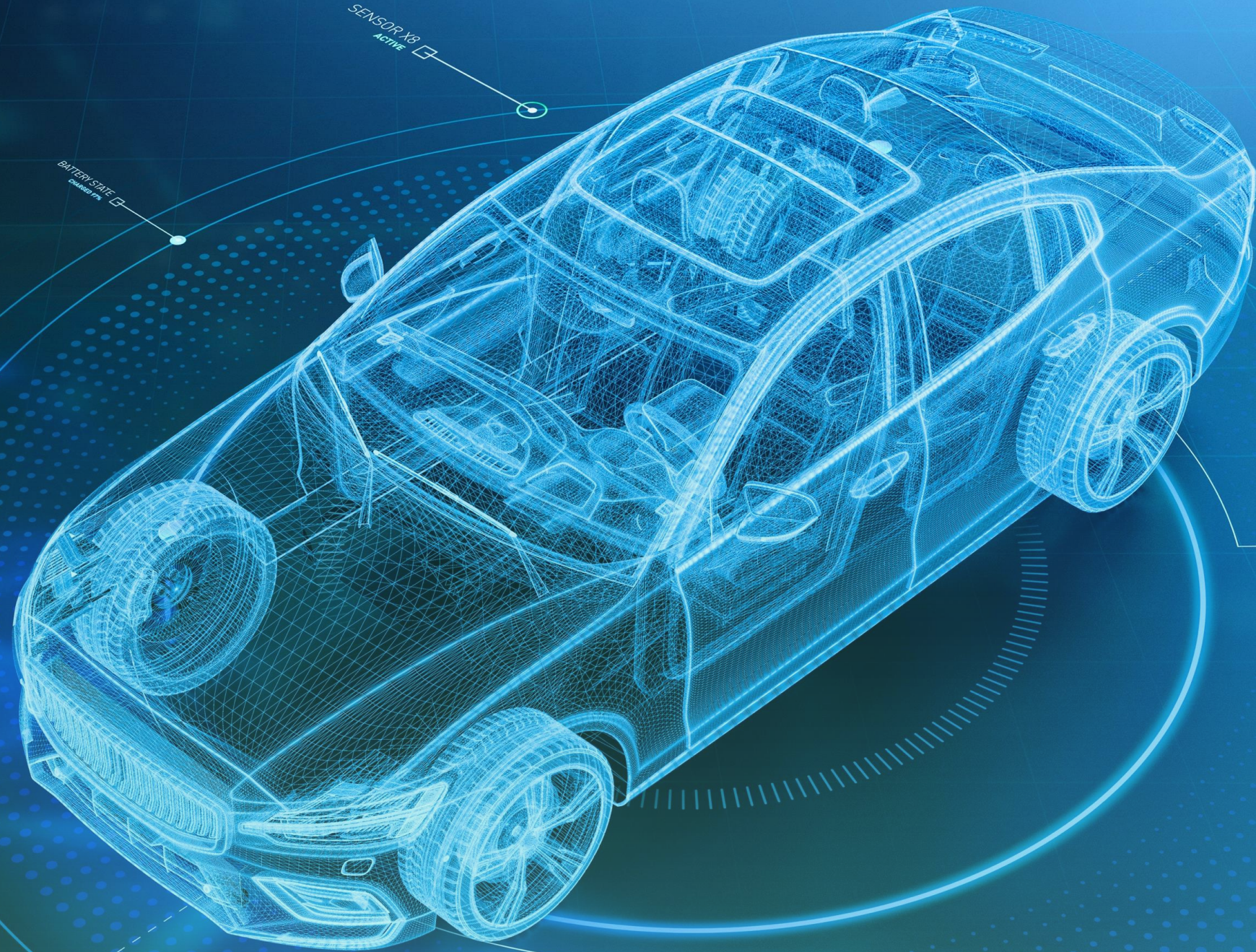


2024

Harris Poll AutoTECHCAST

Research Overview

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Methodology

Harris Poll AutoTECHCAST is an annual multi-client study platform to collect and analyze consumer insights on advanced automotive technologies and features. The 2024 full study includes 40 technologies.



10,261 US Consumers **30** Minutes (average survey length)

In order to qualify for the survey, respondents met the following criteria:

- US resident
- Ages 18-80 years old
- Have a valid driver's license
- Have at least one household vehicle
- The vehicle is among the pre-determined list of North American models with model year of 2018 or newer
- Must be at least 50% involved in the decision to buy the next vehicle
- Intends to purchase or lease a new vehicle in the future



Data collected between April 1, 2024 and May 6, 2024.

Data weighted by demographics and a propensity score to ensure that respondents are representative of the total in-market vehicle buying population.



Standard set of metrics on each of the 40 techs, plus customized "deep dive" questions specific to the individual techs to provide info on preferred functionality, reasons for interest/non-interest, etc.



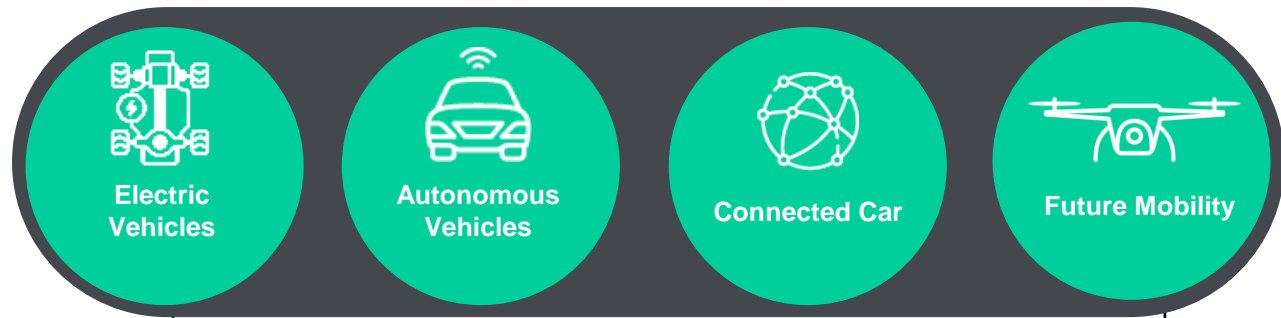
What Does AutoTECHCAST Cover?

Automotive manufacturers and suppliers need to innovate and differentiate to capture new business and build brand equity.

Selecting and integrating the right advanced technologies—those that **drive business performance, product differentiation and customer loyalty**—is essential.

The annual Harris Poll US AutoTECHCAST (ATC) reflects the perspectives of over **10,000 current vehicle owners** and provides an in-depth assessment of a wide assortment of emerging automotive technologies.

Tech Categories Covered



DEEP DIVE SECTIONS



2024 AutoTECHCAST Technology List

COMFORT & CONVENIENCE



COMFORT

- Active Noise Cancellation
- Advanced Cabin Air Filter
- Automatic Window Tinting
- **Coach Doors** ★

CONNECTIVITY

- Front Passenger Screen
- In-Car Payment System
- Over-the-Air Updates
- Smartphone As Key
- Smartphone Linked Media/Navigation
- Streaming Media
- Vehicle Internet Connectivity

CONVENIENCE

- Auxiliary Power Generator
- Driver Recognition System
- EV/Fuel Route Planning Systems
- Smart Home Ecosystem Integration
- Wireless Mobile Device Charging System
- **Rear Wheel Steering** ★

SAFETY



DRIVE MONITORING & ALERTS

- Driver Monitoring System
- Vehicle-to-Vehicle Communication
- Health Monitoring Sensor
- **Passive Alcohol Detection System** ★

DRIVER ASSISTANCE

- Enhanced Collision Mitigation System
- Low-Speed Collision Avoidance System

VEHICLE MONITORING & SECURITY

- Remote Camera Monitoring
- Remote Vehicle Diagnostics
- Vehicle Cybersecurity Solution

VISIBILITY

- Augmented Reality Head-Up Display
- Camera Monitoring System (E-Outside Mirror)
- Full Digital Display Rear View Mirror
- Surround View Camera System
- **External Voice Command System** ★ (microphone)

FUEL EFFICIENCY



FUEL SAVING & ALTERNATE FUEL

- Hybrid Electric Engine
- Battery Electric Engine
- Fuel Cell Engine
- **Extended Range Electric Engine** ★

AUTONOMOUS VEHICLES



AUTONOMOUS & SEMI-AUTONOMOUS

- Automatic Parking System
- Traffic Jam Assist
- Fully Self-Driving
- City and Highway Assisted Self-Driving
- Highway Assisted Self-Driving

Levels of
Autonomy
Explored

PLUS DEEP DIVE SECTIONS ON:

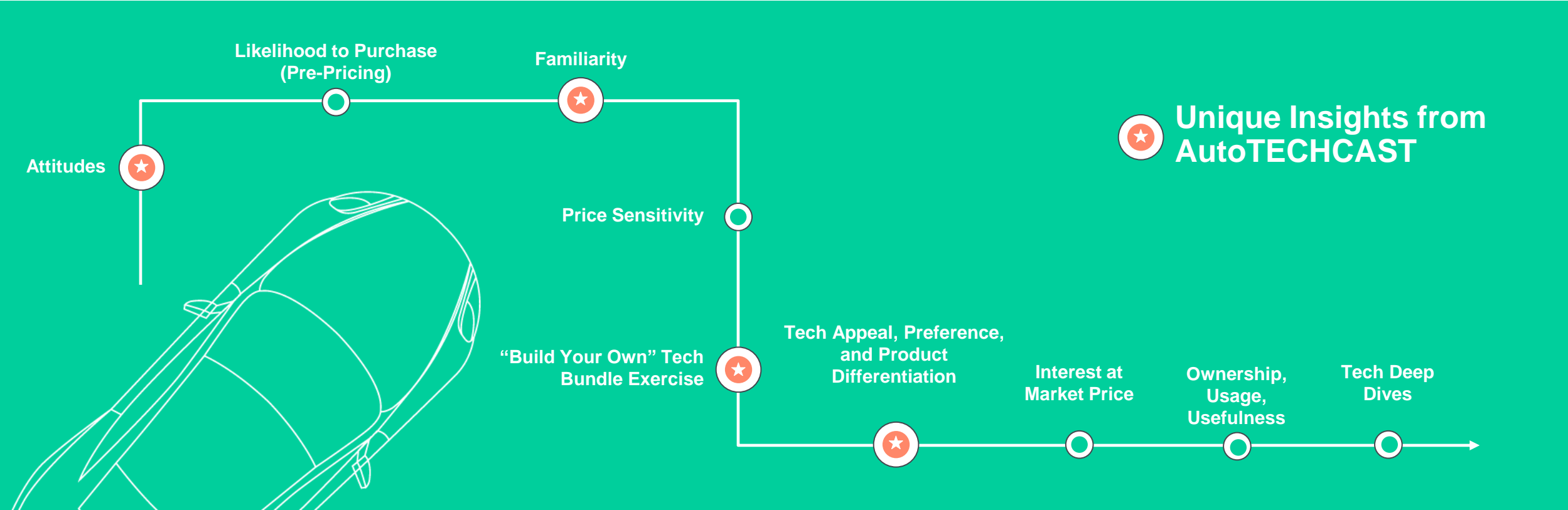
- Autonomous Vehicles
- Connected Car
- Electric Vehicles
- Future Mobility





Study Scope And Flow

Technology attributes included in AutoTECHCAST





What Does AutoTECHCAST Collect About Vehicle Owners?

Data can be explored in many ways: demographics, vehicle ownership/intention, engine type/consideration, and more...



Demographics

- Age
- Gender
- Location
- Ethnicity
- Education
- Income



Lifestyle, Individual

- Marital Status
- Presence of Children
- Political Lean
- Employment Status



Lifestyle, Household

- Household Size
- Presence of Children
- City/Suburban/Rural



Tech Adoption

- Early Adopter
- Online Vehicle Shopper
- Type of Smartphone Owned



Current Vehicle

Avg. Hours spent consuming:

- Brand
- Model
- Model Year
- Purchased/Leased
- New or Pre-owned
- Vehicle Segment
- Engine Type



Driving Behavior

- Miles Driven Per Day
- Mileage By City/Suburb/Rural/Highway
- Fuel economy/Range Performance
- Level of Charging Used (If electric)
- Types of Apps Desired



Next Vehicle

- Purchase Horizon
- Brands Considered
- Brand/Model Most Likely To Purchase
- Vehicle Segment Intention
- Likelihood To Consider BEVs
- Budget For Next Vehicle



Personal/Recreational Activities With Vehicle

- Taking road trips/vacations with friends/family as passengers
- Taking road trips/vacations by myself
- Tailgating at sporting events/concerts
- Helping others (e.g., moving)
- Taking drives just for fun, de-stress or clear my mind
- Towing
- Hauling large items in the bed
- Going to and from work
- Snow plowing in the winter
- Shopping and errands
- Using vehicle as an office
- Driving with pets
- Driving children around (e.g., school and team activities)
- Driving infants around
- Driving with other adults
- Driving elderly adults
- Going off-road
- Driving 4+ hours in one day
- Going to and from school
- Hobbies
- Construction work
- Yard work
- Small home improvement projects

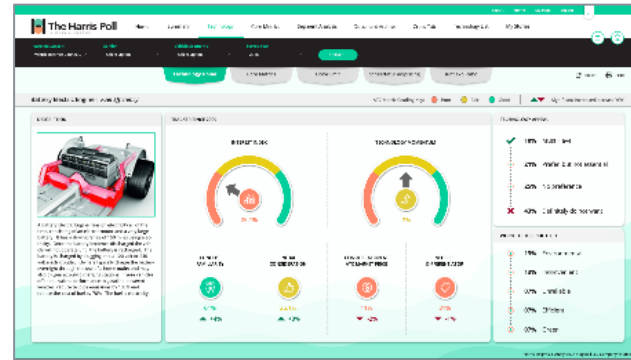


AutoTECHCAST Deliverables

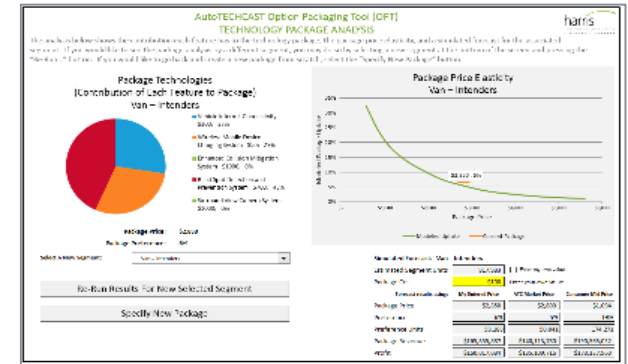
Summary Report



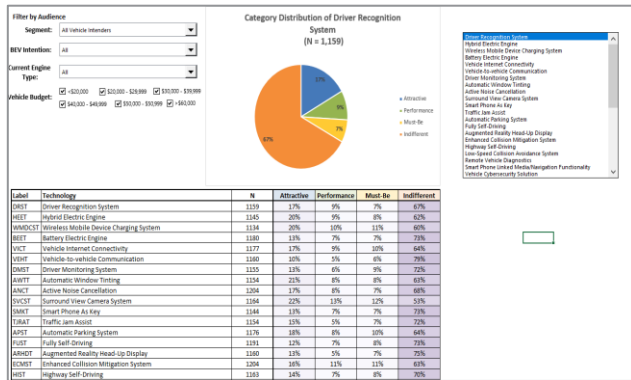
Online Interactive Dashboard



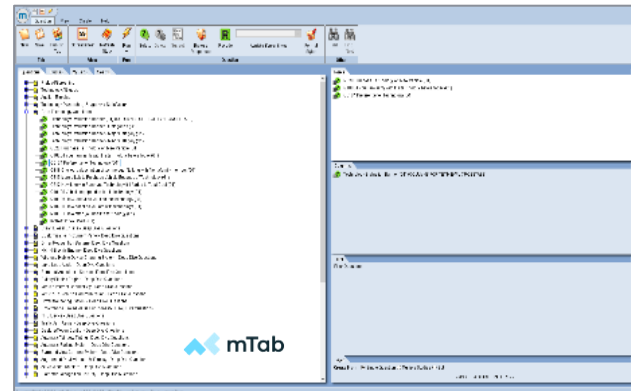
Option Packaging Tool



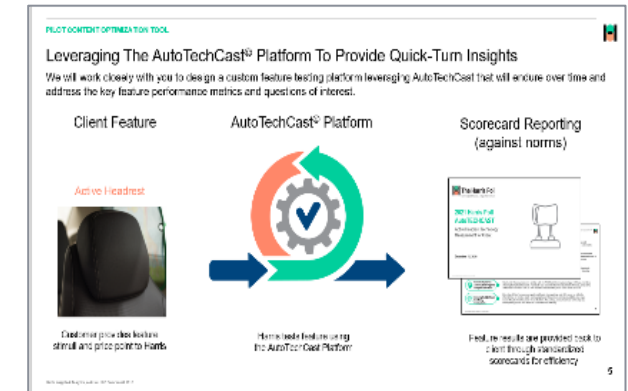
KANO Analysis



Full Data Set by mTab Software



Optional AutoTECHCAST Feature Optimization Platform





Example Analysis



Demand For Alternative Powertrains Softens In 2024; Features That Improve Visibility, Accident Avoidance, And Smartphone Integration Are Most Valued

The 2024 Annual AutoTECHCAST[©] Interest Index

RANK 1-14		'24	'23	RANK 15-28		'24	'23	RANK 29-40		'24	'23
1	Surround View Camera System	55.7	54.1	15	Automatic Parking System	42.3	45.4	29	City and Highway Assisted Self-Driving	34.9	34.7
2	Low-Speed Collision Avoidance System	55.4	55.2	16	Driver Recognition System	42.1	45.9	30	Front Passenger Screen	33.9	33.2
3	Wireless Mobile Device Charging System	54.3	52.9	17	Over-the-Air Updates (OTA Updates)	41.6	39.1	31	Vehicle-to-Vehicle Communication	33.6	32.3
4	Enhanced Collision Mitigation System	52.7	51.5	18	Remote Camera Monitoring	41.4	44.9	32	Extended Range Electric Engine	33.4	n/a
5	Smartphone Linked Media/Navigation Functionality	49.6	51.0	19	Fuel/EV Route Planning Systems	39.5	40.8	33	Rear Wheel Steering	33.3	n/a
6	Remote Vehicle Diagnostics	48.8	49.1	20	Smartphone as Key	39.0	37.2	34	Smart Home Ecosystem Integration	33.1	32.5
7	Advanced Cabin Air Filter System	48.4	47.2	21	Driver Monitoring System	38.5	39.7	35	Battery Electric Engine	31.9	33.6
8	Vehicle Internet Connectivity	47.0	45.1	22	Augmented Reality Head-Up Display	38.1	34.5	36	Fuel Cell Engine	27.9	30.3
9	Full Digital Display Rear-View Mirror	46.8	46.0	23	Traffic Jam Assist	37.9	40.7	37	In-Car Payment System	27.7	29.9
10	Active Noise Cancellation	45.7	46.4	24	Streaming Media	36.9	39.7	38	Coach Doors	27.1	n/a
11	Automatic Window Tinting	45.6	45.1	25	Highway Assisted Self-Driving	36.6	39.1	39	Fully Self-Driving Vehicle	25.4	29.0
12	Hybrid Electric Engine	44.7	48.5	26	Auxiliary Power Generator	36.6	36.7	40	Passive Alcohol Detection System	22.8	n/a
13	Camera Monitoring System (E-Outside Mirror)	42.5	40.8	27	External Voice Command System (mic)	35.7	n/a				
14	Vehicle Cybersecurity Solution	42.4	39.1	28	Health Monitoring Sensor	35.3	35.7				

The annual AutoTECHCASTSM measured consumer interest in 40 advanced technologies.

Younger Drivers Are More Accepting Of Passive Alcohol Detection Systems

False positives (19%) is the top concern with a Passive Alcohol Detection System among vehicle drivers. Baby Boomers are most concerned with a false positive (25%).

Younger generations have higher privacy concerns with this system than older generations (Gen Z/Young Millennials 15%).

Assuring drivers that Passive Alcohol Detection Systems are reliable, non-invasive, and will make roads safer are key to increasing broader acceptance.

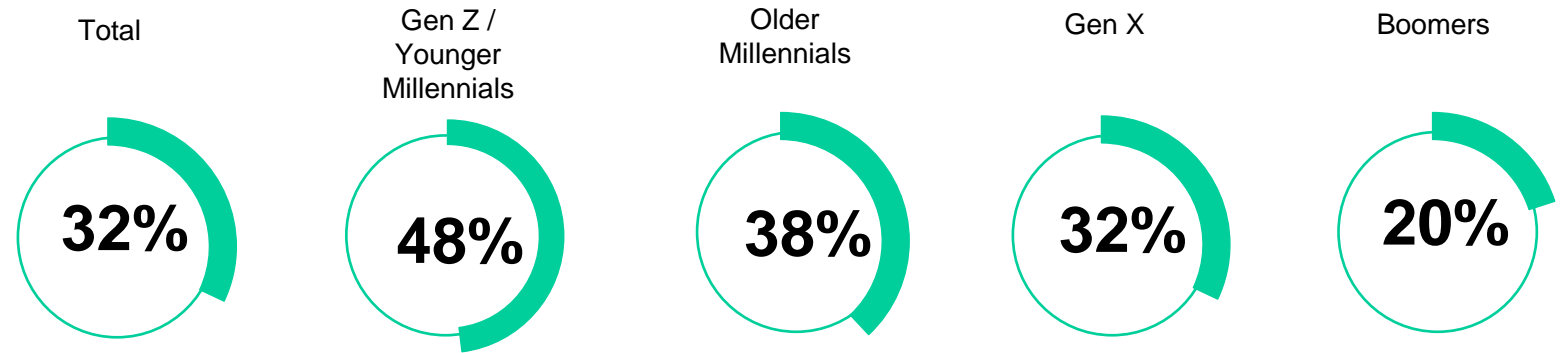
51% feel drivers should face legal consequences if the technology detects alcohol

PASSIVE ALCOHOL DETECTION SYSTEM

2024 Harris Poll AutoTECHCASTSM



PERCENT WHO FEEL ALCOHOL DETECTION SYSTEM SHOULD BE MANDATORY IN NEW VEHICLES



Drivers who drink and drive will find a way to evade the technology

82% agree

This feels like a slippery slope, leading to even more personally invasive requirements in the future

73% agree

I will be more aware of how much I drink before attempting to drive with this technology in my vehicle

67% agree

This type technology would be more useful if it detected the presence of marijuana/THC/cannabis

59% agree

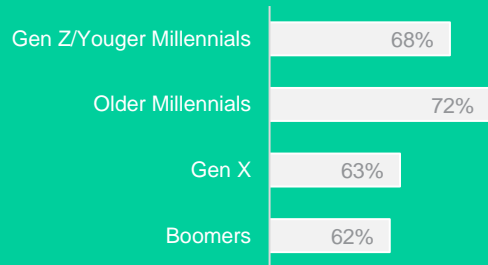
I would have a more favorable view of manufacturers who include this technology in their vehicles

56% agree

Autonomous Driving: To Know It Is To Love It

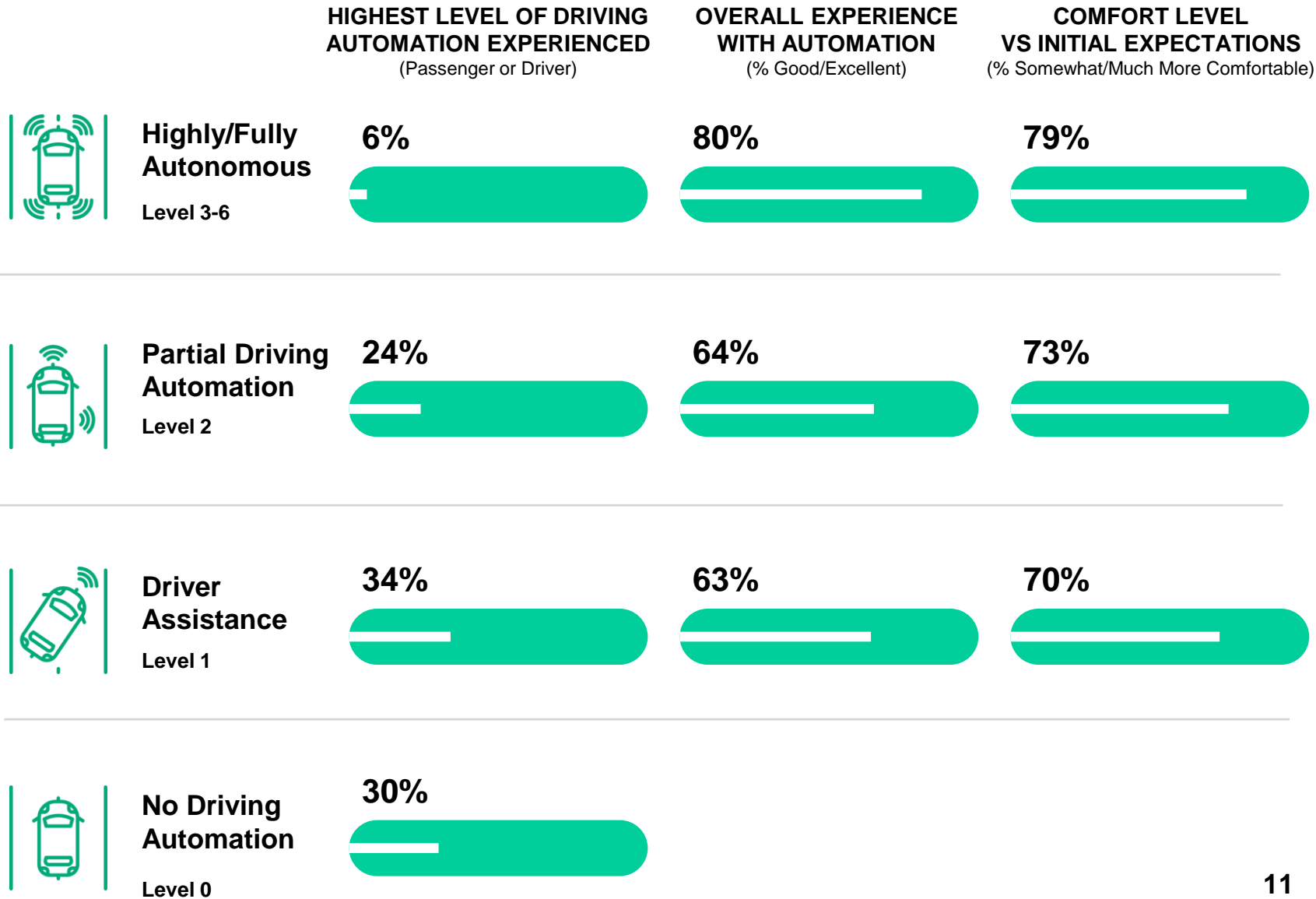
Positive experiences with all levels of autonomy suggest consumers will be more open to autonomous vehicle as the technology evolves and becomes more advanced.

OVERALL EXPERIENCE WITH AUTOMATION (% Good/Excellent)



5% are not sure of the highest level of automation experienced

AUTONOMOUS AUTONOMOUS EXPERIENCE



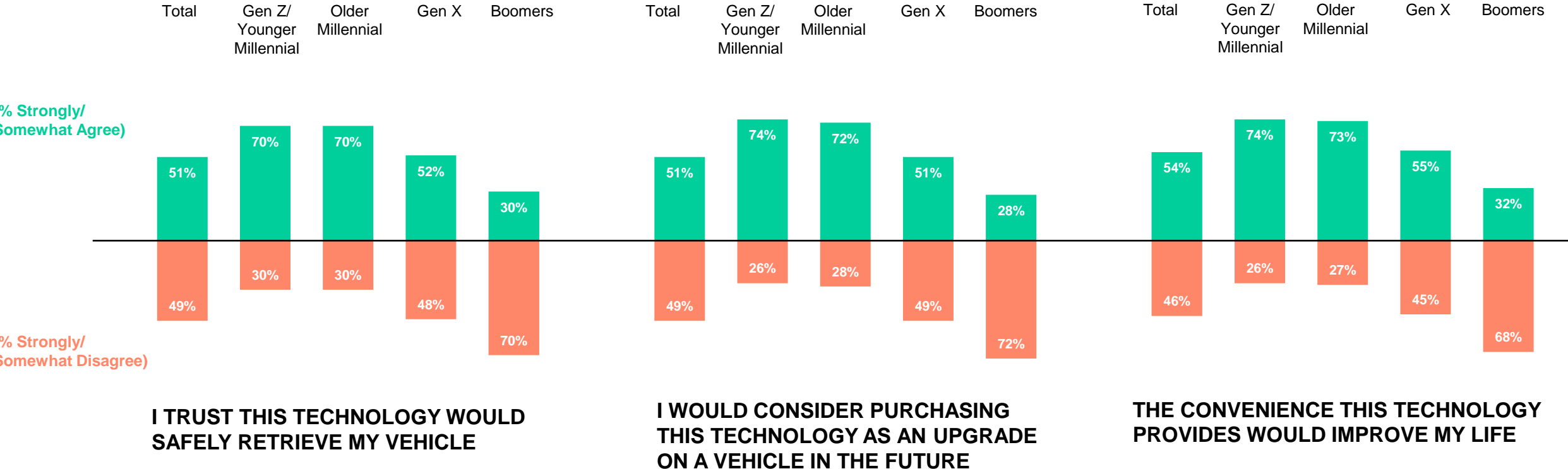
Consumers Are Split On Whether They Can Trust Autonomous Summons To Safely Retrieve Their Vehicle

Description: Some companies are investing in technology often known as “Fully Autonomous Summon” that allows vehicles to autonomously navigate to a designated location based on your commands through your mobile app. The feature enables vehicles to enter or exit a parking spot, come pick you up within a parking lot, or handle other similar requests within a pre-set distance parameter.

Please indicate if you agree or disagree with each of the following statements regarding this technology.

Perceptions of Autonomous Summon

Base: Among those who evaluated the autonomous vehicle deep dive



Q10113



Drivers Are Becoming More Open To Driving Electric Vehicles With A Lower Range Before Seeking To Recharge

If you owned an electric vehicle what is the lowest point you would let your vehicle's range get to in miles before you would look to recharge the vehicle?

Lowest Point Willing To Drive Vehicle Before Recharging (Avg Miles)

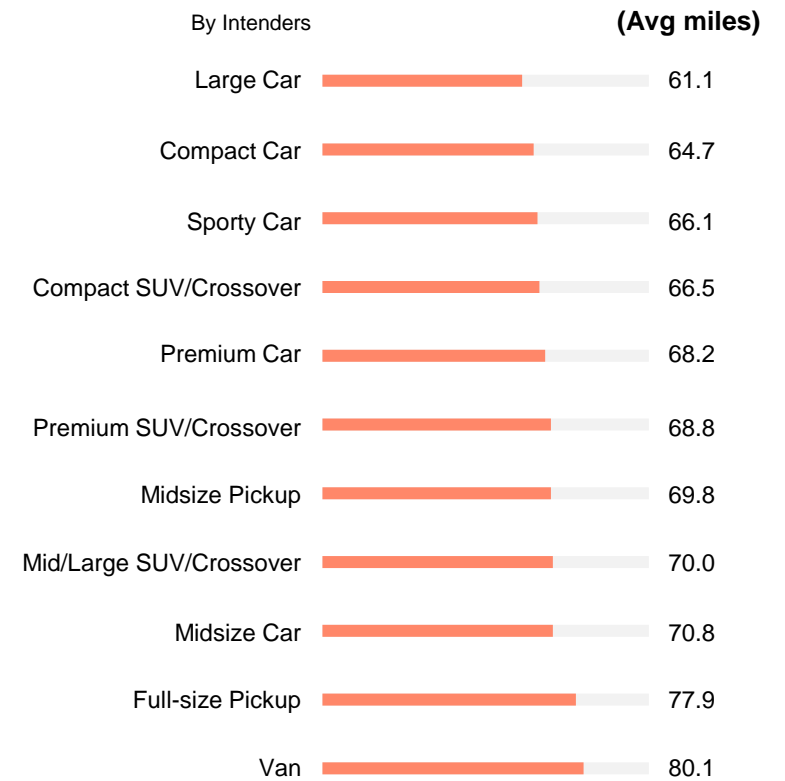
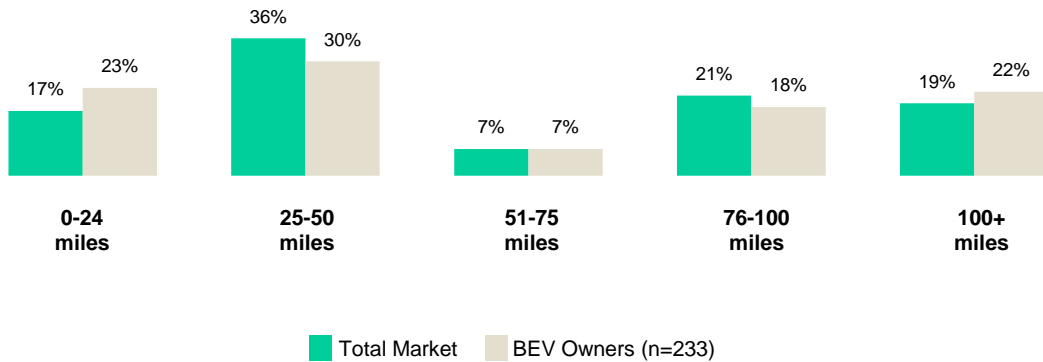
85.1
2022

72.1
2023

69.6
2024

-15.5
Change from 2022

BEV Owners
2023 79.0
2024 66.1





Thank you!
For More Information Contact:

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