

Shifting gears from Frankfurt to Munich and the race for electric dominance

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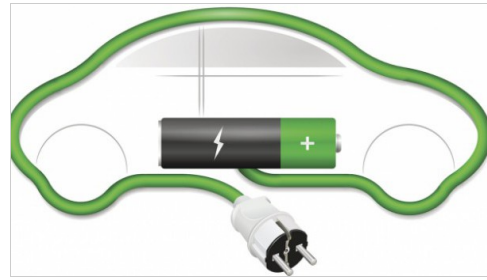
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Supply Chain and Technology, Automotive

European versus mainland Chinese carmakers: The rivalry intensifies at IAA Mobility

Previously known as the Frankfurt Motor Show, the IAA Mobility relocated to Munich in 2021, shifting the focus away from the traditional static motor show to giving practical demonstrations of new technology. While the ritualistic wall-to-wall “thumpin’-and-pumpin’” music inside the Messe Frankfurt every other September is but a distant memory, the sheer range of exciting new electric and autonomous vehicle concepts are still on display in different locations in Germany’s third-largest city, after Berlin and Hamburg.



Source: Getty Images/iIynx_v

A dominant theme at the biennial fair is the [intensified rivalry](#) between European and mainland [Chinese carmakers](#). While Europeans are [pushing back](#) with ever more affordable and appealing EVs,

Germany is still struggling to reduce transport emissions, with pro-car policies in politics and a failure to meet EV targets. The country's focus on [synthetic fuels](#) and the preservation of parking spaces have raised environmental concerns at the IAA. Rubbing salt into the wound, mainland China hosted its electric mobility exhibition, known as the World New Energy Vehicle Congress (WNEVC), within the framework of the IAA. This marked the inaugural occasion when the WNEVC was held outside of the country.

Fast charging takes center stage

Amid a noisy backdrop of climate activist protests inside and outside the show, German Chancellor Olaf Scholz used his opening address to announce a new law that requires 80% of service stations across the country to offer fast-charging options of at least 150 kW for EVs. In referring to [international competitors](#), especially those from mainland [China](#), Scholz affirmed that Germany's standing as a major player in the automotive industry is indisputable, adding that German companies manufacture nearly half of all cars in Europe and roughly one-fifth of all cars in mainland China.

While slow AC charging takes up to 10-12 hours to charge an EV, fast chargers take about an hour to charge 80% of the battery capacity. [Next-generation fast chargers](#) aim to bring this down to under 20 minutes to charge an EV with about 200 miles of driving range. The industry is increasingly acknowledging fast charging as an important pillar; it can lead to significantly higher EV adoption rates, owing to adding to the added convenience and, further down the road, the adoption of smaller, and therefore less-costly batteries.

On the supply side, **CATL** said it will soon commence production for the [rapid-charging Shenxing battery](#) at manufacturing facilities located in mainland China, Germany and Hungary. The supplier boasts that the battery, which uses lithium-iron phosphate (LFP) technology will add up to 400 kilometers (248 miles) of range in 10 minutes of charging and 700 kilometers (435 miles) on a single charge.

[Elli](#), an energy subsidiary of the [Volkswagen Group](#), revealed a high-powered standalone [charging station](#) called Flexpole. Its two connectors can deliver charging speeds at up to 150 kW, which can add 160 km range within 10 minutes, depending on the vehicle.

In showcasing its next generation of EVs, **BMW** took the opportunity to unveil its Vision Neue Klasse

concept powered by the carmaker's sixth generation eDrive. Its powerful electric motors and [cylindrical battery pack cells](#) (like Tesla) can charge 30% faster. The carmaker did not announce a specific range estimate although it said the range can be increased by up to 30% compared with its current EV drivetrain.

Mercedes-Benz also gave us a glimpse of its CLA next-generation model through an electric concept during the event. Using an 800V electric architecture to enable the car to [charge at speeds](#) of up to 250 kW, the near-production car could add 400 km (248 miles) in just 15 minutes.

[Volkswagen](#) (VW) revealed its ID GTI concept, its first GTI without an engine. Transporting the iconic GTI label into the electric future, VW says that the 'I' now represents 'intelligence' in addition to its traditional meaning of 'injection.' The production version will likely hit the road by 2027.

Mainland China's charge

Driven by government initiatives, mainland China's transition to EVs is occurring at an accelerated pace compared with many other nations. Mainland Chinese carmakers in droves have Europe in their sights, as gas- and diesel-powered vehicles are set to be banned by 2035.

Among those mainland Chinese manufacturers that revealed new models — and drew plenty of attention from potential buyers — included BYD and Leapmotor, Denza and Xpeng.

[BYD](#) used the event to unveil at least six all-electric sedan and sport utility vehicle (SUV) models, including the Seal, a mid-size all-electric sedan that will directly competing with Tesla and VW, and the Seal U, a midsized SUV. The latter is set to arrive in Europe in H1 2024.

[Leapmotor](#), a startup that has garnered attention for its potential technology collaborations with VW Group and Stellantis, revealed its C10 midsize SUV. The C10 will offer two powertrain options: a fully electric version and a range-extender hybrid, a configuration that has gained popularity in the mainland Chinese market.

Denza, which is a collaboration between [BYD](#) (holding a 90% stake) and Mercedes (10% stake), showed off its D9, a seven-passenger van that comes in both plug-in hybrid and all-electric configurations.

Xpeng also brought new models to Munich and disclosed its intention to enter the German market in 2024. The company currently sells its P7 sedan and G9 SUV in Norway, Sweden, Denmark and the Netherlands. Xpeng is one of the more credible mainland Chinese startups to enter the European market owing to the Volkswagen Group taking a shareholding in the company at the end of July with [VW](#) taking a 4.99% stake in the company for about \$7 billion. S&P Global Mobility forecasts that Xpeng will sell 3,162 units in the European region in 2023, before rising to 12,521 units in 2024. We expect volumes of around 40,000 by the end of the decade.

The battle lines have been drawn

This year's IAA has shown how German OEMs are responding to their US and mainland Chinese rivals with fresh ideas and new concept cars featuring extended ranges and faster charging. This intensifying competition promises innovative and high-quality electric options for consumers as the EV market evolves, setting the stage for an exciting battle ahead.

S&P Global Mobility comments:

Commenting on the major reveals and themes of this year's IAA in Munich, S&P Global Mobility

Director of Electrification Technology, Graham Evans, noted “There is undoubtedly a defensiveness in tone and narrative from German automotive executives at the IAA this year. History tells us that the established automotive geographies have previously seen their market shares eroded by the rising presence and competitive prepositions from firstly, Japanese manufacturers such as Toyota and Nissan then, more recently, Korean OEMs, notably Hyundai and Kia. The ability to build compelling, high-quality automobiles is not a rite of passage restricted to Western automakers. Yet never has the threat been so marked as now, given the confluence of the environmentally necessitated transition to electric vehicles and the marked evolution in both quality and ambition of Chinese automakers.”

Yet, more specifically, Evans noted the dominant technology and supply chain positions that mainland China has established, which positions them well to make mass market EVs profitable. “EVs to date have, in the most part, been targeted at the wealthy, where typically higher margins have made them just about commercially viable whilst scale has been low. Smaller, low segment vehicles have typically been loss-leading, giving OEMs the chance to explore and refine the technology. Yet the Chinese OEMs, led by a broader government-supported industrial strategy, have been refining technology such as LFP cathode chemistries and building supply chains in critical mineral markets to ensure mass-market electric vehicles can be made profitably. BYD at the IAA is something of a poster child for this progress. Market share has been established in a receptive yet slowing domestic market, leading to ambition in overseas markets keen for more affordable EVs with adequate range.”

Considering the responses of the European OEMs to mainland China’s threat, Evans noted “Protectionist policies around EV manufacturing and grandiose statements might only achieve so much. Ultimately, access to the raw materials and critical technologies to make both batteries and electric motors is almost inextricably linked to China somewhere along the supply chain. The research of the Supply Chain & Technology team around Electrification Technology continues to shine light on the two critical consumer concerns around range and charging time. Establishing technology leadership and achieving consumer acceptance in these two main areas, profitably and sustainably whilst married to an appealing brand, will allow brands to survive and thrive in the coming years of disruptive change.”

S&P Global Mobility’s [Battery Domain](#) enables clients to make informed business decisions by providing in-depth analysis of battery technology developments and the evolving supply chain landscape. The Battery Vehicle Domain delivers comprehensive critical insight helping to answer critical questions related to the automotive battery market.

The developments and scope of newer battery technologies often grab the headlines when the future of transportation electrification is discussed. A longer driving range is seen as one of the most important attributes that will significantly increase the uptake of EVs. However, what is becoming equally important is how capable a vehicle is in terms of charging. A vehicle’s charging speed and ability to reach a higher power rate are already becoming important factors to buyers considering which EV to buy. According to the S&P Global 2022 E-Mobility Consumer Survey on EV ownership and intention, nearly 43% and around 40% of the respondents indicated lack of charging station availability and time required for charging, respectively, are among the top reasons for not purchasing an EV again. The number in both cases is higher than in the previous iterations of the survey, suggesting falling confidence in the charging infrastructure. To learn more, download our latest report, [‘Charging requirements for upcoming xEVs’](#).

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