## IOT PRIVACY FOR AUTOMOBILES:

CONSUMER PROTECTION,

## TRANSPARENCY & THE MONRONEY STICKER

Enabling Recommendation ER3.3.6

IoT Advisory Board Meeting



Source: Image generated using DALL·E, OpenAl



IoTAB Board Member Presenters - Privacy Subteam:

- Privacy & Emerging
  Technologies Expert, Debbie
  Reynolds Consulting LLC
- Maria Rerecich Senior Director,
   Product Testing,
   Consumer Reports

May 15, 2024

#### Debbie Reynolds



#### Founder, CEO, and Chief Data Privacy Officer, Debbie Reynolds Consulting, LLC

- A leading voice in Data Privacy and Emerging Technology Hosts award-winning # 1 "The Data Diva" Talks Privacy Podcast
- Featured by media outlets like PBS, New York Times, Wired, Business
- Insider, Protocol, USA Today, New Statesman, Dark Reading, Morning Brew, Lifewire, CMSWire, Bloomberg, Digiday
- Recognized as one of the Global Top Eight Privacy Experts by Identity
- Review
- Named one of the Global Top 30 CyberRisk Communicators by The European Risk Policy Institute in 2020 and 2021
- Appointed to the U.S. Department of Commerce's IoT Advisory Board in
- 2022
- Serves as the IEEE Committee Chair for Cyber Security for Next
   Generation Connectivity Systems at IEEE for Human Control & Flow

#### Maria Rerecich

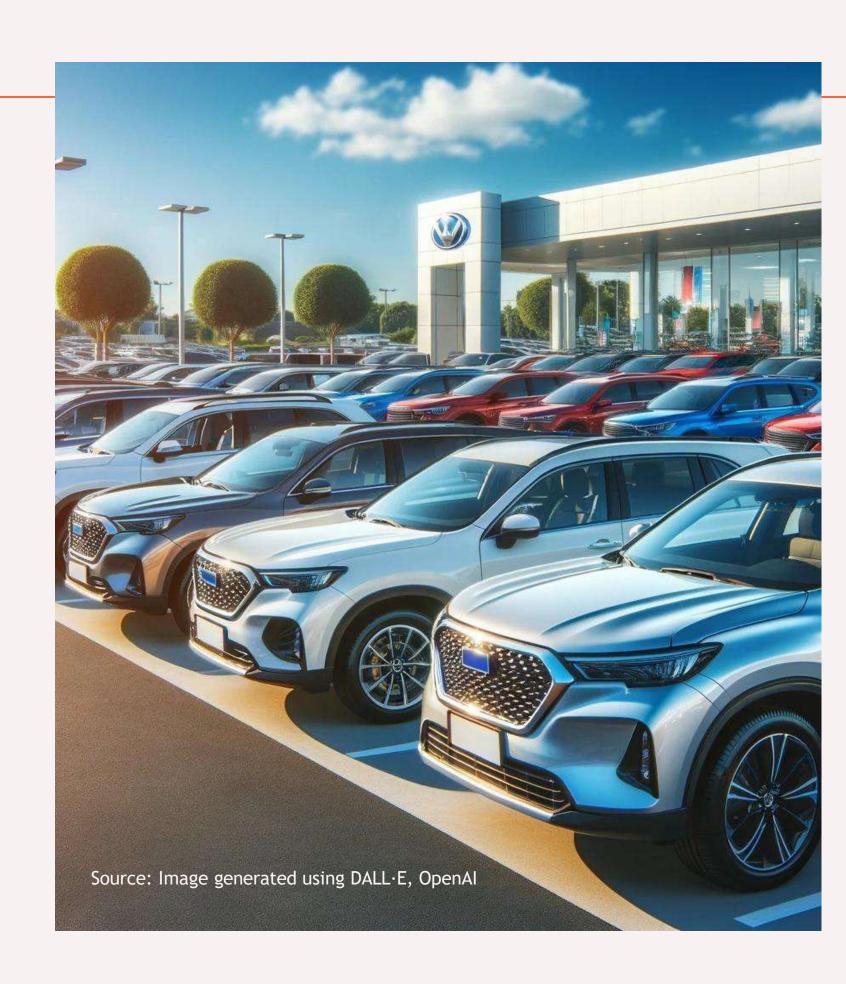


#### **Senior Director, Product Testing, Consumer Reports**

- Joined Consumer Reports in 2013 as Director of Electronics Testing
- Leads teams evaluating consumer products in appliances, home/outdoor products, and consumer electronics
- Works on privacy, security, and data issues, especially testing Internet of Things (IoT) devices
- 29-year career in the semiconductor industry at Standard Microsystems Corporation
- Holds Bachelor's and Master's degrees in Electrical Engineering from MIT
- Appointed to the U.S. Department of Commerce's IoT Advisory Board in 2022

#### **TOPICS**

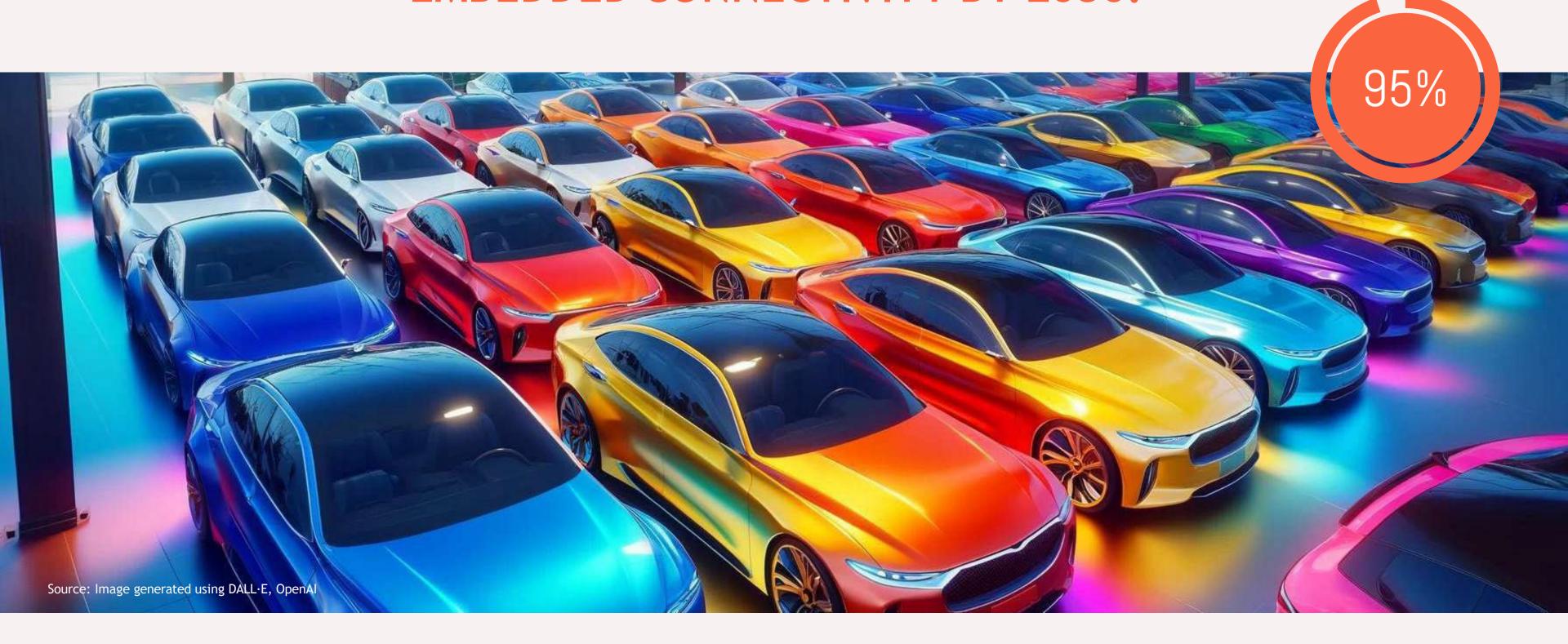
- Statistics
- Data Privacy & Automobile Reports
- Automobile Privacy in the News
- Consumer Stories
- State Legislation
- History of the Monroney Sticker
- Types of Vehicle Stickers
- Privacy Label Design Examples
- Regulatory Bodies
- Cost
- Advocacy for IoTAB Support
- Resources



#### STATISTICS



95% OF THE PASSENGER CARS SOLD ARE LIKELY TO HAVE EMBEDDED CONNECTIVITY BY 2030.

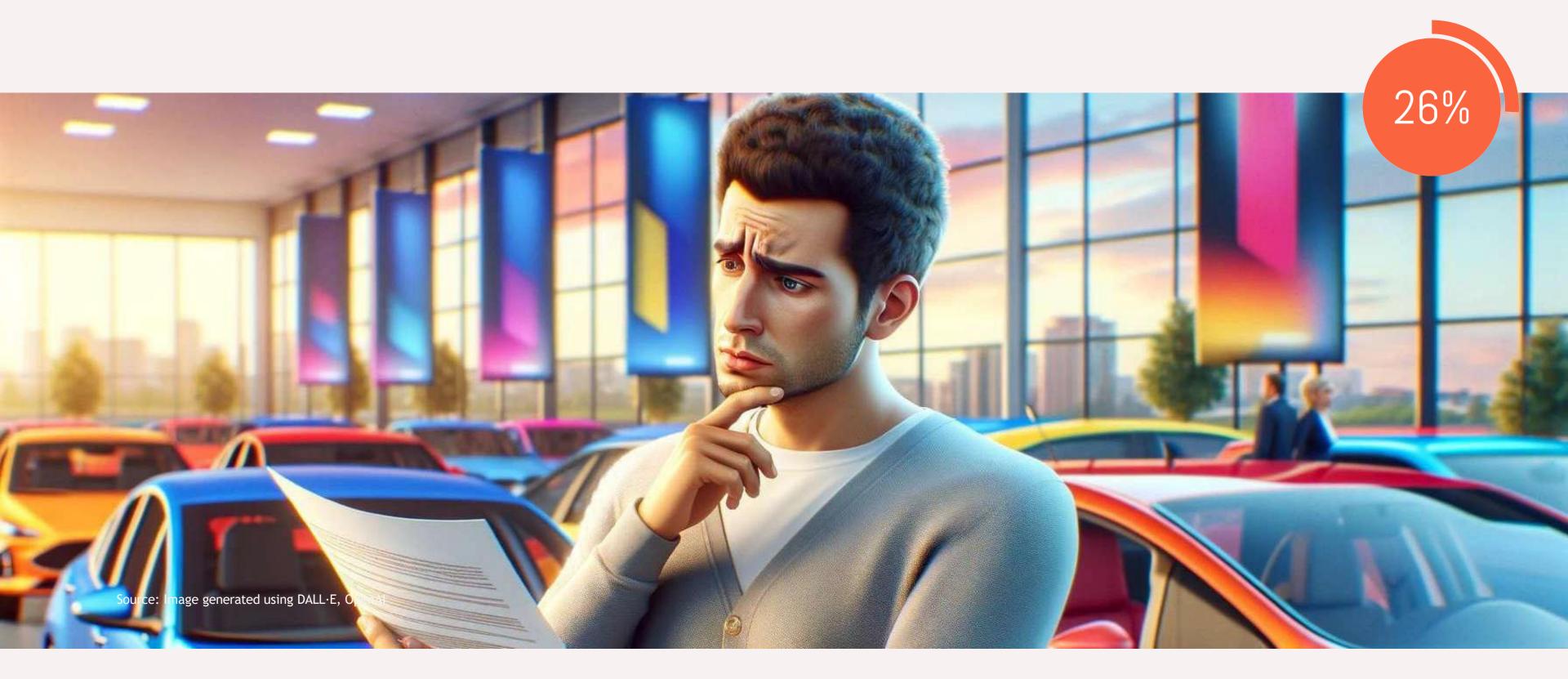


#### 91.7% OF U.S. HOUSEHOLDS OWNED AT LEAST ONE VEHICLE IN 2022



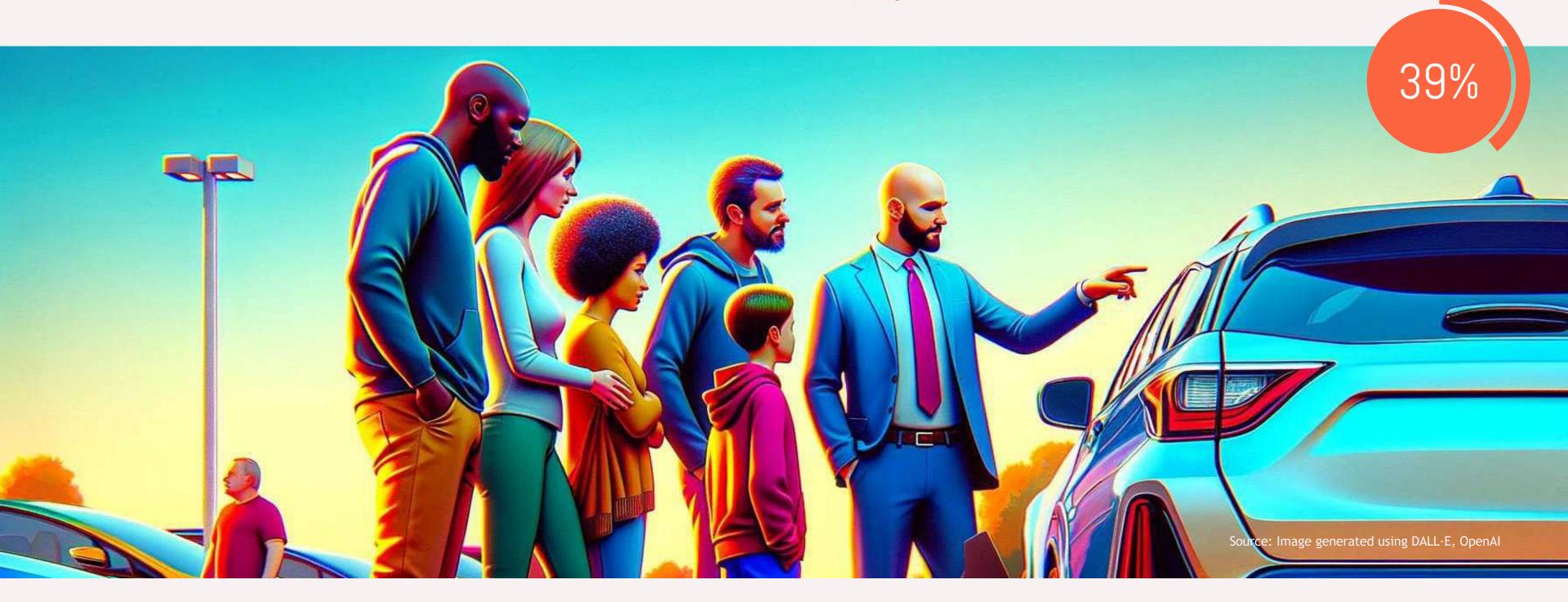
Source: Forbes Advisor, Car Ownership Statistics 2024

### 26% OF CAR BUYERS REPORT THE CAR-BUYING PROCESS IN 2022 AS TRANSPARENT, A DIP OF 14 PERCENTAGE POINTS COMPARED TO 40% IN 2021



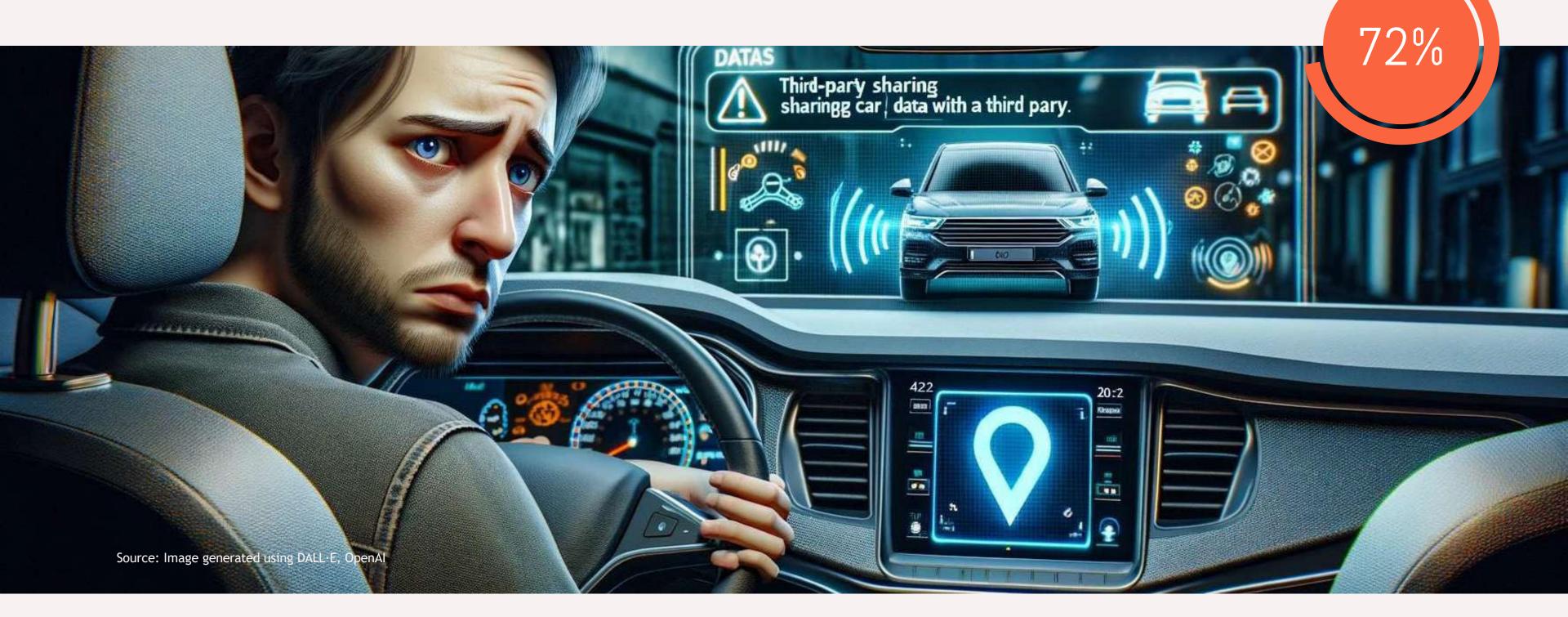
Source: 2022 Capital One Car Buying Outlook, Capital One Auto Navigator

39% OF CONSUMERS NOW CONSIDER DATA PRIVACY HIGHLY IMPORTANT DURING THE VEHICLE SHOPPING AND OWNERSHIP EXPERIENCE.



Source: SBD Automotive

72% OF DRIVERS ARE UNCOMFORTABLE WITH THE IDEA OF AUTOMAKERS SHARING THEIR DATA WITH THIRD PARTIES.



Source: "71% of Drivers Consider Buying Older Cars Due to Data Privacy Concerns", Security Magazine, January 11, 2024

71% OF DRIVERS WOULD CONSIDER BUYING AN OLDER CAR OR ONE WITH LESS TECHNOLOGY TO PROTECT THEIR PRIVACY AND

SECURITY.



Source: "71% of Drivers Consider Buying Older Cars Due to Data Privacy Concerns", Security Magazine, January 11, 2024

#### 140% INCREASE IN VEHICLE CYBER ATTACKS FROM 2020 TO 2021



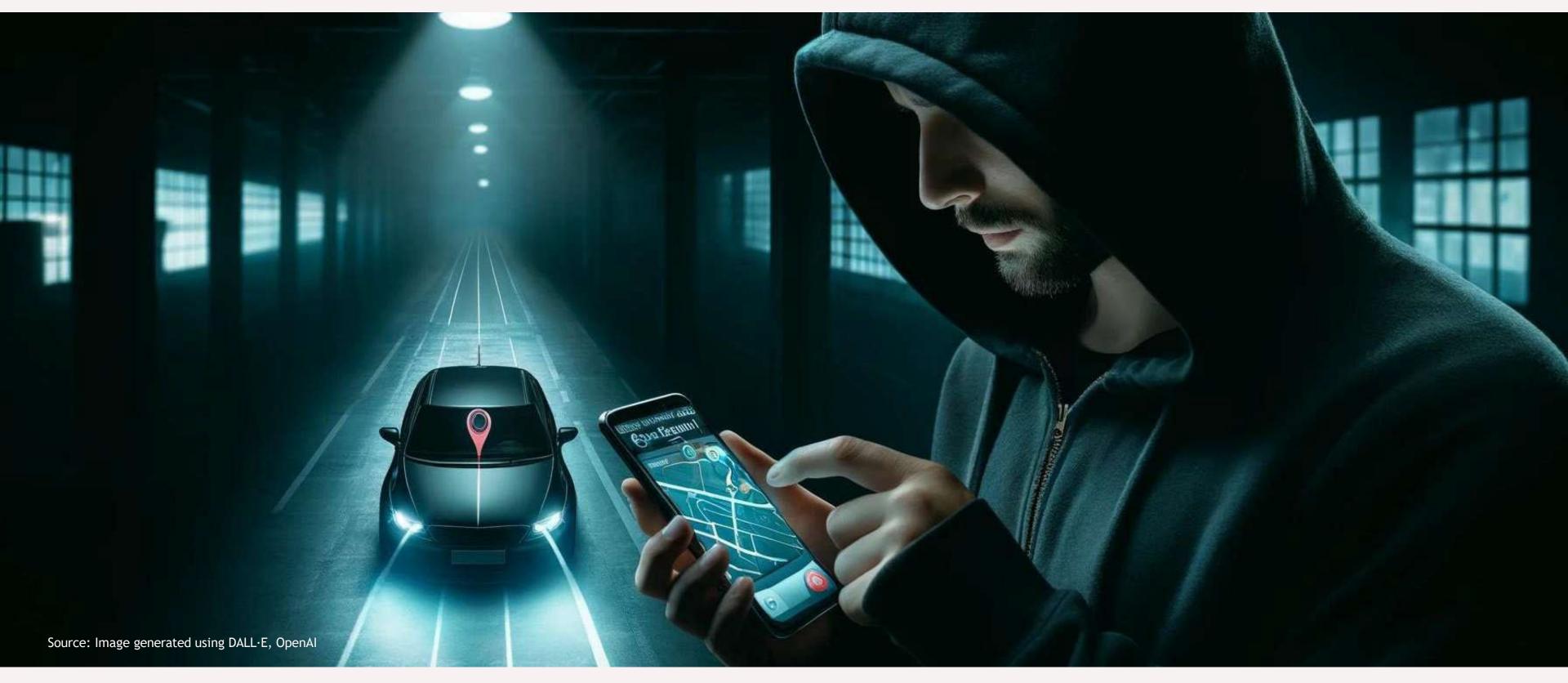
Source: "Driving on the Edge: The Alarming Rise of Automotive Hacking and the Race to Secure Our Vehicles." The Driz Group,, April 10, 2023

## FOR \$2 A CYBERCRIMINAL CAN BUY A CUSTOMER'S PERSONAL CAR DATA AND VEHICLE IDENTITY ON THE DARK WEB



Source: "Stolen Auto Accounts: The \$2 Price Tag on Your Car's Identity." Kasada September 12, 2023

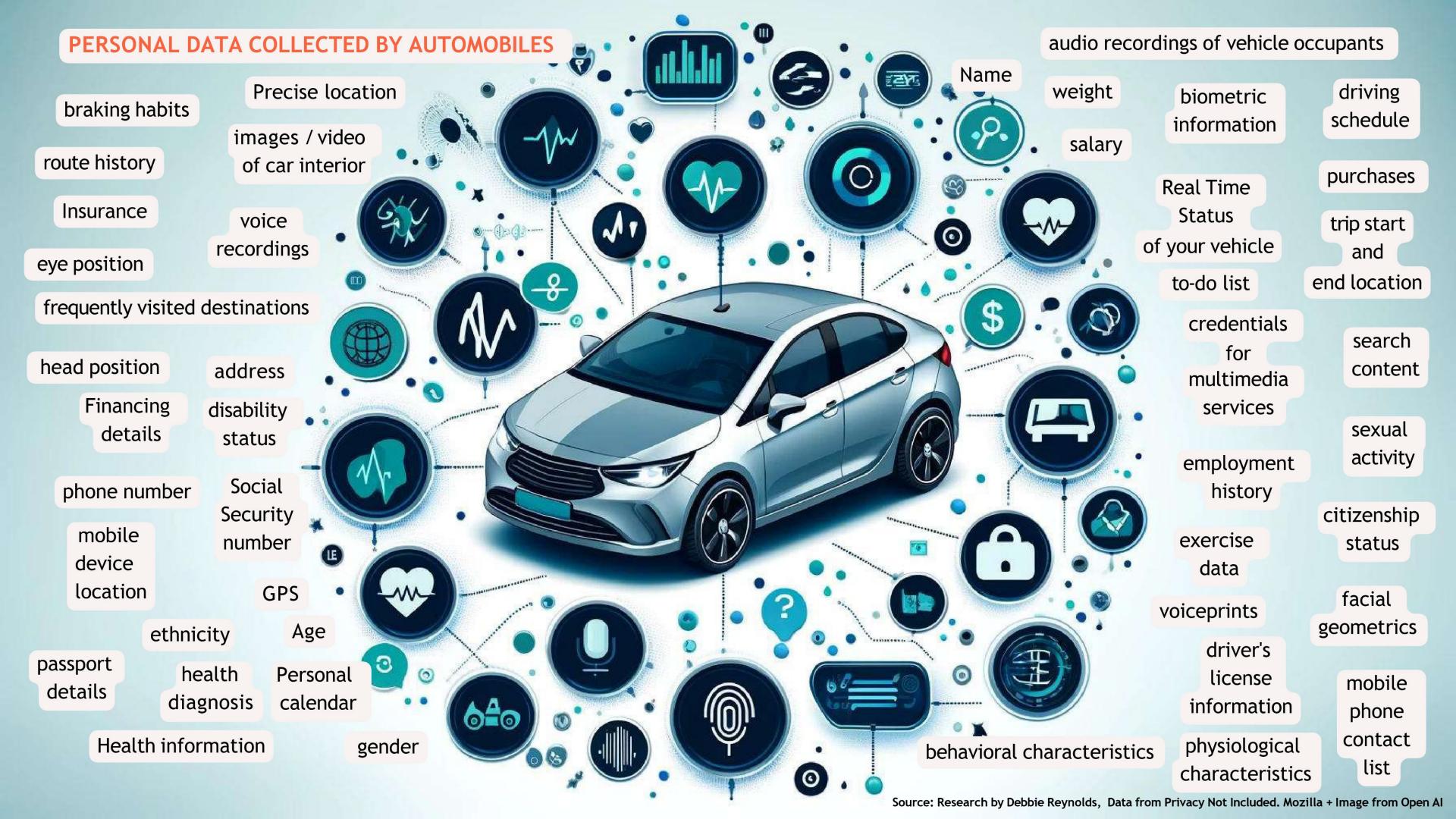
#### 1 IN 13 CYBER STALKING INCIDENTS INCLUDE THE USE OF GPS TECHNOLOGIES



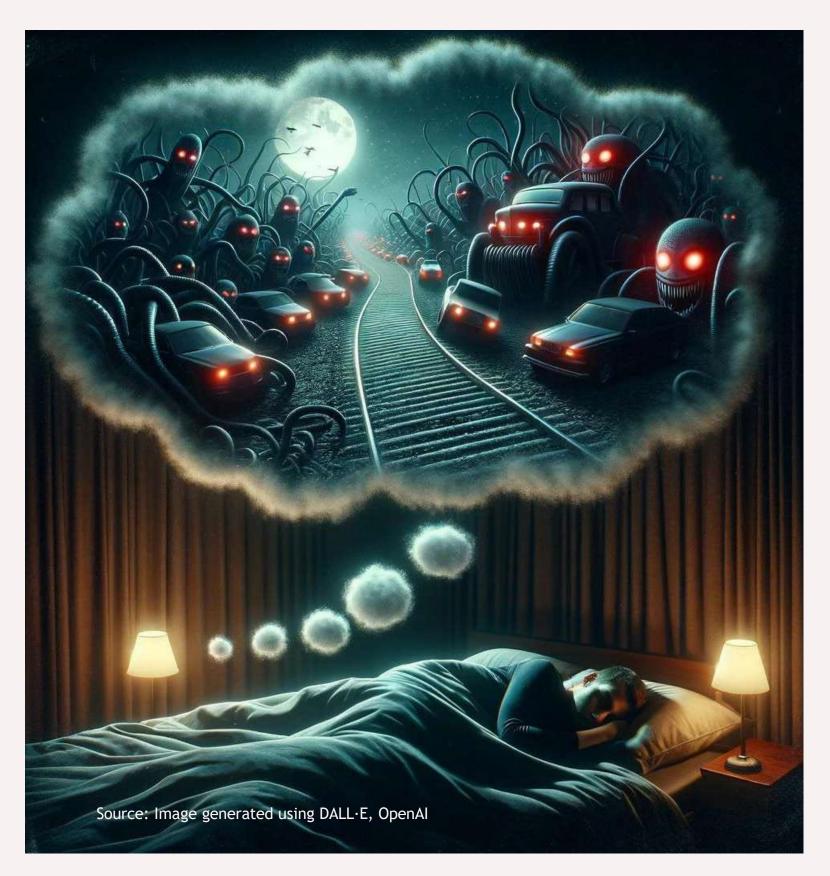
Source: Stalking Victimization in the United States, National Crime Victimization Study U.S. Department of Justice, Bureau of Justice Statistics Special Report, 2009

# DATA PRIVACY & AUTOMOBILE REPORTS





#### **CARS: A PRIVACY NIGHTMARE**

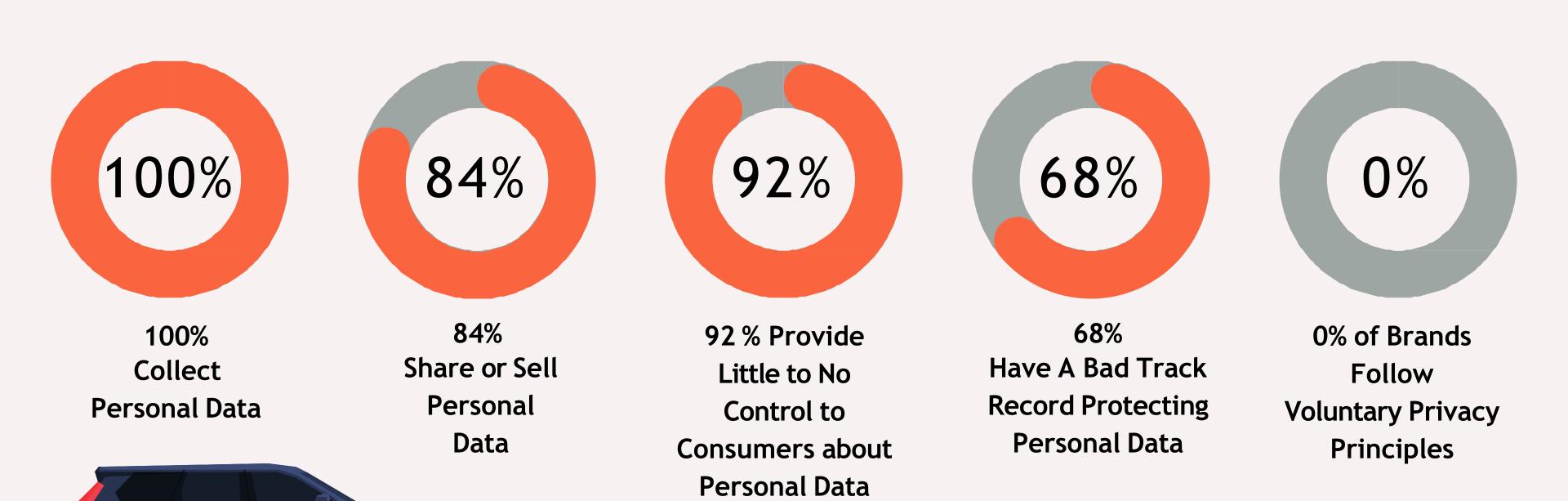


It is "impossible for consumers to try and understand" the legalese-filled policies for car companies, their connected services, and their apps. She called cars "a privacy nightmare."

Researcher Jen Caltrider The Mozilla Foundation

Source: Article, "Automakers Are Sharing Consumers' Driving Behavior With Insurance Companies", New York Times, March 13, 2023

## Automobile Privacy Report "Privacy Not Included" Mozilla Foundation - Review of 25 Automobile Brands



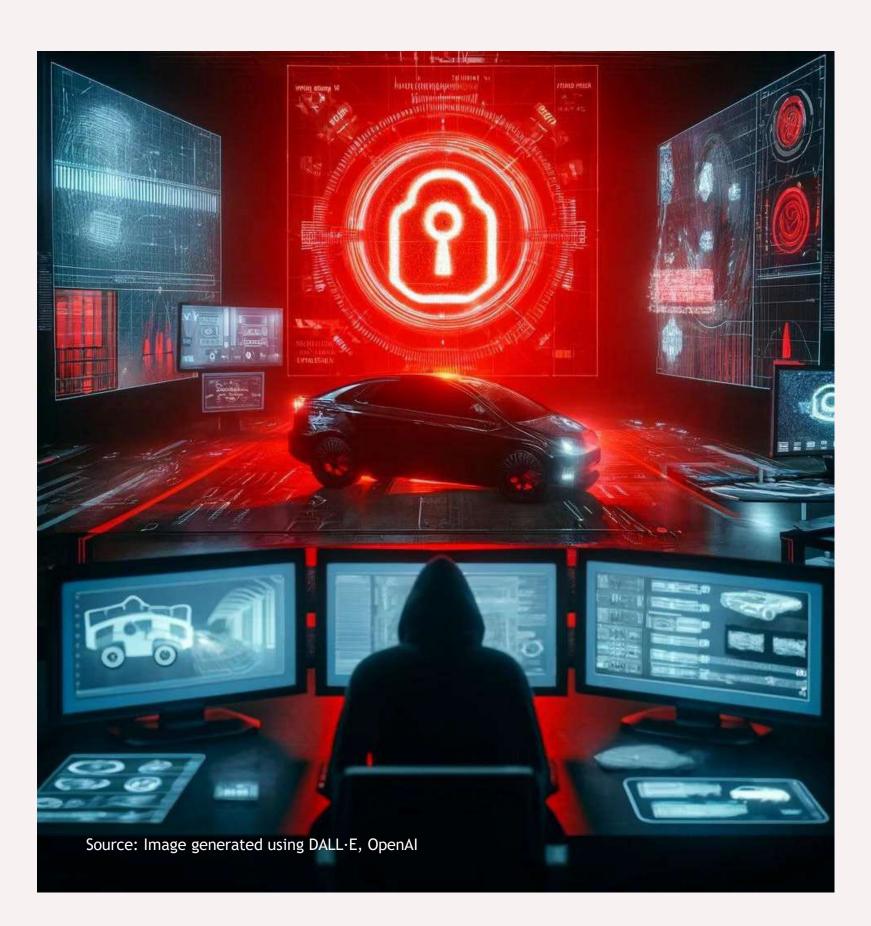
Source: Privacy Not Included. Mozilla, https://foundation.mozilla.org/en/privacynotincluded

#### MOZILLA'S "PRIVACY NOT INCLUDED" SEPTEMBER 2023

"All of the car brands on this list except for Tesla, Renault, and Dacia signed on to a list of Consumer Protection Principles from the US automotive industry group Alliance For Automotive Innovation, Inc.

The list includes great privacy-preserving principles such as "data minimization," "transparency," and "choice." But, the number of car brands that follow these principles? Zero. It's interesting if only because it means the car companies do clearly know what they should be doing to respect your privacy even though they absolutely don't do it."

#### **DATA BREACHES**



Toyota Motor Corporation disclosed a data breach on its cloud environment that exposed the car-location information of 2,150,000 customers for ten years, between November 6, 2013, and April 17, 2023.

This incident exposed the information of customers who used the company's T-Connect G-Link, G-Link Lite, or G-BOOK services between January 2, 2012, and April 17, 2023.

T-Connect is Toyota's in-car smart service for voice assistance, customer service support, car status and management, and on-road emergency help.

The information exposed in the misconfigured database includes:

- the in-vehicle GPS navigation terminal number,
- · the chassis number, and
- vehicle location information with time data.

While there is no evidence that the data was misused, unauthorized users could have accessed the historical data and possibly the real-time location of 2.15 million Toyota cars.

Source: "Toyota: Car Location Data of 2 Million Customers Exposed for Ten Years." BleepingComputer, May 12, 2023

#### FINANCIAL AND REPUTATIONAL IMPACT OF AUTOMOTIVE HACKING



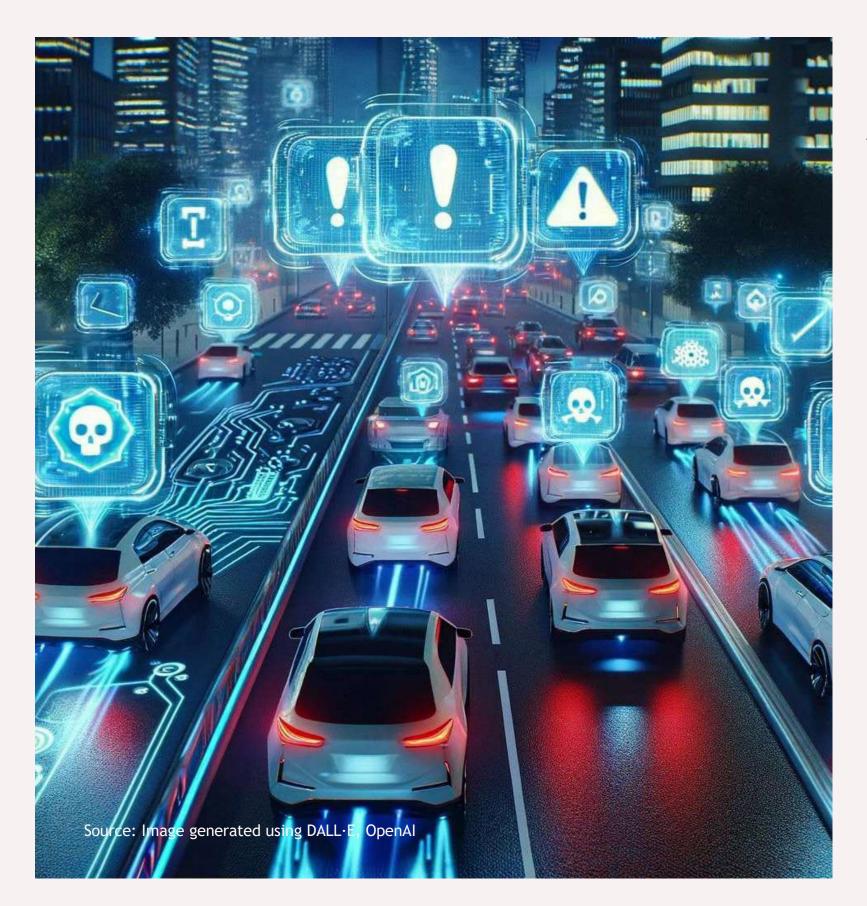
The financial and reputational impact of automotive hacking on automakers and other stakeholders can be significant. Cybersecurity incidents can result in costly recalls, legal liabilities, and damage to brand reputation.

For example, Toyota suffered a data breach in February [2023], exposing the personal information of 3.1 million customers. Such breaches erode consumer trust, leading to lost sales and decreased market share.

Additionally, hackers may use stolen information to create phishing emails, engage in financial fraud, or hold the data for ransom, further increasing the financial burden on affected parties.

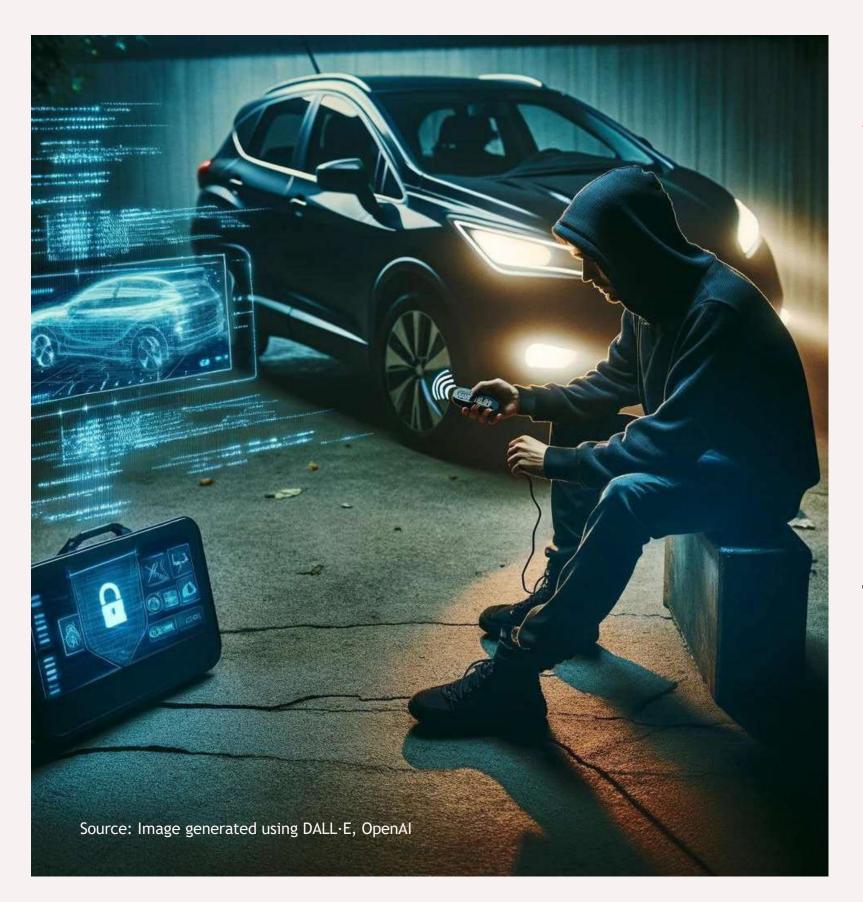
Source: "Driving on the Edge: The Alarming Rise of Automotive Hacking and the Race to Secure Our Vehicles." The Driz Group,, April 10, 2023

#### 140% RISE IN CYBER ATTACKS ON VEHICLES



As the number of connected vehicles on the road has surged, so too have cyberattacks on vehicles, with 2021 alone seeing half of all auto cyberattacks in history, representing an increase of nearly 140% from the previous year [2020].

#### AUTOMOTIVE HACKING TO ACCESS SENSITIVE DATA



Automotive hacking refers to the practice of exploiting vulnerabilities in a vehicle's computer systems, networks, or digital functions to gain unauthorized access, manipulate controls, or extract sensitive data. The phenomenon has become increasingly prominent as the automotive industry embraces the Internet of Things (IoT) and connected car technologies.

The prospect of a malicious actor taking control of a moving vehicle or intercepting sensitive information is profoundly unsettling and potentially catastrophic.

Source: "Driving on the Edge: The Alarming Rise of Automotive Hacking and the Race to Secure Our Vehicles." The Driz Group,, April 10, 2023

#### PRIVACY AND IDENTITY THEFT



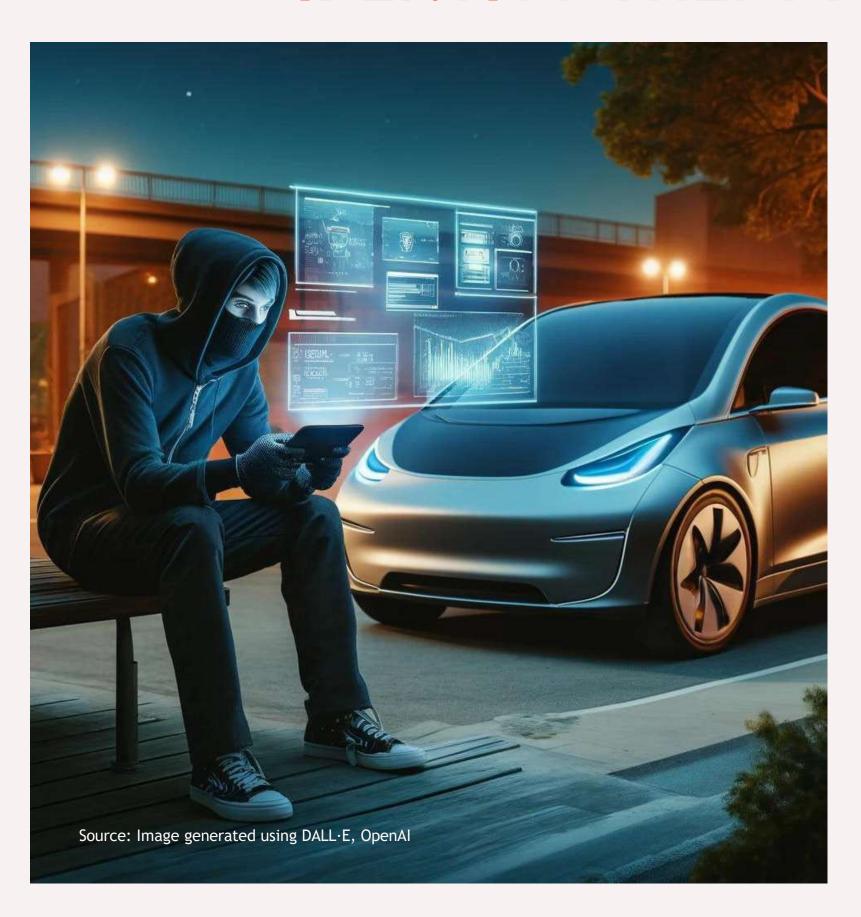
"It costs about \$1,000 to purchase a person's identity on the dark web from stolen financial accounts. Why pay

\$1,000 when it's only \$2 to steal a car's identity and still make a hefty profit?"

What could be done with these accounts after purchasing?

- Car cloning
- Illegal car registration
- Car and home theft
- Identity fraud
- Loan fraud
- Mail and Phone Fraud

#### IDENTITY THEFT AND FINANCIAL FRAUD



Automotive hackers can access a vehicle's data and systems to manipulate controls, steal sensitive information, and even blackmail manufacturers. Hackers can exploit vulnerabilities in a vehicle's software to gain control over its systems, perform actions such as disabling safety features, controlling acceleration or braking, and even causing accidents.

Additionally, the theft of personal information, such as GPS data, driving patterns, and vehicle registration details, raises significant privacy concerns and increases the risk of identity theft and financial fraud.

Source: "Driving on the Edge: The Alarming Rise of Automotive Hacking and the Race to Secure Our Vehicles." The Driz Group,, April 10, 2023

#### PRIVACY AND PERSONAL SAFETY



"The inability of consumers to control the access [in Internet-connected cars] and use of their own personal data poses a threat to safety, and in the case of [domestic abuse] survivors, it can mean life or death,"

California Assembly Privacy and Consumer Protection Committee staff

Source: CalMatters, Khari Johnson for. Car Tracking Can Enable Domestic Abuse. Turning It Off Is Easier Said Than Done - The Markup,. April 30, 2024

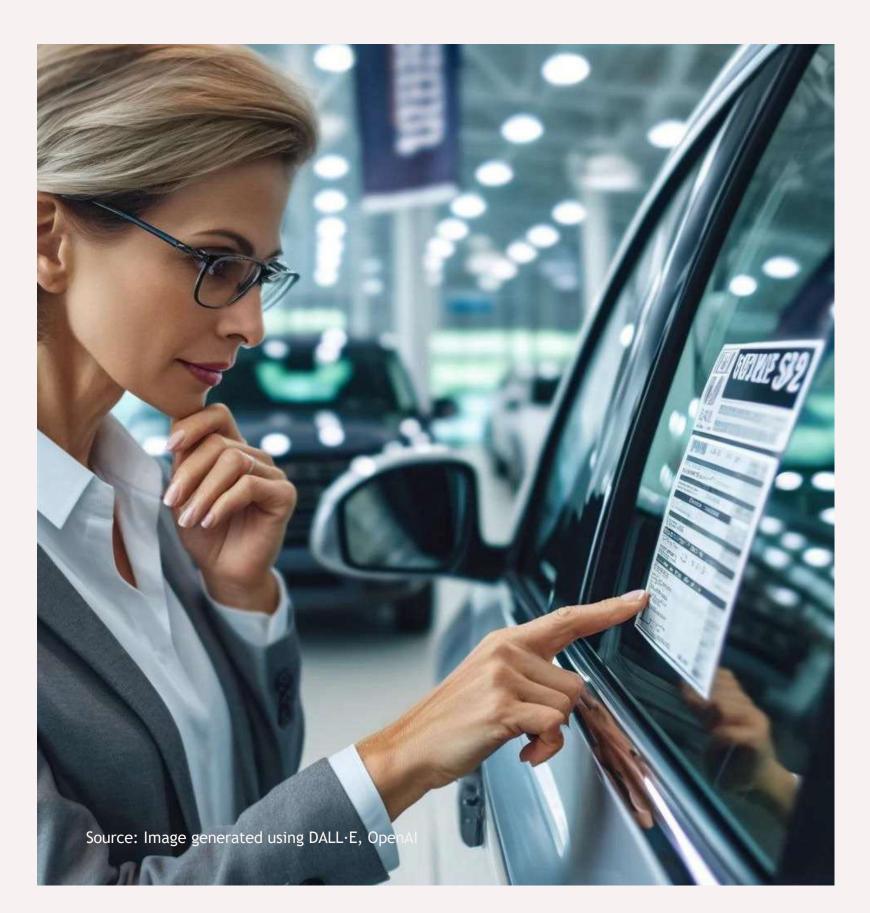
#### PRIVACY AND VEHICLE SAFTEY



"Policymakers and auto manufacturers must consider the privacy and data protection implications for all drivers when incorporating new technology into vehicles to bolster driver trust and adoption."

> Adonne Washington, Policy Counsel of Data, Mobility, and Location Future of Privacy Forum

#### CONSUMER AWARENESS ABOUT PERSONAL DATA COLLECTION PRACTICES



Being informed about the potential risks of automotive hacking, the methods used by hackers, and the steps to take in the event of a suspected cyberattack is crucial.

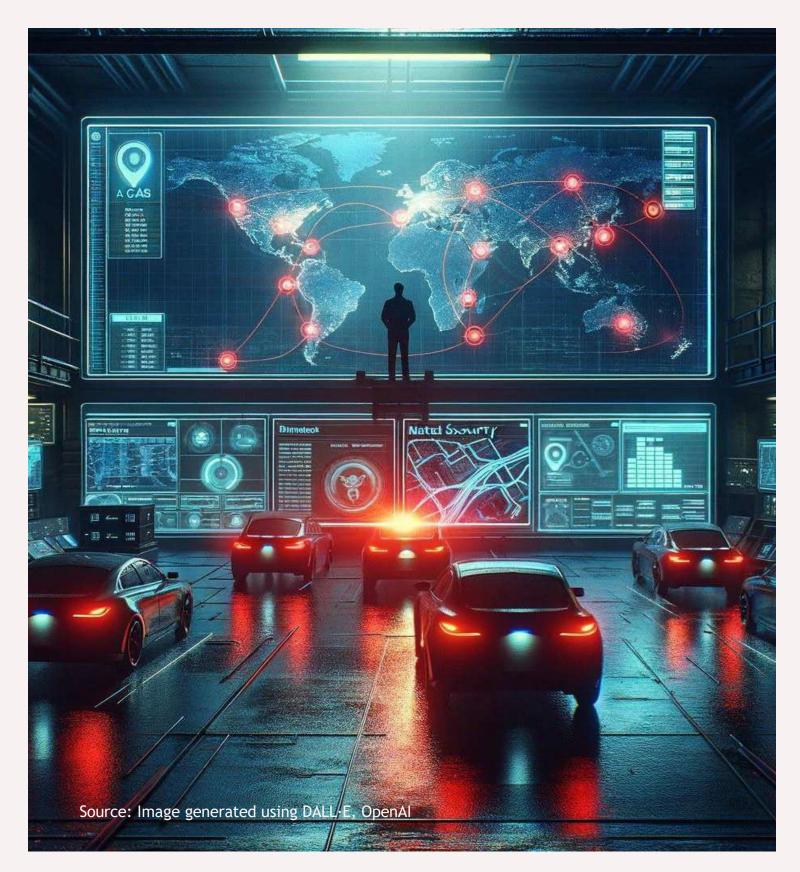
Consumer awareness empowers individuals to take proactive measures to protect their vehicles and data, recognize and respond to potential threats, and make informed decisions about the connected features they choose to use.

Source: "Driving on the Edge: The Alarming Rise of Automotive Hacking and the Race to Secure Our Vehicles." The Driz Group,, April 10, 2023

## AUTOMOBILE PRIVACY IN THE NEWS

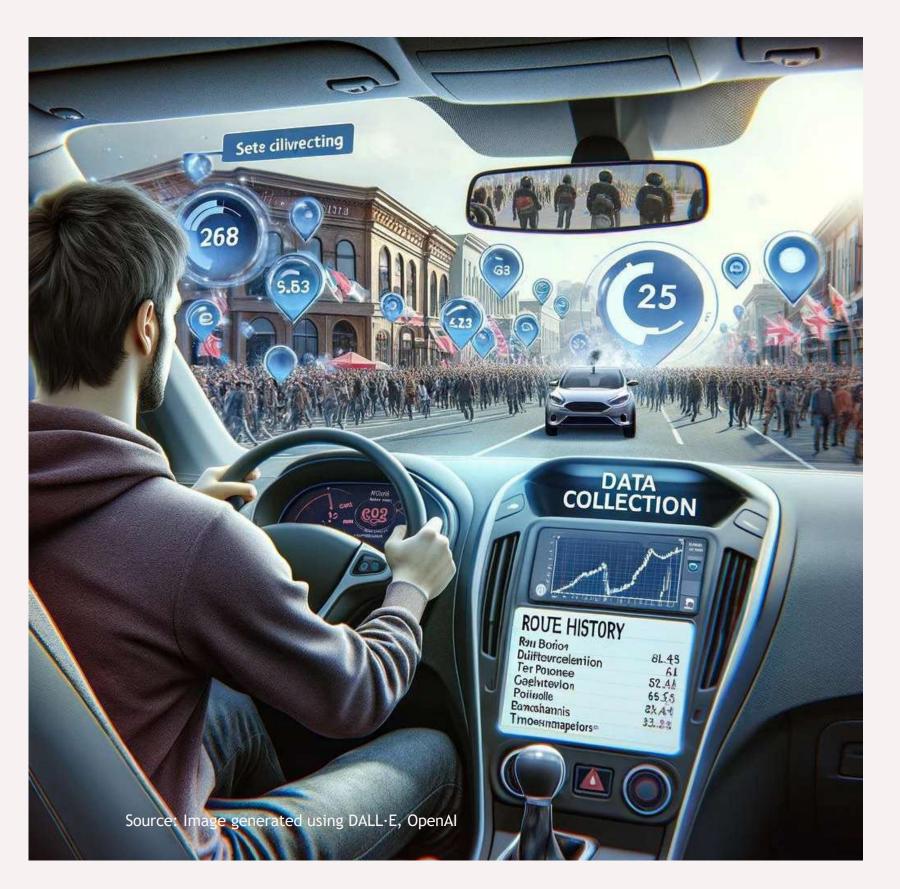


#### NATIONAL SECURITY AND THE PERSONAL PRIVACY



"It doesn't take a lot of imagination to think of how foreign government with access to connected vehicles could pose a serious risk to both our national security and the personal privacy of U.S. citizens," said U.S. Secretary of Commerce Gina Raimondo."

#### THREAT TO PRIVACY OF AMERICANS

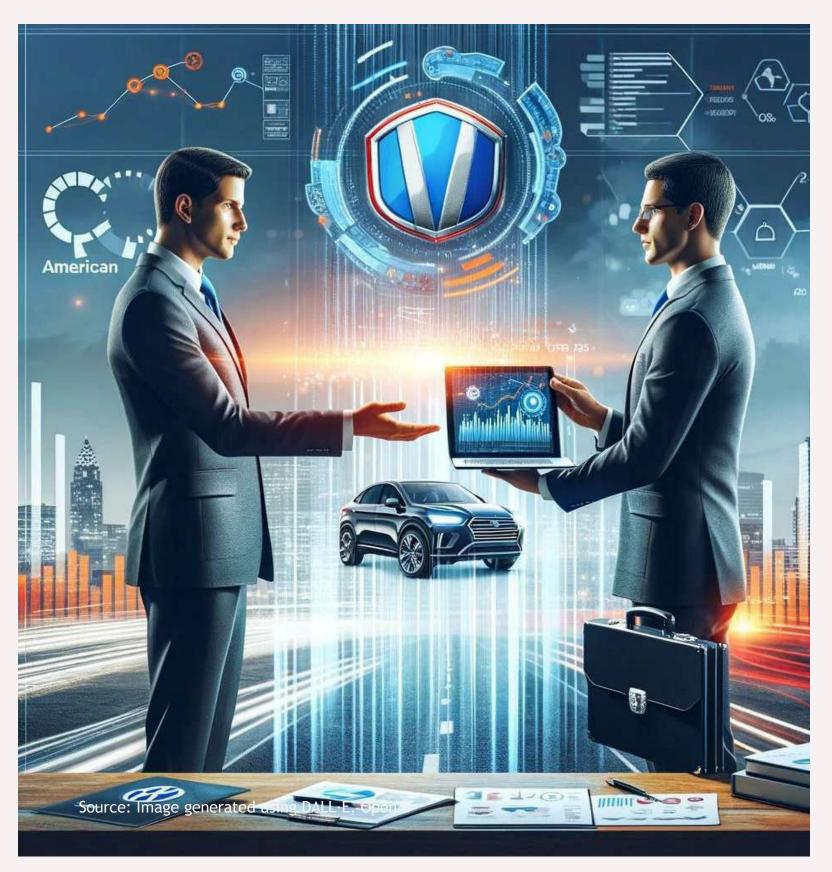


"But depending on car companies' practices, these always-on data connections and the location data collected by cars and sent back to the automaker can seriously threaten Americans' privacy.

Vehicle location data can be used to identify Americans who have traveled to seek an abortion in another state, attended protests, support groups for alcohol, drug, and other types of addiction, or identify those of particular faiths, as revealed through trips to places of worship."

Source: Letter to Lisa Khan at the Federal Trade Commission from Senator Ron Wyden and Senator Edward Markey, April 30, 2024

#### INSURANCE AND AUTOMAKER DATA SALES

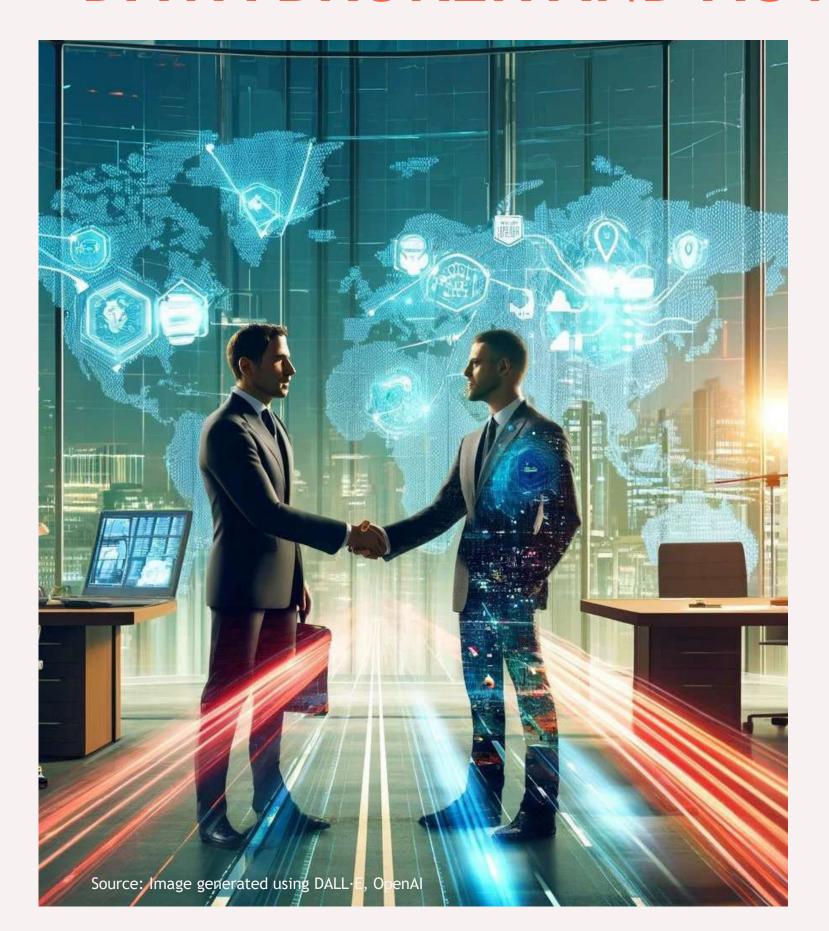


"Automakers have been selling data about the driving behavior of millions of people to the insurance industry.

In the case of General Motors, affected drivers weren't informed, and the tracking led insurance companies to charge some of them more for premiums. I'm the reporter who broke the story. I recently discovered that I'm among the drivers who was spied on."

Source: "How G.M. Tricked Millions of Drivers Into Being Spied On (Including Me)", Kashmir Hill, New York Times, Kashmir Hill, April 23, 2024

#### DATA BROKER AND AUTOMAKER PARTNERSHIPS



"Automakers and data brokers that have partnered to collect detailed driving data from millions of Americans say they have drivers' permission to do so.

But the existence of these partnerships is nearly invisible to drivers, whose consent is obtained in fine print and murky privacy policies that few read."

Source: "Automakers Are Sharing Consumers' Driving Behavior With Insurance Companies", Kashmir Hill, New York Times, March 13, 2024

#### LACK OF TRANSPARENCY IN PERSONAL DATA COLLECTION



"The 'Internet of Things' is really intruding into the lives of all Americans," Senator Markey said in an interview. "If there is now a collusion between automakers and insurance companies using data collected from an unknowing car owner that then raises their insurance rates, that's, from my perspective, a potential per se violation of Section 5 of the Federal Trade Commission Act."

Senator Edward Markey

Source: Article, "Automakers Are Sharing Consumers' Driving Behavior With Insurance Companies", New York Times, March 13, 2024

#### **GPS DATA SHARING WITHOUT A WARRANT**



According to Ron Wyden and Edward Markey, nine automakers, Toyota, Hyundai, Kia, Mercedes-Benz, Mazda, BMW, Volkswagen, Subaru, and Nissan, admitted to giving up location data to authorities without a warrant.

They say that these car companies are breaking their own voluntary promise made in 2014 to require a warrant or court order before turning over GPS location information. Of the 14 car companies involved in the study only Ford, General Motors, Stellantis, Honda, and Tesla require a warrant for this data.

Source: Letter to Lisa Khan at the Federal Trade Commission from Senator Ron Wyden and Senator Edward Markey, April 30, 2024

#### DOMESTIC VIOLENCE AND THE PERSONAL PRIVACY



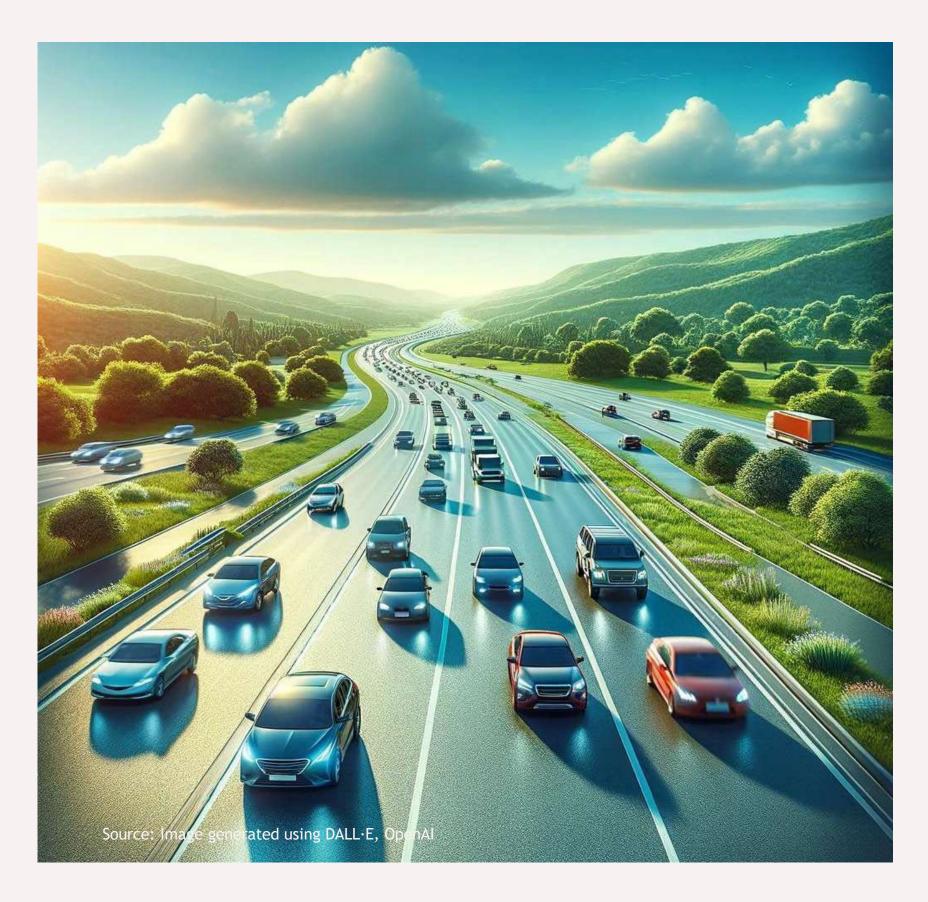
The chairwoman of the Federal Communications Commission ... proposed a potential new rule [under the Safe Connections Act for Survivors of Domestic Abuse] that would subject automakers that sell internetconnected cars to a telecommunications law intended to protect domestic violence survivors.

#### CAR DATA AND DOMESTIC VIOLENCE



"We've known for some time that GPS -tracking technology in cars is being exploited by domestic violence abusers, but unfortunately, car manufacturers are refusing to act to address this potentially fatal problem," said Senator Dave Min of California."

#### RECENT DEVELOPMENTS - PRIVACY FOR CARS



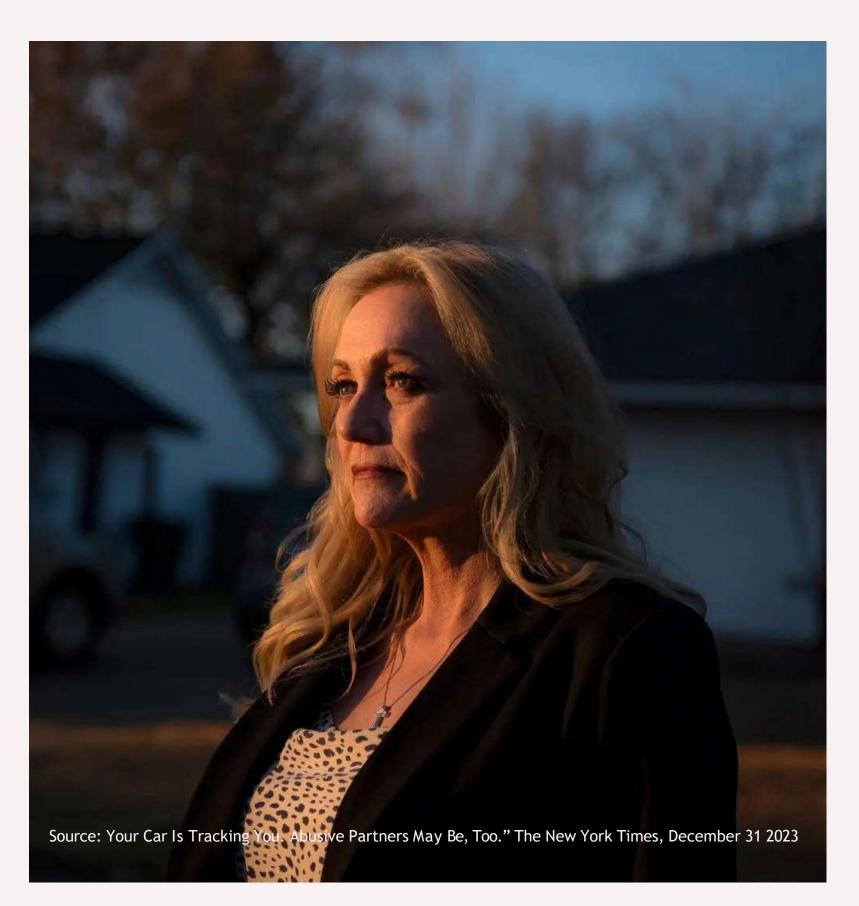
- Toyota and Lexus now grant all US consumers the right to delete their personal data.
- Thanks to public pressure,
   GM (which includes
   Chevrolet, Buick, GMC, and
   Cadillac) said they'll stop
   selling some OnStar data to
   data brokers LexisNexis and
   Verisk.

Source: Car Company CEOs Answer Tough Questions About Cars and Privacy... Kinda, Privacy Not Included, Mozilla Foundation, April 30, 2024

# CONSUMER STORIES



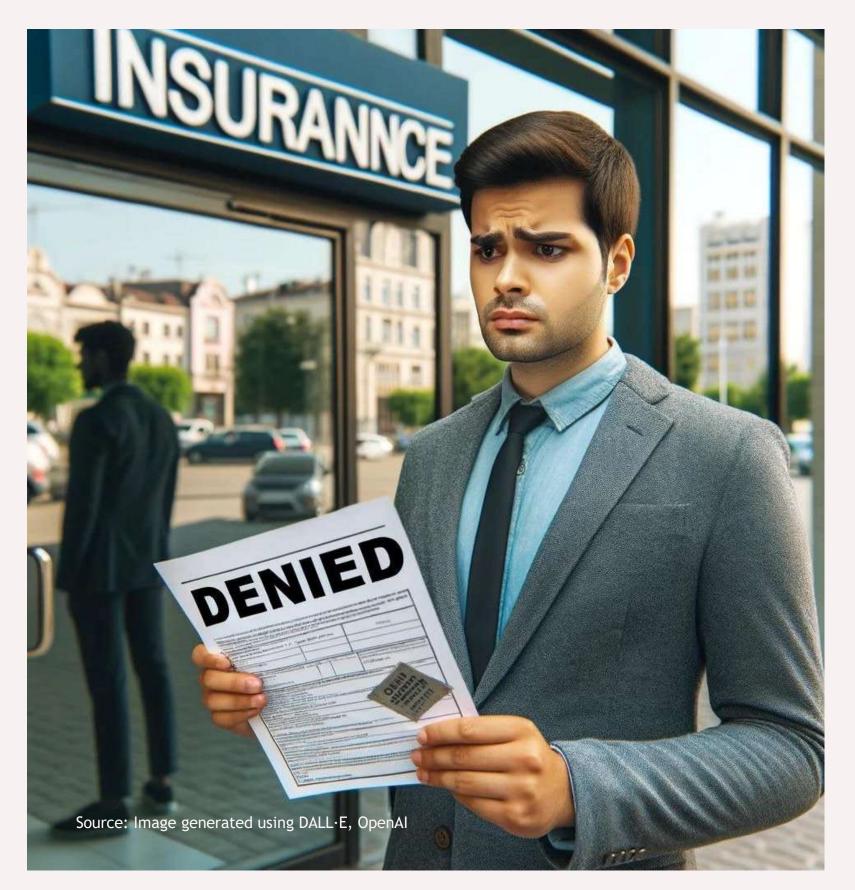
#### CYBER STALKING USING VEHICLE GPS



The New York Times reports that Christine Dowdall fled her home in September 2022 after an altercation with her husband turned violent. She left in a Mercedes-Benz C300 and shortly thereafter started seeing strange messages on her infotainment system about a service eerily called "mbrace."

Part of the "Mercedes me" suite of connected service, the technology allows owners to control their vehicles remotely. People with access can track a car's location and, after obtaining his internet records, Detective Kelly Downey of the Bossier Parish Sheriff's Office eventually found evidence that Dowdall's husband had been using it to track her.

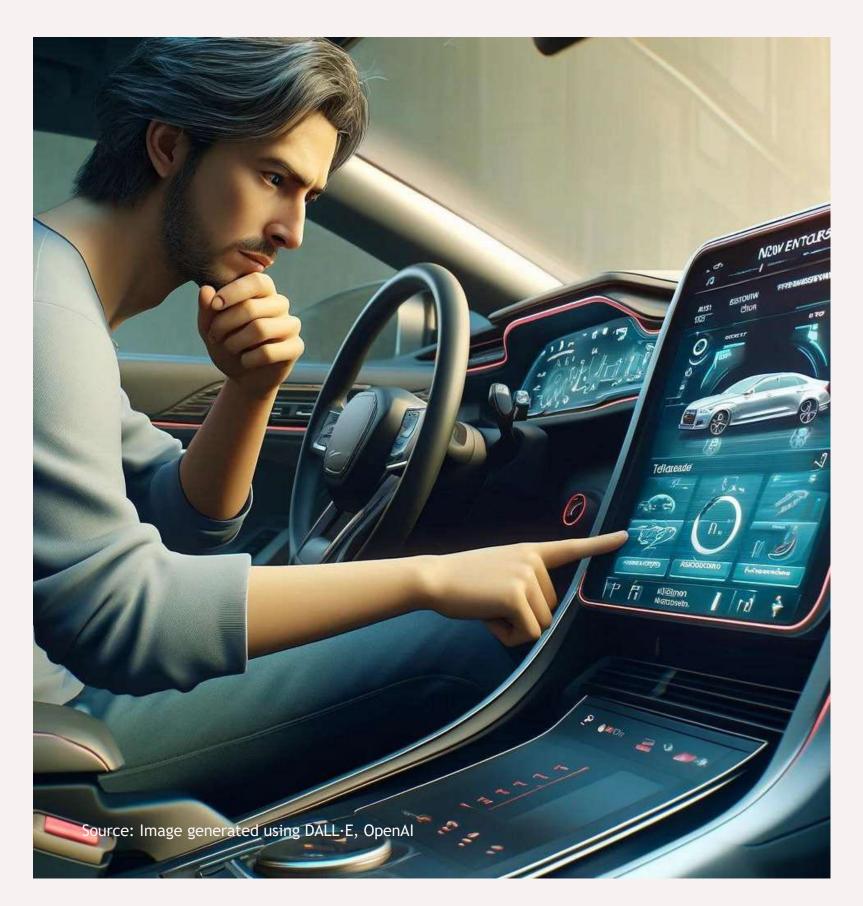
#### DENIAL OF INSURANCE COVERAGE BASED ON VEHICLE DATA



"Despite not subscribing to OnStar, Chicco discovered through a denial of insurance coverage — attributed to a driver report from LexisNexis — that his driving behavior had been closely monitored and recorded. Chicco's report listed 258 driving events, including trip details, such as start and end date and time, acceleration events, hard brake events, high-speed events, distances, and VIN.

The report resulted in Chicco being denied insurance. The lawsuit criticized the use of the telematics data by insurance companies, noting that the report provided to the insurance company lacked any context in regards to the circumstances surrounding the events, rendering the report inaccurate of the insured's actual insurance risk, and unfairly weighing in on and influencing insurance decisions.

#### PRIVACY INVASION

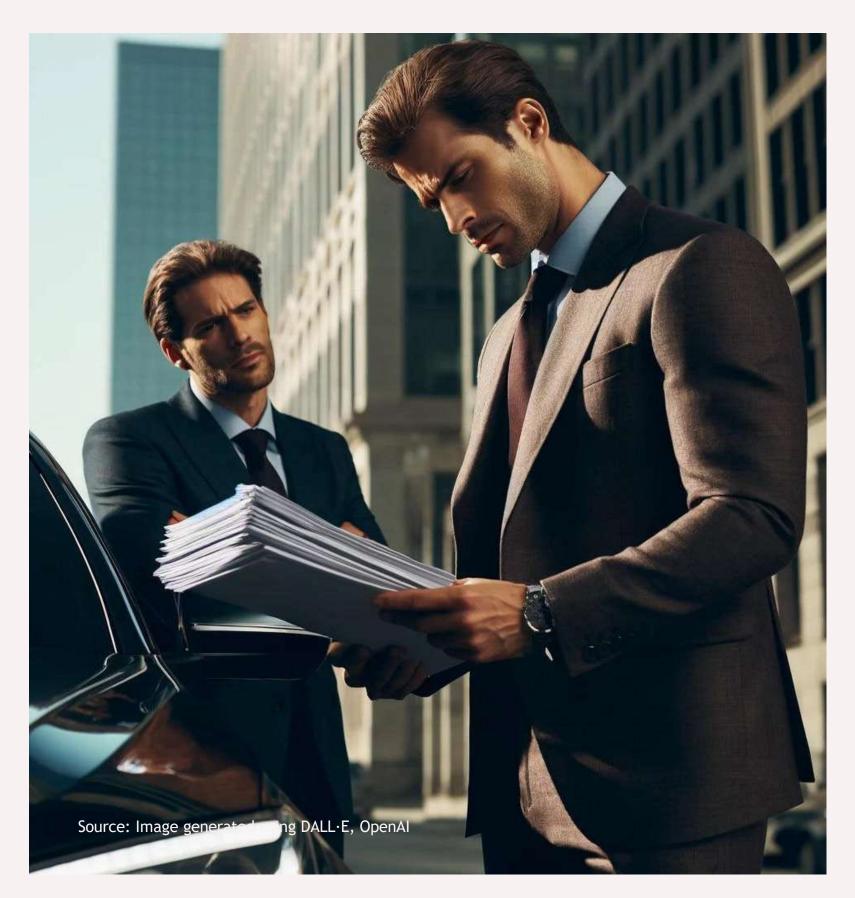


"The worst part is, you cannot purchase a newer car without the privacy invasion "features"...

From my research, you literally cannot purchase a new car (in the US) that has a basic radio, AC, and heating ... everything has privacy invading network connected additions sold as "safety features".

Justin From Tennesee, Reader Pick Commentary to NYT Article, March 11, 2024

#### LACK OF EXPLICIT KNOWLEDGE OR CONSENT IN DATA COLLECTION



Larry Reed and Darnell McCoy, Sr. brought suit against GM and OnStar in the Eastern District of Michigan, alleging that GM and OnStar defaulted to automatically enrolling customers into a data collection scheme without their explicit knowledge or consent. This scheme involved collecting and sharing — or selling — sensitive driving telematics data with third parties, including insurance companies, likely to create consumer profiles.

See Reed v. General Motors, LLC, Case No. 2:24-cv-10804 (E.D. Mich. March 28, 2024).

#### DATA SHARING UNWANTED



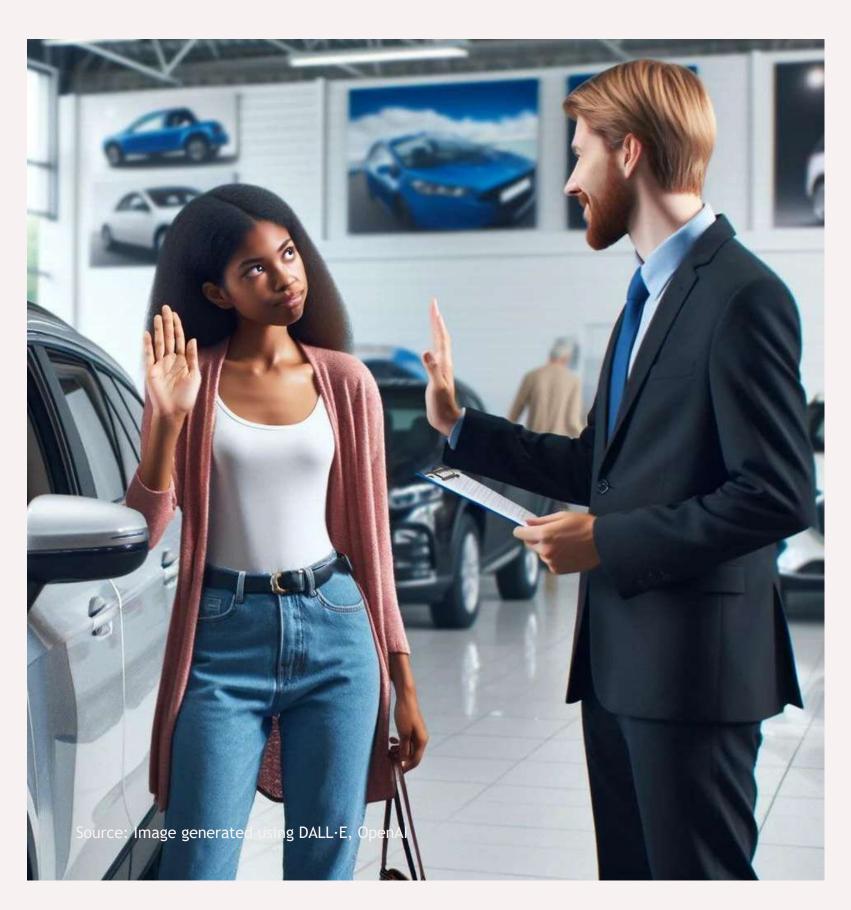
"These cars should have the option to make them less smart. I did not buy a 60K privacy sharing machine, I bought a car."

And it is not just electric cars -- it is everyone.

Leslie from San Francisco, California, Reader Pick Commentary to NYT Article, March 11, 2024

Source: "Automakers Are Sharing Consumers' Driving Behavior With Insurance Companies." The New York Times, Kashmir Hill, March 11, 2024

#### **CONSUMER CHOICES IN CAR BUYING**



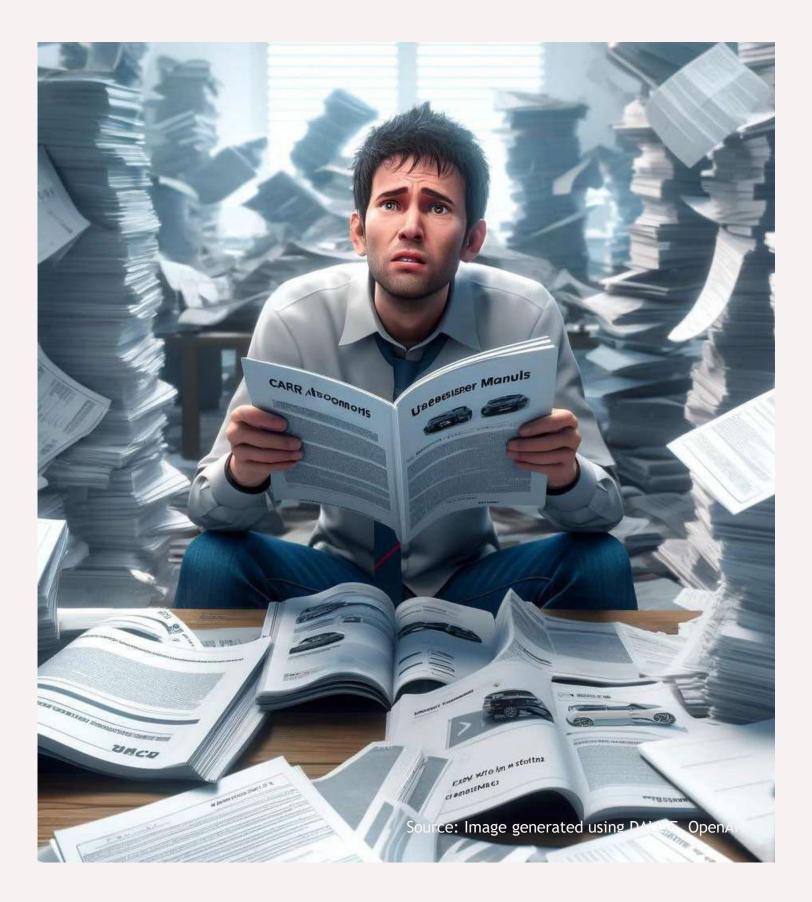
"To any automaker reading these comments:

If you share any driver information, I will not buy your car, period! And, I am going to spread the word.

It's one thing for a car to have a black box, but not to be spying on your driving."

Sunnyside from New Hampshire, Reader Pick Commentary to NYT Article, March 11, 2024

#### UNDERSTANDING DATA COLLECTION



Participants also felt that, when it came to informing drivers about data collection, car companies were not trying to communicate effectively:

'I did go looking and apart from reading lots of user licence agreements for lots of different systems in the car... But they don't really talk about what they're collecting and why.'

Privacy Preferences in Automotive Data Collection Study Participant

Source: "Privacy Preferences in Automotive Data Collection." Transportation Research Interdisciplinary Perspectives, ScienceDirect, vol. 24, March 2024

#### DIFFICULT-TO-UNDERSTAND DOCUMENTS



"Unless the automakers state in an overt way, using easy-to-understand language where the buyer opts in, this is wrong. Nobody should need a lawyer to read the fine print on an auto purchase agreement. Auto dealers should also be obligated to explain these details clearly to the buyer so the buyer understands what is being done. Finally, the automakers probably profit from selling this information which really does not belong to them."

> Calling It Like It Is from Minnesota, Reader Pick Commentary to NYT Article, March 11, 2024

#### DATA OPT OUT DIFFICULTIES



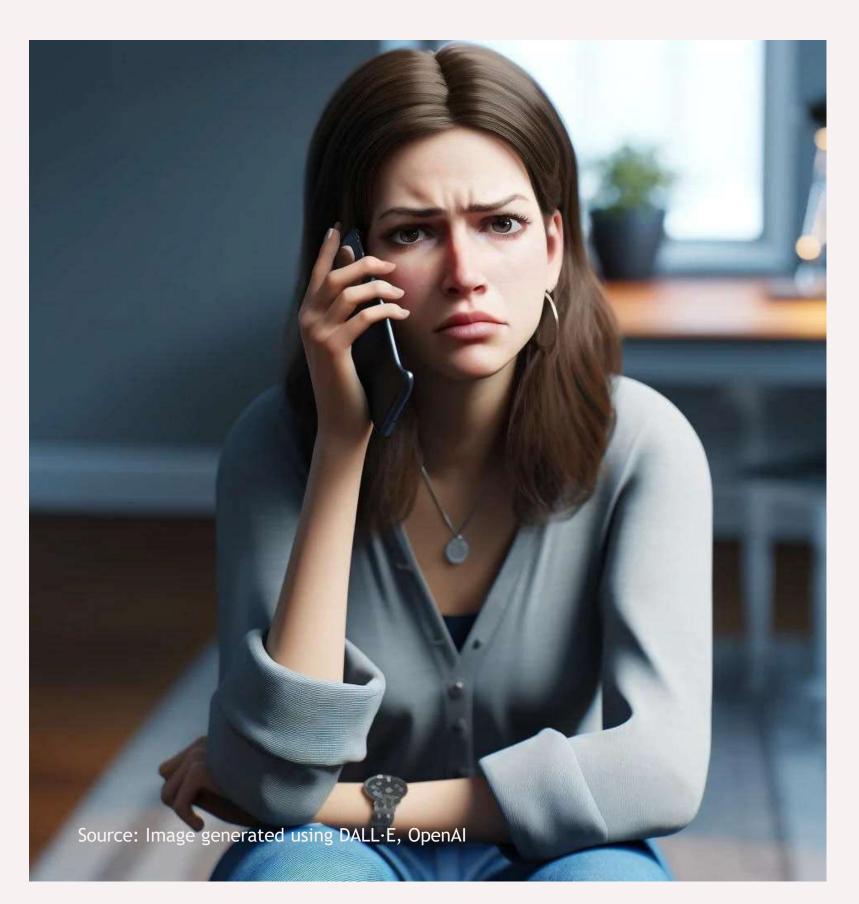
"I wanted to turn off data collection on my car because it's creepy, and I thought the option would be simple.

It turns out that shutting off data collection and figuring out what's been collected is much more difficult than it would seem.

I know because it took me — a reasonably informed and technologically savvy person — a month to finally do so."

Rani Molla - Technology Journalist, Sherwood News

#### STATE VS FEDERAL PRIVACY PROTECTIONS



"Electronic Frontier Foundation's (EFF) handy guide sent me to Honda's online privacy request page, where I learned we didn't live in one of the five states where we could exercise our consumer rights to view or delete the data our car tracked.

Two days later, we got an email: "Because you are not a current resident of a qualifying state, your request will not be processed."

Rani Molla - Technology Journalist, Sherwood News

# STATE LEGISLATION



#### CALIFORNIA SENATE BILL 296: PERSONAL DATA TRANSPARENCY FOR CARS



#### **California Senate Bill 296:**

- **Effective Date:** January 1, 2024.
- In-Vehicle Camera Disclosure: Manufacturers must inform buyers if the vehicle is equipped with in- vehicle cameras via the owner's manual and dealer documents.
- **Consumer Rights:** Buyers/lessees can review the owner's manual before purchase for invehicle camera information.
- Data Use Limits: Prohibits using recordings for advertising or sale without affirmative consent.
- Consent: Requires affirmative prior consent for data sharing and provides mechanisms for consumers to revoke consent.

Source: https://legiscan.com/CA/text/SB296

#### ILLINOIS DATA LAW (SB0800): DELETE PERSONAL DATA FROM CARS



#### **Illinois Data Law SB0800:**

- **Effective Date:** January 1, 2024.
- **Scope:** Applies to repossession agencies handling vehicles.
- Requirement: Mandates deleting personal data from recovered vehicles before release using standardized electronic solutions.
- Definition: Establishes definition for personal information
- Penalties: Imposes penalties for failure to protect personal data.

Source: https://www.ilga.gov/legislation/BillStatus.asp?DocNum=800&GAID=17&DocTypeID=SB&LegId=144915&SessionID=112&GA=103

#### NEW JERSEY SENATE BILL S2740: DELETE PERSONAL DATA FROM CARS



#### New Jersey Senate Bill S2740:

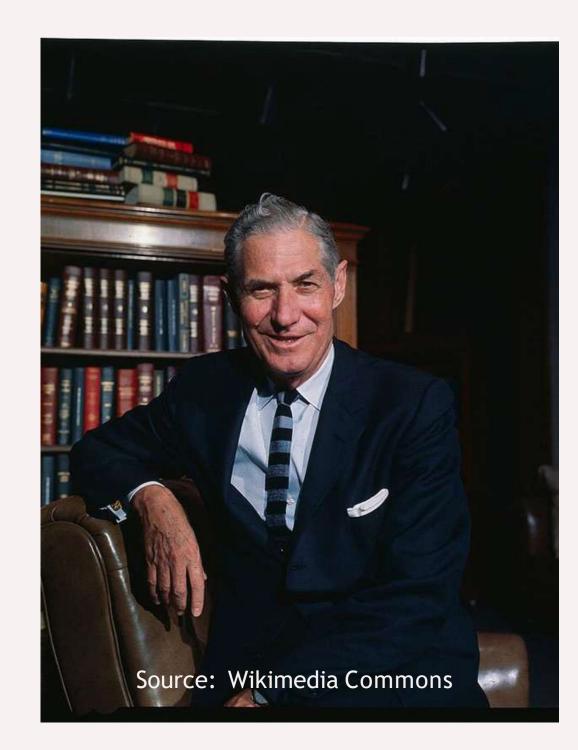
- Effective Date: January 8, 2024.
- **Dealer Obligation**: Dealers must delete personal vehicle data before resale or lease.
- **Penalties**: Civil penalties of \$500 for the first offense and \$1,000 for subsequent offenses.
- Definition: Defines "motor vehicle" and "motor vehicle dealer" to establish the scope of the regulation

Source: https://www.njleg.state.nj.us/bill-search/2022/S2740

# HISTORY OF THE MONRONEY STICKER



#### HISTORY OF THE MONRONEY STICKER



Senator Mike Monroney (Oklahoma)
U.S. Senate from 1951 to 1969

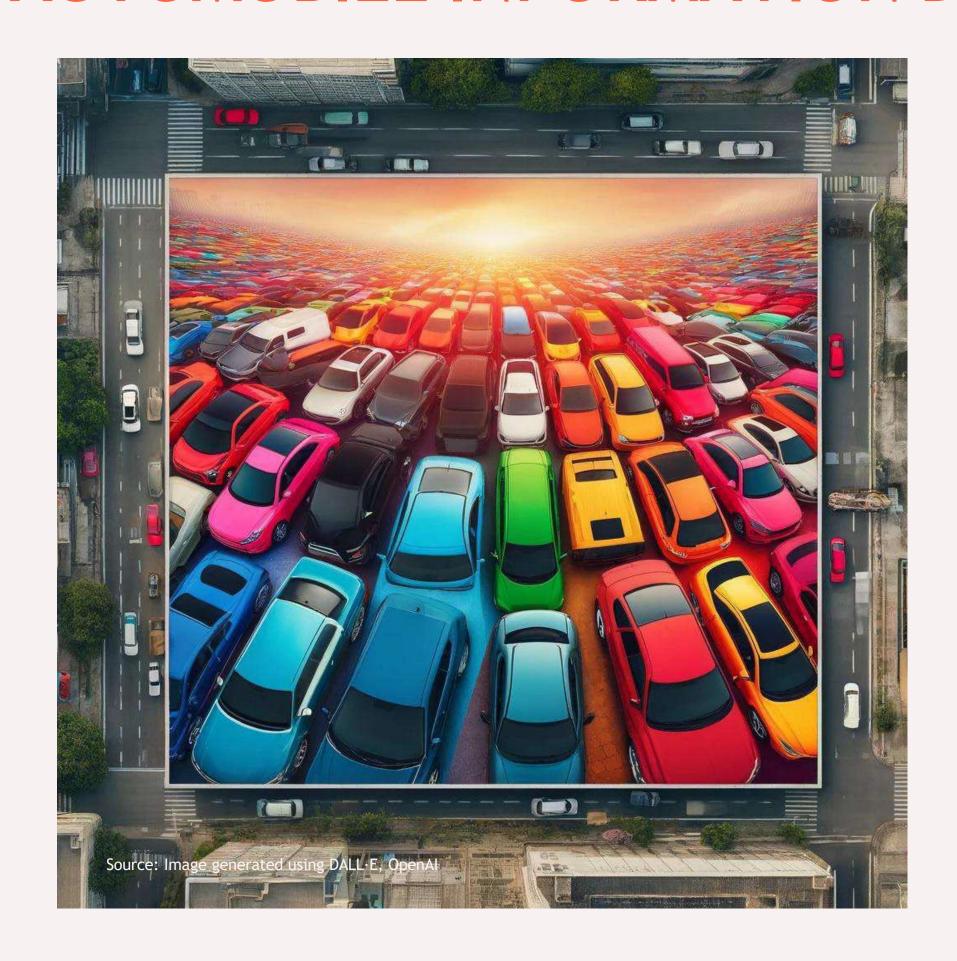
#### **About Senator Monroney:**

- Consumer Advocate focusing on rights and protection
- Legislation sponsor of the Automobile Information Disclosure Act of 1958
- Established the Monroney sticker for transparent vehicle pricing

#### **About the Moroney Sticker:**

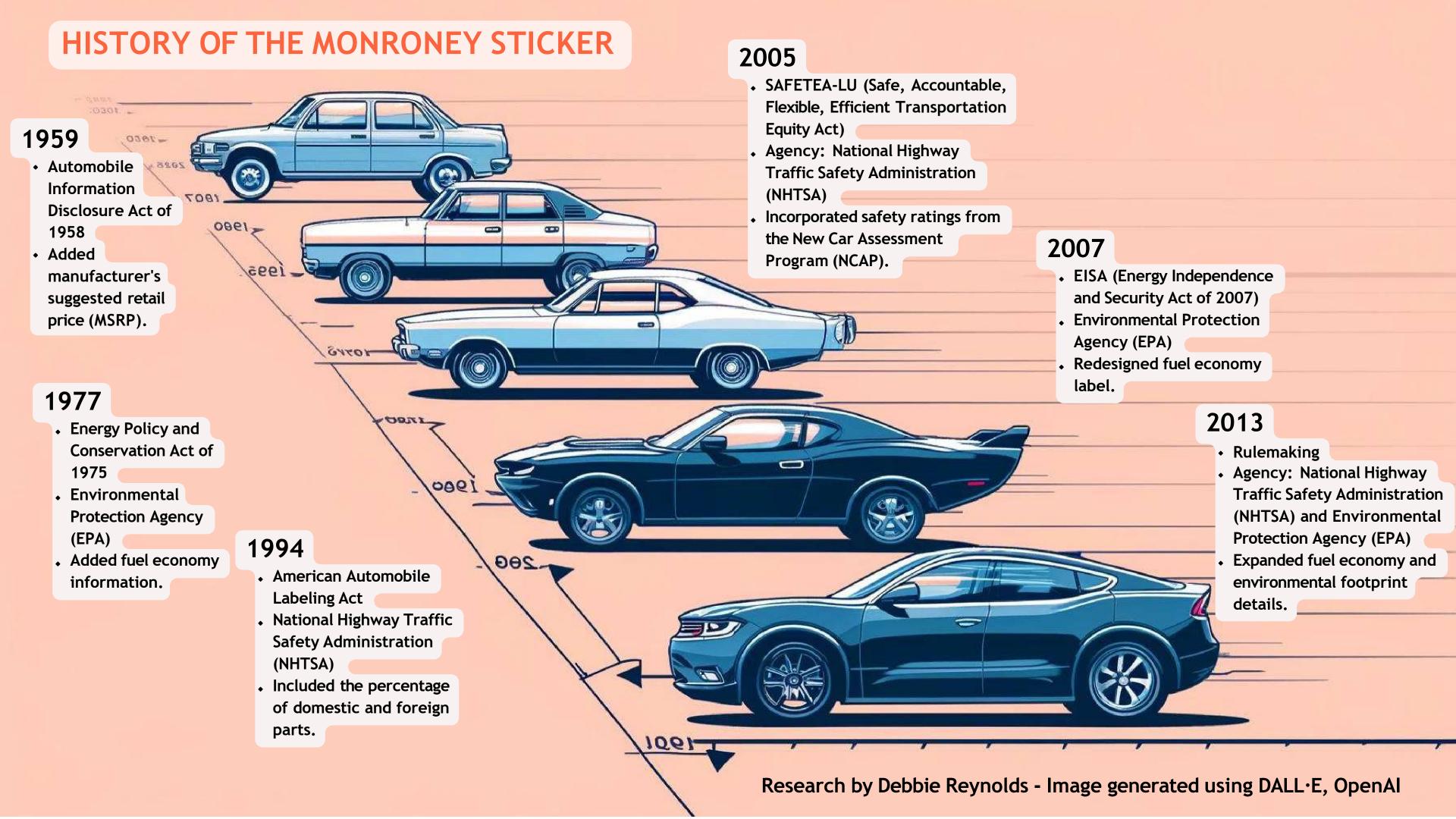
- Automobile Information Disclosure Act of 1958
  - Starting with the 1959 model year, mandatory disclosure
    - Vehicle make and model
    - Vehicle identification number (VIN)
    - Final assembly point
    - Dealer Information
    - Manufacturer's suggested retail price (MSRP)
    - MSRP of optional equipment
    - Transportation charges
    - Total MSRP

#### **AUTOMOBILE INFORMATION DISCLOSURE ACT OF 1958**



Long Title:

"An Act to require the full and fair disclosure of certain information in connection with the distribution of new automobiles in commerce and for other purposes".



# REGULATORY BODIES



#### **REGULATORY BODIES**



- Congress: Legislation
- Primary / Consumer Disclosures for Privacy:
  - Federal Trade Commission (FTC)
    - Action: Rulemaking
- Others:
  - National Highway Traffic Safety
     Administration (NHTSA)
  - Department of Transportation (DOT)
  - Environmental Protection
     Agency (EPA)
  - Federal Communications
     Commission (FCC)

#### FTC: CARS & CONSUMER DATA: ON UNLAWFUL COLLECTION & USE - MAY 14, 2024



Car manufacturers—and all businesses—should take note that the FTC will take action to protect consumers against the illegal collection, use, and disclosure of their personal data.

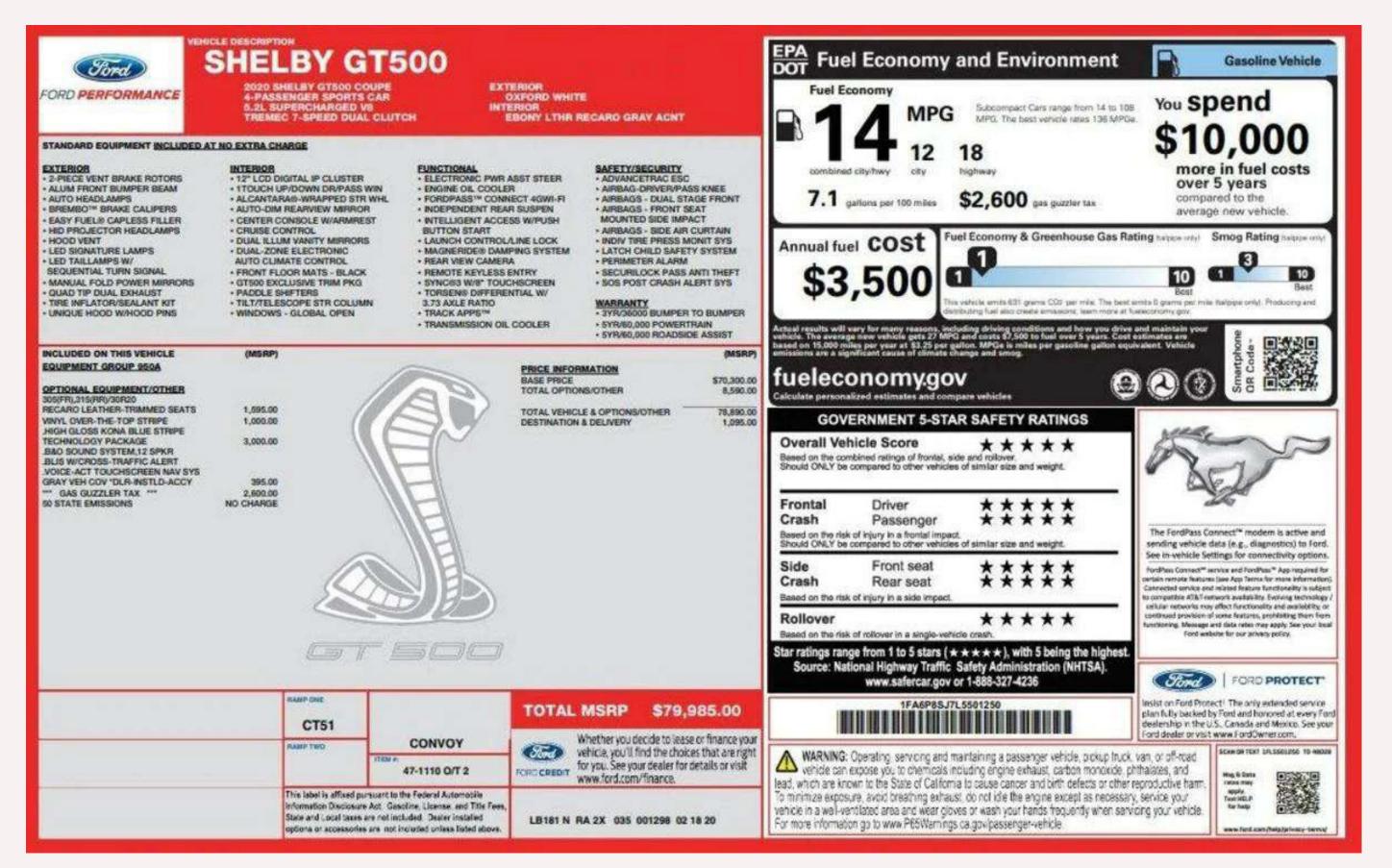
- Geolocation data is sensitive and subject to enhanced protections under the FTC Act.
- Surreptitious disclosure of sensitive information can be an unfair practice.
- Using sensitive data for automated decisions can also be unlawful.

The FTC Office of Technology and the Division of Privacy and Identity Protection in the Bureau of Consumer Protection

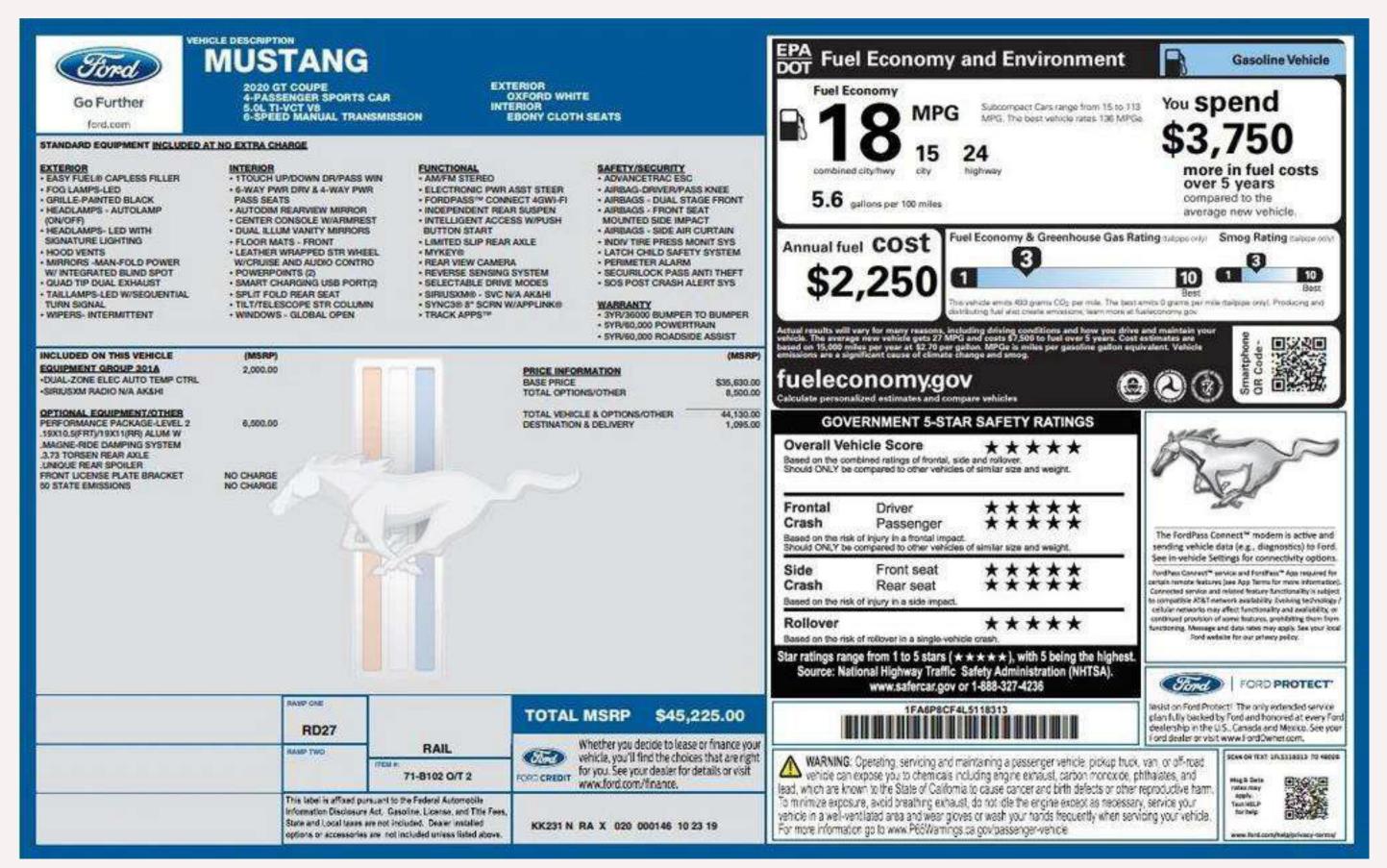
# TYPES OF VEHICLE STICKERS



### MONRONEY STICKER (NEW CARS)



## MONRONEY STICKER (NEW CARS)



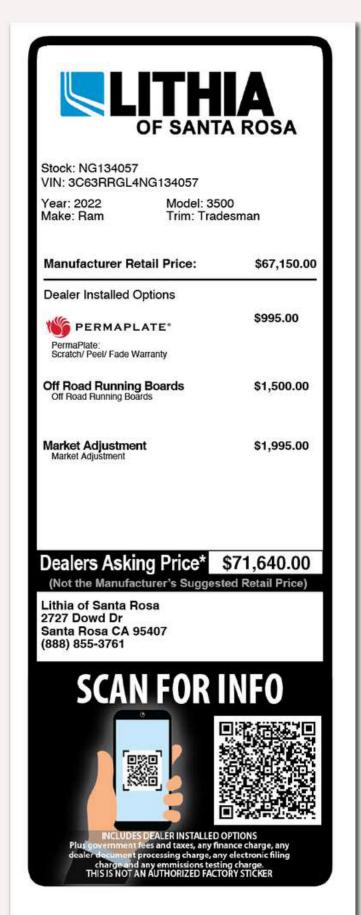
# BUYER'S GUIDE (USED CARS)

	BUYERS GUIDE				
IMPOR	RTANT: Spoken promises are difficult to enforce. Ask the dealer to put all promises in writing. Keep this form.				
WAR	MAKE NODEL YEAR VEHICLE IDENTIFICATION NUMBER (VIN) RANTIES FOR THIS VEHICLE:				
	AS IS - NO DEALER WARRANTY THE DEALER DOES NOT PROVIDE A WARRANTY FOR ANY REPAIRS AFTER SALE.				
	DEALER WARRANTY				
	FULL WARRANTY:				
	LIMITED WARRANTY. The dealer will pay% of the labor and% of the parts for the covered systems that fall during the warranty period. Ask the dealer for a copy of the warranty, and for any documents that explain warranty coverage, exclusions, and the dealer's repair obligations. Implied warrantes under your state's laws may give you additional rights.				
SYSTE	ems covered: DURATION:				
□ MA	-DEALER WARRANTIES FOR THIS VEHICLE: ANUFACTURER'S WARRANTY STILL APPLIES. The manufacturer's original warranty has not expired on some imponents of the vehicle.				
□ MA	ANUFACTURER'S WARRANTY STILL APPLIES. The manufacturer's original warranty has not expired on some imponents of the vehicle.  ANUFACTURER'S USED VEHICLE WARRANTY APPLIES.				
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MACON MAC	ANUFACTURER'S WARRANTY STILL APPLIES. The manufacturer's original warranty has not expired on some imponents of the vehicle.  ANUFACTURER'S USED VEHICLE WARRANTY APPLIES.  THER USED VEHICLE WARRANTY APPLIES.  THE DEALER TO Service contract on this vehicle is available for an extra charge. Ask for details about verage, deductible, price, and exclusions. If you buy a service contract within 90 days of your purchase of this hicle, implied warranties under your state's laws may give you additional rights.  THE DEALER IF YOUR MECHANIC CAN INSPECT THE VEHICLE ON OR OFF THE LOT.  IN A VEHICLE HISTORY REPORT AND CHECK FOR OPEN SAFETY RECALLS. For information on obtain a vehicle history report, visit fic. gov/usedcars. To check for open safety recalls, visit safercar.gov.  If need the vehicle identification number (VIN) shown above to make the best use of the resources on				
MACOF	ANUFACTURER'S WARRANTY STILL APPLIES. The manufacturer's original warranty has not expired on some imponents of the vehicle.  ANUFACTURER'S USED VEHICLE WARRANTY APPLIES.  THER USED VEHICLE WARRANTY APPLIES.  THE DEALER TO Service contract on this vehicle is available for an extra charge. Ask for details about verage, deductible, price, and exclusions. If you buy a service contract within 90 days of your purchase of this hicle, implied warranties under your state's laws may give you additional rights.  THE DEALER IF YOUR MECHANIC CAN INSPECT THE VEHICLE ON OR OFF THE LOT.  IN A VEHICLE HISTORY REPORT AND CHECK FOR OPEN SAFETY RECALLS. For information on obtain a vehicle history report, visit fic. gov/usedcars. To check for open safety recalls, visit safercar.gov.  If need the vehicle identification number (VIN) shown above to make the best use of the resources on				

CONTRACTOR OF SHAPE STREET, AND ADDRESS OF THE PARTY OF T	ay occur in used vehicles.	
Frame & Body Frame-oracia, corrective weids, or rusted through Dog tracks—bent or twisted trame Engine Oil leshage, excluding normal seepage Cracked block or head. Betts missing or inoperable Knocks or missees related to carrishalt littles and push rock. Abnormal enhaust discharge Transmission & Drive Shaft improper fluid twel or leakage, evoluding normal seepage Cracked or damaged case which is visible. Abnormal noise or vibration caused by fauty transmission or drive shaft improper shifting or functioning in any gear Manual clutch slips or chatters. Defferential improper fluid twel or leakage, evoluding normal seepage. Cracked or damaged housing which is visible. Abnormal noise or vibration caused by fauty differential.	Cooling System  Leakage including radiator improperly functioning water pump.  Electrical System  Battery leakage improperly functioning afternator, generator, battery, or starter  Fuel System  Visible leakage Imperable Accessories  Gauges or warning devices Air conditioner Heater & Definater  Braike System  Failure warning light broken  Pedal not firm under pressure (DOT spec.) Not enough pedal reserve (DOT spec.) Does not stop vehicle in straight line (DOT spec.) Hoses damaged Orum or rotor too thin (Mgr. Specis) Lining or pad thickness less than 1/32 rich Power unit not operating or leaking Structural or mechanical parts damaged Air Bags	Steering System Too much free play at steering wheel (DOT spece.) Free play in inchape more than 144 inch Steering gear binds or jame. Front wheels aligned improperly (DOT spece.) Power unit fluid level improper Suspension System Bal joint seals damaged Stabilizer har disconnected Spring broken Shock absorber mounting losse Rubber bushings damaged or missing Radius nod damaged or missing Shock absorber leaking or functioning, Improperly Tires. Total depth less than 2/32 inch Sizes mismatched Visible damage Wheels Visible oracle, damage or repairs Mounting boths losse or missing Exhaust System Leakage Catalytic Conventer
TELEPHONE	EMAJL	
FOR COMPLAINTS AFTER SALE, CON	TACT:	
9	dge receipt of the Buyers Guide at the o	blosing of this sale.
I hereby anknowle		

#### **ADDENDUM STICKER**









Source: https://www.dealeraddendums.com/

# COST



#### PRINTING COSTS OF UPDATE OF MONRONEY STICKERS



 Program: New Car Assessment Program (NCAP); Safety Labeling (National Highway Traffic Safety Administration, 08/13/2007).

#### NHTSA Response:

- Cited a previous agency study, estimating label costs between \$0.09 and \$0.16 per vehicle (2006 dollars).
- Concluded that the cost burden would not have a significant economic impact on vehicle alterers.

Source: New Car Assessment Program (NCAP) safety labeling rule, published by the National Highway Traffic Safety Administration (NHTSA) on August 13, 2007

PRIVACY
LABEL
INFORMATION
AND DESIGN
EXAMPLES



#### PRIVACY LABEL INFORMATION

Privacy Notice Collect

Personal

Data

Sell

Personal

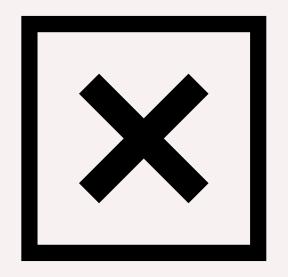
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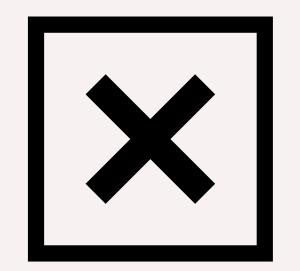
Universal

Opt-Out



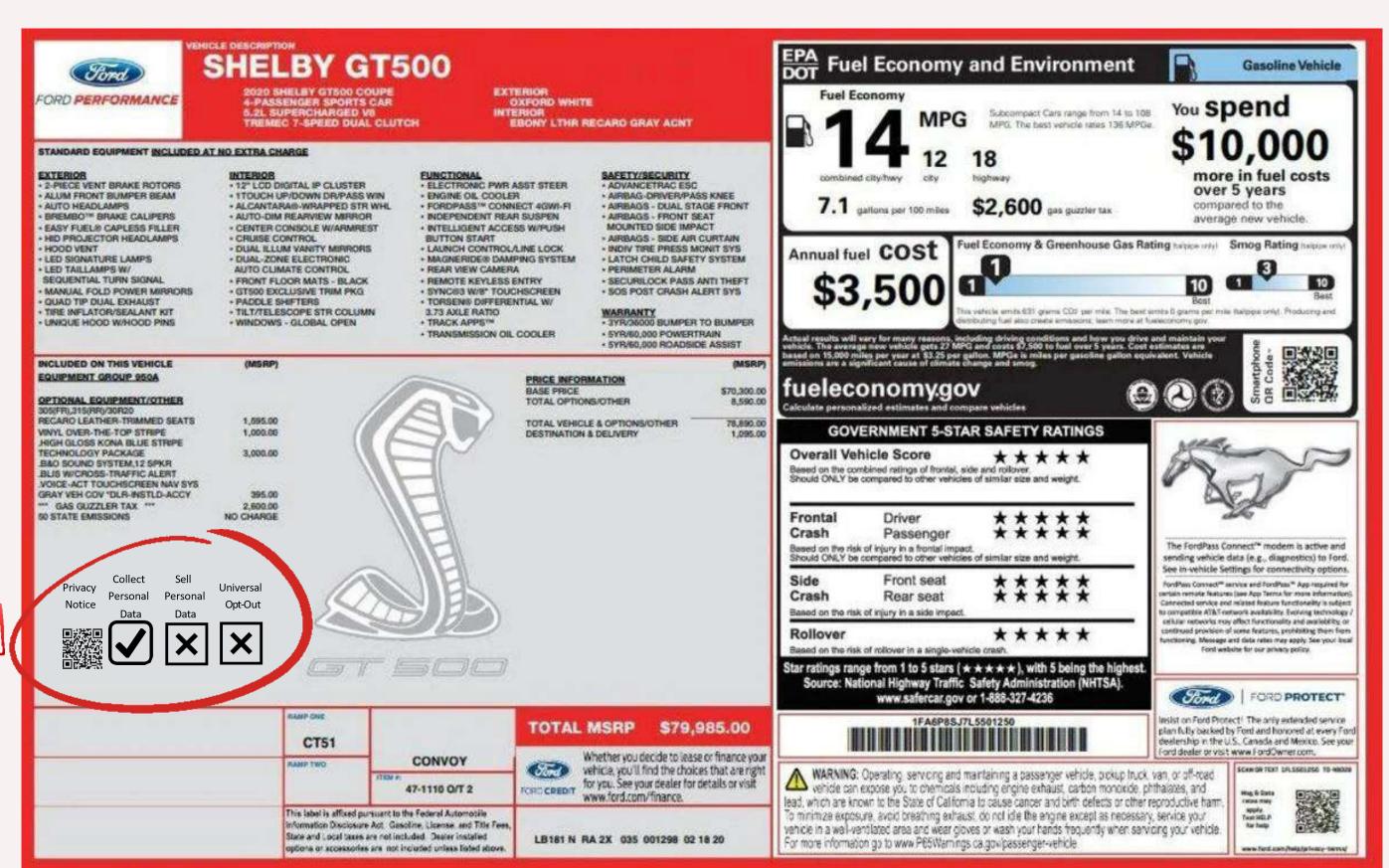




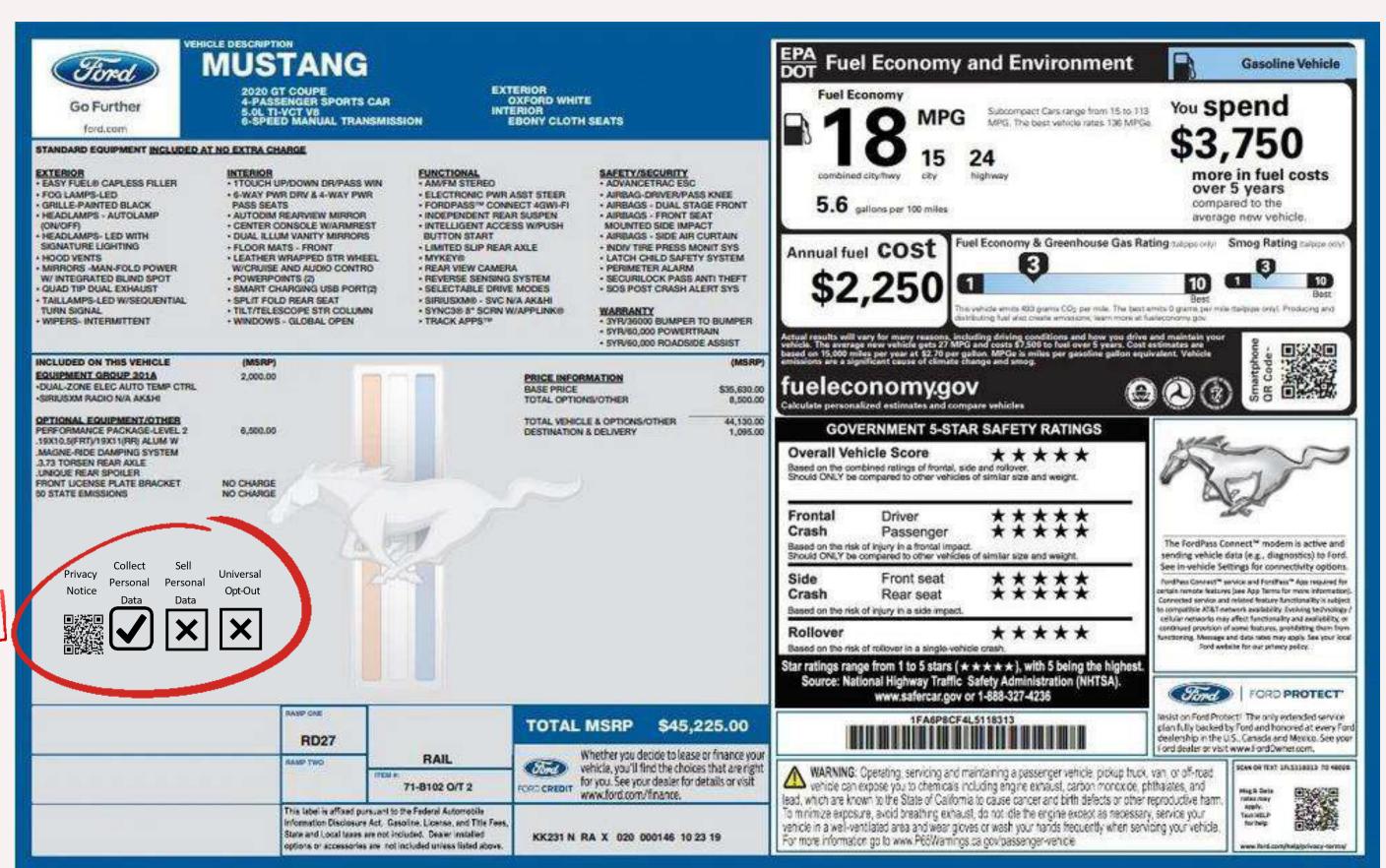




# MONRONEY STICKER (NEW CARS)



## MONRONEY STICKER (NEW CARS)



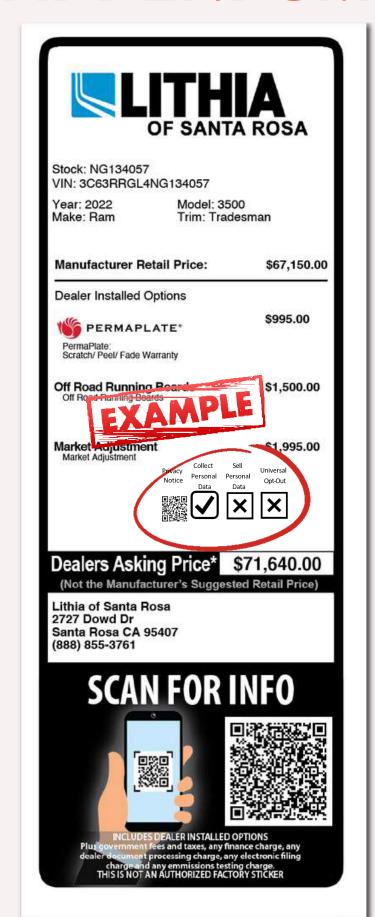
# BUYER'S GUIDE (USED CARS)

BUYERS GUIDE					
IMPORTANT: Spoken promises are difficult to enforce. Ask the dealer to put all promises in writing. Keep this form.					
WARRAN	NODEL TIES FOR THIS VE	HICLE:	0	VEHICLE IDEN	TIFICATION NUMBER (VIN)
No. of the last plant and the	S IS - NO DEALER DOES NOT PRO				
DI	EALER W	ARRA	NTY		
☐ FULL	WARRANTY.				
that fa expla	ED WARRANTY. The deal all during the warranty perion in warranty coverage, exclusion is laws may give you addition	d. Ask the dealer f	or a copy of the wan	ranty, and for any	
SYSTEMS CO	OVERED:	Montanian I	DURATION:	-	
NON DEA	EXAMP LER WARRANTIE	S FOR THIS		onal Personal Data  Data	Opt-Out
CONTRACTOR ASSESSMENT	TURER'S WARRANTY ST	TOTAL CANADASS AND AND AND	sessa Varios monocio de	inal warranty has	not expired on some
component	ts of the vehicle. TURER'S USED VEHICLE				
19.00	SED VEHICLE WARRANT				
Ask the dealer obligations	for a copy of the warranty o	tocument and an ex	planation of warrant	ty coverage, excl	usions, and repair
coverage,	CONTRACT. A service cor deductible, price, and exclu piled warranties under you	islons. If you buy a	service contract with	hin 90 days of yo	
ASK THE DE	ALER IF YOUR MECHAN	IIC CAN INSPECT	THE VEHICLE OF	N OR OFF THE	LOT.
how to obtain	HICLE HISTORY REPOR a vehicle history report, vi the vehicle identification n	sit ftc.gov/usedcar	s. To check for ope	en safety recalls	visit safercar.gov.
these sites.			technology with a	of major defects	that may occur in
these sites.	SIDE for important addit ehicles.	ional Information	, including a list o	S	1427.1
these sites. SEE OTHER : used motor v				14	1621/

There is a risk of morning triality, designing trial in	nay occur in used vehicles.	
Frame & Body Frame-cracks, corrective welds, or rusted through Dog thacks—bent or twisted frame Engine Oil leakage, excluding normal seepage Oracled block or head Betts missing or inoperable Knocks or misses related to carrishaft Iffers and pusit rock Abnormal enhaust discharge Transmission & Drive Shaft Improper flud tower or leakage, excluding normal seepage Oracled or damaged case which is visible Abnormal noise or vibration caused by fauty transmission or drive shaft Improper shifting or functioning in any gear Manual clutch elips or chatters Differential Improper flud level or leakage, excluding normal seepage Cracked or damaged housing which is visible Abnormal noise or vibration caused by fauty differential	Cooling System Leakage including radiator improperly functioning water pump. Electrical System Sattery leakage improperly functioning alternator, generator, battery, or starter Fuel System Visible leakage Imperable Accessories Gauges or warning devices Air conditioner Heater & Defroster Brake System Failure warning light broken Pedal not firm under pressure (DOT spec.) Not enough pedal reserve (DOT spec.) Not enough pedal reserve (DOT spec.) Hoses damaged Drum or notor too thin (Mgr. Specs) Lining or pad thickness less than 1/32 inch Power unit not operating or leaking Structural or mechanical parts damaged Air Bags	Steering System  Too much free play at steering wheel  (DCT spece.) Free play in linkage more than 194 inch Steering geer bride or jame. Front wheels aligned improperly  (DCT spece.) Power unit fluid level improper Suspension System Ball joint seals damaged Staticitizer har disconnected Spring broken Shock absorber mounting loose Rubber bushings damaged or missing Shock absorber leaking or functioning improperly  Tires  Telad depth less than 2/32 inch Scon mismatched Visible damage Wheels Visible oracles, damage or repairs Mounting botts loose or missing Exhaust System Leakage Catalytic Converter
DEALER NAME		
ADDRESS		
TELEPHONE	EMAIL	
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FOR COMPLAINTS AFTER SALE, CON	TACT:	
I hereby asknowle	dge receipt of the Buyers Guide at the o	stocing of this sale:

#### **ADDENDUM STICKER**







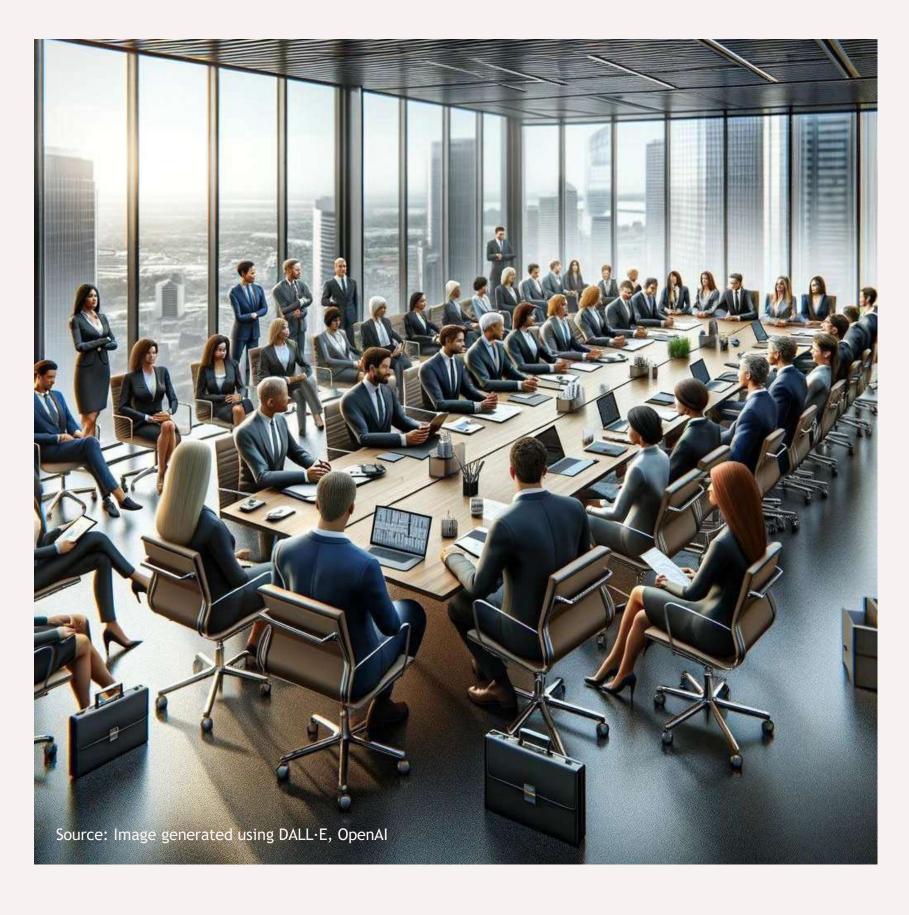


Source: https://www.dealeraddendums.com/

# ADVOCACY FOR IOTAB SUPPORT

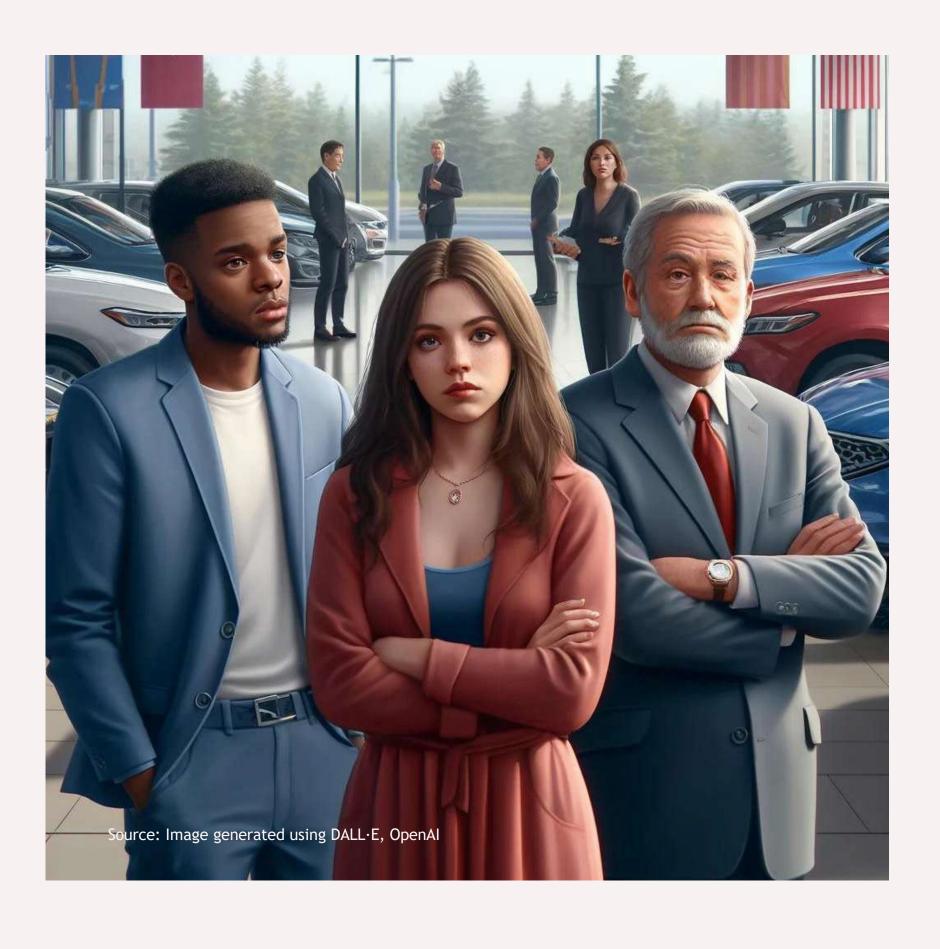


#### **NEGATIVE IMPACT ON AUTOMAKERS**



- Stock Price Impact
- Decrease in Auto Sales
- Litigation Costs
- Remediation Costs
- Vehicle Recalls
- Data Breaches
- Reputational Damage
- Customer Dissatisfaction

#### **NEGATIVE IMPACT ON CONSUMERS**



- Loss of Trust
- Identity Theft
- Financial Fraud
- Third Pary Data Sharing
- Lack of Transparency
- Phishing Attacks
- Cyber Stalking
- Personal Safety Concerns
- Insurance rate hikes/ denials

## WHY THIS, AND WHY NOW?



- Elevates U.S. Leadership in Vehicle Data Privacy
- Boosts Consumer Confidence in Technology Embedded Vehicle Purchases
- Supports Economic Stability by Reducing Auto
  Related Cyber Breaches
- Reduces Risks of Identity Theft and Financial Fraud
- Enhances Public Safety Related to Cyberstalking
  Supports Innovation in Privacy and Security
  Technologies
- Empowers Consumers to Make Informed Buying Decisions

### **ENABLING RECOMMENDATION ER3.3.6:**

Enabling Recommendation ER3.3.6: Require IoT Privacy information on new car automobile "Monroney Stickers".

#### Supported by Finding x.x

In the landscape of connected automobiles, where privacy concerns are mounting, a crucial recommendation has been presented to the U.S. government: including IoT Privacy Information on "Monroney Stickers" for new cars **and Buyer's Guides for** used cars. This recommendation aims to leverage the traditional role of Monroney Stickers – known for detailing fuel efficiency and safety ratings – to now also disclose vital information about IoT privacy. This encompasses data collection, retention, sale, and the availability of a universal opt-out feature.

This initiative is primarily driven by the need to enhance consumer protection and address growing concerns over personal data use and sharing by IoT devices in automobiles. The urgency of this issue is highlighted by findings from the Mozilla Foundation's Automobile Privacy Report in 2023, which reveals that all 25 car brands reviewed in this report collect personal data, with most sharing or selling this information. The report further indicates that most brands offer limited control over drivers' data, and many have concerning records regarding privacy breaches. Notably, the report notes that none of the car brands reviewed that participate under the Alliance for Automotive Innovation adhere to voluntary consumer protection principles focusing on data privacy.

Implementing this recommendation requires a standardized, straightforward, and concise method to present IoT privacy information, ensuring compliance with existing privacy laws and adaptability to future technological developments. The U.S. government must also prepare for possible resistance from automakers concerned about cost implications, the task of educating consumers about the importance of this information, and the complexity of the regulatory landscape governing IoT and privacy.

A united effort from various U.S. government agencies is imperative to successfully implement this recommendation. Agencies such as the Federal Trade Commission (FTC), National Highway Traffic Safety Administration (NHTSA), Federal Communications Commission (FCC), Department of Transportation (DOT), and the **Cybersecurity and Infrastructure Security Agency (CISA) Environmental Protection Agency (EPA)** could play critical roles. Their involvement would uphold the principles of the Automobile Information Disclosure Act of 1958 and significantly bolster consumer rights in an era increasingly defined by connected technology.

## ANSWERS TO BOARD QUESTIONS



- 16 CFR Part 455 -- Used Motor Vehicle Trade Regulation Rule. 19 Nov. 1984, https://www.ecfr.gov/current/title-16/part-455
- 71% of Drivers Consider Buying Older Cars Due to Data Privacy Concerns | Security Magazine. https://www.securitymagazine.com/articles/100317-71-of-drivers-consider-buying- older-cars-due-to-data-privacy-concerns
- "2022 Car Buying Outlook." Capital One Auto Navigator, https://www.capitalone.com/cars/car-buying-outlook
- "Answering Dealers' Questions about the Revised Used Car Rule." Federal Trade Commission, 25 Sept. 2017, https://www.ftc.gov/business-guidance/resources/answering-dealers-questions-about-revised-used-car-rule
- CalMatters, Khari Johnson for. Car Tracking Can Enable Domestic Abuse. Turning It Off Is Easier Said Than Done The Markup. 30 Apr. 2024, https://themarkup.org/privacy/2024/04/30/car-tracking-can-enable-domestic-abuse-turning-it-off-is-easier-said-than-done.
- "Car Ownership Statistics 2024 Forbes Advisor." Car Ownership Statistics 2024 Forbes Advisor, https://www.forbes.com/advisor/car-insurance/car-ownership-statistics/
- "Citing National Security Concerns, Biden-Harris Administration Announces Inquiry into Connected Vehicles." U.S. Department of Commerce, 29 Feb. 2024, https://www.commerce.gov/news/press-releases/2024/02/citing-national-security-concerns-biden-harris-administration-announces
- Clark, Mitchell. "Your Car May Be Recording More Data than You Know." The Verge, 28 Dec. 2020, https://www.theverge.com/2020/12/28/22203587/car-recorded-data-investigation-stalking-privacy-concerns
- Debbie Reynolds Consulting LLC. Debbie Reynolds "The Data Diva" Discusses Data Privacy And Mozilla Automobile Privacy Report 2023. 2023. YouTube, https://www.youtube.com/watch?v=tEV-Hs3QYi4
- Debbie Reynolds "The Data Diva" Discusses Data Privacy And Automobile Telematics. Directed by Debbie Reynolds Consulting LLC, 2020. YouTube, https://www.youtube.com/watch?v=fJY25y2DOKc

- <u>Dowthwaite, Anna, et al. "Privacy Preferences in Automotive Data Collection." Transportation Research Interdisciplinary Perspectives, vol. 24, Mar. 2024, p. 101022.</u>

  <u>ScienceDirect, https://doi.org/10.1016/j.trip.2024.101022.</u>
- Facts about Monroney Labels on New Passenger Motor Vehicles. 28 Dec. 2021, https://www.taylor.com/blog/3-things-to-know-about-monroney-labels
- <u>"FTC CARS Rule Combating Auto Retail Scams A Dealers Guide." Federal Trade Commission, 11 Dec. 2023, https://www.ftc.gov/business-guidance/resources/ftc-cars-rule-combating-auto-retail-scams-dealers-guide</u>
- <u>"FTC Proposes Modifications to Used Car Rule." Federal Trade Commission, 4 Dec. 2012, https://www.ftc.gov/news-events/news/press-releases/2012/12/ftc-proposes-modifications-used-car-rule</u>
- Hawkins, Andrew J. "GM Will No Longer Sell Your Driving Data to Third-Party Companies." The Verge, 22 Mar. 2024, https://www.theverge.com/2024/3/22/24109057/gm-will-no-longer-sell-your-driving-data-to-third-party-companies
- <u>Hill, Kashmir. "Automakers Are Sharing Consumers' Driving Behavior With Insurance Companies." The New York Times, 11 Mar. 2024.</u>

  NYTimes.com, https://www.nytimes.com/2024/03/11/technology/carmakers-driver-tracking-insurance.html
- "How to Opt out of the Privacy Nightmare That Comes with New Hondas." Sherwood News, https://sherwood.news/tech/how-to-opt-out-of-the-privacy-nightmare-that-comes-factory-installed-in-new/
- Illinois General Assembly Full Text of SB0800. https://www.ilga.gov/legislation/fulltext.asp?
   DocName=&SessionId=112&GA=103&DocTypeId=SB&DocNum=800&GAID=17&LegID=144915&SpecSess=&Session=
   =
- "Is My Car Spying on Me?" Kaspersky Driver Survey Report, https://media.kasperskydaily.com/wp-content/uploads/sites/85/2024/01/10103616/13195\_Driver\_Survey\_Report\_WEB-2.pdf
- Levine, Dan, and Kristina Cooke. "Exclusive: US Law on Domestic Abuse Should Cover Carmakers, FCC Chair Says." Reuters, 28 Feb. 2024. www.reuters.com, https://www.reuters.com/world/us/us-law-domestic-abuse-should-cover-carmakers-fcc-chair-says-2024-02-28/

- "Min's SB 1394 Requires Car Manufacturers to Sever Remote Vehicle Access When It Enables Domestic Violence." Senator Dave Min, 28 Feb. 2024, https://sd37.senate.ca.gov/news/mins-sb-1394-requires-car-manufacturers-sever-remote-vehicle-access-when-it-enables-domestic
- "'Monroney Stickers' And Protecting Car Buyers From Fraud In The Age Of Online Motor Vehicle Sales." Seyfarth Shaw "Monroney Stickers" And Protecting Car Buyers From Fraud In The Age Of Online Motor Vehicle Sales, <a href="https://www.seyfarth.com/news-insights/monroney-stickers-and-protecting-car-buyers-from-fraud-in-the-age-of-online-motor-vehicle-sales.html">https://www.seyfarth.com/news-insights/monroney-stickers-and-protecting-car-buyers-from-fraud-in-the-age-of-online-motor-vehicle-sales.html</a>
- Munk, Cheryl Winokur. "New Cars Are Now 'the Worst' Products When It Comes to Protecting Consumer Data." CNBC, 23 Mar. 2024, <a href="https://www.cnbc.com/2024/03/23/how-to-stop-your-internet-connected-car-from-selling-your-driving-data.html">https://www.cnbc.com/2024/03/23/how-to-stop-your-internet-connected-car-from-selling-your-driving-data.html</a>.
- "New Car Assessment Program." Federal Register, 9 Mar. 2022, https://www.federalregister.gov/documents/2022/03/09/2022-04894/new-car-assessment-program
- "New Car Assessment Program (NCAP); Safety Labeling." Federal Register, 9 Mar. 2010, <a href="https://www.federalregister.gov/documents/2010/03/09/2010-4867/new-car-">https://www.federalregister.gov/documents/2010/03/09/2010-4867/new-car-</a> assessment-program-ncap-safety-labeling
- "NJ Legislature Bill S2740, Data Deletion Law." New Jersey Legislature, https://www.njleg.state.nj.us/bill-search/2022/S2740.
- Peele, Robert. "The Senator Behind the Window Sticker." The New York Times, 2 Jan. 2009. NYTimes.com, https://www.nytimes.com/2009/01/04/automobiles/04MONRONEY.html
- "Public Participation in the Rulemaking Process." Federal Trade Commission, 12 May 2022, <a href="https://www.ftc.gov/enforcement/rulemaking/public-participation-rulemaking-process">https://www.ftc.gov/enforcement/rulemaking/public-participation-rulemaking-process</a>
- Raath, Sonja. "20 Ways Your Smart Car Tracks You." ExpressVPN Blog, 5 Nov. 2023, https://www.expressvpn.com/blog/how-your-smart-car-tracks-you/
- "Retrospective Review of FTC Rules and Guides." Federal Trade Commission, 1 Aug. 2013, https://www.ftc.gov/enforcement/rulemaking/retrospective-review-ftc-rules-guides

- Bell, Sebastien. "Connected Cars Are A Scary New Tool Abusive Partners Can Use To Stalk Their Victims." Carscoops, 7 Jan. 2024, https://www.carscoops.com/?p=2903223.
- "Driving on the Edge: The Alarming Rise of Automotive Hacking and the Race to Secure Our Vehicles." The Driz Group, <a href="http://www.drizgroup.com/1/post/2023/04/driving-on-the-">http://www.drizgroup.com/1/post/2023/04/driving-on-the-</a> edge-the-alarming-rise-of-automotive-hacking-and-the-race-to-secure-our-vehicles.html. Accessed 12 May 2024.
- Fellmann, Konrad. "How Cars Have Become the Biggest Threat to Privacy." SC Media, 2 Nov. 2023, <a href="https://www.scmagazine.com/perspective/how-cars-have-become-the-biggest-threat-to-privacy">https://www.scmagazine.com/perspective/how-cars-have-become-the-biggest-threat-to-privacy</a>.
- Garsten, Ed. "Advanced Cars May Face Greater Risk Of Hacking, Cybersecurity Experts Warn." Forbes,

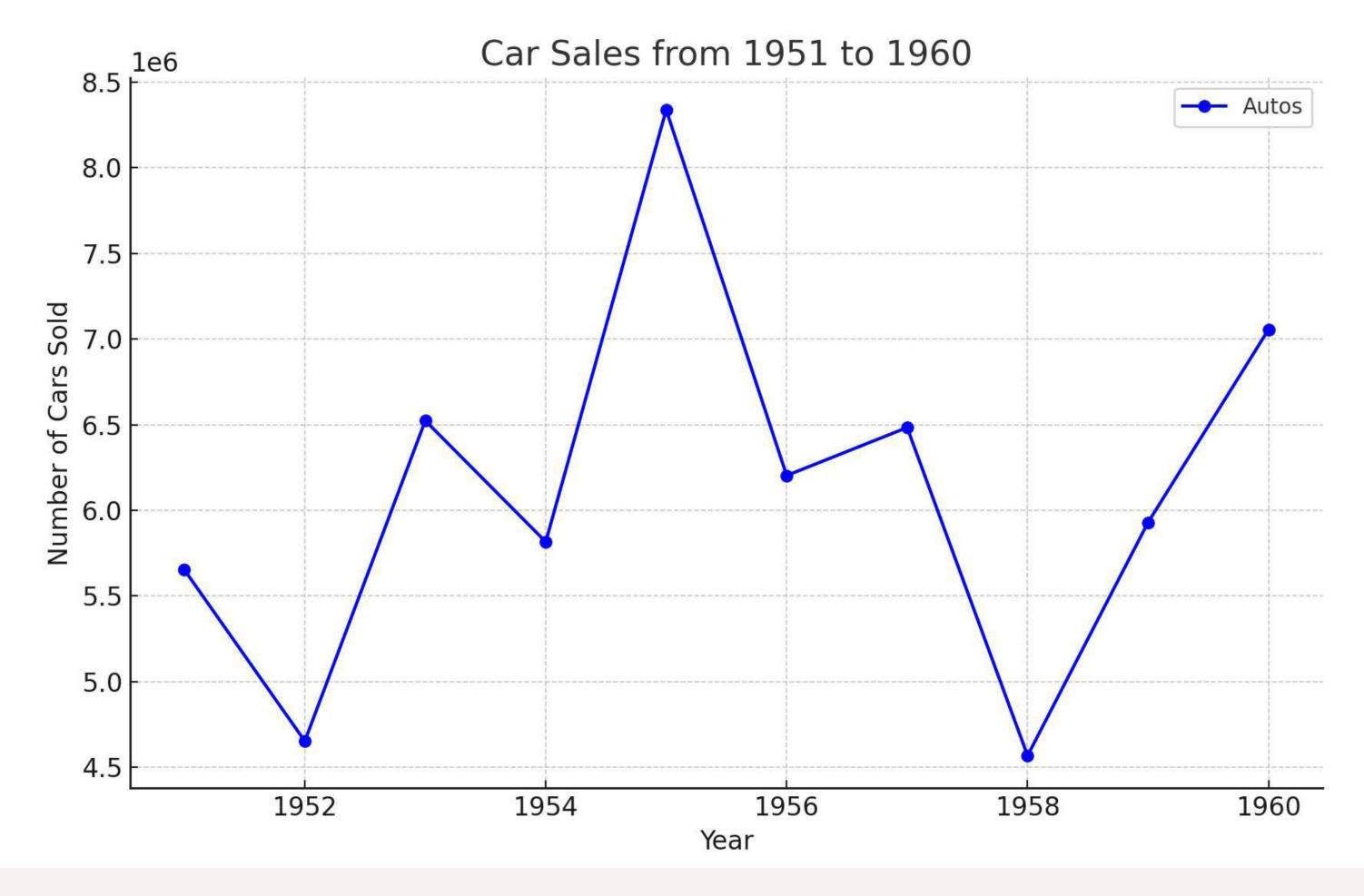
  <a href="https://www.forbes.com/sites/edgarsten/2023/04/26/cybersecurity-">https://www.forbes.com/sites/edgarsten/2023/04/26/cybersecurity-</a> vulnerability-in-vehicles-is-escalating-as-software-engineer-shortage-grows/. Accessed 12 May 2024.
- Hill, Kashmir. "Your Car Is Tracking You. Abusive Partners May Be, Too." The New York Times, 31 Dec. 2023. NYTimes.com, <a href="https://www.nytimes.com/2023/12/31/technology/car-">https://www.nytimes.com/2023/12/31/technology/car-</a> trackers-gps-abuse.html.
- Jodka, Sara H., and Sara H. Jodka. "Dashboard Confessions: Unveiling the Privacy Issues in Connected Cars." Reuters, 25 Apr. 2024.

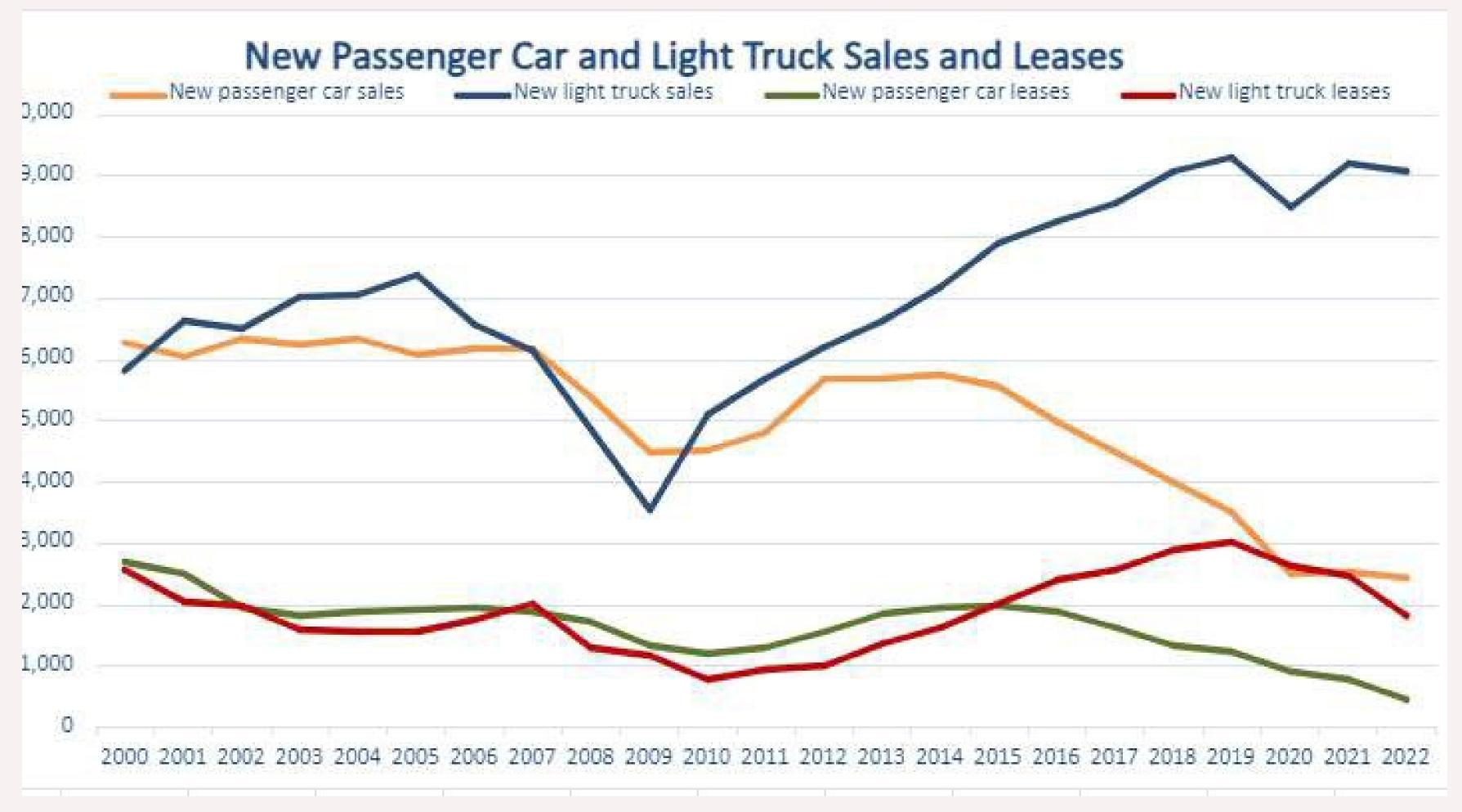
  www.reuters.com, https://www.reuters.com/legal/legalindustry/dashboard-confessions-unveiling-privacy-issues-connected-cars-2024-04-25/.
- Office, U. S. Government Accountability. Vehicle Data Privacy: Industry and Federal Efforts Under Way but NHTSA Needs to Define Its Role | U.S. GAO. 19 Feb. 2019, https://www.gao.gov/products/gao-17-656.
- Rivers, Stephen. "Senators Accuse BMW, Toyota, And Seven Other Brands Of Giving Up Consumer Location Data Without A Warrant." Carscoops, 5 May 2024, <a href="https://www.carscoops.com/2024/05/senators-accuse-bmw-toyota-and-seven-other-brands-of-giving-up-consumer-location-data-without-a-warrant/">https://www.carscoops.com/2024/05/senators-accuse-bmw-toyota-and-seven-other-brands-of-giving-up-consumer-location-data-without-a-warrant/</a>.
- "Toyota: Car Location Data of 2 Million Customers Exposed for Ten Years." BleepingComputer, <a href="https://www.bleepingcomputer.com/news/security/toyota-car-location-data-of-2-million-customers-exposed-for-ten-years/">https://www.bleepingcomputer.com/news/security/toyota-car-location-data-of-2-million-customers-exposed-for-ten-years/</a>. Accessed 12 May 2024.
- United States. Department of Transportation. Bureau of Transportation Statistics. National Transportation Statistics (NTS). 2019. DOI.org (Datacite), https://doi.org/10.21949/1503663.

- The Data Diva E80 Andrea Amico and Debbie Reynolds "The Data Diva" Talks Privacy Podcast. 2022. thedatadivatalksprivacypodcast.buzzsprout.com, <a href="https://www.buzzsprout.com/1734607/10169273-the-data-diva-e80-andrea-amico-and-debbie-reynolds">https://www.buzzsprout.com/1734607/10169273-the-data-diva-e80-andrea-amico-and-debbie-reynolds</a>
- Tone, Allan. "Addendum System for Car Dealers | DealerAddendums Inc." DealerAddendums Inc, https://www.dealeraddendums.com
- Tue, Mar 19th 2024 05:23am-Karl Bode. "GM, LexisNexis Sued For (Nontransparent) Sale Of Driver Behavior Data To Insurers." Techdirt, 19 Mar. 2024, https://www.techdirt.com/2024/03/19/gm-lexisnexis-sued-for-nontransparent-sale-of-driver-behavior-data-to-insurers/
- U.S.C. Title 15 COMMERCE AND TRADE. <a href="https://www.govinfo.gov/content/pkg/USCODE-2010-title15/html/USCODE-2010-title15-2010-
- "Used Car Rule." Federal Trade Commission, 18 Sept. 2014, https://www.ftc.gov/legal-library/browse/rules/used-car-rule.
- "What Is a Monroney Sticker?" Car and Driver, 13 Apr. 2020, <a href="https://www.caranddriver.com/research/a31482404/monroney-sticker/">https://www.caranddriver.com/research/a31482404/monroney-sticker/</a>
- Bell, Sebastien. "Connected Cars Are A Scary New Tool Abusive Partners Can Use To Stalk Their Victims." Carscoops, 7 Jan. 2024, https://www.carscoops.com/?p=2903223.
- "New Report Explores Privacy Implications of Driver Safety Systems Future of Privacy Forum." Https://Fpf.Org/, https://fpf.org/blog/new-report-explores-privacy-implications-of-driver-safety-systems/. Accessed 11 May 2024.
- "Stolen Auto Accounts: The \$2 Price Tag on Your Car's Identity." Kasada, 12 Sept. 2023, https://www.kasada.io/accounts-stolen-in-automotive-credential-stuffing-attack/.

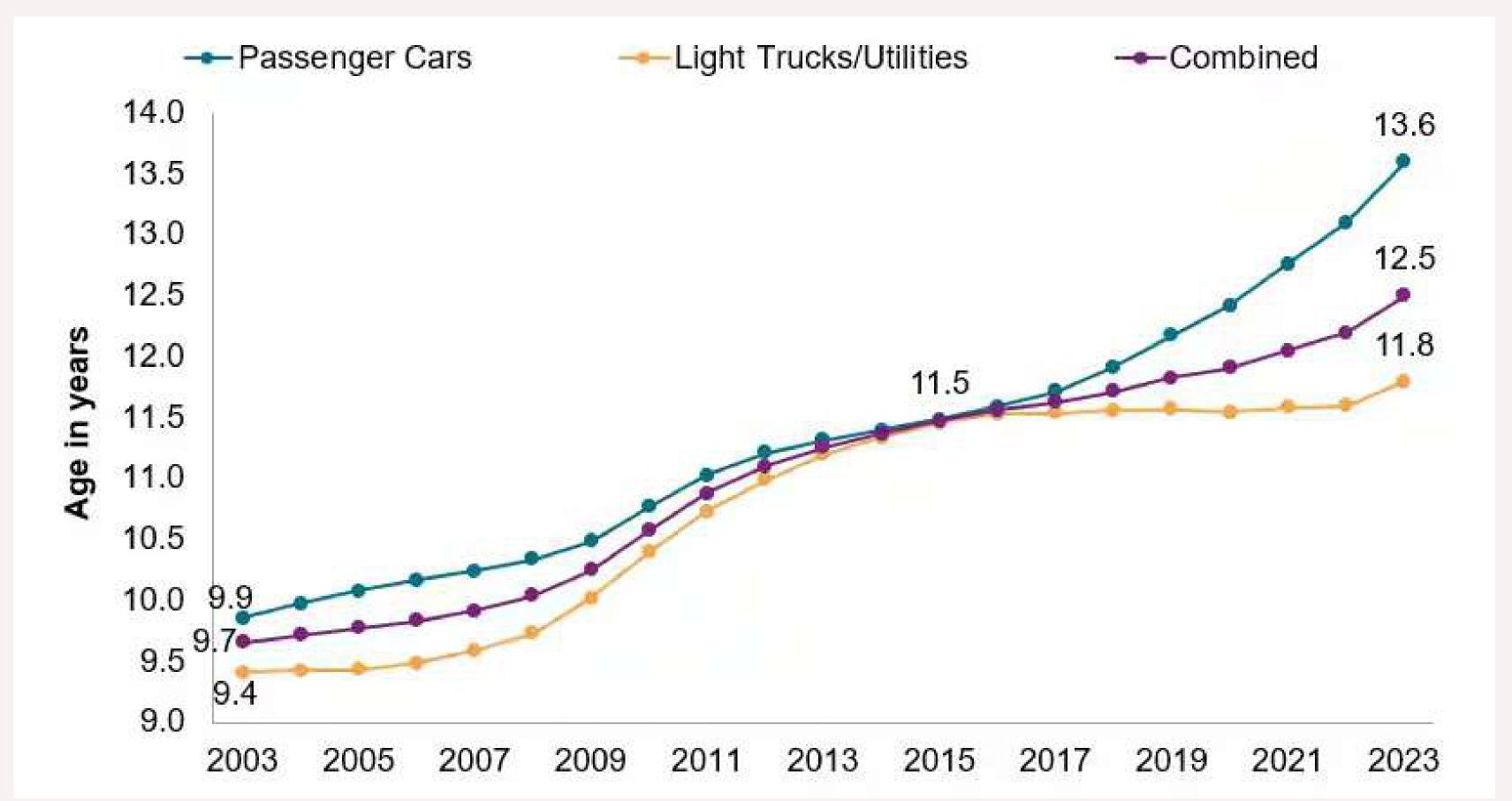
- Bell, Sebastien. "Connected Cars Are A Scary New Tool Abusive Partners Can Use To Stalk Their Victims." Carscoops, 7 Jan. 2024, https://www.carscoops.com/?p=2903223.
- "Driving on the Edge: The Alarming Rise of Automotive Hacking and the Race to Secure Our Vehicles." The Driz Group, <a href="http://www.drizgroup.com/1/post/2023/04/driving-on-the-">http://www.drizgroup.com/1/post/2023/04/driving-on-the-</a> edge-the-alarming-rise-of-automotive-hacking-and-the-race-to-secure-our-vehicles.html. Accessed 12 May 2024.
- Garsten, Ed. "Advanced Cars May Face Greater Risk Of Hacking, Cybersecurity Experts Warn." Forbes,
   <a href="https://www.forbes.com/sites/edgarsten/2023/04/26/cybersecurity-">https://www.forbes.com/sites/edgarsten/2023/04/26/cybersecurity-</a> vulnerability-in-vehicles-is-escalating-as-software-engineer-shortage-grows/. Accessed 12 May 2024.
- Hill, Kashmir. "Your Car Is Tracking You. Abusive Partners May Be, Too." The New York Times, 31 Dec. 2023. NYTimes.com, <a href="https://www.nytimes.com/2023/12/31/technology/car-">https://www.nytimes.com/2023/12/31/technology/car-</a> trackers-gps-abuse.html.
- Jodka, Sara H., and Sara H. Jodka. "Dashboard Confessions: Unveiling the Privacy Issues in Connected Cars." Reuters, 25 Apr. 2024.

  www.reuters.com, <a href="https://www.reuters.com/legal/legalindustry/dashboard-confessions-unveiling-privacy-issues-connected-cars-2024-04-25/">https://www.reuters.com/legal/legalindustry/dashboard-confessions-unveiling-privacy-issues-connected-cars-2024-04-25/</a>.
- Rivers, Stephen. "Senators Accuse BMW, Toyota, And Seven Other Brands Of Giving Up Consumer Location Data Without A Warrant." Carscoops, 5 May 2024, <a href="https://www.carscoops.com/2024/05/senators-accuse-bmw-toyota-and-seven-other-brands-of-giving-up-consumer-location-data-without-a-warrant/">https://www.carscoops.com/2024/05/senators-accuse-bmw-toyota-and-seven-other-brands-of-giving-up-consumer-location-data-without-a-warrant/</a>.
- "Toyota: Car Location Data of 2 Million Customers Exposed for Ten Years." BleepingComputer, <a href="https://www.bleepingcomputer.com/news/security/toyota-car-location-data-of-2-">https://www.bleepingcomputer.com/news/security/toyota-car-location-data-of-2-</a> million-customers-exposed-for-ten-years/. May 12,2013
- "Cars & Consumer Data: On Unlawful Collection & Use." Federal Trade Commission, 14 May 2024, <a href="https://www.ftc.gov/policy/advocacy-research/tech-at-ftc/2024/05/cars-">https://www.ftc.gov/policy/advocacy-research/tech-at-ftc/2024/05/cars-</a> consumer-data-unlawful-collection-use.





#### Average Age of Vehicles in the United States from 2003 to 2023



#### Other Vehicle Sticker Examples - Size





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