THE FUTURE OF AUTOMOTIVE

A Survey of Auto Manufacturing Decision Makers

dimensional research | **JANUARY 2021**

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INTRODUCTION

Who will design the car of the future?
What will that car run on?
And who — or what — will be driving it?

We asked more than 200 auto manufacturing decision makers these questions and more to reinforce and enhance our own understanding of what we've learned working across the automotive, industrial automation, 5G and connected mobility industries.

And our survey made one thing clear: auto decision makers know the trends, the challenges, and what customers want. And, when it comes to innovation, they're not taking their foot off the gas pedal. What's rising to the top of their opportunities and challenges? Connectivity and electrification.

So while flying cars may not be filling the skies anytime soon, electronic-enabled autonomous driving, advanced electric cars and new battery technology are on the agenda — and within reach, if challenges can be overcome.

Read more to learn what's top of mind in the industry and plan your strategy to gain a competitive edge.

This report is part of a series of Molex survey reports conducted in collaboration with independent research firm, Dimensional Research, that will provide valuable, expert information to support customer success.

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KEY FINDINGS

The “Car of the Future” will be …

91% say electric — either fully electric (64%) or hybrid (27%)

94% report it will include autonomous driving, although only 28% say it will be fully self-driving

56% believe it will be at least 50% more expensive than a similar car today

97% believe range anxiety will be solved by 2030

TOP FEATURES: High-speed wi-fi, wireless charging

LEAST LIKELY FEATURES: Flying cars, million-mile warranties

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KEY FINDINGS

Top trends driving the “Car of the Future” include …

- Technology innovation will have the most impact
- Electrification and connectivity will be the most important areas of innovation

60% report Software Defined Vehicles are a top initiative

96% say innovations in the factory will be required

100% report their customers are asking for green or socially responsible initiatives

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GOALS AND METHODOLOGY

Our primary goal was to capture hard data on the real-life opinions of those directly responsible for automotive design and delivery. We fielded an online survey to independent sources of auto manufacturing professionals between November 10 and November 30, 2020.

A total of **230 qualified participants** across diverse regions and roles completed the survey. All were decision makers working at an automobile company with at least 1,000 employees.

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Detailed Findings

DEFINING THE CAR OF THE FUTURE

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WHAT WILL BE THE AVERAGE CAR IN 2030?

For every question in this section, we asked participants to first take a moment to think about what a new car purchased in 2030 might be like. Imagine this car sitting in a dealer lot, being driven down a highway or parking downtown. Think about cars all around the world — not just your country.

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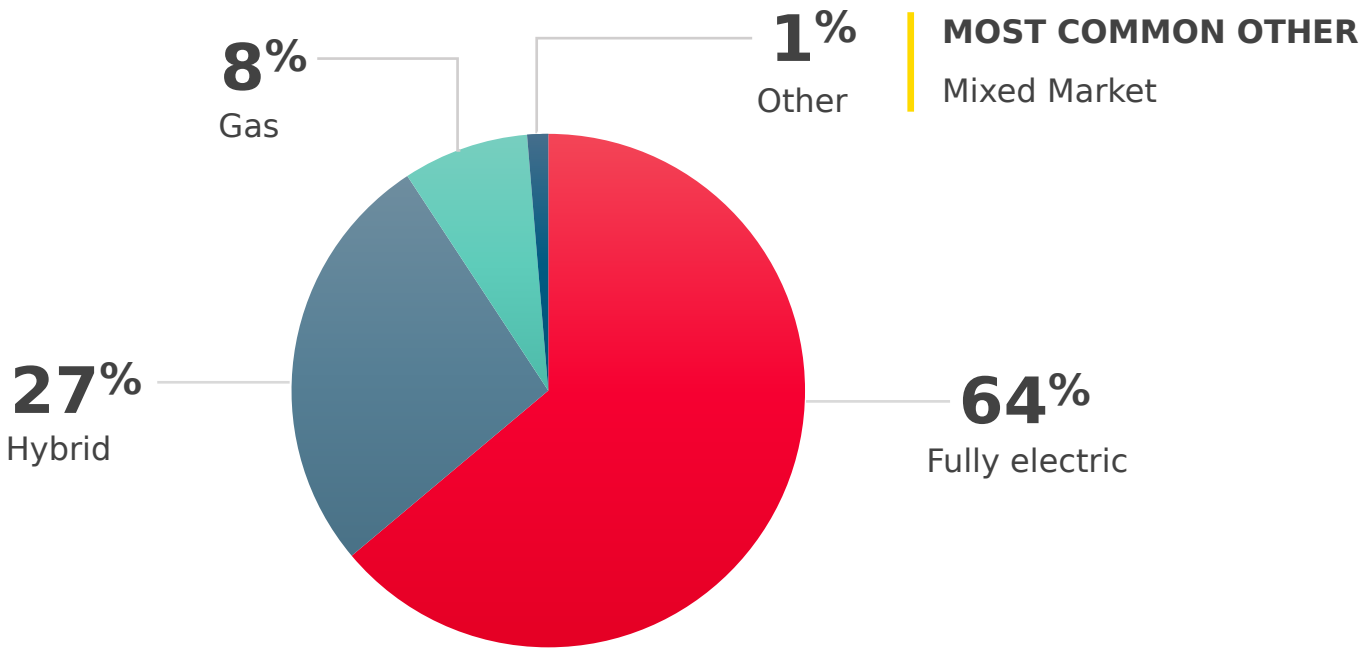
THE CAR OF THE FUTURE WILL BE ELECTRIC



Based on your experience, how do you think this average new car purchased in 2030 will be powered? Choose the one answer that most closely applies.

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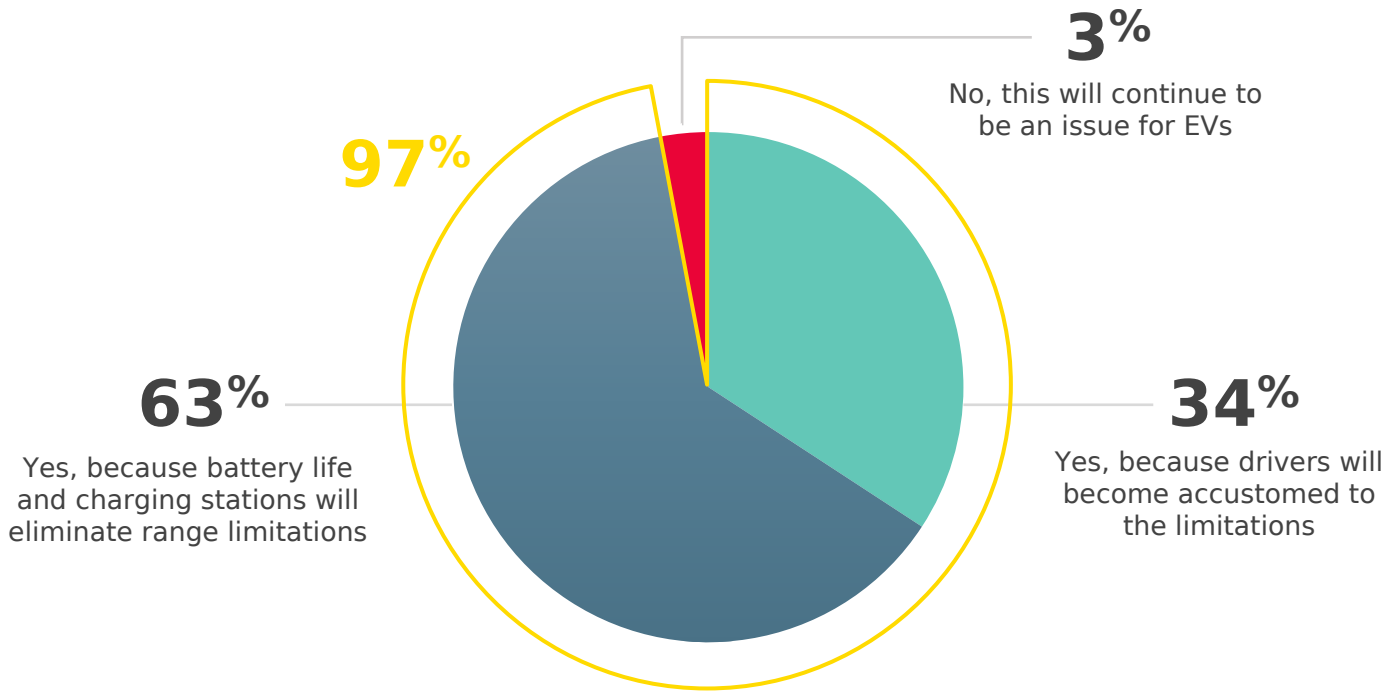
97% EXPECT “RANGE ANXIETY” TO BE SOLVED, BUT SOME THINK CUSTOMERS WILL HAVE TO ADJUST



In your opinion, will “range anxiety” related to use of EVs be solved by 2030? Choose the one answer that most closely applies.

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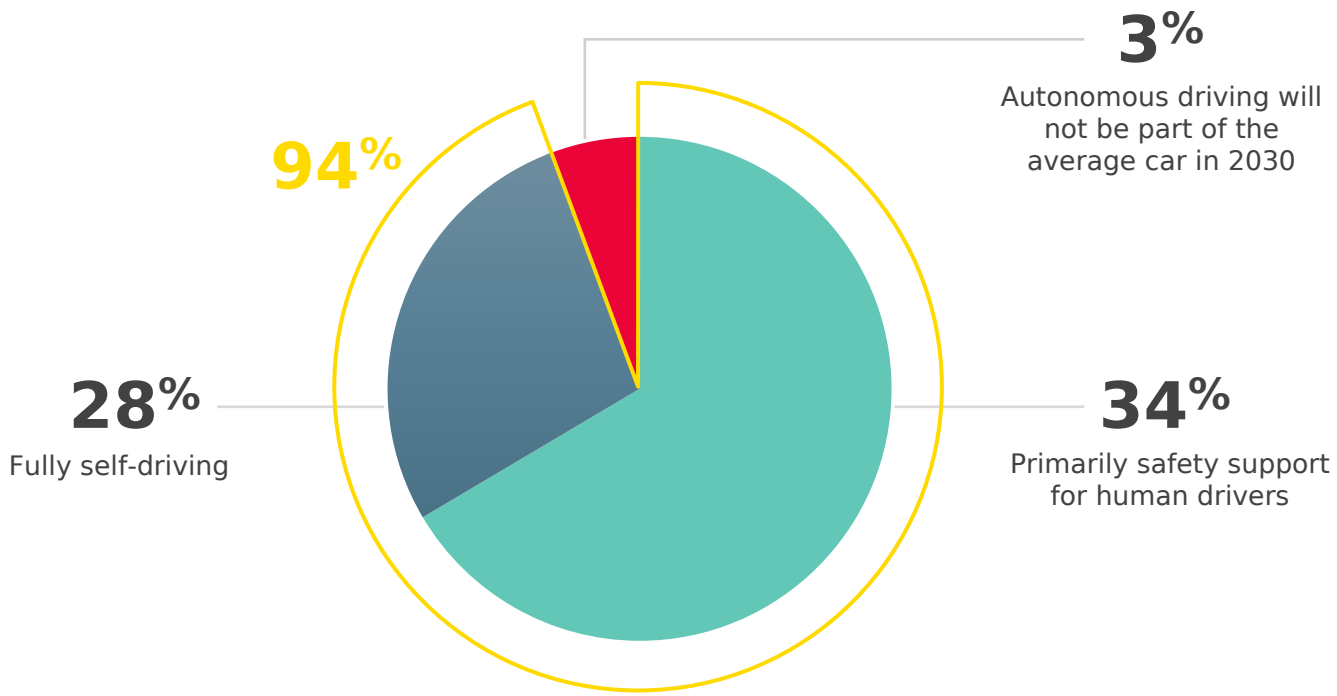
94% BELIEVE THE CAR OF 2030 WILL INCLUDE SOME KIND OF AUTONOMOUS DRIVING



In your opinion, what role will autonomous driving technology have in the average car purchased in 2030? Choose the one answer that most closely applies.

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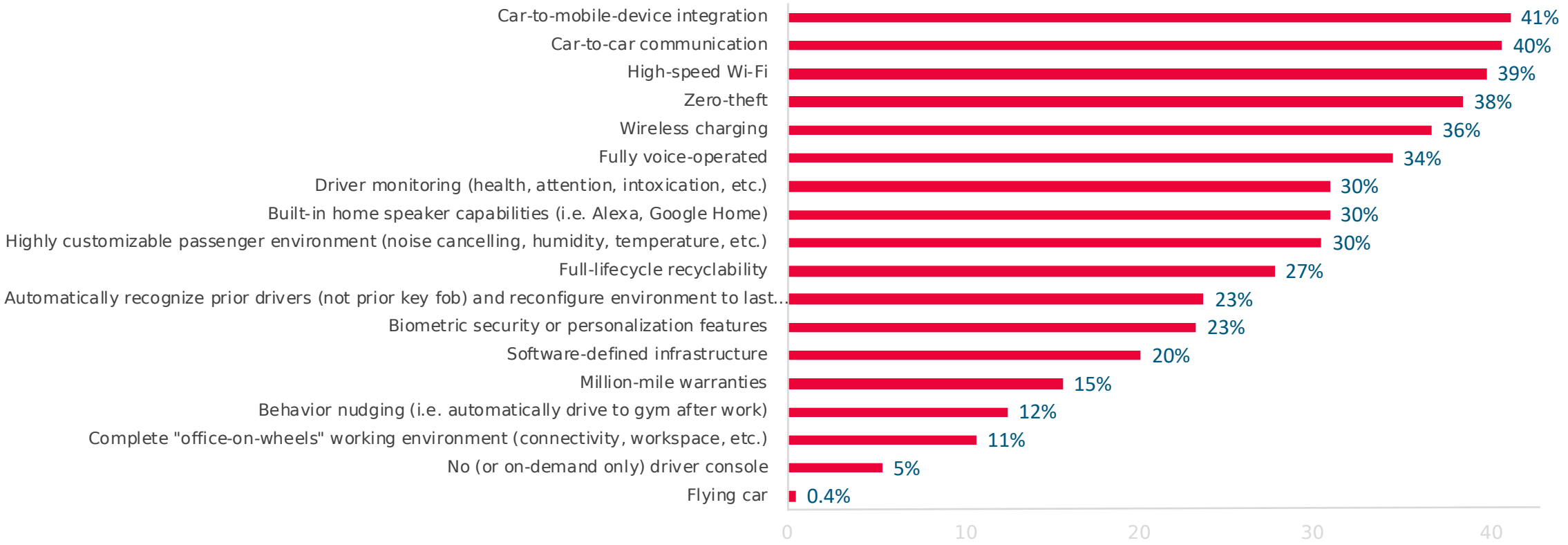
LIKELY FEATURES: CAR-TO-MOBILE DEVICE AND CAR-TO-CAR COMMUNICATION



In your opinion, what types of innovative features are MOST likely to be standard in an average car purchased in 2030? Choose up to five of the following.

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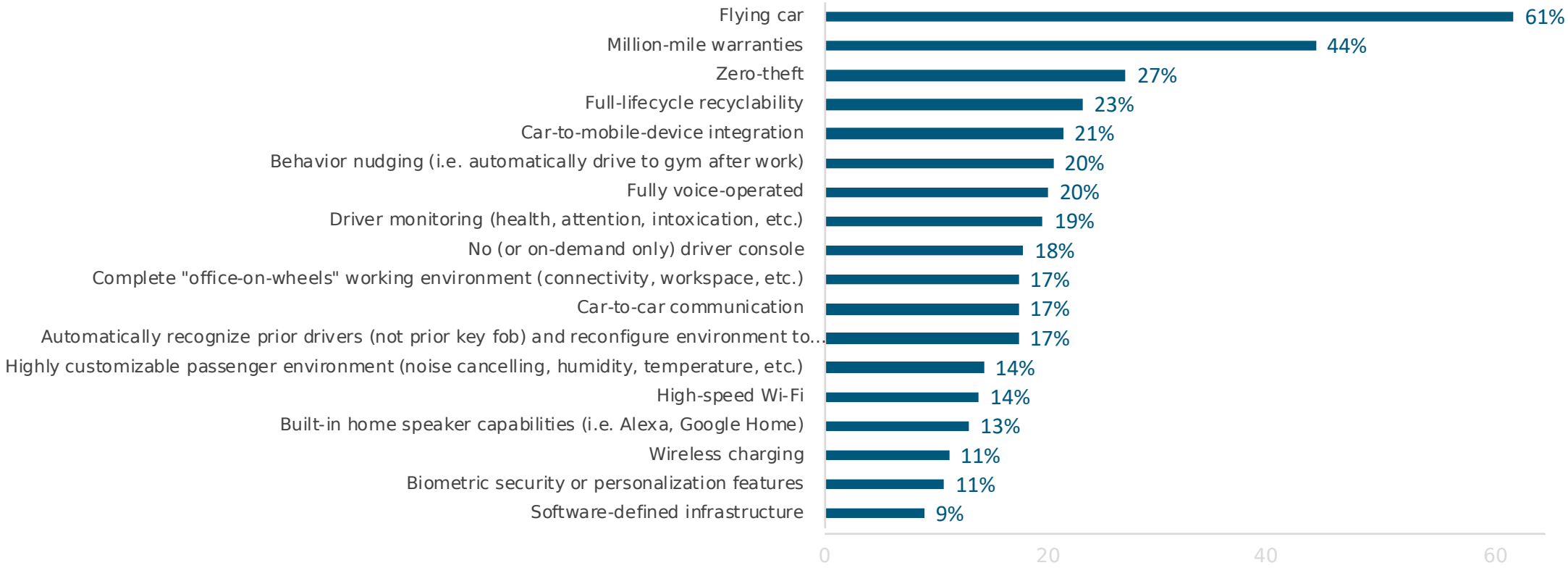
FEATURES OF THE CAR OF 2030 ARE NOT CLEARLY DEFINED YET — BUT WILL NOT INCLUDE FLYING



In your opinion, what types of innovative features are LEAST likely to be standard in an average car purchased in 2030? Choose up to five of the following.

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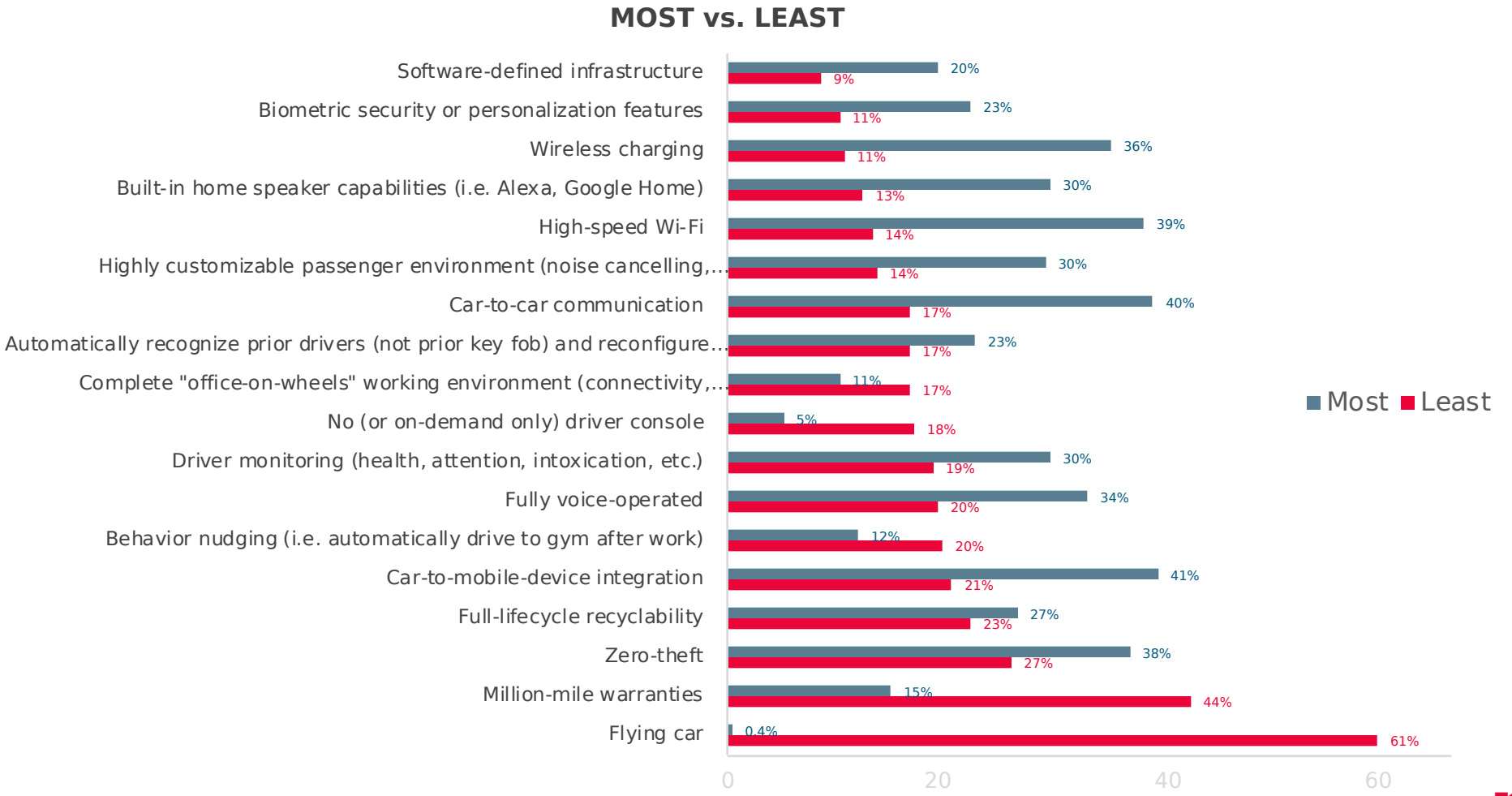
LEAST LIKELY FEATURES: FLYING CARS AND MILLION-MILE WARRANTIES



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TOP 10 FEATURES OF THE CAR OF 2030

	"Most" subtract "Least"
1. **HIGH-SPEED WI-FI**	26%
2. **WIRELESS CHARGING**	25%
3. **CAR-TO-CAR COMMUNICATION**	23%
4. **CAR-TO-MOBILE DEVICE INTEGRATION**	19%
5. **BUILT-IN HOME SPEAKER CAPABILITIES** (i.e., Alexa, Google Home)	18%
6. **HIGHLY CUSTOMIZABLE PASSENGER ENVIRONMENT** (noise cancelling, humidity, temperature, etc.)	16%
7. **FULLY VOICE-OPERATED**	14%
8. **BIOMETRIC SECURITY OR PERSONALIZATION FEATURES**	12%
9. **ZERO-THEFT**	11%
10. **DRIVER MONITORING** (health, attention, intoxication, etc.)	11%

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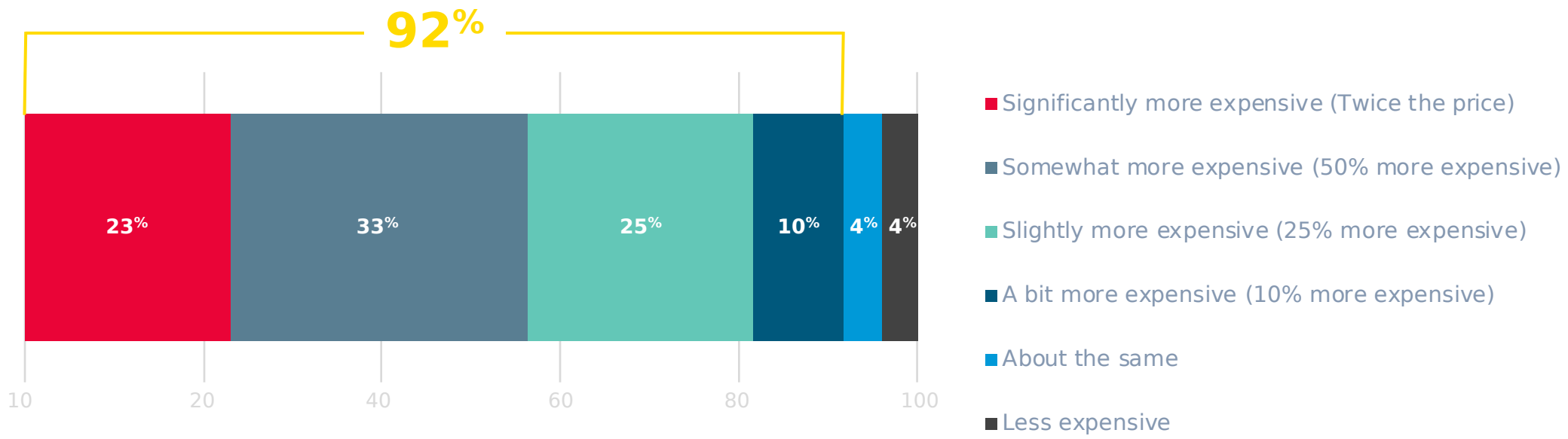
92% PREDICT THAT THE CAR OF 2030 WILL BE MORE EXPENSIVE



When you think of an average car purchased in 2030, how will the price compare to today? Choose the one answer that most closely applies.

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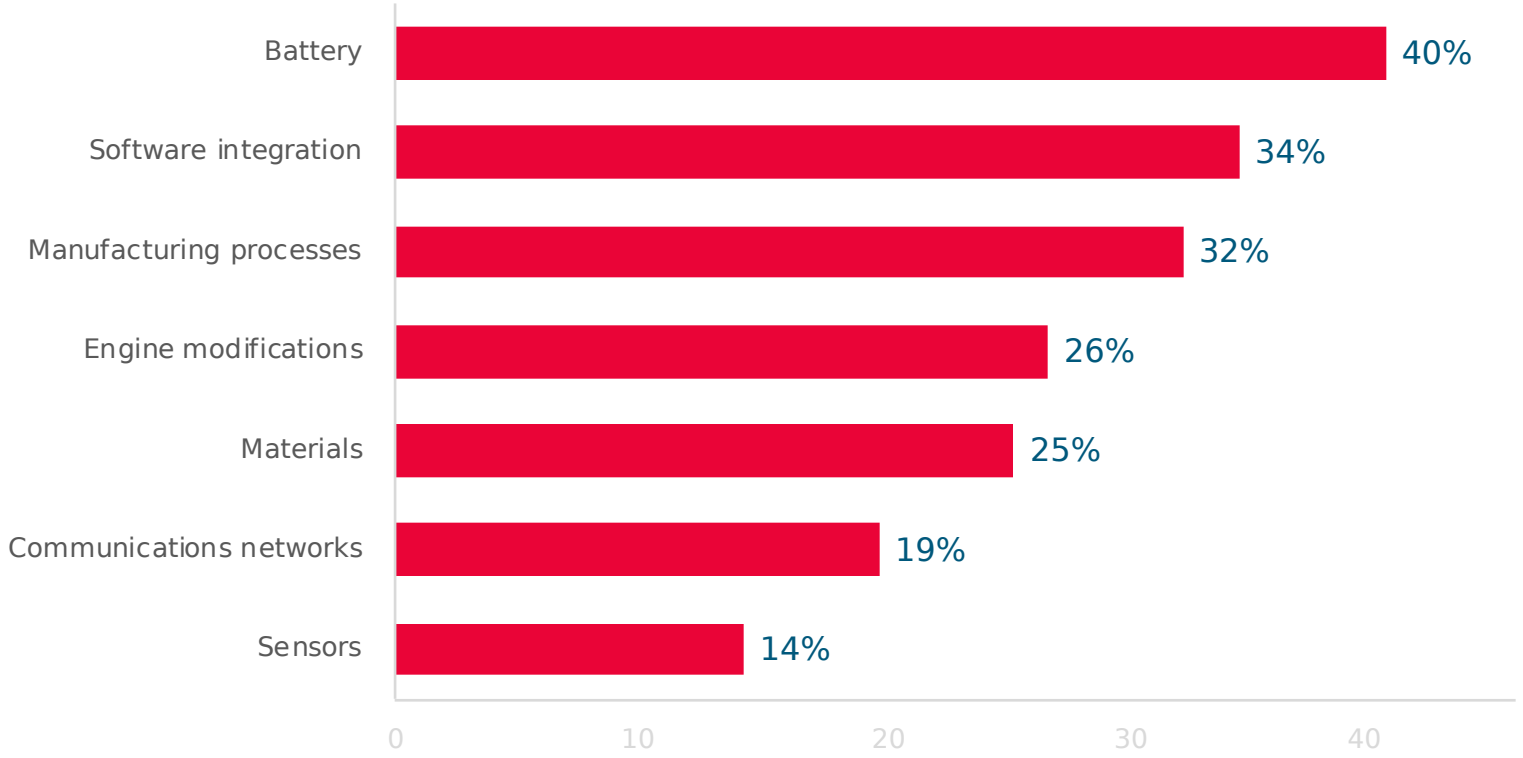
BATTERY COST SAVINGS HAVE THE GREATEST POTENTIAL TO REDUCE THE PRICE



What type of cost savings or innovations within the overall ecosystem will have the most impact on bringing down the price of an average car purchased in 2030? Choose up to two of the following.

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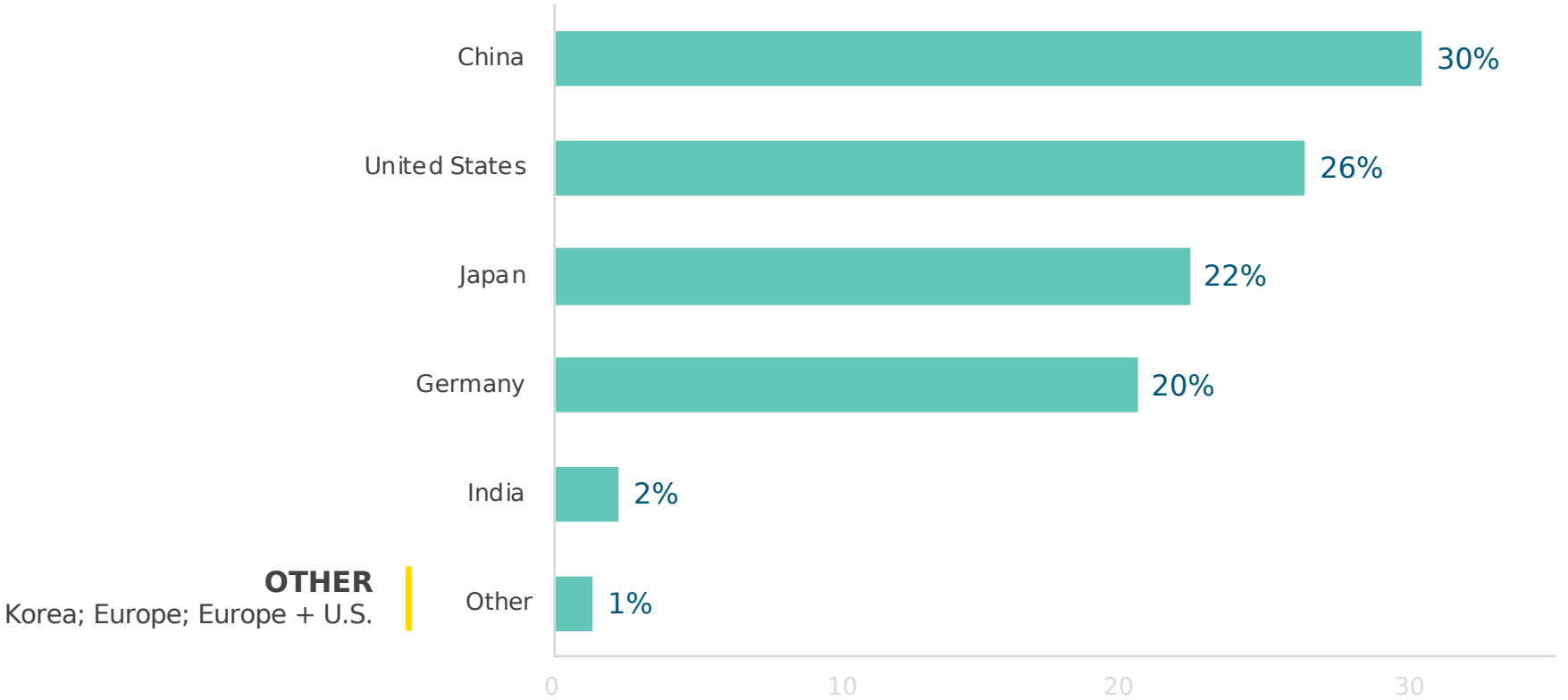
THERE'S NO OBVIOUS COUNTRY THAT WILL PRODUCE THE CAR OF 2030 FIRST



OTHER
Korea; Europe; Europe + U.S.

In your opinion, what country is most likely to produce the type of car you have been thinking about first?

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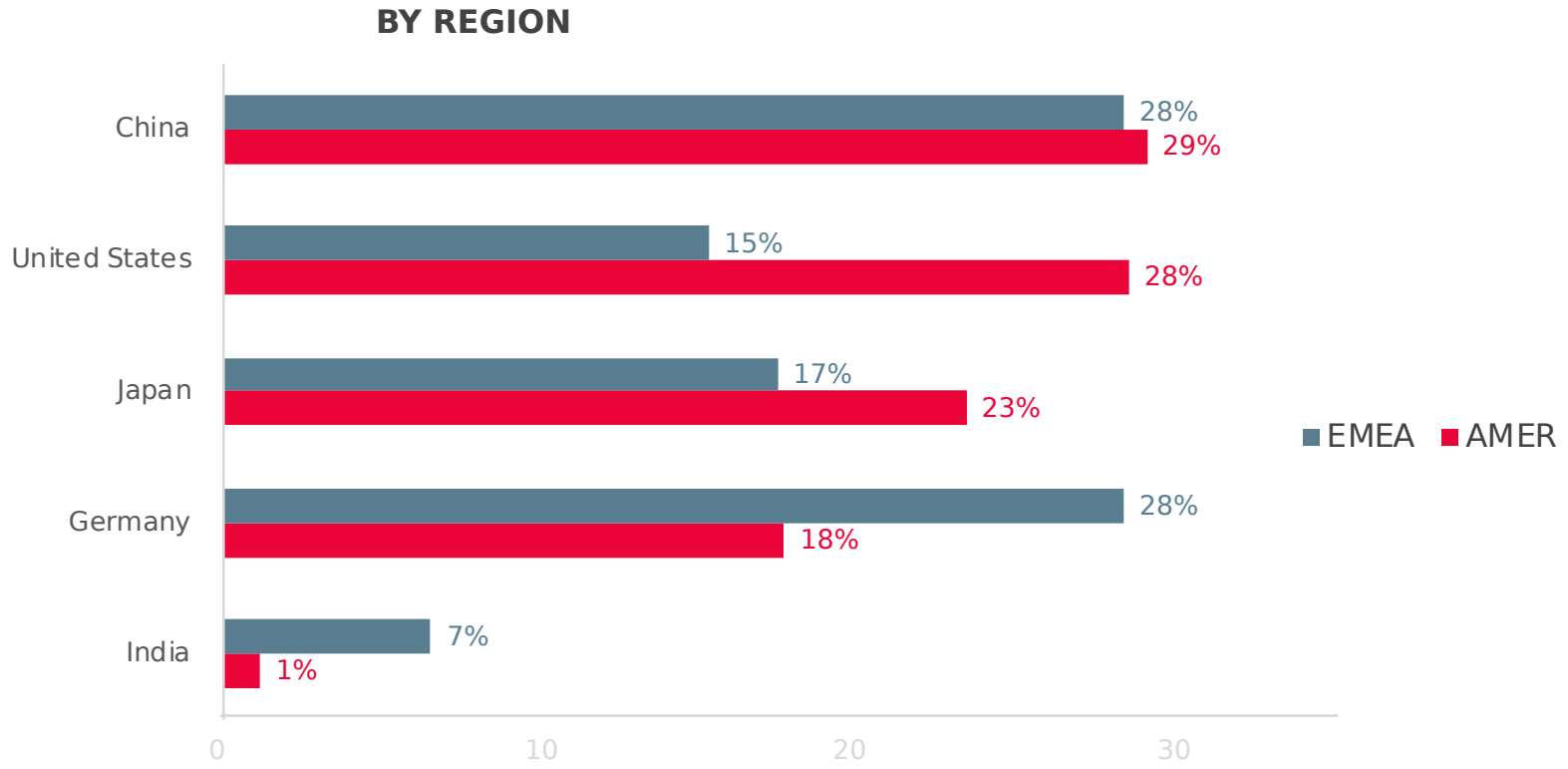
BOTH EMEA AND AMERICA RANK CHINA HIGHLY



In your opinion, what country is most likely to produce the type of car you have been thinking about first?

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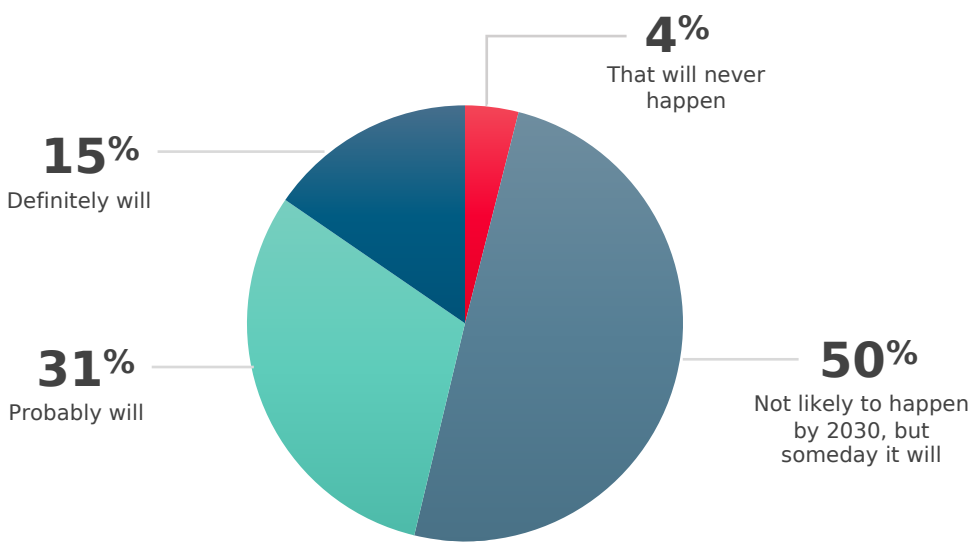
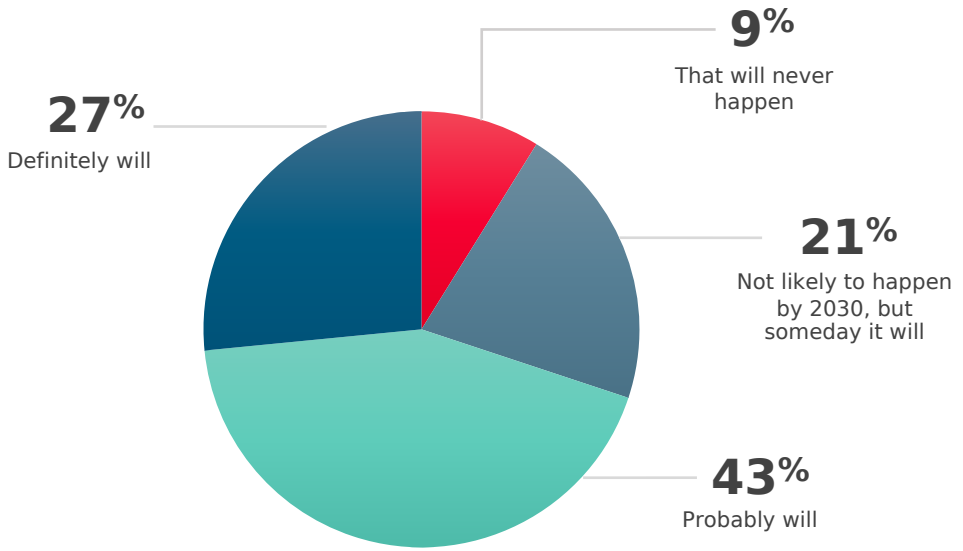
THE CAR OF 2030 MORE LIKELY TO BE “MILLION MILE” THAN “ZERO FATALITY”



In your opinion, how likely is the automobile industry to produce a “Zero Fatality” car by 2030?



In your opinion, how likely is the automobile industry to produce a “Million Mile” car by 2030?

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Detailed Findings

INDUSTRY TRENDS IMPACTING THE CAR OF THE FUTURE

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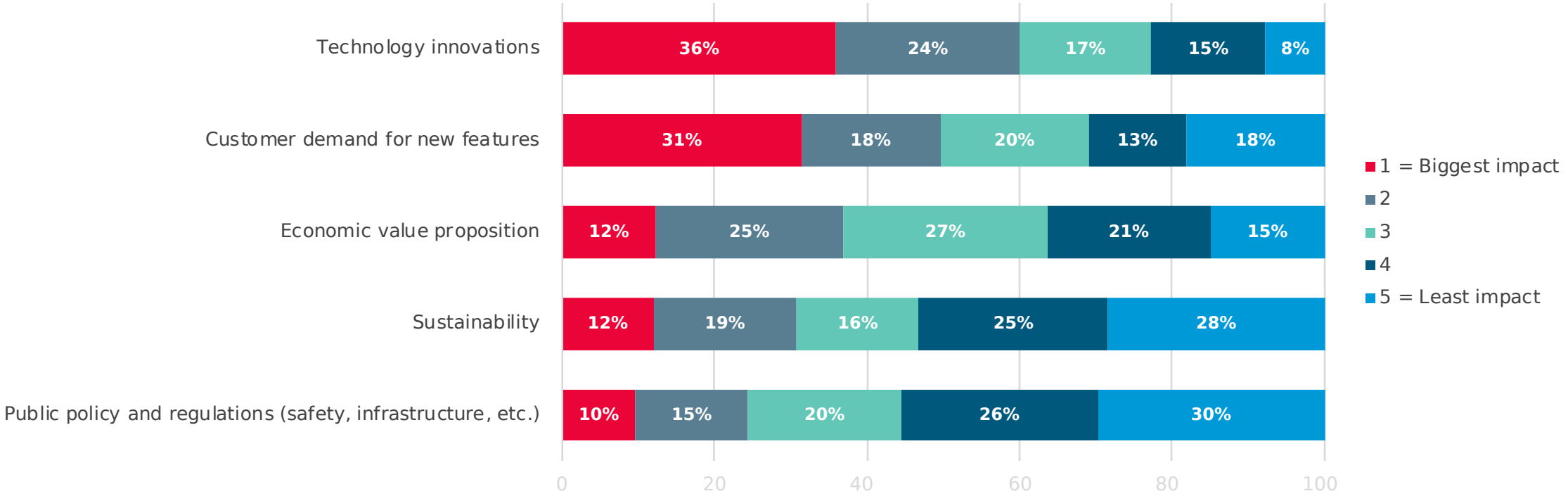
TECHNOLOGY INNOVATION AND CUSTOMER DEMAND WILL HAVE PRIMARY IMPACT



In your opinion, what impact will each of the following factors have on the average car purchased in 2030? Rank each of these from 1 to 5 where 1 = Biggest impact and 5 = Least impact.

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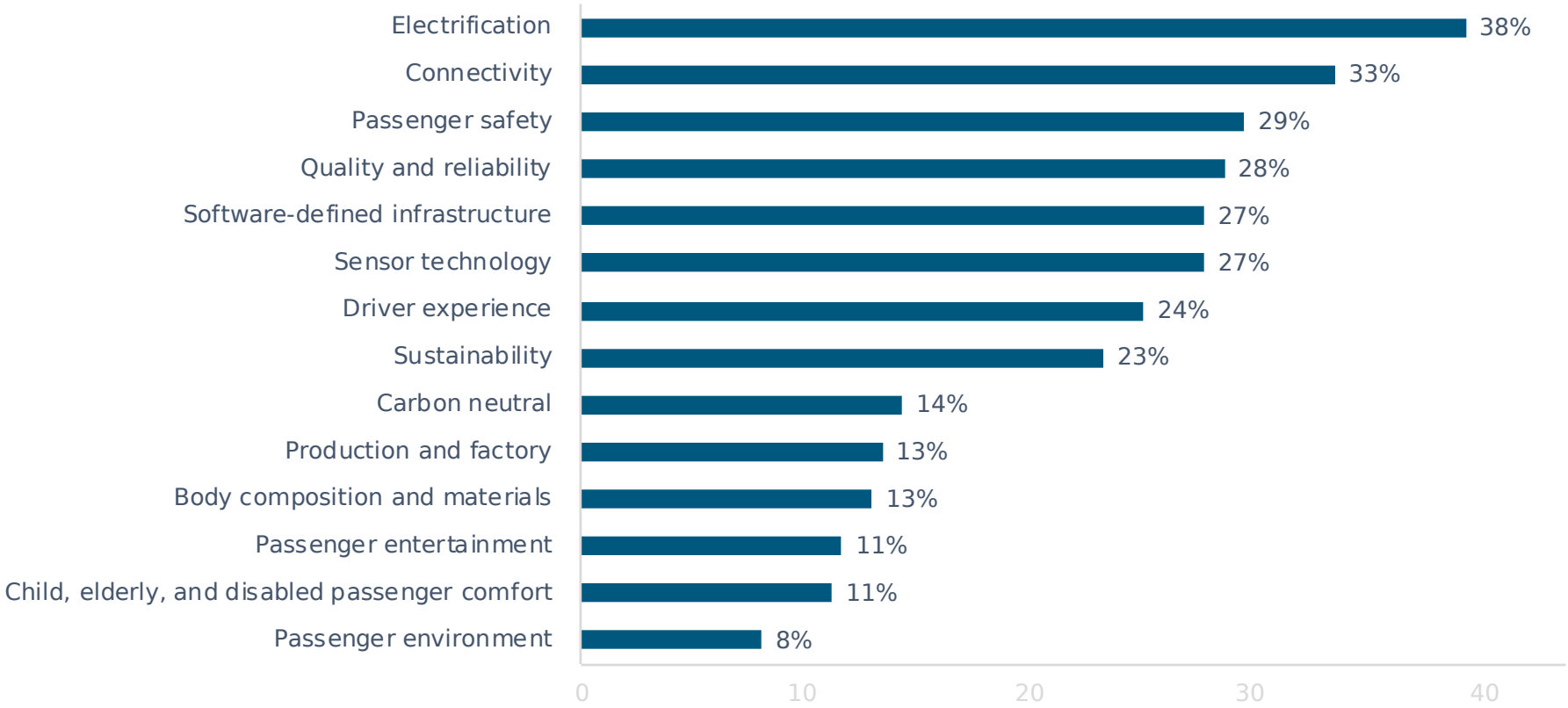
BATTERY COST SAVINGS HAVE THE GREATEST POTENTIAL TO REDUCE THE PRICE



In your opinion, what will be the most important innovation areas for the automotive industry in the next 10 years? Choose up to 3 of the following.

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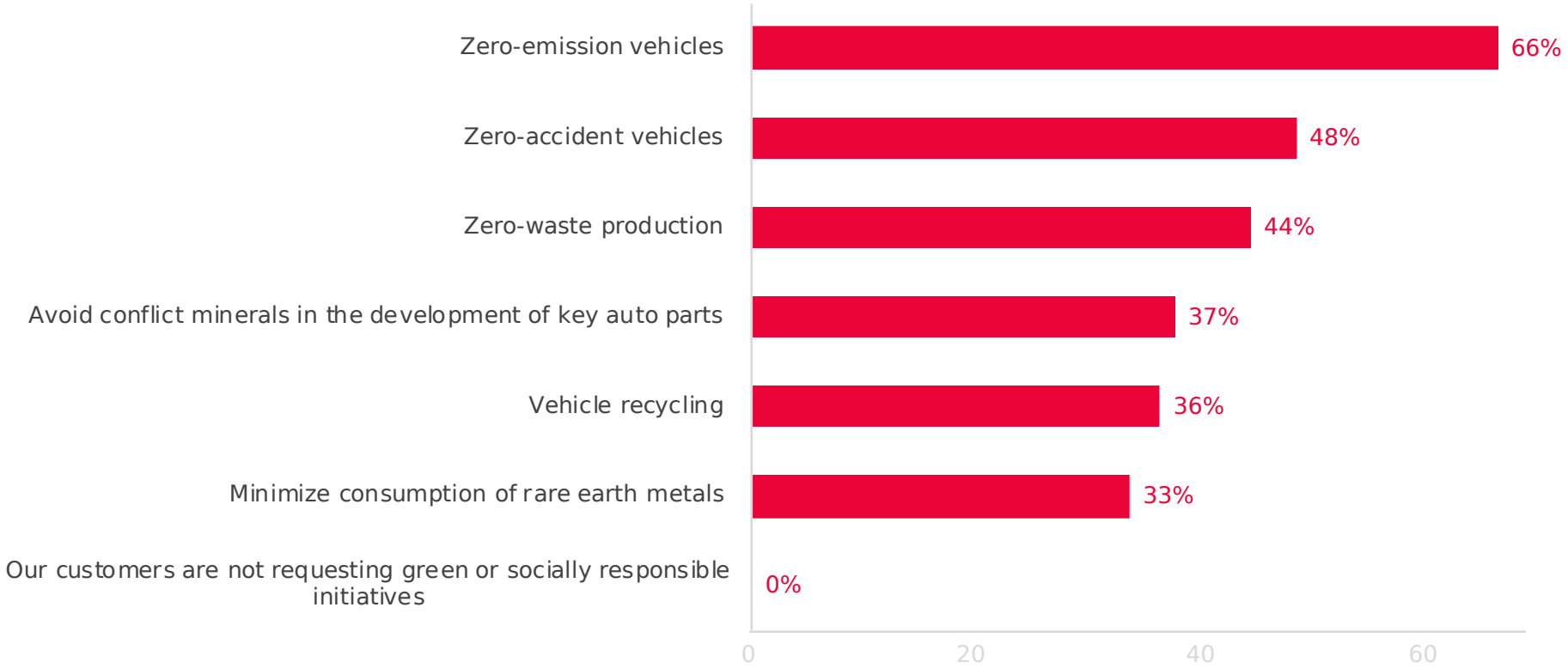
CUSTOMERS ARE REQUESTING GREEN OR SOCIALLY RESPONSIBLE INITIATIVES



What green or socially responsible initiatives are your customers requesting? Choose all that apply.

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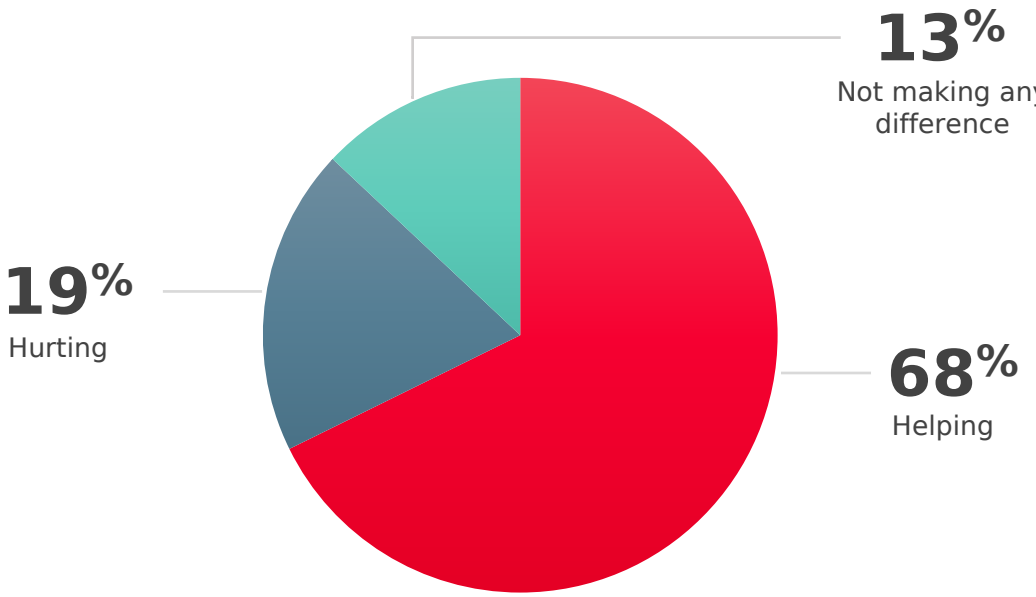
AUTO DECISION MAKERS TYPICALLY THINK GOVERNMENT POLICIES ARE HELPING



In your opinion, what is the overall impact of existing government policies on innovation in the automobile industry? When answering this question think across all areas of government impacts including sustainability, infrastructure, safety regulations, etc.

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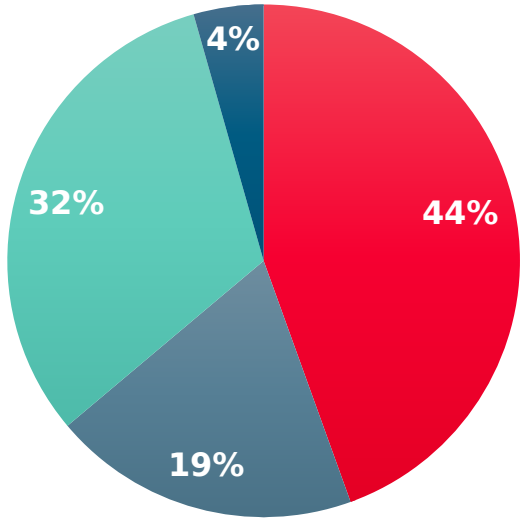
TRADITIONAL OEMS EXPECTED TO LEAD THE CAR OF THE FUTURE — BUT THERE'S NO CONSENSUS



- Established automobile OEMs (Ford, Mercedes, Honda, etc.) because of their expertise in safety, regulation, production, and distribution
- Start-up OEMs (Rivian, Tesla, Waymo, etc.) because of their innovative approach with a focus on automotive
- Technology companies (Apple, Google, Microsoft, etc.) because of their expertise in user experience and human/technology interfaces
- A new category will emerge that combines expertise in all areas

What type of company do you expect to be the leading force that drives the features and design of an average car purchased in 2030? Choose the answer that most closely applies.

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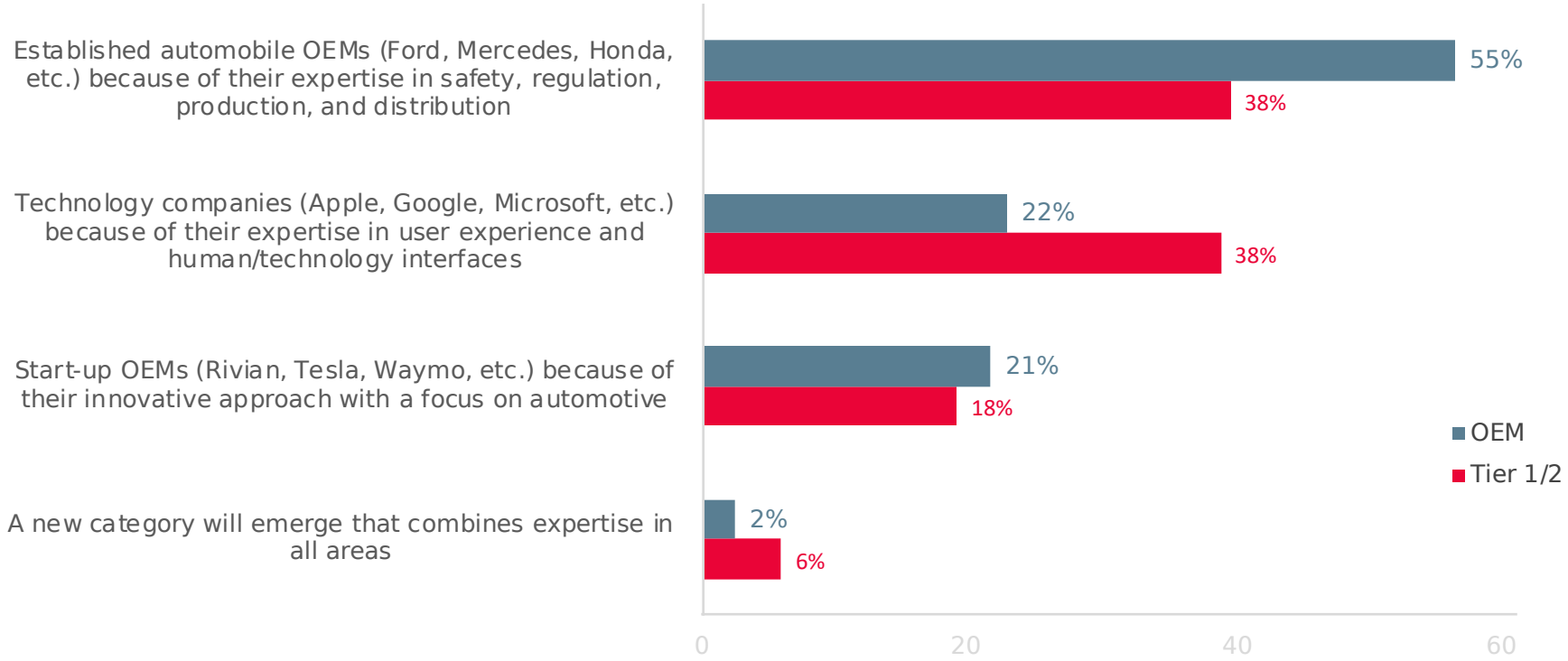
OEMS MORE LIKELY TO REPORT THAT THEY ARE THE TYPE OF COMPANY TO LEAD DESIGN



What type of company do you expect to be the leading force that drives the features and design of an average car purchased in 2030? Choose the answer that most closely applies.

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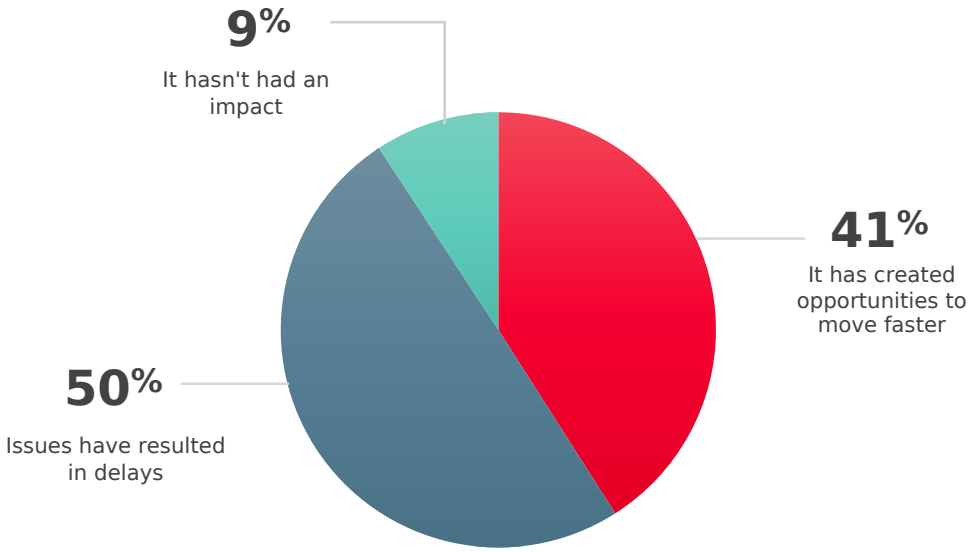
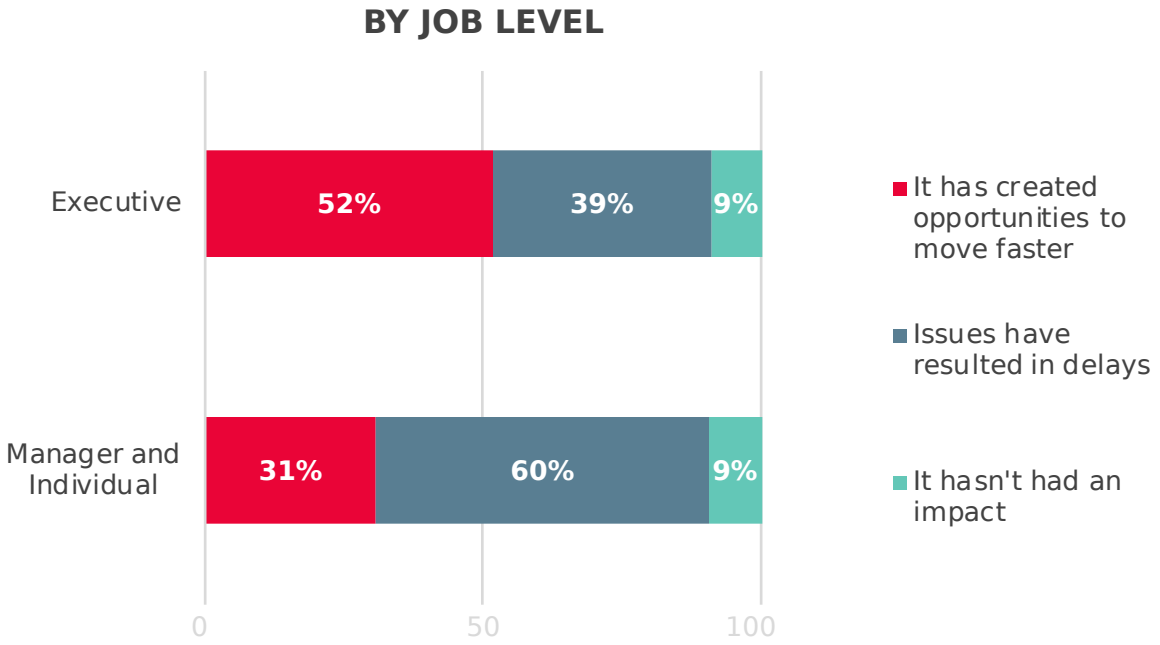
COVID-19 HAS CREATED WINNERS AND LOSERS; EXECUTIVES MORE LIKELY TO REPORT OPPORTUNITY





In your opinion, what impact has Covid-19 had on the automobile industry's ability to develop the car of the future? Choose the one answer that most closely applies.

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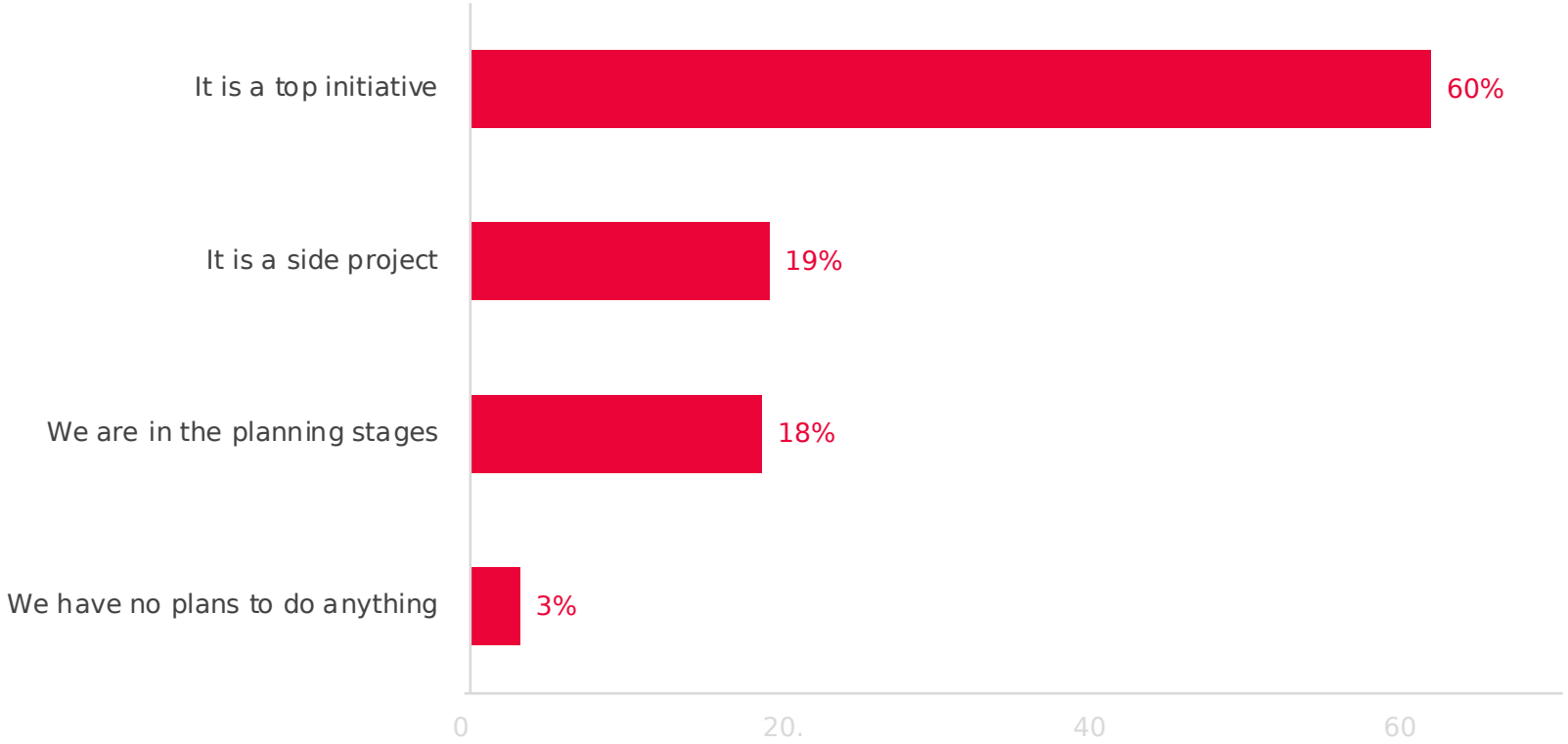
SOFTWARE-DEFINED VEHICLES HAVE CAPTURED ATTENTION OF AUTOMOBILE COMPANIES



For this survey, Software Defined Vehicles refer to automobiles whose features and functions are delivered via software. This includes intelligence needed for autonomous driving, advanced algorithms to reduce energy consumption, remote updates of new features, data management, customized driver experiences and more.

How would you describe your company's approach to developing software defined vehicles? Choose the one answer that most closely applies

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Detailed Findings

OBSTACLES TO OVERCOME

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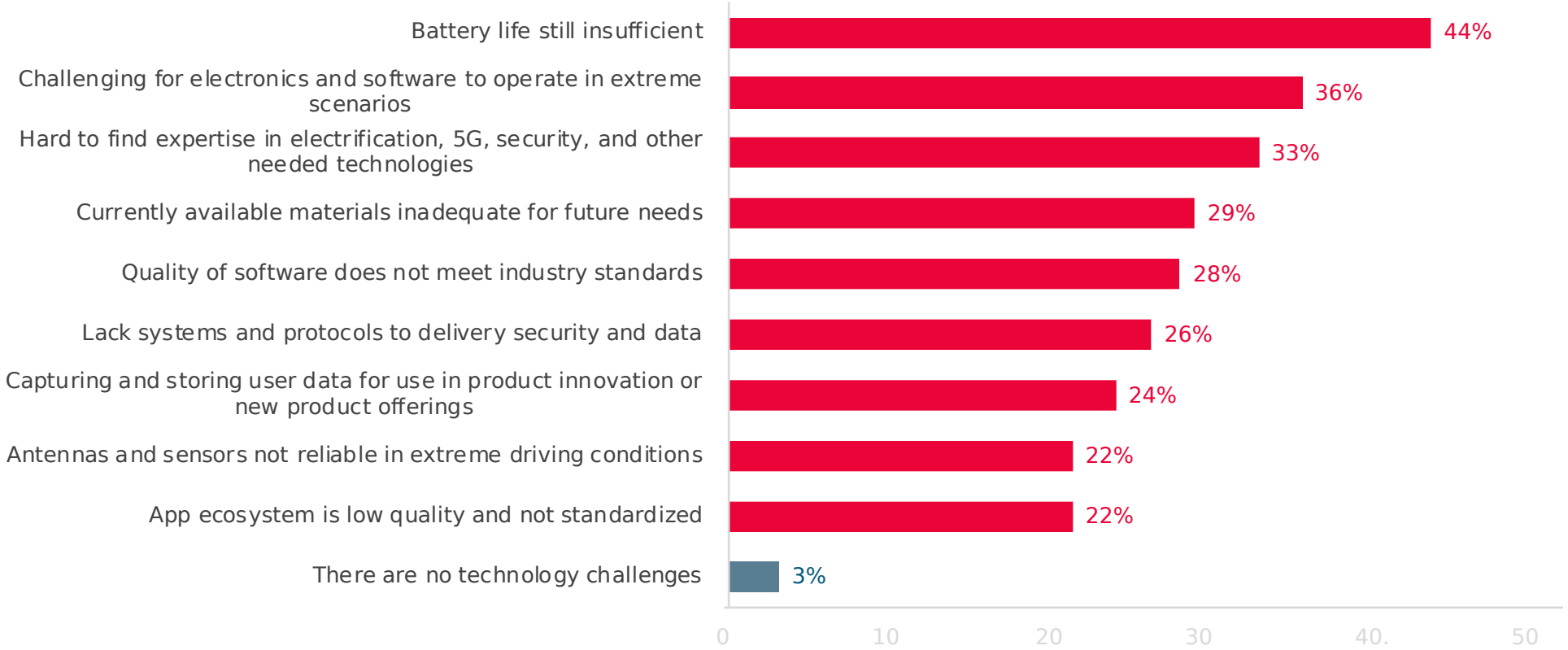
97% REPORT TECHNOLOGY CHALLENGES CREATE OBSTACLES TO INNOVATION



What TECHNOLOGY challenges does your organization face in delivering innovation? Choose all that apply.

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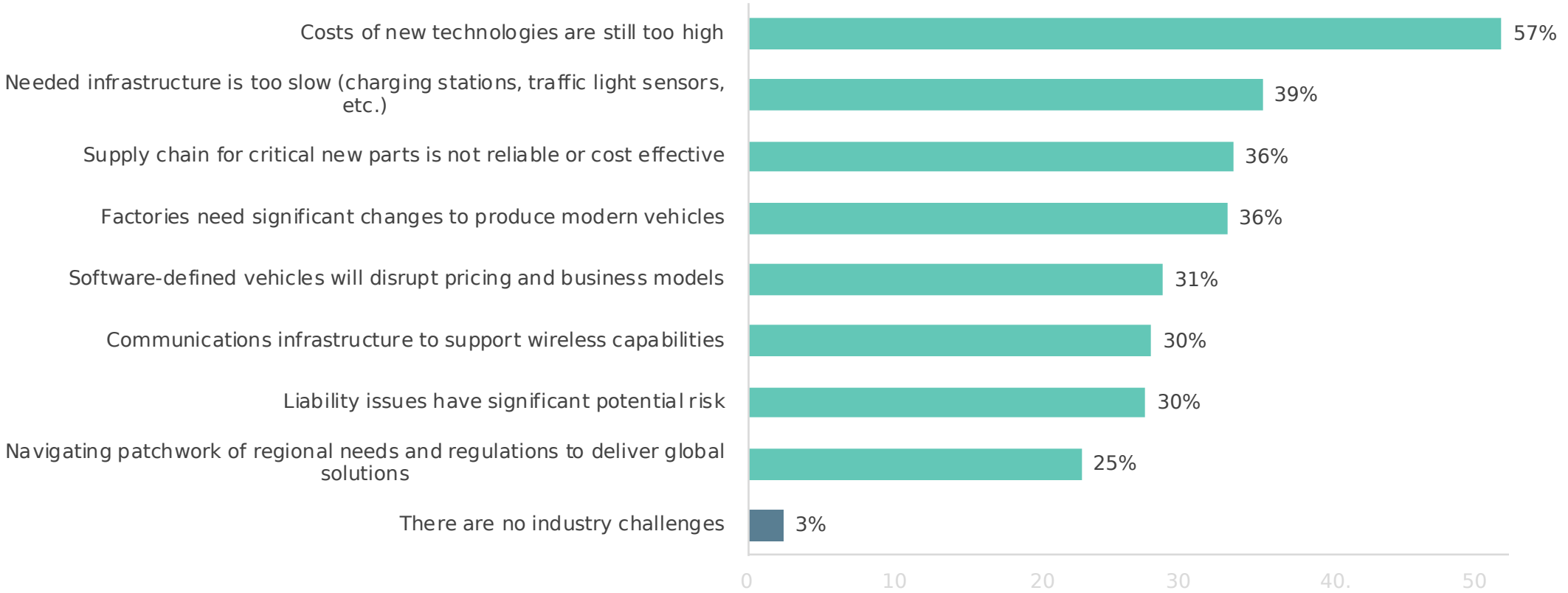
97% REPORT INDUSTRY CHALLENGES TO DELIVERING INNOVATION



What INDUSTRY challenges does your organization face in delivering innovation? Choose all that apply.

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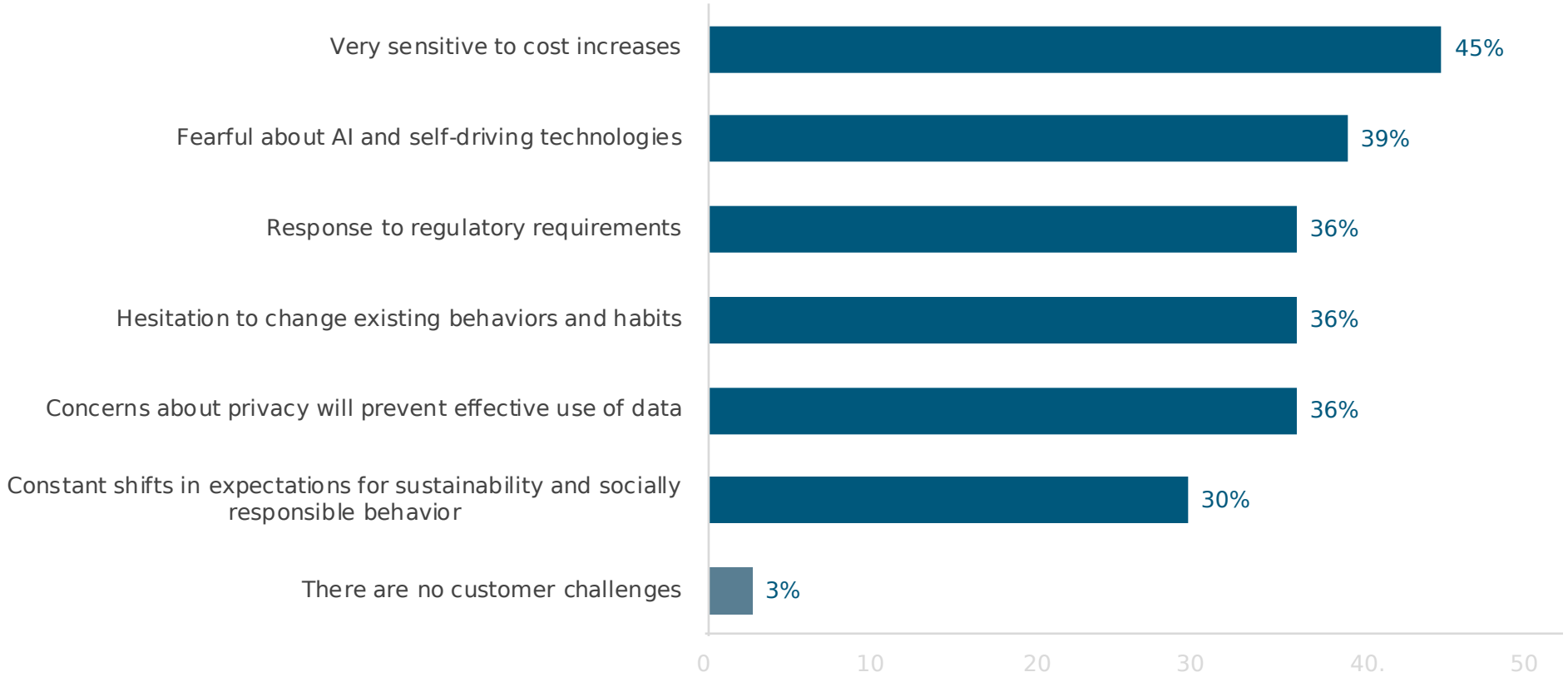
97% REPORT CUSTOMER-RELATED CHALLENGES TO INNOVATION



What CUSTOMER challenges does your organization face in delivering innovation? Choose all that apply.

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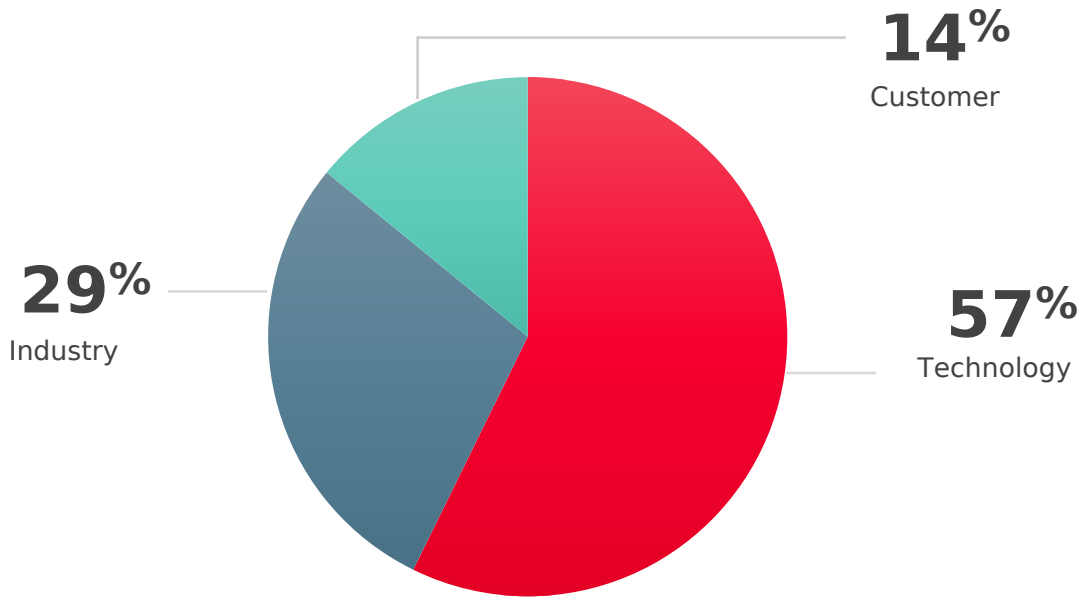
TECHNOLOGY CHALLENGES WILL BE THE MOST DIFFICULT



Of the types of challenges you indicated above, which will be the hardest to overcome? Choose the one answer that most closely applies.

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BIG BELIEF STATEMENTS

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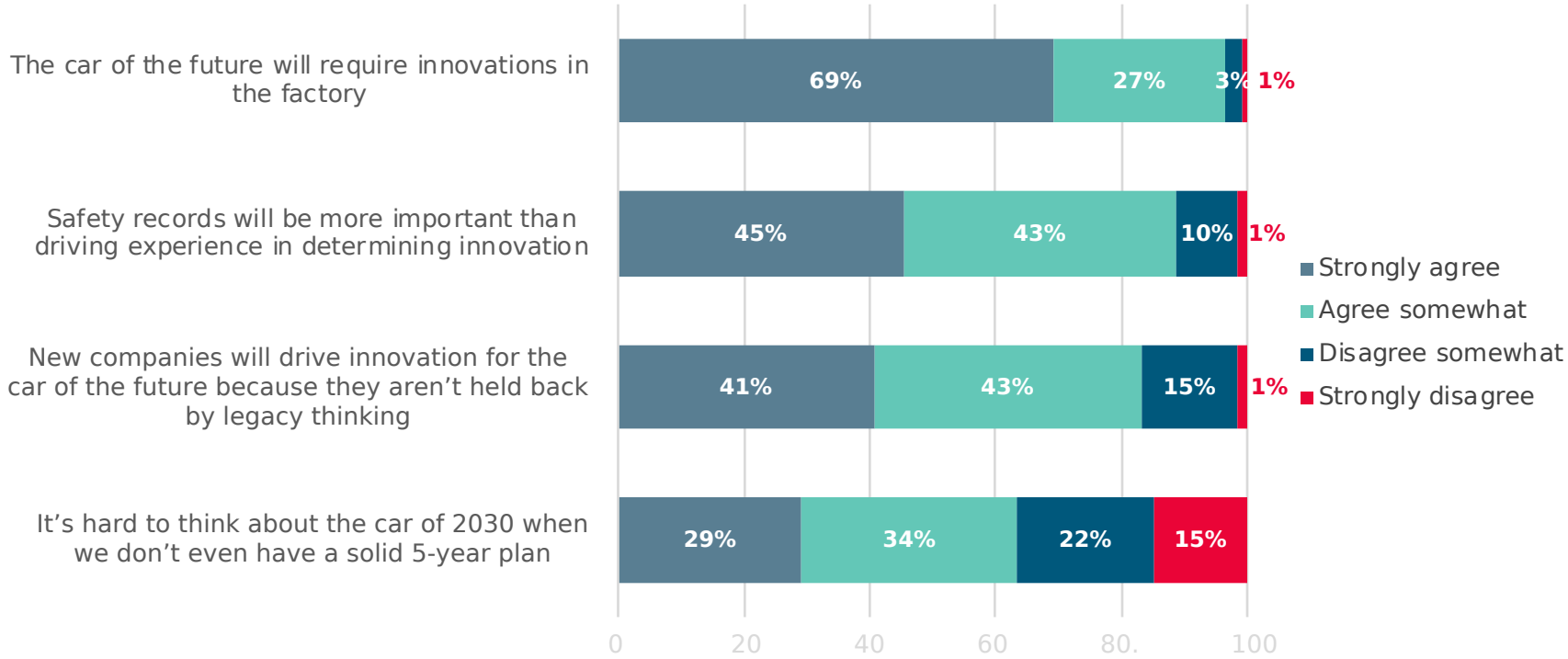
96% AGREE THE CAR OF THE FUTURE WILL REQUIRE INNOVATIONS IN THE FACTORY



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