



Global Automotive Consumer Study: Future of Automotive Technologies

Insights for South Africa

Executive Summary

Key South African storylines uncovered when compared Globally

Dear Reader,

Deloitte's Global Automotive practice has been exploring consumers' evolving automotive and mobility preferences since 2009. Our sixth Global Automotive Consumer study, which surveyed a sample size of 1 254 respondents, reveals interesting insights into how consumers in the South African market feel about rapidly evolving in-vehicle technologies when compared to other countries around the globe.

Our findings reveal that South African consumers are more likely to desire advanced automation technology while making their car selection when compared to consumers in the United Kingdom, Germany, China, Mexico, and South Korea. However, their willingness to pay has decreased from R19 149 in 2014 to R18 370 in 2016. Having said that, younger South Africans are willing to pay more compared to older generations. When comparing the South African consumer to those in South Korea, United Kingdom and Germany, the average proportion of consumers in South Africa are more willing to pay for these **advanced technologies**, than these three countries.

The study also looked into the ranking of technology features, in which our consumers ranked **safety** as the most important feature, followed by **cyber security** and **connectivity**. What is also interesting to note is that our consumers are divided in terms of who they trust in bringing self-driving vehicles into our local market – 51% say they trust a tech company, whereas 49% say they trust traditional vehicle manufacturers. The interest in self-driving vehicles is there, with 7 in 10 South African consumers willing to try them out, provided they have a proven safety record. A concern they share, however, is the safety of the data which comes with advanced in-vehicle technology.

Ride-sharing services do not seem to pose a threat to car ownership as yet, with the majority of South African consumers saying they never, or rarely use this service. However, looking at the younger South African generations (Gen Y/Z), **42%** of them say they use ride-sharing services regularly and **question their need to own a vehicle** in the future.

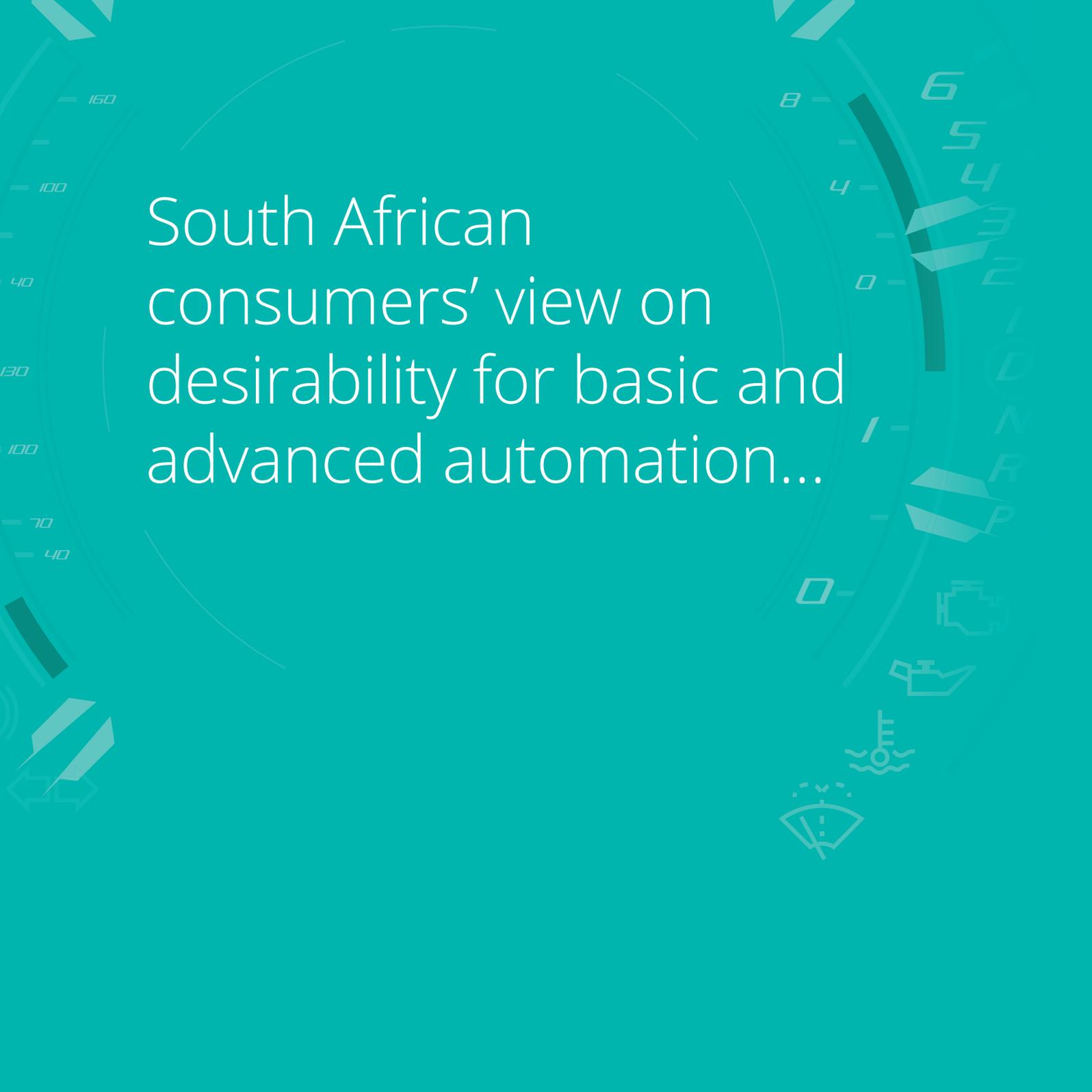
For more information on our survey, please download the report on Deloitte.com/za.

Kind regards,

Karthi Pillay

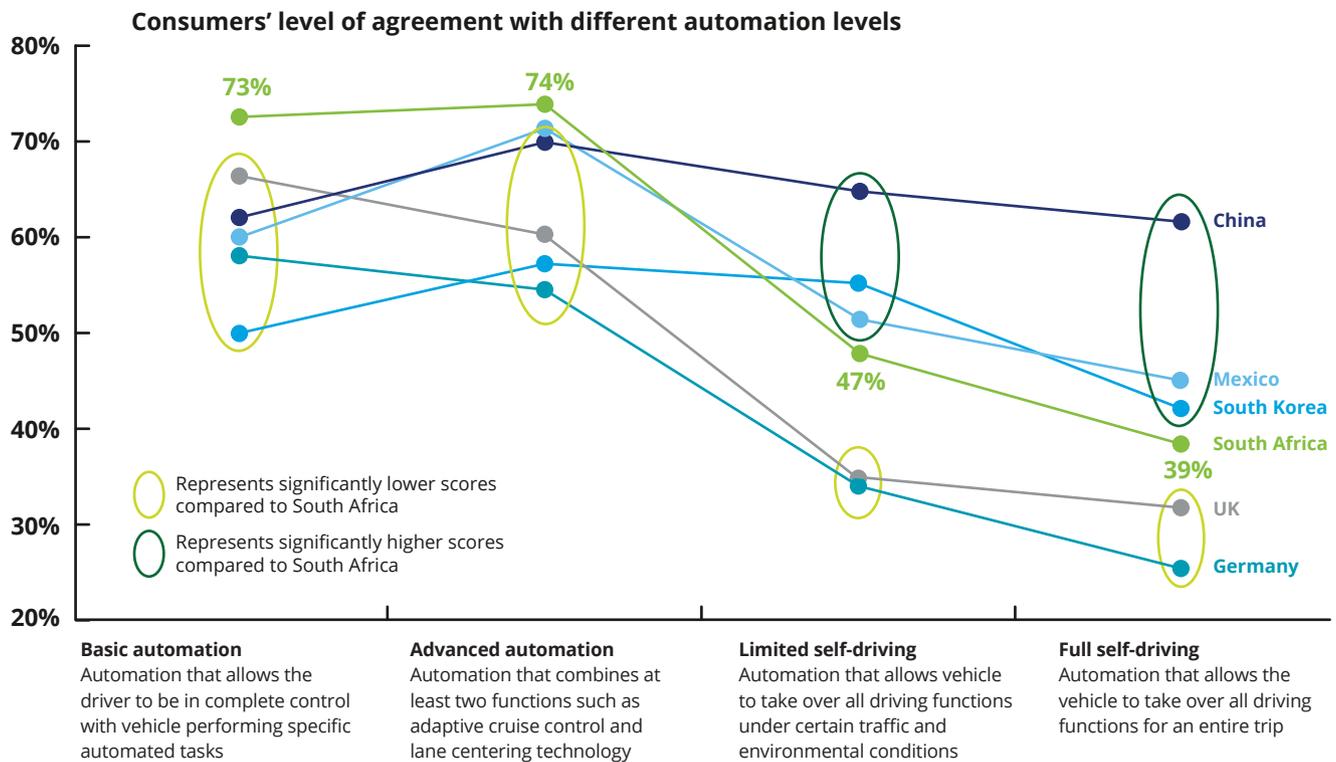
Deloitte Africa Automotive Leader



The background is a teal color with faint, semi-transparent images of a car's instrument cluster. On the left, there are speedometer and tachometer dials with numerical markings. On the right, there is a gear shift indicator with positions labeled 'P', 'R', 'N', 'D', '3', '2', '1'. Below the gear shift are icons for engine oil, a battery, and a fan. The text is centered in the upper half of the image.

South African consumers' view on desirability for basic and advanced automation...

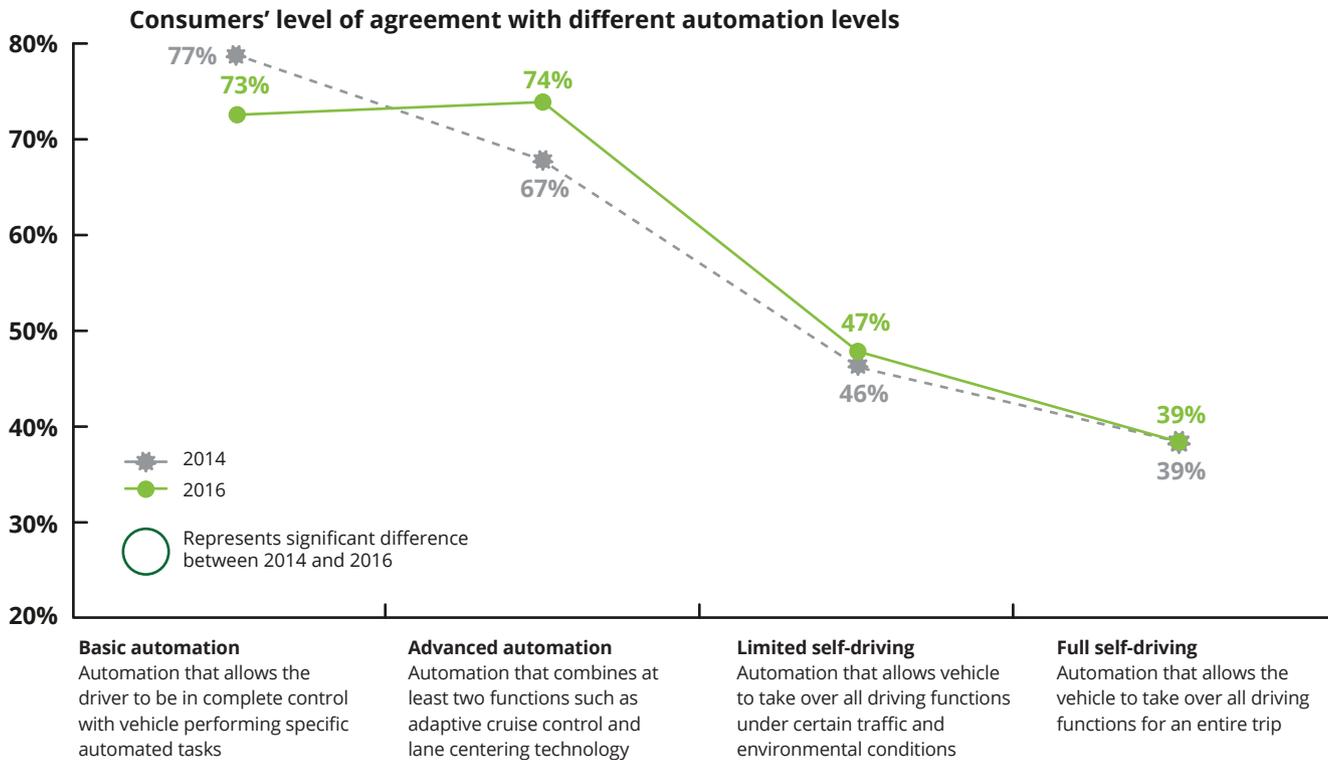
Consumer desirability for basic and advanced automation is higher in South Africa than China, Mexico, South Korea, UK, and Germany...



Note: Percentage of respondents who strongly agreed or agreed have been added together

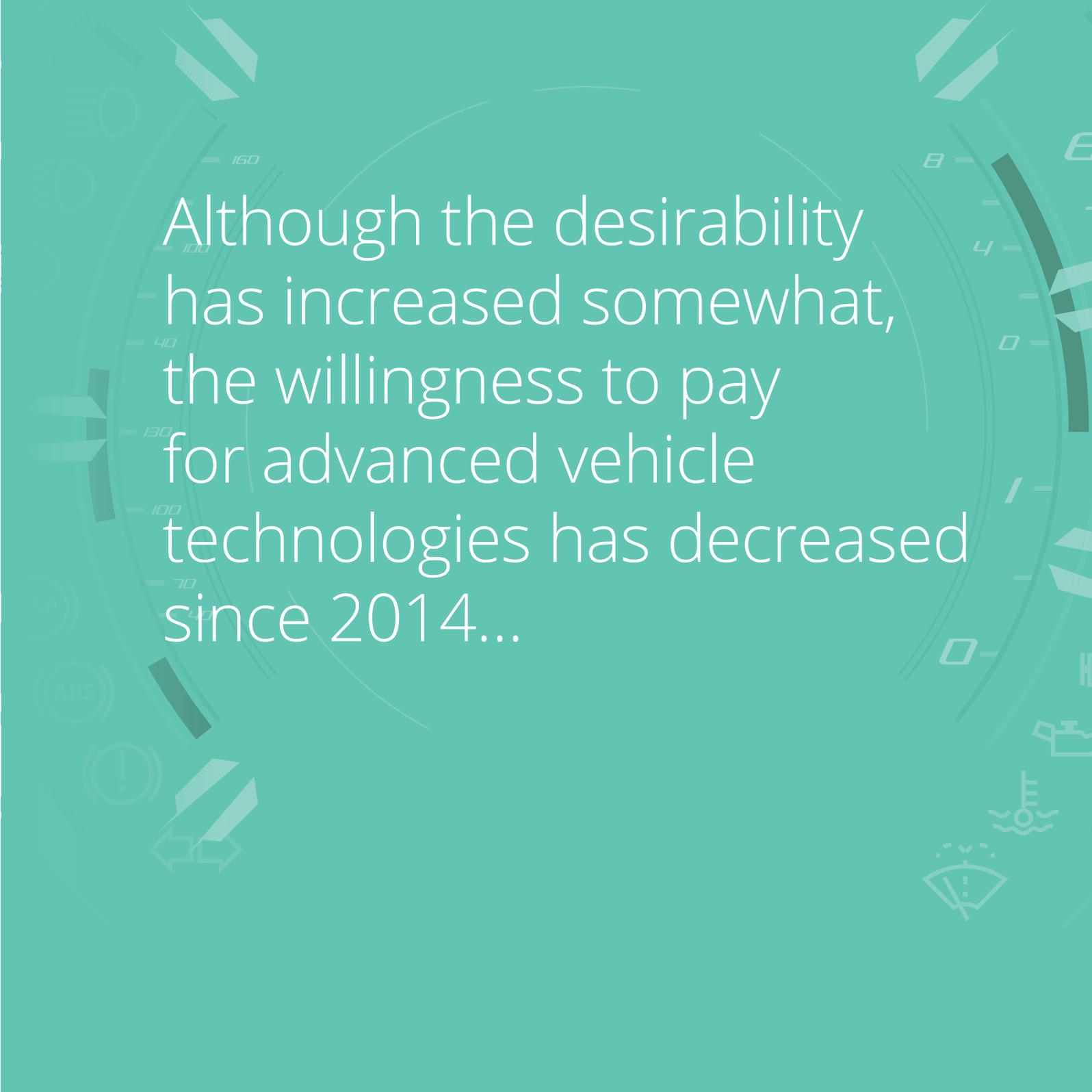
Source: 2016 and 2014 global automotive consumer survey, Deloitte

Furthermore, the desirability for advanced automation has increased over the last 2 years, while that for self-driving levels has remained stagnant...



Note: Percentage of respondents who strongly agreed or agreed have been added together

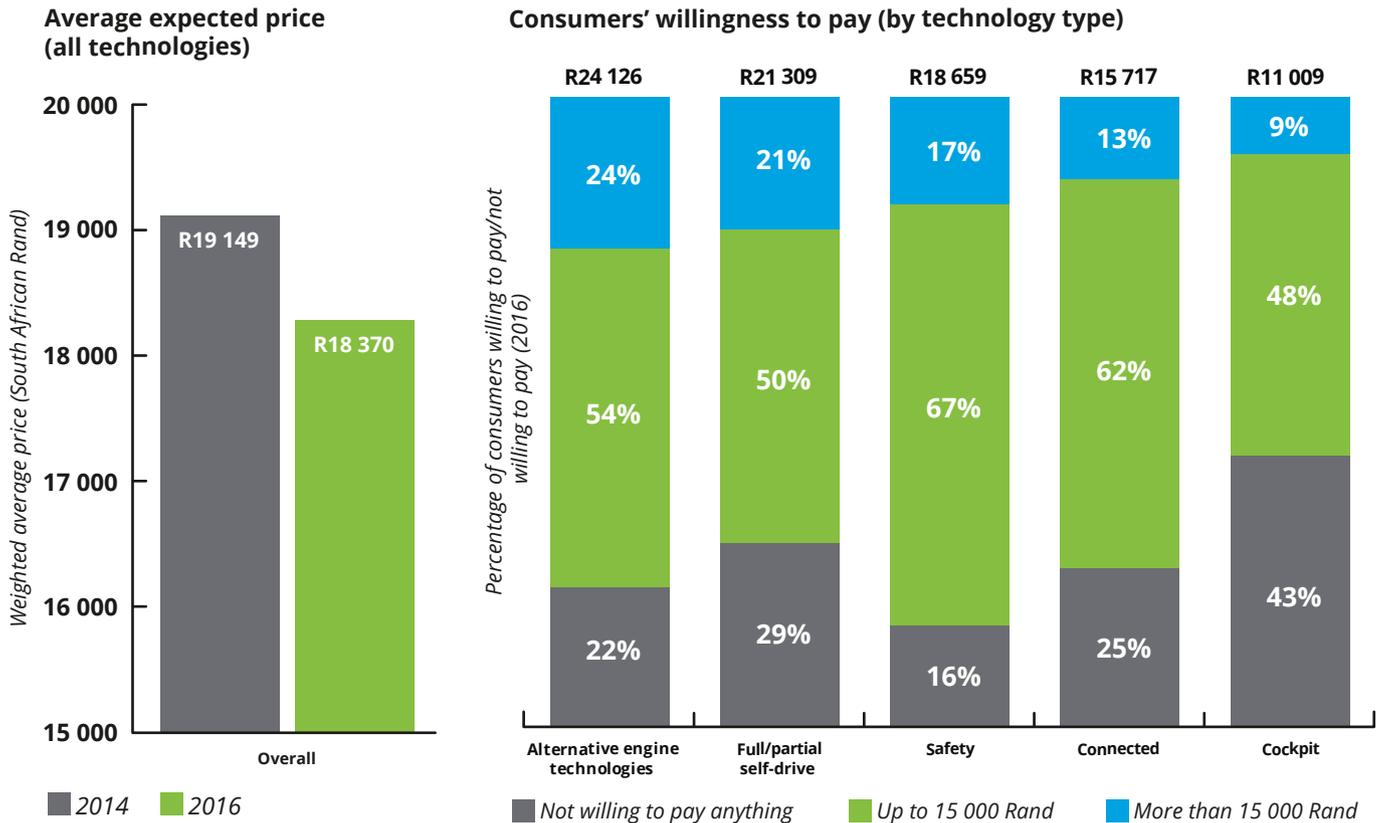
Source: 2016 and 2014 global automotive consumer survey, Deloitte

The background is a solid teal color. It features several faint, semi-transparent icons related to a car's dashboard and navigation. On the left, there are circular gauges with numerical scales (100, 130, 160) and arrows pointing in various directions. On the right, there are more gauges with scales (4, 8) and a speedometer needle. At the bottom, there are icons for a car's front view, a warning sign, and a navigation map. The overall aesthetic is modern and technical.

Although the desirability
has increased somewhat,
the willingness to pay
for advanced vehicle
technologies has decreased
since 2014...

Willingness to pay has decreased slightly in 2014...

For cockpit features, stated price point is relatively low



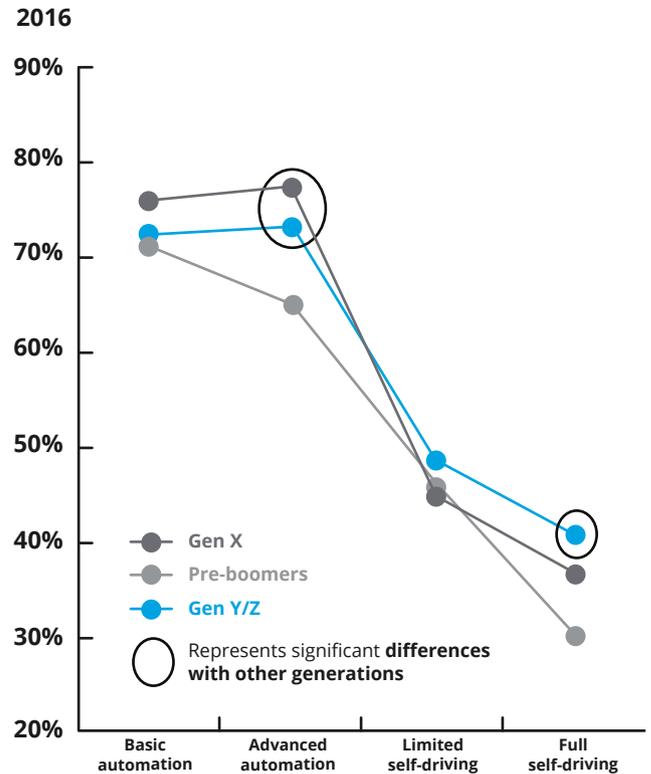
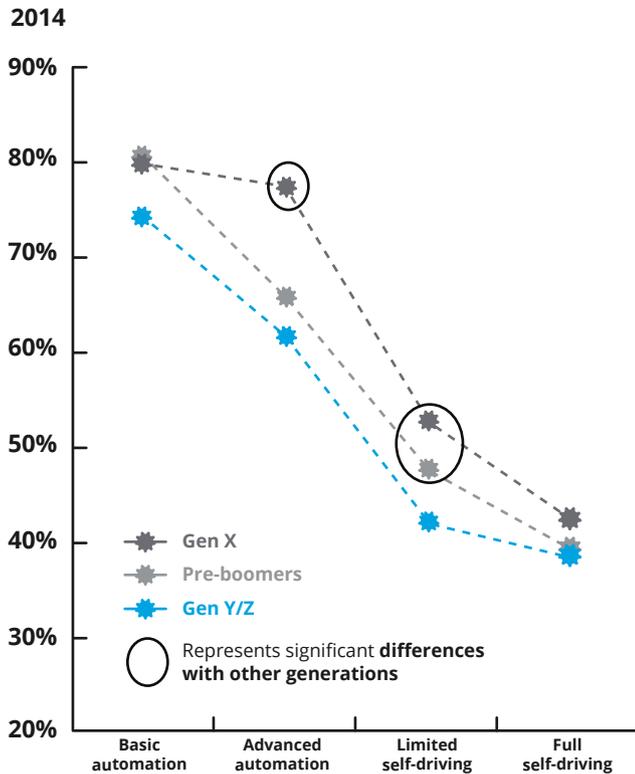
Source: 2016 and 2014 global automotive consumer survey, Deloitte

But ... there is good news for automakers to be found among younger consumers...



Interest in full self-driving vehicles has increased among younger generations...

% of consumers who agree or strongly agree with different levels of automation by generation (2014 and 2016)

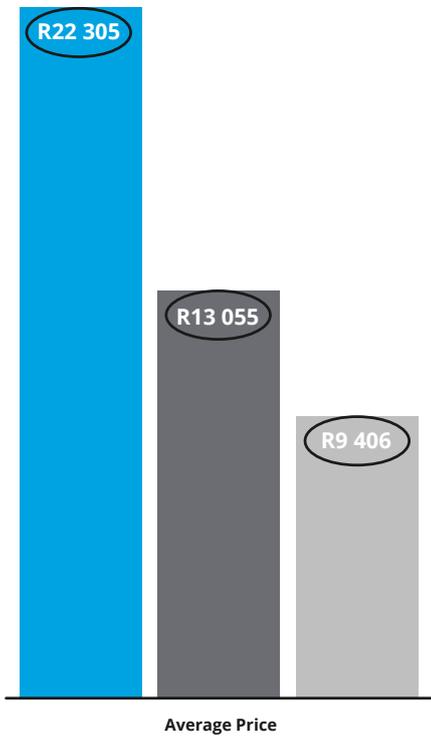


Note: Year of birth for various Generations - Pre-boomers: Before 1964; Gen X:1965-1976; Gen Y/Z:1977 and later

Source: 2016 and 2014 global automotive consumer survey, Deloitte

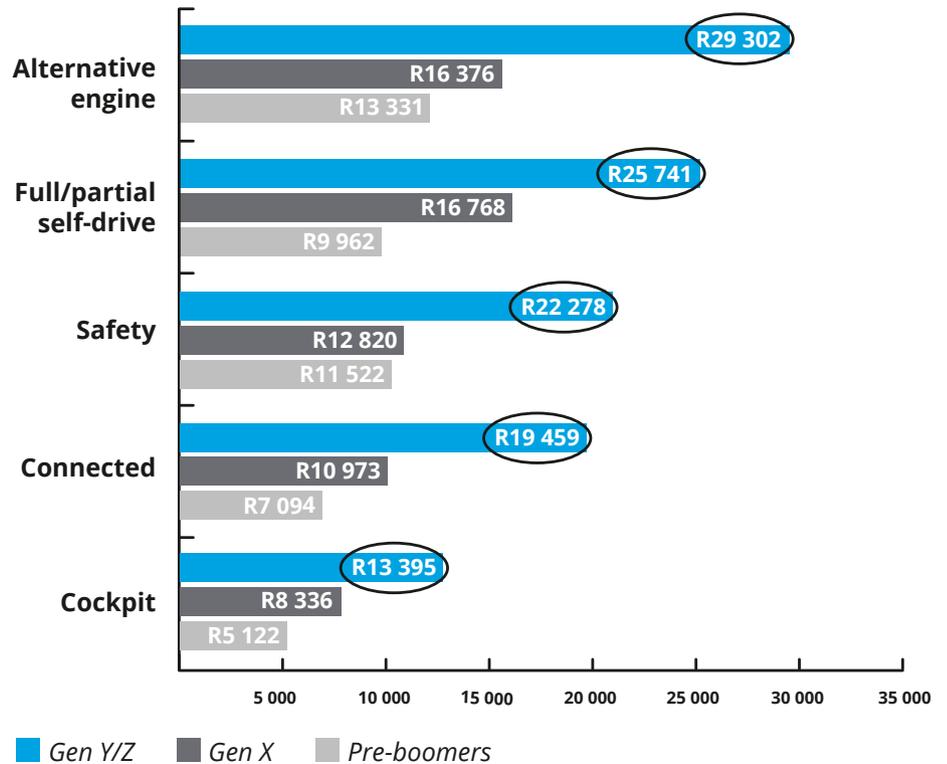
Younger generations are willing to pay more for all in-vehicle technologies versus older generations...

Average price for all technologies



○ Represents significant differences with other options

Weighted average price of technologies by generation



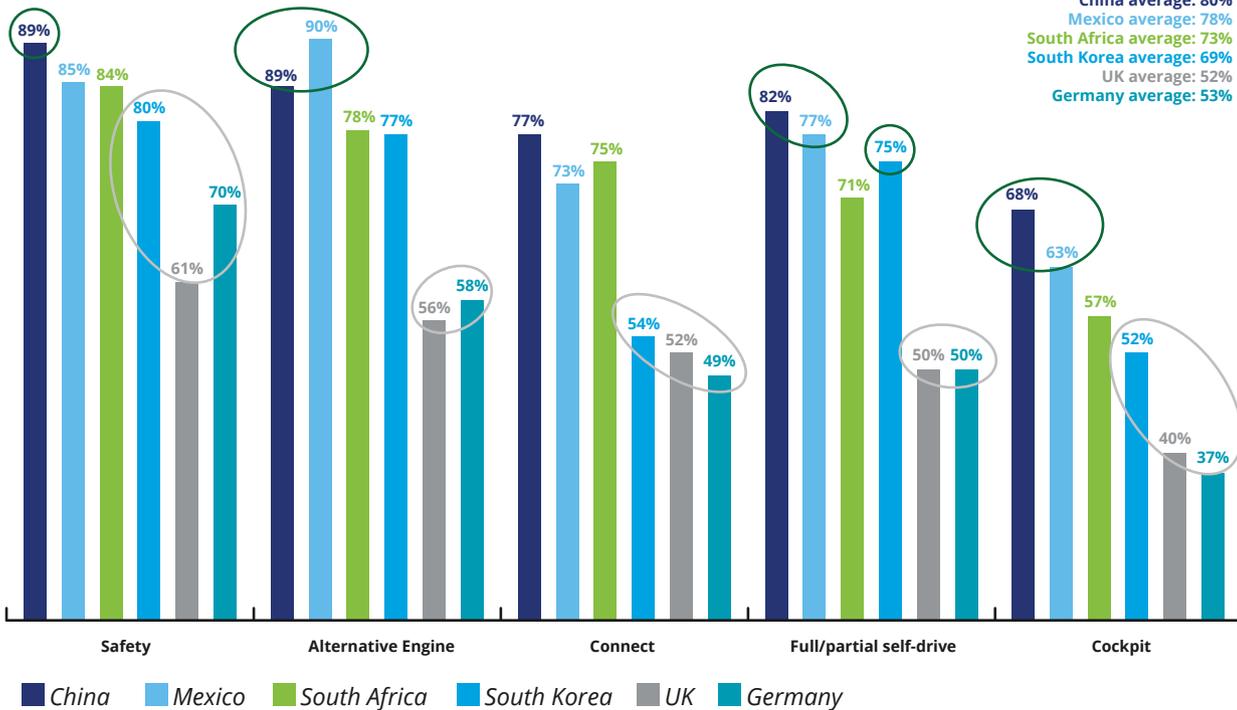
...and a higher average proportion of consumers in South Africa are willing to pay for future vehicle technologies when compared to South Korea, UK and Germany...

% of consumers who are willing to pay for vehicle technology by type (2016)

Average price for all technologies

○ Significantly lower than South Africa
 ○ Significantly higher than South Africa

China average: 80%
 Mexico average: 78%
 South Africa average: 73%
 South Korea average: 69%
 UK average: 52%
 Germany average: 53%



Source: 2016 global automotive consumer survey, Deloitte

The background is a solid blue color. On the right side, there is a large, semi-circular speedometer graphic with a needle pointing towards the top right. The speedometer has numbers 4, 6, 8, and 10 visible. Below the speedometer, there are several white icons: a smartphone, a laptop, a Wi-Fi signal, a key, and a gear. On the left side, there are some faint, stylized icons of a smartphone and a laptop.

Which technology features
do South African consumers
find most useful?

Safety...

Cyber Security...

Connectivity...

The advanced technologies South African consumers prefer ... It's all about safety (and the building blocks of vehicle automation)...

	Rank	Technology that...	Category
Most Useful	1	Recognises objects on road and avoids collision	Safety
	2	Takes steps in medical emergency or accident	Safety
	3	Enables remote shutdown of stolen vehicle	Cyber security
	4	Informs driver of dangerous driving situations	Safety
	5	Blocks driver from dangerous driving situations	Safety
	6	Prevents theft by restricting unauthorised access	Cyber security
	7	Diagnoses and sends maintenance notifications	Connectivity
	8	Helps enhance fuel efficiency	Fuel efficiency
	9	Prevents hacking into vehicle systems	Cyber security
	10	Enables vehicle-to-vehicle and road communication	Connectivity
Moderately Useful	11	Monitors the physical health of the driver	Safety
	12	Enables usage of alternative fuels	Environment
	13	Lowers the impact on the environment	Environment
	14	Enables use of advanced lightweight materials	Fuel efficiency

Key for category (pages 13 and 14)

- Safety
- Cyber security
- Connectivity
- Environment
- Fuel efficiency
- Convenience
- Self-drive
- Cost efficiency
- Service enabler
- Performance
- Miscellaneous

Note: Break points for most, moderate and least preferred technologies are derived based on percentage of times a technology is rated the best

...while convenience and service-enabling technology features resonated the least with consumers...

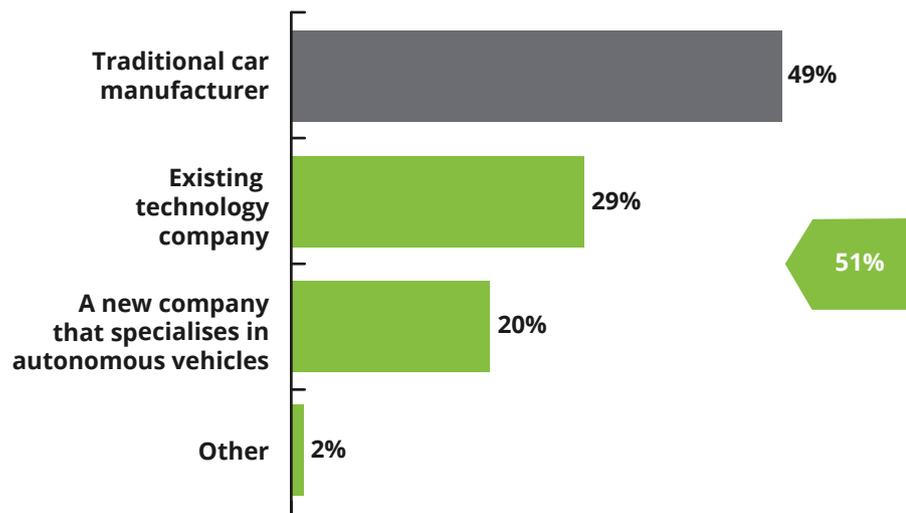
	Rank	Technology that...	Category
Least Useful	15	Enables interactive vehicle operational information	Convenience
	16	Enables high speed, long distance, highway 'auto-pilot' mode	Self-drive
	17	Coaches the driver to drive safely	Cost efficiency
	18	Automates tasks for comfort and convenience	Convenience
	19	Enables full self-driving capabilities	Self-drive
	20	Enables hands-free interior controls	Convenience
	21	Assists in locating, reserving, and navigating to a parking space	Service enabler
	22	Enables remote/automatic software updates of the vehicle	Connectivity
	23	Makes available adjustable settings to enhance vehicle performance	Performance
	24	Allows use of smartphone applications through the vehicle dashboard	Connectivity
	25	Enables the use of self-healing paint	Miscellaneous
	26	Enables low-speed urban "auto pilot" mode	Self-drive
	27	Provides notifications when places of interest are near	Service enabler
	28	Automatically pays parking and toll fees	Service enabler
	29	Allows the driver to control automated home systems	Service enabler
	30	Provides passengers with customised entertainment while driving	Convenience
31	Empowers customer to personalise vehicles	Miscellaneous	
32	Helps manage daily activities	Convenience	

Note: Break points for most, moderate and least preferred technologies are derived based on percentage of times a technology is rated the best

Consumers in South Africa are divided, with **51%** trusting a tech/new company (which specialises in autonomous vehicles) more to bring self-driving technology to market...

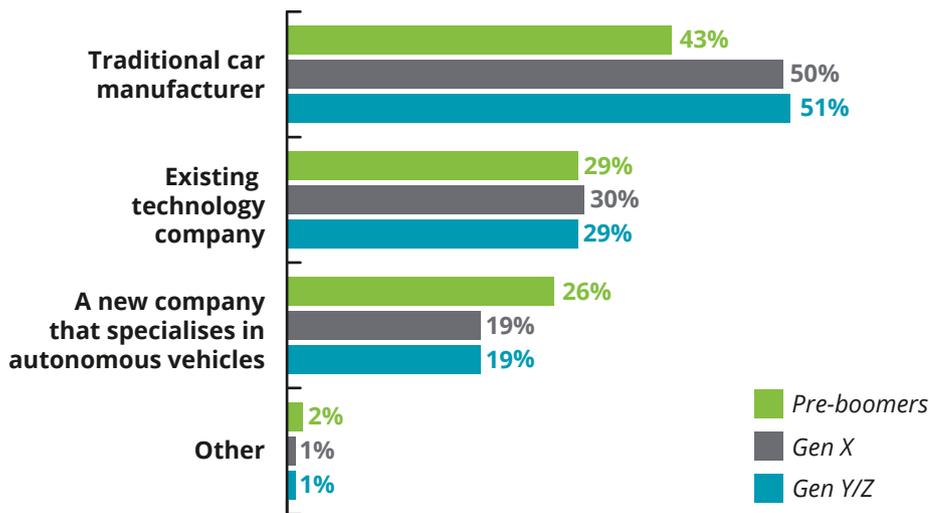
Consumers in South Africa are divided between who they trust most; a technology company, or traditional car manufacturer, to bring self-driving technology

Type of company consumers trust the most to bring fully self-driving technology to market



Consumers in South Africa are divided, with half of them trusting technology companies more, while the other half trust traditional car manufacturers to bring self-driving technology

Type of company consumers trust the most to bring fully self-driving technology to market (by generation)

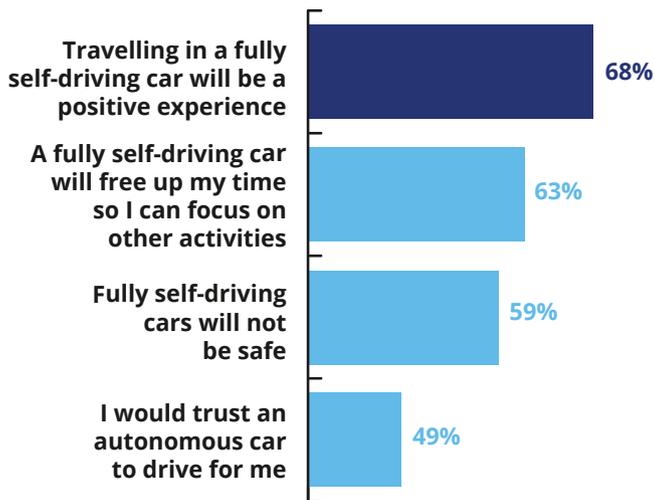




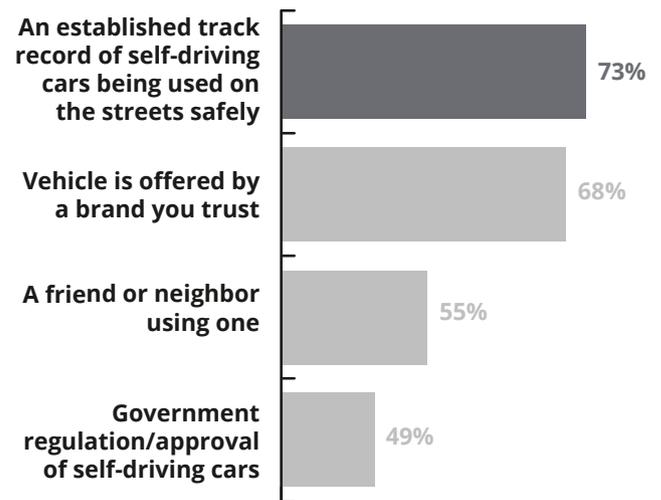
Individual safety features rule, but how do consumers feel about fully self-driving vehicles?

Almost 7 in 10 consumers think travelling in self-driving cars will be a positive experience, and are willing to try them if they have an established safety record...

Consumer opinion on fully self-driving vehicle



Factors making consumers ride in fully self-driving vehicles



Note: Percentage of respondents who strongly agreed or agreed have been added together

Percentage of respondents who said 'significantly more likely' or 'more likely' have been added together

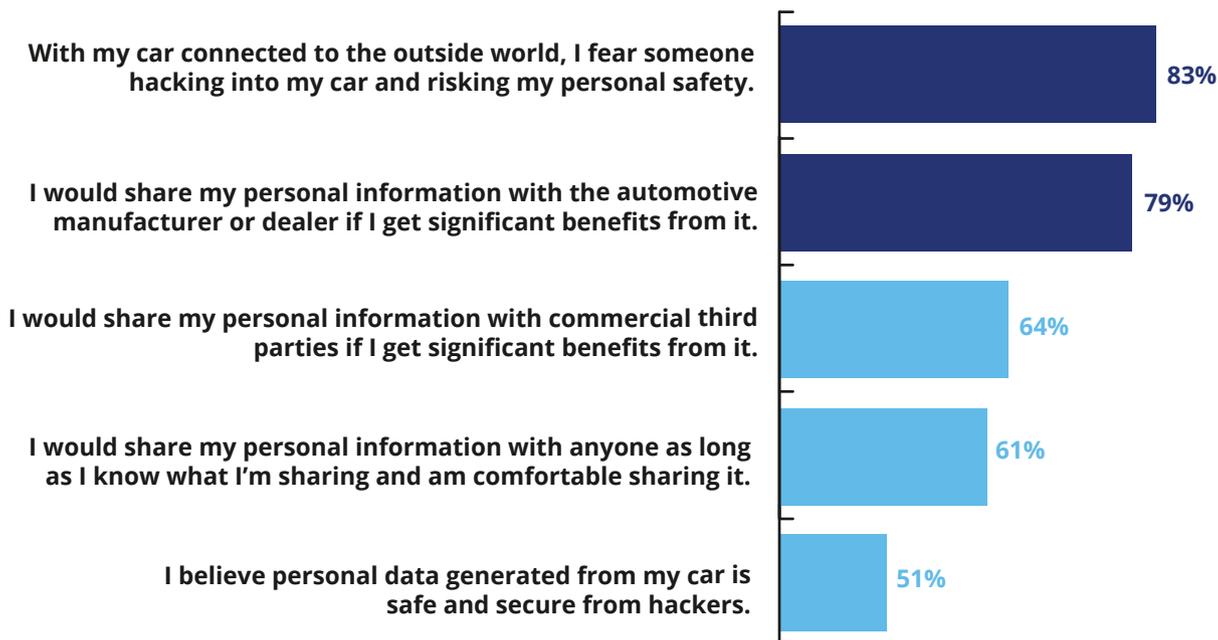
160

Consumers are
concerned about the
safety of their data...



8 in 10 consumers fear hacking as the biggest threat to data sharing, but would readily share their personal information with car makers if they get significant benefits...

Consumer opinion on personal data sharing and privacy

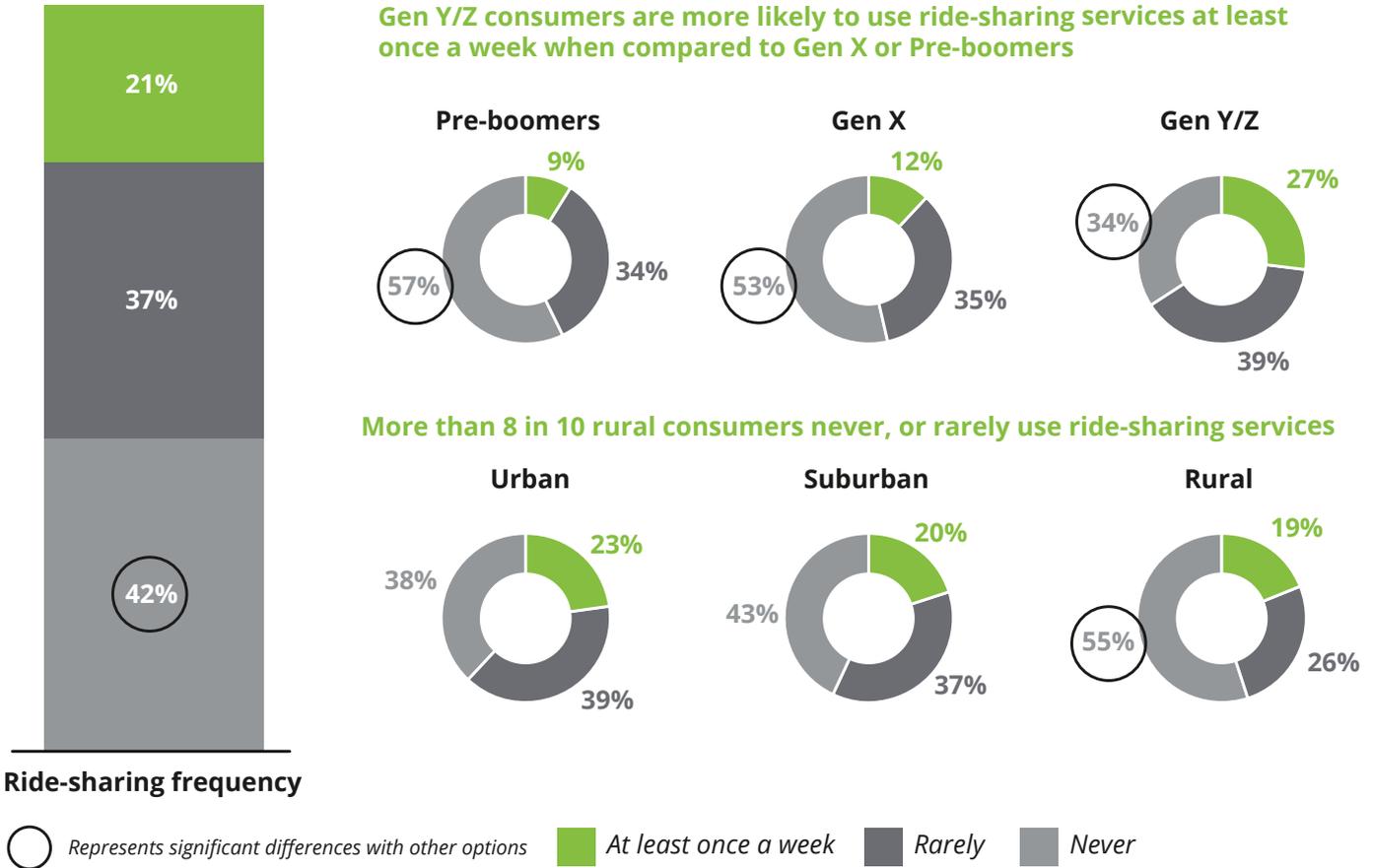


Note: Percentage of respondents who strongly agreed or agreed have been added together



Ride-sharing is not a
threat for South African
car ownership...for now...

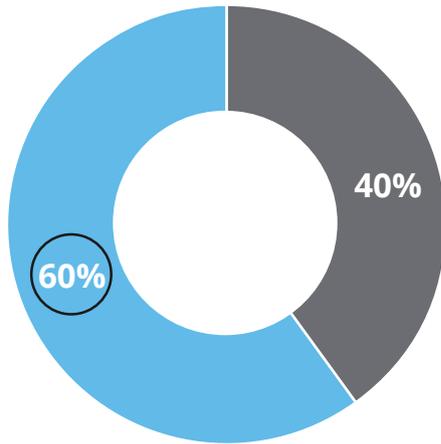
The majority of consumers in South Africa never, or rarely use ride-sharing services...



*Ride-sharing is defined in this study as car sharing services wherein consumers hire a car/driver via the phone, or an app

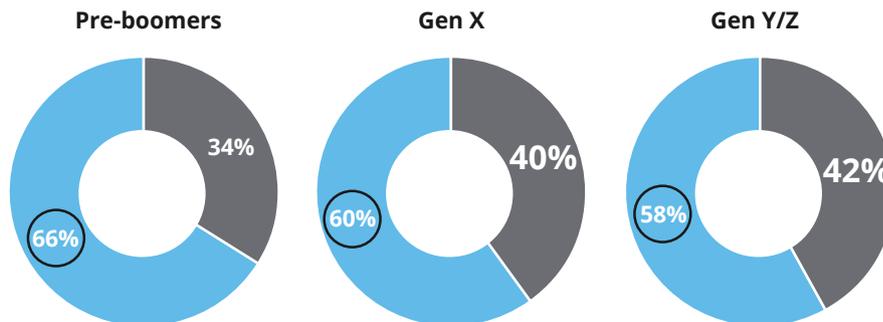
...with the majority of consumers across all generations using it for personal trips...

% use of ride-sharing services by business versus personal travel



More than 4 in 10 Gen X and Gen Y/Z consumers use ride-sharing services for business trips

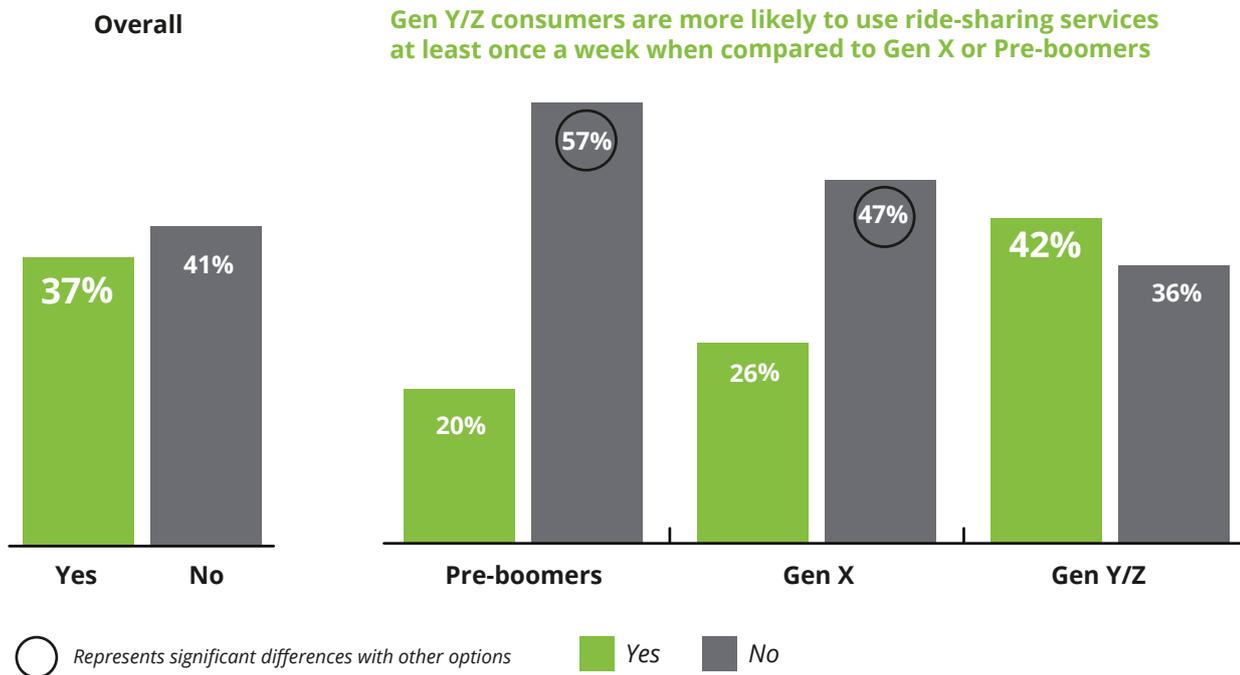
% use of ride-sharing services by Generation



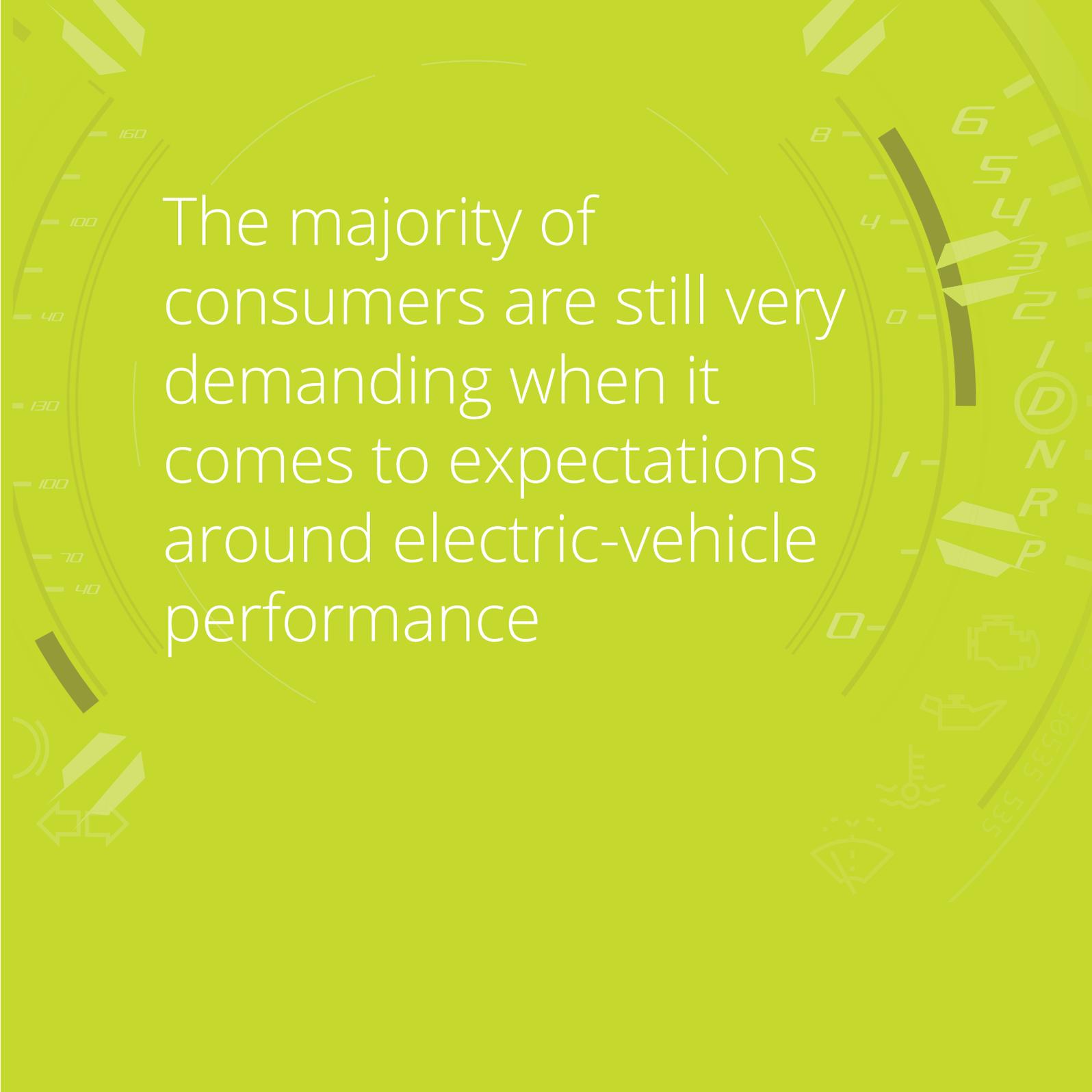
○ Represents significant differences with other options ■ Personal travel ■ Business travel

Interestingly, more than 1 in 3 consumers who use ride-sharing services, question their need of owning a vehicle in the future

% of consumers who question their future vehicle ownership due to use of ride-sharing services, South Africa, 2016



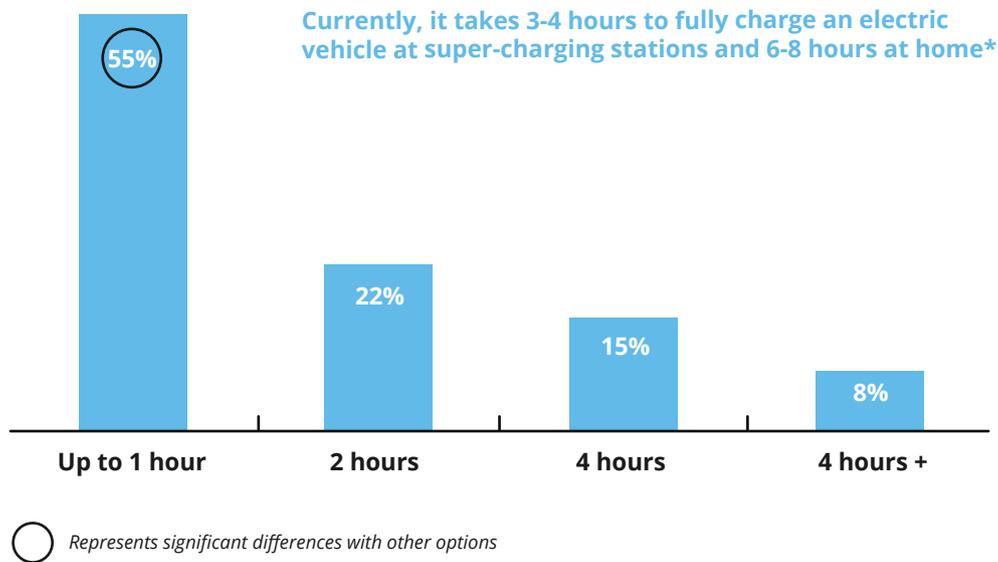
The rest of the percentage of consumers in each category have not thought about using it



The majority of consumers are still very demanding when it comes to expectations around electric-vehicle performance

55% of consumers are willing to wait a maximum of only 1 hour to fully charge an all-battery powered electric vehicle...

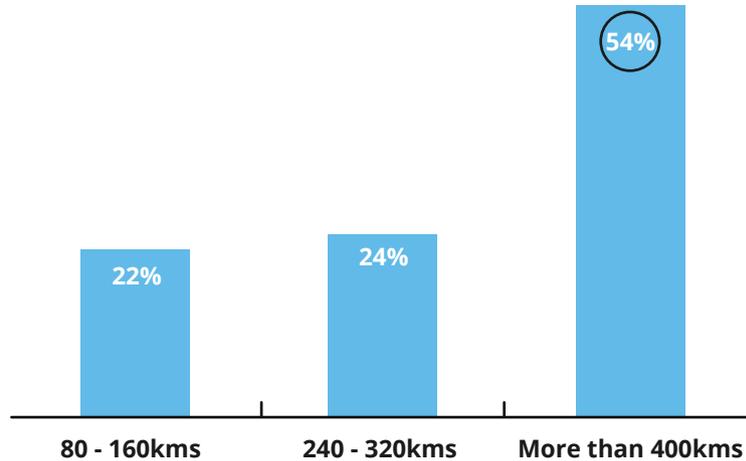
Maximum time consumers are willing to wait to fully charge an electric vehicle



*<http://www.ibtimes.co.uk/electric-cars-could-be-charged-just-15-minutes-using-new-intermediate-storage-system-1539999>

More than half of the consumers want a minimum distance of more than 400 kilometers from a fully charged electric vehicle...

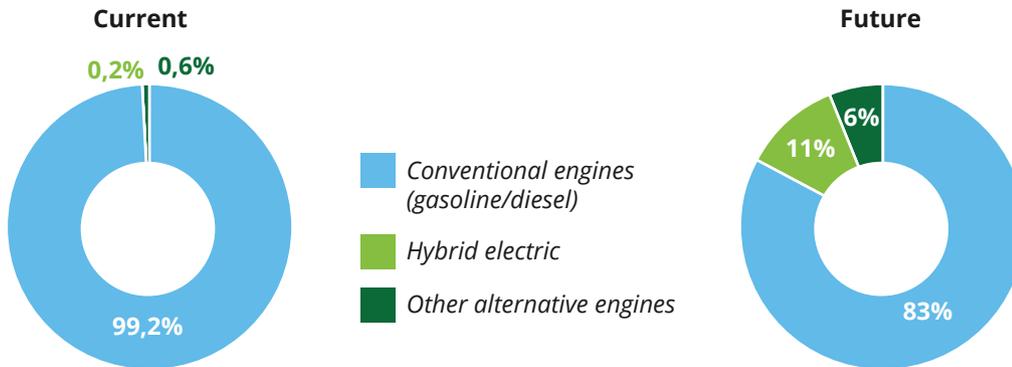
Minimum distance expected from a fully charged electric vehicle



○ Represents significant differences with other options

While conventional engines remain the preferred choice, even into the future, acceptance of alternative engines are on the rise across all generations...

Engine Preferences



Alternative engines by generations



Study Methodology

The Deloitte Global Automotive Consumer Study is fielded using an online panel methodology where consumers are invited to complete the questionnaire via email through Deloitte's global panel partner. This module, which focused on future vehicle technologies, was fielded in 17 countries.

The total sample of survey respondents was 22 078 consumers (16 years old and up). The sample plan was designed to be nationally representative of the overall population in each country.

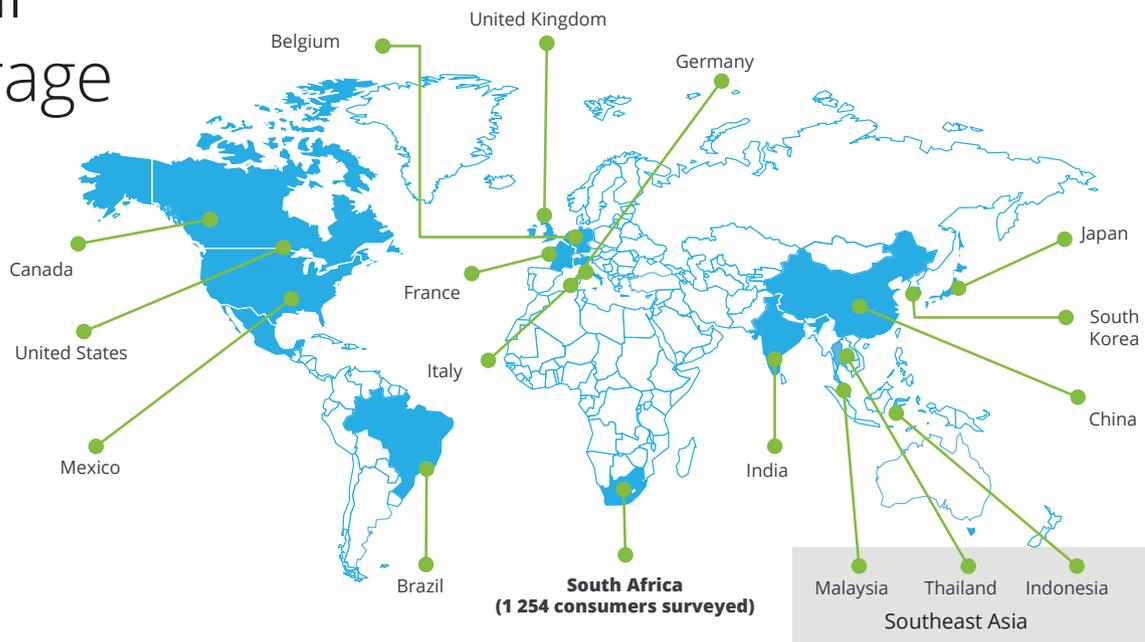
The survey was divided into two broad sections:

1. Consumer preferences related to future technologies
2. Core questions to facilitate repeatable analyses across from 2014

One key outcome of this study was to determine consumer prioritisation of various new in-vehicle features. Maximum Differential Analysis was used to determine a relative ranking of 32 technologies. Using Sawtooth's best-worst scaling, respondents were presented with a gamified method of choice where they were asked to select which of five features was the most and least useful technology.

Each of the 32 features was presented two times in a random order. Consumer choices were then aggregated to yield an overall utility score for each of the 32 technologies, which were then rescaled to 1 000. This analysis was conducted for each of the 15 covered markets to understand consumer preferences.

Global Coverage



Fielding Dates, Sample Size and Key Demographics used

Country	Start Date	End Date	Sample Size
South Africa	12/9/2016	25/9/2016	1 254

	Generation			Gender		Place of Residence			Income Level		
	Gen Y/Z	Gen X	Pre-boomers	Male	Female	Urban	Suburban	Rural	Low	Med	High
South Africa	64%	18%	18%	52%	48%	41%	52%	7%	27%	21%	52%

	Vehicle Ownership		How Acquired		Vehicle Type		Engine Type		Length of Ownership		
	Owners	Non-owners	New	Used	Non-luxury	Luxury	Conventional (Gas+Diesel)	Alternative powertrain	<2 yrs	3-5 yrs	5-10+ yrs
South Africa	82%	18%	43%	57%	83%	17%	99%	1%	37%	40%	23%

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