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2023 Global Automotive Consumer Study

Key Findings: CHINA

February 2023

MAKING AN IMPACT THAT MATTERS since 1845

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From September through October 2022, Deloitte surveyed more than 26,000 consumers in 24 countries (including 1,012 respondents in China) to explore opinions regarding a variety of critical issues impacting the automotive sector, including consumer interest in electric vehicle (EV) adoption, brand perception, and advanced technologies. The overall goal of this annual study is to answer important questions that can help companies prioritize and better position their business strategies and investments.

1	**The shift to EVs is happening, but is it moving fast enough?**	Consumer interest in EVs is growing as consumers look for a better driving experience. However, there are a variety of challenges standing in the way, including concerns over the safety of battery technology, the time it takes to charge an EV, and a lack of available of charging infrastructure.
2	**An unintended benefit of the vehicle inventory crisis**	Product quality, brand familiarity and image top the list of factors driving consumer decisions when it comes to which vehicle brand to buy, while expectations regarding the acceptable length of time to wait for delivery may be opening the door to a "build-to-order" paradigm.
3	**Dealers engender significant trust among consumers**	When asked who they trust most, surveyed consumers equally point to the brand and their servicing dealer, signaling the important role each stakeholder has in coming together to put the customer first and build relationships on a solid foundation of transparency and empowerment.
4	**Subscriptions to connected vehicle services could be a challenge**	Consumer interest in connected vehicle features that provide updates regarding road safety, and vehicle maintenance costs are relatively high, but respondents would much rather pay for connected technologies as part of the upfront cost of the vehicle or on a per use basis compared to a monthly subscription.

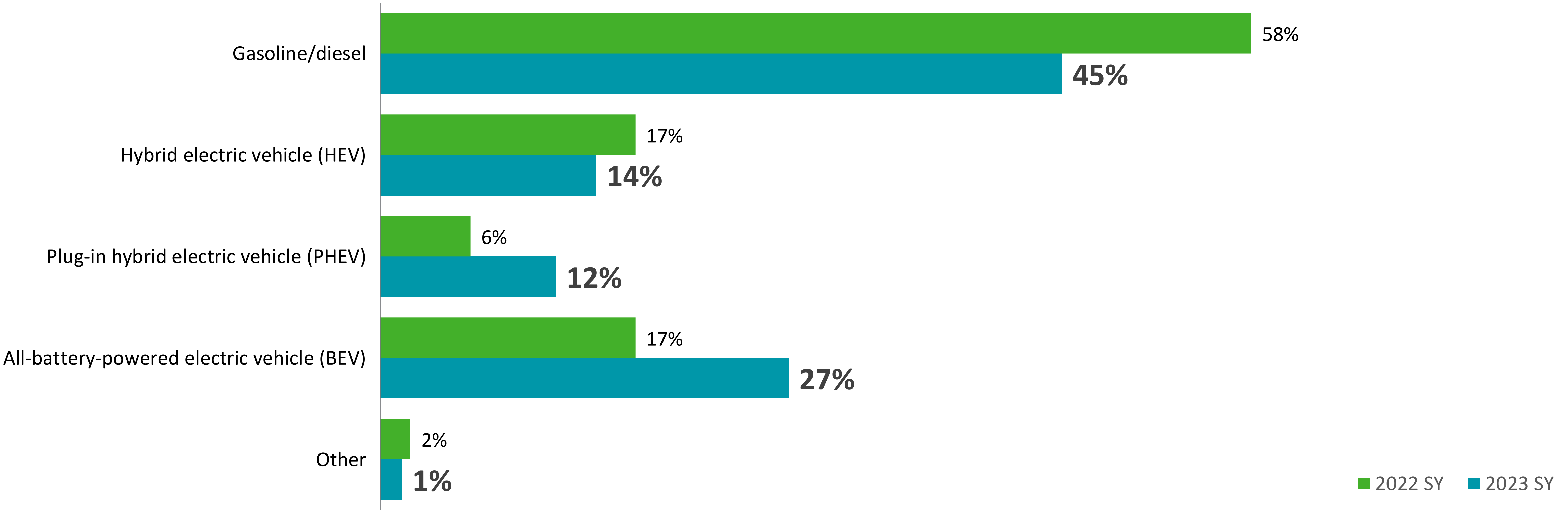
Note: Sum of the values for a few questions in the following slides may not add to 100% due to rounding.

1

Vehicle electrification

Consumer interest in BEVs continues to grow with more than a quarter of consumers planning to acquire one in the future. However, 45% of consumers surveyed would still rather a traditional ICE vehicle, signaling the significant challenge to move markets toward an electric future.

Preference for type of engine in next vehicle



Note: Other includes vehicles with engine types such as compressed natural gas, ethanol, and hydrogen fuel cells; don't know responses weren't considered.

Q40. What type of engine would you prefer in your next vehicle?

Sample size: n= 881 [2022]; 703 [2023]

CHINA

The draw for EVs centers on the desire for a better driving experience and a perception that fuel costs will be significantly lower; concern for climate change does not make the top five list.

Top 5 reasons for choosing an EV for next vehicle

#1 Better driving experience

#2 Lower fuel costs

#3 Use vehicle as a power source

#4 Concern about personal health

#5 Extra taxes on ICE vehicles

Q41. Please rank the following factors in terms of their impact on your decision to acquire an electrified vehicle (highest to lowest).

Sample size: n= 374

CHINA

While ICE intenders are expecting to pay less than 300K yuan for their next vehicle, EV intenders are ready to pay higher prices, reflecting strong overall demand for EVs in the market.

Preferred price ranges for next vehicles

	Overall		ICE Intender		EV Intender	
Less than 75,000 yuan	0.3%		0%		0%	
75,000 yuan to less than 100,000 yuan	1%		2%		0%	
100,000 yuan to less than 150,000 yuan	9%	75%	13%	83%	6%	68%
150,000 yuan to less than 200,000 yuan	25%		26%		23%	
200,000 yuan to less than 300,000 yuan	40%		43%		39%	
300,000 yuan or more	25%		17%		32%	
Don't know/not sure	0.1%		0%		0%	

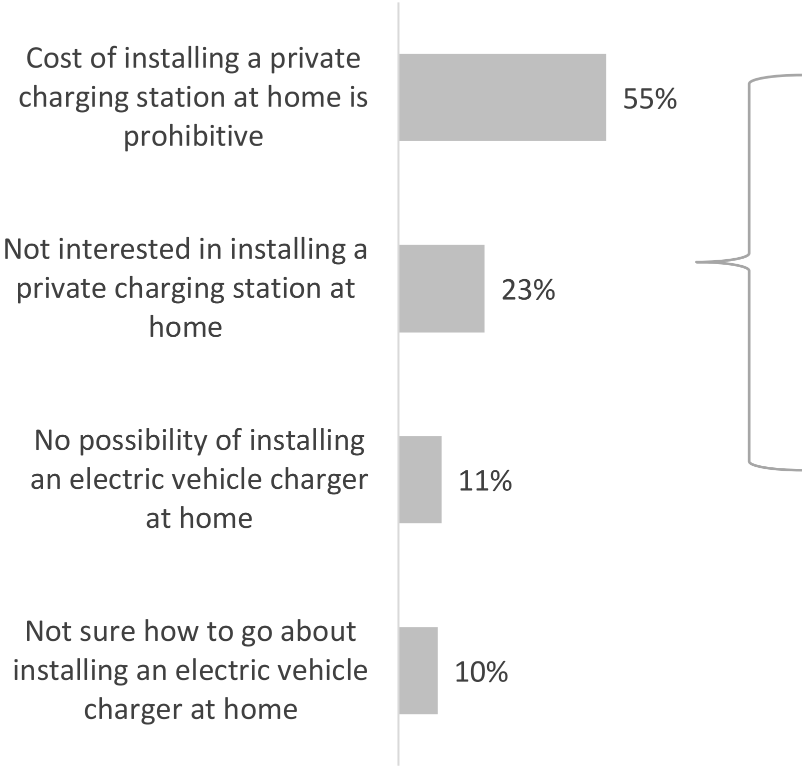
Q39. In which of the following price ranges will you be shopping for your next vehicle? (Please indicate what you would expect to pay after any discounts and/or incentives that might be available.)

Sample size: [Overall] n= 707; [ICE intender] n= 319, [EV intender] n=374

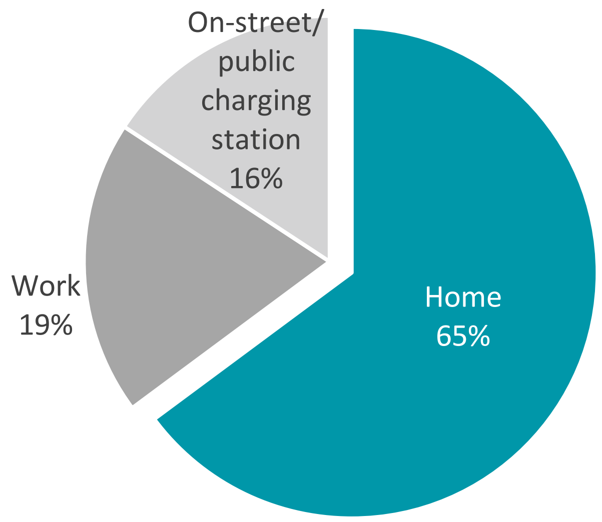
CHINA

Most EV intenders plan to charge their vehicle at home by connecting to either a regular power grid or to a combination of traditional and alternate power sources. Those not intending to charge at home cite high installation costs.

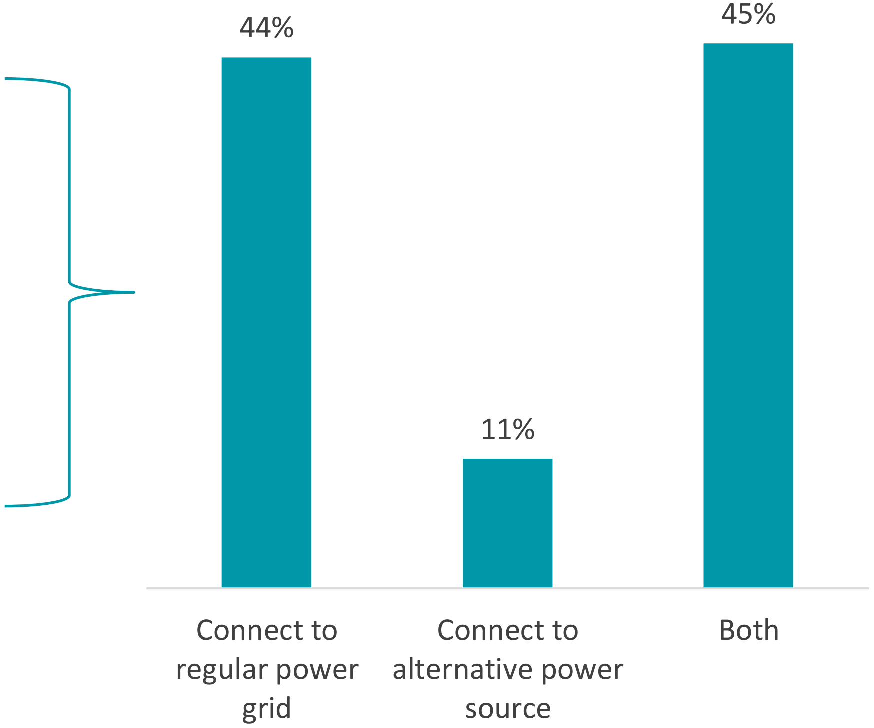
Reasons for not charging an electrified vehicle at home



Expecting to charge electrified vehicle most often at…



Intending to charge electric vehicles at home using…



Q43: Where do you expect to charge your electrified vehicle most often?; Q44: How do you intend to charge your electrified vehicle at home?; Q45: What is the main reason you do not intend to charge your electrified vehicle at home?

Sample size: n= 273 [43]; 177 [44]; 96 [45]

CHINA

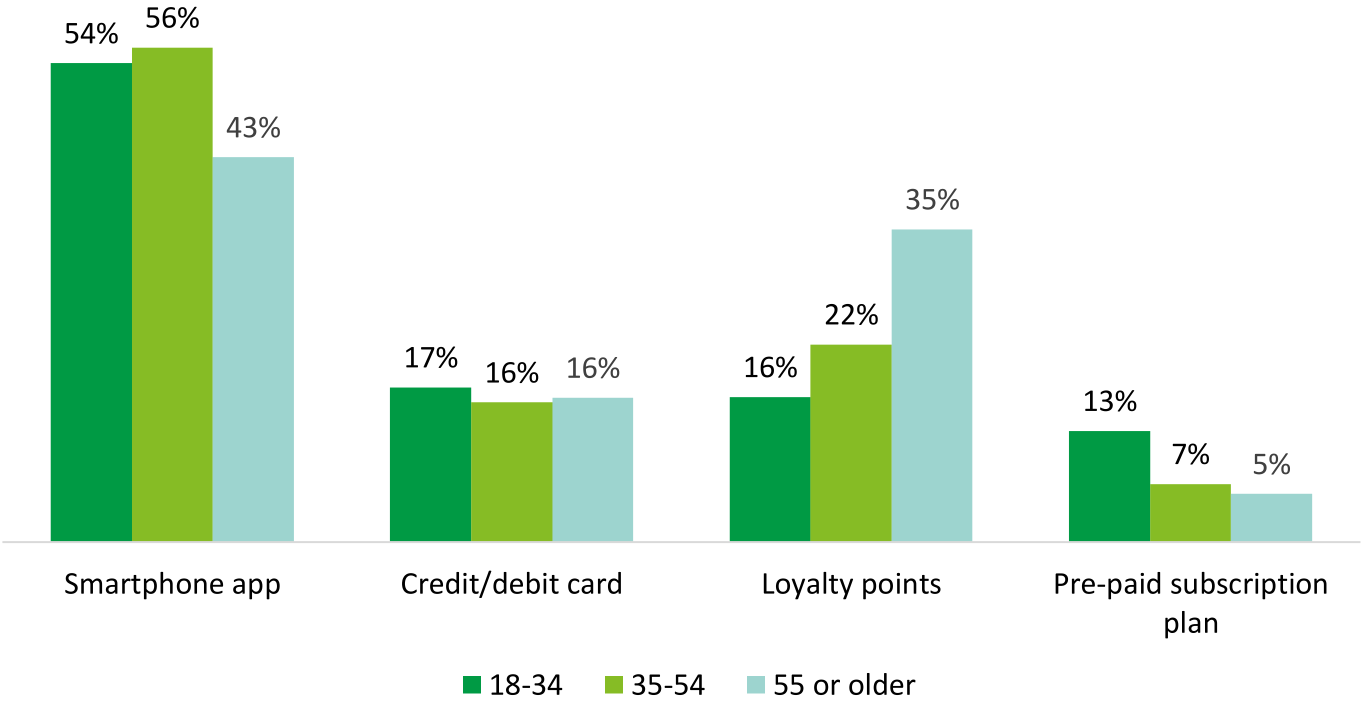
Given the high penetration of digital payment tools in the Chinese market, consumers would prefer to pay for public EV charging via apps on their smartphones.

Most preferred way to pay for public EV charging

Overall

Smartphone app	53%
Loyalty points	21%
Credit/debit card	17%
Pre-paid subscription plan	9%

By age category



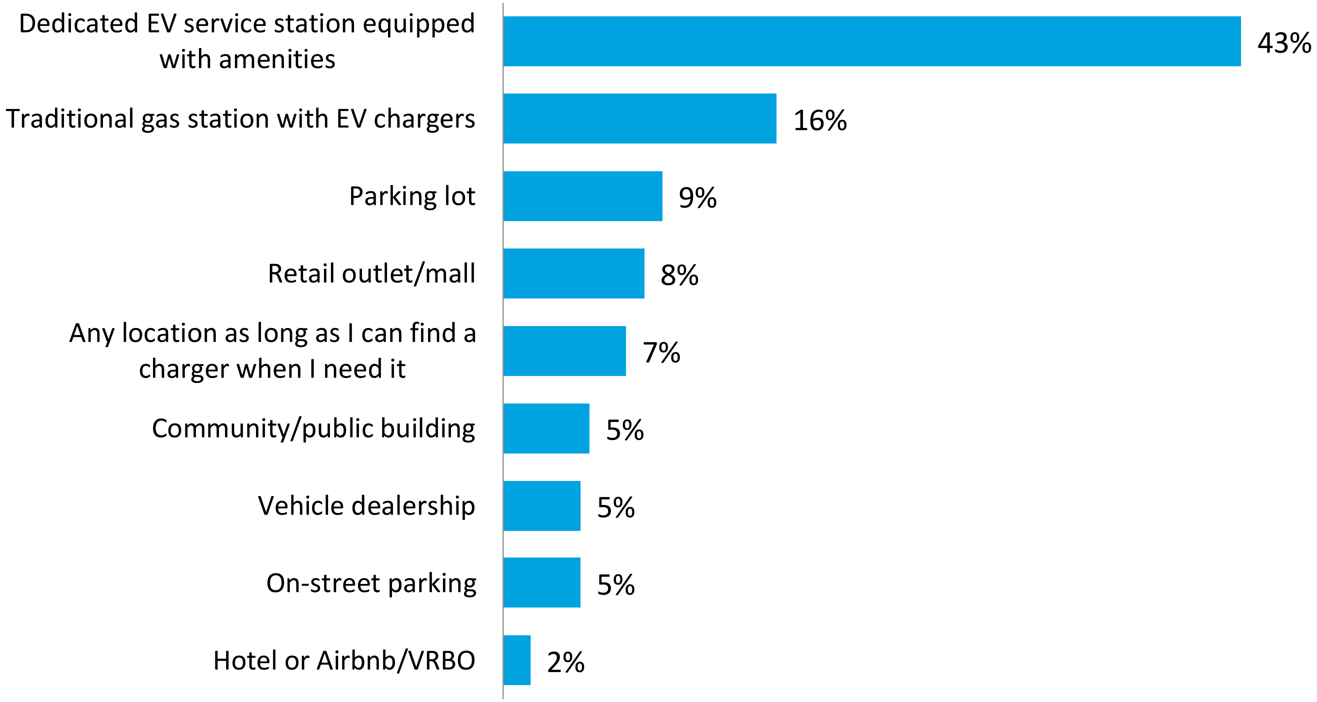
Q49: How would you most prefer to pay for public EV charging?

Sample size: n= 374 [Overall]; 184 [18-34], 153 [35-54], 37 [55+]

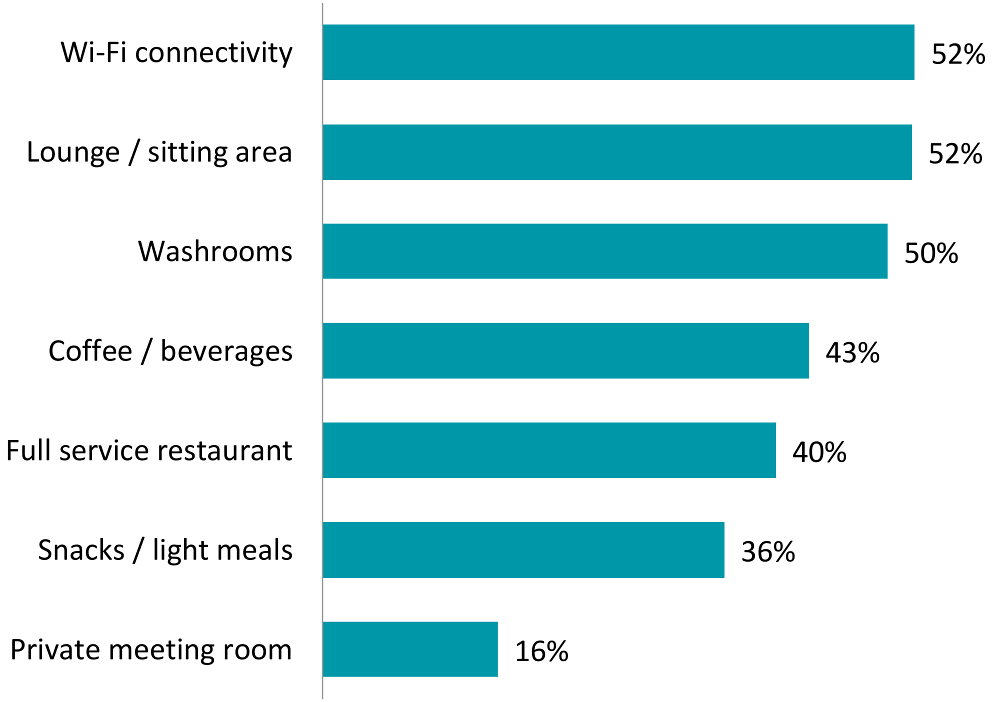
CHINA

More consumers would prefer a dedicated EV charging station with amenities such as Wi-Fi connectivity, a lounge, and restrooms over a traditional gas station equipped with chargers.

Public locations that the consumers would prefer to charge their EV when they are away from their home



Type of amenities that the consumers want to have access to while their vehicle is charging at a public location



Note: Sum of the percentages in the right-side chart exceed 100% as respondents can select multiple options

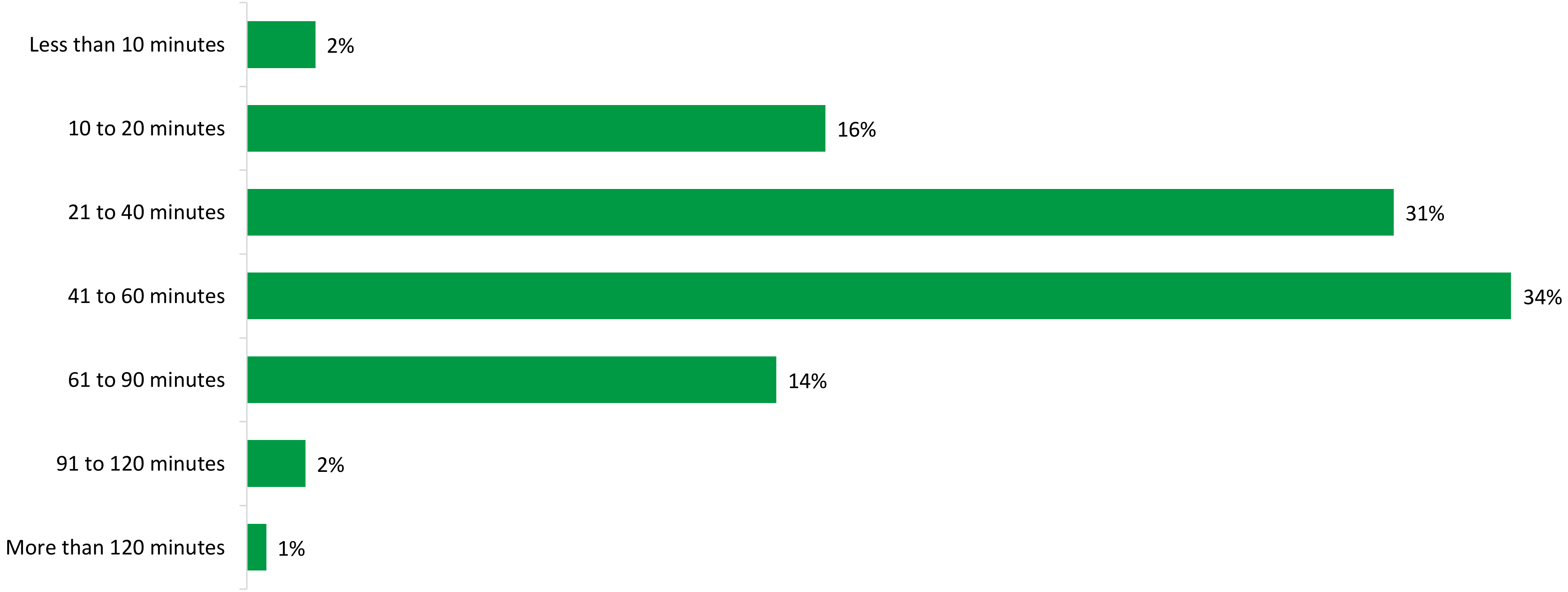
Q46: Which of the following public locations makes the most sense to charge your EV when you are away from home?
Q48: What type of amenities would you want to have access to while your vehicle is charging at a public location?

Sample size: n= 374 [Q46]; 374 [Q48]

CHINA

Nearly half of surveyed consumers would wait between 10 and 40 minutes for their vehicle to charge from empty to 80% at a public charging station, challenging conventional wisdom that matching the fossil fuel experience is “table stakes”.

Expected wait time to charge an EV at public charging stations from empty to 80%



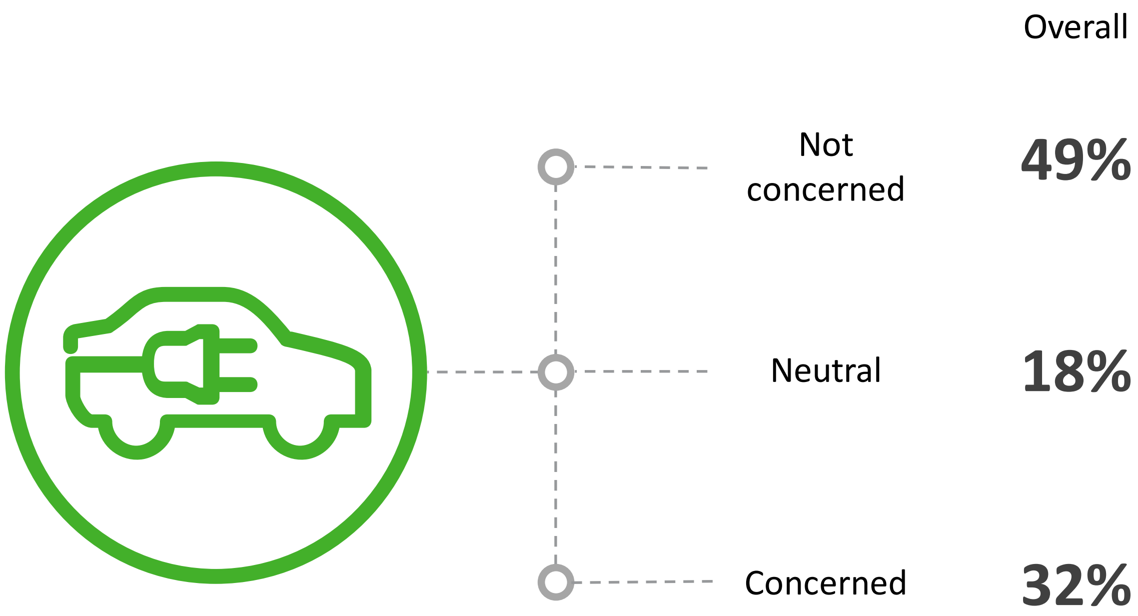
Q47: How long would you expect it to take to charge your EV from empty to 80% at a public charging location?

Sample size: n= 374

CHINA

One third of consumers are concerned about the residual value of a full battery electric vehicle as questions around battery life persist.

Percentage of consumers who are concerned about the resale/residual value of an all battery-powered electric vehicle (BEV)



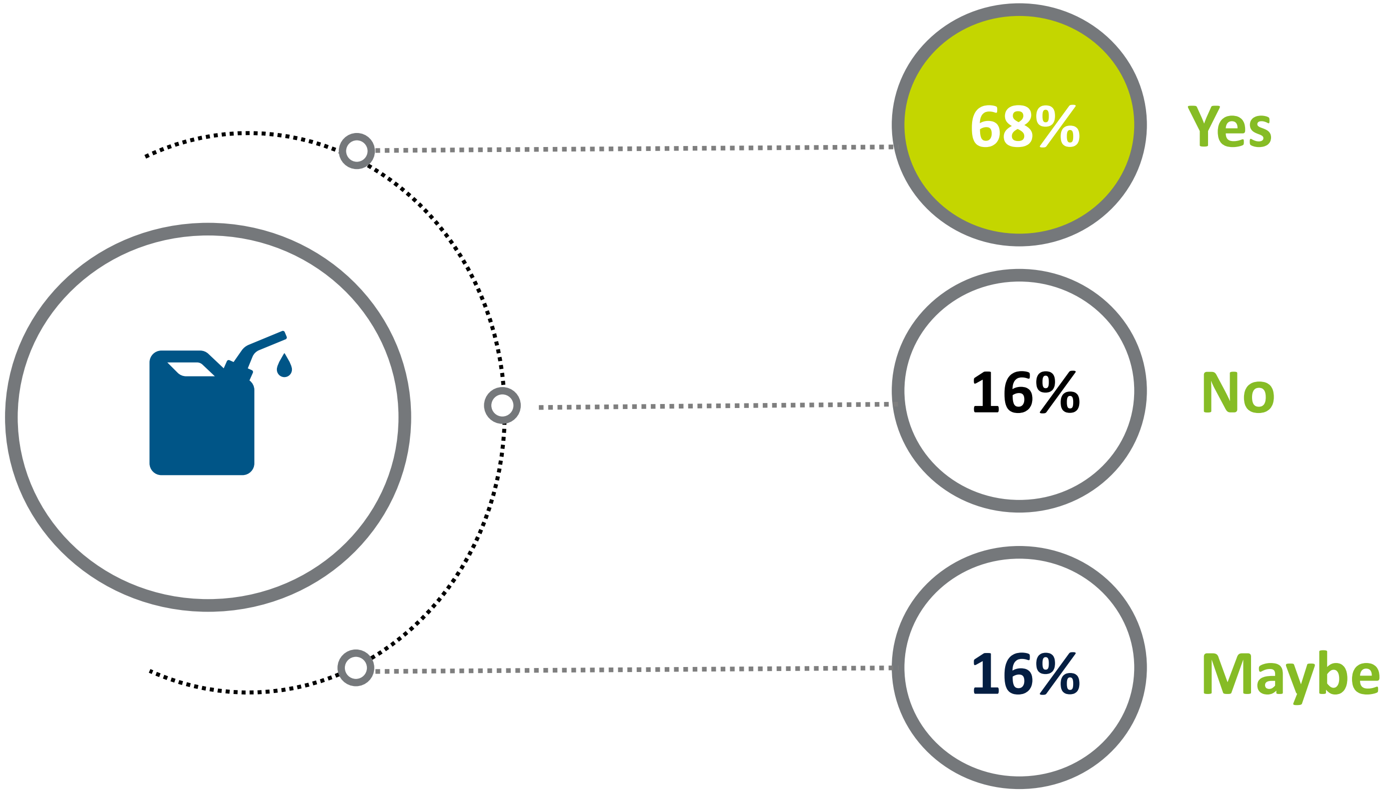
Q50: To what extent are you concerned about the resale/residual value of an all battery-powered electric vehicle?

Sample size: n= 191

CHINA

Two-thirds of consumers would rethink their decision to purchase an EV if an environmentally sustainable, synthetic combustion fuel was available.

Percentage of consumers who would rethink an EV purchase if an environmentally sustainable, synthetic fuel alternative was available for traditional (ICE) engines



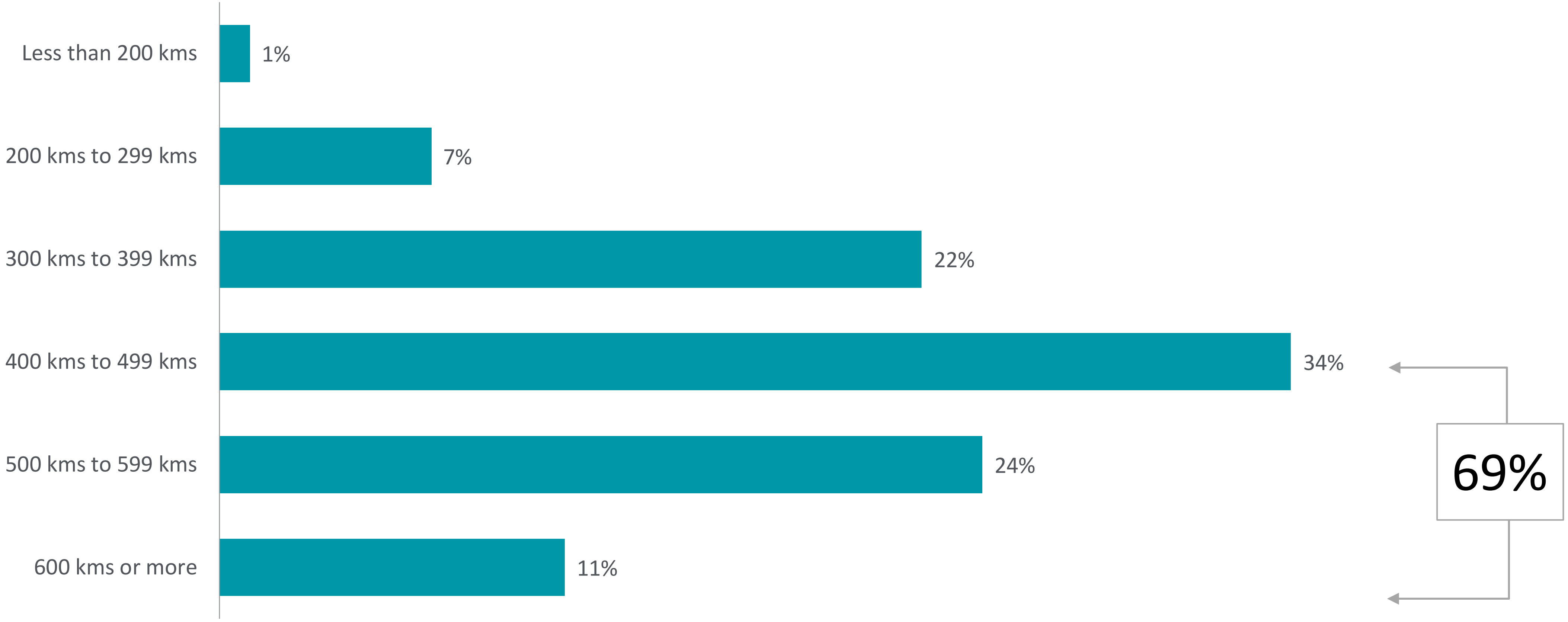
Q42: In a scenario where an environmentally sustainable, synthetic fuel alternative (i.e., carbon-neutral gas) that would work in traditional internal combustion engines was readily available, would you rethink your decision to purchase an EV?

Sample size: n= 374

CHINA

7 in 10 non-BEV intenders would expect a fully charged BEV to have a driving range of at least 400 kms in order to consider one as a viable option for their next vehicle.

Consumer expectations regarding BEV driving range



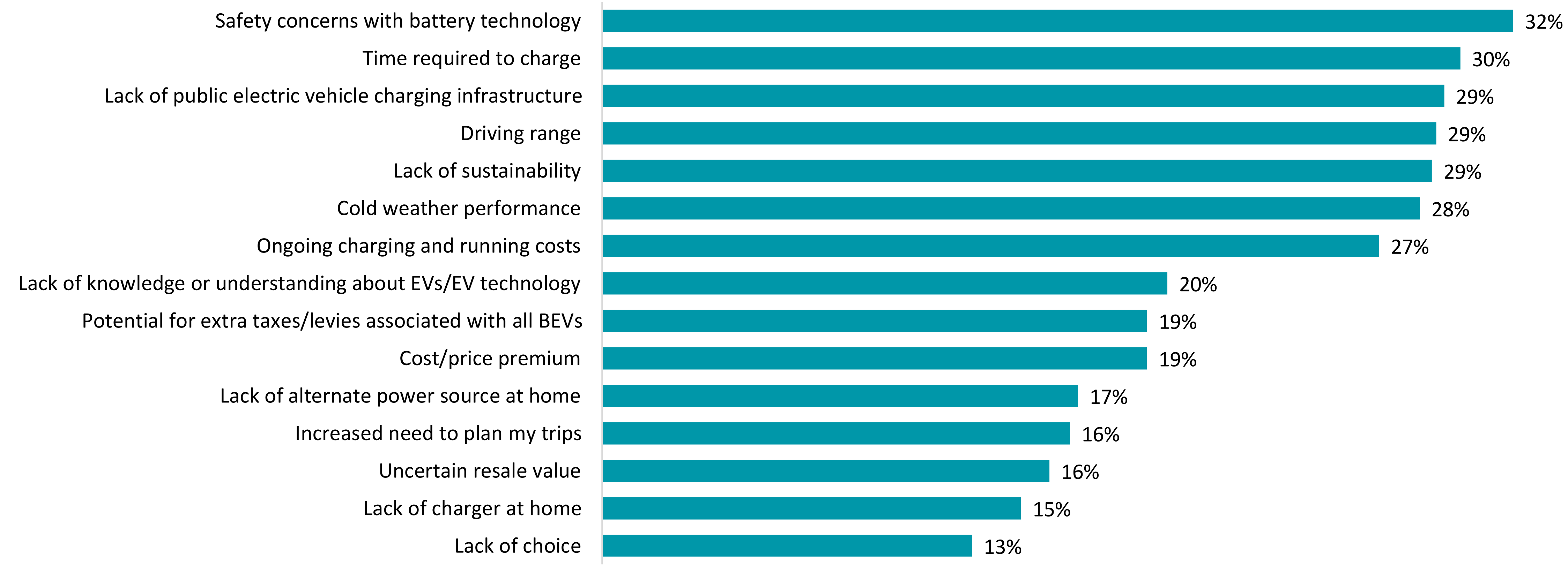
Q52: How much driving range would a fully charged all-battery electric vehicle need to have in order for you to consider acquiring one?

Sample size: n= 516

CHINA

Unlike other markets where cost is the biggest hurdle to EV penetration, surveyed consumers in China are most concerned about the safety of battery technology.

Greatest concern regarding all battery-powered electric vehicles



Note: Sum of the percentages exceed 100% as respondents can select multiple options.

Q51: What are your biggest concerns regarding all battery-powered electric vehicles? Please select all that apply.

Sample size: n= 707

CHINA

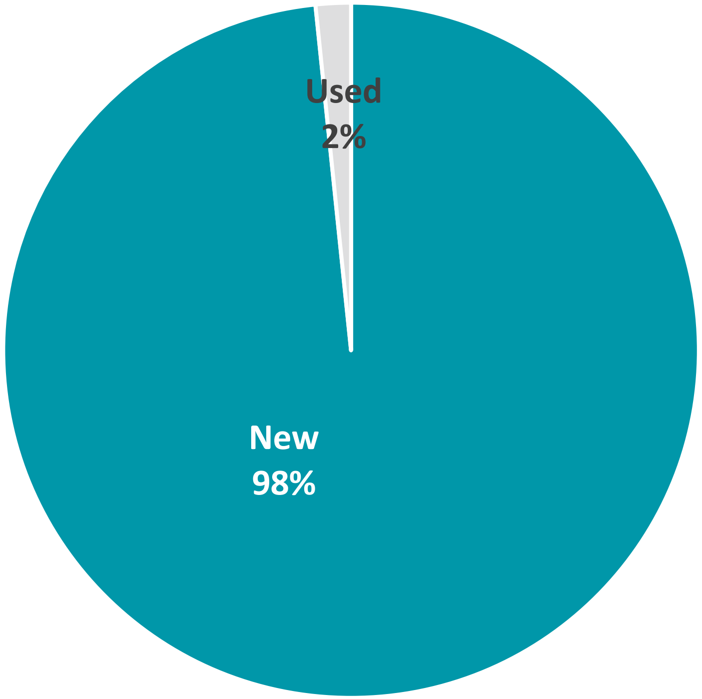
2

Future vehicle intentions

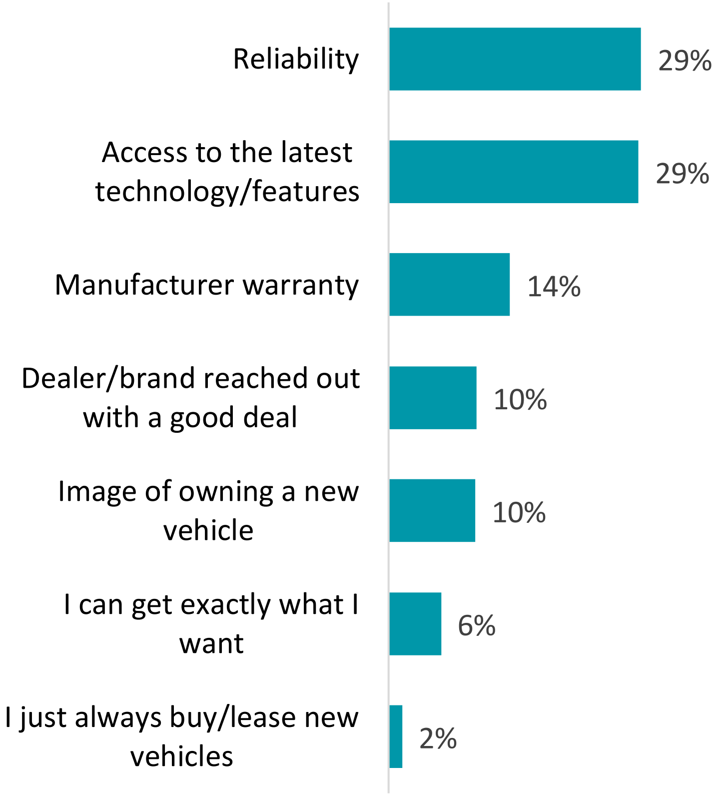
Almost every vehicle owner who acquired their current vehicle new intends to buy a new vehicle again with reliability and access to the latest technology acting as the prime motivators.

Next vehicle type by current vehicle type

Current vehicle NEW



Reasons for choosing new vehicle



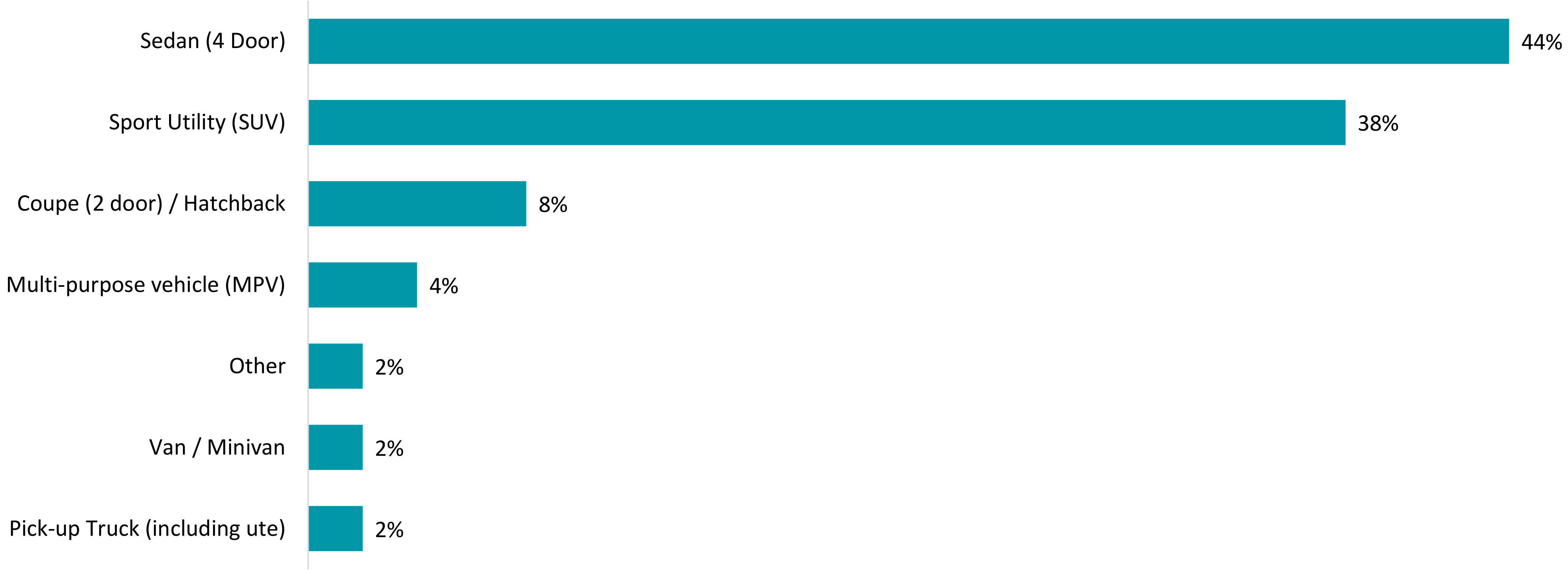
Q30. Will your next vehicle be new or used?

Sample size: n= 614 [New], 14 [Used]

CHINA

Unlike some other global markets, consumers surveyed in China still prefer passenger cars (i.e., sedans) over sport utility vehicles.

Type of vehicle consumers are planning to acquire next



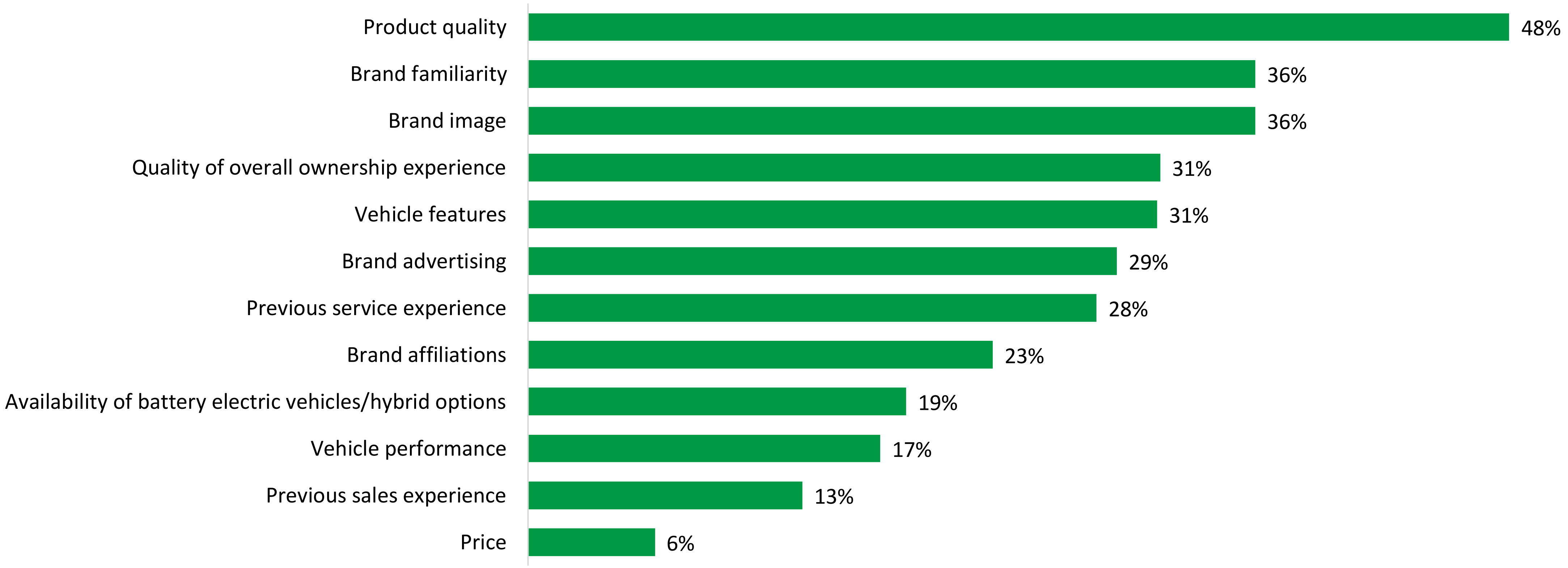
Q33: What type of vehicle are you planning to acquire next?

Sample size: n= 708

CHINA

Vehicle product quality is the most important factor for consumers when choosing one brand over another. The availability of EV options rates much lower in terms of importance.

Most important factors driving the choice of brand for your next vehicle



Note: Sum of the percentages exceed 100% as respondents can select multiple options.

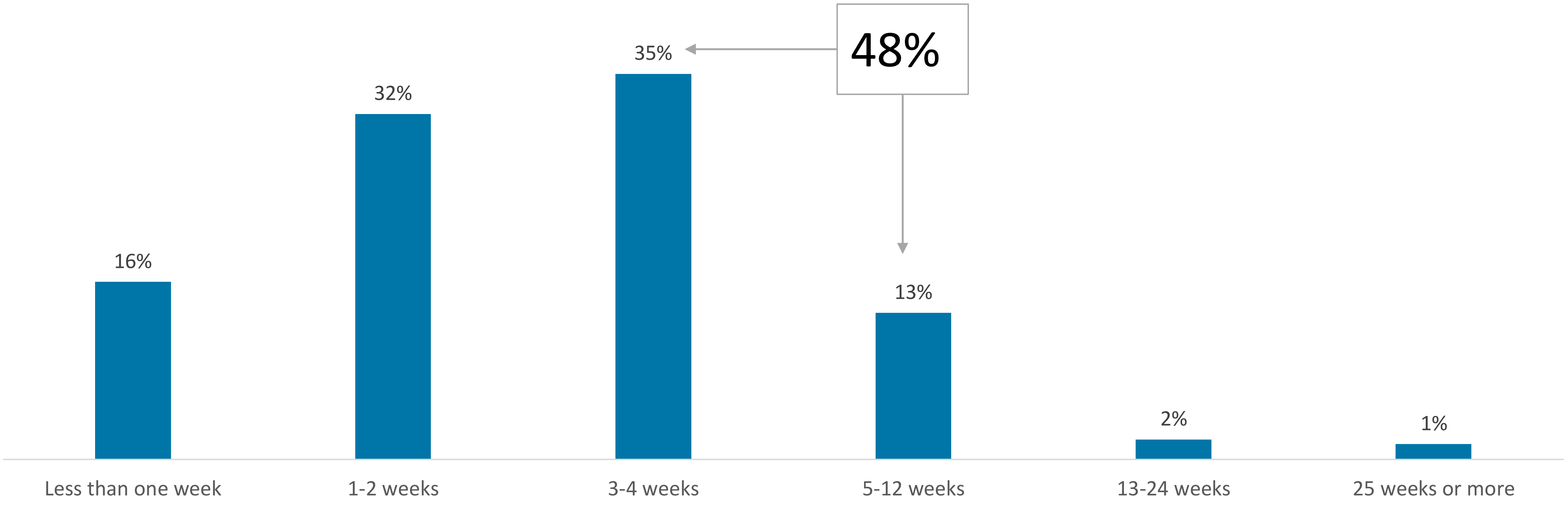
Q35. What are the most important factors driving the choice of brand for your next vehicle? (Please select all that apply).

Sample size: n= 707

CHINA

Nearly half of consumers think it is acceptable to wait times between 3 weeks and 3 months for delivery of a new vehicle, opening the door to a more "build-to-order" retail paradigm.

Acceptable length of time to wait for delivery of next vehicle

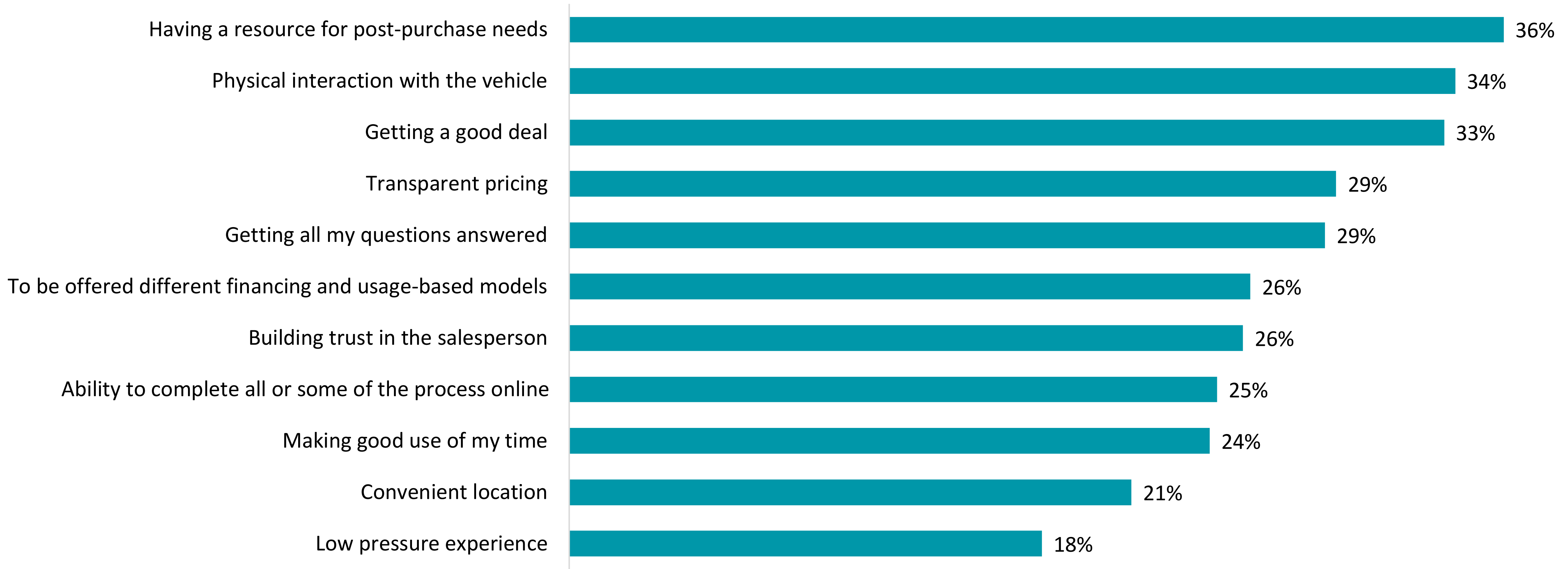


Q37: In your opinion, what is an acceptable length of time to wait for delivery of your next vehicle if it meant you got exactly what you wanted (i.e., features, color, etc.)?
Sample size: n=707

CHINA

Consumers still want to touch and feel the vehicle, a resource to help them with post-purchase needs, and get a good deal with transparent pricing before they commit to buying a vehicle.

Most important aspects of the vehicle purchase experience



Note: Sum of the percentages exceed 100% as respondents can select multiple options.

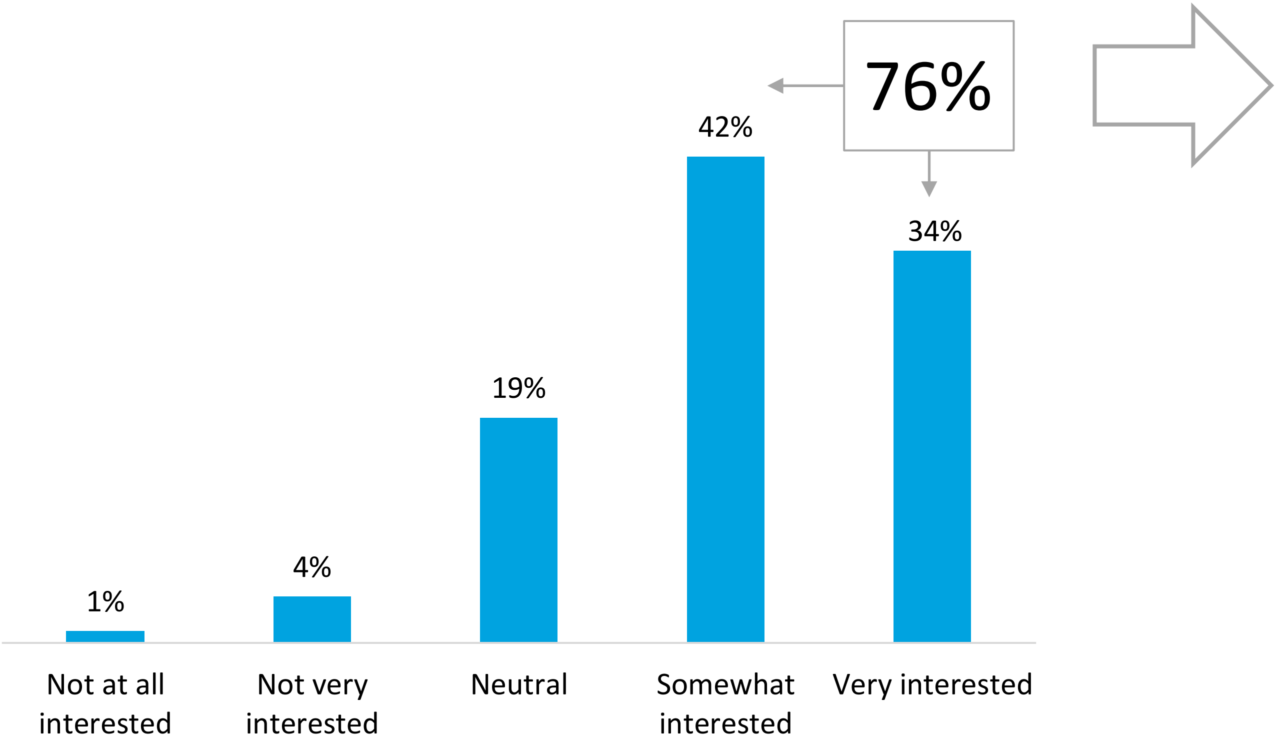
Q59: When looking to acquire your next vehicle, what are the top three most important aspects of the purchase experience?

Sample size: n= 707

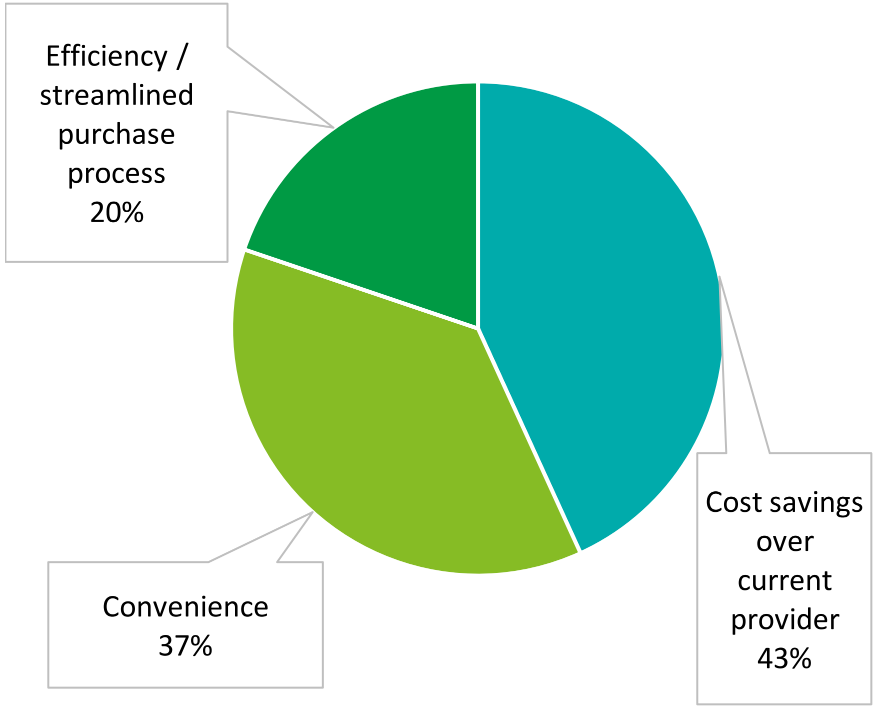
CHINA

OEMs are looking at every potential profit pool going forward, including bringing insurance products in-house, signaling a significant disruption for the traditional value chain.

Percentage of consumers who would purchase insurance directly from the manufacturer



For those consumers who are interested in purchasing insurance directly from the manufacturer, primary benefits are..



Q60: The next time you acquire a vehicle, how interested would you be in purchasing insurance directly from the vehicle manufacturer?;
Q61: What do you expect the primary benefit of buying insurance directly from the manufacturer to be?
Sample size: n= 707 [Q60]; 535 [Q61]

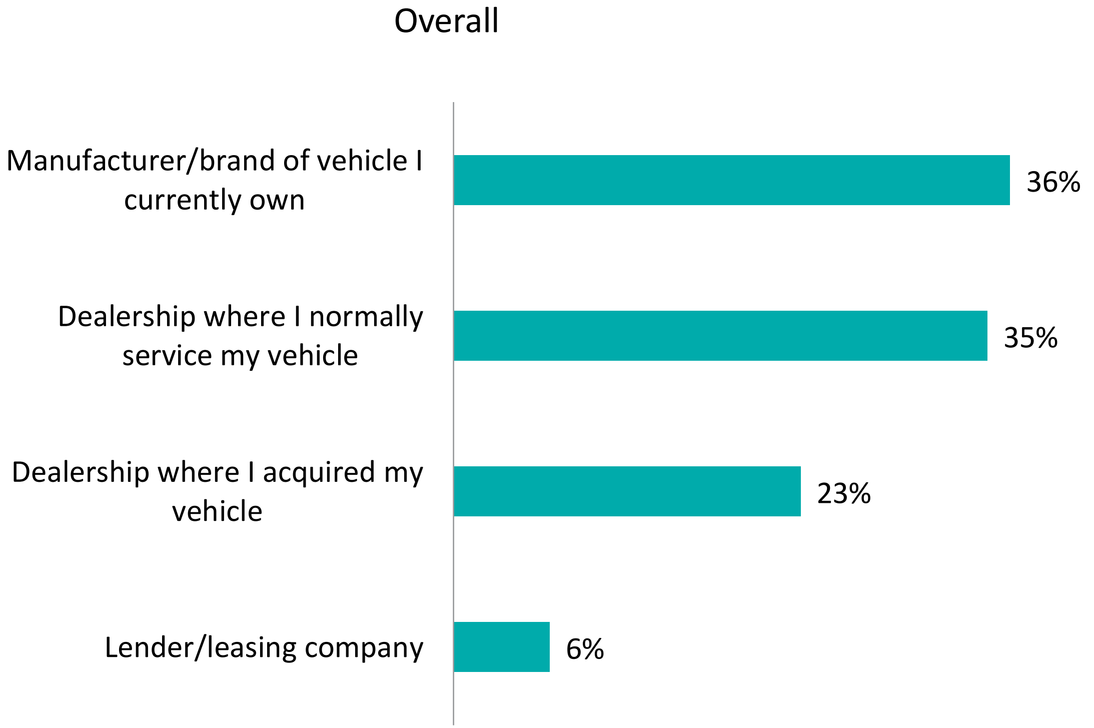
CHINA

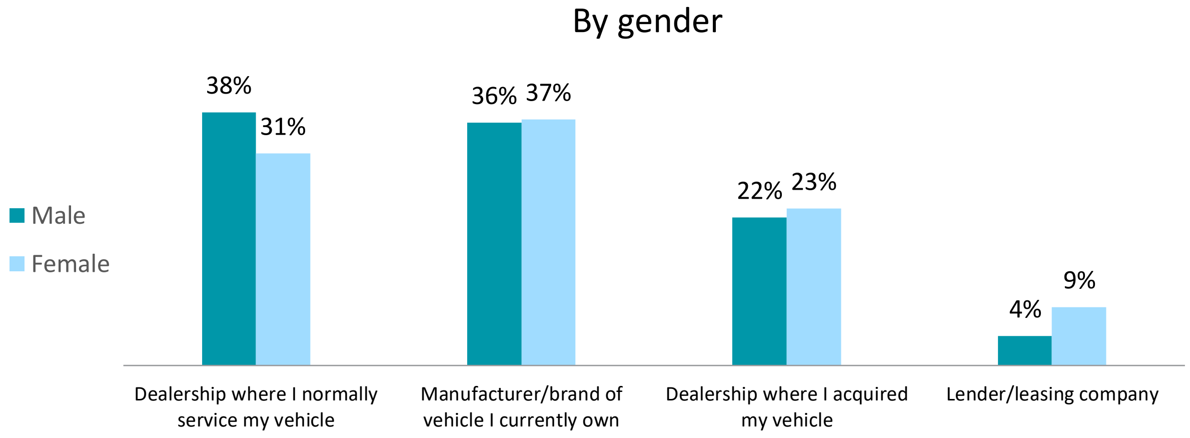
3

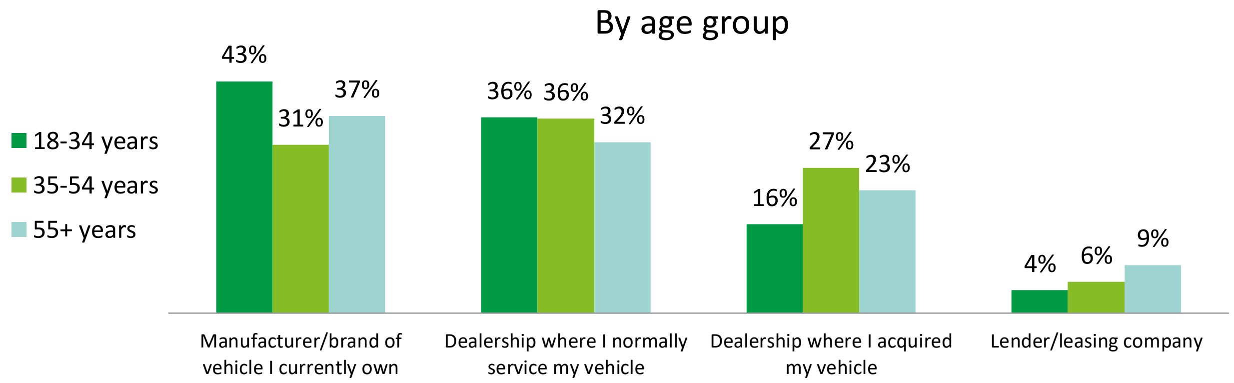
Vehicle brand and service experience

Consumer trust is evenly split between the manufacturer and the servicing dealer, signaling the importance each stakeholder has in the customer relationship.

Consumers have the most trusted relationship with…







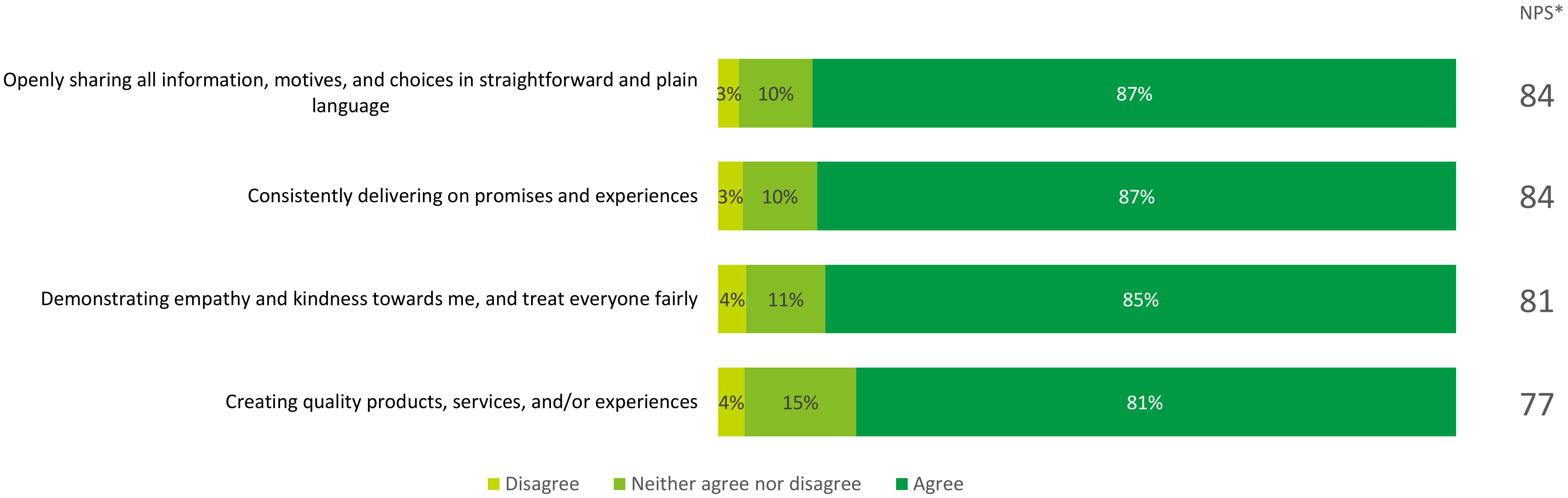
Q27: With whom do you have the most trusted relationship?

Sample size: n= 813 [Overall]; 455 [Male], 356 [Female]; 237 [18-34], 330 [35-54], 246 [55+]

CHINA

A reason for high trust in brands likely stems from the fact that consumers believe their OEM brand shares information, delivers on promises, and treats everyone fairly.

Consumer opinions on the brand of vehicle they currently own



*Net promoter score (percentage agree minus percentage disagree).

Note: Disagree includes strongly disagree, disagree, and somewhat disagree values; Agree includes strongly agree, agree, and somewhat agree values.

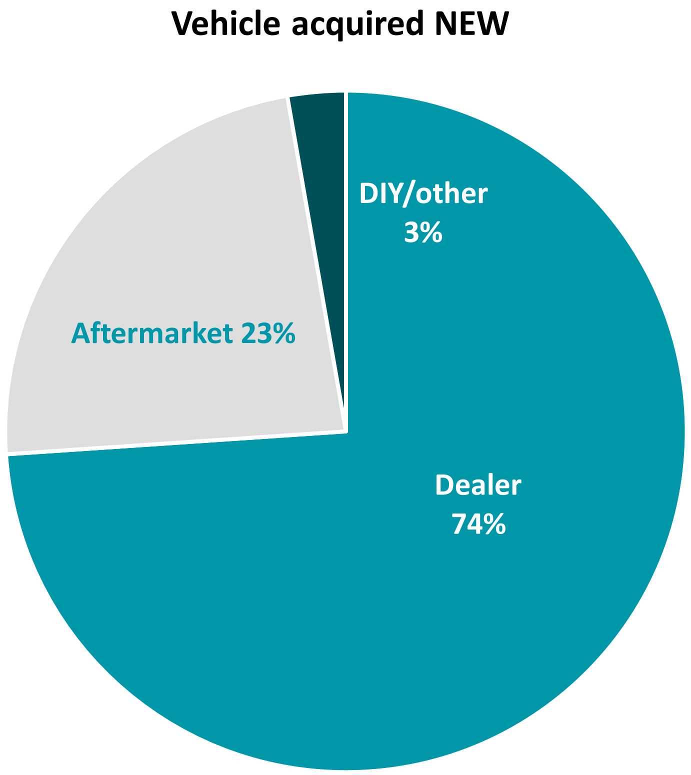
Q18: To what extent do you agree or disagree with the following statements relative to the brand of vehicle you currently own?

Sample size: n= 813

CHINA

3 in 4 consumers who originally acquired their vehicle new routinely take it back to the dealer for service, leaving another 23% of people who prefer an independent service provider.

Preferred vehicle service provider by how current vehicle was acquired



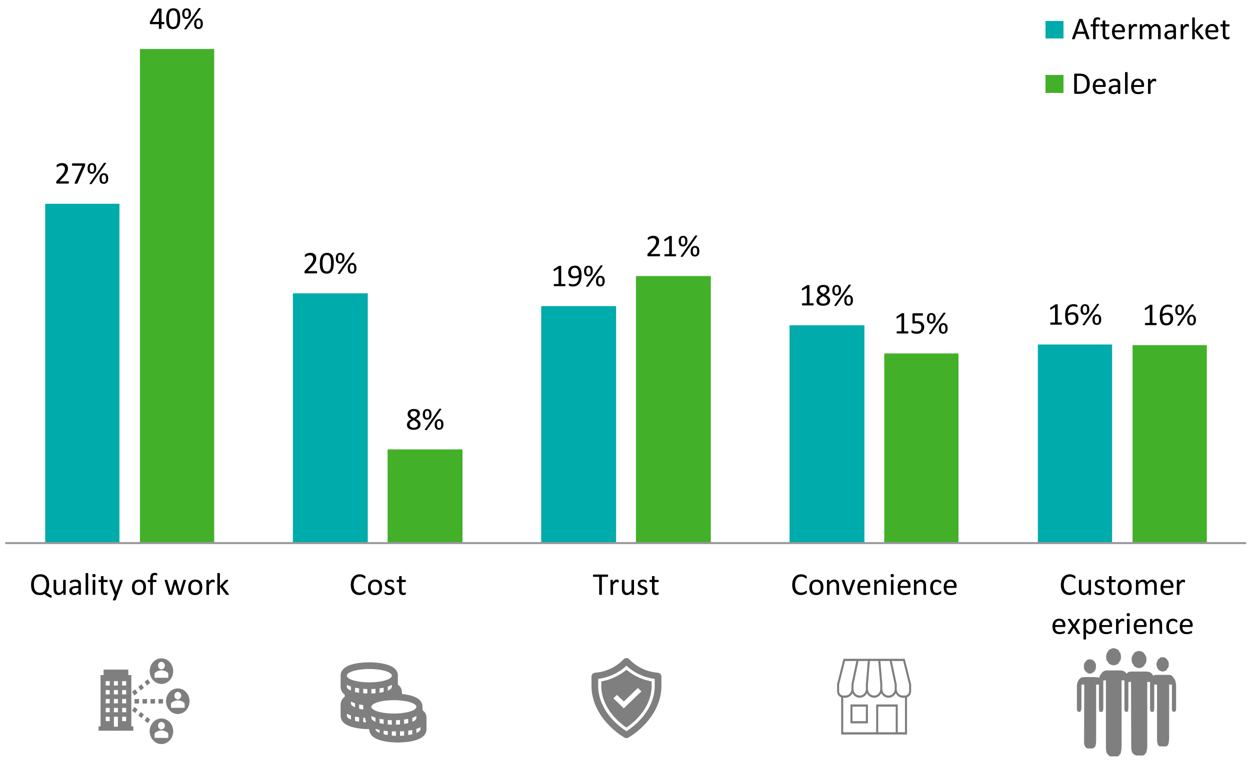
Q24: Where do you normally service your vehicle?

Sample size: n= 798

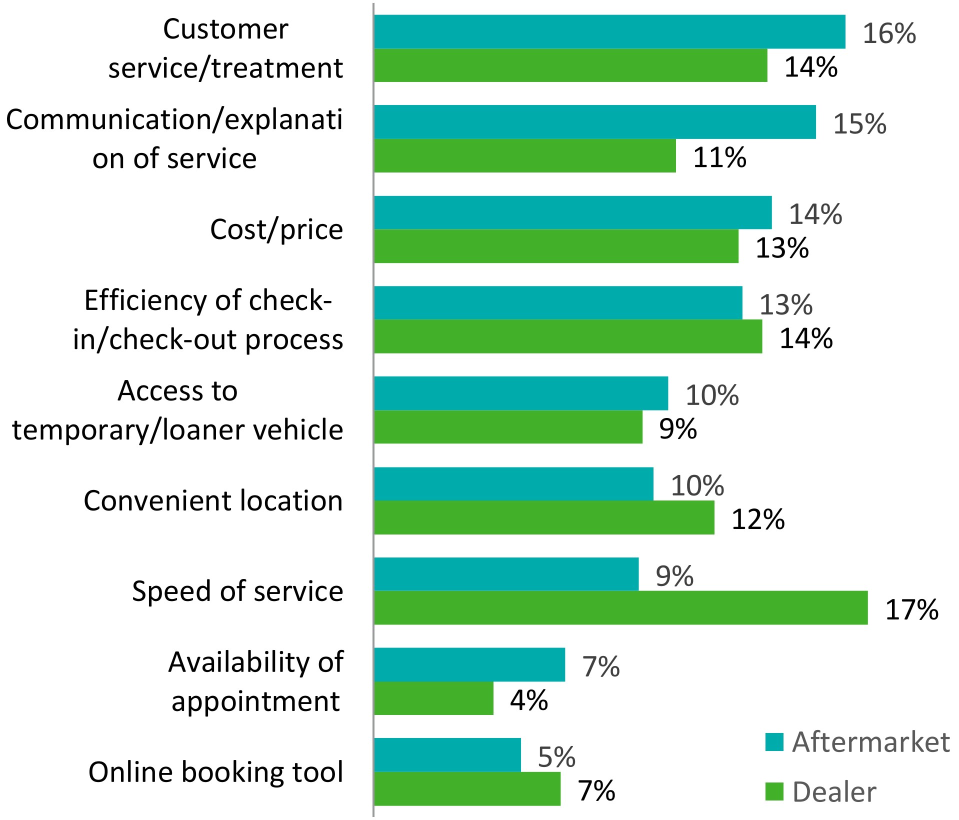
CHINA

Consumers prefer the dealership for the quality of work performed. Customer service and explanation of the work performed top the list of service experience success criteria.

Reasons for choosing vehicle service provider (by preferred provider)



Most important aspect of the vehicle service experience (by preferred provider)



Note: "Other" reasons not shown for choosing a vehicle service provider.

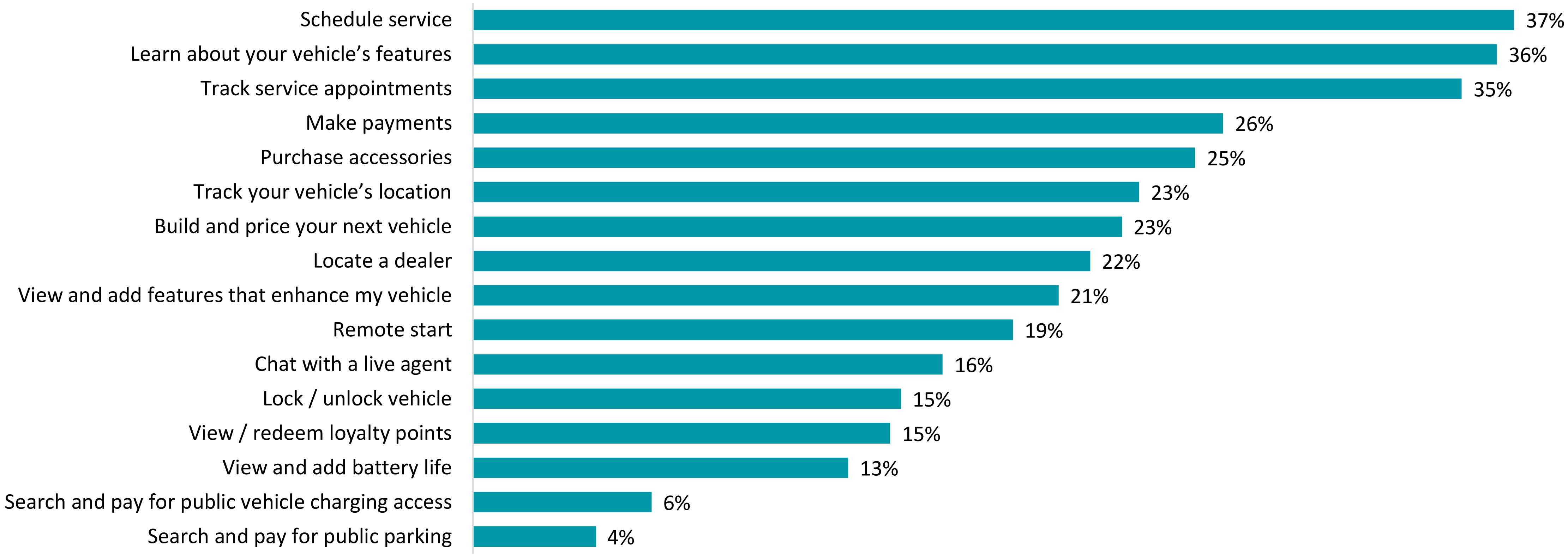
Q25: What is the most important reason for your preferred choice of vehicle service provider?; Q26: What is the most important aspect of a vehicle service experience?

Sample size: n= Dealer [596], Aftermarket [194] for Q25 and Q26

CHINA

Consumers most prefer to access features/applications that help them schedule and track service appointments and learn about their vehicle's features.

Important features of a vehicle brand app



Note: Sum of the percentages exceed 100% as respondents can select multiple options.

Q28: What are the most important features of a vehicle brand app? Please select all that apply.

Sample size: n= 813

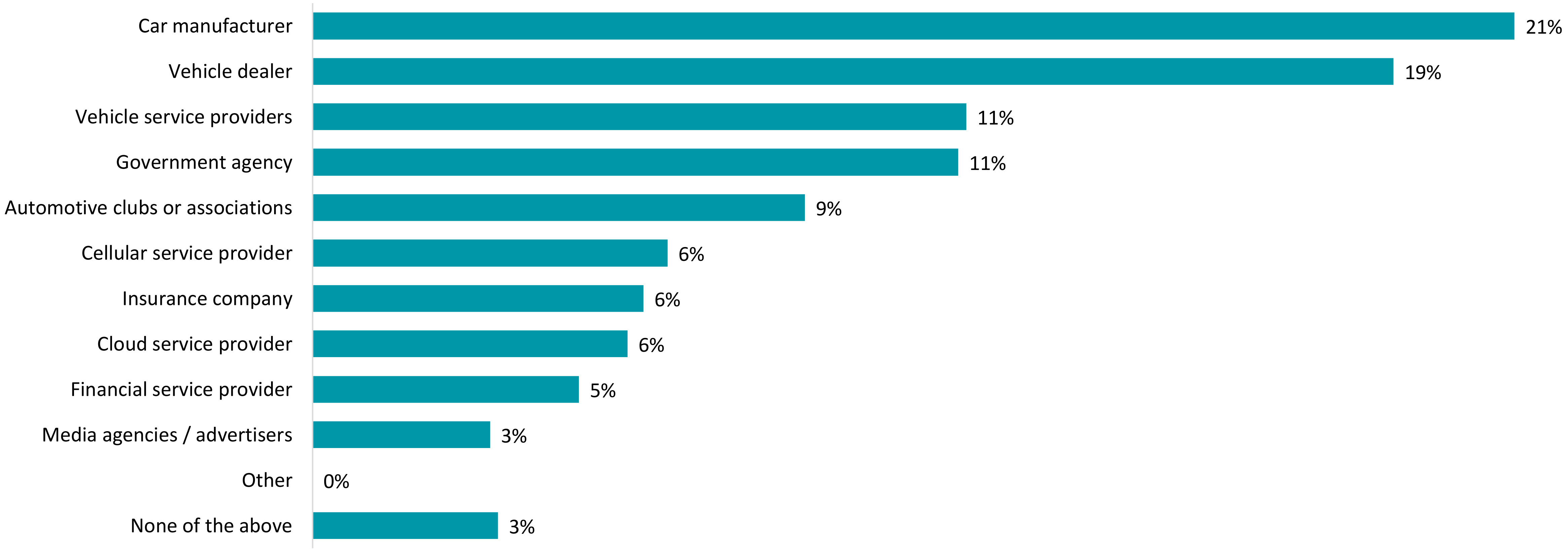
CHINA

4

Connectivity

Surveyed consumers mainly trust OEMs and dealers to manage their connected vehicle data. Unlike other global markets, only 3% of consumers don't trust anyone.

Consumer opinions on whom they trust the most to manage data generated/collected by their vehicle



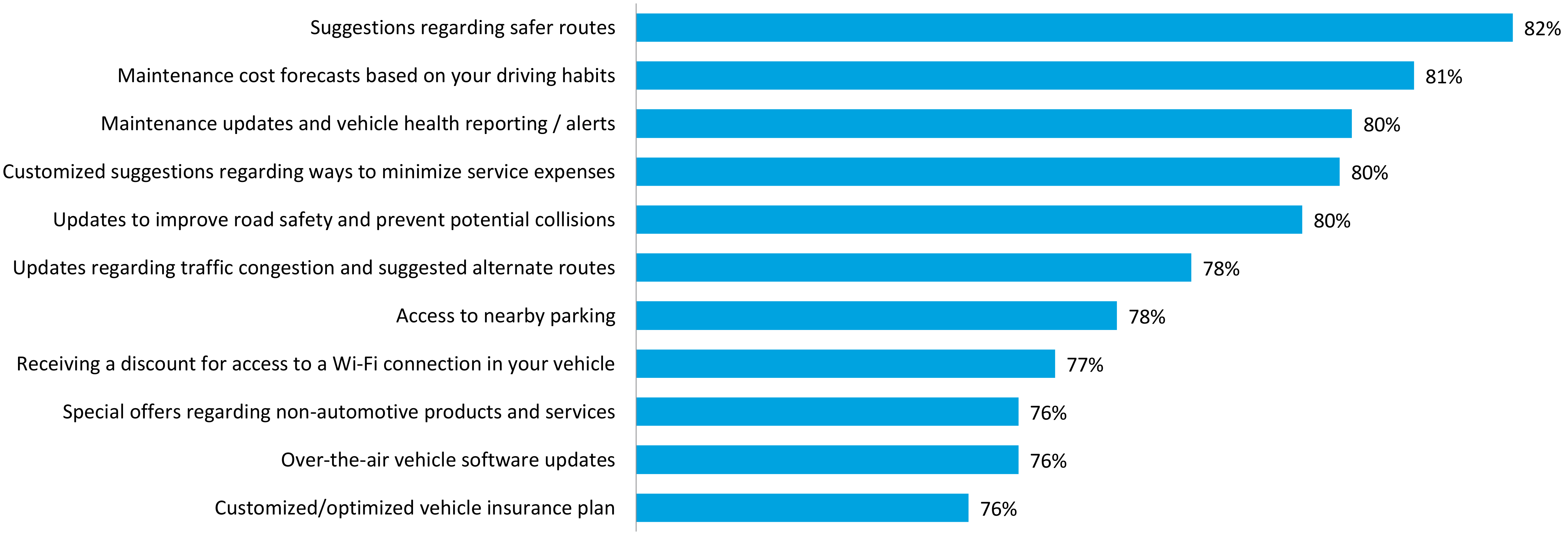
Q57: In a scenario where you owned a connected vehicle, which of the following entities would you most trust to have access to the data your vehicle generates?

Sample size: n= 707

CHINA

Consumers are ready to share PII* if it helps them get traffic/road safety updates, maintenance updates, and suggestions to help lower service expenses.

Consumer opinions on benefits of connected vehicles



*Personally identifiable information.

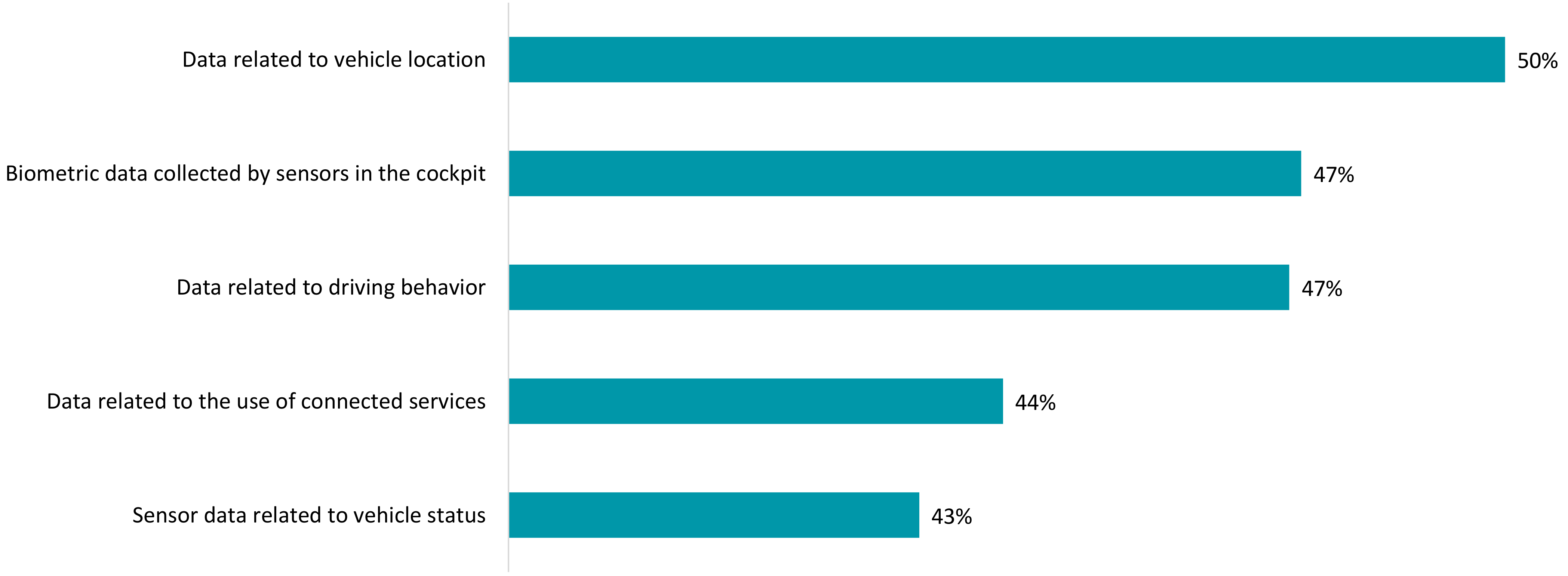
Q55: How interested are you in the following benefits of a connected vehicle if it meant sharing your own personally identifying data and/or vehicle/operational data with the manufacturer or a third party?

Sample size: n= 707

CHINA

At the same time, half of consumers surveyed are concerned if data related to the vehicle's location, biometrics, and driving behavior is shared.

Percentage of consumers concerned by sharing data with vehicle manufacturer, dealer, insurance company, and/or other third parties



Q56: As vehicles become more and more connected to the internet, how concerned would you be if the following types of data were shared with your vehicle manufacturer, dealer, insurance company and/or other third parties?

Sample size: n= 707

CHINA

More than half of the surveyed consumers would prefer to pay for connected vehicle features and technology upfront as part of the purchase price, representing a challenge for OEMs looking to build new revenue streams via digital subscription services.

Consumers preferred ways to pay for additional connectivity technologies

54%	Up front as part of the vehicle purchase price
39%	Charged on a per use basis
8%	As part of a monthly service to which I subscribe

Vehicle buyers prefer to pay for added tech features up front

Q58: How would you prefer to pay for additional connectivity technologies in your vehicle?

Sample size: n= 707

CHINA

5

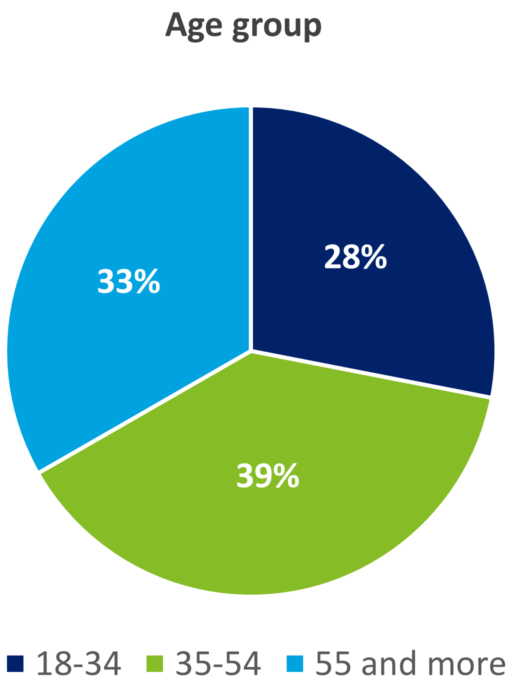
About the study

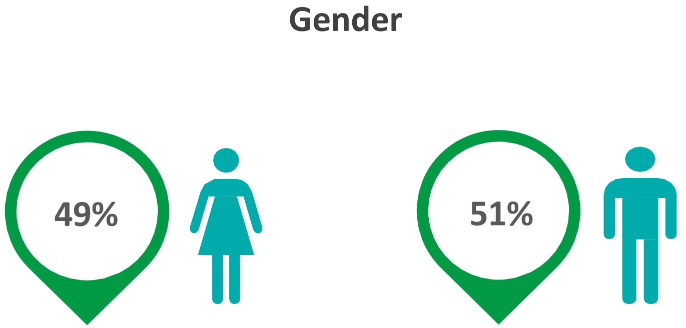
About the study

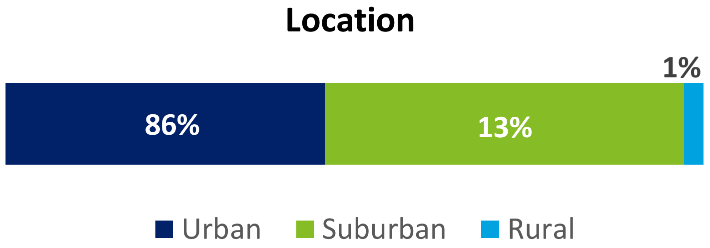
Survey timing
October 11 to October 14, 2022

Sample
The survey polled a sample of 1,012 consumers in China. The survey has a margin of error for the entire sample of +/-3.1%

Methodology
The study is fielded using an online panel methodology where consumers of driving age are invited to complete the questionnaire (translated into local languages) via email.







CHINA

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Acknowledgments

We would like to thank Srinivasa Reddy Tummalapalli, Srinivasarao Oguri, Dinesh Tamilvanan, and Kelly Warner for their important contributions to the research.

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MAKING AN IMPACT THAT MATTERS since 1845

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