BERYLLS BY ALIXPARTNERS

GERMAN SCEPTICISM MEETS CHINESE PROGRESSIVENESS AND US BRAND AFFINITY

Key insights from BEV purchasers and BEV considerers in China, the US, Germany and South Korea

CONTENT

Battery Electric Vehicles (BEVs) Consumer Survey

BATTERY ELECTRIC VEHICLES (BEVs) CONSUMER SURVEY

KEY TAKEAWAYS

German BEV consideres are more sceptical than consumers from the US or China

There are notable differences in how respondents in the four surveyed countries perceive BEVs. German respondents are rather skeptical with **40%** regarding electric vehicles as neutral or not good value for money. In contrast, **96%** of Chinese respondents and **90%** of American respondents rate them as good or very good value for money, demonstrating a very positive attitude towards BEVs.

Germans prioritize technical features while US-Americans and Chinese see the brand image as crucial

In some markets such as China or the US, a BEV's brand reputation carries substantial weight due to the perceived social status that it delivers. At the opposite end of the consumer spectrum, German BEV purchasers tend to prioritize practical and technical features such as battery size **(72%)**, range **(67%)**, and charging efficiency **(72%)**. For US respondents, the performance of a BEV **(58%)** is the biggest decisive factor.

Test drives play a crucial role to convince BEV prospects in all markets

The initial driving experience with a BEV is a key factor in shaping consumer perceptions. Across the markets, **86%** of respondents report a positive or very positive initial experience, while only **7%** have never driven a BEV. Notably, **55%** of US participants view the test drive as very positive, in contrast to **20%** of Koreans and **29%** of Germans.

US considerers make their purchase decision very early, while Chinese customers do so later in the sales funnel

40% of the US respondents decided on a BEV vehicle right from the start compared to only **16%** in China and **24%** in Korea. For Chinese customers, interacting with the brand **(35%)** or test driving the car **(30%)** convinced them to buy a BEV. German respondents' decision-making is more evenly distributed throughout the sales funnel.

A localized journey-based approach is key to accelerating BEV sales

Although many OEMs are facing challenging situations in their core markets like Germany and China for various reasons, they must boost BEV sales to stay competitive globally. Electric vehicles are superior for most passenger car use cases, offering comfort, ease of driving, interior space, and high performance. Our survey results show what consumers from different markets demand during the BEV buying journey. OEMs need to design their local sales funnels accordingly.

Berylls by AlixPartners 2024 BEV Consumer Survey

- **> 1,400** respondents in China, the US, Germany and South Korea
- Respondents purchased BEV in past year or plan to do so in next 2 years
- Segmented by age groups and gender to reflect specific national BEV buyer groups

in cooperation with: Civey

1

BEV BUYERS' NEEDS DURING THE PURCHASE JOURNEY

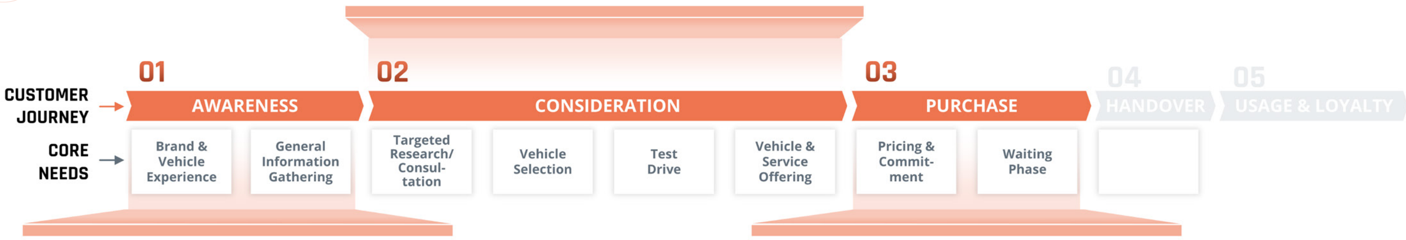
Factors that are unique to BEVs such as range, charging capabilities and battery longevity are important to customers who are considering whether to buy an electric vehicle. Many potential purchasers still lack knowledge about these factors and need more vehicle information than internal combustion engine vehicle (ICE) buyers, including a test drive, before deciding to buy a BEV.

Along the purchase journey, various brand and product touchpoints have different levels of importance in encouraging customers to convert, as the findings from our 2024 BEV study of potential and current BEV purchasers illustrate (see Figure 1):

FIGURE 1: MOST IMPORTANT CORE NEEDS AT DIFFERENT STAGES OF THE BEV PURCHASE JOURNEY

Upon becoming aware of different BEV brands and models, buyers look at details to improve their understanding of advantages of electric vehicles and differentiating elements that will determine their purchasing decision. Test drives experiences are crucial for both new and experienced BEV drivers. Our survey examines whether BEV buyers are proactively informed about BEV options, what they require from a test drive and how these takeaways influence their perceptions of e-mobility.

02 BEV VEHICLE CONSIDERATION AND TESTING



01 BEV BRAND AND VEHICLE AWARENESS

Car buyers used to be familiar with a few major brands and their regularly updated models. With the shift to e-mobility, many established manufacturers are launching BEV sub-brands like VW's ID, Mercedes-Benz's EQ, and BMW i. Meanwhile, new BEV-only brands such as Polestar, BYD, and NIO are expanding globally. These changes may confuse customers but also present opportunities to attract BEV buyers. Our survey examines how buyers first discover BEVs, the importance of brand reputation, and how BEVs compare to ICE vehicles.

03 BEV VEHICLE DECISION AND PURCHASE

There are key trigger points that influence the final BEV purchase decision. An attractive offer often extends beyond the vehicle, to include a wall box for home charging, a new energy contract or rooftop solar panels. For public charging, customers may seek subscription packages. Our survey examines what BEV buyers value in their offer, which factors ultimately trigger the purchase decision, and which factors may discourage consumers from going fully electric.

Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

BEV BRAND AND VEHICLE AWARENESS

The primary sources of awareness vary significantly by country. In Germany, online channels, and particularly social media, are less important than seeing BEVs on the road, which is ranked first (28%), followed by conversations with family, friends, and colleagues (24%).

By contrast, 37% of respondents in China first became aware of their preferred BEV model via social media, illustrating their higher level of online engagement when seeking product information and trends compared with consumers in the other three surveyed countries.

FIGURE 2: HOW DID YOU FIRST BECOME AWARE OF A BEV THAT YOU THEN PURCHASED OR ARE CONSIDERING PURCHASING?

	Web search	Social media	Video platforms	Family, friends, and colleagues	Seeing vehicle on the street	Other	Don't know
	26%	25%	12%	19%	15%	1%	1%
🇺🇸	34%	25%	10%	16%	13%	1%	1%
🇩🇪	19%	15%	5%	24%	28%	6%	3%
🇨🇳	22%	37%	14%	17%	10%	0%	0%
🇰🇷	31%	16%	17%	22%	13%	1%	0%

Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

These national divergences between BEV purchasers underscore why vehicle brands and dealers must follow strategies to maximize their presence in individual markets that reflect the diverse ways in which different cultures and regions engage with digital and traditional media.

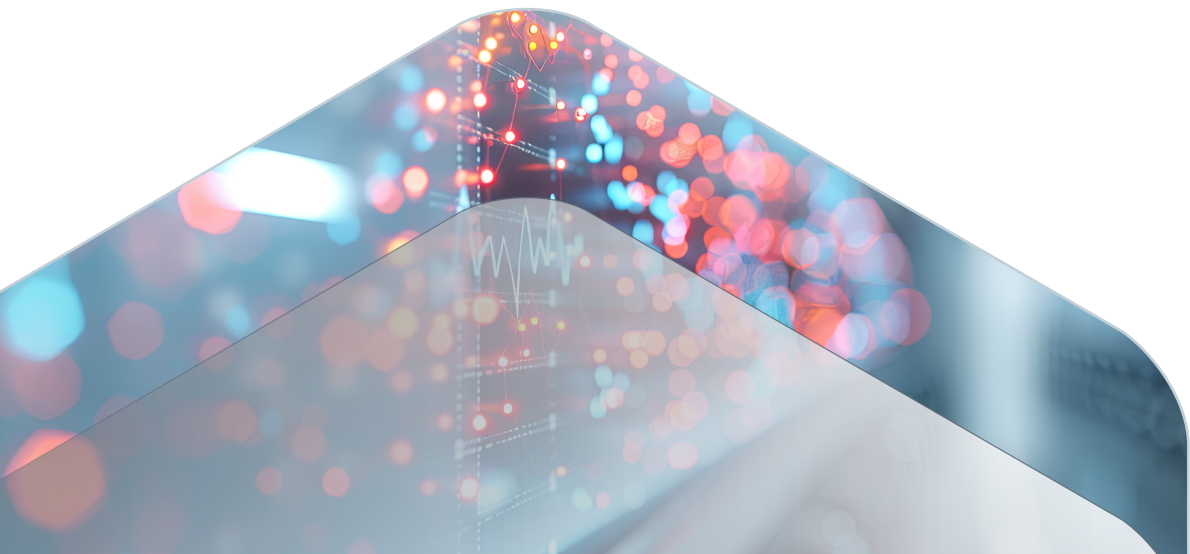
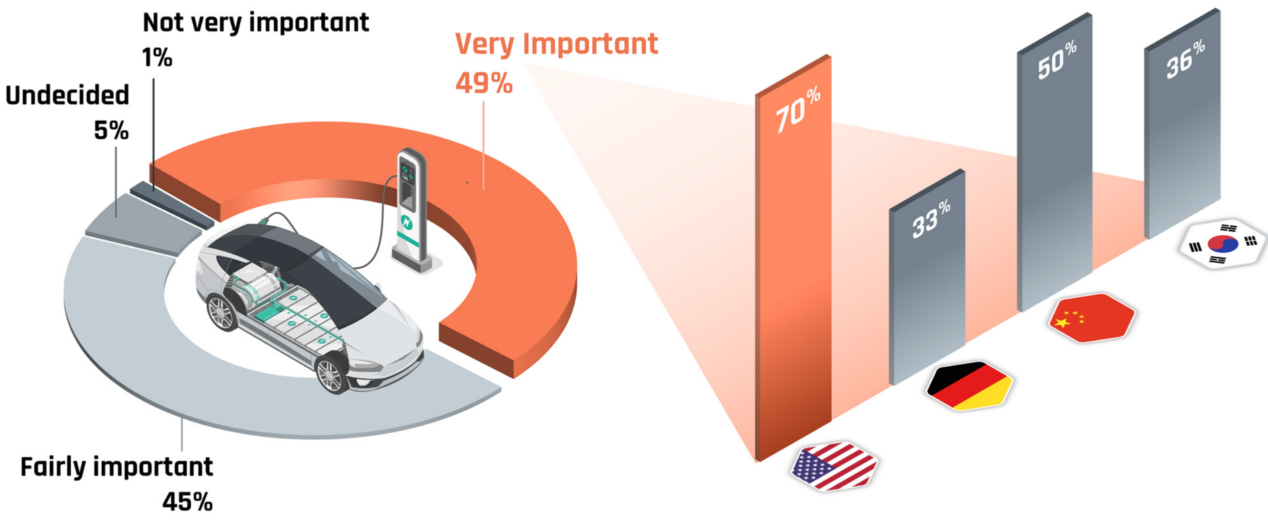


FIGURE 3: HOW IMPORTANT IS BRAND REPUTATION WHEN CONSIDERING THE PURCHASE OF A BEV?



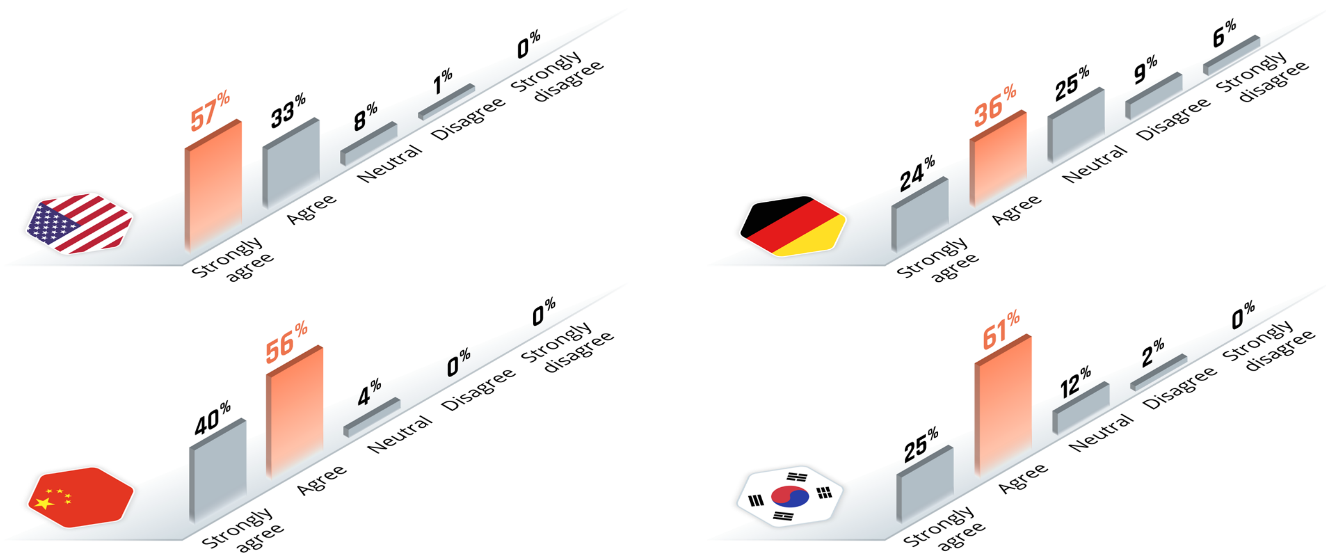
Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

Across the survey, 94% of respondents consider the brand reputation as either “very important” (49%) or “fairly important” (45%). This global emphasis illustrates the trust and security that a strong brand conveys. Well-known BEV brands symbolize quality, reliability and good customer service, significantly influencing purchasing decisions.

Nonetheless, German and South Korean BEV purchasers place markedly less importance on the brand when deciding which model to buy compared with their counterparts in the US and China. Among German respondents, 20% find brand reputation “not very important” or are “undecided” about its importance, compared to less than 5% in the other three markets. They tend to focus on more pragmatic concerns, such as product features and functionality, creating an opportunity for new and non-European e-mobility brands to gain market share.

German and South Korean BEV purchasers place markedly less importance on the brand when deciding which model to buy compared with their counterparts in the US and China.

FIGURE 4: TO WHAT EXTENT DO YOU AGREE WITH THE FOLLOWING STATEMENT: „BEVs ARE GOOD VALUE FOR MONEY“?



Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

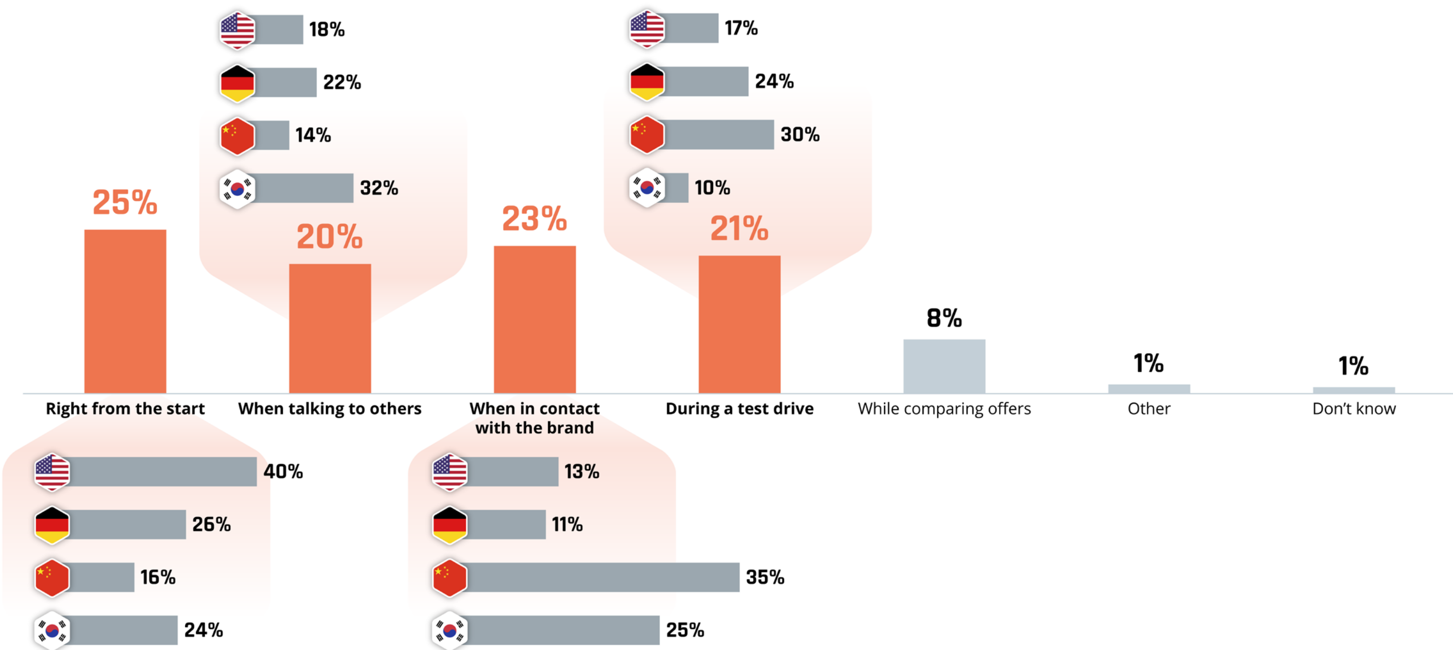
Most respondents across countries have a positive attitude towards BEVs, with 85% of respondents considering them to be good value for money.

Yet there are still significant national differences. In the US, 90% of respondents agree with the statement, compared with only 60% in Germany, where 15% of respondents are not convinced that BEVs are worth the price. Germany's relative skepticism about BEVs is also reflected in frequently critical media coverage of electric vehicles.

One way to improve the popular image of BEVs in Germany is for manufacturers and dealers to focus more strongly on the positive features of electric vehicles compared with ICE models, including a quieter, more comfortable driving experience, increased interior space and the potentially cheaper total cost of ownership, which depend on the individual usage and . This marketing approach would help address the dilemma currently faced by OEMs and dealers in Germany, where they still generate most of their revenues from ICE vehicles, while needing to recover their investments in e-mobility.

> Only 25% of respondents knew from the outset that they wanted to purchase a BEV.

FIGURE 5: WHEN DID YOU DECIDE TO BUY A BEV RATHER THAN A TRADITIONAL ICE VEHICLE?



Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

The decision to opt for an electric engine represents a crucial point in the customer journey. Only 25% of respondents knew from the outset that they wanted to purchase a BEV. About 20% decided to go electric after conversations with friends and family, while a further 21% chose to buy a BEV after the test drive, illustrating the importance of getting potential customers behind the steering wheel.

In the US, a significantly higher percentage of respondents (40%) were set on buying a BEV from the start of the purchase journey compared with the overall survey average (25%). In contrast, brand interaction is the most influential factor for respondents in China (35%), as confirmed by other findings in the survey.

Deep Dive

MAJOR DIFFERENCES BETWEEN THE BEV MARKETS IN CHINA, THE US, GERMANY AND SOUTH KOREA

Many general BEV buying trends are similar across markets. However, there are some significant national differences between the four surveyed countries that should influence how to design the best BEV purchase journey for maximum sales conversion and customer happiness. These differences were most evident among German and Chinese respondents.

German consumers appear to be more cautious and demanding about tangible product features, possibly reflecting greater concerns about BEV performance or adoption. Their preference for interpersonal interactions and direct observation suggests a reliance on first-hand experience and trustworthy sources of information, highlighting the importance of local test drive opportunities and robust customer service.

In the **US**, brand reputation plays a crucial role, with 70% of respondents deeming it very important when considering a BEV. American buyers are also significantly more decisive, with 40% knowing that they wanted a BEV from the outset. The influence of social media and manufacturer information is prominent, underscoring the need for effective digital marketing strategies. Additionally, test drives are a pivotal moment in the decision-making process. Typically, OEMs in the US have little influence on the dealer-focused national market. It is up to the dealers to design test drive experiences in a way that facilitates the BEV transition.

Chinese respondents are heavily influenced by digital platforms, with 37% first learning about BEVs through social media. This openness to online information is coupled with a strong emphasis on brand reputation, which is "very important" to 50% of buyers. The rapid adoption of BEVs in China is supported by extensive public charging networks, contributing to high engagement and conversion rates. The Chinese market's combination of technological engagement and brand consciousness underscores the need for tailored marketing approaches.

In **South Korea**, buyers value practical offers such as attractive energy tariffs more than home charging installations. This market reflects a preference for innovative solutions, suggesting that competitive pricing and service packages could drive BEV adoption. Personal experience of BEVs is important, but it has slightly less influence on purchasing decisions than in the US, China and Germany, indicating a potential marketing opportunity for manufacturers in this area.

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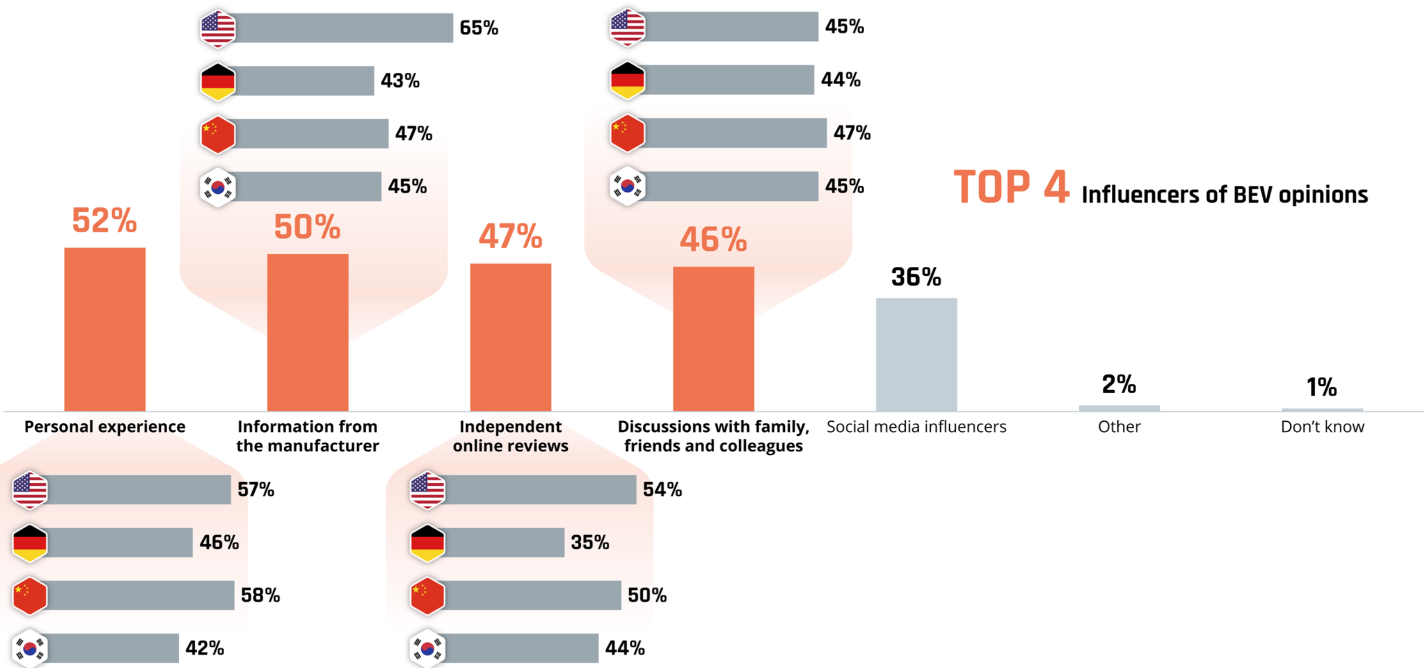
BEV VEHICLE CONSIDERATION AND TESTING

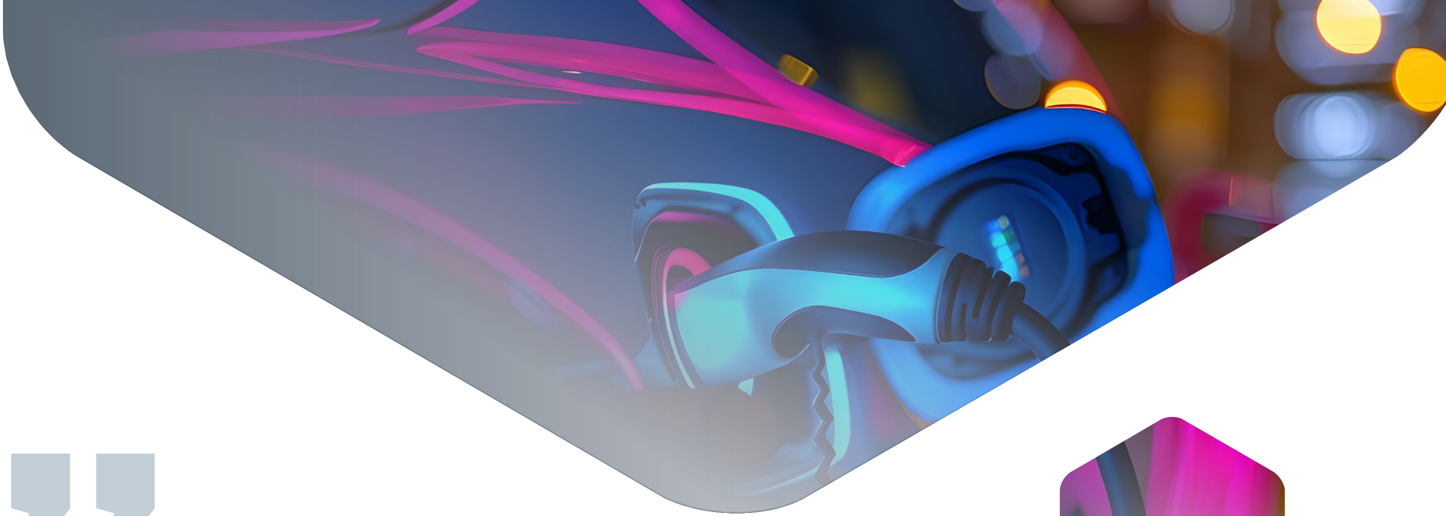
FIGURE 6: WHAT HAS SHAPED YOUR OPINION ABOUT BEVs?

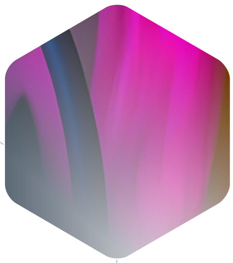


Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

The global perception of BEVs is shaped by various factors. Across all countries, personal experience such as test drives is influential, with 52% of respondents citing it as significant. Similarly manufacturer information shapes 50% of respondents' opinion. Discussions with family and friends also play a role and influence 46% of respondents, as well as independent online reviews, which influence 47%.

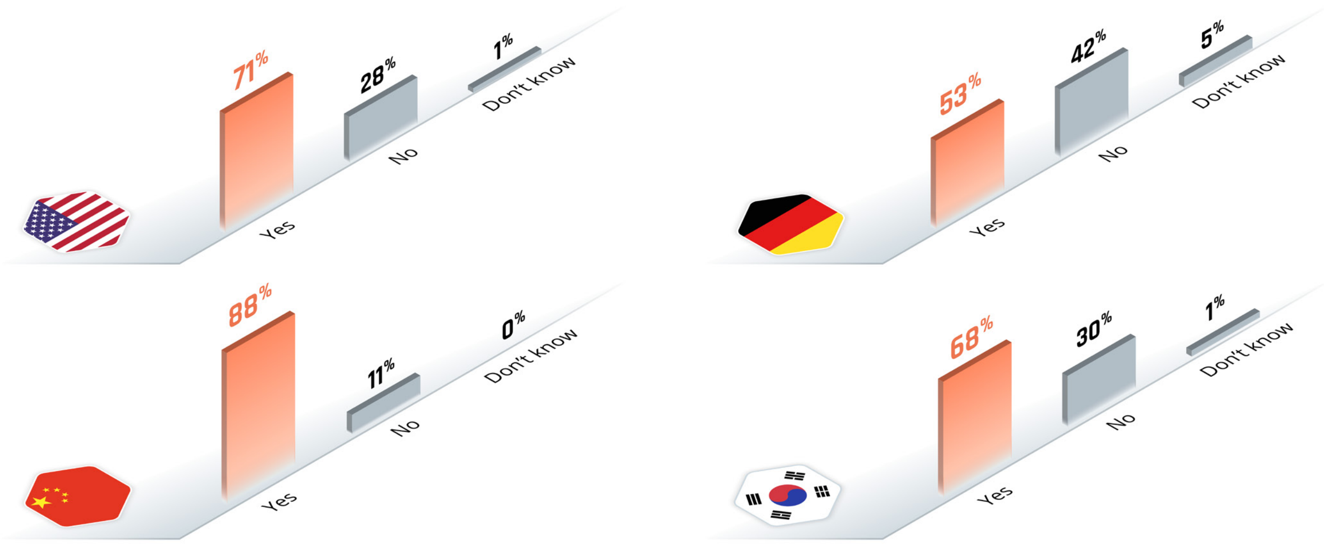
These findings highlight that there is no one-size-fits-all approach to influencing consumer attitudes to e-mobility in different markets around the world. Instead, it is important to focus on the needs and preferences of individual customers. Online marketing channels certainly have a role to play, but customer-facing sales staff should also be empowered to make decisions based on their interaction with potential BEV buyers.





In Germany, only 53% of the respondents have been proactively informed about BEVs during their purchase journey compared to 88% in China or 71% in the US.

FIGURE 7: WHEN YOU LAST BOUGHT A CAR, WERE YOU PROACTIVELY MADE AWARE OF BEV OPTIONS?

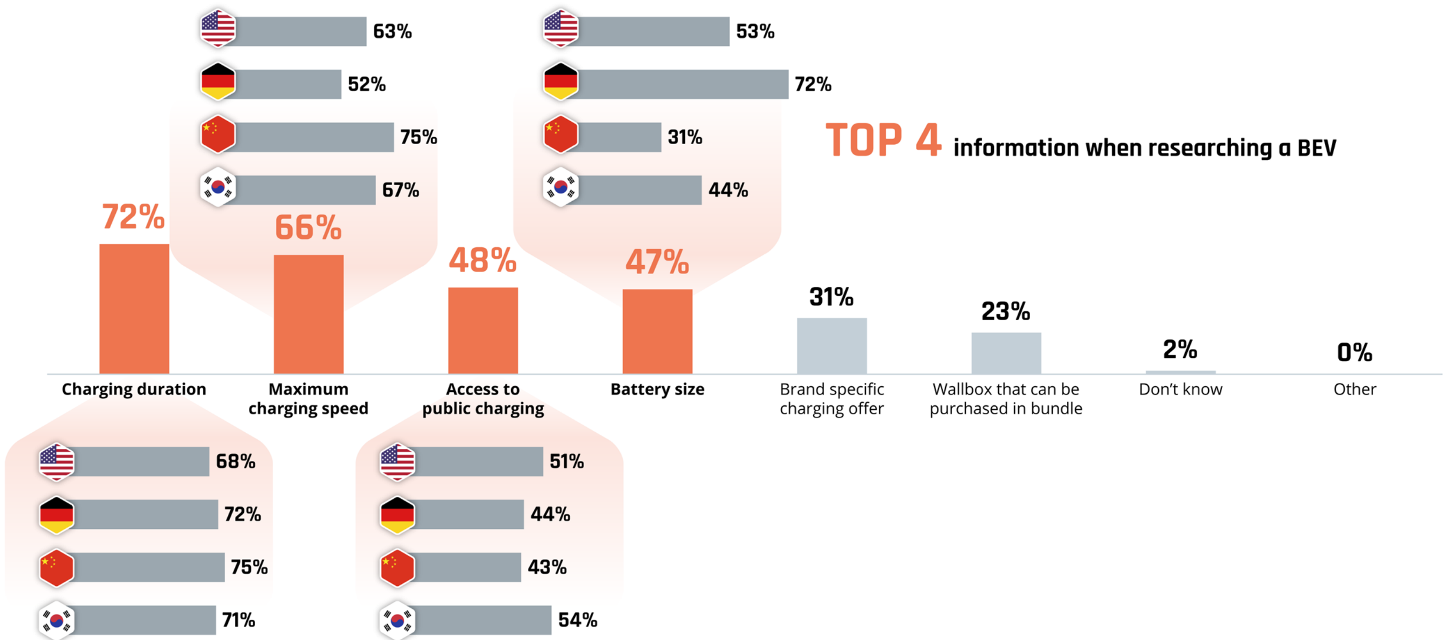


Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

The increasing importance of BEVs can be observed on a global scale, with more and more customers being offered BEV options. Across the survey, 73% of respondents say they have been proactively introduced to BEVs during their car purchase journey.

However, in **Germany**, only 53% of the respondents have been proactively informed about BEVs during their purchase journey compared to 88% in China or 71% in the US. This highlights the promotional opportunities that have not yet been utilized yet or underlines the sceptism of German sales persons to push BEV sales.

FIGURE 8: WHAT CHARGING INFORMATION IS IMPORTANT TO YOU WHEN RESEARCHING A BEV?

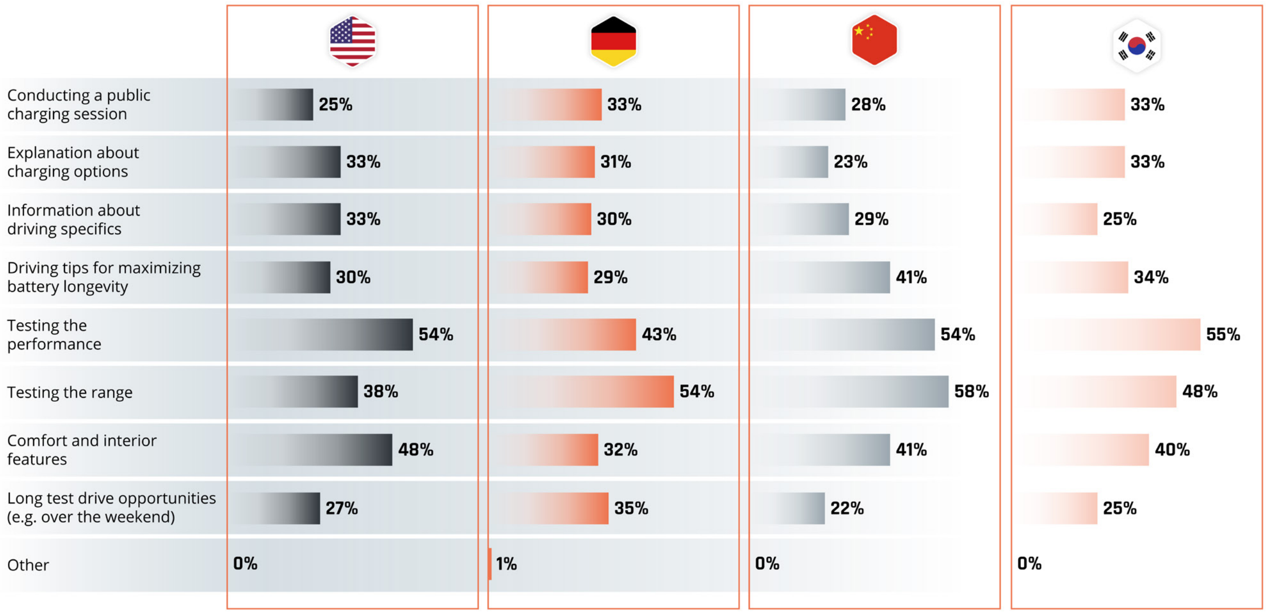


Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

These results indicate that global BEV customers prioritize efficiency and convenience when it comes to charging their vehicles. Maximum charging speed and charging duration directly affect how quickly a vehicle can be ready for use again, which is crucial for maintaining mobility and reducing downtime. As BEVs become more prevalent, the emphasis on fast, efficient charging reflects respondents' desire for seamless integration of these vehicles into their daily routines.

Interestingly, **Chinese** customers value charging speed over battery size, which Berylls regards as a sign of a more mature BEV market. Maximum range, which correlates with battery size, is less important if vehicles can be charged quickly. This may matter more in China, where short-distance urban driving is prevalent, than in the US or Germany, where long-distance trips are also common.

FIGURE 9: WHAT IS IMPORTANT TO YOU WHEN TEST DRIVING A BEV?

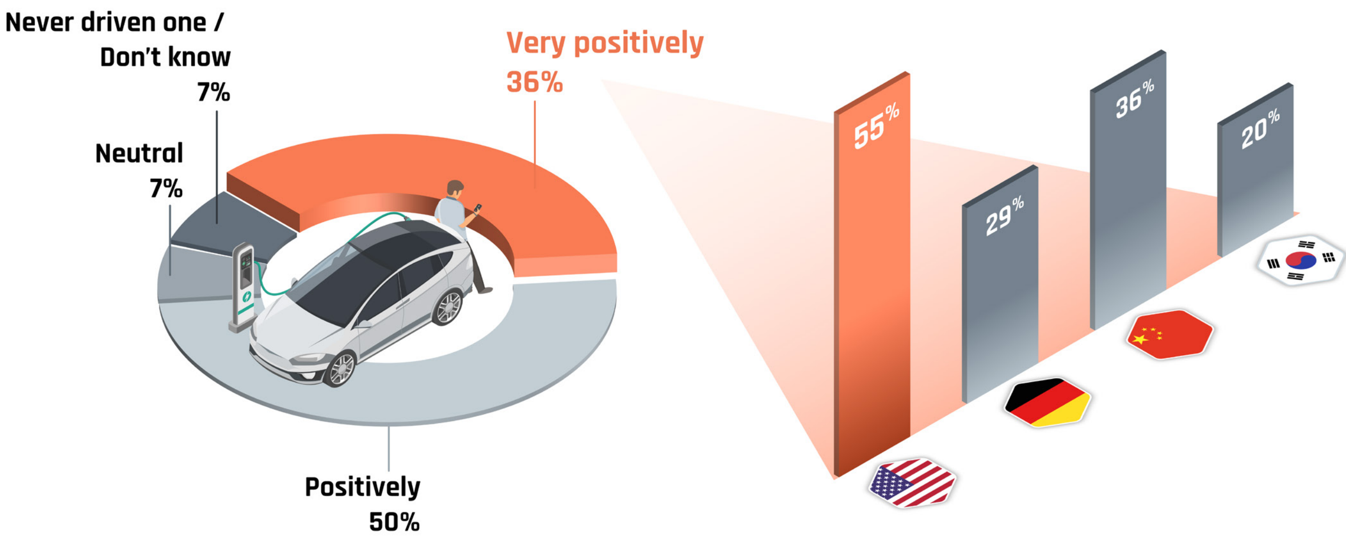


Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

Globally, a range of factors matter to potential customers during a test drive, including evaluating performance (52%) and assessing range (50%), with no significant differences between the four national markets. Interestingly, no factors significantly dominate the responses in any of the markets.

To persuade buyers irrespective of the market, OEMs and dealers should ensure that test drives offer a comprehensive experience that addresses all aspects that are critical to the individual customer's needs.

FIGURE 10: HOW HAS THE FIRST TIME YOU DROVE A BEV AFFECTED YOUR VIEWS ABOUT THIS TYPE OF CAR?



Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

The first experience of driving a BEV can significantly influence a customer's perception of this type of car. Across the survey, 86% of respondents rate their initial BEV drive as either "very positive" (36%) or "positive" (50%). Meanwhile, only 7% of respondents have never driven a BEV, indicating widespread exposure to electric vehicles. In **Germany**, the proportion is 15%, illustrating the lower prevalence of BEVs. At the opposite extreme, 99% of respondents in **China** have driven a BEV, with almost all of them (94%) regarding the experience as "positive" or "very positive".

> Across the survey, 86% of respondents rate their initial BEV drive as either "very positive" (36%) or "positive" (50%).

Deep Dive

RETAILERS' ROLE AND PERSPECTIVE

In most markets, dealers play a key role in selling BEVs. They have the power to both accelerate and slow down BEV sales, especially in the indirect sales model. Even in direct sales scenarios, however – where OEMs don't sell vehicles to dealers who then sell them to customers, but dealers take on a sales and consultation role in the name of OEMs – dealers have an influential role. This results from customers' preference for offline interactions during the purchasing process, which is more prevalent in Europe and the US than in China or South Korea.

The role of incentives on dealers' motivation to sell BEVs

Dealers operate as entrepreneurs within the automotive ecosystem. While they aim to meet customer demand, their choices are also influenced by financial considerations, which in turn are determined by the incentives that OEMs put in place. In markets like Germany or the US, where BEV skepticism persists, dealers are less likely to convince buyers to choose BEVs if it requires more time and effort. Consequently, dealers may prioritize ICE vehicles unless specific incentives encourage BEV sales.

Among the respondents, less than 3 in 4 customers were proactively be made aware of BEV options, in Germany only every second customer. Given that only recent BEV purchasers and current BEV considerers were asked, we can clearly see a missed opportunity. Especially in Germany, where almost all customers buy vehicles from a dealer, the dealer sales staff does not seem to have a big enough incentive to proactively promote and therefor accelerate the sale of BEVs.

What dealers can do to increase the attractiveness of BEVs

1. Always offer BEV options to customers whose driving habits favor BEVs over ICE vehicles
2. Instead of positioning BEVs as merely an alternative to ICE vehicles, emphasize their positive aspects
3. Prioritize individual customer needs and address concerns, many of which stem from misconceptions or outdated information
4. Ensure that potential BEV customers have the opportunity to test drive the electric vehicles, as this positively influences almost any BEV considerer's opinion
5. Proactively integrate charging (public and home) in the purchase experience
6. Offer promotions like BEV carefree packages that help mitigating customers' e-mobility concerns

If incentives are insufficient to make BEV sales attractive, dealers should collectively communicate this to OEMs. Successful e-mobility transitions require everyone's participation. Accelerating BEV sales early as a vehicle brand is wiser than playing catch-up later. Motivations to support BEV adoption should extend throughout the entire supply chain, including dealers. In the most extreme case, sales standards between OEMs and dealers can be updated to fully focus on BEV sales.

In summary, dealers' roles extend beyond mere transactions – they shape consumer perceptions, educate buyers, and influence the transition to e- mobility. By addressing market-specific challenges and incentivizing proactive promotion, dealers can play a pivotal role in driving BEV adoption.

Additional information

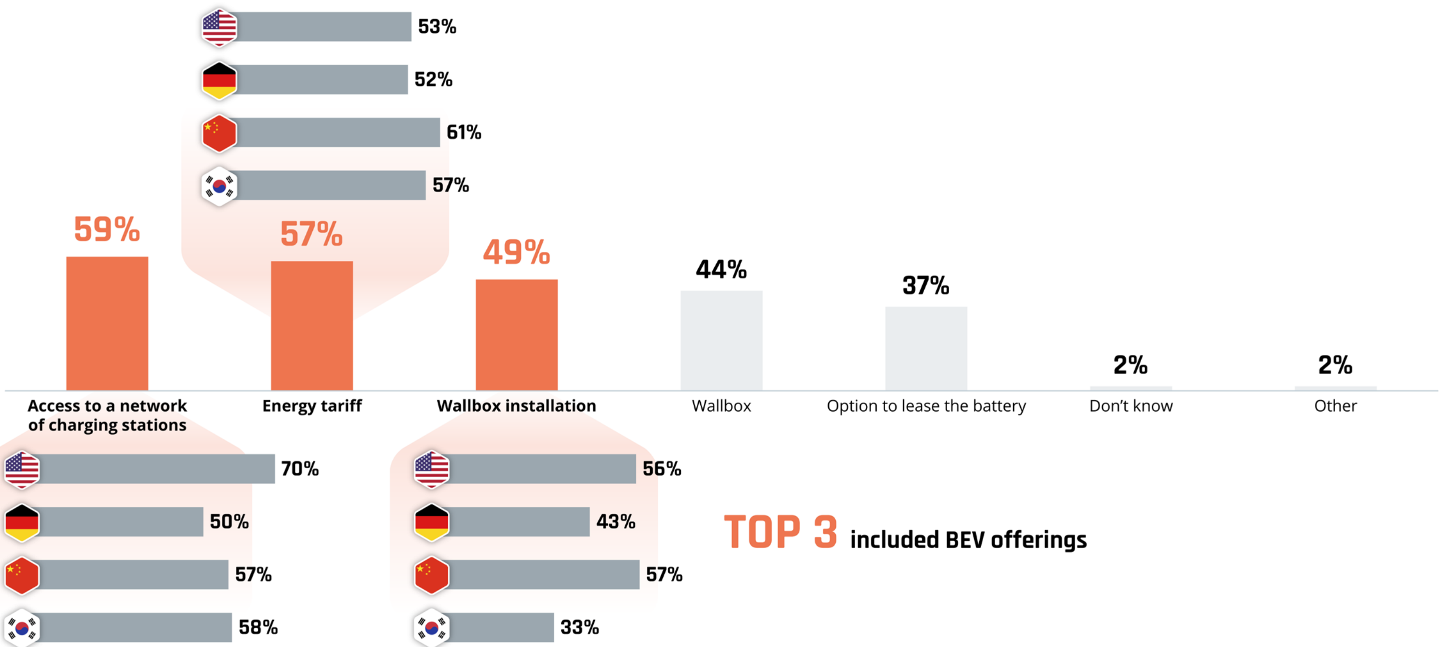
CONSUMER STUDY ON ONLINE SALES

**Dealers continue to play a crucial role in overall sales, as customers in most markets still prefer purchasing vehicles from them rather than online.
For further insights, you may refer to our recent online sales consumer study at Berylls by AlixPartners.**

4

BEV VEHICLE DECISION AND PURCHASE

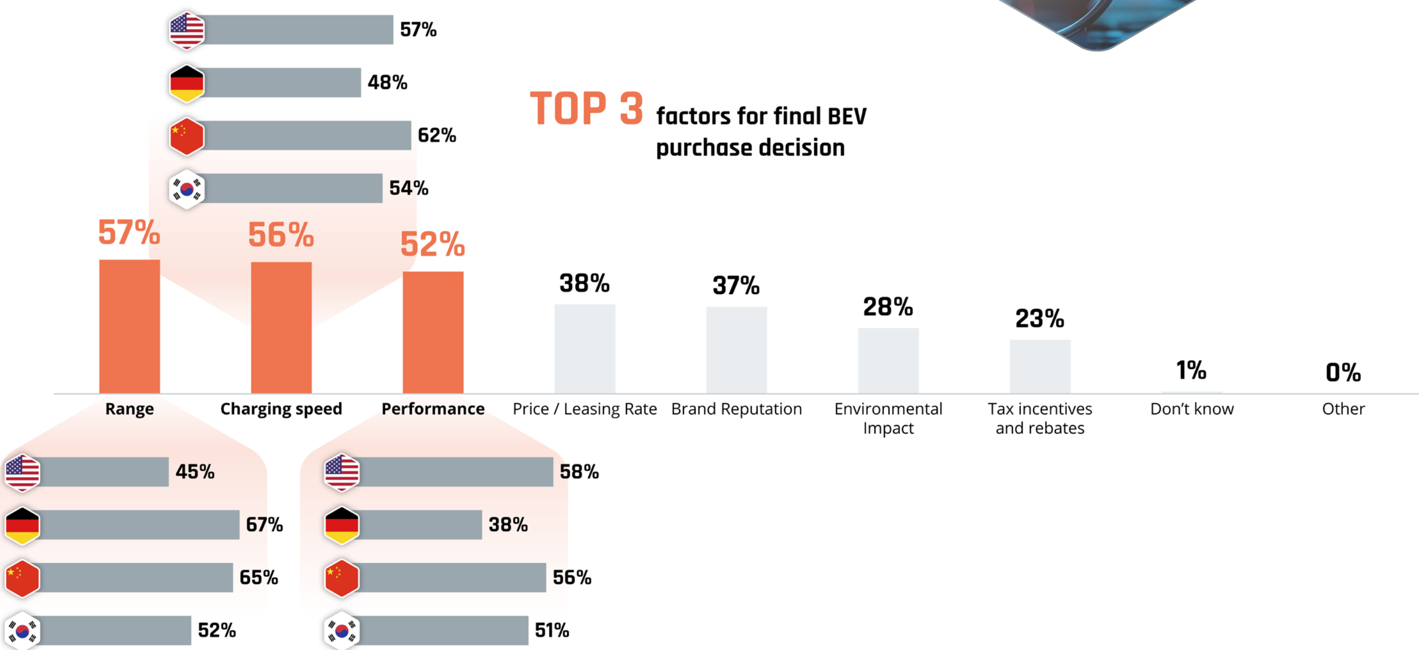
FIGURE 11: WHAT SPECIFIC BEV OFFERS WOULD YOU LIKE TO SEE INCLUDED WHEN CONSIDERING THE PURCHASE OF A BEV?



Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

The decision to purchase a BEV is influenced by a variety of factors, including the additional services and products that accompany the vehicle. Many OEMs are contemplating whether to bundle multiple products with their BEVs to enhance their attractiveness. The most frequently mentioned are access to a charging network, an energy tariff that typically must be updated when installing a wall box at home, and the wall box installation. Including these offers could improve overall customer satisfaction and drive higher conversion rates by mitigating common barriers to BEV adoption. As none of the mentioned products and services dominate the responses, offering these may not pay off in terms of making a BEV more attractive to the purchaser. These bundle offers are increasingly standard in the observed markets.

FIGURE 12: WHICH FACTORS WERE OR ARE MOST IMPORTANT FOR YOUR FINAL PURCHASE DECISION, IF YOU HAVE PURCHASED OR ARE CURRENTLY CONSIDERING PURCHASING A BEV?

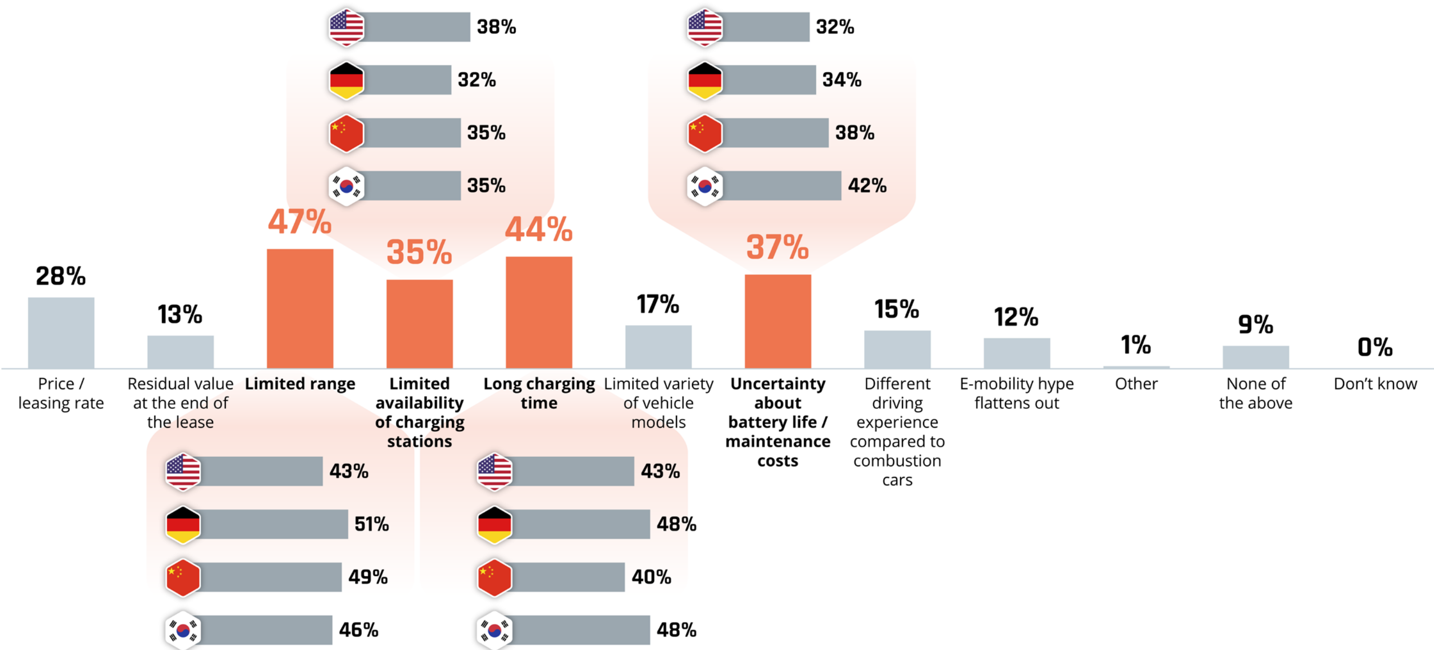


Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

When making the final decision to purchase a BEV, technical aspects such as range, charging speed, and vehicle performance are relevant across all markets. These three factors are followed by price and brand reputation. There are no significant differences between countries, although range is seemingly a little less important in the US (45%) compared with the survey average (57%). Similarly, German respondents appear to place less priority on performance (38%) than the survey as a whole (52%).

Overall, these technical attributes are pivotal in addressing key consumer concerns and ensuring the vehicle meets practical needs, underscoring their central role in the decision-making process. This suggests that while national preferences may vary slightly, the core elements driving BEV purchase decisions remain consistent. The wide spread of factors cited by small segments of respondents is a sign for OEMs or dealers to link their sales arguments to the individual customer's needs.

FIGURE 13: IN YOUR OPINION, WHAT ARE THE KEY FACTORS THAT WOULD DISCOURAGE THE PURCHASE OF A BEV?



Source: Berylls by AlixPartners & Civey, 2024, n = 1,402

Consumers may hesitate to purchase BEVs due to several factors that may not meet their expectations. Across the survey, the most important factors for respondents are range (47%), followed by long charging time (44%), limited availability of charging stations (35%) and uncertainty about battery life (37%). In addition, long charging times and insufficient charging infrastructure contribute to consumer resistance, while doubts about battery longevity add to the overall uncertainty. Overall, the responses are fragmented across various factors.

The mentioned concerns are likely to reduce over time as charging infrastructure improves, reducing the need to worry about range and long charging times. Battery life will also be less of a concern once consumers understand how durable vehicle batteries are compared with everyday battery-powered devices such as mobile phones which suffer from decreasing battery performance within few years. Meanwhile, OEMs and dealers should improve their communication to mitigate these concerns, with customer success stories and brand ambassadors as two possible approaches.

GETTING AHEAD IN THE E-MOBILITY TRANSITION: THE BERYLLS BY ALIXPARTNERS BEV SALES ACCELERATION FRAMEWORK

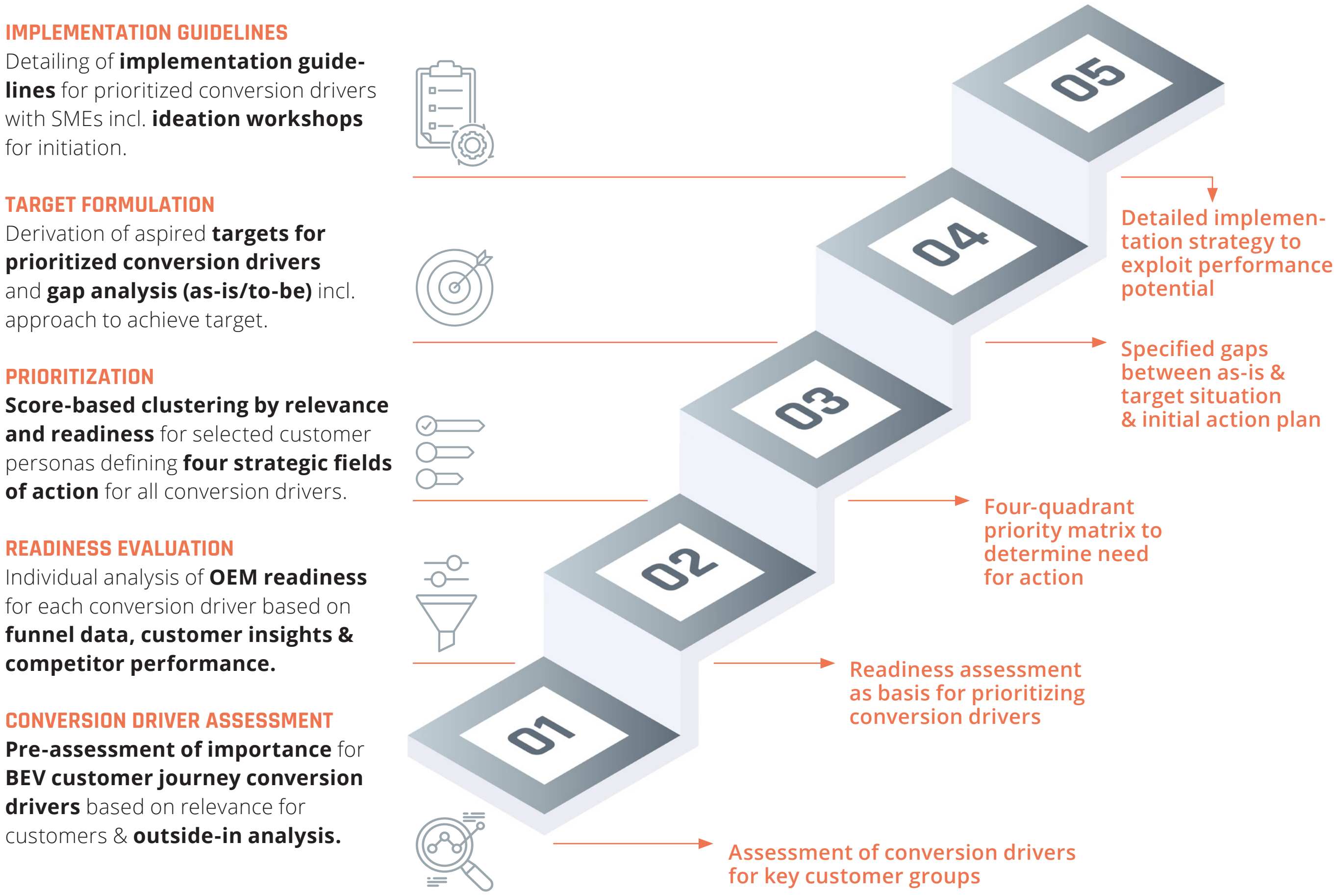
Our survey highlights what customers in four major national BEV markets value along their purchase journey. The findings show that while there are still some concerns regarding issues such as range and charging infrastructure and speed, there are also answers to these problems. Most importantly, it is essential to give customers the opportunity to sit behind the steering wheel and proactively engage with them to discuss and mitigate their concerns. Test drives and helpful, informative conversations can open the route to a positive BEV purchase decision.

Differentiation from competitors is critical for boosting the sale of BEVs in an increasingly crowded market. As the survey reveals, some touchpoints along the purchase journey are more important than others in driving conversion.

Drawing on Berylls' BEV customer experience projects, we have developed a sales acceleration framework that builds on the survey findings to prioritize the most critical BEV conversion touchpoints. In total, the framework identifies and assesses more than 50 BEV purchase journey conversion drivers that can be refined by integrating an OEM's current journey readiness and proprietary customer insights.

The framework sets out a proven five-step approach to accelerate BEV sales:

FIGURE 14: BERYLLS BY ALIXPARTNERS BEV SALES ACCELERATION FRAMEWORK



Source: Berylls by AlixPartners

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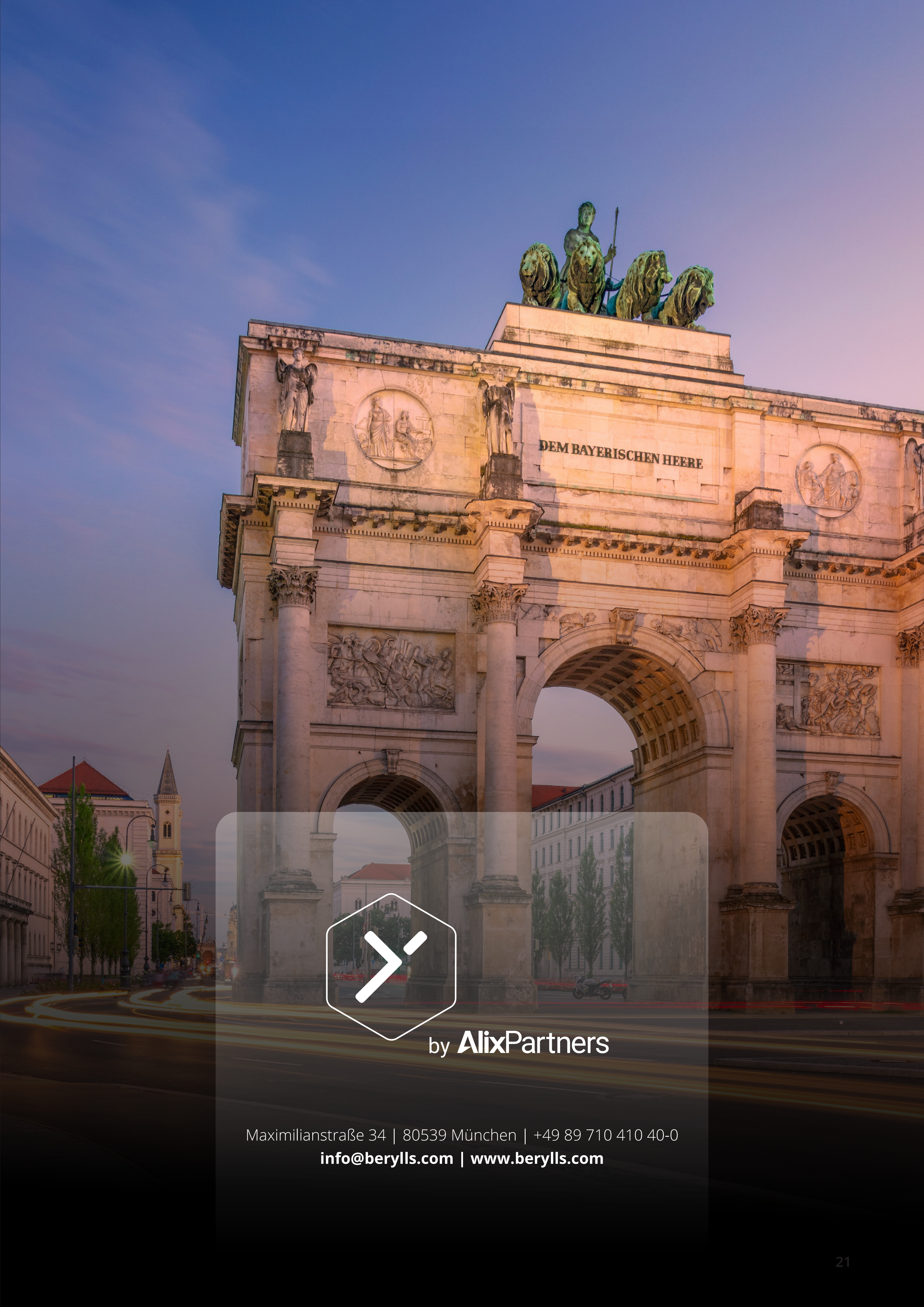

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