.

Key: → Process flows → Delivery flows.

Source: KPMG 'The Future of Automotive Retail Strategy in Europe'; KPMG analysis.

Chinese OEMs typically partner with their distributors to provide aftersales services to their local customer base.

D2C service centres	Sales partners	Third-party partners
Pros — Controlled and branded customer experience — Allows for differentiation from competitors through unique and customer-focused service centres — In the long run, this model allows OEMs to save on warranty and service costs (opex) compared to working with sales partners or other partners	**Pros** — Leverages existing sales partners and strengthens the relationship — Efficient and timely rollout of authorised service centres — Ability to extend service centre base of sales partners through partnership with additional service centres of (independent) car dealerships (other partners)	**Pros** — Not limited to capabilities and geographical coverage of sales partners — Allows for price-efficient partnerships with e.g. fast-fitter chains; the rollout, training and support could be arranged efficiently through the centralised service organisations of the fast-fitters
Cons — Requires setup of service locations; this involves a large initial investment (capex) and setup of local organisation — In larger geographical areas it is hard to cover all areas — High(er) risk of failure due to greenfield setup of service centres in local markets	**Cons** — Less cost-effective than D2C for OEM — Requires training/authorisation of local sales partner locations and communication and support with individual locations — Less influence on the customer relationship and potential touchpoints with other car brands at local (multi-brand) dealerships	**Cons** — Risk of less loyal or controlled type of relationship due to the absence of the sales element — Need to communicate with an additional partner in addition to the sales parties — The brand image and customer experience of an ICD/fast-fitter might conflict with the branding of the OEM
Chinese OEMs in Europe NIO	**Chinese OEMs in Europe** AIWAYS, XPENG, SKYWELL, LEVC, MG, BYD, SERES, JAC MOTORS	**Chinese OEMs in Europe** AIWAYS, XPENG, SKYWELL, NIO polestar, LYNK&CO, LEVC Partnered with Geely's Volvo dealers

The majority of Chinese OEMs arrange aftersales services through sales partners, similar to their aftersales models in China. This allows for efficient operations and stronger relationships.

When setting up their aftersales services, there are three options available to Chinese OEMs: self-managed D2C service centres, partnering with their sales partners or partnering with other parties (fast-fitters or ICDs). Despite various D2C trends in the sales distribution of cars, the majority of Chinese OEMs work with their sales partners for aftersales services.

Aftersales through sales partners has the advantage of being efficient and fast to implement. In addition, through these partner networks a large geographical area can be serviced. Additional partnerships with other independent car dealers (non-sales partners) in rural areas are used to provide full geographical coverage. This enables sales activities, e.g. experience stores, in high-density areas yet still offers close-to-home aftersales services. Examples of this model include NIO, which, complementary to its own dealer and service centre in Oslo, partners with independent car dealers in Norway to cover other geographical areas. In the example of Geely, both Lynk & Co and Polestar make use of the extended dealer network of Volvo (an other partner) for their aftersales services.

Only private greenfield parties have decided to partner with other partners for their aftersales service, e.g. Aiways France works with two fast-fitters (Feu Vert and Go Mecano) for solely its aftersales service, while Aiways NL's sales partner Profile simultaneously acts as its aftersales specialist.

After the warranty period, both sales and other partners potentially have a lock-in position with their customers due to their skills and knowledge of specific EV brands.

International OEMs entering the European market typically have three major options for setting up the required supply chain.

New and existing Chinese OEMs typically enter the European market by importing fully finished vehicles from the home country of production to avoid high upfront investment costs and enable fast go-to-market. In the long term, Chinese car manufacturers are expected to establish local assembly and/or production plants to avoid import taxes.

Historically, the production of vehicles was most often completely outsourced to the most cost-efficient locations, which often led to long supply chains with a focus on imports. The current trend (which is expected to continue in the future) is nearshoring with the establishment of local assembly or manufacturing plants. This offers OEMs the advantage of local tax rates (lower import taxes) with more control over (local) production and more control over shorter supply chains, thus reducing the risk of supply chain disruptions.

The market entry strategy often depends on the OEM's market share position in a certain area. OEMs with low market share locally typically focus on more expensive imports from centralised low-cost production facilities. On the other hand, those with significant local market share focus on localised production. For instance, Tesla initially adopted the strategy of importing cars to Europe from its factories in China and the US. Now it is focused on scaling up local production at its Gigafactory in Berlin, Germany.

Chinese automotive manufacturers typically enter Europe by importing cars from production facilities in their home country. The growing demand for EVs in Europe is likely to result in several Asian OEMs evaluating market entry as well as local assembly or production operations to benefit from lower import taxes, increased production volumes, fewer supply chain issues and access to advanced European manufacturing facilities. For instance, several Chinese players have already entered the European market recently through the import or local assembly route including MG and BYD.

Europe offers international manufacturers access to high technical standards, state-of-the-art innovative facilities and highly-skilled employees. The European automotive industry is highly competitive and is witnessing increased regulatory scrutiny particularly with regards to emissions and fuel economy.

The share of imports of passenger cars by volume in absolute terms from China to Europe has grown by 132% over the same period. This shows the general acceptance of and growing demand for more affordable Asian vehicles.

Import	Local assembly	Local production
— Car manufacturers import fully finished vehicles from the country of production, which do not require additional assembly, for sale in the local markets; also known as completely built units (CBU)	— Supply of completely knocked down (CKD) kits including key vehicle parts, components and engines that are assembled in company-owned or third-party plants locally	— Establishment of local manufacturing plants and operations to produce vehicles, either directly or in collaboration with strategic partners
Pros	**Pros**	**Pros**
— Easier as no local production is required — Useful for pilot testing local demand and consumer dynamics — Useful for assessing market penetration capabilities	— CKD units are usually subject to lower import taxes compared to CBU units — Requires limited market or technological capabilities — Useful for piloting before establishing local production plants	— Nearshoring to avoid challenges from global supply chain issues — Easier to penetrate international markets and increase local brand awareness with 'made/assembled in Europe' stamp
Cons	**Cons**	**Cons**
— Often subject to higher import taxes compared to taxes for assembly parts and components	— Requires partnership/local setup of production facility — More capital- and labour-intensive then 'import'	— Most capital- and labour-intensive. — Compliance with local regulations and tax structures
Example OEMs	**Example OEMs**	**Example OEMs**
NIO, MG, AIWAYS, XPENG, SKYWELL, LEVC, polestar, LYNK&CO, JAC MOTORS	(b) SAIC	(a) (b)

Note: (a) Non-EV.
(b) Electric buses.
Source: ACEA; Eurostat; NY Times; other secondary sources; KPMG analysis.

There is significant overcapacity in the production of passenger cars in Europe, which provides potential for third-party capacity when facilities are adjusted to EV-compatible production facilities.

The automotive industry in Europe has been significantly impacted in recent years by disruptive trends such as the sustainability transition, new mobility solutions, developing technologies, new entrants, changing customer behaviours and supply chain issues. This has led to a (temporary) significant underutilisation of existing capacities.

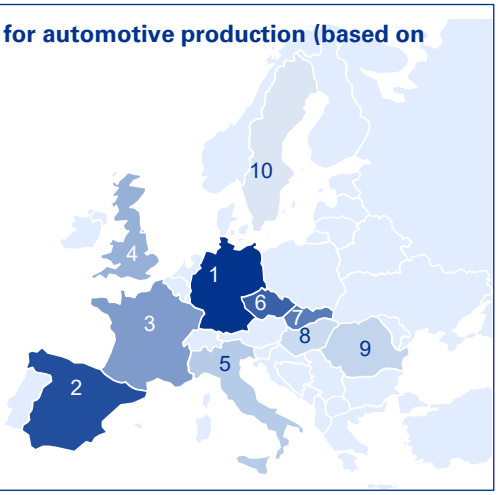
The industry is faced with excess surplus capacity as production volumes have decreased in recent years. For instance, Germany, the largest car producer in Europe and home to several major global OEMs, had an overcapacity of nearly 50% in 2020. However, even as supply chain issues are expected to slowly disappear towards 2025 there is still some excess capacity of approximately 17% expected to remain. This provides opportunities for Chinese entrants to produce locally when this excess capacity is transformed to EV-compatible production facilities. Some examples do already exist, e.g. VDL transforming from Mini production to Rivian.

In particular, 2020 was a difficult year as the entire industry value chain was impacted by Covid-19, with shutdowns due to lockdown measures and a decline in consumer demand as well as sourcing issues including a significant shortage of semiconductor chips resulting in production and sales volume declines.

Production volumes are expected to rebound in the long term driven by overall economic recovery, as well as the 'green recovery' with industry transformation including a shift towards newer EV and autonomous models, third-party capacity sharing and the development of strategic production and raw material clusters.

Even though production volumes are expected to recover over time, it is expected that in the short term, overcapacity will persist within the European market, providing significant room for Chinese OEMs to enter.

Top 10 European countries for automotive production (based on 2020 capacity)



Production and capacity volumes in top 10 European countries

	Country	Production and capacity volumes in top 10 European countries (incl. UK), 2020-2025 (m)[(a)]	CAGR '18-'20 (%)
1	Germany	3.7 49% 7.1 6.0 15% 7.1	(16.9%)
2	Spain	2.2 33% 3.4 3.0 4% 3.2	(10.2%)
3	France	1.3 55% 2.9 2.1 25% 2.7	(23.6%)
4	United Kingdom	1.0 56% 2.2 1.4 30% 2.0	(21.6%)
5	Italy	0.8 54% 1.6 1.2 24% 1.6	(14.7%)
6	Czech Republic	1.2 29% 1.6 1.5 12% 1.7	(10.3%)
7	Slovakia	0.9 28% 1.3 1.2 10% 1.3	(5.2%)
8	Hungary	0.4 38% 0.7 0.6 27% 0.8	(3.4%)
9	Romania	0.4 20% 0.6 0.6 17% 0.7	(4.1%)
10	Sweden	0.3 18% 0.3 0.2 32% 0.3	(10.5)

Key: 2020 production 2020 excess capacity 2025 production 2025 excess capacity.

Note: (a) Excess capacity is determined as the variance between total capacity and production volumes for the top 10 European countries.

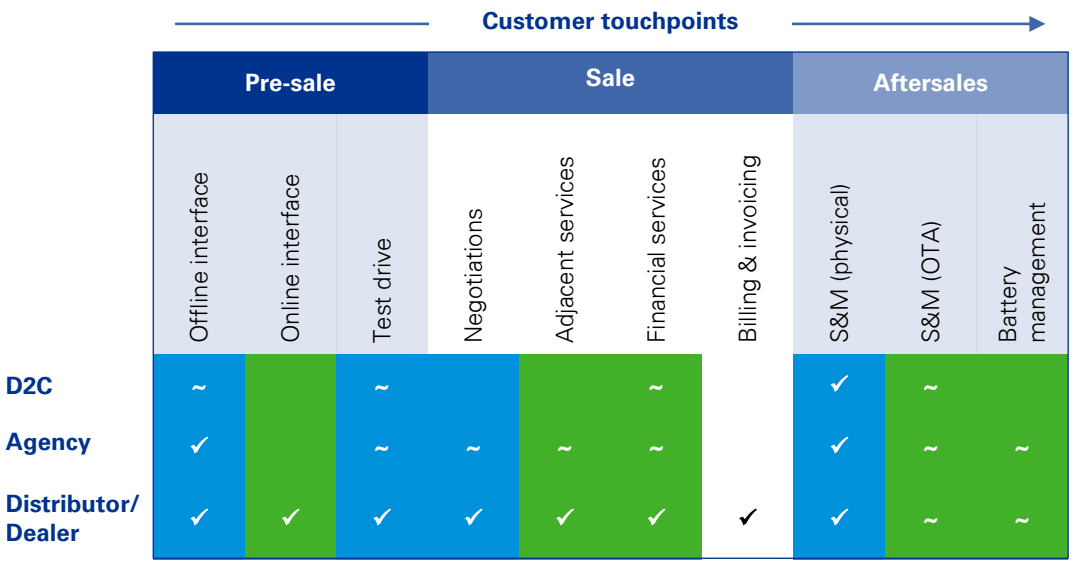
Source: LMCA; HIS; Argus Media; MarkLines; KPMG analysis.

Implications for the Dutch market

According to our analysis, 10-15 Chinese OEMs will be present in the European market in the coming years. In doing so, they will need to set up retail networks. We estimate that nearly all will seek partners in doing so.

By 2030, 8% of the Dutch EV sales (83% of total car sales) are expected to be by Chinese OEMs, coming from 8% of EV sales (16% of total car sales) currently, potentially providing new partnerships for Dutch retailers. As visualised in the S-curve on page 39, the majority of Chinese OEMs currently adopt the agency business model but many are expected to move towards the D2C model in the future. The level of attractiveness for (potential) Dutch partners differs greatly per model, decreasing from dealership towards D2C. In general, Chinese OEMs will likely need support with a selection of customer touchpoints they cannot/will not service due to low installed bases in the short to medium term. These include offline interfaces, test drives, financial services and service & maintenance (S&M) (physical). Despite dealerships having the most responsibilities as local partners, the best opportunity to meet the OEMs demands currently is the agency model.

Partnership potential for distribution models across customer touchpoints



Key: ✓ In the control of the partner ~ Limited partnership control or dependent on preferred model by OEM.
Colour determines how customer touchpoint level of importance develops:
■ Increasing importance ■ Declining importance.
Source: KPMG analysis.

Retail business models comparison

	D2C	Agency	Distributor/Dealer
Focus of OEM	— Innovative, digital customer experiences and relationships by controlling online and offline touchpoints	— Strong customer experiences and relationships by controlling online and offline touchpoints	— Controlled offering of cars through committed and incentivised distributors/dealers, to avoid commercial risk and enable speed to market
Level of control by OEM			
Positioning	— Innovative	— Innovative and traditional	— Traditional
Digital	— High	— Medium	— Low
Production method[a]	— Build to order	— Build to order	— Build to stock
Partnership fee model	— (Pre-)sale: Referral fee per vehicle sold to customer located nearby store and cost allowance — Aftersales: Fee per S&M activity based on agreed rate structure with OEM	— (Pre-)sale: Referral fee per vehicle sold — Aftersales: Fee per service & maintenance activity based on agreed rate structure with OEM	— (Pre-)sale: Margin on car sales (retailer determines) — Aftersales: Fee per service & maintenance activity based on agreed rate structure with OEM

Note: a) preferred production method for this specific retail concept

Key: High level of control by OEM Low level of control by OEM.

Source: Accenture; McKinsey; Deloitte; Roland Berger; KPMG analysis.

Understanding the challenges faced by Chinese OEMs will enable potential Dutch partners to cater to their needs and harness opportunities.

Dutch car companies could address the challenges OEMs face when choosing a specific business model and enhance solutions to strengthen their position in (potential) partnerships.

	Challenge of OEMs	Partnership opportunities
Direct-to-consumer (D2C)	— Setting up own sales channels in foreign countries requires Chinese OEMs to have expertise and resources in areas including – Knowledge of the local market and its customers – Customer service – Local distribution, incl. spare parts – Adequate and geographically proficient service and maintenance	— Limited (pre-)sale potential as the OEM has self-managed sales channels. Dutch importers and car dealers could potentially offer support with selective operational aspects of the D2C channel. – An example is the Xpeng experience centre in Leidschendam which is managed by Emil Frey yet allows for D2C exposure and experience for the Chinese OEM. Providing this level of control for OEMs could provide an opportunity for partnering in the operational aspects. — Address the potential lack of geographical coverage for (physical) maintenance and service. – An example includes NIO's partnership with two Norwegian ICD groups to offer aftersales services locally in Northern Norway in addition to the NIO service centres.
Agency retail model	— Establishing efficient (online) operation and communication with different agents across local markets while centralising and standardising customer experiences — Optimising incentive schemes to ensure HQ targets are met — Offering a full range of services through all agents in a consistent way, including price, service and maintenance	— Dutch car dealers could support Chinese OEMs willing to expand through the agency model by focusing on efficiency, adaptivity and aligning on sales targets. — Provide efficient operations to OEMs through multi-service/one-stop solutions with (after)sales and additional services like charging stations in order to unburden Chinese OEMs and strengthen their customer experience. — Reduce entrepreneurial risk through adopting the agency model at a low investment, which also allows for the diversification of sales mixes and channels. – An example is the new Green Mobility Group consisting of five Suzuki dealers which added the Seres brand to their portfolio through the agency model.
Distributor/dealer retail model	— Seeking certainty in meeting sales targets from their Chinese HQ — Not being able and/or willing to take the full risk and financial investment when entering European markets — Despite limited investment, still offering (potential) customers a range of services including aftersales and additional services like e.g. charging stations	— Keep independence and protect self-controlled margins. Potentially leverage own economies of scale while expanding (multi-)brand dealership with Chinese entrants. — Harness the experience of Chinese (SOE) OEMs with the dealership model and offer similar 'comfortable' distribution in Europe including compliance with local regulation and administration. — Diversify sales portfolio and offering for multi-brand dealers to existing customer base in order to further strengthen customer relationship and data. – An example is the multi-brand dealer Stern, Volvo NL's dealer. — Keep a degree of freedom in upselling and aftersales. — Providing financial services support through lease or rental agreements enables ownership over the vehicle and – as such – strengthens the dealer position.

Source: Accenture; McKinsey; Deloitte; Roland Berger; KPMG analysis.

Pre-requisites for partnerships with Chinese OEMs consist of both commercial and cultural elements. In particular, size, offering and speed-to-market are considered key.

Chinese OEMs coming to Europe seek partners with a commercial and cultural fit and which primarily align with their ambitions. Despite most having a single partner per market, currently Chinese OEMs will most likely collaborate with multiple partners in order to benchmark prices and quality and simultaneously reduce their dependency. Key pre-requisites for local dealers are outlined below.

Local dealers in the Netherlands will need to focus on the pre-requisites of Chinese OEMs in order to become attractive partners. Re-evaluating their current positioning and potentially partnering with other NL retailers could strengthen partnership positions. In the example of the Green Mobility Group, five Suzuki dealers united to launch a partnership with Dongfeng to distribute its Seres brand.

Chinese OEMs are likely to focus on a series of capabilities that touch both commercial and cultural elements (non-exhaustive):

Large geographical coverage

To enhance their European expansion and exposure, Chinese OEMs in general seek partners with multiple locations in a larger geographical area, including cross-border partners. This makes it more efficient for them in terms of both operations and communication with a single party. Partners do not necessarily have to fully cover a single country but being able to offer an extension for e.g. solely aftersales is a benefit.

Sufficient EV skills and experience

In terms of capabilities, potential partners need to understand electric vehicles and have experience in the local Dutch market with an existing customer base. An additional focus area is also considered, i.e. being experienced with local regulation and compliance.

One-stop shops

Ideally, Dutch partners can offer one-stop-shop solutions including sales, aftersales and additional adjacent services for EVs. This includes, but is not limited to, charging cards and charging stations. This allows Chinese OEMs to offer a full range of products to their customers and supports their brand image while unburdening their operations.

Cultural fit

Chinese OEMs seek partners who, like them, focus on a quick go-to-market, focus on the targets rather than the process and have an entrepreneurial mindset. The need to start exporting, high targets set by the HQ and the favourable EV conditions in Europe, as described in chapter 1, combined with their culture, drive their need for quick exposure and handling. Speaking the Chinese language would be considered an advantage but is not a prerequisite; understanding the Chinese business structure and its hierarchy is more important.

Innovation

Chinese OEMs have already experienced an extension of sales products in their home country from traditional upselling items like insurance to subscription models and battery life cycle products. Being able to support and adapt to new innovations in the market is important to Chinese OEMs when forming an partnership.

This also applies to innovation in customer experiences, e.g. through online communities or unique physical store experiences. Online and offline integration, digital tooling to communicate with the customer and service-driven KPIs are considered key in providing a seamless customer experience.

"Chinese OEMs are very result-oriented and want their partners to share this mindset. They value results over process and want to be quick." – Industry expert

Interview feedback

Emergence of alternative store concepts

Pop-up store	VR/AR store	Brand experience centre	City store	Life-style store	Online showroom
					
— No permanent setup — Focused line-up — Often located at larger events, city centres — Focus on large frequencies — Moderate investment — Brand image (hip/smart/ young)	— Store equipped with VR stations to show products — Very limited physical product line-up — Lower frequencies but high immersion — High investment — Brand image (technology/ modern)	— Permanent setup — Focus on brand values and heritage, less presentation of product line-up — Very high investment — Brand image (heritage/trust)	— Small store at prime city location — Limited display of line-up — The objective is being-present and create brand awareness — Target group is younger urban population	— Similar concept to pop-up store but with long-term/permanent location — Narrow line-up — Focus more on socialising than sales	— Enhanced web-presence — Medium investment — Aim is to resemble a real store visit, including sales consultants, lead generation and sales conversion
Example & brands					
— Several examples across most brands: recent FCA in Ludwigshafen/ Rhine; VW in 2017 with a series to present new UP	— Audi as frontrunner with first store in Berlin	— VW (Autostadt) — BMW — Mercedes — Porsche	— Tesla (focus on online and selected city stores only) — Opel Cayu store (also lifestyle store) — Polestar	— Opel Cayu store in Stuttgart — 'Mercedes me' (Hamburg)	— Part of Hyundai's H-Way strategy

The entrance of Chinese OEMs to the European market requires a re-evaluation of retailers' current position

The entrance of Chinese OEMs has significant implications for the current position of retailers in the market and gives rise to multiple independent strategic recommendations to enhance their position:

Extend geographical coverage through (in)organic growth

- Retailers with large geographical (national) coverage are best positioned to collaborate with Chinese OEMs. Extension of the current network is therefore key, either through setting up new locations organically or through acquisition of dealer locations.
- The focus should be on extending national coverage rather than densifying the current local network.

Target aftersales and used car market

- Partnership potential is high in the physical aftersales market for all three distribution models (D2C, agency, dealership) as investment costs to set up a dense and broad aftersales network are high for the OEM while revenue potential is low with EVs.
- The used car market is currently small for EVs but will develop in the coming years and provides an opportunity for non-OEM parties to compete].

Understanding of Chinese culture / business acumen

- Chinese business culture is very different from European business culture. Retailers will benefit from a better understanding of the Chinese business uses , such as:
- Importance of (long) term relationships in the Chinese culture
- Typical do's and don'ts in business meetings
- Sufficient materials translated into Chinese

Extend product and services offering

- Retailers can extend their product and services portfolio from traditional car sales to lease activities and e-mobility services to become an attractive partner to Chinese OEMs and to compensate for declining margins on car sales.
- Chinese OEMs are typically not active in leasing services – the lease market is nihil in China – and therefore require a partner to understand local regulations. Also, with leasing and rental services the dealer remains in control of the car and customer which provides opportunity for e-services sales.
- The market for e-services (e.g. charging stations, PV, smart charging) will grow significantly and provides ample room for dealers to provide new propositions.

Target Chinese traditional volume brands

- The conventional dealer delivery model provides the most opportunity for retailers to partner with OEMs. Chinese OEMs with strong dealer legacy in Europe (e.g. Geely) and/or China (e.g. Dongfeng) will likely leverage their experience and remain (partly) focused on the dealer model in the short to medium term. Retailers should therefore target these players.
- In addition, volume brands will likely transit at a slower pace to D2C vs. premium brands as they require partners for selling large volumes. More premium and digital-savvy brands typically sell lower volumes at higher price points to compensate for operational investments in digital infrastructure. These players have the digital infrastructure to set up a D2C model and therefore have less of a need for (sales)] partnerships.

Focus on multi-brand offering

- Retailers can extend their brand offering to compensate for lower (offline) sales volumes via dealers and the expected market share decline of current volume brands (e.g. Renault, Ford, Kia) due to the entrance of Chinese brands.

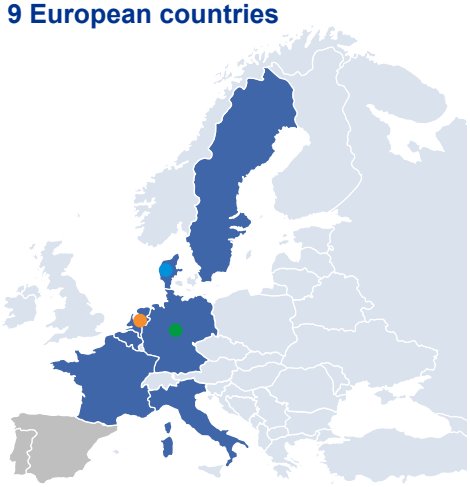
Source: LMCA; Mercis; KPMG analysis.

Overview of Chinese OEM players

Aiways

Agency model	China & Europe	2021 revenue: n/a	Private Tencent, Didi and CATL

9 European countries



Key: ■ Current ■ Planned.
● Germany: R&D ● Denmark: R&D and battery manufacturing ● Netherlands: Spare parts centre.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
GE	2020	Agency	TPP	U5, U6 '22	Euronics, A.T.U.
DN	2021	Agency	SP	U5, U6 '22	Andersen Motors
NL	2021	Agency	SP	U5, U6 '22	Profile Tyres, Lease-E
BE	2021	Agency	SP	U5, U6 '22	Cardoen
FR	2021	Agency	TPP	U5, U6 '22	Car East France, Feu Vert, Go Mecano
IT	2021	Agency	SP	U5, U6 '22	Koeliker Group
SE	2021	Agency	SP	U5, U6 '22	Andersen Motors
SP	2022	n/a	SP	U5, U6 '22	Astara (importer), NEM
PT	2022	n/a	SP	U5, U6 '22	Astara (importer), NEM
CN	2017	D2C	D2C & OP	U5, U6, U7	Various ICDs for aftersales

Partnerships and innovation

Retail
— In Europe, Aiways partners with independent dealers and non-automotive retail partners (Germany only) through an agency model

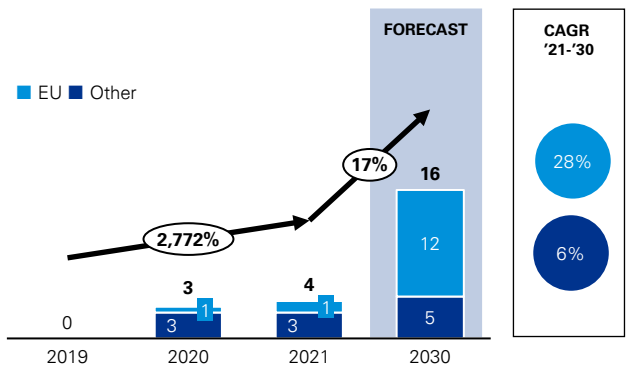
Aftersales
— Aftersales is managed by the partner dealers or additional partners; these include fast-fitters (e.g. Profile)

Joint ventures
— Aiways Europe has a joint venture with the German company Roland Gumpert to produce a methanol fuel-cell electric car known as RG Nathalie

Technology
— Aiways focuses on OTA technology, autonomous driving, AI virtual assistance and driver monitoring systems
— Hesai Technology partnership: autonomous driving
— Lenovo partnership: intelligence systems (IoT)
— CATL partnership: high-energy-density modules for batteries and optimised usage

Other partnerships
— ARC Europe for road assistance and mobility solutions

Global EV sales (#000)



Details on EV sales development

— Aiways solely offers EVs and since its launch in 2017 has focused on D2C distribution through its own showrooms and its online channel in its home country China.
— Aiways EU originally intended to focus on D2C but in order to gain exposure it quickly decided to partner. Partners work with an agency model and take care of the EV sales, test drives, services and maintenance.
— Aiways EU has announced it will continue expanding in Europe in 2022 to drive its sales.

Source: Company information; Europe Autonews; Inside EVs; Automotive Online; Nikkei; Marktlines; LMCA.

BAIC Group

Arcfox | BAW | Beijing | Changhe | Doda | Fonton

Hybrid model | Asia Pacific & Africa | 2021 revenue: USD28bn | SOE

0 European countries

Key: ■ Current ■ Planned.
● Germany: R&D ● Italy: R&D and shared manufacturing
● Austria: Manufacturing.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
CN	1958	Dealer	SP	All	

Partnerships and innovation

Retail
- BAIC Group currently has no EV-related sales strategy in Europe; it only sells ICE cars to small-scale importers in Belgium and Germany

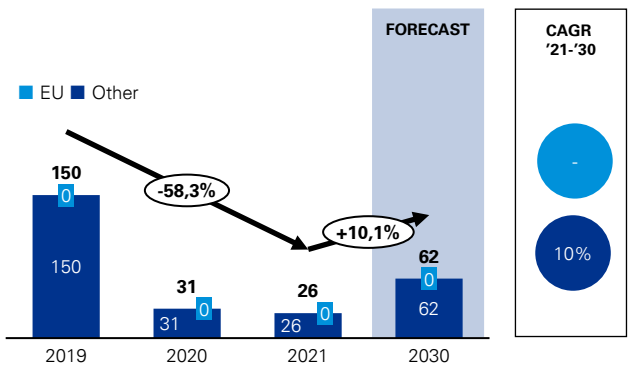
Aftersales
- BAIC Group currently has no EV aftersales strategy in Europe

Joint ventures
- BAIC Group has manufacturing joint ventures with Daimler and Hyundai
- BAIC Group has a manufacturing joint venture with Magna Steyr in Austria and China

Technology
- BAIC Group focuses on intelligent connected vehicle technologies
- Daimler partnership: battery research
- Huawei partnership: autonomous driving and speed charging
- Didi partnership: EV development
- Baidu partnership: robot taxis services

Other partnerships
- Huawei partnership: D2C channel development

Global EV sales (#000)



Details on EV sales development

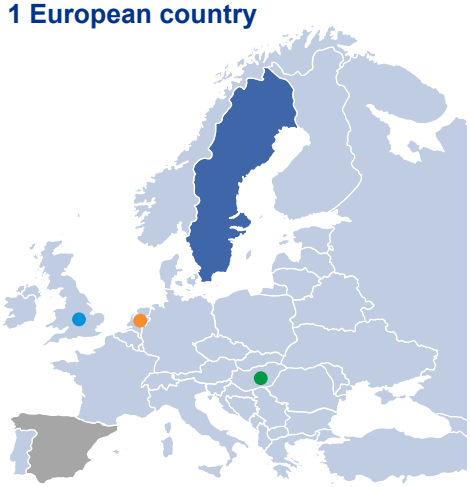
- BAIC Group mainly manufactures cars through its joint ventures with Daimler and Hyundai (not included in the graph). For its own brands it solely focuses on China.
- BAIC Group has an extensive traditional dealer network in China to sell its cars. Only recently BAIC has announced a trial for a new distribution and sales strategy together with Huawei. This strategy will consist of both online and offline direct sales for the high-end Arcfox EV line through Huawei retail outlets in China.

Source: Company information; Reuters; South China Morning Post; STCN; CNEV Post; Marktlines; LMCA.

BYD

Agency model	Asia Pacific & Europe	2021 revenue: USD24bn	Private, listed Berkshire Hathaway

1 European country



Key: ■ Current ■ Planned.
● Netherlands: HQ incl. distribution ● UK: Assembly of electric buses ● Hungary: Manufacturing of electric buses.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
NO	2021	Agency	SP	Tang, T3	RSA Norway
ES	2022	TBA	TBA	TBA	New Energy Mobility
CN	1995	Dealer	SP	All	

Partnerships and innovation

Retail
— BYD has selected RSA to become the Norwegian importer; RSA distributes through its own and other independent car dealers via an agency model

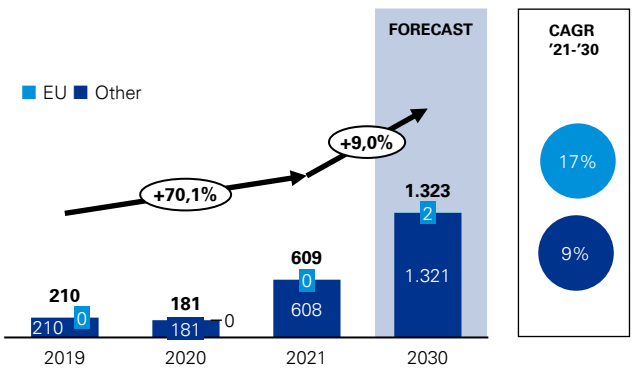
Aftersales
— The aftersales in Norway is managed through RSA's own and partner network

Joint ventures
— BYD has a manufacturing JV with Daimler for the Denza cars, based on Mercedes models for the Chinese market

Technology
— BYD focuses on OTA technology, blade batteries and IoT
— Nuro partnership: autonomous driving and delivery
— Momenta partnership: autonomous driving
— Aurora partnership: smart mobility solutions
— Toyota partnership: blade batteries for Toyota EVs

Other partnerships
— In the UK, BYD partners with ALD for the assembly of electric buses

Global EV sales (#000)



Details on EV sales development

— Following its launch in Norway, BYD has announced to launch in more European countries in the near future, e.g. in Spain through New Energy Mobility Group.
— Through its electric buses sales in many European countries and European facilities, BYD has experience and a local network within Europe.

Source: Company information; Europe Autonews; Inside EVs; Automotive Online; Nikkei; Marktlines; LMCA.

Changan

长安汽车 CHANGAN

Dealer model | Asia, Africa, South America | 2020 revenue: USD11.8bn | SOE

0 European countries

Key: ■ Current ■ Planned.
● Germany: R&D ● UK: R&D ● Italy: Design centre.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
CN	1862	Dealer	SP	All	

Partnerships and innovation

Retail
— Changan currently has no EV-related sales strategy in Europe

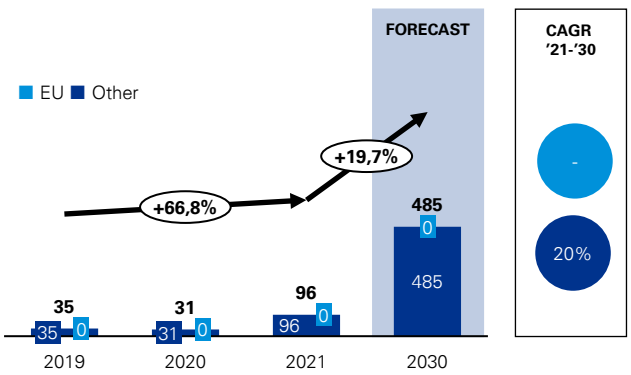
Aftersales
— Changan currently has no EV aftersales strategy in Europe

Joint ventures
— Changan has joint ventures with Ford and Mazda

Technology
— Changan focuses on autonomous driving, smart mobility solutions and connectivity
— Huawei partnership: intelligent vehicle solutions
— CATL partnership: battery research and development
— BYD partnership: battery production

Other partnerships
— No current information on other partnerships

Global EV sales (#000)



Details on EV sales development

— Changan currently has no European sales activities but has a European footprint through its R&D and design centres.
— In 2021, Changan, Huawei and CATL announced the new brand Avatar that should further boost the sales of EVs.
— Having joined the EV market only recently, Changan is increasing its positioning through newly-established brands like Avatar (co-created by Huawei and CATL) and UNI. The company has announced that new models will first be introduced in its home market, China.

Source: Company information; China Daily; Nikkei; CNEV Post; Marktlines; LMCA.

Chery

Jetour | Exceed | Karry

Hybrid model | Asia, South America | 2020 revenue: USD16.6bn | SOE

0 European countries

Key: ■ Current ■ Planned.
● Germany: R&D ● Italy: Design centre.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
CN	1997	Dealer	SP	All	

Partnerships and innovation

Retail
- Chery currently has no EV-related sales strategy in Europe

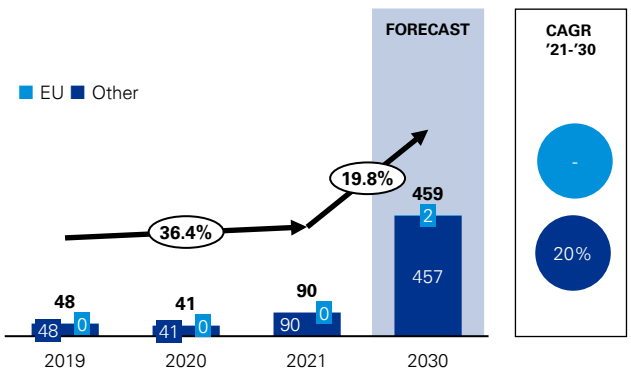
Aftersales
- Chery currently has no EV aftersales strategy in Europe

Joint ventures
- Chery has a joint venture with DR motors in Italy to assemble and rebrand Chery cars
- Chery has a joint venture with Jaguar Land Rover to produce JLR cars
- Chery has a joint venture with Israel Cooperation to establish cars for their shared brand Qoros

Technology
- Chery focuses on autonomous driving, Internet of Things and connected vehicles
- Haier partnership: Internet of Things technology
- Quanergy partnership: autonomous driving and smart vehicles
- Huawei partnership: smart cars

Other partnerships
- Chery has partnered with Deutsche Post to develop electric street scooters

Global EV sales (#000)



Details on EV sales development

- EV sales have mainly developed through sales of the A-segment/city car QQ in China.
- Chery recently announced D2C strategies for both the Chinese and Brazil market. In China, it will partner with Sourche, an automotive retail platform that is backed by large Chinese tech companies. In addition, Chery has announced a partnership with Xiaomi, a phone manufacturer, for a direct sales strategy of its Exceed brand in Xiaomi retail outlets.
- Chery has announced that it will enter the European market in the near future with its EV brand Exeed, model VX.

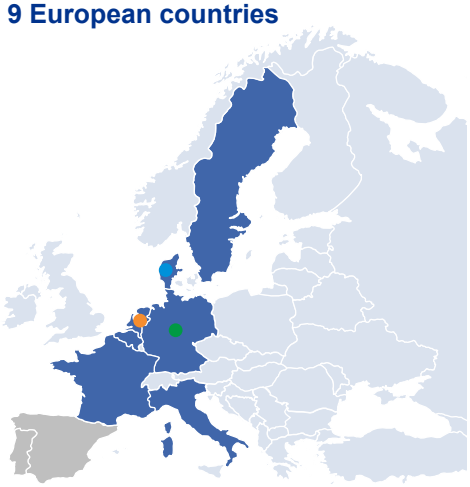
Source: Company information; China Daily; Nikkei; CNEV Post; Marktlines; LMCA.

Dongfeng

Voyah | DFSK | Xiaokang | Globy | Fengguang | Seres

Agency model | Asia & Europe | 2020 revenue: USD15.6bn | SOE

9 European countries



Key: ■ Current ■ Planned.
● Germany: R&D ● Denmark: R&D and battery manufacturing ● Netherlands: Spare parts centre.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
GE	2020	n/a	SP	Seres 3	Indimo Automotive
SE	2020	Agency	SP	Seres 3	Drivee Automotive
NO	2020	n/a	SP	Seres 3, Voyah ('22)	Gill Gruppen
NL	2021	Agency	SP	Seres 3	Green Mobility Group
BE	2021	Agency	SP	Seres 3	One Automotive
IT	2021	n/a	SP	Seres 3	Koeliker Group
Baltics	2021	n/a	SP	Seres 3	Busnex
PO	2021	n/a	SP	Seres 3	Busnex
ES	2021	n/a	SP	Seres 3	Grupo Invicta
FR	2021	n/a	SP	Seres 3	Ecoway and SN Diffusion
CN	1969	Dealer	SP	All	

Partnerships and innovation

Retail
— Dongfeng has partnered with multiple independent car distributors in Europe to sell its cars; in NL it works through an agency model with five local Suzuki dealers

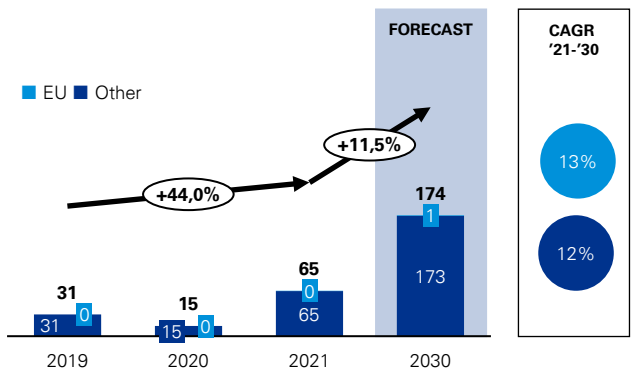
Aftersales
— Aftersales is arranged through its sales partners (independent car dealers)

Joint ventures
— Dongfeng has manufacturing joint ventures with Nissan, Stellantis, Honda, Kia and Chongqing Sokon Industry Group

Technology
— Dongfeng focuses on autonomous driving, battery development and connected cars
— Huawei partnership: smart cars and autonomous driving
— CATL partnership: battery development
— Tencent partnership: 5G-connected cars

Other partnerships
— n/a

Global EV sales (#000)



Details on EV sales development

— The Seres label was originally established in Silicon Valley and Dongfeng currently has production facilities in the US and China. The European market is supplied through its Chinese factories.
— Sales in NL run through a collective initiative of five non-exclusive Suzuki dealers which also provide aftersales services.
— Dongfeng has already been present in Europe since 2008 for its DFSK label (non-EV), mainly in Southern Europe.
— Back in China, Dongfeng started a D2C sales channel for one of its labels in 2019 and launched a D2C trial with its JV partner Peugeot in 2020. In 2021 it launched an agency model with Huawei, selling through Huawei's retail stores.

Source: Company information; AD; EVmotors; E-drives; Bovag; Autoweek; Huawei; Marktlines; LMCA.

FAW Group

Hongqi | Bestune | Junpai | Senia

Agency model | Asia & Europe | 2020 revenue: USD17.9bn | SOE

1 European country

Key: ■ Current ■ Planned.
● Germany: Design centre.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
NO	2021	Agency	SP	Hongqi, E-HS9	Motor Gruppen
CN	1953	Dealer	Dealer	All	

Partnerships and innovation

Retail
- FAW's Hongqi works with a sales agent in Norway, Motor Gruppen. FAW's Bestune (non-EV) is also currently present in Europe through small-scale importers in Belgium and Germany.

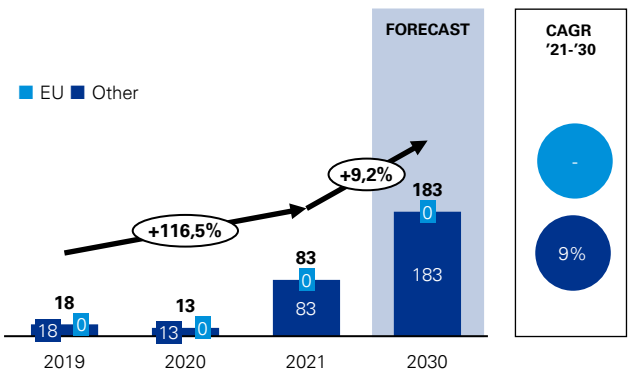
Aftersales
- Motor Gruppen's dealers and its dealer partnerships take care of the aftersales

Joint ventures
- JV with Volkswagen, Audi (solely EV starting in 2024), Mazda and Toyota
- JV with SILK, an Italian engineering and design start-up focusing on EV sport cars

Technology
- FAW Group focuses on artificial intelligence, connected cars and smart solutions
- Alibaba partnership: smart vehicles
- Baidu partnership: autonomous driving
- Xiaomi partnership: intelligent cars

Other partnerships
- Wanda Group, a large real estate company which, together with FAW Group, will focus on real-estate-related vehicle solutions

Global EV sales (#000)



Details on EV sales development

- FAW's Hongqi line is considered the luxury brand of China, often used by the government, and aims to compete with the likes of Tesla in Europe.
- In collaboration with Wanda Group, FAW Group in China has launched a direct sales channel for its Hongqi brand. This D2C model will target Chinese customers directly through experience stores in tourism projects, retail stores in commercial shopping malls and through supermarket projects.

Source: Company information; Europe Autonews; Motor Gruppen; China Daily; Nikkei; Marktlines; LMCA.

GAC

AION | Hycan | Trumpchi | GONOW

Hybrid model | Asia | 2020 revenue: USD62.2bn | SOE

0 European countries

Key: ■ Current ■ Planned.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
CN	1955	Dealer	SP	All	

Partnerships and innovation

Retail
- GAC Group currently has no EV-related sales strategy in Europe

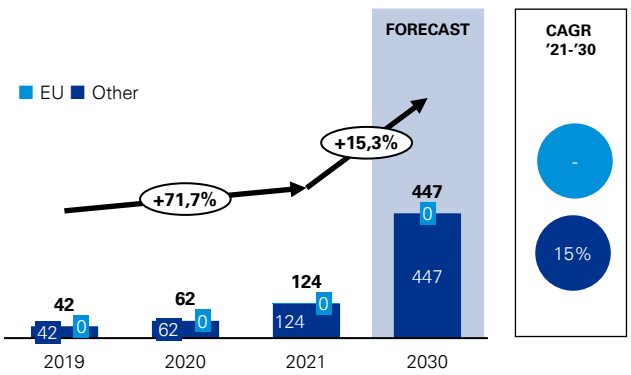
Aftersales
- GAC Group currently has no aftersales strategy in Europe

Joint ventures
- GAC has joint ventures with Toyota and Stellantis as well as a joint venture with NIO to manufacture the Hycan, a new economy EV brand

Technology
- GAC Group focuses on intelligent connected vehicles (ICV) and smart solutions
- Huawei partnership: smart cars and autonomous driving
- CATL partnership: battery development
- Didi partnership: autonomous driving EVs

Other partnerships
- GAC has invested in WeRide, a China-based autonomous driving start-up for robotaxis

Global EV sales (#000)



Details on EV sales development

- GAC is mainly focused on its home country China and currently has no sales activities in Europe.
- In 2021, GAC launched a direct-to-consumer sales model in China for its Aion label which includes both online and offline elements and will be combined with its traditional dealer network.

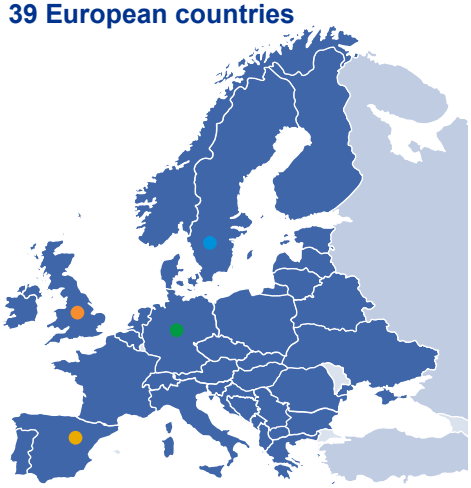
Source: Company information; CNEV Post; Automotive World; Reuters; Marktlines; LMCA.

Geely

Lynk & Co | Geometry | Kandi | LEVC | Maple | Zeekr | Zhidou | Lotus | Volvo | Polestar

Agency model	China & Europe	2021 revenue: n/a	Private Tencent, Didi and CATL

39 European countries



Key: ■ Current ■ Planned.
● Germany: R&D ● Sweden: R&D ● UK: R&D and design ● Spain: Design centre.

Brand specifics

Brand	Launch	Countries	Retail model	Aftersales model
Lynk & Co	2021	7	D2C	TPP (Volvo)
LEVC	2017	21	Dealer & agency	SP & TPP (Volvo)
ZhiDou	2012	18	n/a	SP & TPP
Polestar	2017	10	D2C& agency	OP (Volvo)
Volvo	1926	39	Dealer	SP
Lotus	1948	16	Dealer	SP & TPP
CN	1986		Hybrid	Hybrid

Partnerships and innovation

Retail
- Geely has non-traditional business models for its newly-introduced brands, with only Volvo maintaining the dealership model. It has announced that this will become an agency model by 2030. Lynk & Co solely offers a mobility solution through its own stores ('clubs').

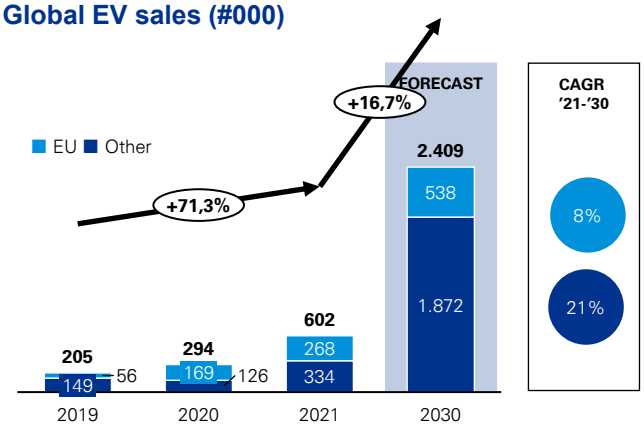
Aftersales
- Geely uses a hybrid strategy for its aftersales by partnering with sales partners and utilising its existing Volvo dealer network for many of its brands

Joint ventures
- Geely has joint ventures with Renault and Daimler (for the E-Smart line)

Technology
- Geely focuses on smart (OTA) solutions, autonomous driving and battery swapping technology
- Lifan Technology partnership: battery development
- Baidu partnership: developing a new electric car named Jidu Auto, a 'robot' car

Other partnerships
- Inchcape global automotive partnership: distribution of the Geely brand across South America

Global EV sales (#000)



Details on EV sales development

- Through its acquisition of Volvo, Geely has managed to quickly gain exposure, grow and utilise its Volvo network for its other brands in Europe.
- Geely announced that its Geometry brand will enter Europe in 2022. Details about the strategy are still unknown.
- Geely focuses on non-traditional sales and distribution channels, even in its home country China. It has set up one D2C channel in China through Da Souche, an Alibaba-backed automotive platform, and through the Haier Group (home application retail stores).

Source: Company information; FleetEurope; InsideEVs; AD; Autonews; Car News China; Electrive; AM-online; Marktlines; LMCA.

Great Wall Motor (GWM)

Haval | Wey | Ora

Hybrid model | Asia Pacific & Europe | 2020 revenue: USD15.6bn | Private, listed

1 European country

Key: ■ Current ■ Planned.
● Germany: R&D ● Germany: HQ ● Austria: R&D.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
GE	2022	t.b.d.	t.b.d.	Wey and Ora	YesAuto
CN	1984	Dealer	SP	All	

Partnerships and innovation

Retail
— GWM Group currently has no EV-related sales strategy in Europe. The company sells non-EV vehicles in Romania, Bulgaria, Italy and the UK.

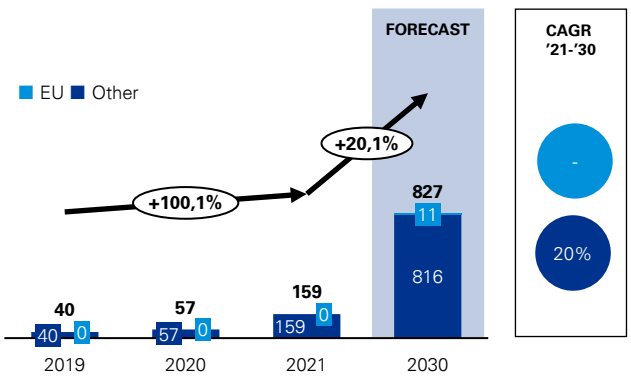
Aftersales
— GWM Group currently has no EV aftersales strategy in Europe

Joint ventures
— GWM has a joint venture with BMW (E-mini)

Technology
— GWM focuses on connected vehicles, autonomous driving and smart vehicle solutions
— CATL partnership: battery development
— Oculli partnership: autonomous driving
— Tencent and Xiandou partnership: OTA and autonomous driving

Other partnerships
— Strategic partnerships with YesAuto (automotive online sales platform) in Germany and ERGO Mobility Solutions (insurance firm) to create an ecosystem for its (future) EV users

Global EV sales (#000)



Details on EV sales development

— GWM has announced the launch of the Wey and Ora models in multiple European countries, starting with Germany. GWM will potentially enhance its partnership with YesAuto to set up a D2C channel in Germany.
— Despite its large dealer network in China, GWM has started various initiatives to establish a direct customer connection.

Source: Company information; Automobielmanagement; Autovista24; Elektrischeauto; CNEV Post; Nikkei; Marktlines; LMCA.

JAC Motors

Agency model | Asia Pacific, Europe & South America | 2020 revenue: USD6.5bn | SOE

6 European countries

Key: ■ Current ■ Planned.
● Italy: Design centre.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
BE	2020	Agency	SP	E-S2	E-Drive
CH	2020	n/a	SP & TPP	E-S2	Auto Kunz
AT	2020	n/a	SP	E-S2	Automobile Wien
ES	2021	n/a	SP	E-S2	New Energy Mobility
PT	2021	n/a	SP	E-S2	New Energy Mobility
NL	2021	Agency	SP	E-S2	E-Drive (importer), Autohaarhuis & Auto van Zeist
CN	1964	Dealer	SP	All	

Partnerships and innovation

Retail
— JAC Motors works with independent importers and distributors throughout Europe via an agency model

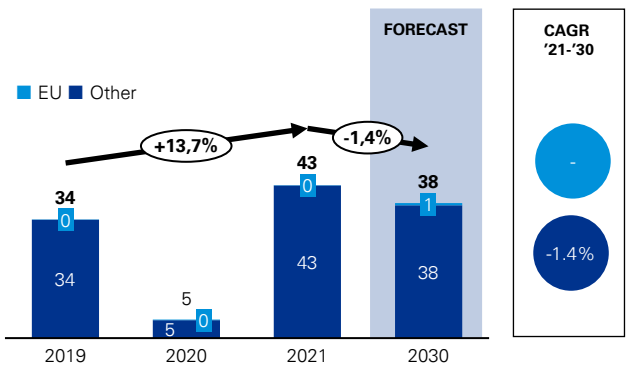
Aftersales
— JAC Motors partners with local independent car dealers to manage its aftersales; in Switzerland this includes Hostettler Autotechnik, an aftersales supply specialist to manage the spare parts

Joint ventures
— JAC Motors has a joint venture with Volkswagen to manufacture EVs as well as a joint venture with NIO to manufacture NIO vehicles

Technology
— JAC Motors focuses on connected cars, autonomous driving and battery development
— Weichai Group partnership: energy solutions
— CBAK partnership: battery development
— Huawei partnership: smart vehicle solutions

Other partnerships
— Alibaba partnership: setup of an e-commerce B2B channel for the international sales of JAC vehicles

Global EV sales (#000)



Details on EV sales development

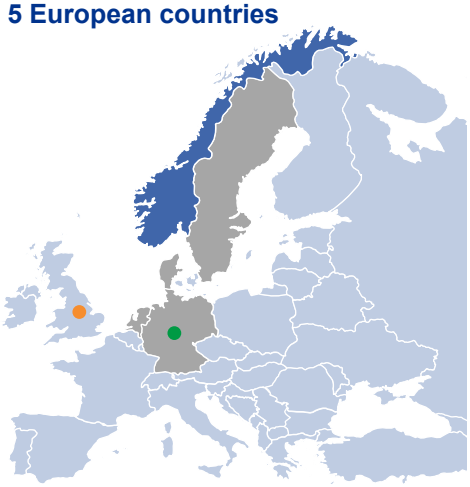
— In comparison to its competitors, JAC Motors has only small numbers of EV sales and has only recently introduced the E-S2, its relatively affordable EV model.
— JAC Motors hopes to compete on price in Europe with models starting at €30,000.

Source: Company information; Autoweek; E-drivers; Automotiveworld; NIO; Electrive; Nikkei; Marktlines; LMCA.

NIO

D2C model	Asia & Europe	2020 revenue: USD2.5bn	Private, listed Tencent, Baidu

5 European countries



Key: ■ Current ■ Planned.
● Germany: Design centre ● UK: R&D.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
NO	2021	D2C	Hybrid	ES8	Frydenbo Bil (service partner)
SE	2022	D2C	Hybrid	t.b.d.	
DN	2022	D2C	Hybrid	t.b.d.	
GE	2022	D2C	Hybrid	t.b.d.	
NL	2022	D2C	Hybrid	t.b.d.	
CN	2014	D2C	D2C	All	

Partnerships and innovation

Retail
- NIO sells through its own dealers known as 'clubhouses' and its online D2C channel

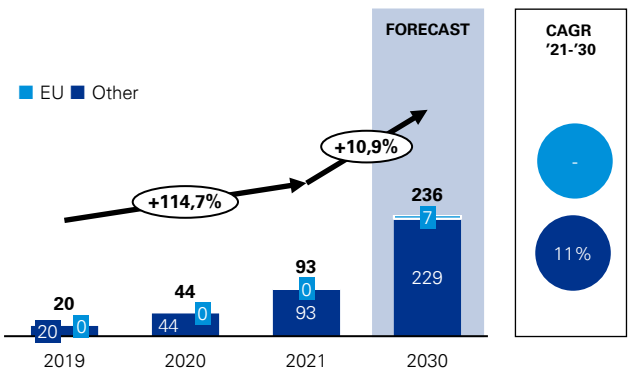
Aftersales
- Service and maintenance are mainly delivered through NIO's own service centres, but NIO also partners with local dealers to extend its geographic positioning

Joint ventures
- JAC Motors: production of NIO vehicles
- GAC Motors: building Hycan cars, an economy EV

Technology
- NIO focuses on battery swapping technology, OTA and autonomous driving
- CATL partnership: battery swapping technology
- Mobileye and Sixt partnership: development of robotaxis in Germany
- Tencent and Baidu partnership: smart cars

Other partnerships
- Shell partnership: establishing a network of charging and battery swapping stations in both China and Europe.
- LeasePlan partnership: offering NIO EVs and the BaaS solution through its lease offering

Global EV sales (#000)



Details on EV sales development

- NIO further drives its sales through battery subscriptions ('battery as a service' or 'BaaS'), swapping stations and charging stations. In addition, it offers access to exclusive NIO clubhouses and lifetime free roadside rescue, warranty and car connectivity. In addition, NIO offers NIO Life products through its clubhouses and the NIO app, with the goal of changing its brand into a lifestyle brand.

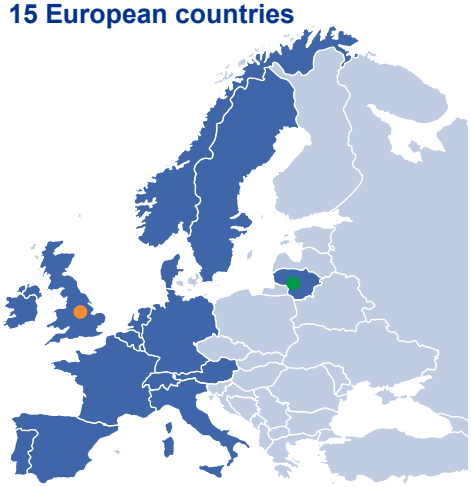
Source: Company information; Reuters; Top Electric SUV; Car Expert; LeasePlan; Simon Kucher; Car News China; CNEV Post; Automotive Online; Marktlines; LMCA.

SAIC

Boajun | Feifan | IM | Maxus | Roewe | Wuling | MG

Hybrid model | Asia Pacific & Europe | 2020 revenue: USD117bn | SOE

15 European countries



Key: ■ Current ■ Planned.
● Lithuania: Assembly ● UK: R&D.

Brand specifics

Brand	Launch	European countries	Retail model	Aftersales model
MG	2007	14	Dealer & Agency	SP and OP
Maxus	2011	9	Agency	SP and OP
Wuling (Freze Nikrob)	2021	1 and more planned	n/a	n/a
CN	1958		Dealer	SP

Partnerships and innovation

Retail
- SAIC's MG and Maxus brands have partnered with many (independent) car dealers in Europe through the agency model. MG also has dealerships. Wuling's sales model (and expansion) is yet to be announced.

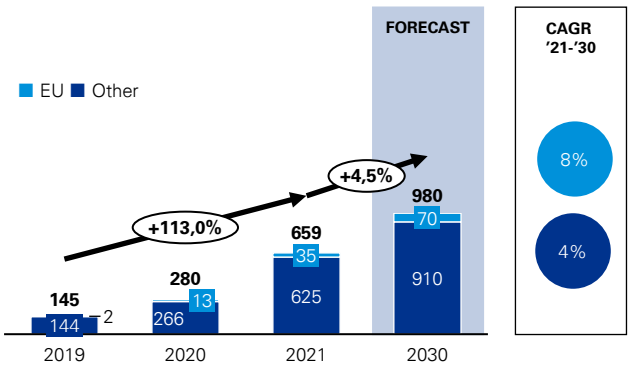
Aftersales
- Aftersales is managed through the network of sales partners (dealers and agents)

Joint ventures
- SAIC has a JV with Alibaba named IM Motors, an EV company (to be launched in 2022)
- SAIC has a JV with Liuzhou Wuling Motors and GM. Together they develop the brands Wuling and Baojung. The Wuling brand has a joint venture with Dartz Motors in Lithuania to assemble the Wuling cars for the European market.

Technology
- SAIC focuses on intelligent vehicles and OTA technology
- CATL partnership: battery development
- GAC, partnership: intelligent vehicles

Other partnerships
- Maxus has a partnership with LeasePlan in Europe

Global EV sales (#000)



Details on EV sales development

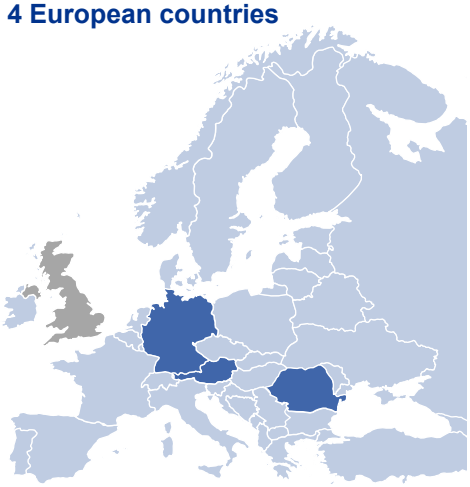
- Through the acquisition of the bankrupt MG in 2007, SAIC has been able to leverage a legacy name and network throughout Europe. The brands Roewe and Feifan (formerly R) are branded as MG in Europe.
- The Wuling, a small-sized economy city car has turned out to be a tremendous success in China with sales numbers in 2021 reaching more than 400,000. Through local assembly in Europe and subsidies this car could potentially be sold for ~€10,000.

Source: Company information; CNEV Post; Electrive; Auto Evolution; Online EV; China Daily; NY Times; AD; Marktlines; LMCA.

Skywell

Agency model | Asia & Europe | 2019 revenue: n/a | Private

4 European countries



Key: ■ Current ■ Planned.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
GE	2021	Agency	TPP	ET5	Elaris, Euromasters
AT	2021	Agency	TPP	ET5	eMotor, Bosch ICD
RO	2021	Agency	SP	ET5	Allview, Brady Auto Center
UK	2022	Agency	t.b.d.	ET5	Innovation Automotive
CN	2017	D2C & Agency	D2C & SP	All	Skyworth

Partnerships and innovation

Retail
— Skywell makes use of the agency model in Europe. In Germany, Skywell is rebranded to Elaris, named after the importer. For nearly all other European countries Skywell has already partnered with distributors.

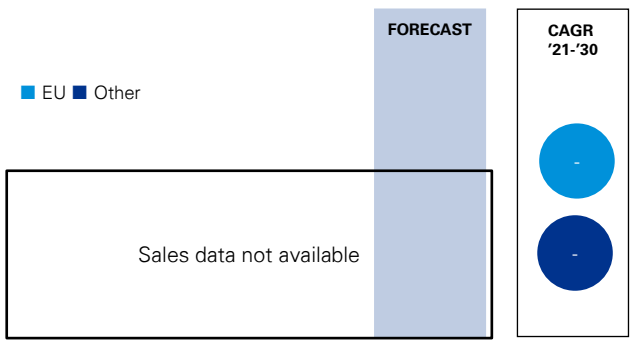
Aftersales
— Skywell works with other partners, both fast-fitters (Euromasters) and independent car dealers, to service its cars

Joint ventures
— Skywell has a joint venture with Skyworth, a consumer electronics manufacturer, and shares various trademarks. Skyworth is also involved with the EV bus manufacturer Nanjin Golden Dragon Bus.

Technology
— Skywell and its connected companies focus on intelligent cars and OTA connectivity

Other partnerships
— n/a

Global EV sales (#000)



Details on EV sales development

— Skywell is a relatively new brand that partners with existing subsidiaries within its holding firm to ramp up production.

Source: Company information; EV Stories; China Daily; AM-online; Electrive; Automobilmanagement; Car News China; Marktlines; LMCA.

Xpeng

XPENG

Hybrid model	Asia & Europe	2020 revenue: USD0.9bn	Private, listed Alibaba, Xiaomi

4 European countries

Key: ■ Current ■ Planned.
● Netherlands: HQ.

Country specifics

Country	Launch	Retail model	Aftersales model	Car models Offered	Retail partnerships
NO	2021	Agency	SP	G3 and P7	Motor gruppen
SE	2022	D2C & Agency	SP	P7	Bilia
NL	2022	Agency	ISP	P7	Emil Frey
DN	2022	t.b.d.		P7	
CN	2014	D2C & Dealer	D2C & SP	All	Zhongsheng Group Holdings

Partnerships and innovation

Retail
— Xpeng distributes its cars in Europe via an agency model. In addition, it has Xpeng experience stores that are self-managed in Sweden and managed by Emil Frey in NL.

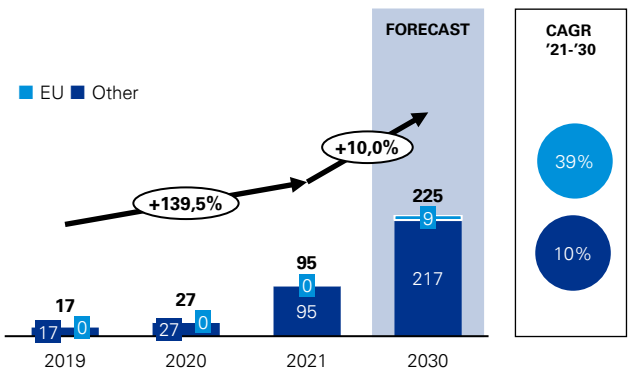
Aftersales
— Service and maintenance activities are managed by connected sales partners and authorised other partners

Joint ventures
— n/a

Technology
— Xpeng focuses on EVs only, super charging stations, autonomous driving and connected vehicles
— Livox Technologies partnership: lidar technology for autonomous driving

Other partnerships
— Dewu partnership: local trading platform for trendy items in China

Global EV sales (#000)



Details on EV sales development

— In China, Xpeng focuses on rapid sales development through self-managed experience and service centres combined with dealerships from Zhongsheng Group (mainly Mercedes Benz and BMW). In Europe, it focuses mainly on third-party agents to quickly secure broad exposure and geographic positioning.
— In addition to its EV offering, Xpeng offers a network of charging stations to its customers in China.

Source: Company information; Top Gear; Top Electric SUV; Xiaopeng; CNEV Post; Simon Kucher; CNBC; SCMP Bloomberg; Marktlines; LMCA.

Appendix

Different types of partnerships already exist in Europe which range from small local partners to broad multi-country partnerships.

European partnerships of Chinese OEMs			
OEM	Sales	Aftersales	Lease
AIWAYS	• Koeliker Group (IT), Astara (ES & PT), Cardoen (BE), Andersen (NO), Car East France (FR) • Profile (NL) • Euronocs (GE)	• Koeliker Group (IT), Astara (ES & PT), Cardoen (BE), Andersen (NO), Car East France (FR) • Profile (NL), A.T.U. (GE), Feu Vert (FR), Go Mecano (FR)	• Lease-E (NL)
BAIC			
BYD	• RSA (NO)	• RSA (NO)	
长安汽车 CHANGAN			
CHERY			
DONGFENG	• Indimo Automotive (GE), Green Mobility Group (BE & NL), One Automotive (UK), Koeliker Group (IT), Grupo Invicta (ES), Drivee Automotive (SE), Gil Gruppen (NO), Busnex (PO & Baltics), Ecoway and SN Diffusion (both FR)	• Indimo Automotive (GE), Green Mobility Group (BE & NL), One Automotive (UK), Koeliker Group (IT), Grupo Invicta (ES), Drivee Automotive (SE), Gil Gruppen (NO), Busnex (PO & Baltics), Ecoway and SN Diffusion (both FR)	• Crédit Agricole (NL)
FAW	• Motor Gruppen	• Motor Gruppen	
GAC MOTOR			
GEELY AUTO	• E.g. Stern (NL), ABVV (FR), Endeavour (UK), Paul Rigby (UK), Leie Mobility Group (BE), LUEG Group (GE), Volvo (Europe)	• E.g. Stern (NL), ABVV (FR), Endeavour (UK), Paul Rigby (UK), Leie Mobility Group (BE), LUEG Group (GE), Volvo (Europe)	• ALD (BE, NL, GE & UK)
Great Wall			
JAC MOTORS	• E-drive (BE & NL), Auto Kunz (CH), Automobile Wien (AT), New Energy Mobility (ES & PT)	• E-drive (BE & NL), Auto Kunz (CH), Automobile Wien (AT), New Energy Mobility (ES & PT)	
NIO		• Frydenbo Bil	• LeasePlan Norway
SAIC	• E.g. Van Mossel (NL & BE), Truckland (NL), Astatra (multiple countries), Dartz Motors (LI), RSA (multiple countries)	• E.g. Van Mossel (NL & BE), Truckland (NL), Alstatra (multiple countries), Dartz Motors (LI), RSA (multiple countries)	• LeasePlan Europe
SKYWELL	• Elaris (GE), eMotor (AT), Brady Auto Center (RO), Innovation Automotive (UK) • Allview (RO)	• Brady Auto Center (RO), Innovation Automotive (UK) • Euromaster (GE), Bosch ICD (AT)	
XPENG	• Motor Gruppen (NO), Bilia (SE), Emil Frey (NL)	• Motor Gruppen (NO), Bilia (SE), Emil Frey (NL)	

Key: • Independent car dealers (ICD) • Fast-fitters • Non-autootive retailers • Leasing agencies
Source: Company information.

Global partnerships of Chinese OEMs

Global partnerships of Chinese OEMs			
OEM	Technology	Hardware solutions	Other
AIWAYS	• Hesai Technology • Lenovo	• CATL	• ARC – roadside assistance
BAIC	• Huawei	• Daimler & Didi • Huawei • Baidu	
		• BAIC	
BYD	• Nuro & Momenta • Aurora	• Toyota	
长安汽车 CHANGAN	• Huawei	• CATL & BYD	
CHERY	• Haier, Quanergy & Huawei • Quanergy	• Deutsche Post – electric street scooters	
DONGFENG	• Huawei & Tencent • Huawei	• CATL	
FAW	• Alibaba, Xiaomi & Wanda Group • Baidu		
GAC MOTOR	• Huawei • Huawei, Didi, WeRide	• CATL	
GEELY AUTO	• Baidu	• Lifan technology, CATL & LG Chem • Baidu • Plugsurfing – charging cards • Smappee – charging infrastructure	
Great Wall	• Oculli, Tencent & Xiandou • Tencent & Xiandou • Tencent & Xiandou	• CATL	• YesAuto – online automotive platform • ERGO – insurance
JAC MOTORS	• Huawei • Weichai Group – energy-saving solutions	• CBAK	
NIO	• Tencent & Baidu	• CATL • Shell – charging stations and infrastructure • Mobileye & Sixt	
SAIC	• GAC	• CATL	
SKYWELL			
XPENG	• Livox • VIVID Nav – connected navigation services		

Key: • Autonomous driving • Smart vehicles • Over-the-air • Battery development • Charging and battery swapping • Robot taxis • Other.
Source: Company information.

Glossary of terms

>	Larger than
<	Smaller than
#	Number of
~	Approximately
%	Percentage
000	Thousand
AC	Alternating current
ACC	Automatic cruise control
AFID	Alternative Fuels Infrastructure Directive
AI	Artificial intelligence
AT	Austria
B2C	Business-to-consumer
BaaS	Battery as a service
BE	Belgium
BEV	Battery electric vehicle
CAERI	China Automotive Engineering Research Institute Co Ltd
CAGR	Compound annual growth rate
CBU	Completely built unit
CH	Switzerland
CKD	Completely knocked down
CN	China
CO2	Carbon dioxide
CPO	Charging point operator
D2C	Direct-to-consumer
DN	Denmark
e.g.	'exempli gratiā' (for example)
EC	European Commission
EFTA	European Free Trade Association
Etc.	Et cetera
EU	European Union
EV	Electric vehicle
Excl.	Excluding
FC	Forecast
FHEV	Full hybrid electric vehicle
FR	France
FTA	Free trade agreement
GAES 21	KPMG's 22nd Annual Global Automotive Executive Survey 2021
GBP	British pound sterling
GDP	Gross domestic product
GE	Germany
HQ	Headquarters
i.e.	'id est' (that is)
ICD	Independent car dealer
ICE	Internal combustion engine
ICV	Intelligent connected vehicle
Incl.	Including
IoT	Internet of Things
IT	Italy
JV	Joint venture
km	Kilometre
KPI	Key performance indicator
kW	Kilowatt
kWh	Kilowatt hour
m	Millions
MHEV	Mild hybrid electric vehicle
n/a	Not applicable
NCAP	New Car Assessment Programme
NL	The Netherlands
NO	Norway
NSC	National sales company
OEM	Original equipment manufacturer
OTA	Over-the-air
PHEV	Plug-in hybrid electric vehicle
PMO	Project management office
POE	Privately-owned enterprise
PT	Portugal
PV	Photovoltaic
R&D	Research and development
RO	Romania
S&M	Service & maintenance
SE	Sweden
SOE	State-owned enterprise
SP	Sales partner
ES	Spain
SUV	Sport utility vehicle
t.b.d.	To be determined
TPP	Third-party partner
UK	United Kingdom
US	United States of America
USD	United States dollar
ZEV	Zero-emission vehicle

KPMG

KPMG on social media

KPMG app