



Driving into a World of Electric Vehicles

Malaysia Automotive Sector – Whitepaper Series

June 2024

Rakuten Insight

EVOLVE
EXPLORE | CONNECT | TRANSFORM



Research Objectives

1

Understanding the Current Electric Vehicle (EV) Market & Future Potential



Electric Vehicles Understanding & Perception



Electric Vehicles Usage & Attitude



Triggers and Barriers Towards Electric Vehicles

2

Identifying the Triggers & Barriers towards Electric Vehicle (EV) & Opportunities to Address Concerns



View Towards Current Charging Stations for Electric Vehicles



Perception towards Aftersales Service of Electric Vehicles



Opportunity Areas for New Services for Electric Vehicles

Research Design



COVERAGE

Total Malaysia

Peninsular & East Malaysia



AUDIENCE

Definition

Current car owners who intend to purchase a new car in the next 3 years and are considerers of Electric Vehicles (EV)

Profile

Malaysian Citizen aged 21 – 60 years old



METHODOLOGY

Method

*Online Interview
(via Rakuten Insight consumer panel)*

Interview Length

25-30 Minutes

Sample Size

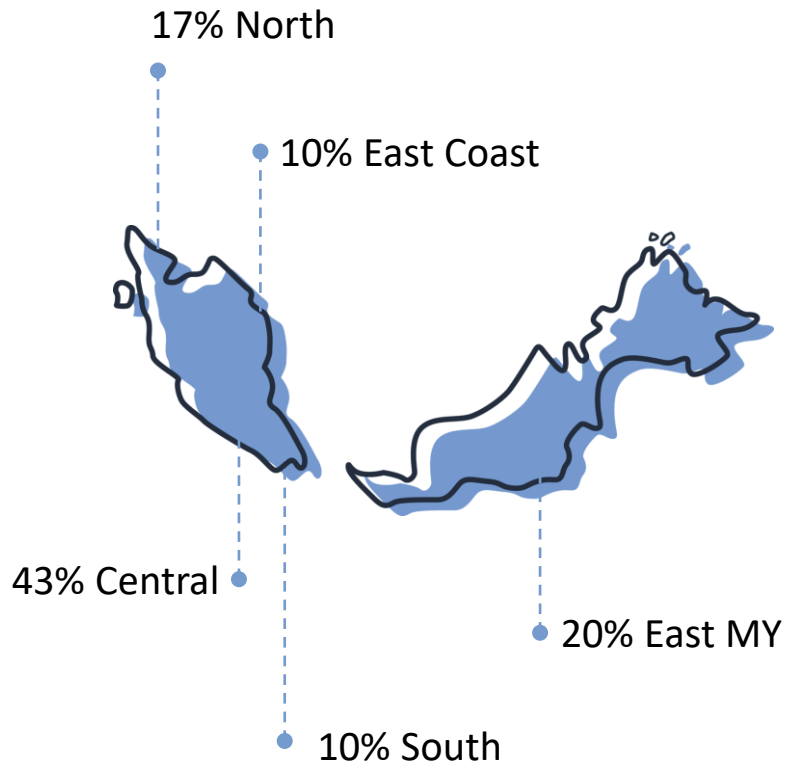
613 Interviews

Fieldwork period

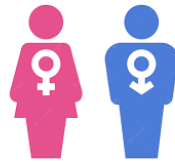
Q1 2024

Audience Profile

LOCATION



AUDIENCE



GENDER

54% Female
46% Male



ETHNICITY

51% Malay
41% Chinese
8% Indian



AGE GROUP

24% 21 – 30 years old
38% 31 – 40 years old
30% 41 – 50 years old
8% 51 – 60 years old



HOUSEHOLD INCOME BRACKET

31% T20 (High Income)
57% M40 (Mid Income)
13% B40 (Low Income)



CAR TYPE OWNER



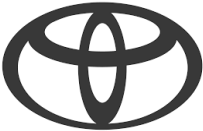















90% Gasoline/Diesel
25% Hybrid
5% Electric Car



CAR SEGMENT OWNER

25% <RM50k
27% RM50-120k
26% RM120-190k
22% >RM190k

Car Brand Usership

 <p>PERODUA 24%</p>	 <p>HONDA The Power of Dreams</p> <p>HONDA 18%</p>	 <p>TOYOTA 14%</p>	 <p>PROTON</p> <p>PROTON 12%</p>	 <p>BMW 9%</p>	 <p>NISSAN 4%</p>
 <p>MERCEDES-BENZ 3%</p>	 <p>MAZDA 3%</p>	 <p>HYUNDAI 2%</p>	 <p>FORD 2%</p>	 <p>MITSUBISHI 1%</p>	 <p>LEXUS 1%</p>
 <p>TESLA 1%</p>	 <p>VOLVO 1%</p>	 <p>CHERY 1%</p>	 <p>KIA 1%</p>	 <p>VOLKSWAGEN 1%</p>	 <p>BYD 1%</p>

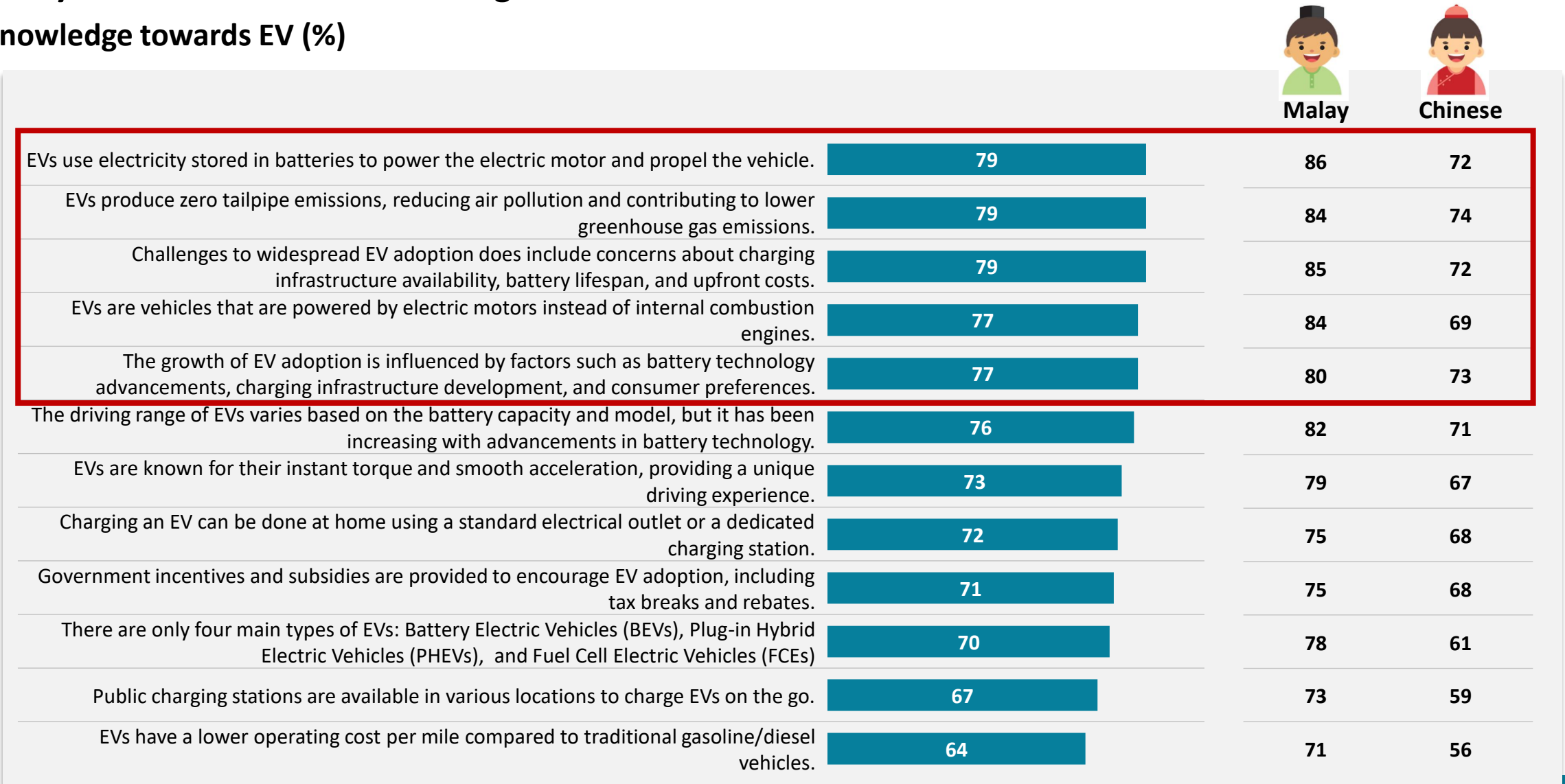
Base: All respondents; n = 613
Which of these brands do you drive most frequently?



What is the level of understanding towards Electric Vehicles (EV)?

Malaysians' knowledge of EV is more on a general level with lower knowledge towards actual usage experience, technological and government incentives enhancements. Malays seem to have more knowledge of EVs.

Knowledge towards EV (%)

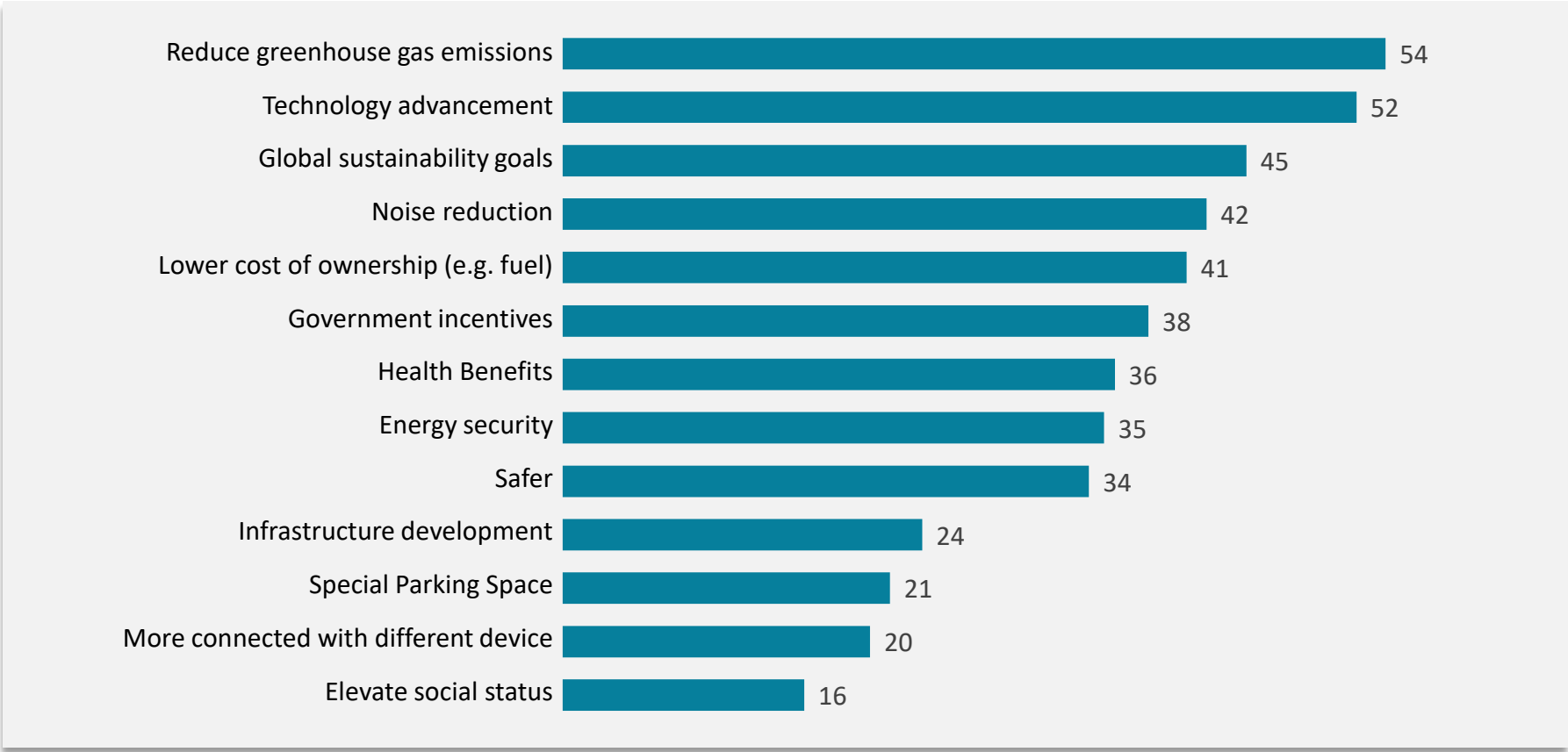


Base: All respondents; n = 613

Here are some statements related to Electric Vehicles (EVs), to what extent do you agree and disagree on a scale of 1-5, where "1" – strongly disagree and "5" – strongly agree

Malaysians also perceive benefits of EV are more towards sustainability and technology advancement but lacking in personal benefits.

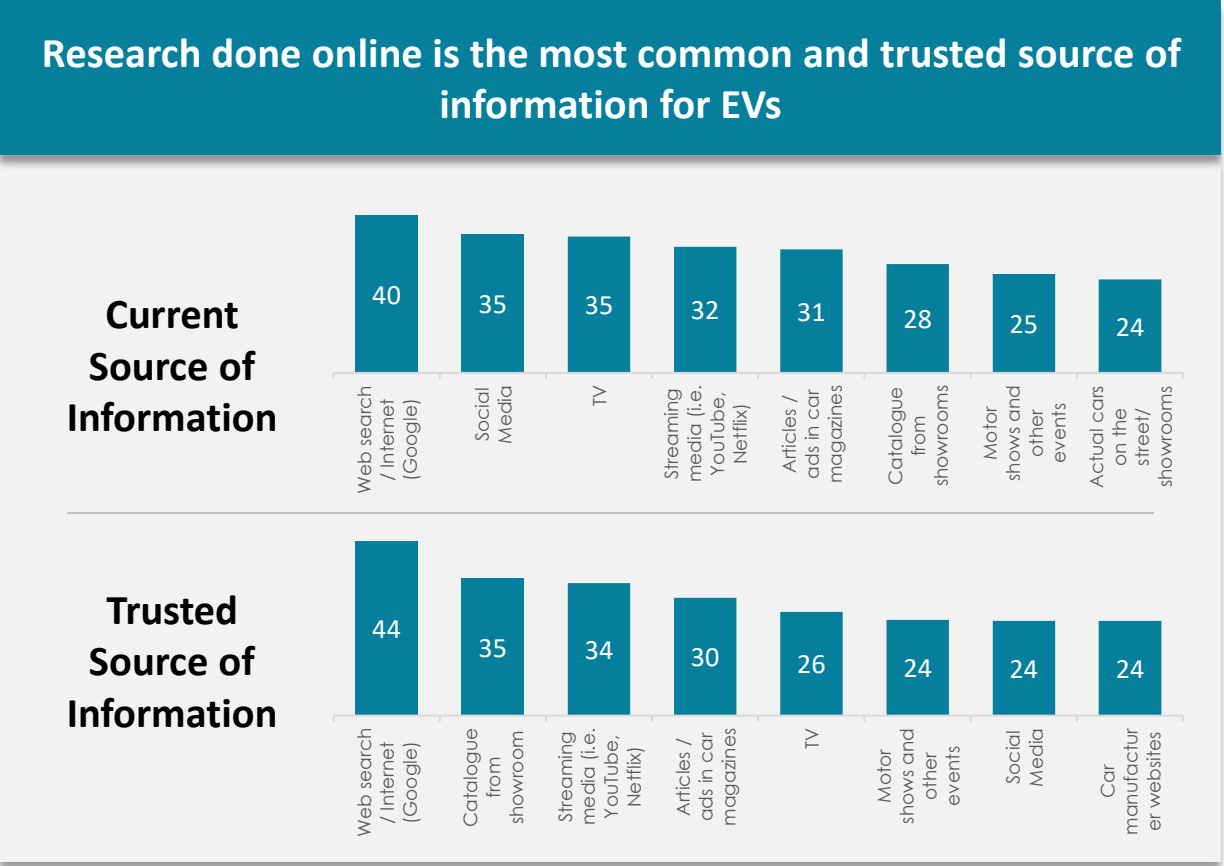
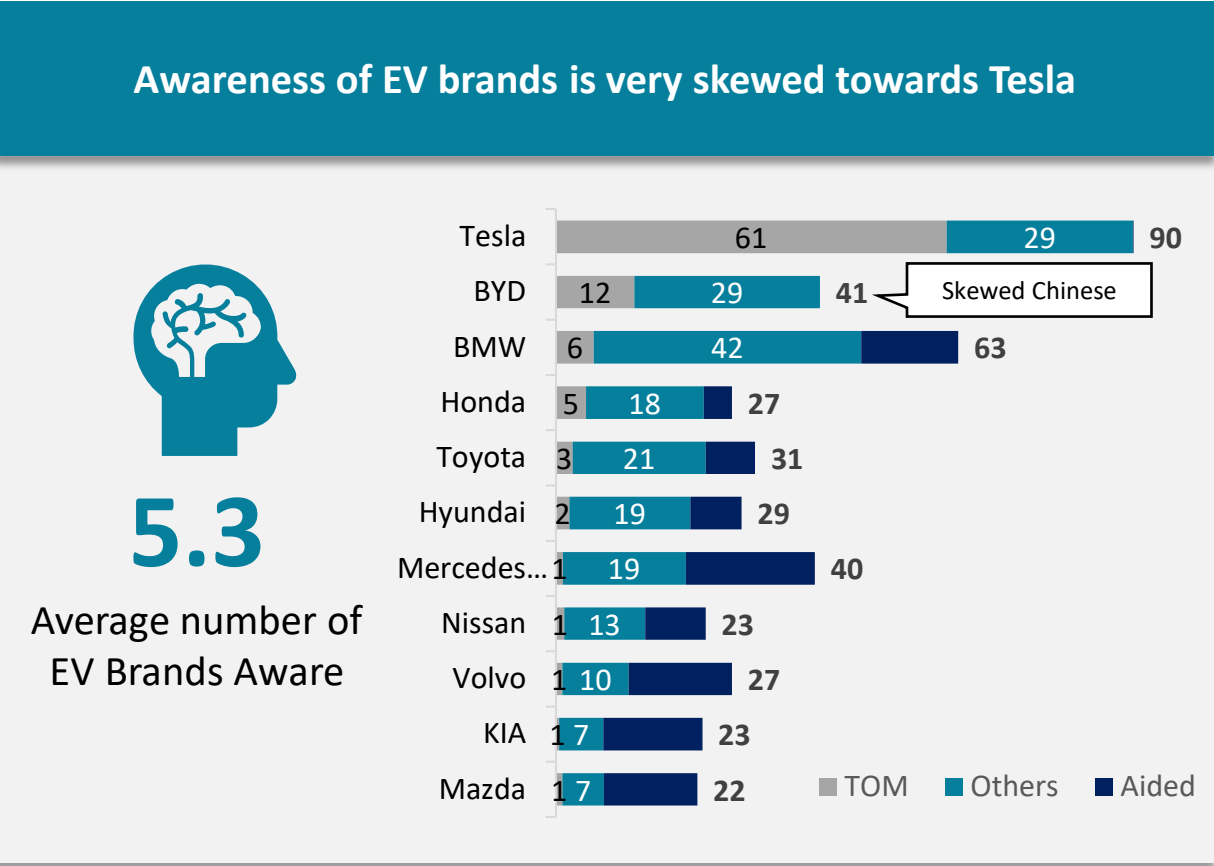
Benefits of Using EV (%)



Base: All respondents; n = 613
What do you think are the main benefits of using an electric vehicle?

On a brand level, there is a lack of awareness for EV car brands with majority only knowing Tesla.

Awareness of EV Brands (%)



Base: All respondents; n = 613
 Thinking about all the electric vehicles, which brand is the first that comes to your mind? And which other brands come to your mind when it comes to electric vehicles?
 Which of these electric vehicles (EVs) brands are you aware of?
 How do you first come across [PIPED IN Q6]?
 Which specific sources do you rely on for information about electric vehicles?



What is the perception towards EVs?

Value is the most important factor for Malaysians when it comes to EVs.

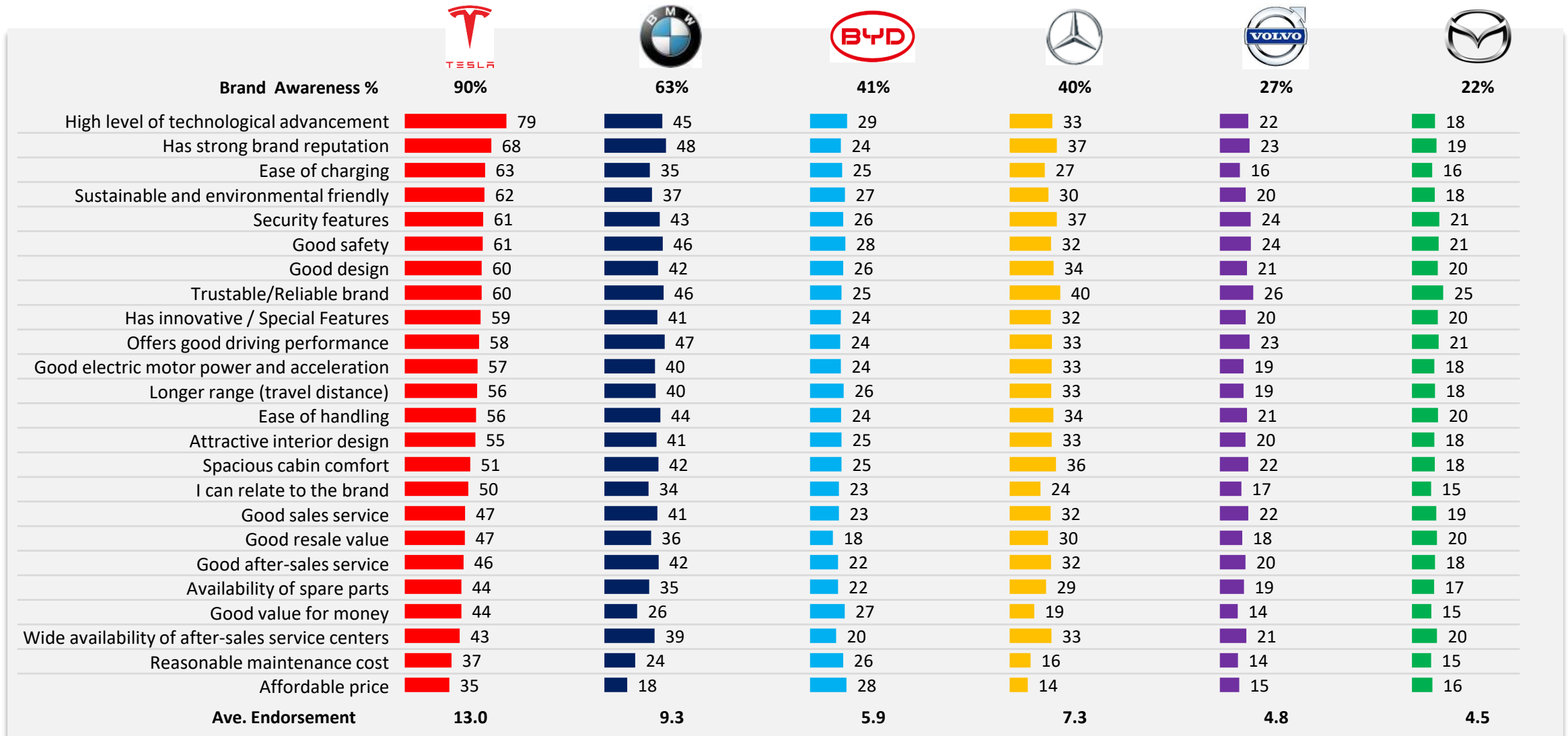
Attitude towards EV (%)



Base: All respondents; n = 613
We would like your opinion of several electric vehicles (EVs).

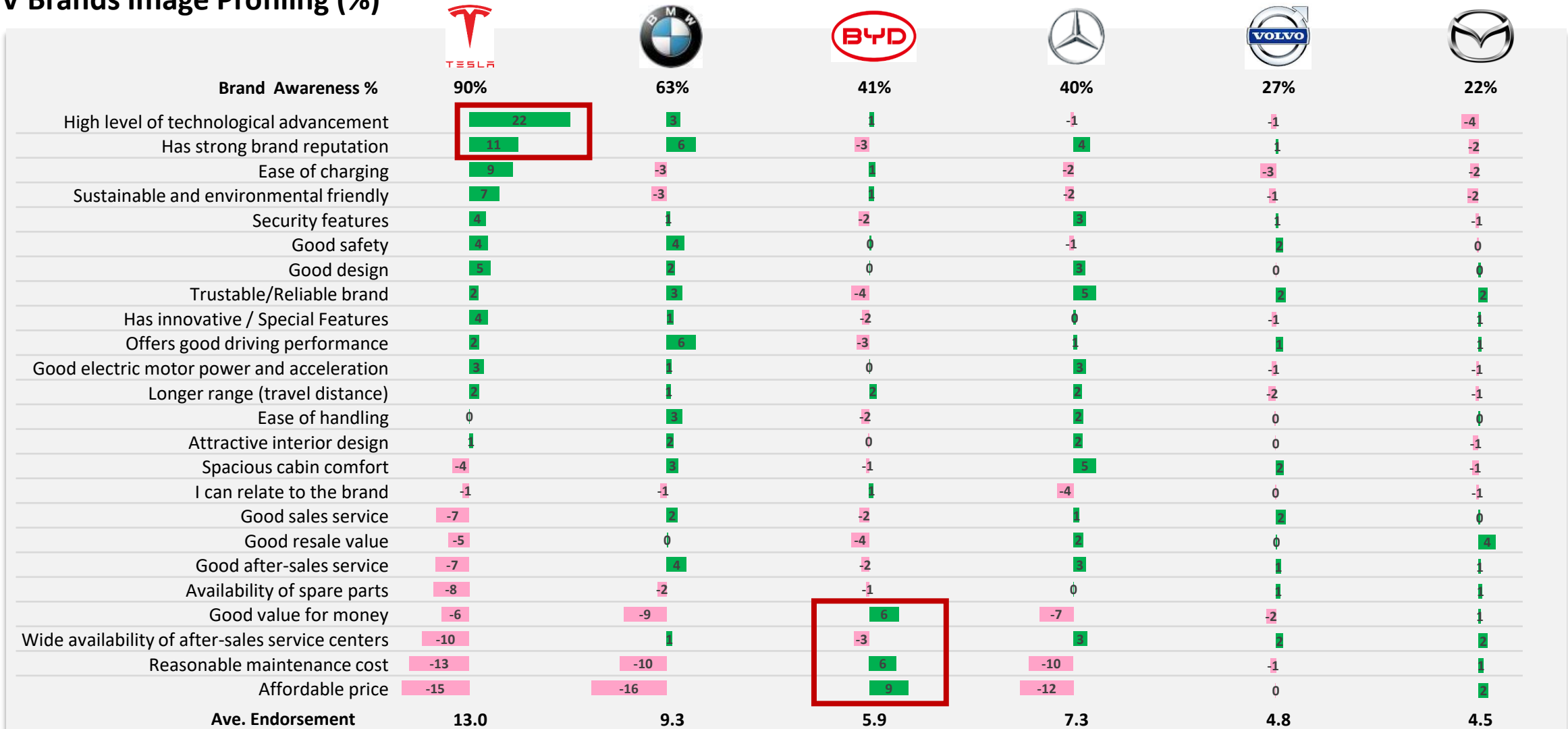
Tesla, being the most well-known, is getting the highest endorsement.

Attitude towards EV brands (%)



Tesla's strength lies in Level of Tech and Strong Brand Reputation but BYD's strength is in Value which is the most important factor for EV in Malaysia. There is opportunity for EV brands to communicate on driving performance which is not strongly owned by any brands.

EV Brands Image Profiling (%)

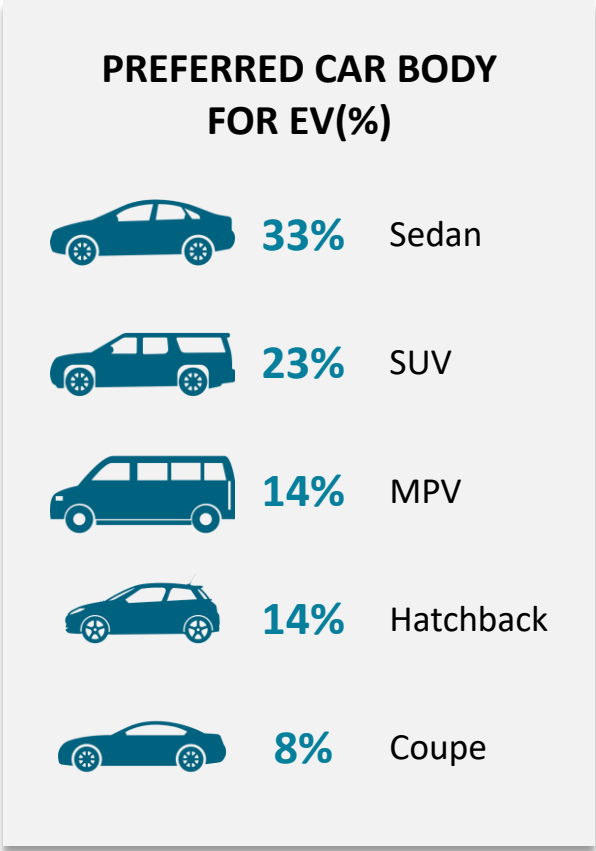
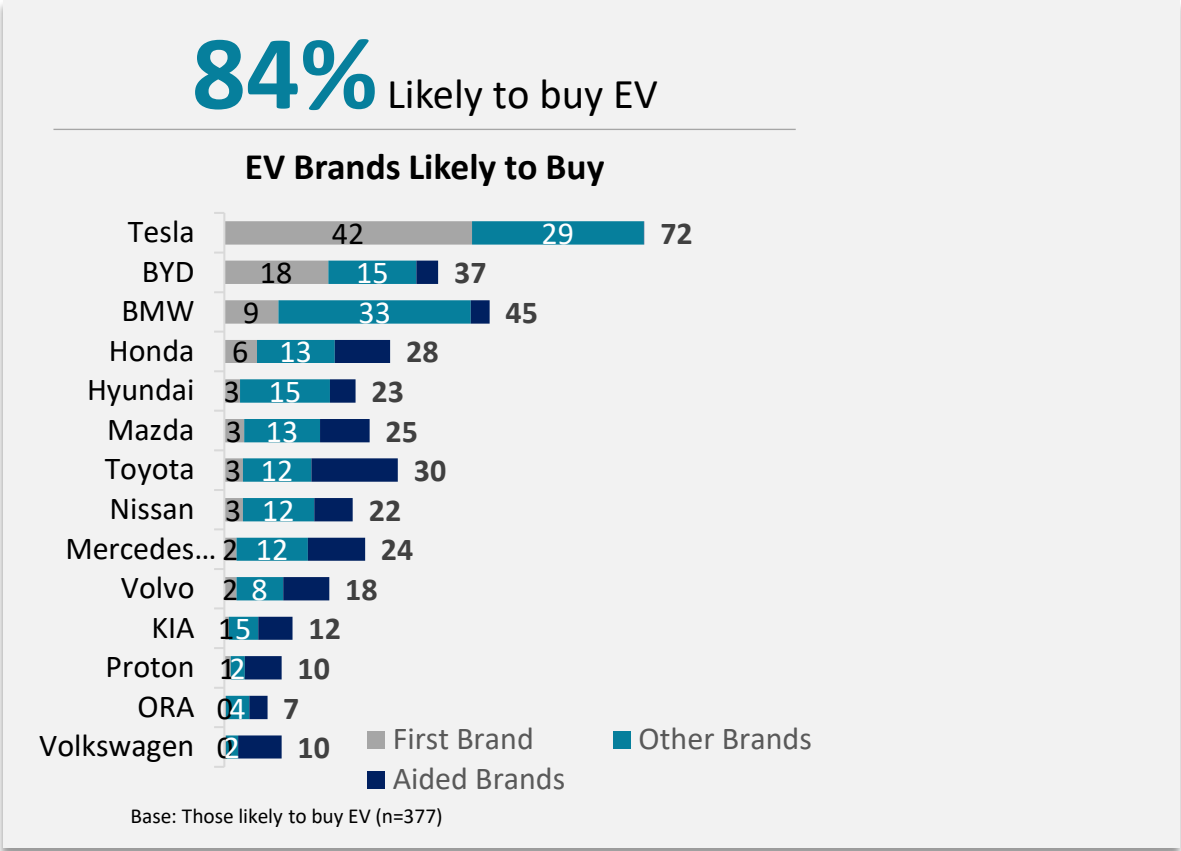


Base: All respondents; n = 613

We would like your opinion of several EV brands.

On intention to purchase, Tesla stands out as the #1 option with Sedan being the top preference in car body.

Intention for EV (%)



Base: All respondents; n = 613

Which of these electric vehicles (EVs) brands that you would take into consideration when purchasing electric vehicle in the next 1 year? Please select the brands that you've mentioned earlier.

If electric vehicles (EVs) are priced at a lower price, around RM50,000. Which of these electric vehicles (EVs) brands that you would take into consideration when purchasing electric vehicle in the next 1 year? Please select the brands that you've mentioned earlier.

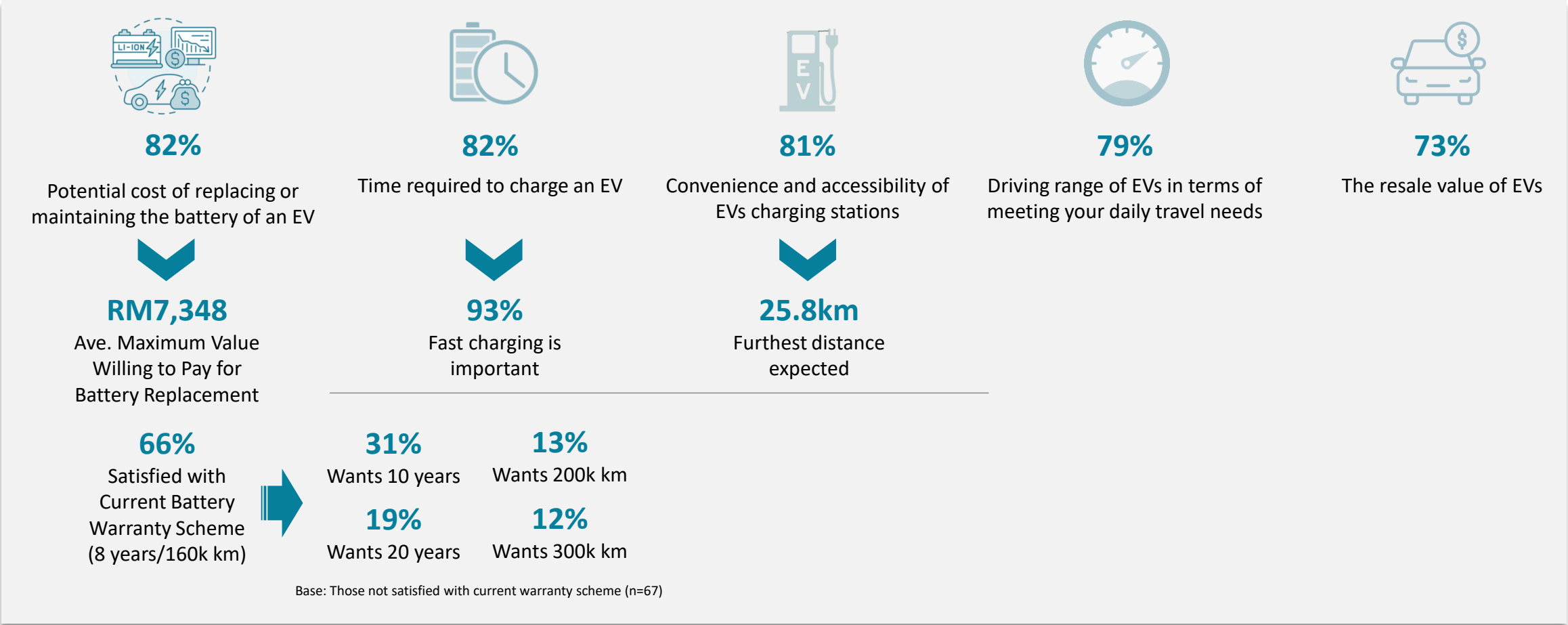
If you would have to buy an electric vehicle in the next 1 year, could you please tell me which of the following car body type would you seriously consider?



What are the triggers & barriers for EVs?

The concerns towards EV are mainly geared towards the convenience and cost of daily maintenance, less on resale value.

Concerns towards EV (%)



Base: All respondents; n = 613

Below are a few recent concerns about electric vehicles (EVs), I need you to tell me how concerned you are about these issues.

You mentioned that you are concerned about the convenience and accessibility of EVs charging stations. What is the distance that you are willing to travel to charge your vehicle?

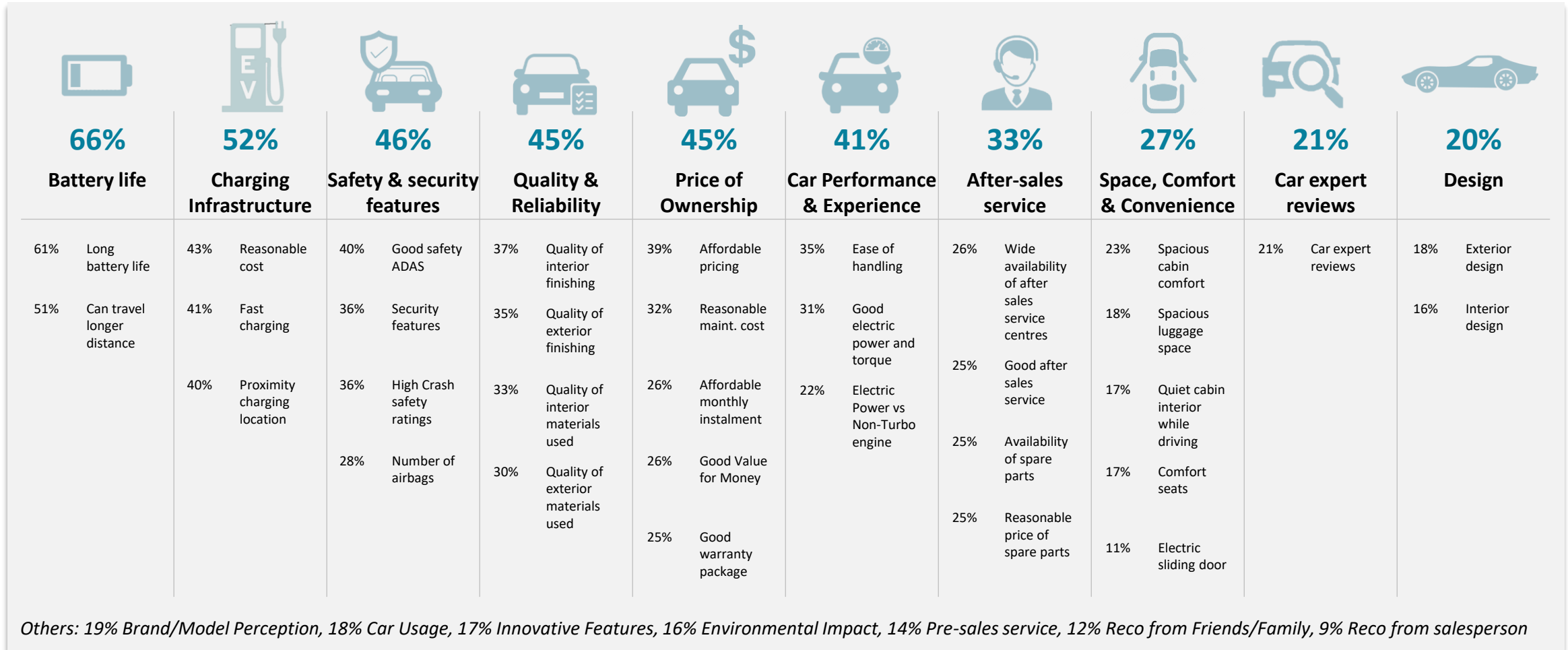
When it comes to battery replacement cost, what is the maximum value that would you be willing to pay?

Current electric vehicle's battery (lithium-ion polymer battery) warranty is 8 years or 160,000km. Are you satisfied with the current battery warranty scheme? What is the ideal warranty for electric vehicle's battery?

How important is it for charging stations to offer fast-charging options to reduce charging time?

Therefore, improvement in battery life and charging infrastructure will address key concerns and create higher interest for EV.

Influencers to Consider Purchasing EV (%)



Base: All respondents; n = 613

Which of the following factors would influence your decision to consider purchasing an electric vehicle (EV)? Please rank the TOP 5 factors.

Which of the following factors would influence your decision to consider purchasing an electric vehicle (EV)?

Financial subsidies will also create higher interest in EV.

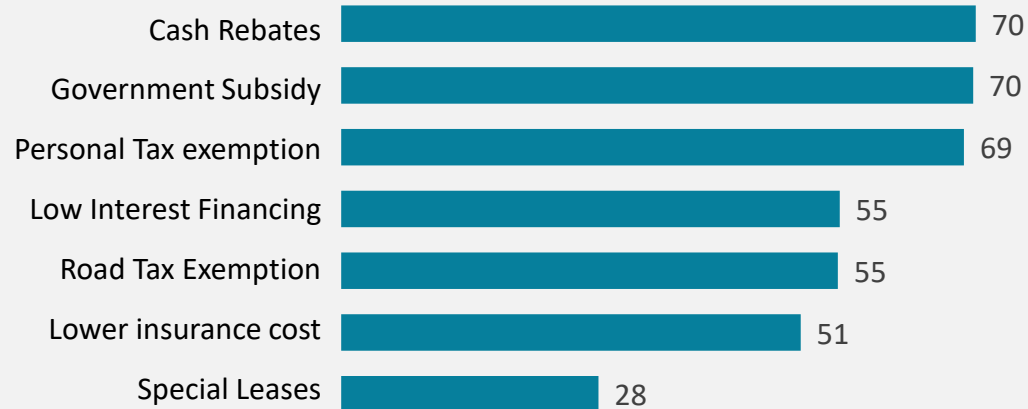
Incentives/Tax Breaks Motivation (%)



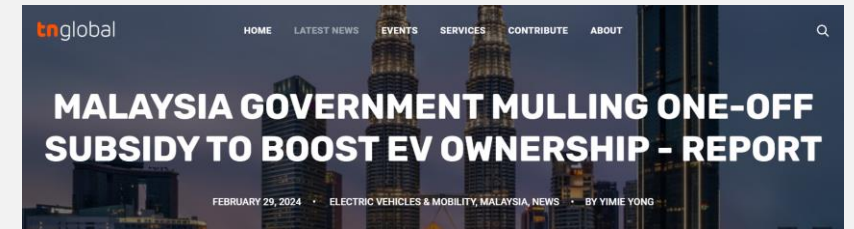
91%

Agree that incentives/tax breaks will motivate them to purchase EV

TYPE OF INCENTIVES SEEK (%)



NEWS ON GOVERNMENT SUBSIDY TO BOOST EV OWNERSHIP



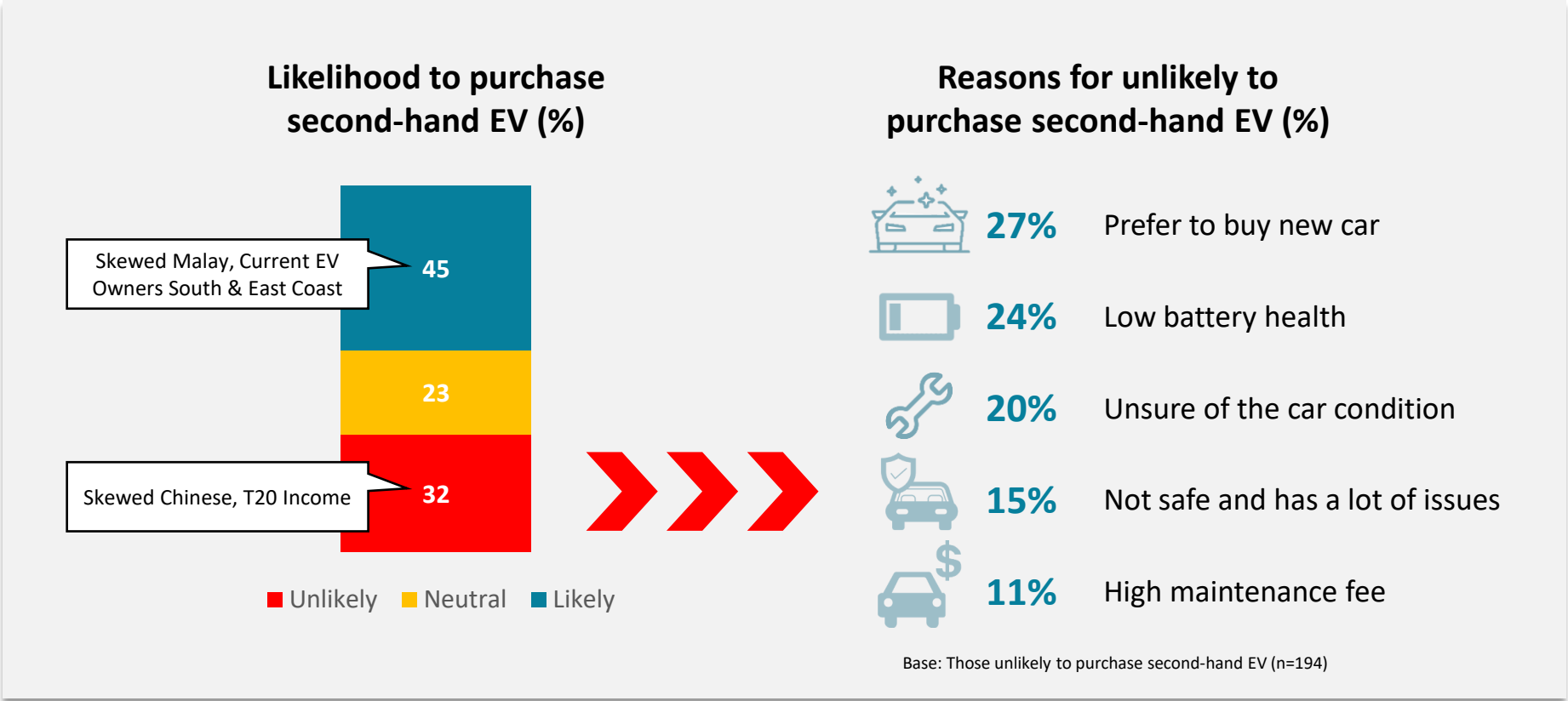
PETALING JAYA: Budget 2024 will see the introduction of several electric vehicle (EV) incentives as part of Putrajaya's initiatives to facilitate the energy transition process.

Prime Minister Datuk Seri Anwar Ibrahim, when tabling Budget 2024 in Parliament on Friday (Oct 13), said there would be a scheme to encourage usage of electric motorcycles for individuals earning RM120,000 and below a year.

"The scheme is expected to provide rebates up to RM2,500 for (owners)," said Anwar.

Not everyone is interested with second-hand EV options, particularly Chinese and high-income groups, with preference of buying new car and concerns about car condition being key factors.

Option for Second-hand EV (%)



Base: All respondents; n = 613
 Would you consider to purchase a second-hand electric vehicle?
 You mentioned that you are unlikely to purchase a second-hand electric vehicle. Why would you say so?



How can the current ecosystem of EVs be improved?

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Having more charging stations will create a better attraction for intenders to enter the EV market with current pricing structure within acceptable range.

Charging Infrastructure for EVs (%)

There are room for improvement in the availability of charging stations



60%

Are **satisfied with the availability** of public charging stations for EV in Malaysia
(30% Neutral)

Base: EV Owners (n=30)



64%

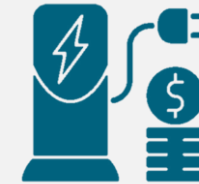
EV Intenders think availability of public charging stations for EV in Malaysia is **insufficient**
(19% Sufficient)

Base: EV Intenders (n=583)

Ideal Public Charging Location for EV

- 86% Petrol Station
- 72% Shopping Malls
- 65% Public Parking
- 63% Highways
- 51% Condominium
- 51% Office Building Parking

Current pricing structure for charging stations are still acceptable



57%

Feels the current pricing structure for using public charging stations are **acceptable but can be improved**
(40% Fair and reasonable)

Base: EV Owners (n=30)

Current Charging Cost

RM0.80 /kWh
Max: RM2.20 /kWh

Ideal Charging Cost sen/kWh

EV Owners

RM0.314 /kWh

EV Intenders

RM0.336 /kWh

Base: All respondents; n = 613

Ideally, where should the public charging for electric vehicles be installed in Malaysia?

From what you understand, how satisfied are you with the availability of public charging stations for EV in Malaysia?

Do you think the current availability of public charging stations for EV in Malaysia is enough?

How do you feel about the current pricing structure for using public charging stations?

Based on your own opinion, what would be the ideal charging cost sen/kWh?

Building the confidence of after-sales service for EV in Malaysia will help reduce concerns although it is not the biggest trigger to entry (33%).

After-sales service for EVs (%)

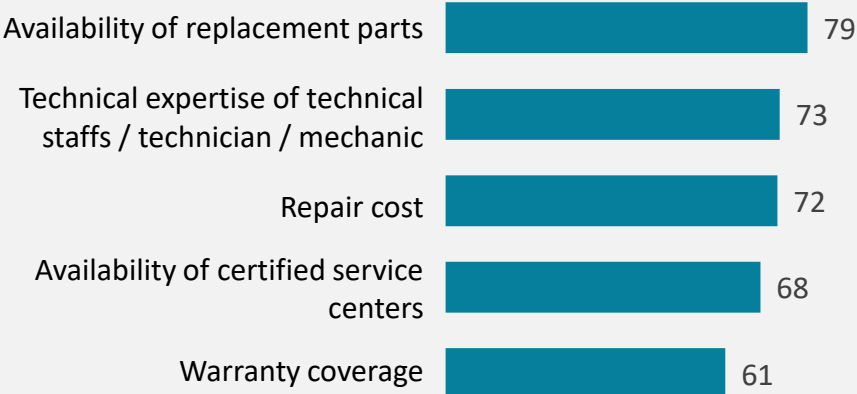
Majority are concerned with the after-sales service of EV



88%

Are concerned about the availability of after-sales service for EV

Aspects of after-sales services concerned (%)



Base: Those who are concerned about the availability of after-sales service for EV (n=539)

Accessibility and Capability of Service Centres and Mechanics who are able to handle EV maintenance is needed



92%

Feels it is important to have **easy access** to authorized service centres for EV after warranty expires



53%

Confident with **LOCAL** mechanics and service centres to handle EV maintenance

(Skewed Malay, EV Owners)



83%

Confident with the quality of after-sales services by **MANUFACTURERS/ SERVICE PROVIDERS**

Base: EV Owners (n=30)

Base: All respondents; n = 613

How concerned are you about the availability of after-sales service for electric vehicles in your area?

What specific aspects of after-sales service for EVs are you most concerned about?

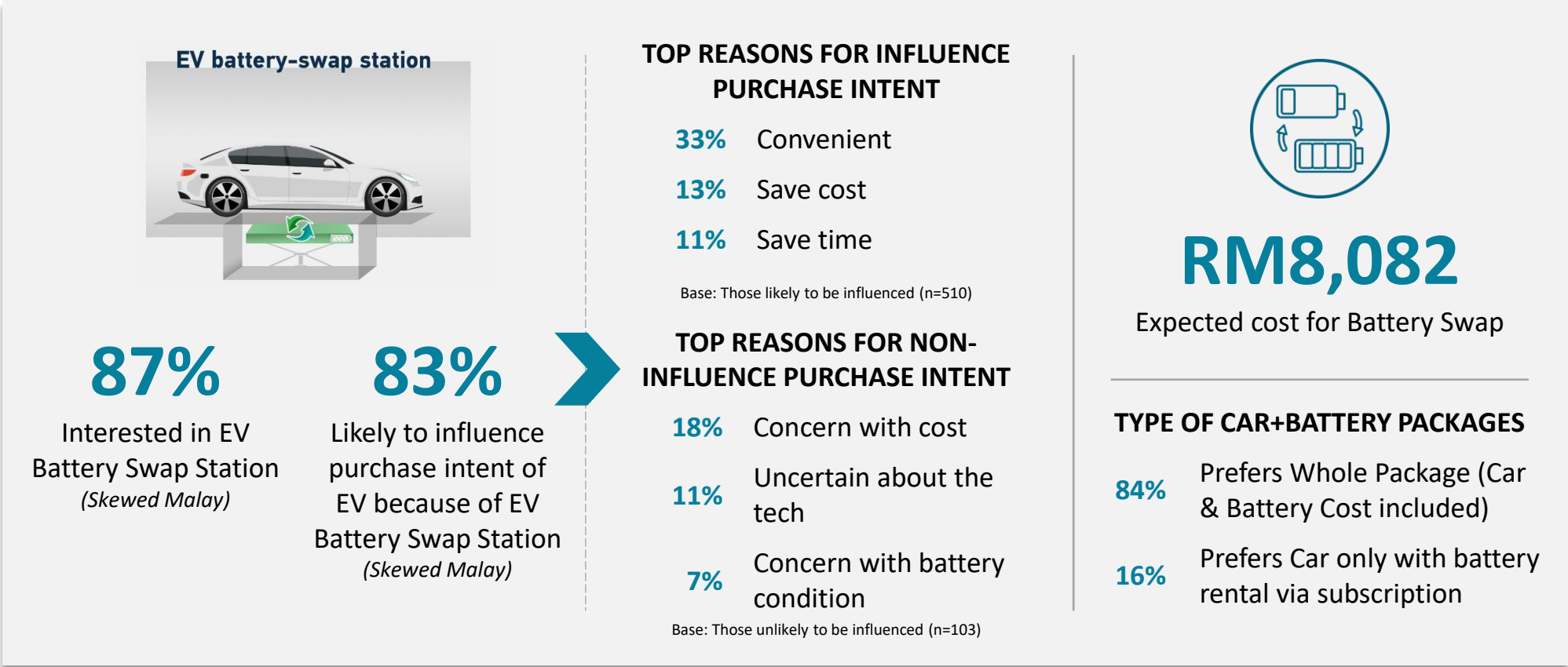
How important is it for you to have easy access to authorized service centres specifically trained for electric vehicle maintenance after the warranty period expires?

How confident are you that local mechanics and service centres have the necessary expertise to handle electric vehicle repairs and maintenance?

Are you confident with the quality of after-sales service (technician's skills) that manufacturers or service providers provide?

There are interest in having EV Battery Swap Stations for convenience which presents an opportunity to further improve the existing EV ecosystem.

Interest in EV Battery Swap Station (%)



Base: All respondents; n = 613

Based on the concept shown above, how interested would you be in trying this new service if it is within your budget?

How likely does EV battery swap station affect your intention to purchase electric vehicles?

What are the reasons that your purchase intention is [coded in Q36a] affected by EV battery swap station?

In your opinion, how much do you think battery swap cost?

Let us say that currently dealer offers car with different packages of car and battery cost. Which are the one would you prefer?

There are also interest in having co-working space at charging stations but not a necessity for all.

Interest in Co-Working Space at Charging Station (%)



80%

Interested in Co-Working Space at Charging Station

75%

Likely to influence purchase intent of EV because of Co-Working Space
(Skewed Malay)



TOP REASONS FOR INFLUENCE PURCHASE INTENT

- 37%** Convenient
- 22%** Save time
- 7%** Comfortable

Base: Those likely to be influenced (n=458)

TOP REASONS FOR NON-INFLUENCE PURCHASE INTENT

- 39%** No need for it
- 10%** Not interested
- 10%** Not saving much time

Base: Those unlikely to be influenced (n=155)



RM9.10

Expected hourly rate for Co-Working Space

Base: All respondents; n = 613

Based on the concept shown above, how interested would you be in trying this new service if it is within your budget?

How likely does co-working space at charging station affect your intention to purchase electric vehicles?

What are the reasons that your purchase intention is [coded in Q39a] affected by having co-working space at charging station?

How much do you think is the hourly rate for this co-working space?



Appendix

EV owners are traveling further and more frequent than non-EV owners, with daily commute being the key occasion for using EV.

Usage of EVs (%)

Further and more frequent traveling amongst EV owners



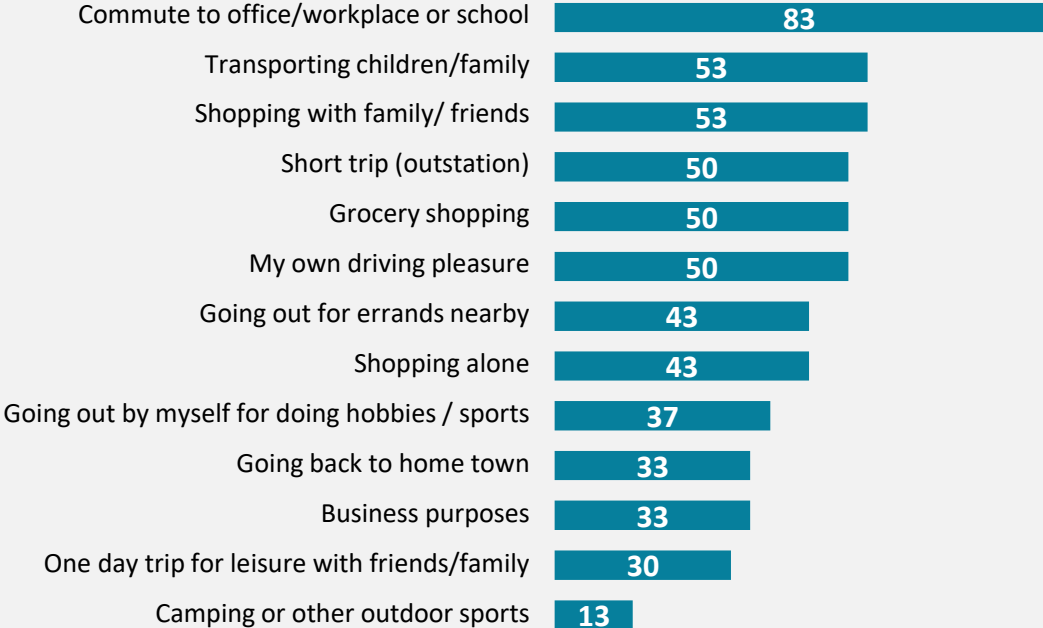
241.7km

Average distance driven in a week
(Non-EV Ave: 202.8km)

97%

Driven at least 5 days a week
(Non-EV Ave: 93%)

Daily commuting is the key occasion for using EV



Base: EV Owners; n = 30
 On average, how many kilometers do you drive in a week?
 How frequently do you use personal vehicle for your daily commuting needs?
 What are you currently using your electric vehicle for?

Who Are We – A Brief Introduction



Founded in 2021 by Alan and YC, Evolve Consulting is committed to humanistic research for our clients, and look for **“People = Story = Insights”** through our **explore, connect, transform** framework.

We offer Research and Consulting solutions to support our clients from strategic down to tactical level:



- Market landscape
- Category understanding
- Purchase behaviour
- Market segmentation



- Branding & communication
- Product innovation
- Concept testing
- Proposition & pricing
- Customer profiling & targeting
- Ads evaluation



- Customer experience
- User experience
- Customer feedback & close-loop
- Brand tracking
- Employee engagement

About The Authors



Chew Li Sa

Senior Partner

Li Sa is a Veteran professional in management consulting and market research.

Li Sa is proficient in primary and secondary research, including business consultancy.

Li Sa has a remarkable talent for connecting people and uses this ability to identify client issues, opportunities, and needs.

With her deep understanding of the local market, she excels at working with clients across various industries, government clients, MNCs and including the automotive sector.



Alan Oh

Co-founder of Evolve Consulting

Alan is different and does not conform to the traditional ways of working – with a distinct style of connecting and translate data & insights into innovative, narrative driven solutions for his clients.

Alan boasts cumulative experience in marketing research, venture capital and consulting. He is passionate about delivering humanistic, sustainable business strategies, offering a unique perspective that embraces a more humanly approach.

Alan is also a certified HRDF trainer and a masterful storyteller.



YC Loh

Co-founder of Evolve Consulting

YC consistently applies analytical and logical thinking, aiming to simplify intricate research processes and derive insights that effectively address complex business challenges.

YC possesses a versatile skill set in primary research, and encompasses innovative approach to understand consumer behaviour, meticulously applied within the research design.

YC's entrepreneurial spirit is a source of pride and motivation, driving a passion for innovation and business excellence.

Our Capabilities And Partners



Research Technology

Online and offline research through advance SaaS platform



Desk Research

Collect, analyze and synthesis of existing research



Statistical Analysis

Adopting advance statistical analysis in deriving the outcome or story telling

Our research partners



Rakuten Insight Global

For over 25 years, Rakuten Insight Global has been at the forefront of consumer market research data collection. By combining our 1st party data with the highest levels of quality assurance processes, Rakuten Insight Global has remained our clients' trusted research partner for Asia, US & Beyond.

Our proprietary, double opt-in online panels have been developed throughout 12 major Asian markets & the US. All of the panels are managed by dedicated local support teams and meet the highest industry standards. The Rakuten Insight Global team offers 24-hour coverage from 11 worldwide locations, providing exceptional service for 500+ clients across the globe.

Rakuten Insight Global is tasked with leveraging the 1st party membership assets of the Rakuten Group for market research purposes. Having access to such a diverse and unique group of research participants allows Rakuten Insight to remain at the forefront of online research.

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