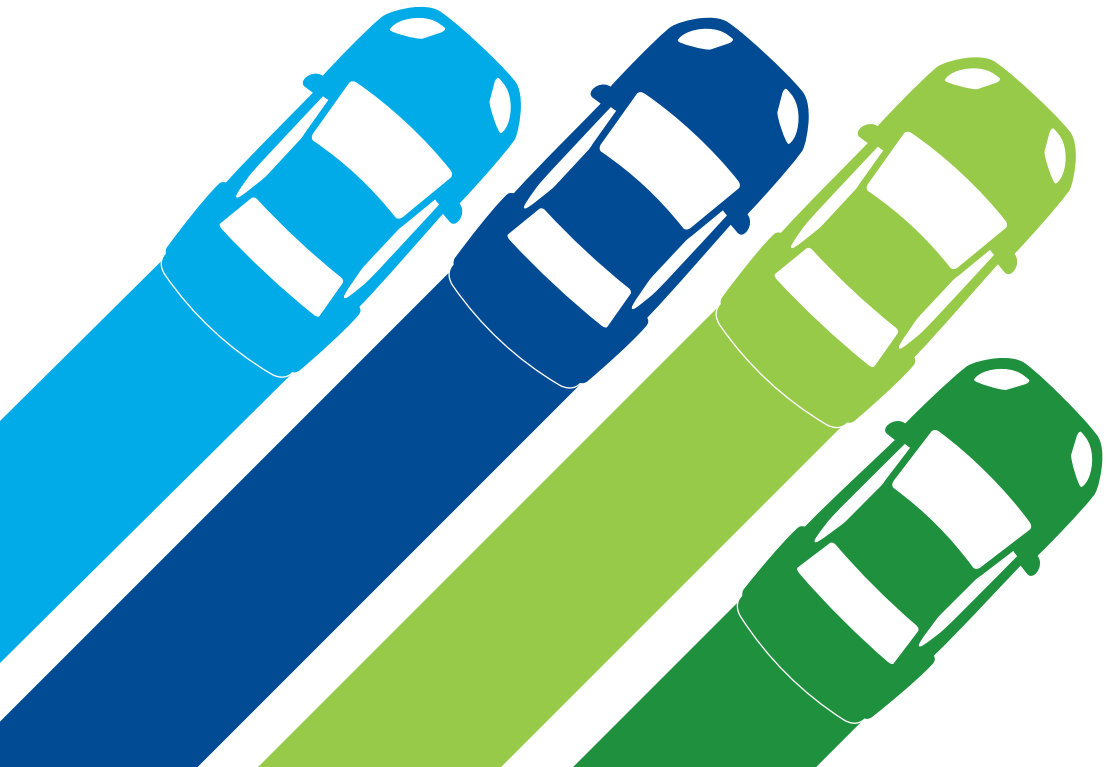
Deloitte.

2014
Global Automotive Consumer Study
Exploring consumers' mobility choices and transportation decisions



Introduction

Forces are changing the mobility landscape and affording consumers more choices than ever before in meeting their transportation needs. For automotive companies, these shifting consumer demands result in a number of complex questions that may ultimately impact their products and how they engage their customers.

To explore consumers' mobility choices and transportation decisions, Deloitte fielded a survey in 19 countries. In total, more than 23,000 individuals representing a broad range of cross generational—Baby Boomers, Gen X and Gen Y—automotive consumers responded to the survey. This broad and diverse consumer demographic, both across countries and Gen Y, allowed for in-depth analysis through multiple lenses, including generational, socio-economic, gender, and many others.

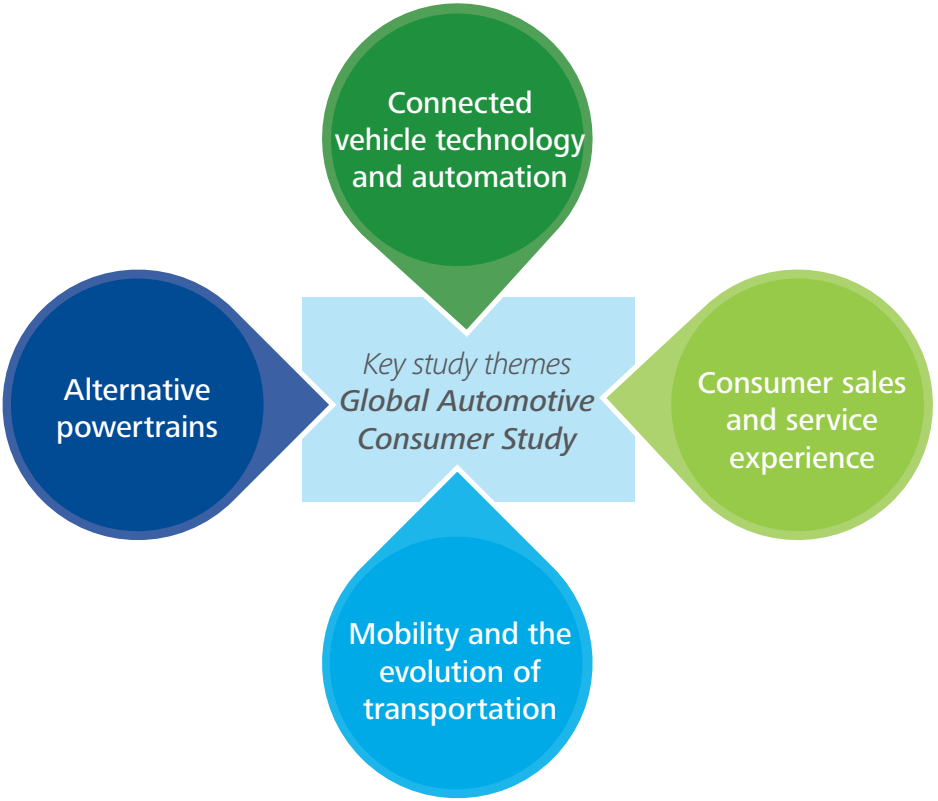
The objectives of the study centered on understanding the factors influencing consumers' mobility decisions as new transportation models that provide access to transportation (e.g., car-sharing, etc.) emerge. We also analyzed the different tradeoffs consumers are willing to pay for to own a vehicle, and examined how preferences for powertrains, technology (inside and outside of the vehicle), and lifestyle needs impact consumers' choice in the purchase or lease decision. The study also sought to assess the customer experience and the factors influencing the final vehicle purchase decision.

The findings of the study outlined in the following pages represent the analysis of the over 2,000 U.S. consumers who responded to this global survey. These findings form the foundation for an informed dialogue between automakers, dealers, and non-automotive companies working within the industry about the factors that will increasingly impact how consumers around the world choose to get from one place to another.

Contents

About the Global Automotive Consumer Study

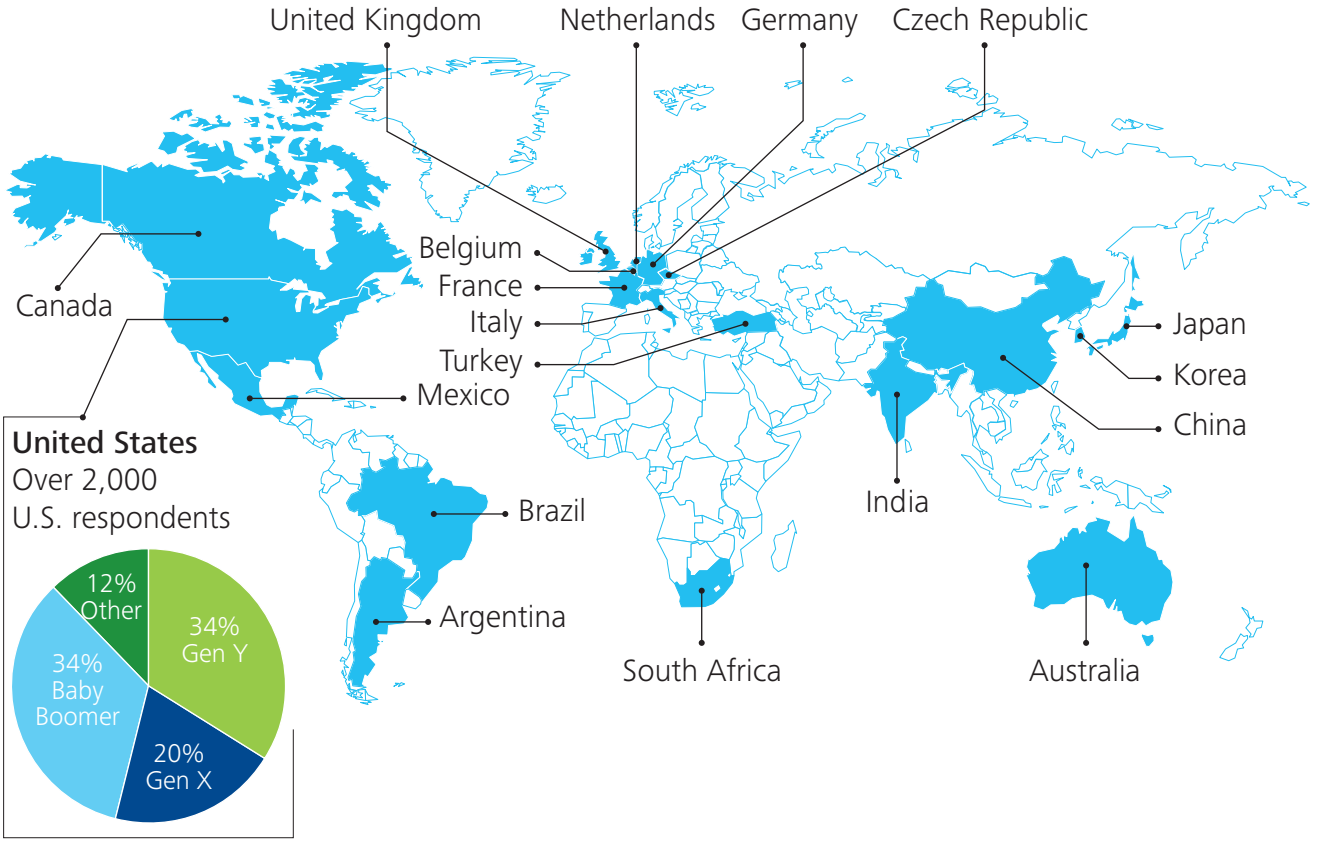
The Global Automotive Consumer Study focuses on "the changing nature of mobility" and how mobility affects various aspects of the automobile buying and ownership experience. Within the mobility theme, the study examines how alternative powertrains, connected vehicle technology and automation, and the sales channel experience influences the transportation choices of automotive consumers.



The ***Global Automotive Consumer Study***
is based on a survey of *over 23,000 consumers* in *19 countries.*

The key findings and insights in this publication are based on U.S. responses to the survey.

Participating countries



Why Conduct a Global Automotive Consumer Study?

As these powerful and dynamic forces continue to take shape, consumer mobility preferences are rapidly evolving.

Hyper-urbanization

In 2006, the world reached a critical midpoint; over half of the world's population was living in a city. The trend is expected to accelerate, with approximately 70% of the world's population expected to live in cities by 2050 (90% in North America)[1]. Overcrowding, the realities of traffic, and new capabilities enabled by technology are all leading to more collaborative approaches to transport: for example, the "sharing economy," driverless cars, and improved public transportation.

Generational views

Individuals today have a number of transportation options, and increasingly their transportation decisions are differing across Gen Y. Some tend to gravitate toward traditional vehicle ownership models, while others are highly interested in models that provide access to mobility, allow them to remain connected (and productive), and reduce costs. These differing views and expectations of mobility, along with disruptions of traditional ownership models, will likely change how OEMs engage their customers.

Connected technology

Innovations in V2X connectivity, mobile phones, apps, and smart card technology are disrupting the automotive industry. Moreover, automotive consumers will increasingly expect customer experiences that go beyond the sales or service transaction and leverage technology to integrate with their connected lifestyles—both inside and outside of the vehicle. The formerly clear lines—between humans and machines, between ownership and non-ownership, between goods and services—will blur as a result of connectivity and the information generated and used interchangeably by people and machines.

[1] Urban and Rural Areas. United Nations, 2007. http://www.un.org/en/development/desa/population/publications/pdf/urbanization/2007_urban_rural_chart.pdf

Convergence of the private and public sectors

The mass adoption and use of new transportation systems (e.g., public transportation, electric and driverless cars vehicles, supporting infrastructure, etc.) is going to require increased public-private collaborations. Government will neither be able to fully fund nor take primary responsibility for the requirements supporting tomorrow's transportation systems. Moreover, the sheer complexity of transportation systems that work for everyone argues that many players will have to be involved. The resulting improved systems will likely offer consumers better transportation options that are more efficient, cost effective, and environmentally friendly.

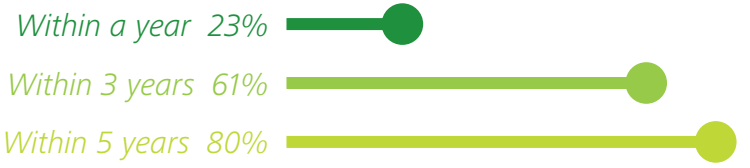
Sustainability and environmental concerns

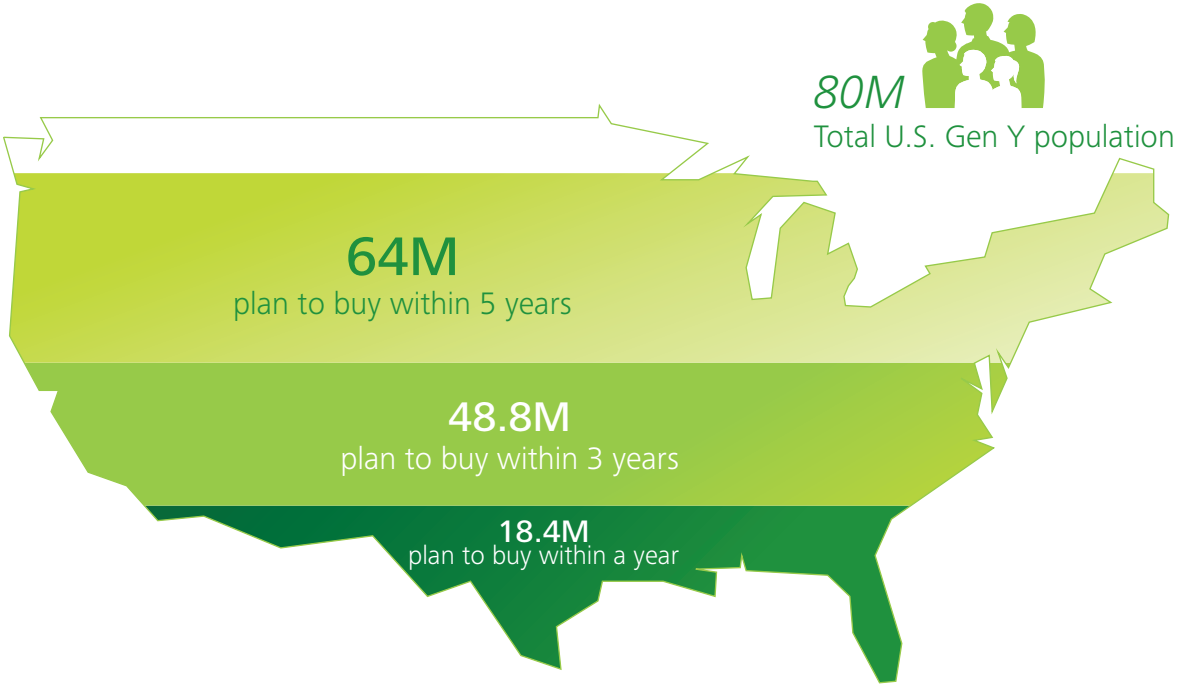
In 2012, new Corporate Average Fuel Economy (CAFE) standards were released in the U.S. that require automakers to raise the average fuel efficiency of new cars and trucks to 54.5 MPG by 2025. At the same time, U.S. consumer interest in large SUVs and trucks remains high. These factors are fueling the development of disruptive innovations within the vehicle—particularly advancements in alternative powertrains. As a result, by 2025, consumers in the U.S. may have the ability to choose from a mix of proven powertrain options that best meet their lifestyle needs—including more efficient internal combustion engines, electric vehicles (EVs), plug-in hybrids, and vehicles powered by natural gas.

Gen Y Market Potential

Over three-quarters

of Gen Y consumers plan to purchase or lease a vehicle **within the next five years**

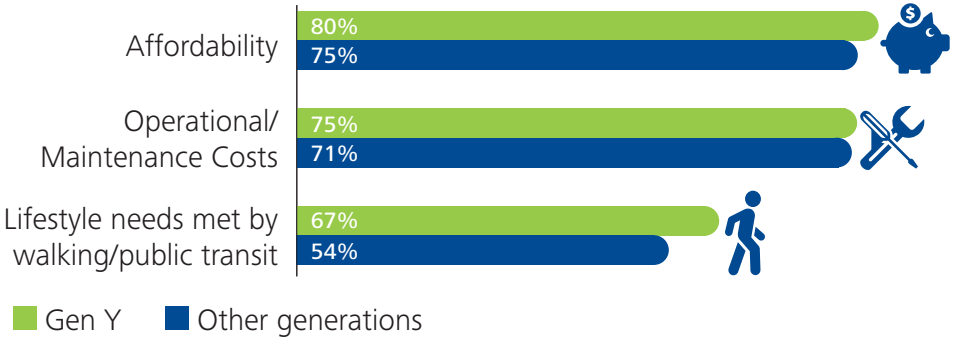




Decision Criteria

Affordability and *high operational and maintenance cost* are top reasons across Gen Y for not owning a vehicle. In addition, Gen Y consumers generally feel that their **lifestyle needs can be met by walking or public transportation.**

Top three reasons Gen Y doesn't buy (versus everyone else)



Percentage (%) of respondents who neither own or lease a vehicle that agreed with the following statements

But is Gen Y willing to buy?

vs.

(in current models)

Top three things that would get them into a vehicle

Cheaper + More fuel efficient + More affordable payment options = Vehicle purchase

Driver Profiles

Gen Y enjoys driving,

provided the **cost is low** and it's **convenient.**

Eco-friendly	Low cost	Convenience	Utility	Luxury	Technology	Love to drive
I make green choices in my life. When going somewhere, I want to do so in an eco-friendly manner, even if that means more time and money.	My total cost when going somewhere needs to be low, and I will choose a transportation option that is cheapest.	When going somewhere, I want to do so in the fastest and easiest way and am willing to use any transportation option to achieve this.	I have things to do and getting somewhere needs to fit the demands of my lifestyle. My transportation option must have the functionality to meet these demands (e.g., I require a truck to haul my equipment/ tools).	I value luxury and want to be noticed when I go somewhere. I feel a sense of pride driving a luxury vehicle and am willing to pay more for the features and the brand name.	Connected technology is important to me when going somewhere. To do this, my transportation choice needs to be integrated with my electronic devices, and it needs to access, consume, and create information.	I look forward to driving because getting there is half the fun.

How would you describe yourself as a commuter?

Driver profile generational comparison

Ranking	1	2	3	4	5	6	7
Gen Y							
Other generations							

Vehicle Loyalty

64%
of Gen Y consumers love their cars

but are
3X
more likely to abandon their vehicles if costs increase.

Other generations
10%

Gen Y
29%

"I would be willing to give up driving my car even if I had to pay more to get where I need to go."

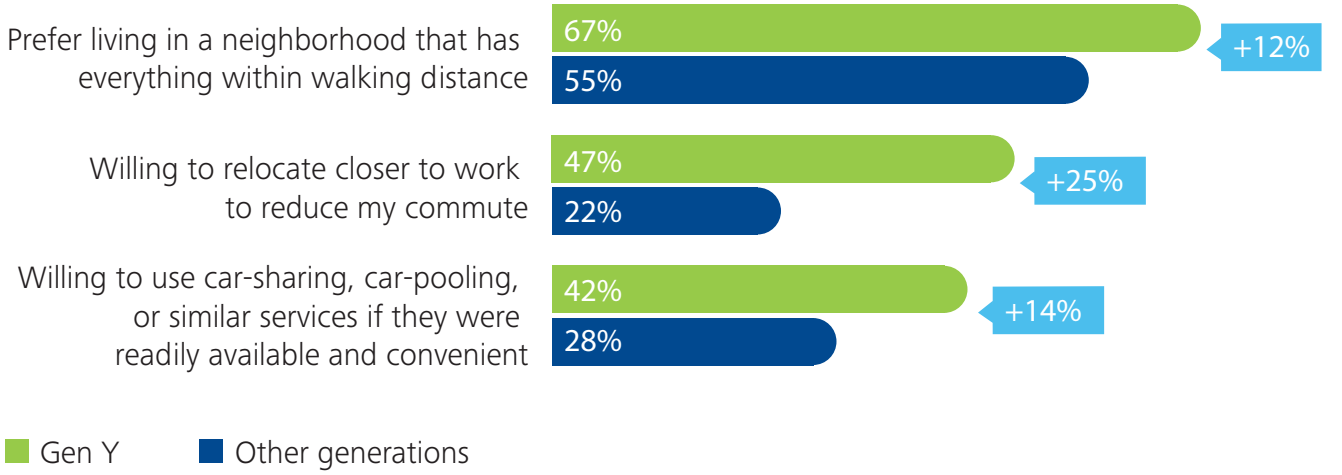
Lifestyle

Factors that may influence

consumers' decision to abandon vehicle ownership

Lifestyle is the primary reason

How much do you agree with each of the following statements?

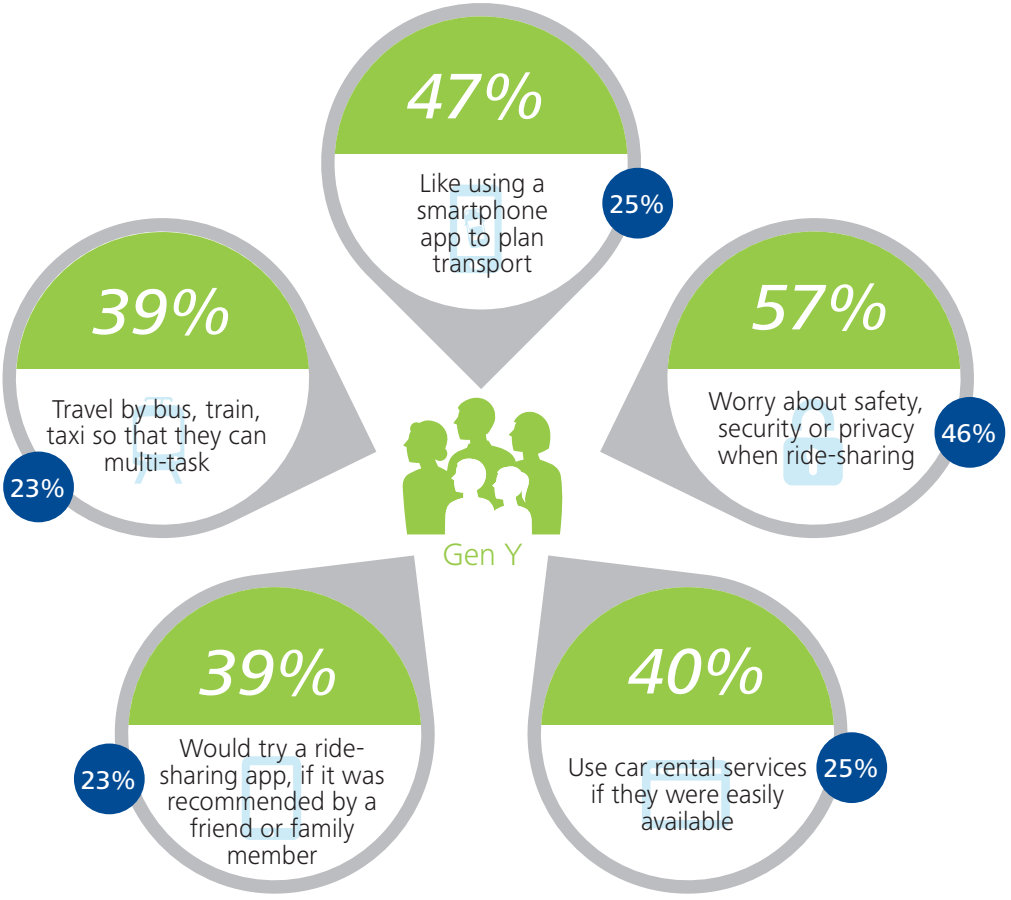


Gen Y consumers are more

interested in alternative modes of transportation,

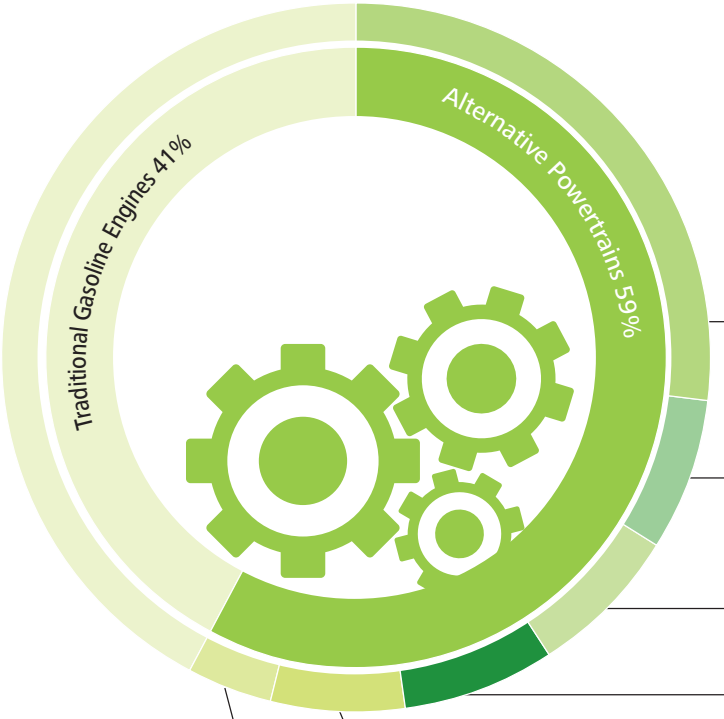
particularly if they are **safe** and **enabled by technology.**

Percentage of Gen Y respondents that agree with the following statements:



Alternative Powertrains

More than half of Gen Y would **prefer to be driving an alternative powertrain five years from now.**



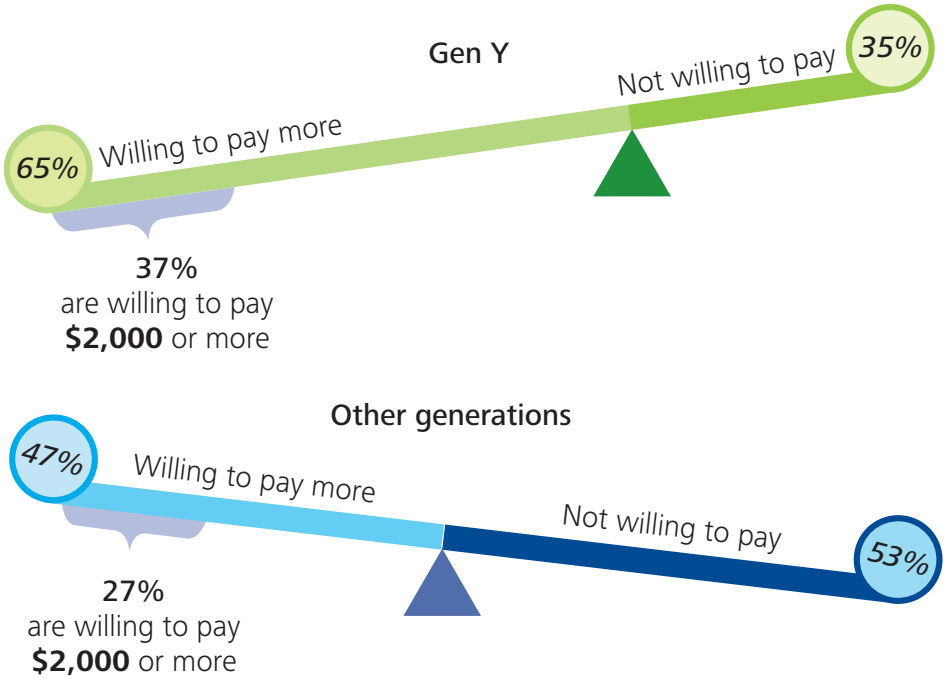
59% *of Gen Y consumers see themselves driving an alternative engine in 5 years* vs. ***44%*** for everyone else

- Hybrid electric ***27%***
- Plug-in hybrid ***8%***
- Battery-powered electric ***7%***
- Compressed natural gas ***7%***
- Diesel ***6%***
- Fuel cell ***4%***

Gen Y is

willing to pay more

for an alternative powertrain...



...but cost is

still a primary motivation

53%

say "My motivation to purchase/lease an alternative powertrain would be driven more by my desire to save money on fuel rather than to save the environment."

53%

of Gen Y would prefer to drive a traditional vehicle if it could provide comparable fuel efficiency to vehicles with alternative powertrains.

Perspective

*6.4 years**

Time it would take to recoup an incremental $2,000 in the purchase price of a new alternative powertrain vehicle versus a new traditional gasoline vehicle through increased fuel efficiency.

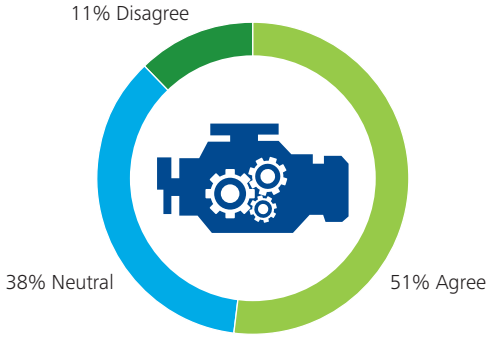
* Source: Calculated by Deloitte Research, using data from U.S. Department of Transportation Federal Highway Administration, U.S. Department of Energy. 2013 Ford Fusion used for comparative analysis.

Majority of consumers feel there

aren't enough alternative powertrain options

in the market, and **2:1 prefer a broad range of powertrain options** in each vehicle model

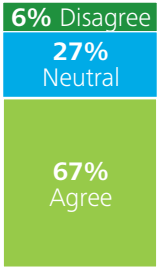
Total population



"Manufacturers don't offer enough alternative powertrains in vehicles I would actually want to drive"

Alternative powertrain preference

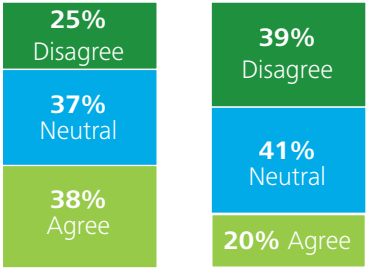
Total population



"I would prefer that manufacturers offer a *range of engine options* for each model that they produce."

Consumers substantially prefer a range of engine options over a specialized line of vehicles...

Gen Y *Other generations*



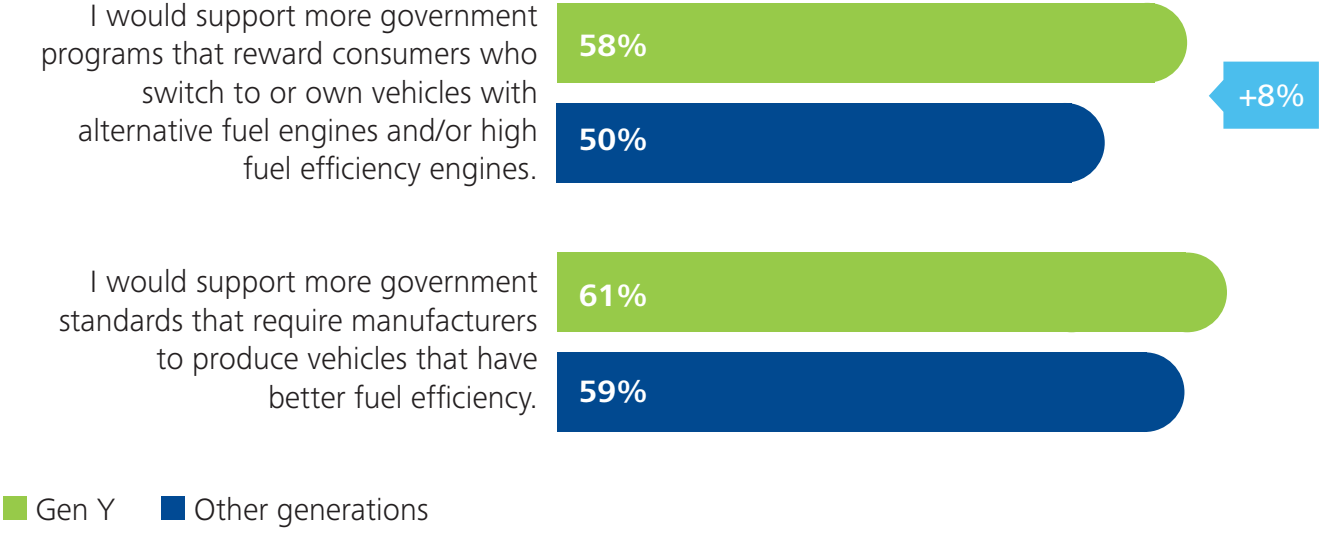
"I would prefer a vehicle from an automotive manufacturer that offers a *specialized line of vehicles* that only have alternative engines so that people know I'm environmentally conscious."

... but Gen Y shows twice the interest in specialized line of vehicles over other generations

Gen Y is

more supportive of government incentives

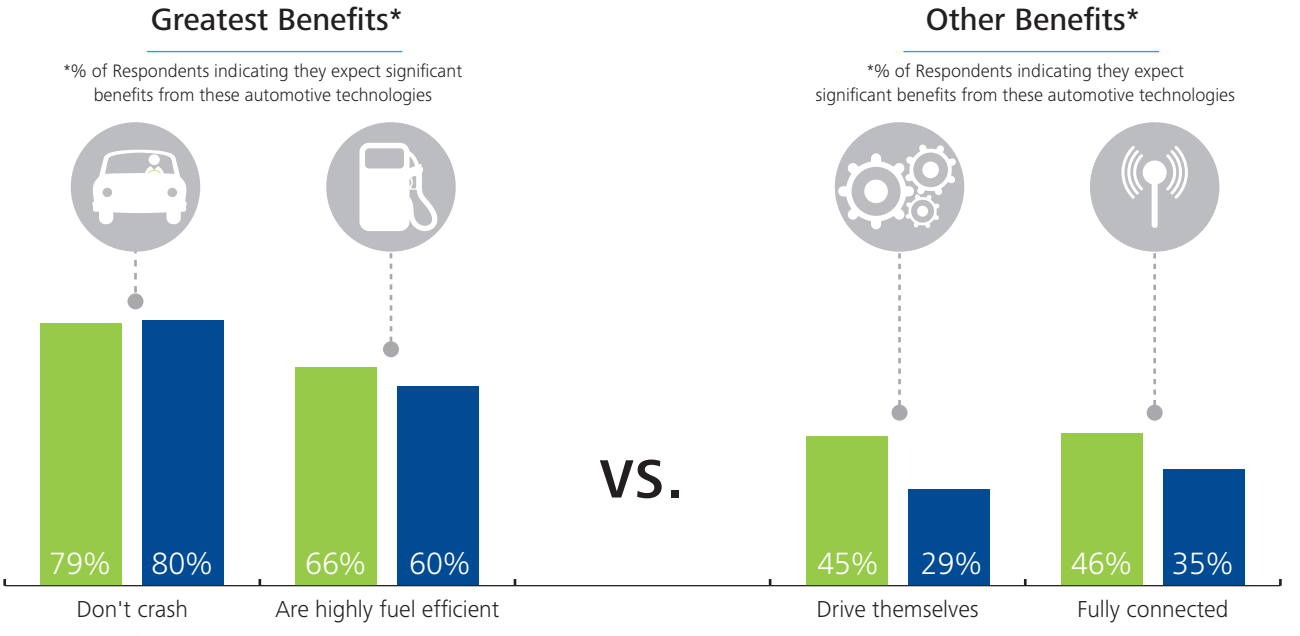
to switch to alternative powertrains.



Percentage of respondents that agreed with the statements above

Vehicle Technology

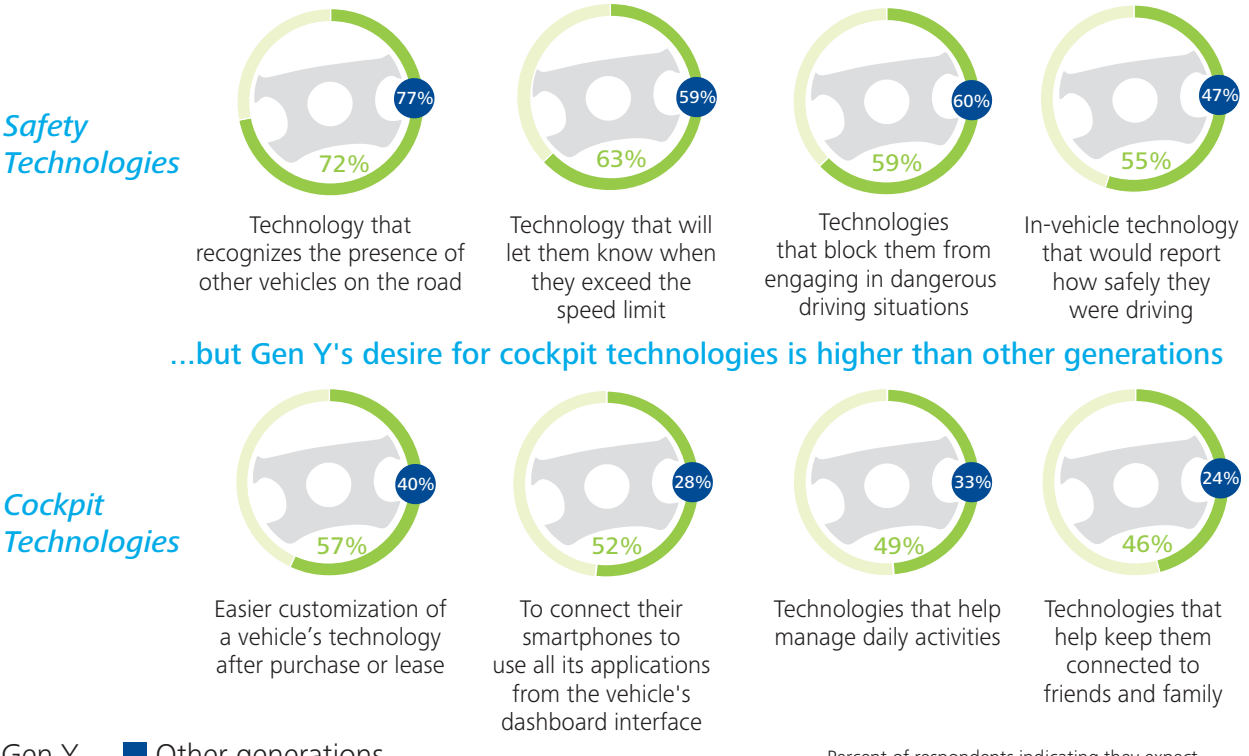
Gen Y consumers believe
there are significant benefits from new vehicle technologies,
including vehicles that:



Gen Y wants:
- Technology that recognizes the presence of other vehicles on the road
- Technology that will let them know when they exceed the speed limit
- In-vehicle technologies that would automatically block them from engaging in dangerous driving situations

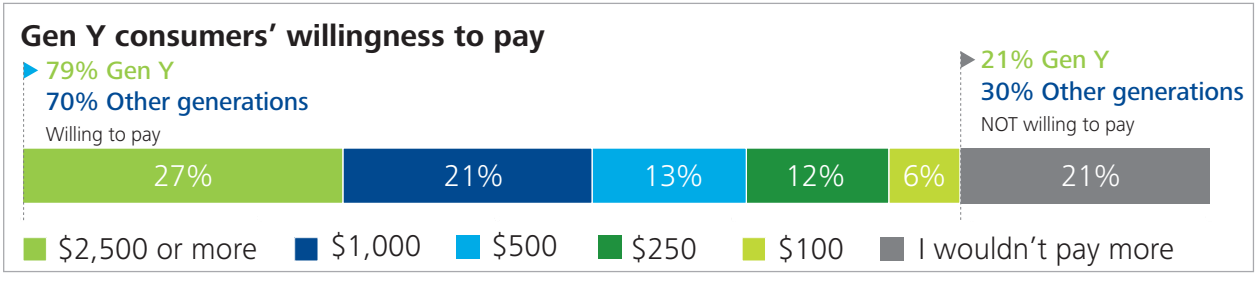
Gen Y Other generations

Consumers desire safety technologies more than **cockpit technologies...**



Percent of respondents indicating they expect significant benefits from these automotive technologies

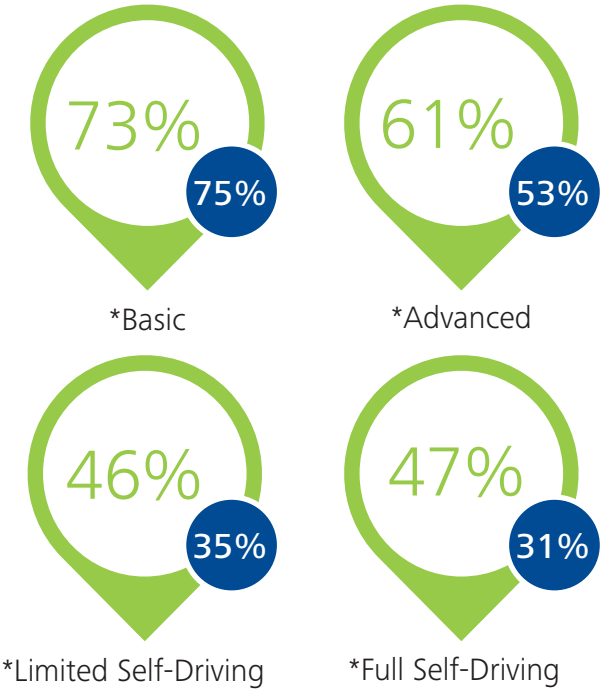
And consumers aren't willing to pay much, with only *27%* **willing to pay over $2,500**



Autonomous Vehicles

In general, U.S. consumers today find
higher levels of automation less desirable

But *Gen Y is far more comfortable with autonomous vehicles* than other generations



*% of Respondents indicating they would find the following levels of autonomy desirable

Gen Y — % — Other generations

U.S. federal government definitions for autonomous (driverless) vehicles

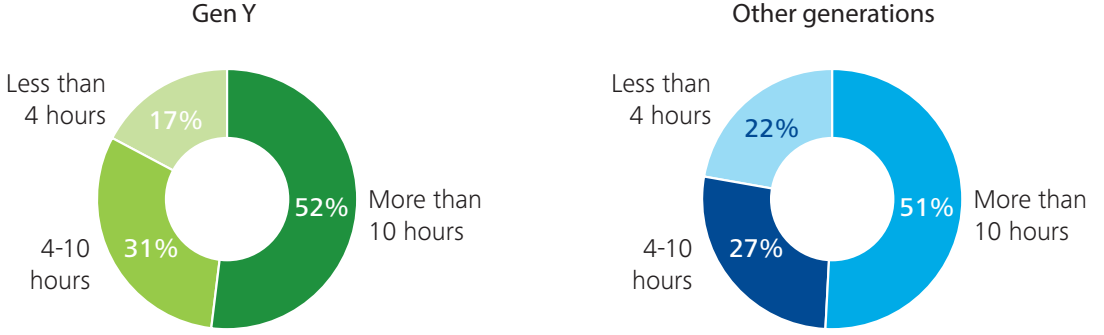
- **Basic**: Allows the vehicle to assist the driver by performing specific tasks like anti-lock braking (prevent from skidding) and/or traction control (to prevent loss of grip with the road).
- **Advanced**: Combines at least two functions such as adaptive cruise control and lane centering technology in unison to relieve the driver of control of those functions.
- **Limited Self-Driving:** Allows the vehicle to take over all driving functions under certain traffic and environmental conditions. If conditions changed, the vehicle would recognize this and the driver would then be expected to be available to take back control of the vehicle.
- **Full Self-Driving:** Allows the vehicle to take over all driving functions for an entire trip. The driver would simply need to provide an address and the vehicle would take over and require no other involvement from the driver.

Source: Based on U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) definitions

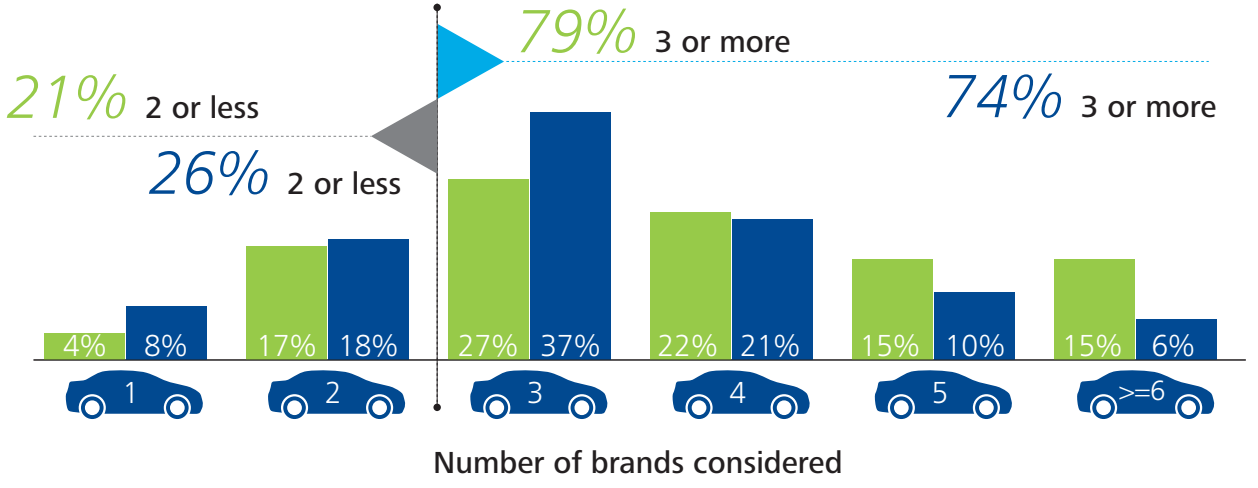
Research is key

The majority of Gen Y consumers spend more than *10 hours researching* and considers *3 or more brands* before they purchase or lease a vehicle.

Time spent researching possible vehicles

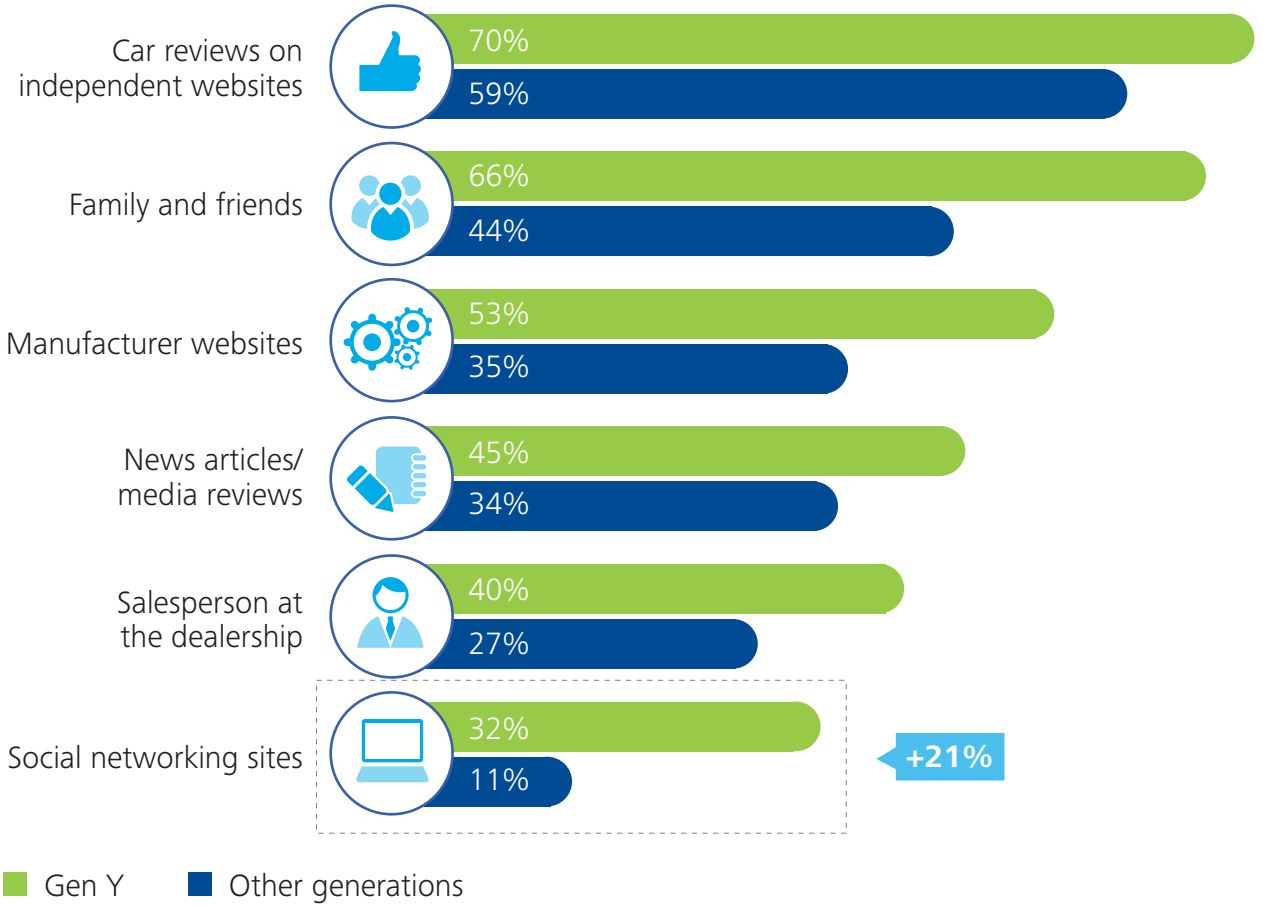


Number of brands considered when purchasing or leasing



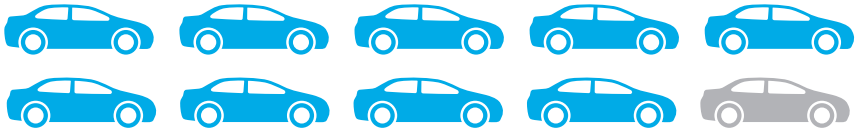
Impacting the purchase decision

Gen Y trusts independent car reviews and family and friends the most.



Percent of respondents indicating this source is a significant influence on the purchase decision

9 out of 10



Consumers want an *extremely efficient* purchase process...

Average acceptable time per phase for all consumers

Getting info from dealerships

34% not willing to wait more than **20 minutes**

Waiting to test drive a vehicle

23% not willing to wait more than **10 minutes**

Processing paperwork and registration

22% not willing to wait more than **20 minutes**

Processing financing

27% not willing to wait more than **20 minutes**

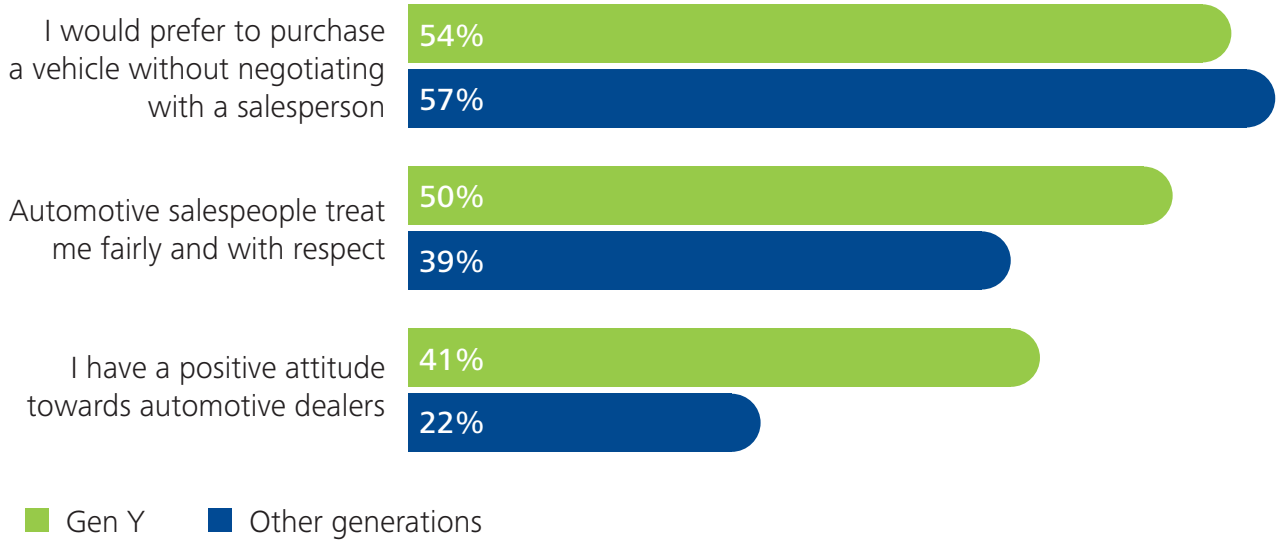
Performing simple maintenance service

38% not willing to wait more than **30 minutes**

Biggest challenge: consumers expect simple maintenance to be performed in less than an hour

...and some consumers are *willing to wait only 10-30 minutes* per phase

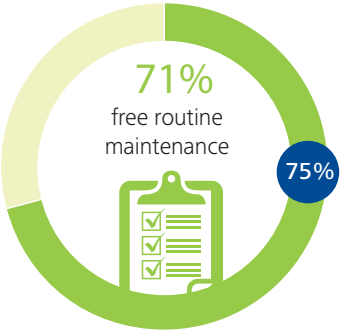
Gen Y consumers have a *more positive image of automotive dealerships* but the **majority of Americans would prefer to skip the negotiation process.**

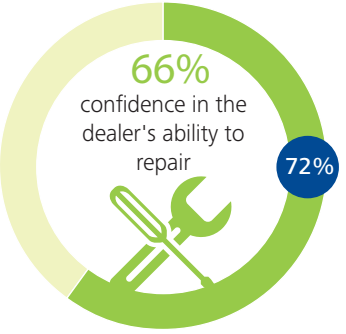


Service impacts vehicle sales

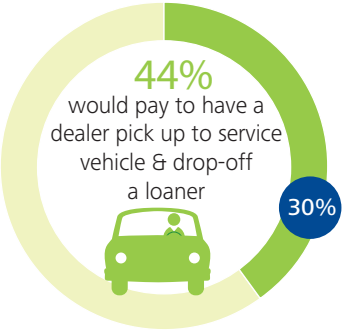
The *cost* and *quality* of the service bundle **influences over *2/3*** of consumers' purchase decision.

When choosing a vehicle to purchase or lease, how important are each of the following attributes?





Nearly half of Gen Y consumers are **willing to pay for services** that make their lives easier.



Gen Y Other generations

Percentage of respondents that agreed with the following statements

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