



**23rd Annual Global Automotive
Executive Survey**

Auto leaders prepare to seize big opportunities

**Will they choose
the right road?**

kpmg.com/automotive



Foreword

The 23rd edition of the KPMG Global Automotive Executive Survey comes at a momentous time for the industry. Every facet of automotive—from product development, to manufacturing, to supply chains and the customer experience—is undergoing profound changes, driven by the powerful convergence of the automotive and technology sectors.

A year ago, automotive executives sensed a change was coming and the future was theirs to seize. In the latest survey, translated into 20 languages, more than 900 executives in 30 countries remain optimistic, but the mood is tempered by realism. The exciting future is no longer theoretical—more than half a trillion dollars have been committed to developing a dazzling array of new vehicles built in advanced manufacturing facilities. They are investing in electric-battery plants, semiconductors, autonomous systems, software, and electronics. (Readers can go to our [website](#) to interact with the data and view graphical results by country, company type, and job title.)

To deliver on the promise of those billions of investments, car companies will take many roads to their destination. Some roads will lead to success, others could end in abject failure. To enable

executives to navigate the future, the survey findings help frame some strategic questions:

- Should we go it alone, form alliances, or do joint ventures? With whom and why?
- How should we allocate capital among our different powertrain ecosystems?
- What role will contract manufacturing play in the future of the industry?
- What does a reimagined customer experience look like?
- How important should autonomous systems be to our strategy?

These and other questions are growing more urgent by the day, as competition intensifies. For some, the answer is the status quo. For others, it is diversification and being a fast follower. For still others, the path is to be bold and go all-in with new operating models. Strategic flexibility has never been more important. So yes, some roads will lead to success and others will end in failure. For the executives who responded to our survey, the future is in their hands.



Gary Silberg

Global Head of Automotive
KPMG International

Main findings



The global outlook

- Auto executives are more optimistic than in 2021 about the prospects for long-term, profitable growth. Eighty-three percent are confident of higher profits over the next five years, compared with 53 percent in 2021.
- They have become more cautious about near-term results, however, given the headwinds facing the global economy: 76 percent are concerned that inflation and high interest rates will adversely affect their business in 2023.

- Auto executives are very optimistic about the prospects for after-sale revenues. Sixty-two percent are very confident that consumers will be willing to pay monthly subscription fees for software services such as EV charging, car-maintenance analytics, advanced driver assistance, and other over-the-air updates.
- Executives think automakers continue to see the insurance market as a key growth opportunity, but they have shifted focus from competing against insurers to partnering with them or selling them data.



Future of powertrains

- Expectations of global electric vehicle (EV) sales in 2030 are becoming more realistic. In 2021, executives predicted that EVs would capture between 20 percent and 70 percent of the market by 2030. Now they are taking a more cautious view of the challenges of shifting to battery power, with forecasts varying from 10 percent to around 40 percent of sales by 2030.
- Specifically, executives have greatly tempered their expectations about EV sales growth in India (poor infrastructure), Brazil (biofuels as an alternative) and Japan (a focus on hybrid and energy sources other than batteries).
- There is, though, more confidence that EVs will achieve cost parity with internal combustion engine (ICE) vehicles without government help. Eighty-two percent believe that in the next 10 years EVs can be adopted widely without subsidies. And 21 percent, three times the proportion in 2021, do not think governments should provide any direct consumer subsidies for EVs.



Vulnerable supply chains

- Executives remain very concerned about supplies of commodities and components, especially semiconductors, as well as items such as electrical steel and lightweight materials that are crucial to increase fuel efficiency and extend battery range.
- In response to the vulnerability of supplies, car makers are focusing on near-shoring and on-shoring, in an effort to reduce their reliance on only one or two countries.



Digital consumers

- With the proliferation of new models, entrants, and technologies, executives believe consumer buying decisions in the next five years will focus on driving performance and brand image. Data privacy and security are also key factors in purchase decisions.
- Car customers are expected to shop increasingly online, opening opportunities for manufacturers to sell directly to consumers, as well as online through dealerships. Traditional e-commerce players will also compete for car purchasers.



New technologies and new entrants

- Many executives think Apple will enter the car market and become a leader in EVs by 2030, moving to fourth place in the survey from ninth in 2021. Tesla is expected to remain the market leader in EVs.
- Whichever company becomes the leader, nine in 10 executives say start-ups will have a sizeable effect on the auto industry.
- More than one in five say they are extremely likely to sell non-strategic parts of their businesses, given the massive investments required to compete.
- Contract manufacturing will become even more strategic going forward.

The global outlook

Auto executives are very optimistic that the billions spent on investments in new factories and powertrains are going to yield big dividends. Eighty-three percent are confident that the industry will achieve more profitable growth over the next five years versus today. In 2021, only 53 percent were as confident.

Now car companies have to deliver on the promise, and executives know they will face multiple challenges. Obstacles include skills shortages, uncertain supplies of materials and components, a troubled geopolitical picture, and tough macroeconomic conditions. Seventy-six percent of respondents are concerned that inflation and high interest rates will adversely affect their business in 2023, compared with only 14 percent who are not.

There are significant differences in expectations. In the near term, net sentiment (those concerned/optimistic minus those who aren't) varies from 18 percent at one extreme to 93 percent at the other. Executives in China are the least concerned, while the rest of Asia and North America are more concerned, by a large margin.

Interact with the data

To see how expectations differ from one market to the next: [Explore now](#)

 If the workforce in the tech industry continues to shrink, this is a golden opportunity for auto-makers to acquire skills in crucial areas, such as development of future connectivity, including transport data, end-to-end user experience and secure mobile communications."

—James Walker, Automotive Principal, KPMG in the US





Future of powertrains

In just one year, the outlook has changed appreciably. The survey in 2021 showed that auto executives were very optimistic about the prospects for global EV sales. They estimated that EVs could capture as much as 70 percent of the market share by 2030. Since then, the top estimates have fallen to around 40 percent, which still indicates confidence. The range of forecasts has narrowed, too.

The decline in the estimate of EV penetration was particularly noticeable in India, Brazil, and Japan. India's infrastructure challenges mean that EV demand is likely to be much lower for cars than for two- and three-wheeled vehicles, which are not part of the survey. Brazil may focus less on electrification and more on alternative fuel, such as ethanol. And Japan's leading car manufacturers are likely to continue emphasizing hybrid vehicles and other potential energy sources such as hydrogen.

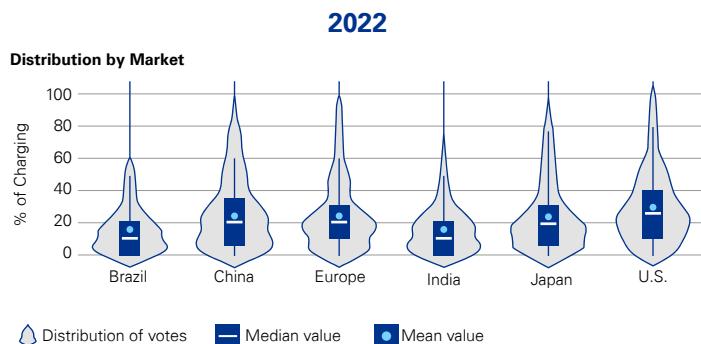
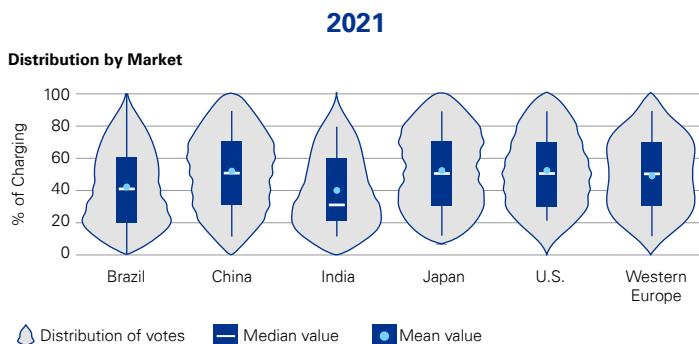
“The automotive industry faces challenges with high energy prices alongside a potential economic slowdown. There will be pressure to postpone investments that would reduce carbon footprint, but automakers need to stay focused on the importance of a long-term carbon-free future and make strategic investments in these new technologies.”

-Laurent Des Places, Partner, Head of Automotive, KPMG in France

The closer the expert is to the customer, the lower the EV share expectations seem to be. For example, US executives say car dealers expect EVs to capture 22 percent of the market by 2030, eight percentage points less than OEMs predict.

One reason for the overall reassessment is that automakers are confronting the sheer complexity of shifting the industry from internal combustion engines to batteries. It will affect every facet of the value chain, not just the sourcing of raw materials. It will change every step of the product lifecycle: the way the cars are made, how they are distributed, fueled (recharged), and serviced.

By 2030, what percentage of new vehicles sales do you believe will be battery-powered (excluding hybrids) within each market?



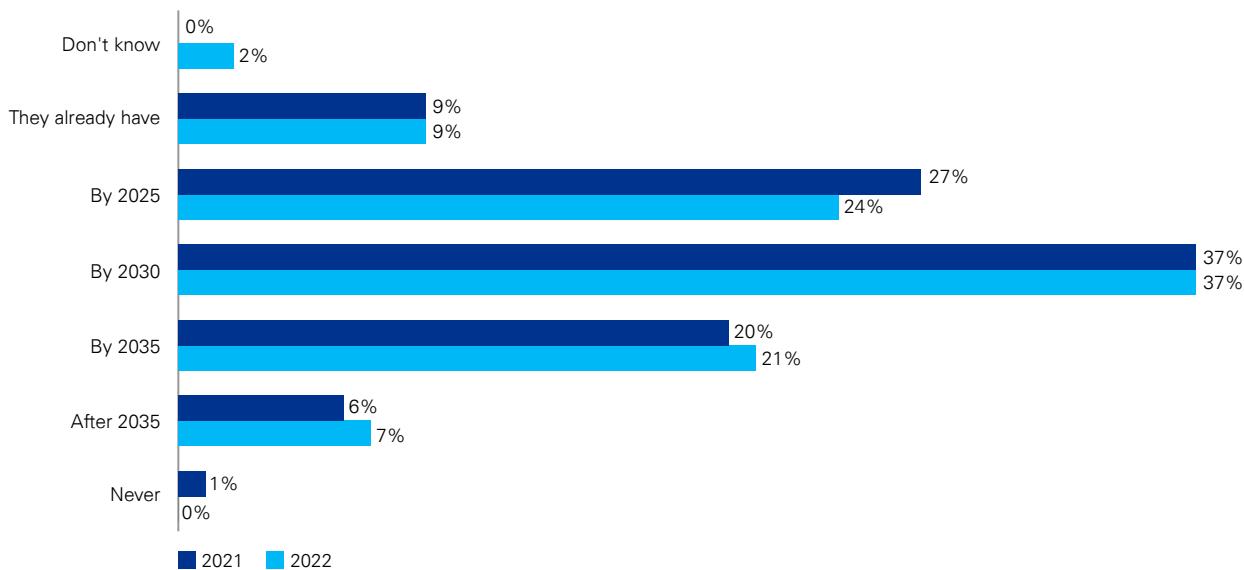
Underlying these EV sales expectations are some key predictions based on a growing confidence among manufacturers in the economics of EV car production. This can be attributed in part to the billions of dollars that have been invested in new plants and R&D. As EV output expands, costs are expected to fall due to economies of scale. Seventy percent of respondents expect that EVs will reach cost parity with ICE vehicles by 2030 without subsidies.

More than 80 percent of executives surveyed believe that EVs will achieve widespread adoption without government subsidies in the next 10 years. And the proportion in 2021 or respondents who do not agree that governments should provide direct consumer subsidies for EVs was 21 percent, three times the share in 2021. Such subsidies often distort markets and tend to complicate international trade. Some 78 percent say subsidies should be phased out at car prices ranging from \$30,000-plus to \$70,000-plus.

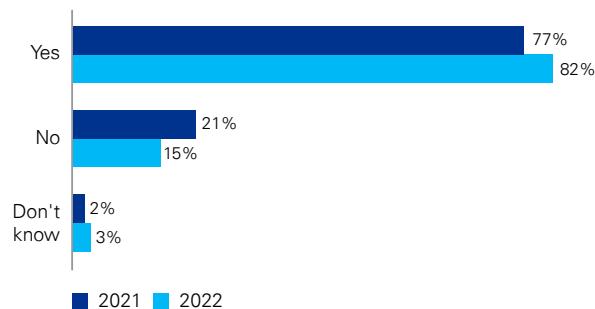
“With automakers placing huge bets on the future of EVs, they have to make them pay off. With this transformation, they must transition their workforce skills to align with the new direction and collaborate closely with partners to maximize the benefits for their ecosystem.”

—Andreas Ries, Automotive Partner, KPMG in Germany

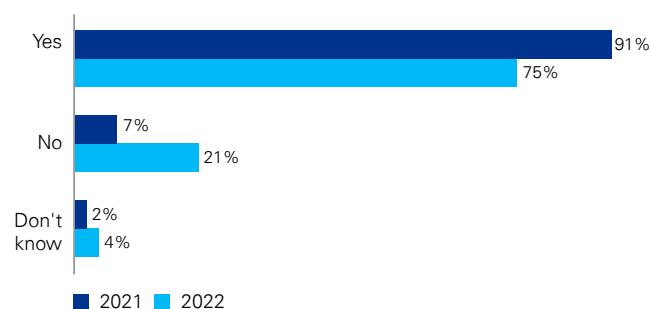
When do you believe battery electric vehicles will reach cost/affordability parity with ICE without any subsidies?



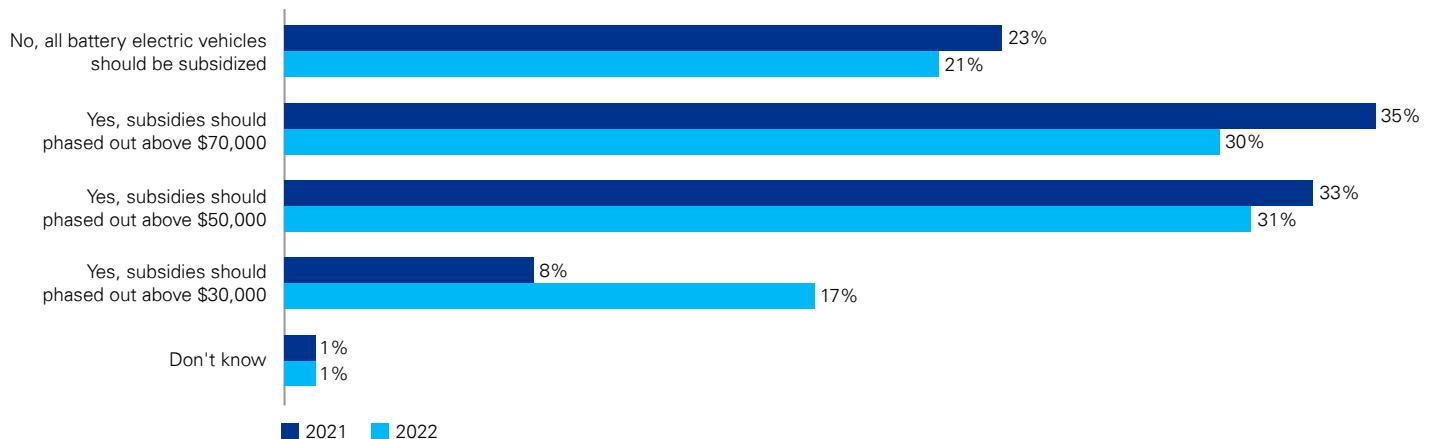
Do you believe battery-electric vehicles can achieve widespread adoption in the next 10 years without government intervention?



Some governments are providing direct consumer subsidies for battery-electric vehicles. Do you agree with this policy?



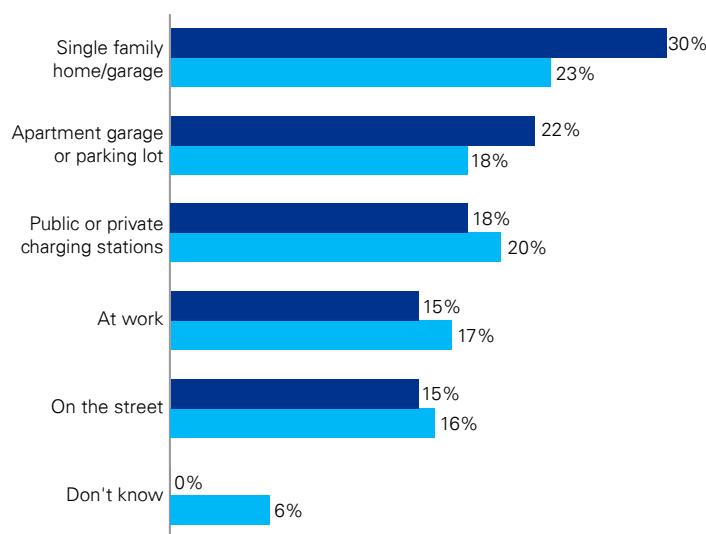
If yes, should the subsidies be phased out for vehicles above a certain vehicle price?



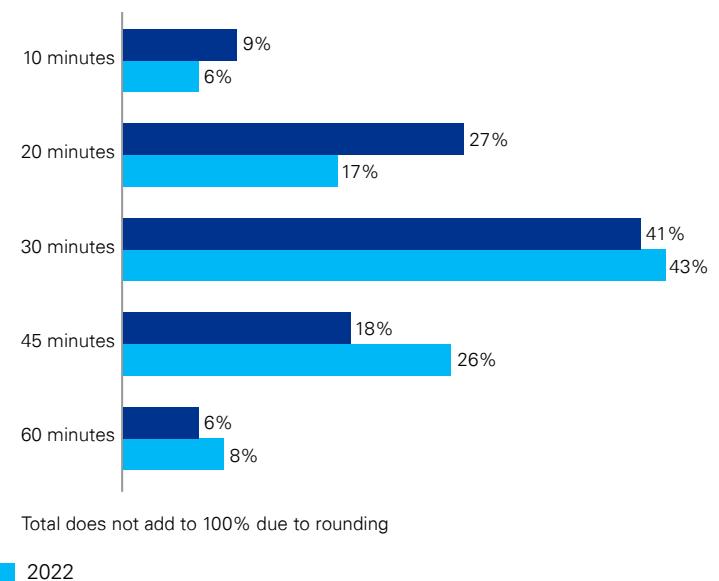
Perceptions of the infrastructure challenge are also shifting, as more government money is allocated for charging stations. While executives still think most charging will take place at consumer homes, a rising proportion of executives say owners will park at public charging stations, at work, or on the street.

There is more clarity about what the charging technology can do. More executives in 2022 expected consumers to wait longer for an 80 percent recharge than in 2021. Also, 26 percent say consumers would be willing to wait 45 minutes, eight percentage points more than in 2021. The proportion who believe consumers will only accept a 20-minute wait fell from 27 percent to 17 percent.

In your home country, where will owners charge their battery- electric vehicles?



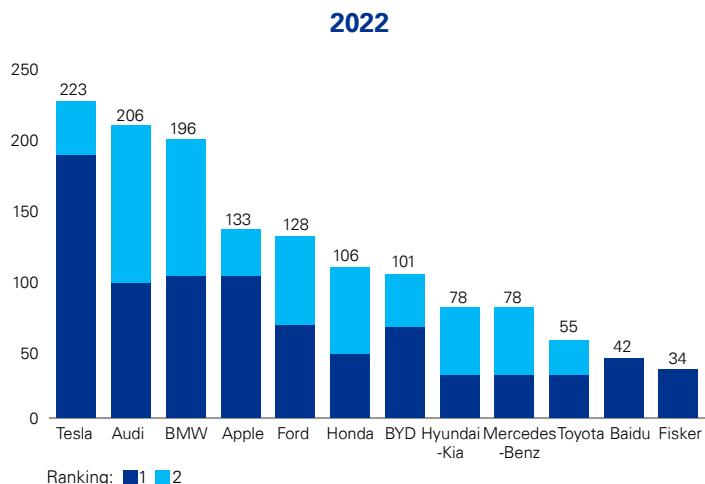
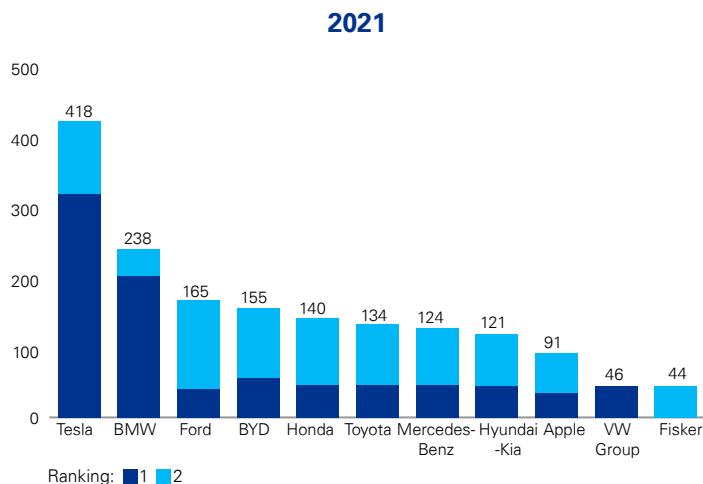
While traveling and running low on battery charge, how long will the typical consumer be willing to wait for an 80 percent or greater charge?



Auto executives still expect Tesla will be the market leader in battery-powered vehicles in 2030, the same as in 2021, but by a much narrower margin. One interesting change: Apple is now in fourth place, having risen from ninth position in 2021,

even though it has not yet produced or even announced a single car. BYD of China looks to be another strong contender. Auto executives will be watching closely for new entrants, because the field remains wide open.

Looking out to 2030, which of the following companies do you think will be the market leaders in electric vehicles?





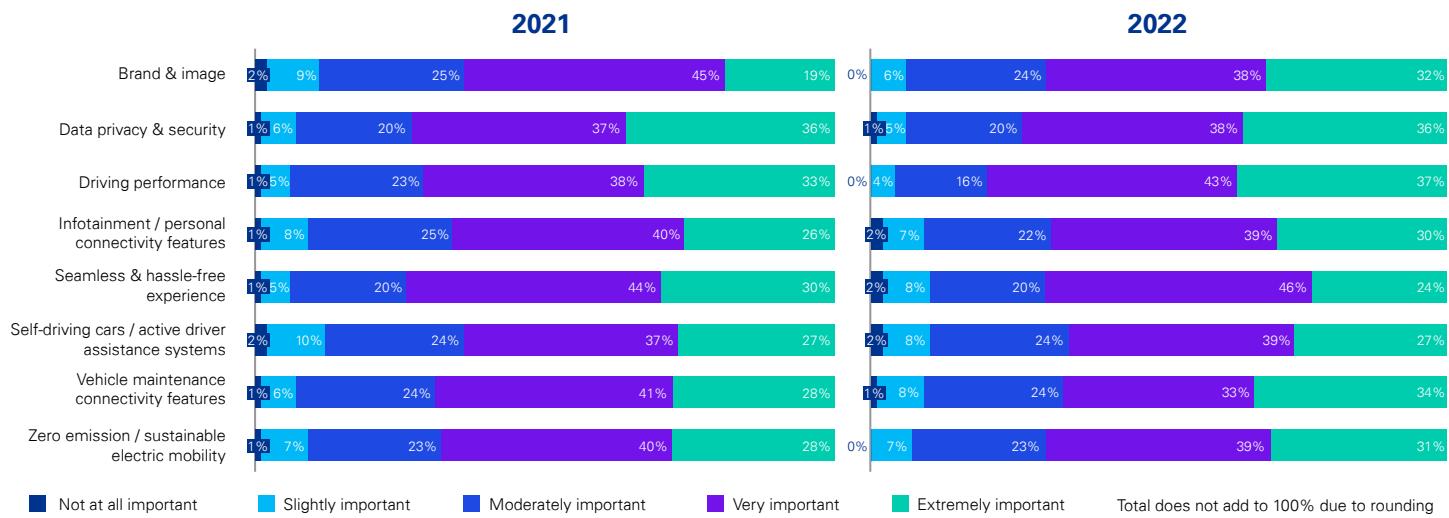
Digital consumers

Car buyers have an unprecedented array of choices for EVs. Auto makers have announced investments of more than \$500 billion in EV programs and 160 new EV models are slated for the global market in the next four years. More than 50 new manufacturers are jostling for market share. Company names like Rivian, Lucid, BYD, Xpeng, Nio, Fisker, and Vinfast have emerged in only the past few years.

The explosion of new auto manufacturers is driving significant changes in consumer car tastes, especially in terms of performance and branding. When executives are asked which factor is most important in the next five years when consumers buy a car, 80 percent, the highest number, focus on driving performance, a nine-percentage-point increase over the previous year. Given the range of options, consumers see automotive performance as a more critical differentiator than before, when performance was generally perceived as similar.

Branding is also a key differentiator. The survey shows a six-point increase in the importance of brand and image. With prices rising sharply, car buyers are raising their expectations. Also, with so many new models to choose from, branding becomes more important. In the field of EVs, the new brands may possibly have a “cool” cachet that consumers gravitate towards, and this is a critical trend to watch.

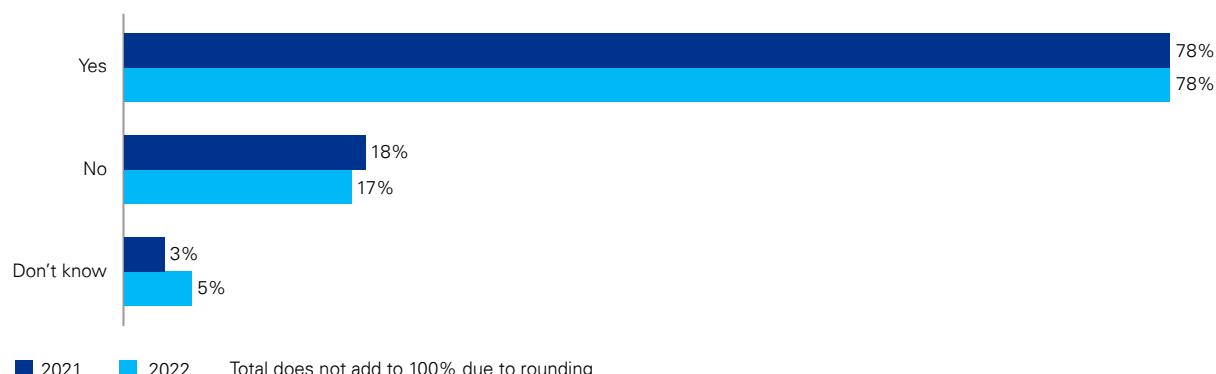
How important do you think the following features will be for consumers when deciding to purchase a car in the next 5 years?



Executives expect consumers to swing decisively to online: 78 percent predict that most vehicle purchases will be completed digitally by 2030. Within the same timeframe, auto executives expect 34 percent of new cars will be sold directly

to consumers by car manufacturers and the same proportion by dealers. In addition, traditional e-commerce platforms will be key players, along with new companies that specialize in online car sales.

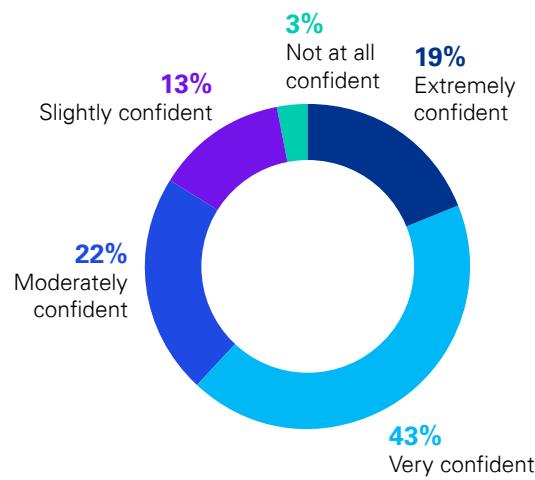
By 2030, do you believe the majority of new vehicle purchases will be completed online? (Excluding test drive)



Performance and image are not the only ways in which automakers expect to separate themselves from the pack. They also offer a wide range of software options that can create a different driving experience. Digitization will extend well beyond the point of sale to the entire functional and experiential life of the car, executives believe. Sixty-two percent say they are very confident that consumers will be willing to pay monthly subscription fees for such things as software services and advanced driver assistance systems (ADAS).

This revenue model is widely familiar to consumers who buy personal computers and then pay subscriptions for their software or those who buy monthly streaming entertainment services. If this prediction proves correct, such ongoing revenue streams are likely to help fatten automaker profit margins considerably. But given the attractive profits from subscriptions, car dealers are likely to want a share of the revenue, just as they will aim to increase their online car sales.

Many automakers are contemplating selling additional features and services as a monthly subscription (software services, maintenance, charging, advanced driver assistance systems, etc.) How confident are you that consumers would be willing to pay monthly subscription fees for this?



Given the amount of data that will be generated by each car and what it can tell about the driver, it is logical to expect automakers to want to participate in the market for car insurance. Executives think automakers will join forces with insurers, rather than competing against them. Only 7 percent predict that auto companies will compete directly with

insurers, half the level of the previous year. Nearly half (46 percent) expect them to partner with insurance companies and 44 percent expect automakers to sell car and driver data to the insurers. Directly entering the car insurance market appears to be a road that few automakers will follow.

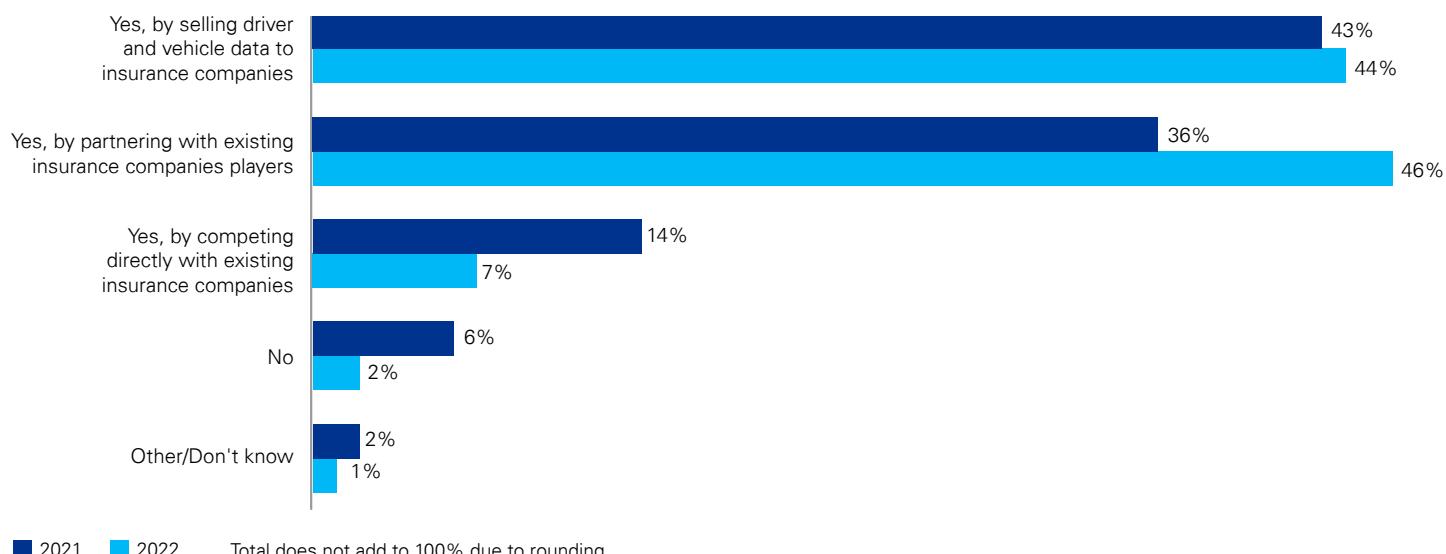
“The market for data knows few bounds; it will be hard for auto manufacturers and dealers to wall off the automobile data market from insurers and technology companies. The rising connectivity of cars will create a rapidly growing market for the data; whichever segment manages the data is likely to win big.”

-Richard Peberdy, Partner, Head of Automotive, KPMG in the UK

“Unfortunately, it would only take one or two highly publicized incidents of cyber breaches for car companies to lose their customers' trust. To prevent this from happening, the industry needs to make a concerted effort to mitigate and prepare for possible data attacks.”

-Vinodkumar Ramachandran, Partner, Head of Automotive, KPMG in India

Do you think automakers will successfully participate in the insurance market? If so, how?



■ 2021 ■ 2022

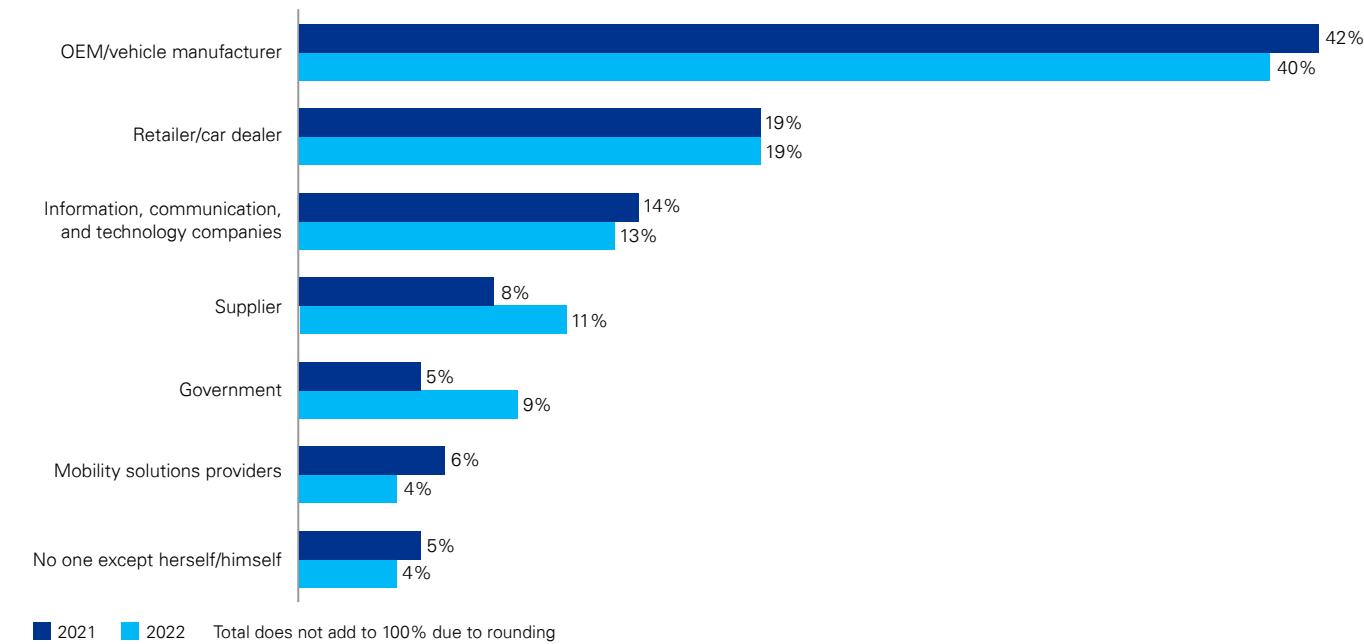
Total does not add to 100% due to rounding

The growing connectivity of cars raises cybersecurity risks that car companies have only recently begun to address. However, executives recognize its significance: 75 percent say it will be a very important factor in purchase decisions in the next five years.

Despite the fact that car makers have little track record in managing digital risks, 40 percent of executives say that

consumers would trust automakers most to safeguard the data, twice as many as car dealers. In fact, 80 percent of respondents say car manufacturers have adequate cyber security and data-privacy protection. These high expectations place the onus on the OEMs to safeguard the trust consumers may have in them; if they fail and hackers are able to exploit weaknesses in the system, that trust may evaporate very quickly.

Who do you think a consumer would trust to safeguard the data generated by the vehicle?



Do you believe automakers have adequate cyber security and customer data privacy protections in place?



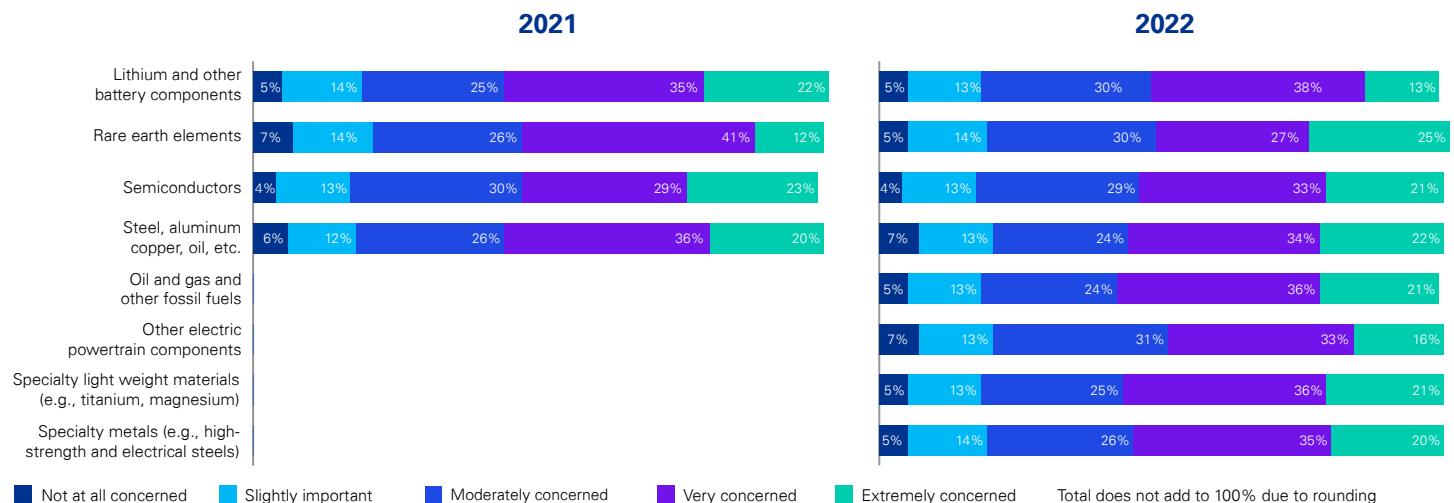


Vulnerable supply chains

The continuity of supplies of components and raw materials remains a source of high anxiety for executives. About half or more of respondents are very or extremely concerned about supplies of all eight commodities or components listed in the survey. Despite big, new investments in semiconductor manufacturing plants, procurement continues to be a near-term worry.

Two other categories should be noted. More than half of executives are very concerned about the supply of specialty metals such as electrical steel, a key component for EVs. A slightly higher number worry about lightweight materials, which are increasingly essential as heavy batteries add greatly to the weight.

How concerned are you about continuity of supply for the following commodities / components?



In response to such problems, automakers and their suppliers are making significant changes to their supply chain strategies. There is an increase over 2021 in the number of executives who say that near-shoring and re-shoring are very important, as well as the direct sourcing of raw materials and investments in suppliers. In the US, more than \$40 billion has been invested in 15 factories to make car batteries.

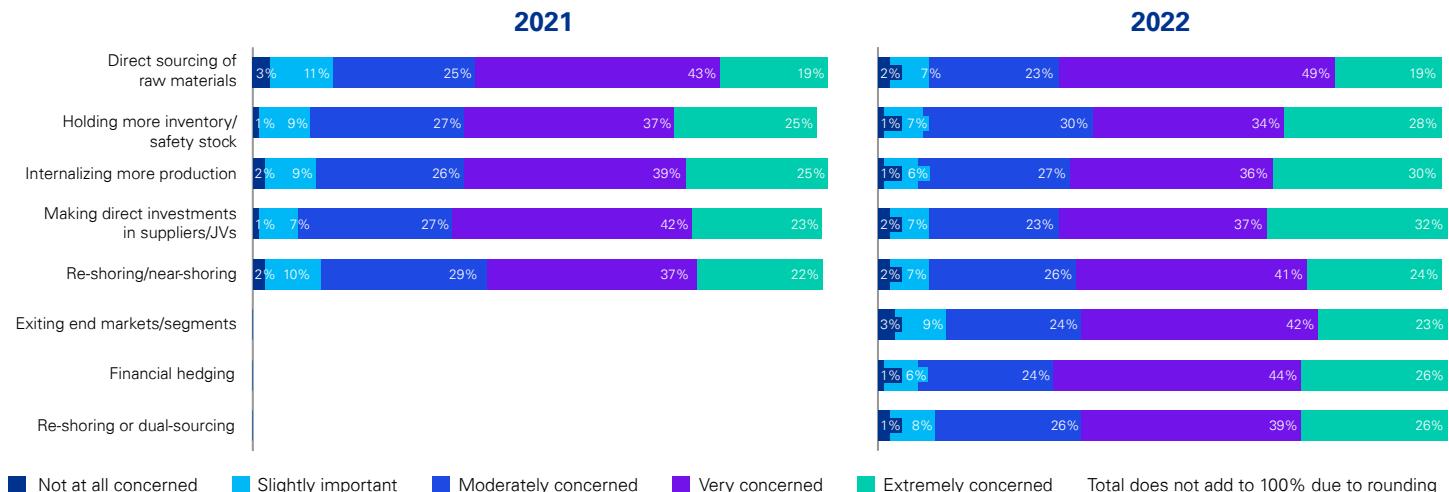
Local sourcing of raw materials, especially for battery components, is a high priority. Right now, much of the mining and processing is done in Asia and in China in particular. The number of new lithium, cobalt, and nickel mines and refineries that will be needed runs into the hundreds and on-shoring will be complex. Many of these must be located in the US and Europe. Expect supply constraints and commodity-price swings to continue.



Securing supplies of key raw materials and components will remain a consistent concern going forward. For various OEMs, the answer will be taking stakes in sector-specific companies that produce strategic ingredients. For others, it will include global alliances and partnerships at integral points along the supply chain."

-Goran Mazar, Partner, Head of Automotive and ESG, KPMG EMA and in Germany

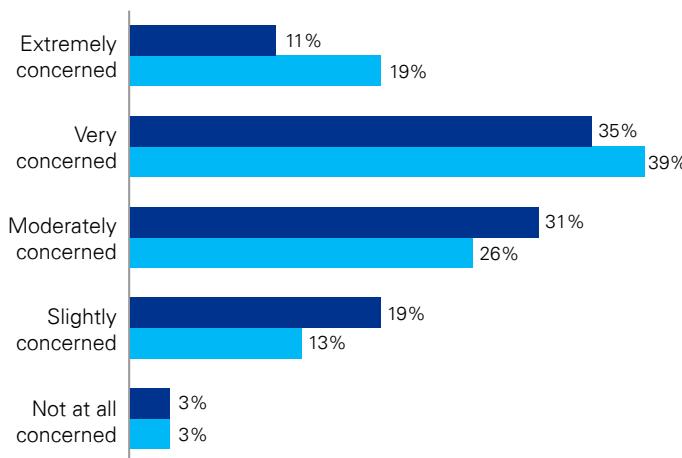
How important are each of the following to your supply chain strategy?



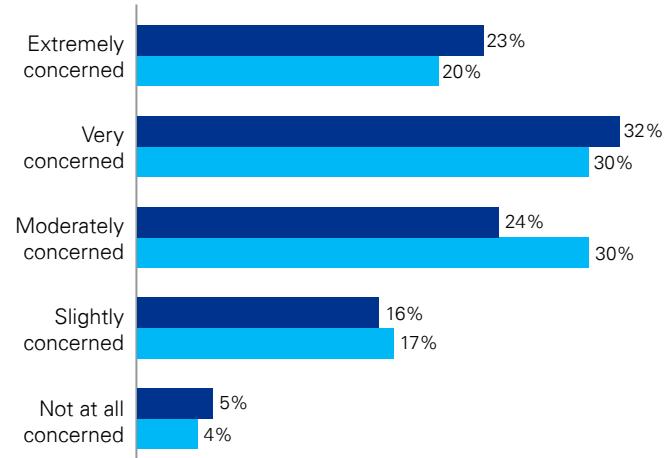
“ Recent years have highlighted supply chain vulnerabilities. To gain more control and mitigate risk, automakers are using technology to dig deeper into supply chains. They are also forming alliances, joint ventures and taking equity stakes in key suppliers with the goal of efficiency, continuity, and flexibility.”

-Seung-Hoon Wi, Partner, Head of Automotive, KPMG in South Korea

How concerned are you that the recent volatility in commodity prices will adversely impact your business in the next 12 months?



How concerned are you that labor shortages or wage increases will adversely impact your business in the next 12 months?

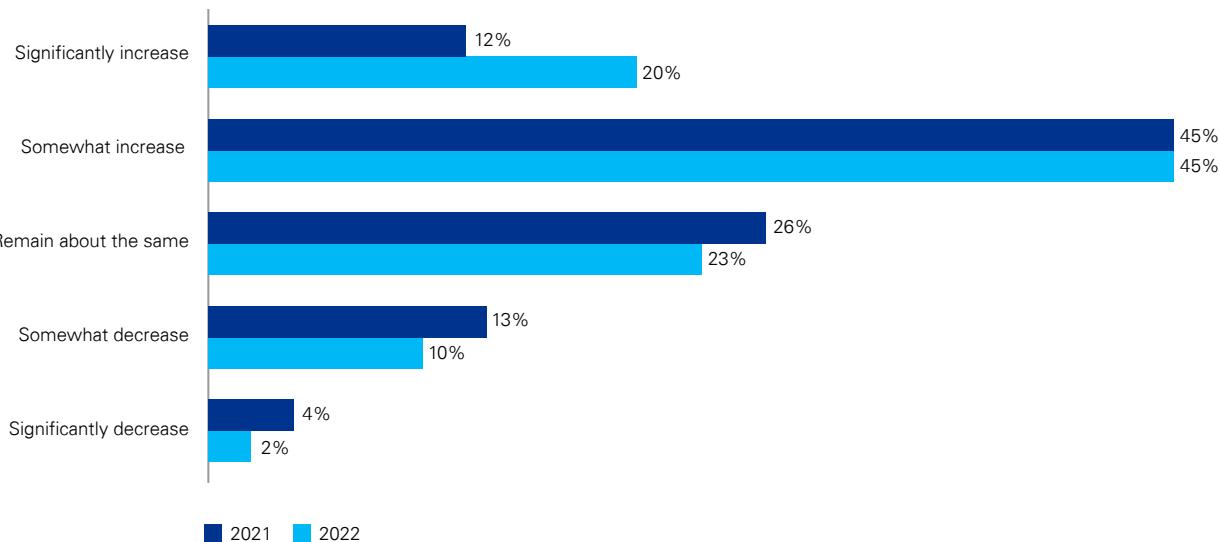


■ 2021 ■ 2022 Total does not add to 100% due to rounding

There is another important reason why sourcing is becoming more difficult: tariffs, trade rules and regulations are more costly and complex than before. The European Union has banned the sale of new gasoline and diesel cars by 2035 and has proposed increases in carbon-dioxide reductions targets for new cars and vans.¹ In China, the government has set a goal that EVs will comprise 40 percent of vehicle sales by

2030 and insists on interoperability for charging systems and infrastructure.² The recently enacted Inflation Reduction Act provides some subsidies for the US EV industry, with specific rules for battery manufacturing, mining, and processing.³ Global car makers will need to navigate these rules very carefully.

Do you believe the cost and complexity of tariffs, trade rules, and regulations will increase or decrease in the next five years?



Source: KPMG International



¹ Source: "EU ban on the sale of new petrol and diesel cars from 2035 explained," European Parliament News, November 3, 2022

² Source: "China is racing to electrify its future," Wired, June 29, 2022

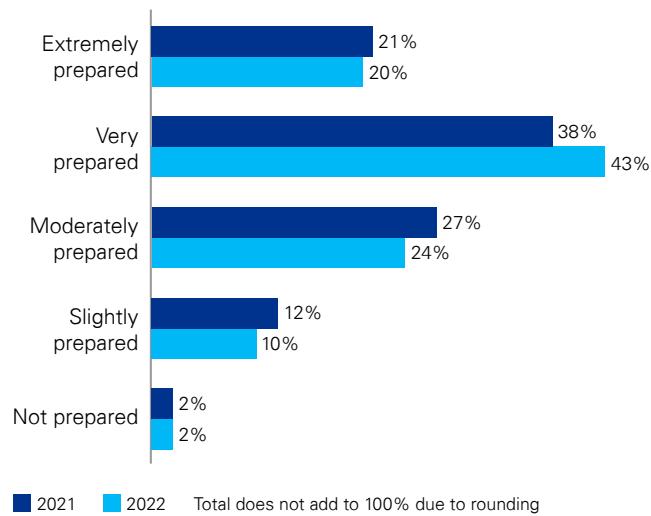
³ Source: "Fact Sheet: Biden-Harris Administration Driving U.S. Battery Manufacturing and Good-Paying Jobs," The White House, October 19, 2022



New technologies and new entrants

Car makers remain very confident in their ability to implement Industry 4.0 technologies, such as machine learning, advanced robotics, and 3D printing. Most auto firms have gone through several stages of transformation and are learning the lessons from each iteration. Keeping up with, or ahead of, changes in manufacturing technology, and to do so at scale, will be a critical cost differentiator.

How prepared is your company for Industry 4.0 technologies (e.g. machine learning, advanced robotics, 3D printing)?

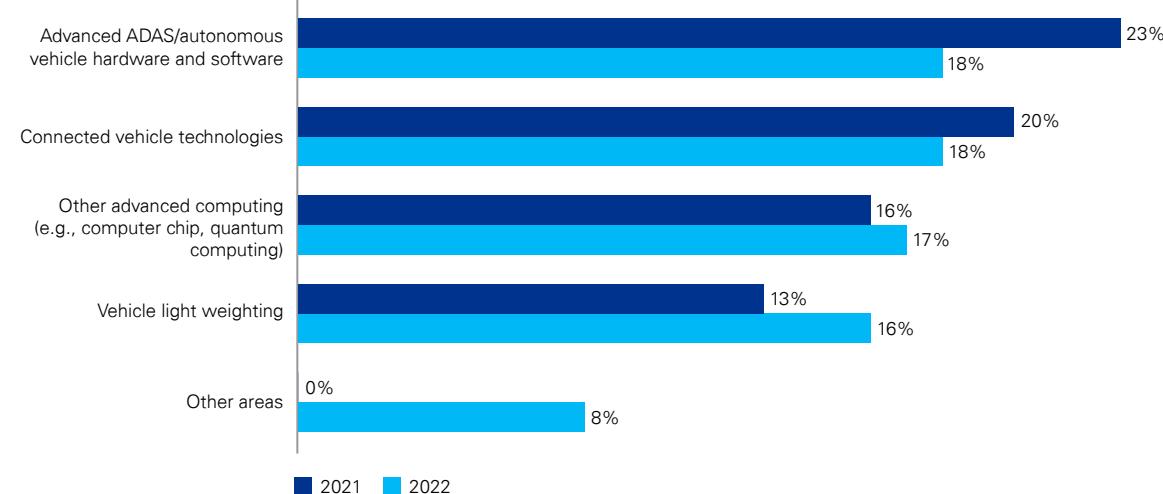


Investments in new powertrain technologies continue to be vital, but executives are also emphasizing advanced computing to enable the car's electronic systems. They are focusing on technologies to reduce the vehicle's weight and improve gasoline efficiency and battery range.

“ Automakers will need to make better use of technology such as AI, machine e-learning alongside data analytics to gain profound insights into the working of their supply chain. These efforts will help them build more resilient ecosystems.”

-Fabrizio Ricci, Partner, Head of Automotive KPMG in Italy

If you were given approval to double your existing R&D investment, how would you allocate the additional funding among the following technologies?



Source: KPMG International

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One of the most notable shifts in sentiment between 2021 and 2022 involves portfolio-shaping plans to sharpen their focus. Almost twice as many respondents as in 2021 say they are extremely likely to divest nonstrategic parts of the

business in the next several years. More than one in five executives say they are extremely likely to make such sales, given the massive investments required to compete.

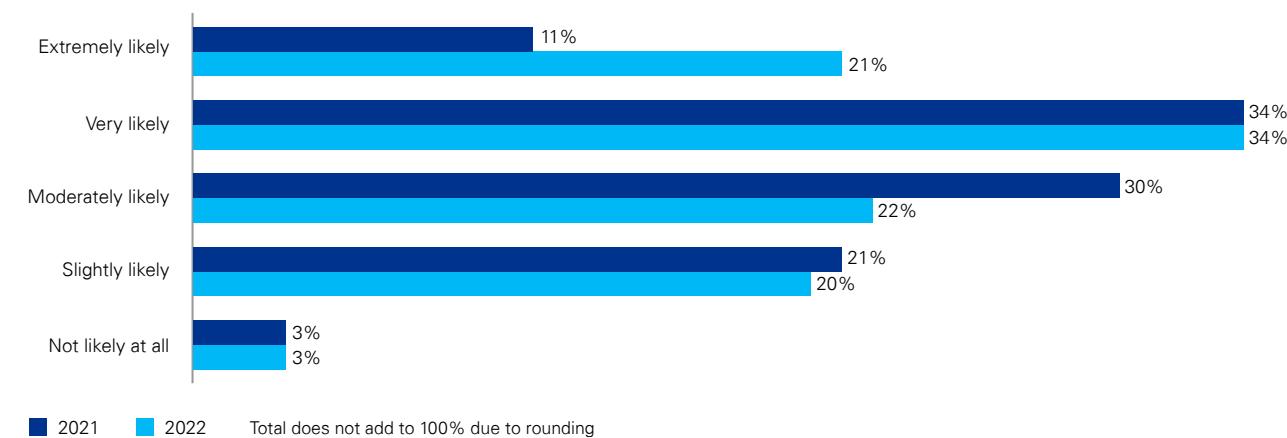
“ As automotive companies change their business models, they must investigate the tax implications of divestments, carve-outs, and acquisitions. Each may be able to improve the tax efficiency of separated assets after the deal closes, but these opportunities are likely to be missed if they do not focus on the underlying businesses.”

—Flavia Spadafora, Partner, Head of Automotive, KPMG in Brazil

“ M&A is playing a crucial role in helping car companies accelerate their transformation efforts. Executives who can see into both buy and sell sides of the equation are likely to restructure their asset portfolio to grow more profitably.”

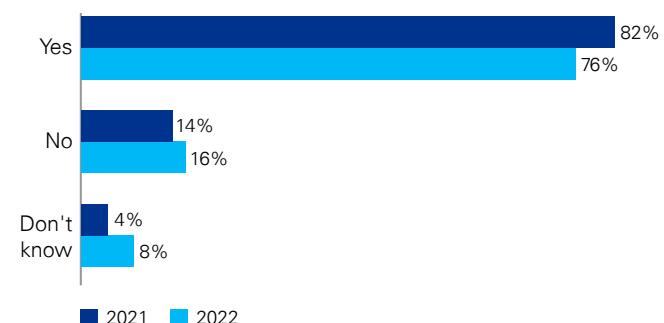
—Lenny LaRocca, Automotive Partner, KPMG in the US

How likely are you to divest nonstrategic parts of your businesses in the next several years?



Contract manufacturing of vehicles is emerging as a big, growth opportunity, as a result of the large number of new EV automakers entering the market and the billions of dollars required to produce these vehicles at scale. Seventy-six percent believe automakers can succeed if the manufacture is done by a third party. Taiwanese manufacturer Foxconn, which assembles iPhones for Apple, is working to produce EVs for Lordstown Motors and Fisker. In later 2022, Foxconn unveiled two of its own EV vehicle concepts. Elsewhere, Magna Steyr has begun producing the Fisker Ocean model and is working with several other OEMs.

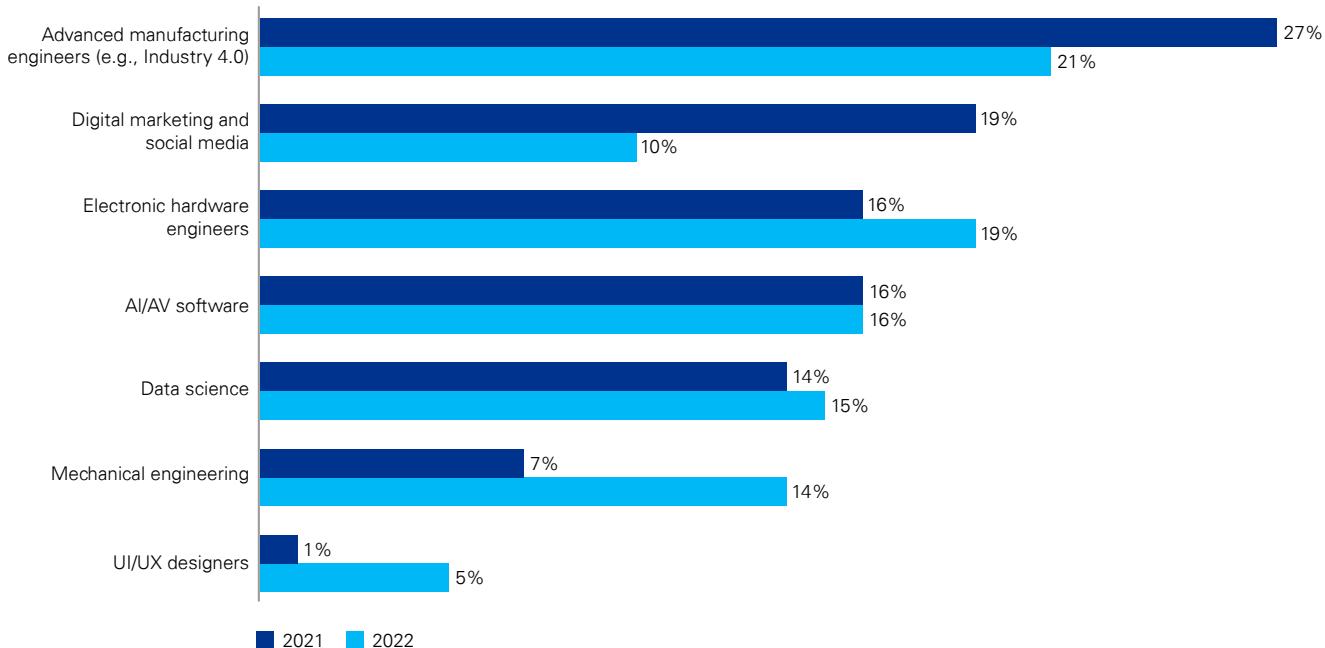
Many new automakers are pursuing “asset-light” strategies using third parties to manufacture their vehicle. Do you believe automakers can succeed using contract manufacturing?



Skills are a critical element in the transformation of the car industry. Workers with knowledge of advanced manufacturing continue to be the most sought after, but the past year has

seen significant increases in demand for skills in the fields of electronics engineering, mechanical engineering, and data science.

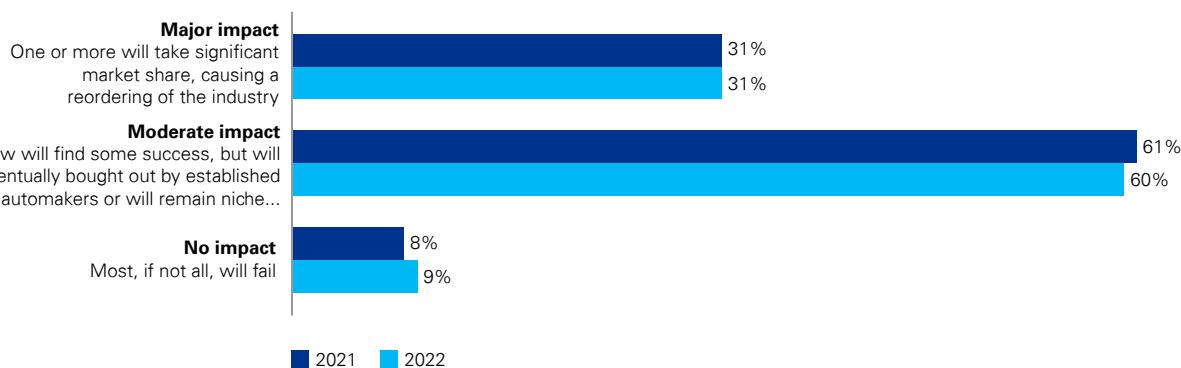
Which of these skills and roles do you believe will be the most important to your business in the next several years?



The large number of automotive start-ups is changing the industry in many ways and executives expect them to have a considerable impact in the future. Nine out of ten executives

say car startups will have a sizeable effect and, of these, three in ten expect them to take a significant market share.

In the last several years there has been significant investment in auto start-ups. In the next 10 years, what do you think the impact of these companies will be?



Industry sentiment toward the development of autonomous vehicles (AV), is changing, after the billions spent to bring the technology to market. Executives continue to be positive about the prospects for the technology, but have pushed further into the future the time when they will be available within major cities.

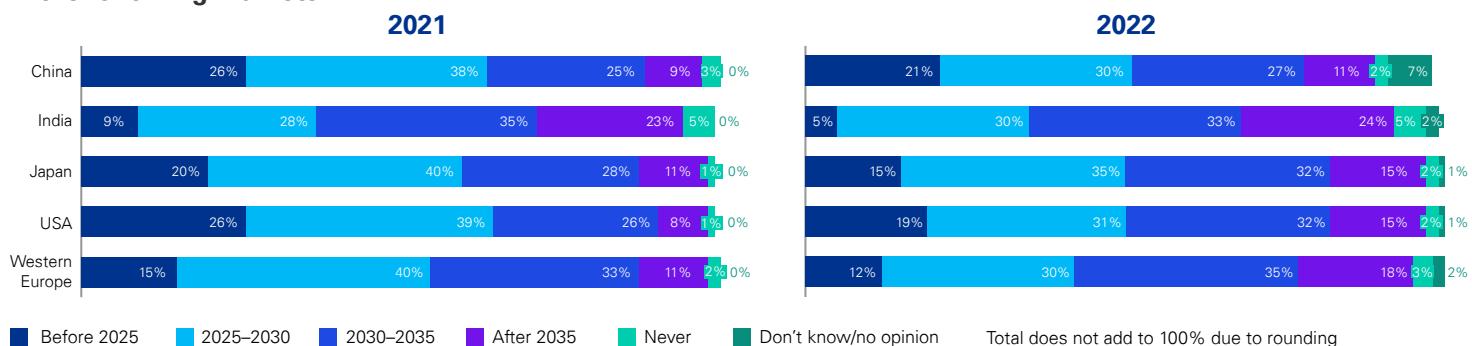
Tesla remains the perceived leader, and by a wider margin than in 2021, since when there has been significant industry consolidation. Lyft sold its AV assets to Toyota (Woven Planet), Uber sold its self-driving unit to Aurora, and Ford and VW have shut down their Argo AI joint venture. These moves are a sign that implementing AV technology is proving more complex

than previously thought. Success will require patience and deep pockets.

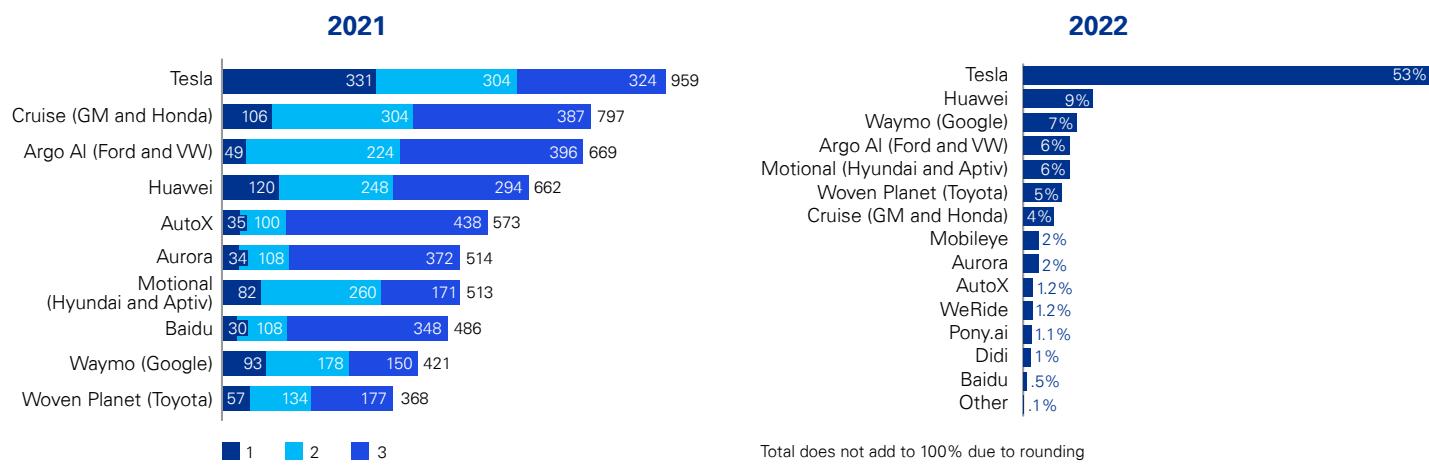
“Several forecasts show a delay in the implementation of autonomous driving systems. However, the economics and potential impact in urban ride-share markets and long-haul trucking remain quite compelling.”

—Megumu Komikado, Partner, Head of Automotive, KPMG in Japan

When do you believe autonomous ride hailing and / or delivery will be commercially available within major cities in the following markets?



Which company do you think will be the leader in autonomous vehicle solutions?



More than two-thirds of auto executives expect Apple to enter the car market with their own branded vehicles, a speculation

fueled in part by the entrance of Foxconn, the iPhone manufacturer, in the auto market.

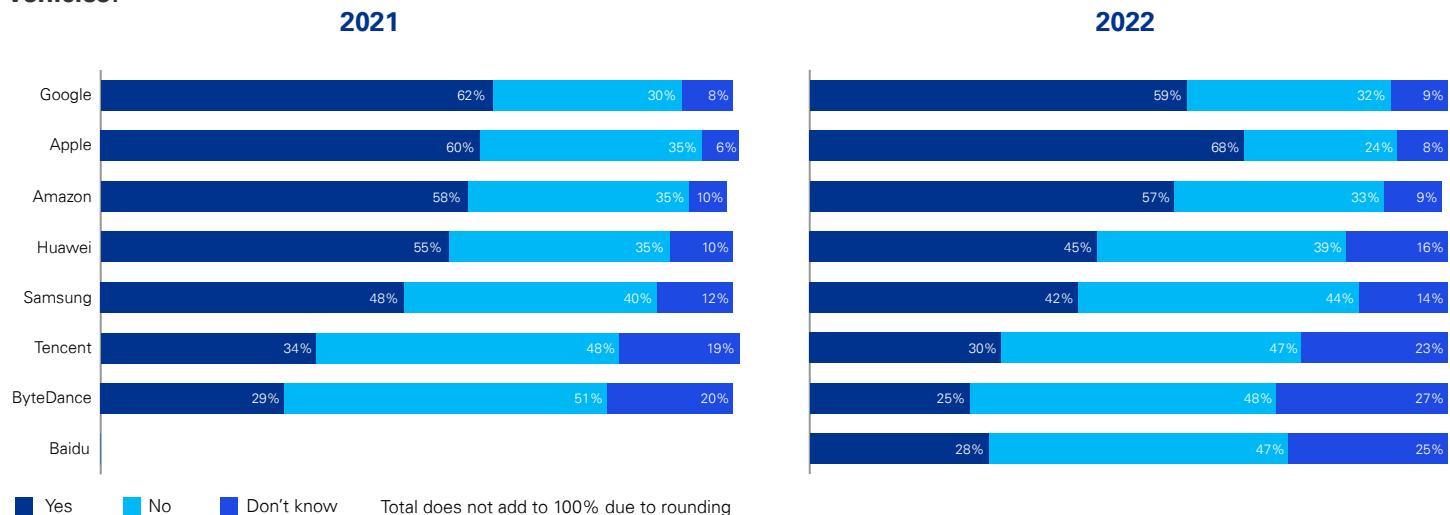
“Incumbents often underestimate the impact of new entrants, and the auto industry is no exception. With more than 50 new manufacturers, a shakeout is inevitable. Some might succeed in their own right; others will be bought out. There has rarely been a time of such disruption and some of the winners may surprise people.”

—Norbert Meyring, Partner, Head of Automotive, KPMG in China

“The prediction of auto execs that large technology companies are likely to enter the auto market is a sign that the tech and auto industries are converging. And not just two industries: aerospace companies are competing for a share of the market for air taxis. Tech companies not only have the technologies needed by auto makers; the larger technology firms also have the financial firepower to make a big impact in autos.”

—Per Edin, Automotive Principal, KPMG in the US

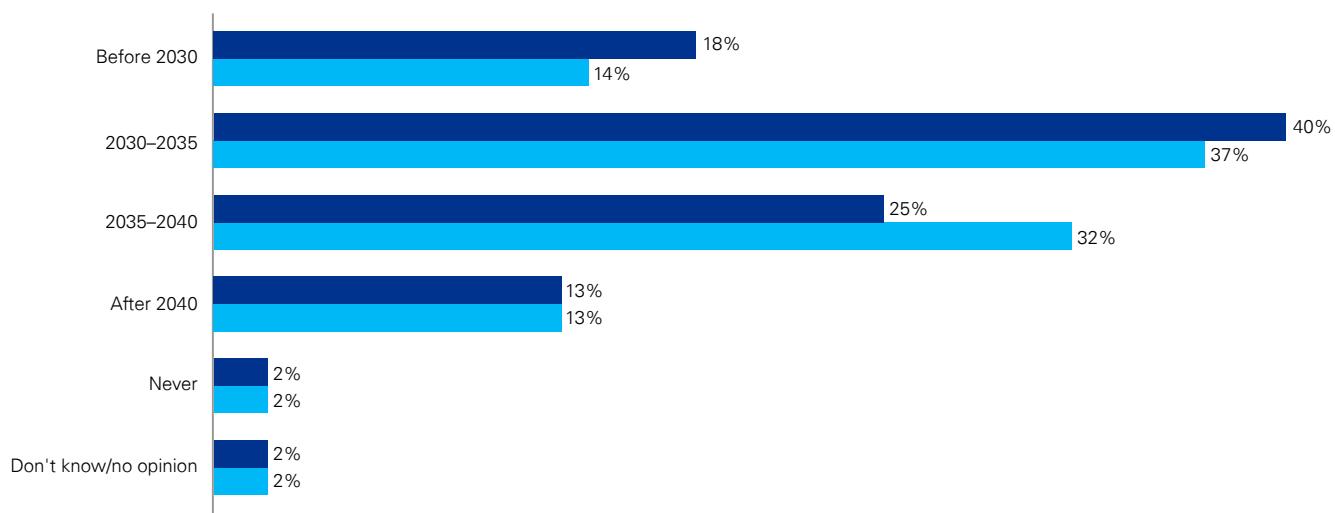
Do you think the following major technology companies will enter the auto market with their own branded vehicles?



Enthusiasm for flying cars, known as electric vertical take-off and landing aircraft (eVTOLs), remains strong, but executives have tempered expectations of when they will be widely

available. Almost seven in 10 now say they will be common sometime in the 2030s.

When, if ever, do you believe eVTOLs will be in most major cities?



Conclusion

Rarely has the automotive sector faced such an array of opportunities and challenges, as the survey shows. Executives predict big changes ahead—new powertrains, relationships with consumers, revenue models, manufacturing processes, technologies, and data flows. The next decade is slated to see business model innovation on a global scale. But their existing capabilities are not going to be enough to see them through. They should prepare to be stretched as never before. Here are four implications of our survey to consider:



Prepare for the unexpected:

It is clear there are many “known unknowns,” but executives should plan for an even wider range of scenarios. There are many strategic questions that need to be asked. What assets should be divested and which ones acquired? Is it worth continuing to produce gasoline-powered cars? Does it make sense to work with a contract manufacturer? What software development needs to be done in-house? Leaders must test every assumption, challenge long-held beliefs and develop a culture that rewards this type of thinking.

You can't do it alone:

To succeed, companies will need to develop skills outside their current competencies—from software development and software as a service, to artificial intelligence/deep learning algorithms, to customer analytics and massive, new data sets. Some of these capabilities can be developed organically, but others will need to be obtained through alliances, joint ventures, and acquisitions.

All about the customer:

The auto industry has for too long been distanced from its customers. No more. Digitization offers automakers the opportunity to build direct customer relationships that are deep, long-lasting, and mutually beneficial. Success will likely depend on creating a seamless, multi-year customer experience based on personalization, efficiency and trust, especially over data stewardship.

Speed is of the essence:

If executives think events are moving at a breakneck pace, they can expect the clock speed of change will go even faster in the coming years. The evolution of the automotive industry is rapidly accelerating, and the winners are likely to be those companies that make better decisions faster than their competitors.



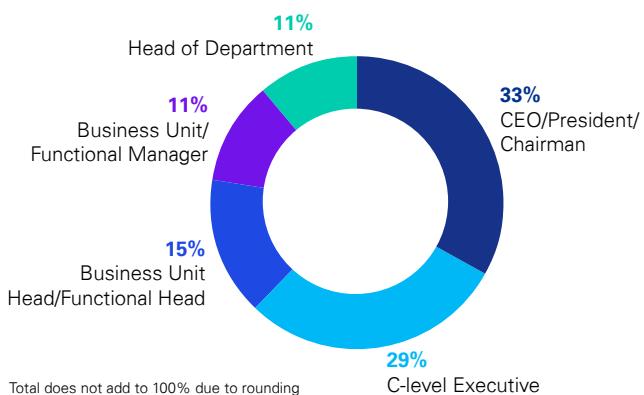
There are many roads that will lead to success and more than a few will end in failure. Now is the time to choose.

Respondent profile

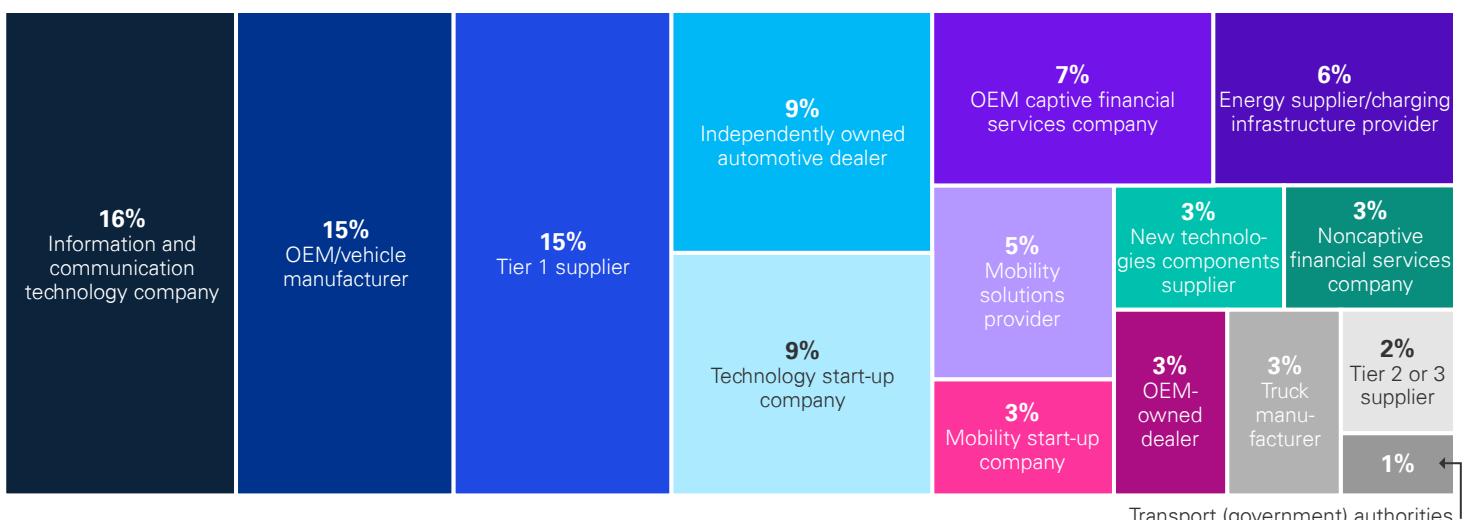
KPMG International conducted a survey of 915 executives across the automotive and adjacent industries in October 2022. Two hundred and seven CEOs responded to the survey, along with 209 other C-level executives, 293 heads of business units and departments, and 205 business unit managers. Of these, 15 percent work for car manufacturers and 15 percent for Tier-1 suppliers; 16 percent are employed by information and communication technology companies.

Among the respondents, 351 work at companies with annual revenue of more than \$1 billion. The two countries with the largest number of responses are the US (28 percent) and China (17 percent). Europe has 29 percent of respondents, with 26 percent located in India, Japan, South Korea, Australia, Thailand, Indonesia, Canada, Latin America, South Africa, and Saudi Arabia.

Which of the following best describes your job title?



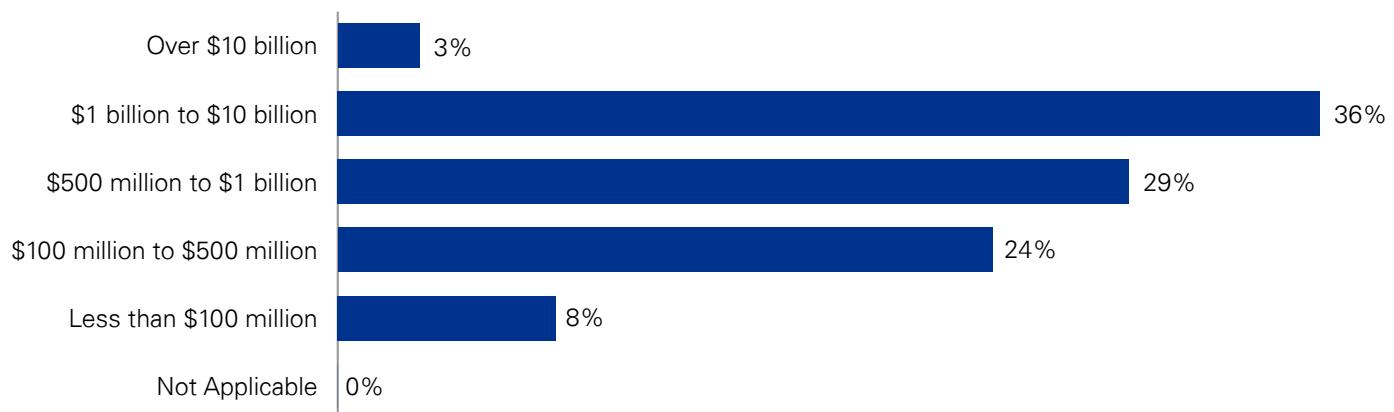
Which of the following best describes your company?



Source: GAES 2022, KPMG International

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Which of the following best describes your company's annual revenues in 2022?



In what country, territory, or jurisdiction do you live?

North America



Western Europe



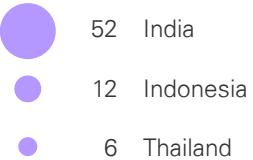
Eastern Europe



South America



India and ASEAN



Mature Asia



Rest of World



China



● Number of respondents

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