

STUDY

Germany's automotive reset

From model of global
success to painful
consolidation



Roland
Berger

Germany's automotive industry is under intense pressure. Decades of growth momentum have largely stalled, while the technological transformation of the car – think electric mobility and next-generation electrical/ electronic architectures – is taking much longer than originally anticipated. Growing geopolitical tensions are adding further strain to an industry built on global integration.

But that is only part of the story. Long-standing structural advantages of the German automotive industry have turned into disadvantages. The country's export-oriented model is being weakened by regionalization, while the position of German original equipment manufacturers (OEMs) in China has deteriorated sharply. Strong profits from China helped sustain the German model for years; now, that cushion has gone and is unlikely to return. Chinese manufacturers are busy expanding in Europe with competitive products and aggressive pricing.

Germany also faces a significant location cost disadvantage. Development cycles remain too slow and production capacity has not been adjusted decisively enough. The result? A marked deterioration in profitability and growing pressure on employment.

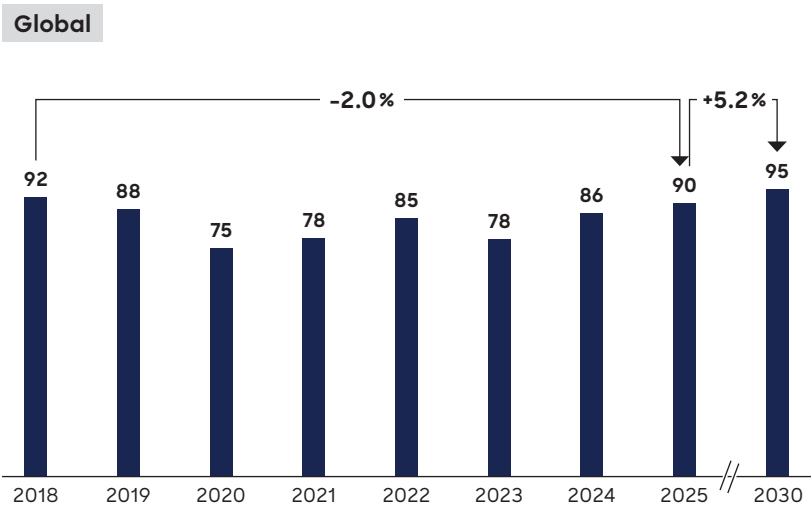
What Germany now needs is a reset: a streamlining of the industrial footprint through further consolidation – which will inevitably be somewhat painful – alongside a more competitive cost base. Faster development will also be essential. If industry and policymakers act decisively, a profitable core of automotive value creation can remain in Germany. But getting there will require a much more radical approach than in the past.

Global growth has stalled – while transformation costs remain high

The automotive industry is facing challenging conditions worldwide. Although it is true that global light vehicle sales returned to around 90 million units in 2025 and are forecast to reach about 95 million by 2030, the underlying picture is far less dynamic. Europe is facing a demand slump without a full recovery, while China is struggling with massive overcapacity and an intensifying price war. In the United States, there has been a de facto retreat from e-mobility, while tariffs are increasingly isolating the market from global supply chains.

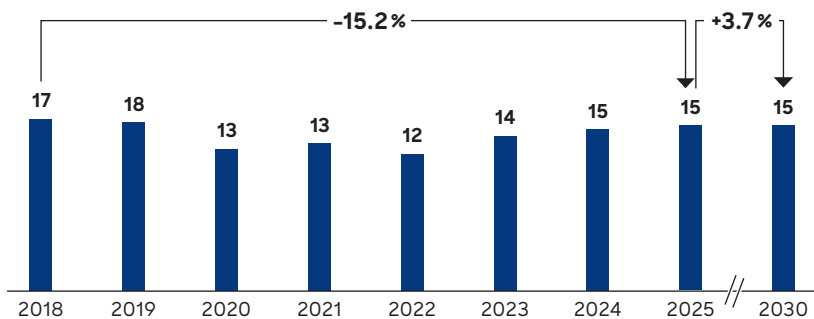
At the same time, the technological transformation of the car is taking much longer than originally anticipated, leaving OEMs and Tier-1 suppliers with long investment periods before reaching target margins. Growing geopolitical tensions are adding further cost pressure as supply chains become more fragmented. US "China-free" requirements, for example, can make affected supply chains 15-25 percent more expensive than global sourcing. The result is a global environment that offers German manufacturers less growth relief and fewer benefits from global scale.

Global automotive sales by region,
2018–30 [m units]

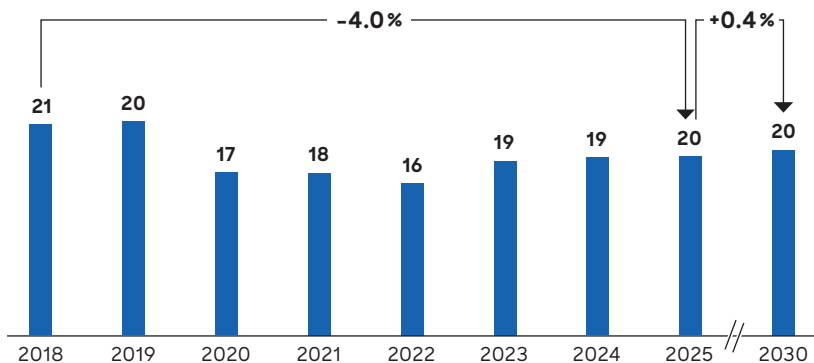


Source: Mobility Global LV Sales Forecast July 2026

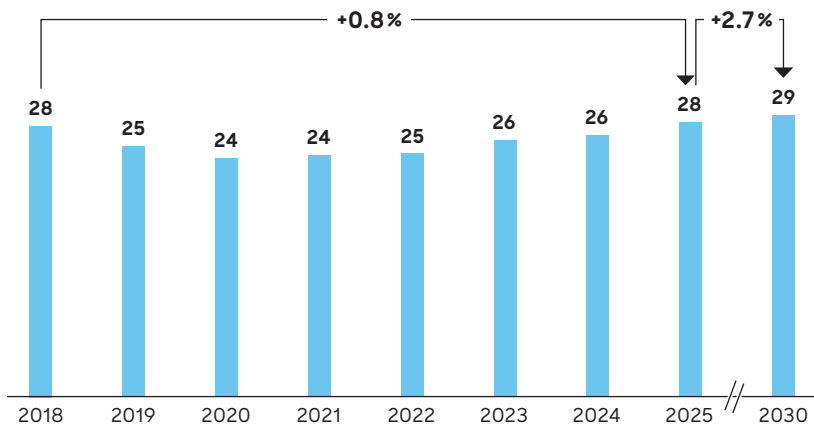
Europe¹



North America (USMCA)



China



¹ EU27 + UK + Norway + Switzerland

In Germany, vehicle demand remains weak – while Chinese competition adds further pressure

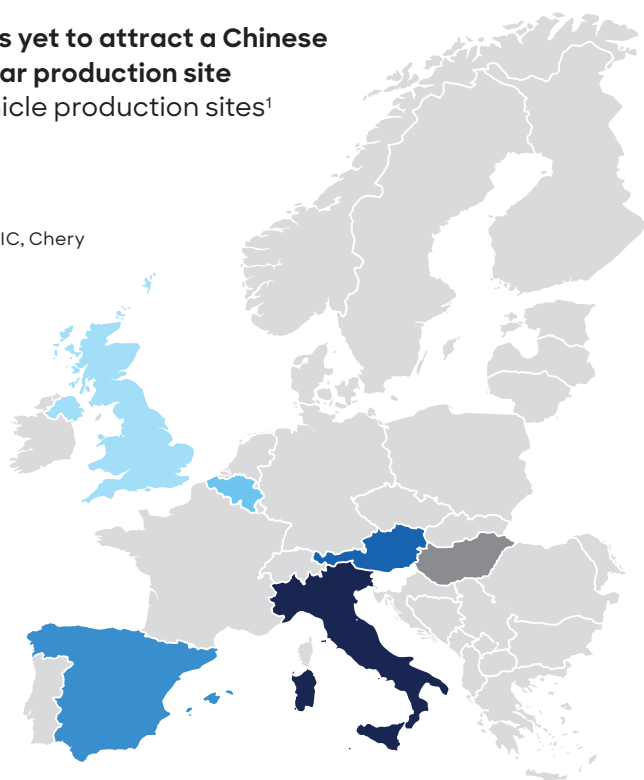
Vehicle demand in Germany remains well below historical peaks, while export volumes have been declining for years. Vehicle production fell from 5.9 million units in 2015 to 4.2 million in 2025. At the same time, significantly higher production costs are reducing competitiveness and prompting German OEMs to shift more production abroad.

Pressure is mounting from another direction, too. Chinese OEMs are focusing increasingly on Europe and using aggressive pricing to gain market share, further squeezing margins. Their share of European registrations rose from 0.1 percent in 2018 to 5.2 percent in 2025 and is forecast to reach 12.1 percent by 2030. Chinese manufacturers are also establishing production in Europe – but, notably, not in Germany.

Germany has yet to attract a Chinese passenger car production site

Planned vehicle production sites¹

- Chery
- Geely
- Leapmotor, SAIC, Chery
- XPENG
- Leapmotor
- BYD



¹ Plants > 20,000 vehicles p.a. until 2030

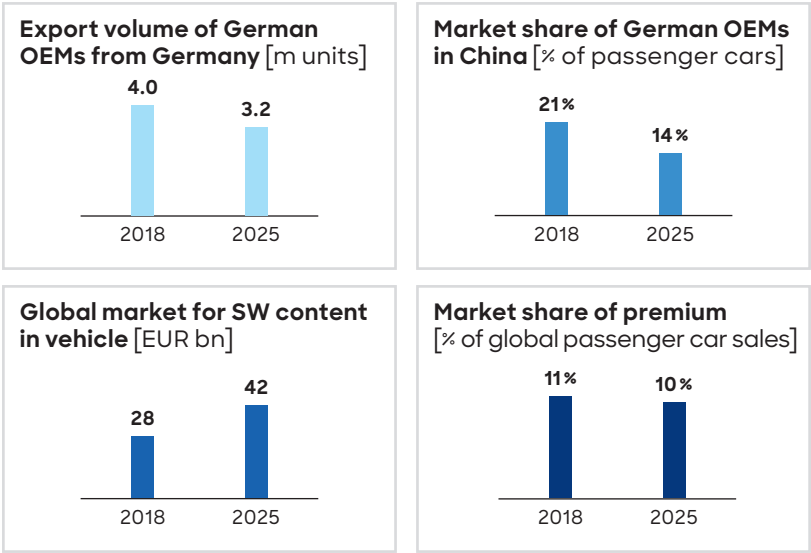
Source: Mobility Global LV Sales Forecast July 2026

Germany's traditional automotive strengths have turned into structural disadvantages

For decades, Germany's automotive success model rested on mutually reinforcing advantages. Global demand supported high factory utilization, while strong growth in China generated disproportionate margins through premium positioning. Hardware excellence and the global reputation of German engineering reinforced that position.

Those advantages are now much weaker. Regionalization is reducing exports and prompting OEMs to relocate production closer to target markets, while German manufacturers are losing ground in China. At the same time, Germany's high energy and labor costs are becoming increasingly difficult to absorb as productivity is not keeping pace. Low investment in automation and digitalization is also holding back productivity, while differentiation is shifting from hardware toward software and connectivity. The result is a fundamental reversal of the old model: strengths that once reinforced Germany's automotive position are now increasingly working against it.

Key indicators show Germany is losing its automotive edge



Source: VDA Annual Report 2025 and Automotive Industry Overview 2024/2025, Global Mobility LV Sales Forecast July 2026

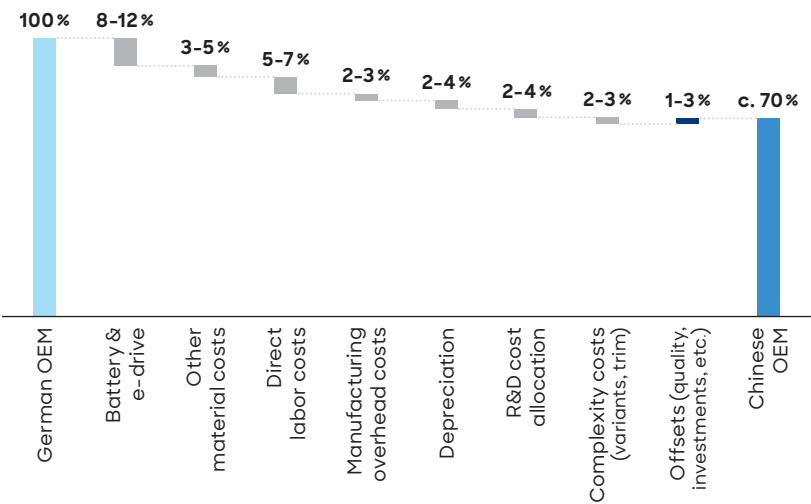
German OEMs are too slow – Chinese competitors remain cheaper

Germany's homegrown OEMs and suppliers have not responded decisively enough to changing conditions. German OEMs require 48–60 months to develop a new vehicle model, compared with just 18–24 months for Chinese new energy vehicle (NEV) OEMs. German manufacturers still rely heavily on sequential processes and extensive validation, while Chinese competitors make greater use of parallelization and a minimum viable product (MVP) approach. Chinese manufacturers also respond more closely to consumer needs.

Cost competitiveness is another major challenge. Chinese OEMs enjoy a vehicle cost advantage of around 30 percent, supported by greater vertical integration and lower factor costs. Crucially, about half of this advantage remains even when production is localized in a European best cost country. The gap is therefore not simply a function of producing in China: Chinese manufacturers retain a meaningful structural cost advantage even with a European production footprint.

Chinese OEMs have a built-in cost advantage

Vehicle costs: German vs. Chinese OEMs; German OEM = 100



1 German OEM with value creation, supplier ecosystem, and production in Germany, Chinese OEM with value creation, supplier ecosystem, and production in China

Source: Roland Berger

When it comes to cutting excess capacity, Germany is dragging its heels

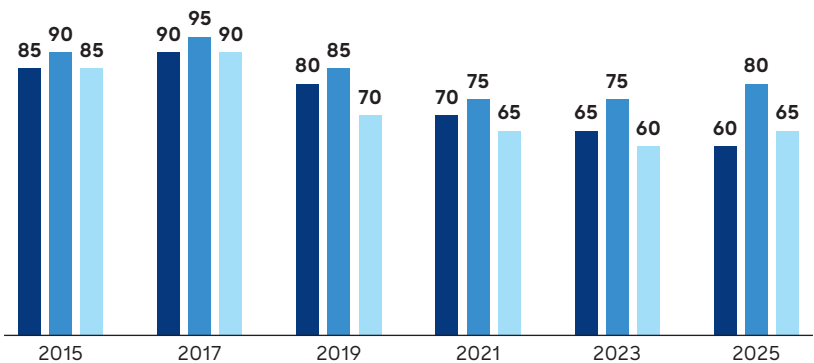
Germany has not adjusted its automotive production capacity fast enough. Declining export volumes have collided with almost unchanged capacity, leaving plants in Germany utilized far below the European average. At the same time, gross value added has fallen sharply while employment levels have remained largely stable, leaving the industry with a workforce and production footprint that have adjusted much more slowly than its economic output.

The consequences are visible in manufacturing costs. High fixed costs at low utilization push unit costs well above the European benchmark and further weaken competitiveness. Germany's automotive industry therefore needs to bring capacity much more decisively into line with lower production volumes.

Underutilization is driving up the cost of producing in Germany

Production and value creation at German OEMs

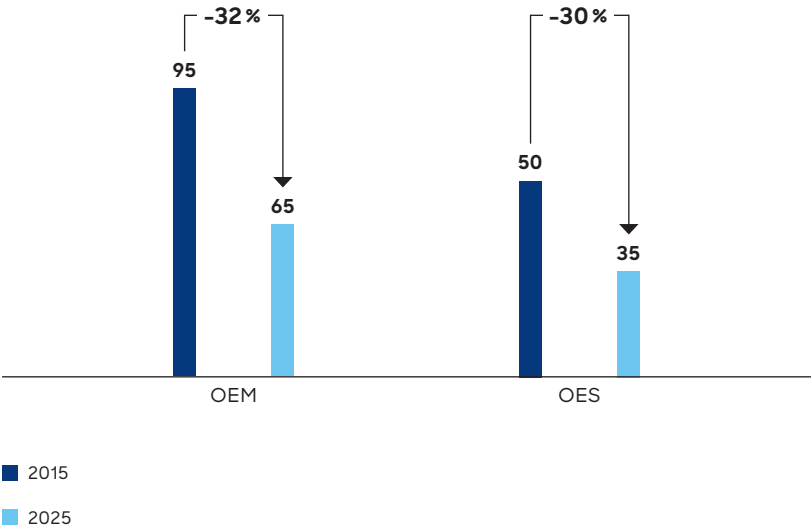
Average OEM plant utilization
[% of capacity]



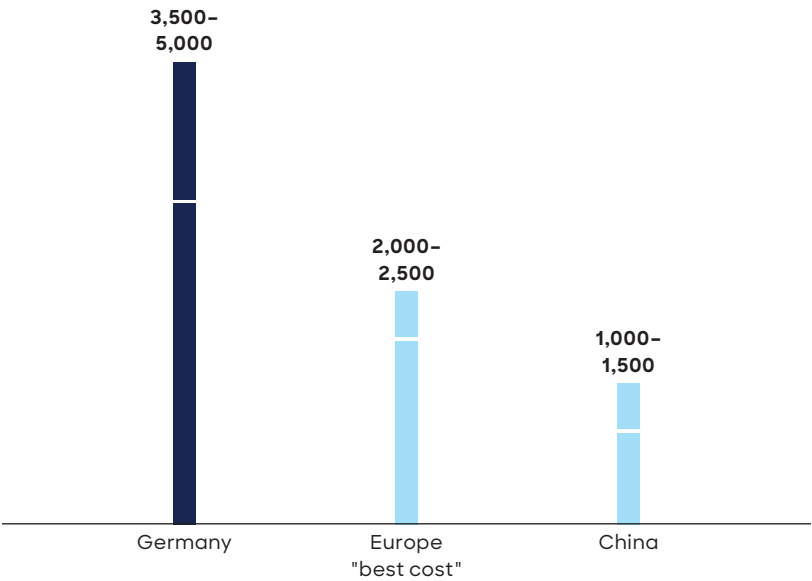
- German OEMs in Germany
- German OEMs in rest of Europe
- Average Europe

Source: Reuters/GlobalData, ACEA, VDA

Gross value added of German automotive industry
[nominal; EUR bn]¹



Manufacturing costs per vehicle
[EUR/vehicle]



¹ Based on gross value added by OEMs and OESs
Source: Reuters/GlobalData, ACEA, VDA

Margins are falling as Germany's market position erodes

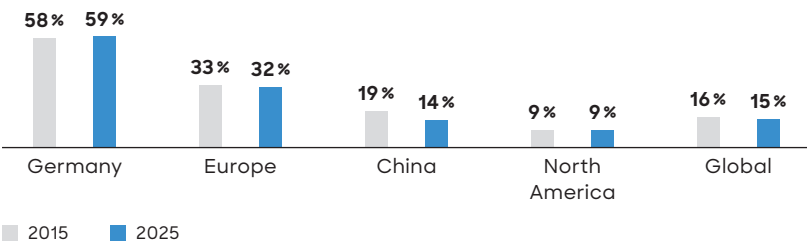
The pressures described on the previous pages are now visible in financial performance. German OEM profitability has fallen sharply since the post-COVID peak in 2021/22. The deeper structural problem is the loss of the exceptional profits generated in China for many years: these helped compensate for weaker profitability in Europe, but that cushion has now largely disappeared and is unlikely to return. At the same time, Chinese manufacturers are increasing competitive pressure with affordable, technologically advanced electric vehicles.

For suppliers, the challenge is equally fundamental: traditional and battery components are becoming increasingly commoditized, while value is shifting toward software and other areas with greater pricing power. Average earnings before interest and taxes (EBIT) margins at the five leading traditional German automotive suppliers in our analysis fell from 6.9 percent in 2018 to 0.7 percent in 2025. Together, these trends point to a gradual erosion of Germany's position across the automotive value chain.

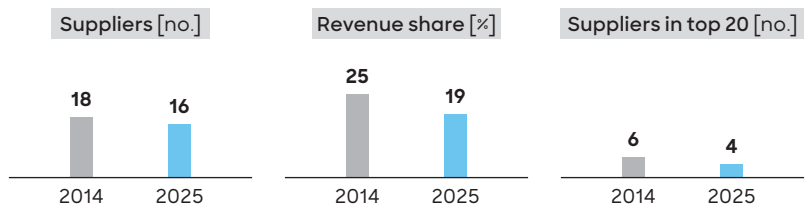
Germany's automotive market position is eroding

Market position of German OEMs and suppliers, 2014/15 & 2025

German OEM market shares, 2015 vs. 2025 [%]



Share of German suppliers in the global top 100



Source: Global Mobility, company information

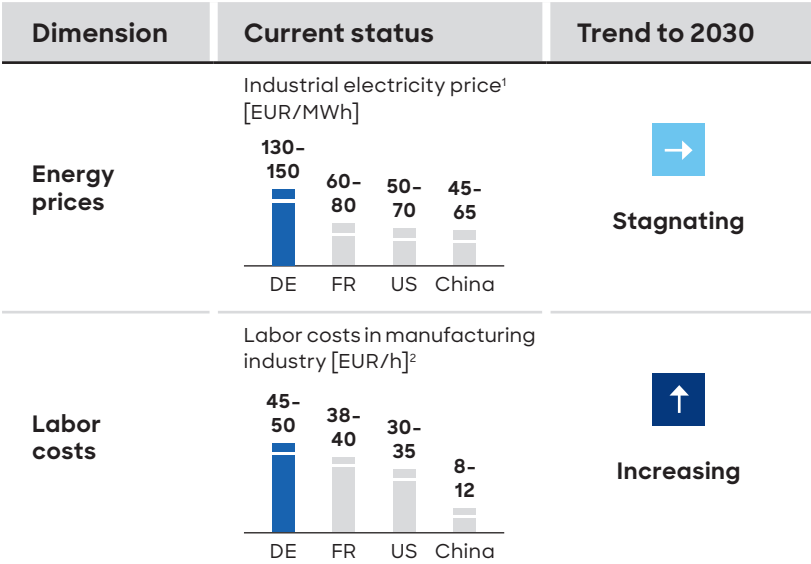
The diagnosis is clear – Germany needs an automotive reset

Germany's overall economic conditions will remain challenging in the years ahead. Energy prices are unlikely to return to pre-2022 levels, while inflexible labor regulations are creating structural wage pressure. Underinvestment in automation and digitalization cannot be caught up quickly, and artificial intelligence (AI) adoption in Germany remains slower than in the United States and China.

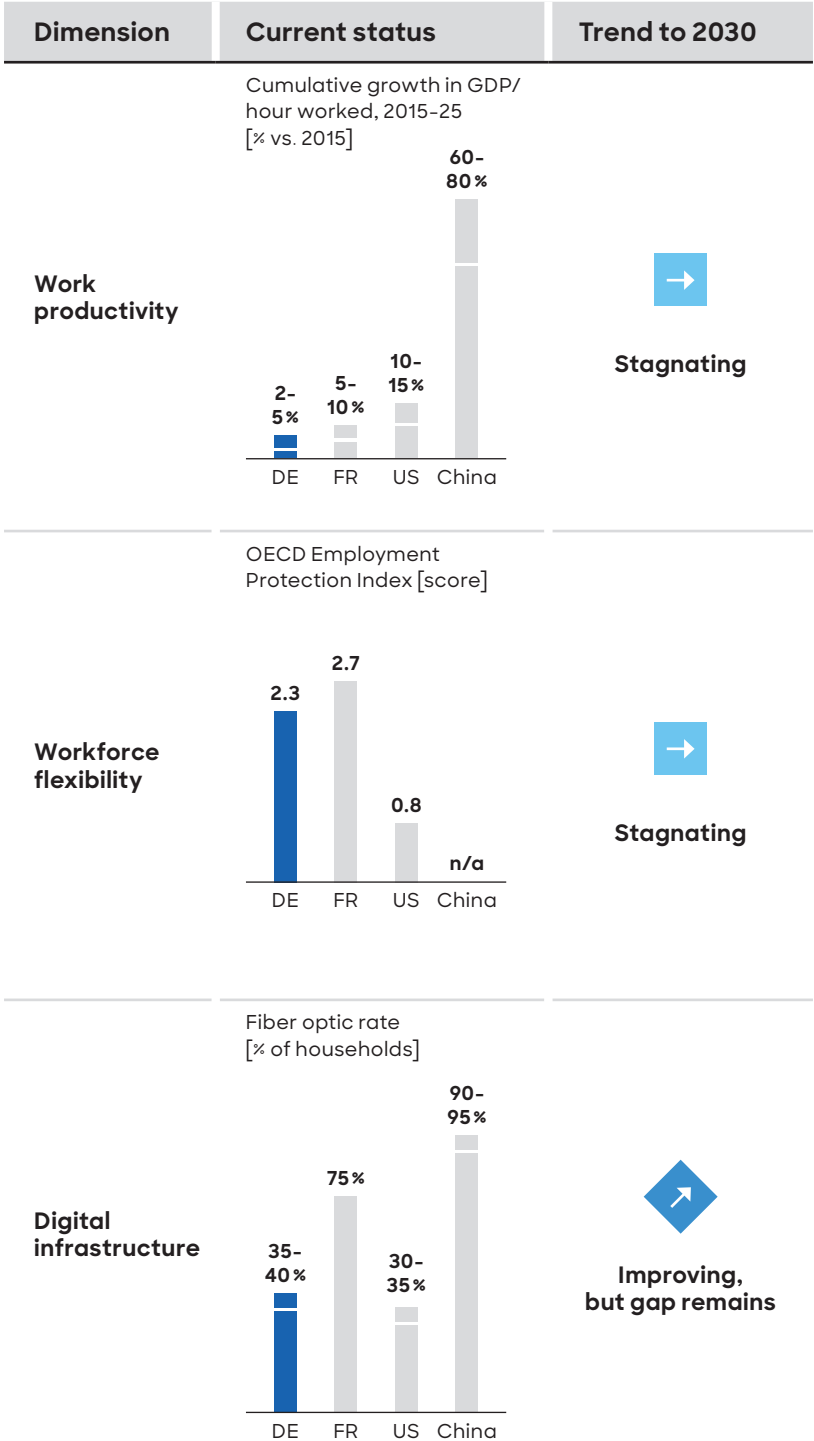
This makes the required response more fundamental: Germany needs an automotive reset. That means painful consolidation as the industry streamlines its footprint, while improving the conditions for manufacturing at home. Germany's automotive sector still has the ability to master the transformation, but doing so will require a more radical approach than in the past. Even under favorable conditions, further job losses will be unavoidable. But with the right strategic decisions, a profitable core of automotive value creation can remain in Germany – albeit on a significantly smaller scale than today.

Germany's economic conditions will remain challenging through 2030

Outlook for key location factors



1 Includes taxes, fees and charges; bulk consumer rates at locations relevant to the automotive sector; 2 Includes labor-related additional costs



Source: IEA, Eurostat, US Energy Information Administration (EIA), US Bureau of Labor Statistics, IW Köln, ILOSTAT, OECD, World Bank, FTTH Council Europe, DESI Index of the European Commission, MIIT

The auto industry can adapt, but Germany's industrial base risks decline

For automotive companies, safeguarding competitiveness increasingly means looking beyond Germany. Greater use of Eastern Europe can cut labor costs by 60–70 percent while keeping production within the European market. Capacity can also be expanded in growth regions, localizing production where demand is rising and factor costs are more competitive. Technology partnerships offer another route: German manufacturers can work with Chinese technology players in areas such as software and battery chemistry, or with US hyperscalers in cloud and artificial intelligence, rather than developing everything in-house. As Chinese OEMs localize production and supply chains in Europe, German suppliers can also compete for their business, while Germany itself has an opportunity to attract some of that investment.

Furthermore, automotive companies will need to pursue radical cost reduction. Portfolio rationalization and platform consolidation can reduce complexity, while simpler vehicles and greater standardization can lower costs further. Consolidation will also be required across the supplier landscape, including mergers and acquisitions (M&A) and orderly exits for suppliers that are no longer competitive.

At the same time, Germany remains a structurally difficult manufacturing location. Industrial electricity prices remain two to three times higher than in the United States or China. Labor costs rank among the highest globally. Workforce flexibility is also limited: Germany has the strictest employment protection in the Organisation for Economic Co-operation and Development (OECD), with plant closures requiring long lead times and costly social plans. Productivity growth has stagnated after years of underinvestment in automation, and planning and permitting processes remain several times longer than at competing locations.

The problem is that what strengthens individual companies may well weaken Germany as a manufacturing location. Relocating production or expanding capacity in lower-cost markets shifts value creation away from Germany as a whole. Germany thus risks entering a self-reinforcing cycle: as manufacturing relocates, jobs are lost and the domestic automotive ecosystem shrinks, making Germany less attractive for future production and investment. Ultimately, without coordinated action, the pursuit of self-optimization risks creating a downward spiral for Germany's industrial base.

The German automotive industry needs a radical approach to master the transformation

The German automotive industry still has the ability to master the transformation, but incremental adjustment will no longer be enough. Production capacity must be brought into line with lower volumes. Underutilized or undersized plants need either a viable alternative use or an orderly closure, with target utilization above 80 percent by 2030. Workforce consolidation will also be necessary over the coming years, even as companies continue recruiting for capabilities where skills remain scarce.

The industry also needs to move much faster. Development cycles can be shortened by stepping up the use of virtualization and AI, supported by pre-qualified modules in areas that do not differentiate the product. Development cycles should be shortened to 24–30 months rather than today's 36–48 months. More decentralized decision-making can reinforce this by reducing management layers and committees and increasing decision speed; it can also allow companies to accept more risk in pursuit of new opportunities.

Technology spending will also have to change. Companies will need to direct their research and development (R&D) resources more toward software and electronics, and outsource activities that do not provide differentiation. Specifically, they should raise the share of R&D budgets and employees devoted to software and electronics from around 25 percent today to more than 50 percent by 2028, while keeping their overall R&D budget broadly constant.

Finally, complexity must be reduced. Fewer model lines and significantly fewer variants will allow greater standardization and more consistent design-to-cost. Shared modular systems across OEMs can reduce duplication further, challenging the assumption that every component must provide differentiation. Additionally, the supplier landscape will need to consolidate through M&A or orderly market exits where businesses are no longer competitive.

Industry action will not be enough: Germany must improve the framework conditions

The automotive industry can do much to improve its own competitiveness, but securing a viable manufacturing base in Germany will also require changes to the surrounding framework conditions. One key area for improvement is skills. A large-scale qualification initiative could help employees move into areas where capabilities remain scarce, using modular, practical formats rather than relying mainly on full-time training. This should be directed at an estimated 50,000-80,000 employees a year and supported jointly by government and industry.

Germany needs a more competitive industrial electricity price and much faster approval processes for industrial infrastructure. Investment in automation and digitalization should be encouraged through targeted depreciation measures. Greater flexibility will also be needed when companies adjust their industrial footprint, with faster procedures for restructuring locations and support for employees affected by those changes.

The legal framework should also make it easier for companies to cooperate where they face common structural challenges. We see a case for clearer legal parameters for pre-competitive cooperation between OEMs and suppliers in areas such as platform standardization. Regional innovation clusters could provide another lever by linking industry more closely with research institutions and pilot production.

There are already signs that substantial change is possible in practice. For instance, the European Semiconductor Manufacturing Company (ESMC) is building a new semiconductor fab in Dresden with a strong automotive focus. Volkswagen is investing in its "unboxed" production concept, from which it expects productivity gains of more than 50 percent. BMW says its Neue Klasse architecture will cut high-voltage battery costs by 50 percent and vehicle costs by 25 percent. Continental, meanwhile, has been restructuring and carving out its automotive electronics division, with its EBIT margin improving from between zero and two percent in 2023 to four to five percent in 2025. Clearly, transformation can work: the challenge is to move from isolated success cases to change at scale.

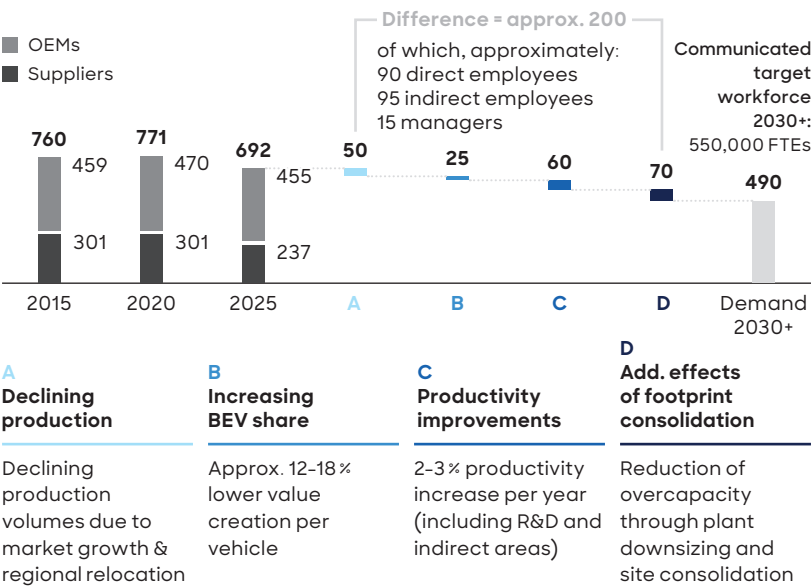
Even under favorable conditions, further job losses are unavoidable

Employment in Germany's automotive industry has already fallen substantially: the combined workforce of OEMs and suppliers declined from 771,000 full-time equivalents (FTEs) in 2020 to 692,000 in 2025. But the adjustment is far from complete: even under favorable conditions, around 200,000 further job losses over the next five years are unavoidable.

Several structural forces are driving this decline. Vehicle production in Germany is expected to fall further as growth shifts to other markets and production becomes more regionalized. The increasing share of BEVs will also reduce the amount of value creation per vehicle by around 12-18 percent. At the same time, productivity improvements of two to three percent a year will reduce labor requirements, including in R&D and other indirect functions. And reducing overcapacity through plant downsizing and site consolidation, while essential to restoring competitiveness, will inevitably mean fewer jobs.

Germany's automotive workforce will shrink significantly by 2030

Employment in Germany's automotive industry, 2015 to 2030 & beyond ['000 FTEs]



1 Based on announced workforce reduction programs from OEMs and suppliers

Source: Federal Statistical Office of Germany, Mobility Global, Roland Berger

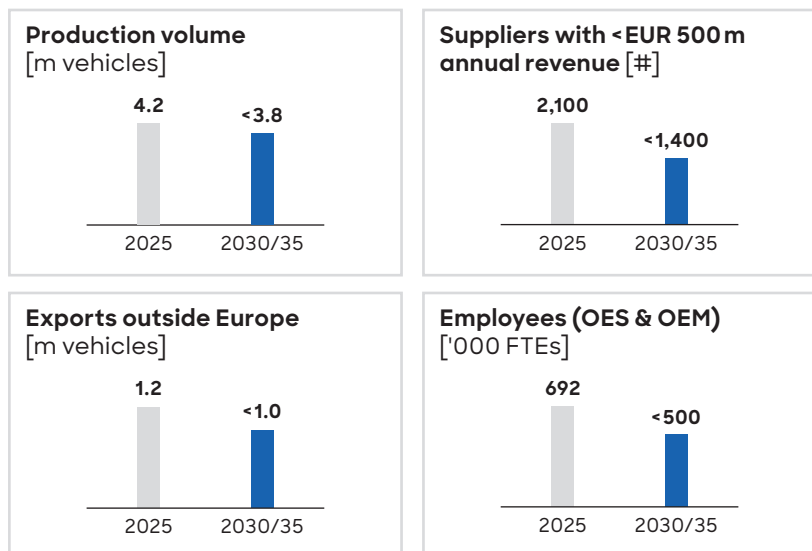
A profitable automotive core can remain in Germany – but at a much smaller scale

With a major reset, Germany's automotive industry can remain an important source of value creation. In a potential target state for 2030/35, vehicle production would be below 3.8 million units and capacity below 5.0 million, while employment across OEMs and suppliers would be under 500,000 FTEs.

The objective for the sector is a smaller industrial footprint combined with stronger economics. With the right adjustments, capacity utilization would need to increase from around 60 percent today to more than 75 percent, helping address the fixed-cost burden created by underutilized plants. At the same time, average OEM margins would need to rise from around six percent to between seven and nine percent, while supplier margins would increase from around three percent to five or six percent. In this way, Germany would retain a profitable core of automotive value creation, but one that is substantially smaller than today and better aligned with the realities of the global market.

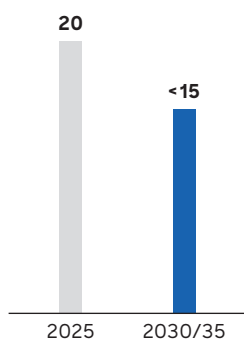
A smaller automotive footprint can support stronger economics

Target state for Germany's automotive industry after 2030

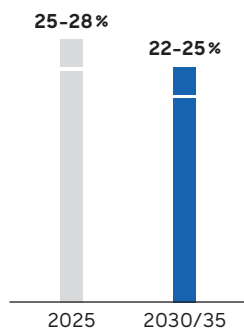


Source: Roland Berger

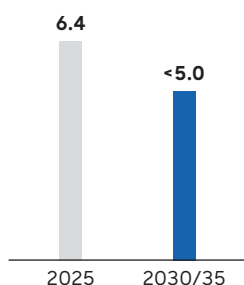
No. of vehicle plants¹



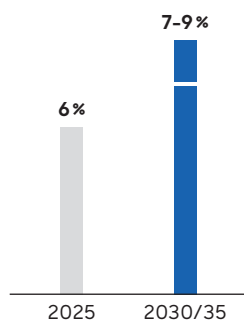
Share of global automotive patents [%]



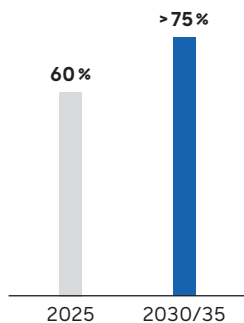
Vehicle production capacity [m units]



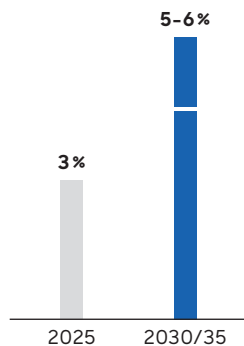
Average OEM margin [% of revenue]



Capacity utilization [% of total capacity]



Average supplier margin [% of revenue]



¹ > 50,000 units of capacity

From diagnosis to execution – How Roland Berger can help

Germany's automotive reset will require companies to translate the diagnosis into concrete decisions and then execute them at pace. The objective is not to preserve the old model of global success, but to manage a potentially painful consolidation while securing a sustainably profitable automotive core in Germany. For automotive leaders, four questions now matter most:

1

Which parts of our German footprint can remain sustainably competitive?

Roland Berger can help define the target footprint and translate it into site-level capacity and investment decisions, including alternative uses or the orderly closure of underutilized plants.

2

How ambitious should we be on cost reduction and development speed?

We can identify structural cost gaps and help accelerate development through greater use of virtualization and AI, while reducing complexity through techniques such as portfolio rationalization and design-to-cost.

The goal is clear: a smaller automotive footprint with stronger economics. Roland Berger can help turn that target state into concrete decisions and sustained execution.

3

Which capabilities should remain in-house, and where are partnerships the better route?

We can help refocus R&D on software and electronics and identify non-differentiating activities for outsourcing. Where developing everything in-house is no longer the best option, we can assess technology partnerships.

4

How can we execute the transformation at pace?

At Roland Berger, we specialize in translating target states into executable transformation roadmaps, with clear ownership and performance steering aligned with objectives and key results (OKRs). At the same time, we support the more decentralized decision-making needed to increase speed.

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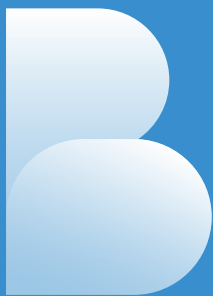
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