

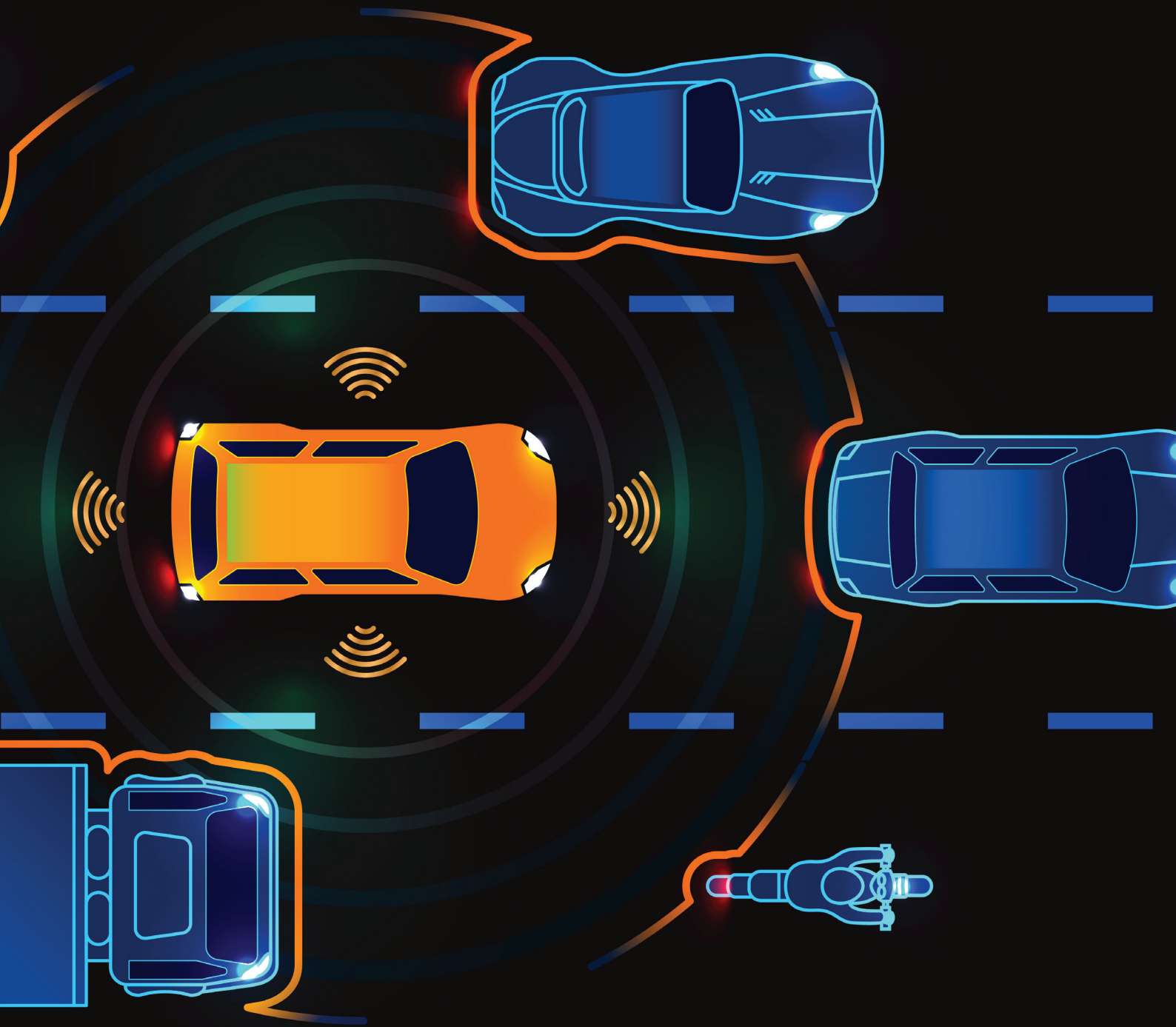


Global Automotive Consumer Study:

Autonomous, connected vehicles and
multi-modal mobility

Insights for South Africa

2019





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To learn more about the Global
Automotive Consumer Study, visit
www.deloitte.com/autoconsumers

For a decade, Deloitte has been exploring consumers' changing automotive expectations and the evolving mobility ecosystem.

Key insights from our Global Automotive Consumer Study over the years:



The Global Automotive Consumer Study helps inform Deloitte’s work and insights into the evolution of mobility, smart cities, connectivity, transportation, and other changes transforming the movement of people and goods.

2019 Deloitte Automotive Consumer Study – South Africa

Deloitte surveyed more than 25 000 consumers in 20 countries to explore opinions regarding a variety of critical issues impacting the automotive sector, including the development of advanced technologies, change in customer preferences and a need for a strategy refresh by the sectors corporates. The overall goal of this annual study is to answer important questions that can help companies prioritise and better position their business strategies and investments.

Key insights



South Africans still prefer to use traditional transportation

Consumers prefer to use their own vehicle, walk, or use a taxi to satisfy their transportation needs. 67% of consumers said they would consider a model that offers more utility compared to 26% that would likely favour more luxury



A need for a change in Original Equipment Manufacturer (OEM) models remains high

74% of consumers are interested in buying direct from OEM. Electric vehicles remains an uncertainty to end consumers affordability needs, with a slight increased interest in Hybrids



Majority of consumers are willing to pay for connected technologies

Consumer opinions are mixed, while interest in time-saving features is high, significant concerns remain over privacy and data security



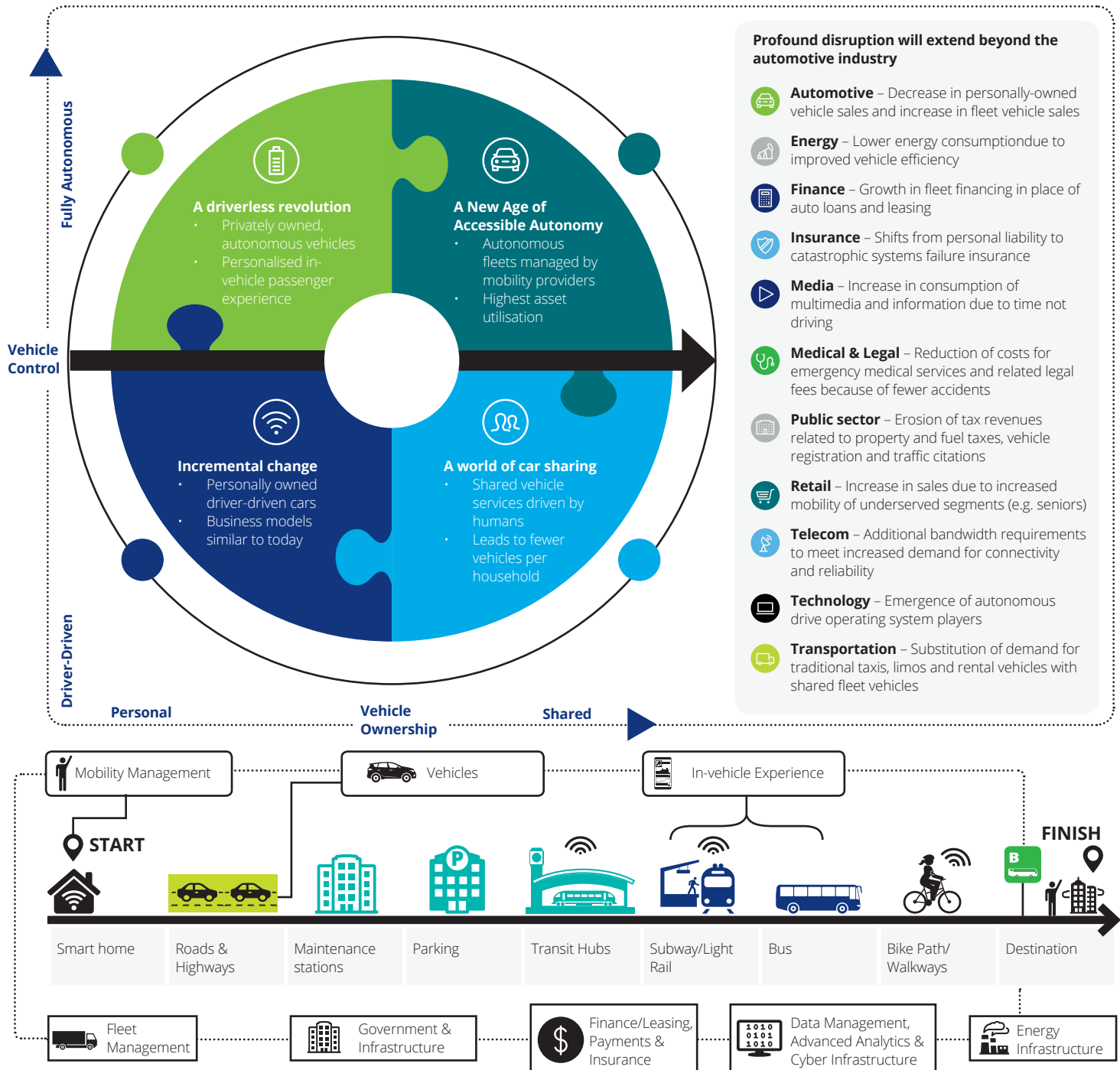
South African consumers are interested in innovative mobility services

More than half of the consumers are interested in subscription services for selecting multiple vehicles and those that offer unlimited ride-hailing



Consumers “pump the brakes” on interest in Autonomous Vehicles (AVs)

As the technology gets closer to scalable, real-world application, consumers are questioning if AVs are safe



What do SA consumers think
about multi-modal mobility?

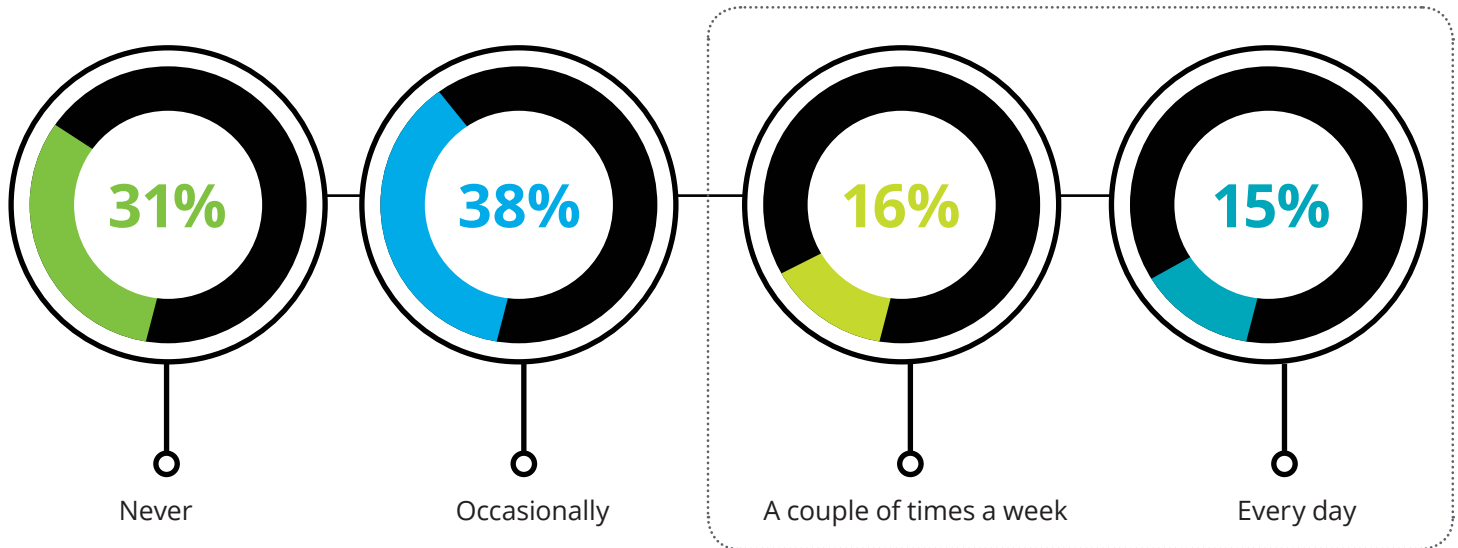


Majority of people are still not able to telecommute frequently

An effective, efficient transportation system remains a vital part of everyday life for most people



How often do consumers work from home?

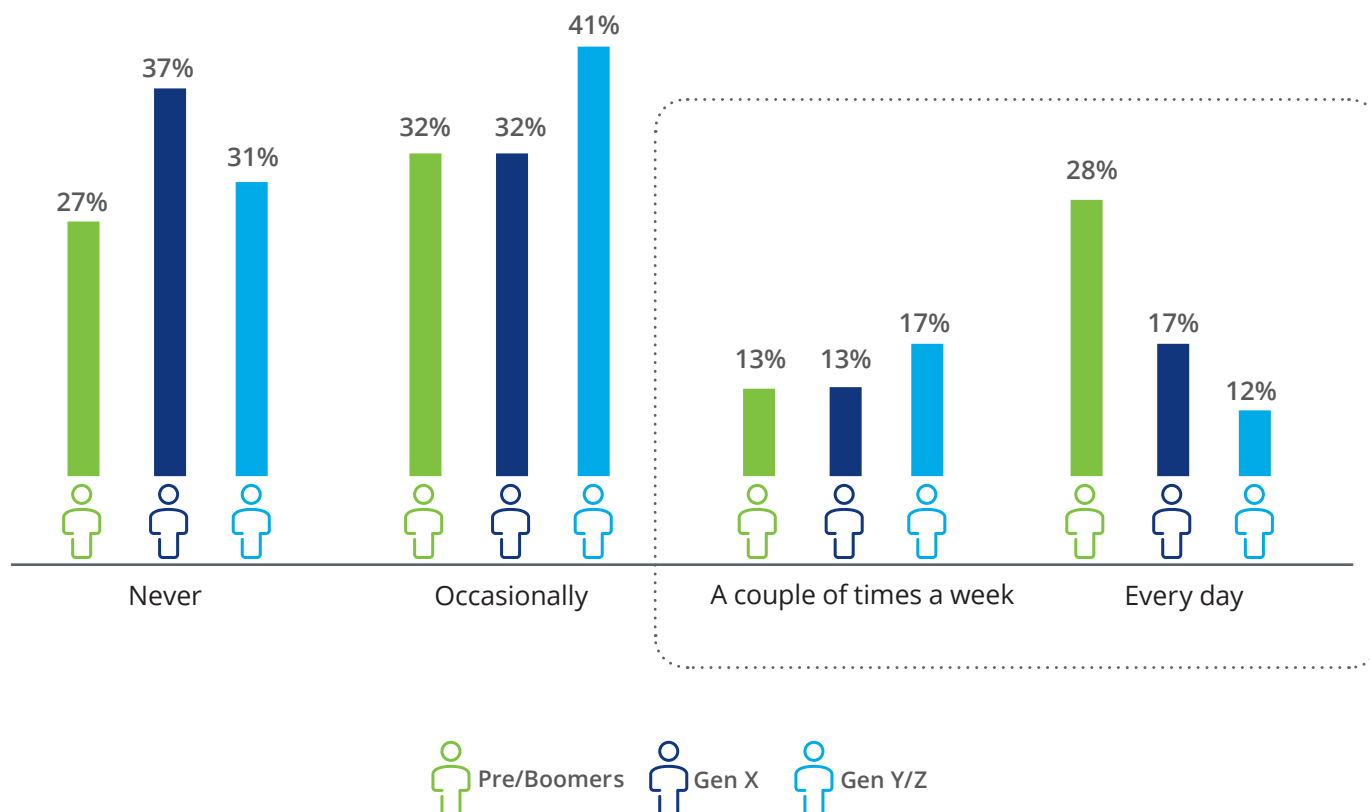


But, **younger consumers** may be starting to buck the trend

Perhaps an early sign that transportation systems may need to adapt to changing work habits going forward



How often do consumers work from home?

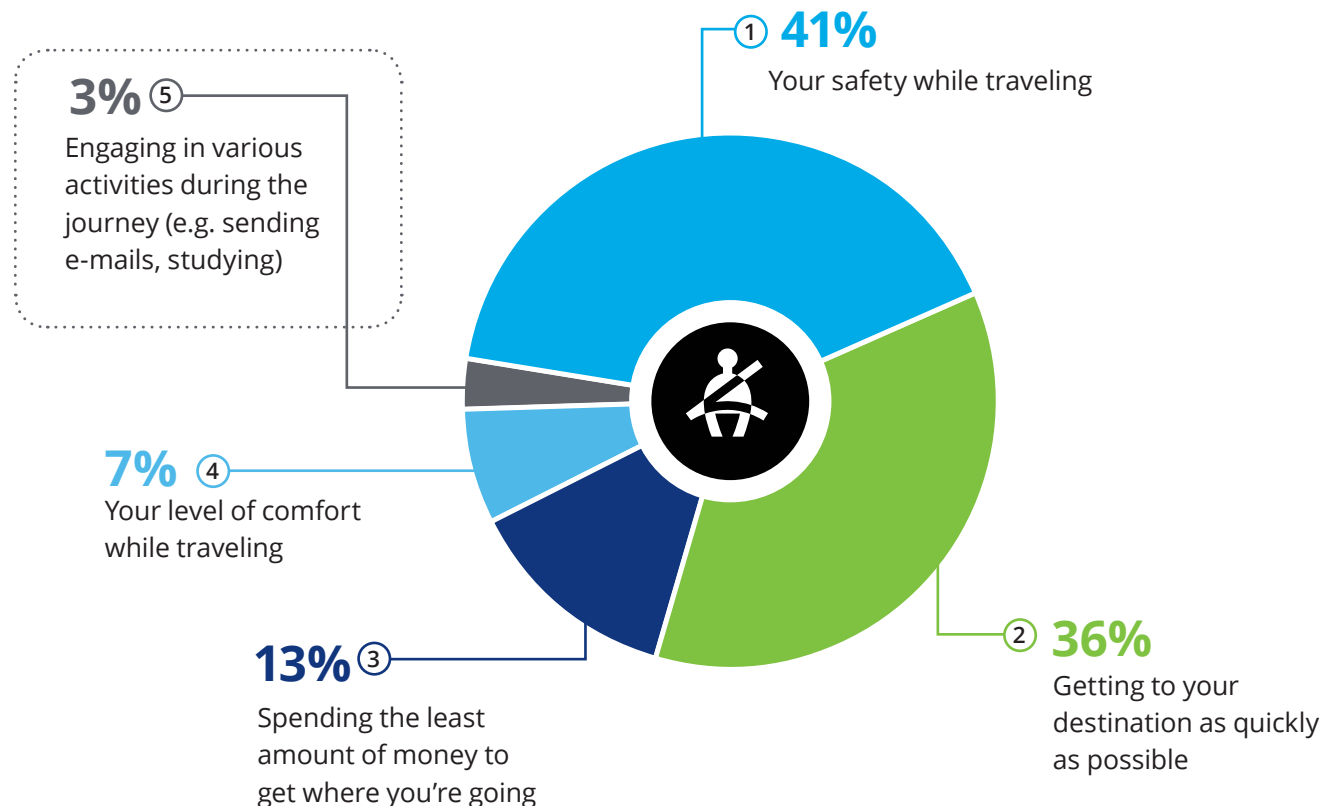


Safety is the most important aspect of mobility

Apart from reaching a destination safely, consumers also consider minimum travel time to be an important aspect



What is the most important aspect of mobility for South Africa?






South Africans still prefer to use **traditional transportation**

Consumers prefer to use their own vehicle, walk, or use a taxi to satisfy their transportation needs



Frequency of transportation use by type

	Daily	Weekly	Monthly	Occasionally	Never
1 My Own Vehicle (4-wheeler) 	62%	11%	3%	7%	18%
Car Share	3%	5%	6%	17%	70%
Ride Hail (UBER, Bolt)	2%	10%	11%	39%	38%
Rental Car	1%	2%	3%	38%	57%
2 Walk 	44%	14%	7%	23%	12%
3 Taxi 	10%	9%	8%	29%	44%
Carpool/minibus	4%	6%	5%	25%	59%
Commuter train	2%	3%	5%	27%	65%
City bus (Metro)	3%	4%	7%	29%	57%
Rapid transit bus (BRT)	1%	3%	4%	18%	74%
Bicycle (including urban bike sharing programmes)	3%	4%	5%	20%	69%
Motorcycle/scooter/moped	3%	2%	4%	10%	81%

Top 3 transportation types






Forward looking **mobility** view

South Africans still aspire to own, walk and use a taxi as their preferred mobility in the next 3 years



% of consumers using a particular transportation type

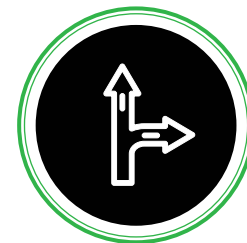
	Daily	Weekly	Monthly	Occasionally	Never	Don't know
1 My Own Vehicle (4-wheeler) 	73%	12%	3%	4%	3%	4%
Car Share	1%	6%	5%	19%	37%	31%
Ride Hail	3%	10%	10%	40%	17%	20%
Rental Car	1%	1%	4%	41%	27%	26%
2 Walk 	38%	15%	7%	23%	9%	8%
3 Taxi 	5%	6%	6%	31%	34%	19%
Carpool/minibus/micro-transit	2%	4%	5%	22%	41%	26%
Commuter train	2%	3%	4%	24%	43%	25%
Light rail/tram	1%	2%	2%	15%	53%	27%
Subway/metro	1%	3%	4%	18%	48%	26%
City bus	2%	3%	7%	29%	36%	22%
Rapid transit bus	1%	3%	4%	22%	43%	27%
Bicycle	3%	8%	7%	20%	40%	23%
Motorcycle/scooter/moped	3%	4%	5%	14%	51%	24%
Water-based ferry/sea taxi	1%	2%	2%	12%	52%	31%

Top 3 transportation types

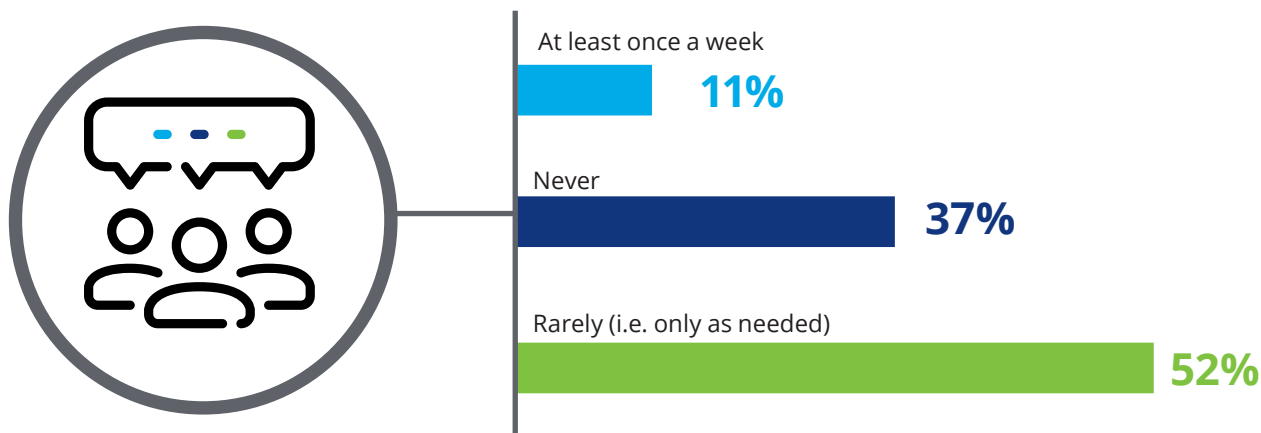


Only **11%** of people take multi-mode trips on a weekly basis

Majority of people rarely use multiple modes of transportation in the same trip – 37% consumers always use just one type per trip



% of consumers who use multiple modes of transportation in the same trip















Personal ownership still scores **highest** in **4/5** categories

Other mobility models (e.g., taxi, car share, ride-hail) face some challenges



Consumers’ view regarding different transportation types

Transportation Type	Cost	Safety	Ease of use	Environmental friendliness	Reliability
My own vehicle (4-wheeler)	43.6	79.1	77.5	57.5	82.9
Car share	51.6	54.9	55.4	57.1	55.2
Ride hail (UBER, Bolt)	40.8	59.0	69.2	55.6	67.0
Taxi	55.2	31.8	57.7	39.1	39.5
Carpool/minibus/micro-transit	59.5	53.6	59.1	53.1	53.1
Public transportation (e.g. train,bus)	67.1	42.0	59.0	51.5	42.8

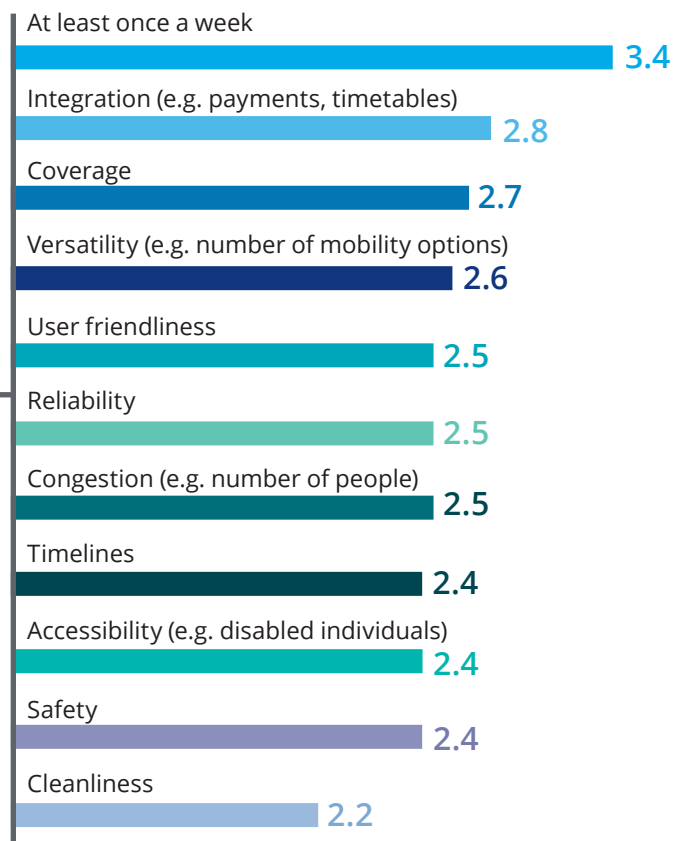
	Cost	Safety	Ease of use	Environmental friendliness	Reliability
<div> Most</div>	Public transportation (e.g. train,bus) 	My own vehicle (4-wheeler) 	My own vehicle (4-wheeler) 	My own vehicle (4-wheeler) 	My own vehicle (4-wheeler) 
<div> Least</div>	Ride hail (UBER, Bolt) 	Taxi 	Car share 	Taxi 	Taxi 

Public transportation scores the **highest** on affordability

However, it lags on other critical dimensions of transportation, particularly on cleanliness



Consumers rating of public/mass transit system on a scale of 1-5

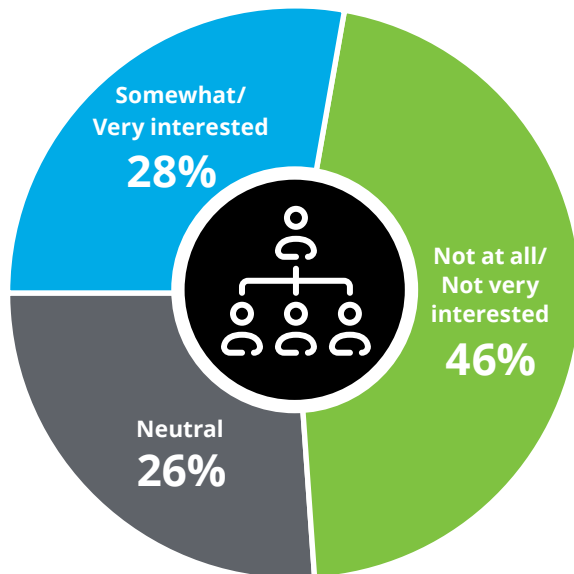


Less than a third of consumers interested in car-pooling services

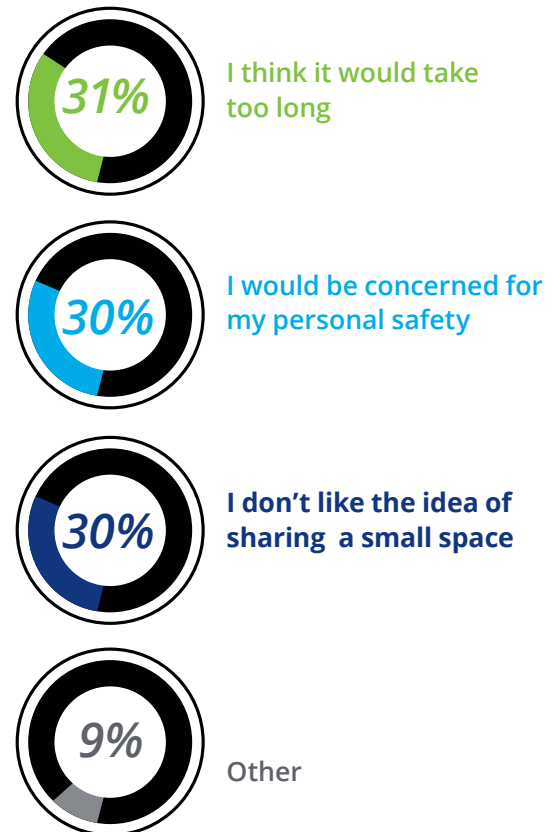
Consumers who are not interested cited reasons such as lengthy trip, safety concerns, and dislike towards sharing a small space with strangers



Percentage of consumers interested in using a car-pooling service



Main reason consumers' are not interested in using a car-pooling service

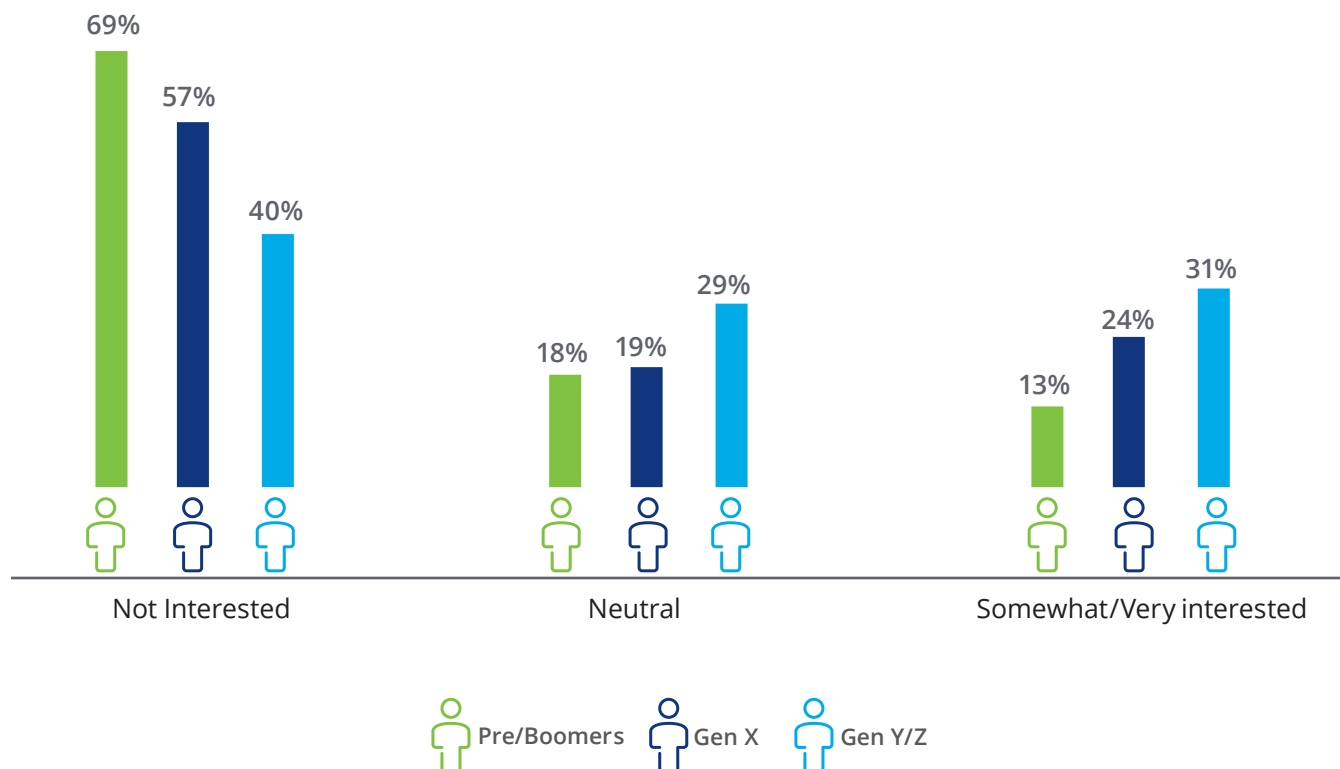


Interest in car-pooling services **varies** among generations

Though younger consumers are relatively more interested than older generations, overall acceptance remains fairly low



Percentage of consumers interested in using a car-pooling service



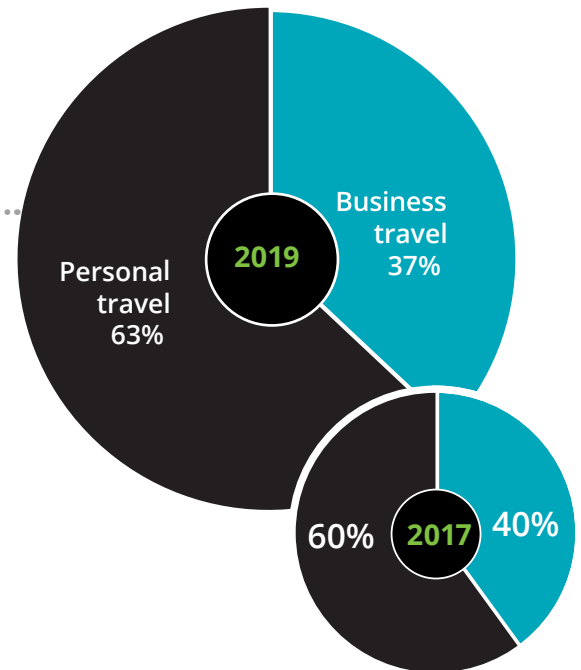
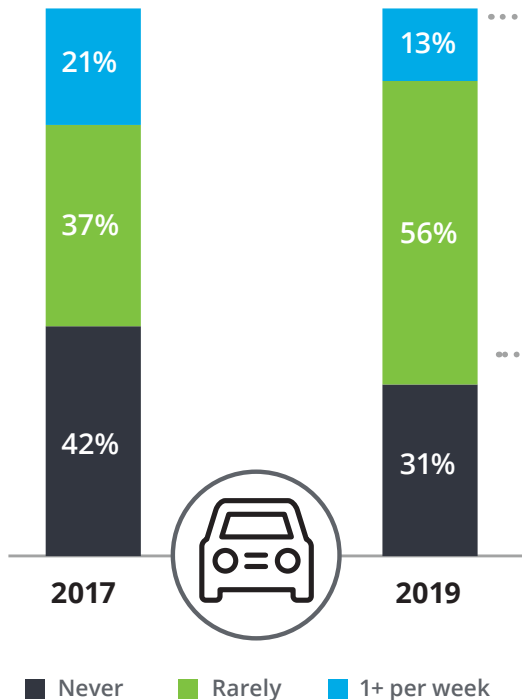
Percent of people using ride-hail regularly **dropped** significantly

At the same time, there has been an increase in the number of people who use the service on an occasional basis



Frequency of ride-hailing usage

Purpose of ride-hailing

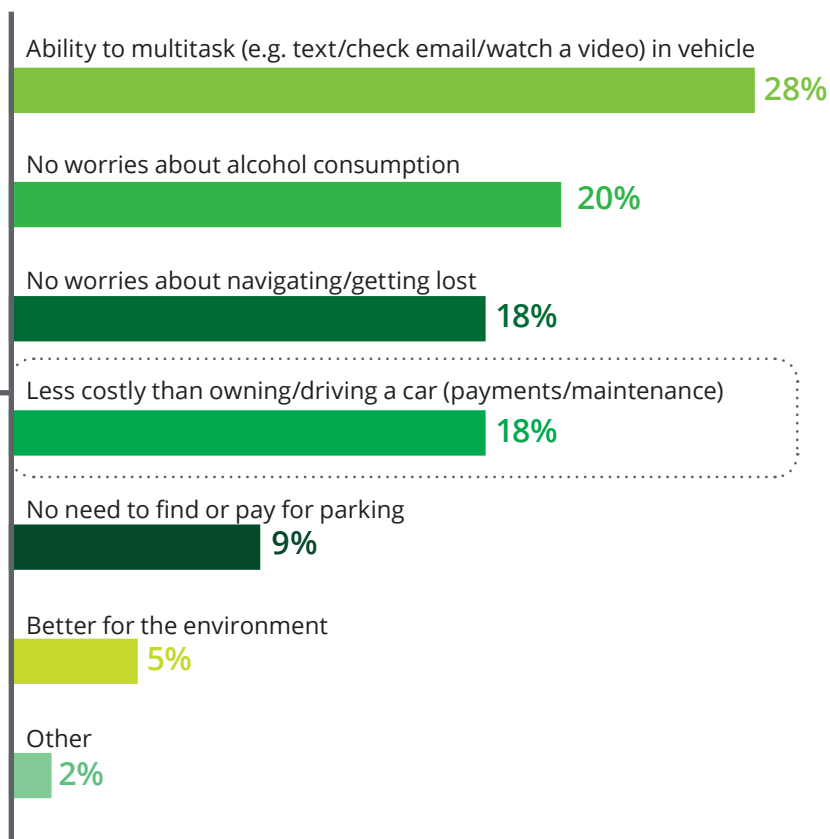


Consumers see **multiple benefits** of ride-hailing services

Ability to multitask, no worries about alcohol consumption and getting lost are seen as the most important benefits



Most important benefit of using a ride-hailing service

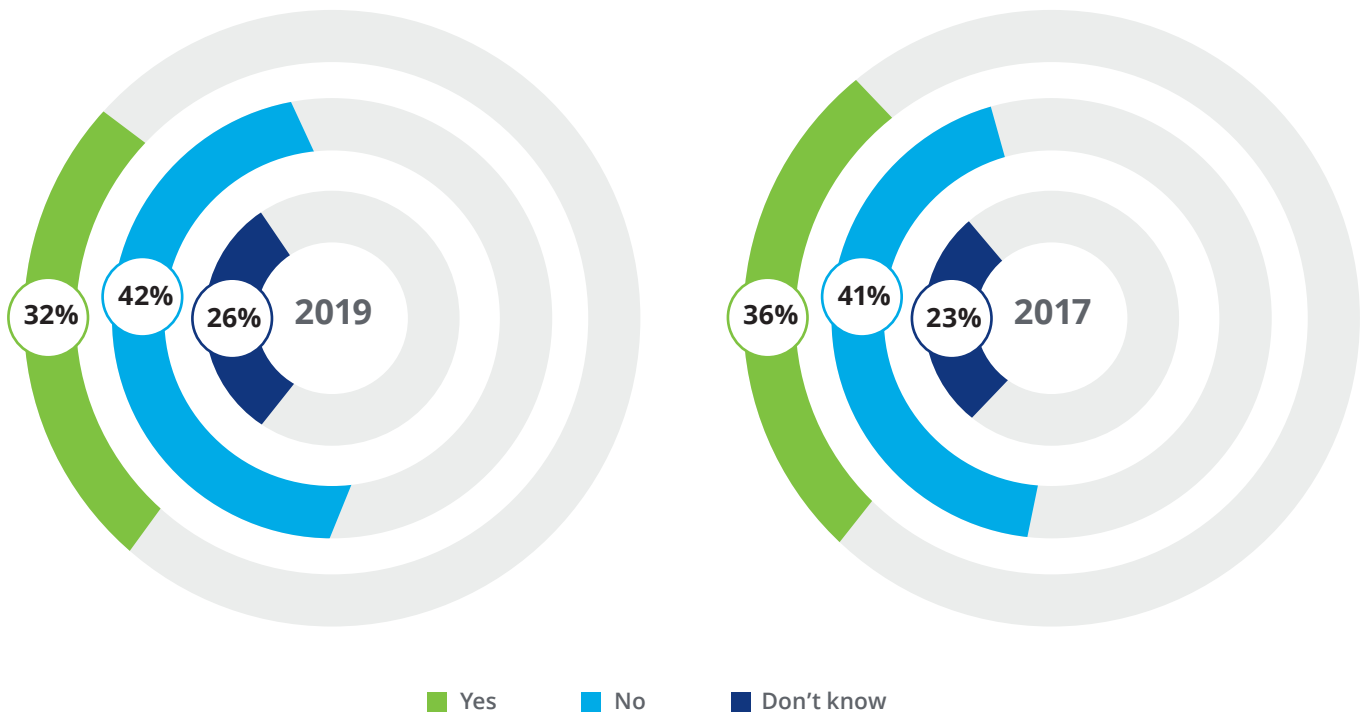


One-third of ride-hail users may give up vehicle ownership

This is a decrease from 2017 when 36% of ride-hail users wondered whether they need to own a vehicle going forward



Percentage of consumers who question the need to own a vehicle in the future due to use of ride-hailing services

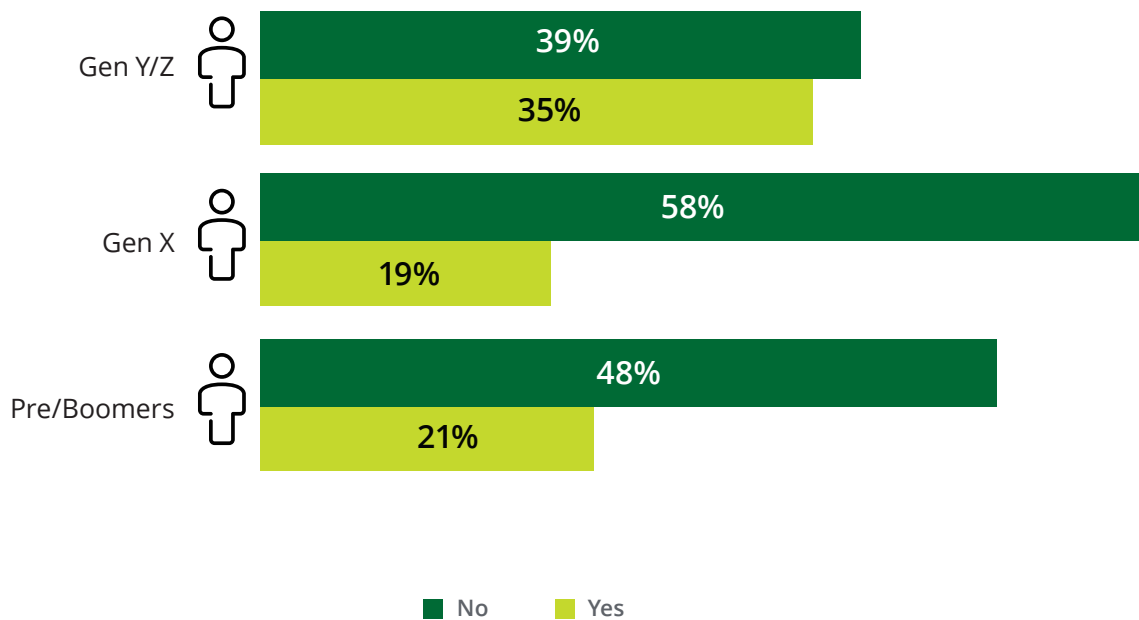


One-third of younger ride-hail users are ready to give up cars

They are more willing to abandon car ownership when compared to their older counterparts



Percentage of consumers who question the need to own a vehicle in the future due to use of ride-hailing services

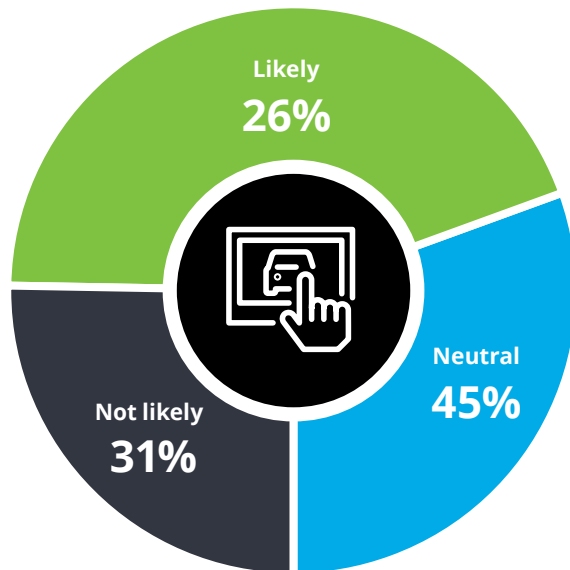


People want **utility rather than luxury** when downsizing number of cars

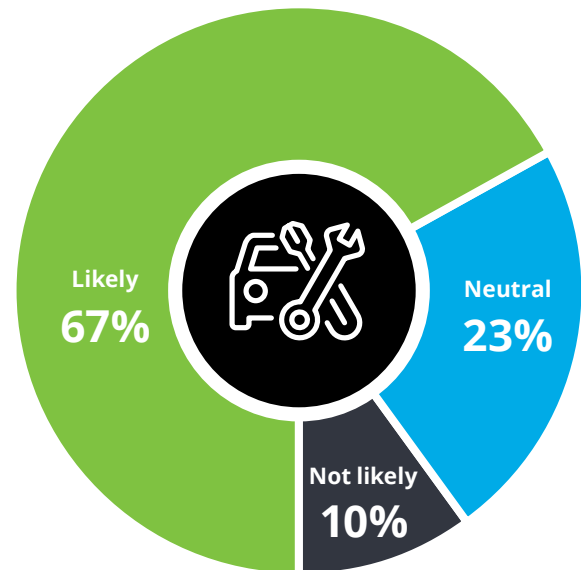
67% of consumers said they would consider a model that offers more utility compared to 26% that would likely favour more luxury



More luxury



More utility

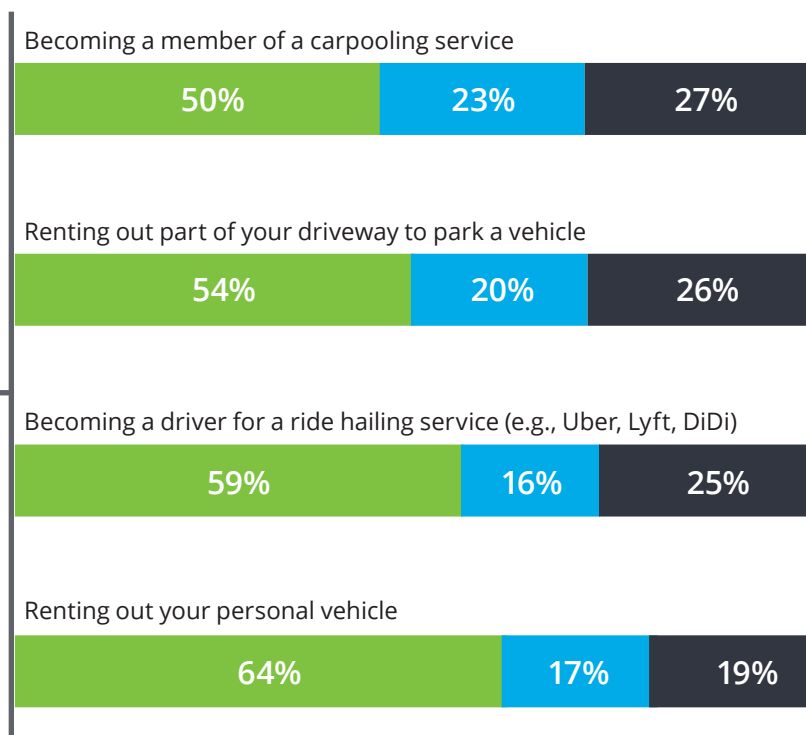


Majority of people **not interested** in new ways to make money

Concept of becoming a member of carpooling service and renting out your personal vehicle has yet to catch on amongst the general population



How interested are consumers in the following scenarios?



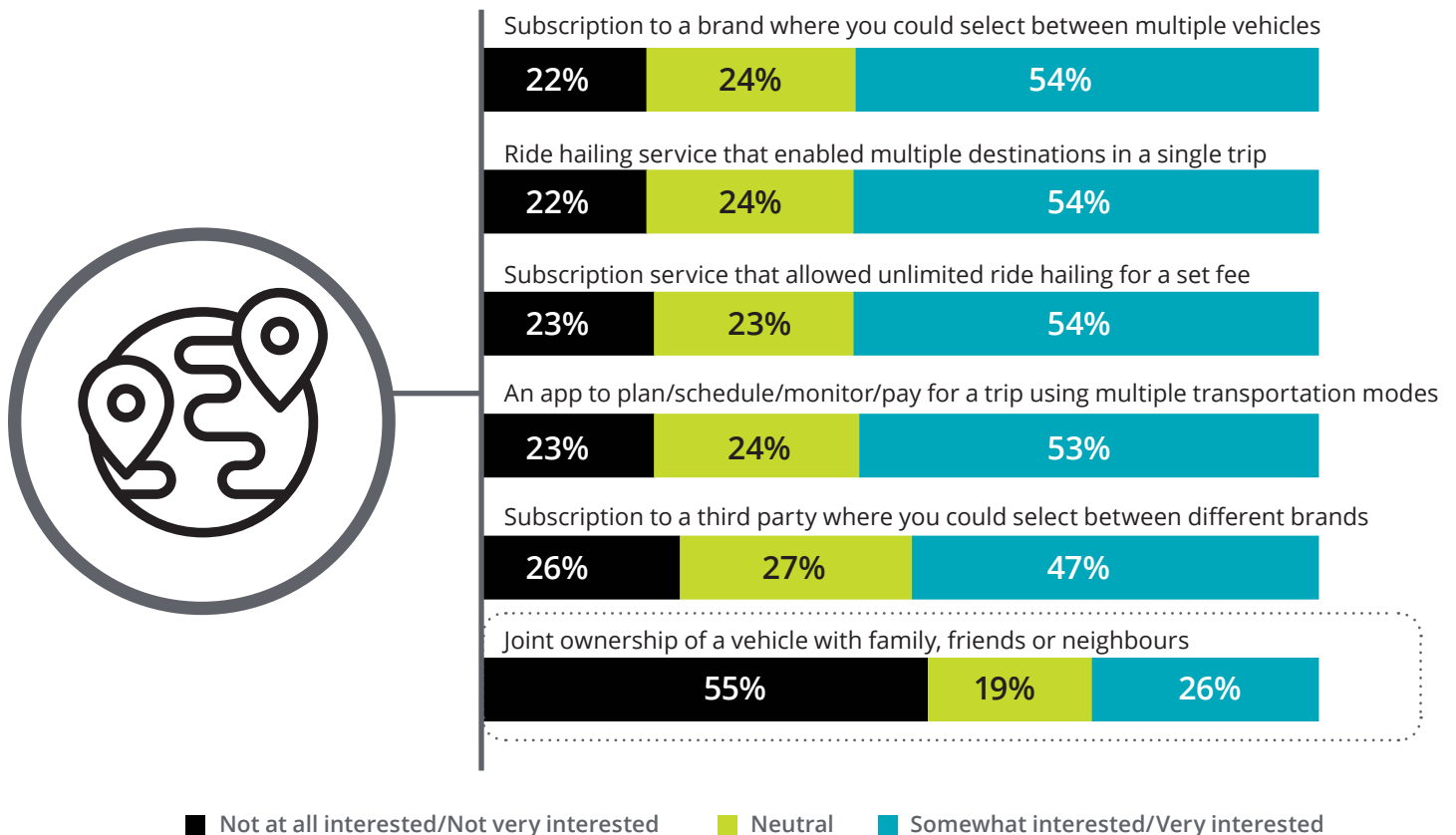
■ Not at all interested/Not very interested ■ Neutral ■ Somewhat interested/Very interested

SA consumers are **interested** in innovative mobility services

More than half of the consumers interested in subscription services for selecting multiple vehicles and those that offer unlimited ride-hailing



Level of interest in the following scenarios



What do SA consumers think about 'connected' vehicles?

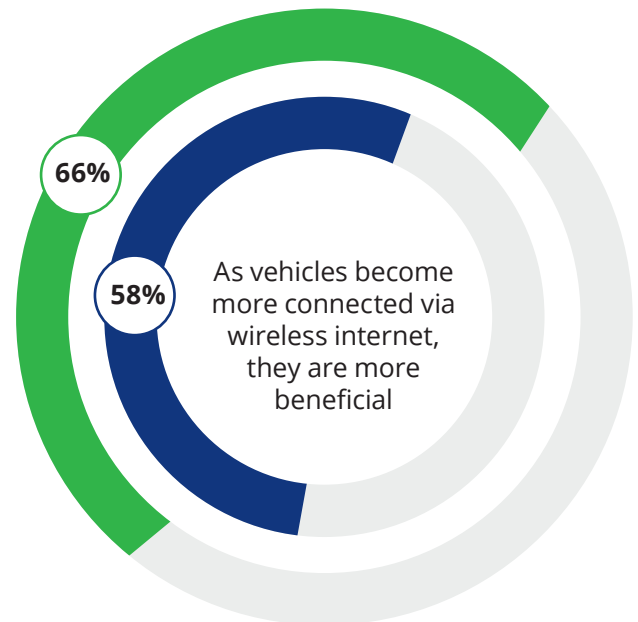


Consumers **continue** to be concerned about vehicle hacking

On the other hand, percentage of people that think more connectivity means more benefit has improved on a year-over-year basis



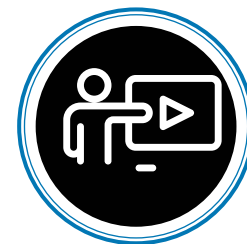
Percentage of consumers who agree that...



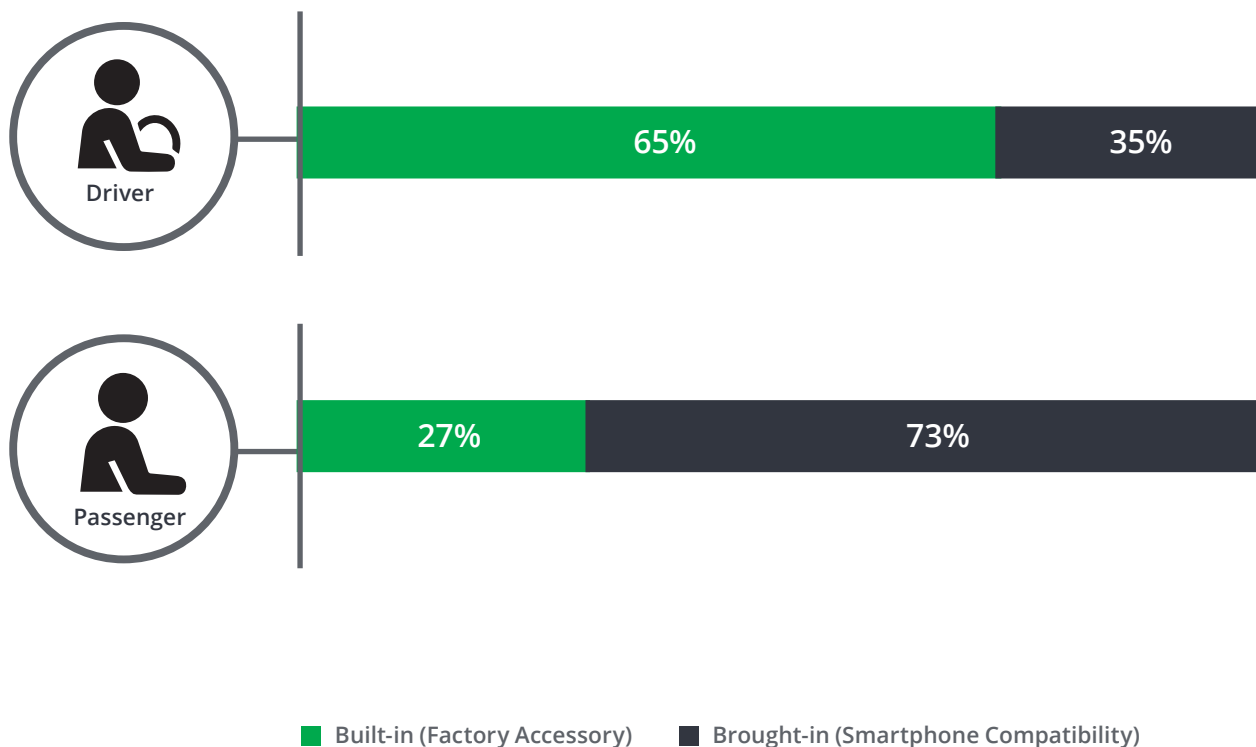
■ 2019 ■ 2018

Two-thirds of drivers prefer **“built-in”** technology

On the other hand, 73% of passengers prefer “brought-in” technologies



Preferred type of technology interface by type of vehicle occupant

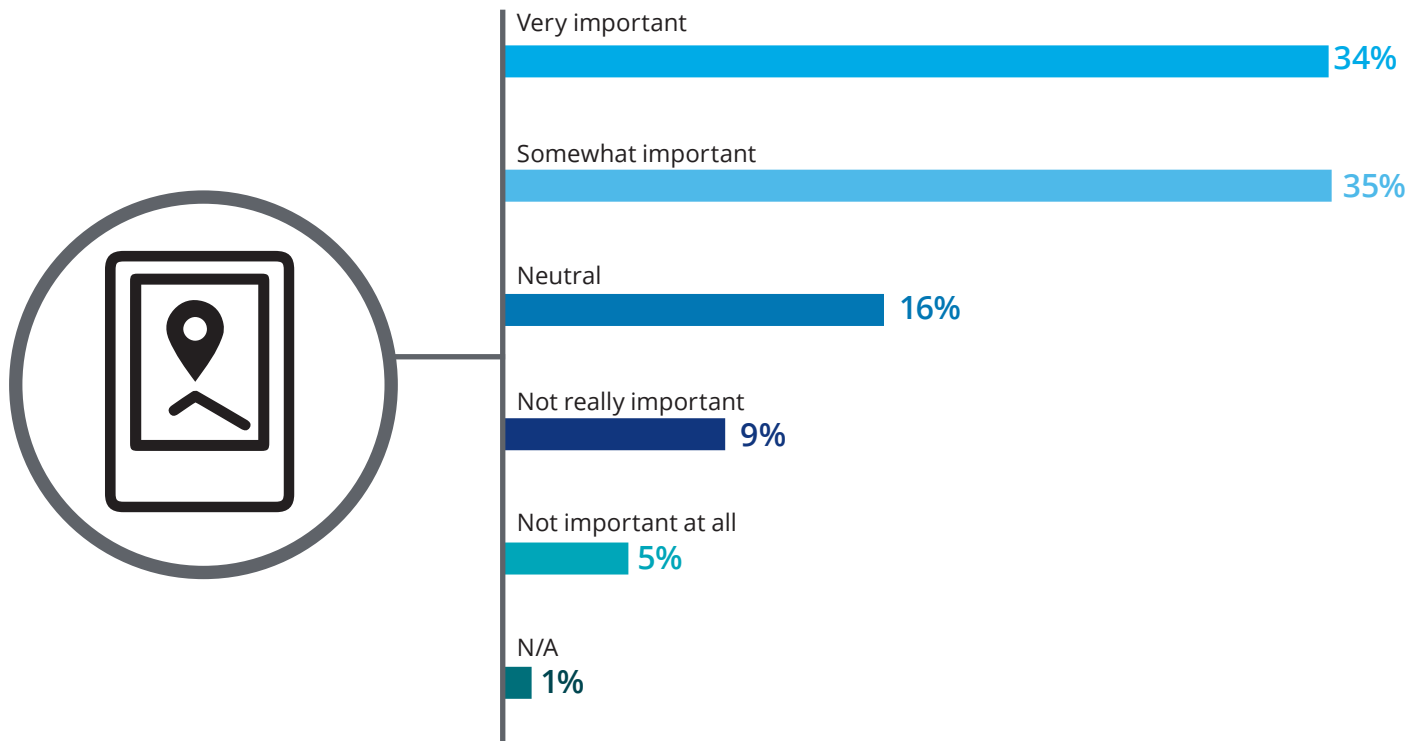


Having the **same interface** across multiple vehicles is important

69% of the consumers think it is at least somewhat important to have the same technology interface across multiple vehicles

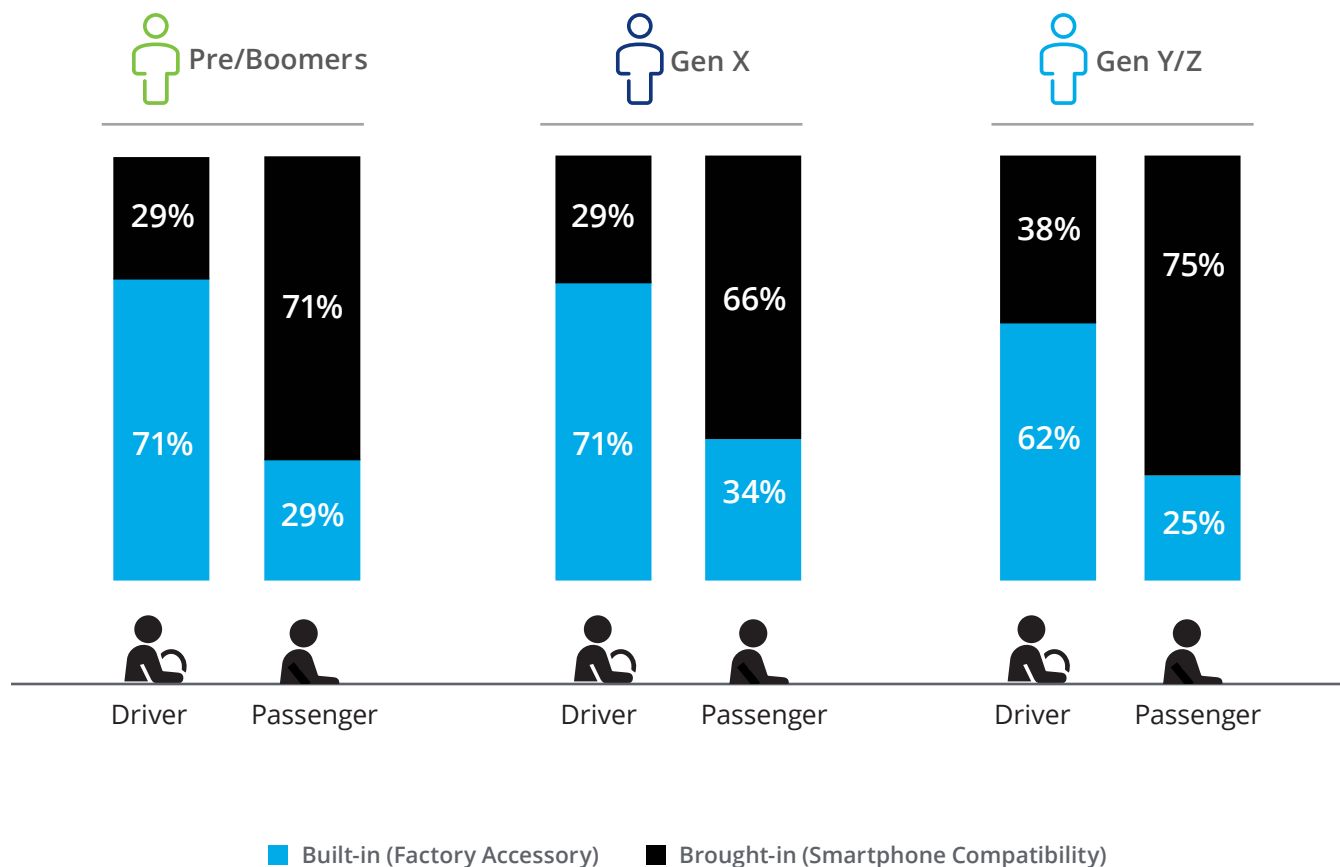


How important is having the same technology interface across multiple vehicles?



Across generations, drivers prefer **'built-in'** technology

Passengers, across generations, prefer to have brought-in capabilities

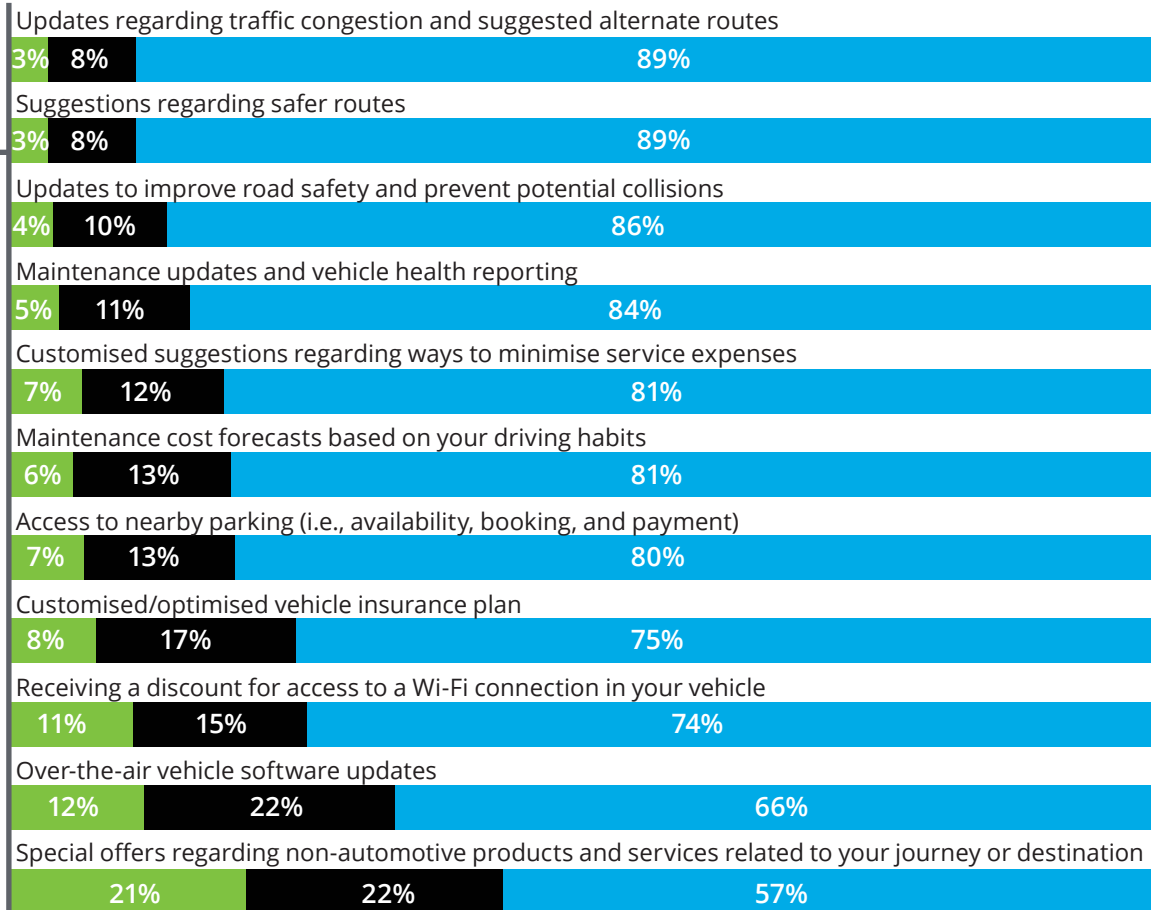
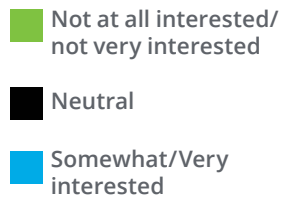


Consumers are **most interested** in updates on traffic congestion

More than 80% of consumers are also interested in safer travel routes, updates on road safety, and vehicle maintenance reporting



Consumer opinions on benefits of connected vehicles



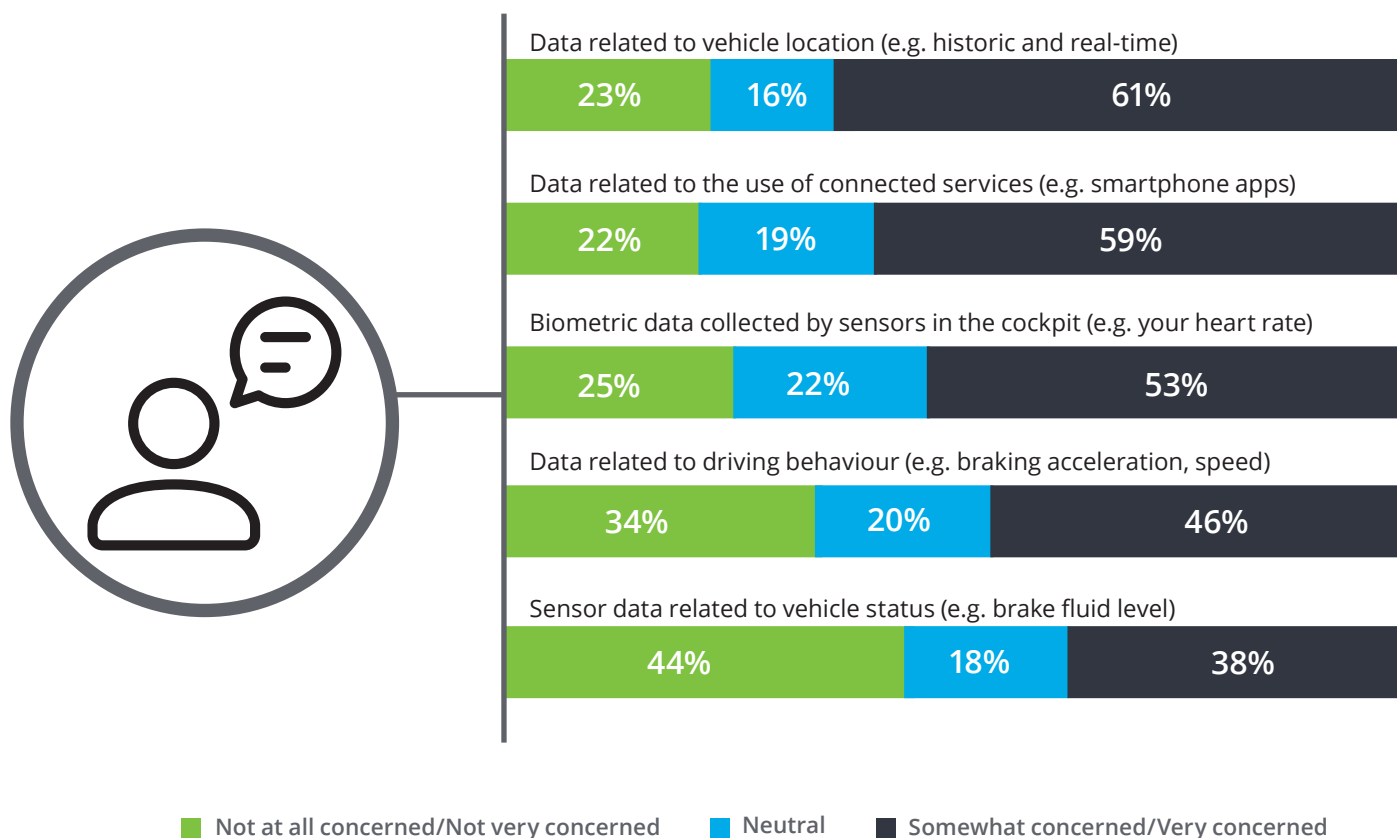
Note: Percentage of respondents who are somewhat or very interested have been added together

Consumers concerned if vehicle location data is collected

More than half of consumers are also worried if data related to usage of apps and biometric data is collected and shared



Consumer opinions on futuristic scenarios

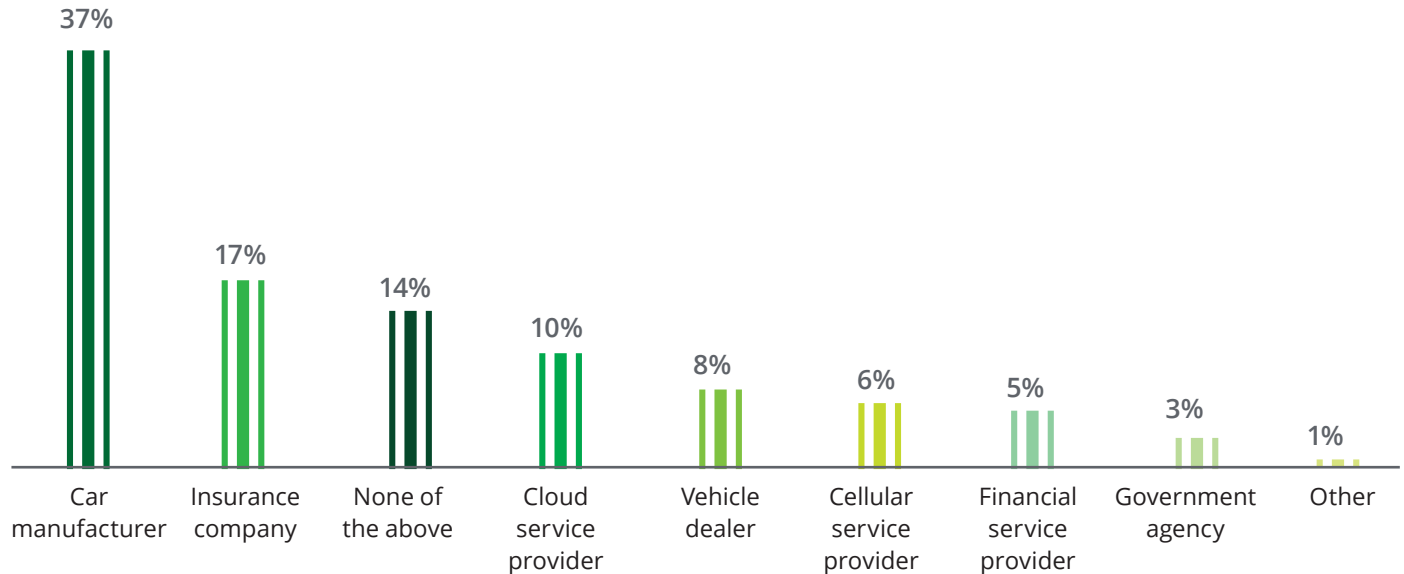


Consumers **trust OEMs** the most in managing collected data

At the same time, 14% percent of consumers said they do not trust anyone in managing the data that is generated in a connected vehicle



Consumer opinions on whom they trust the most to manage data generated/collected by their vehicle

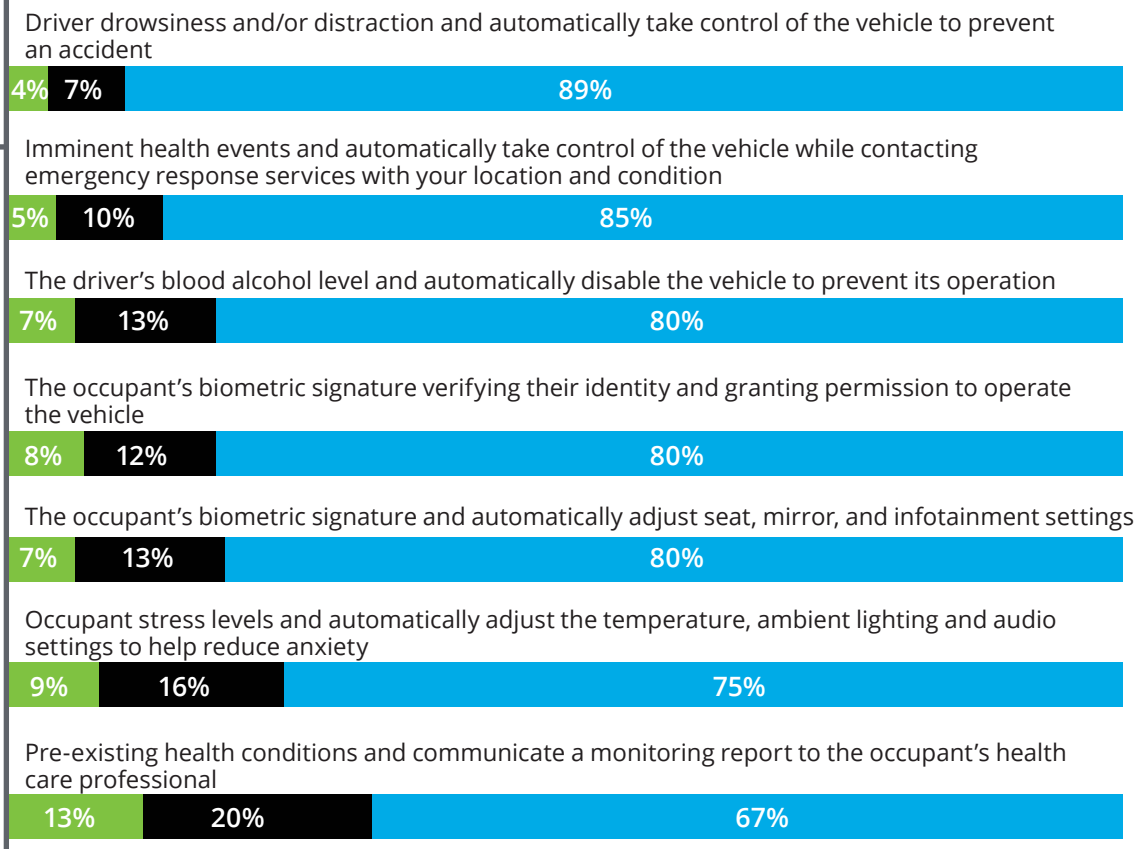
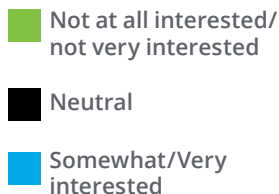


Consumers are fine to **handover** vehicle control in some situations

Consumers are ok with a vehicle automatically taking control in case of distractions/driver drowsiness, poor health, and high alcohol level



Consumer opinions on benefits of connected vehicles

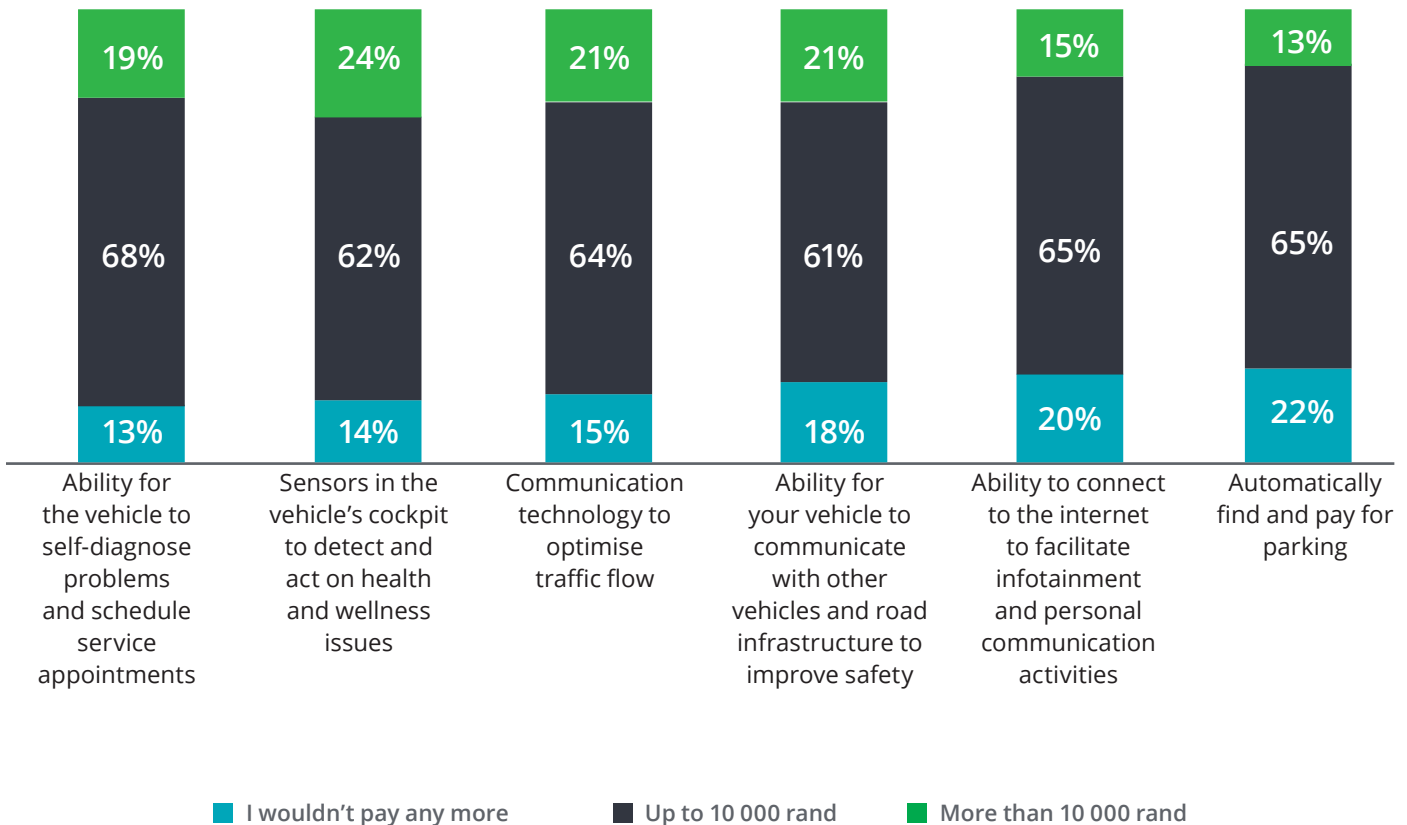


Majority of consumers **willing to pay** for connected technologies

Especially for those technologies that allow the vehicle to self-diagnose problems and act on health and wellness issues



Consumers' willingness to pay for various connected technologies

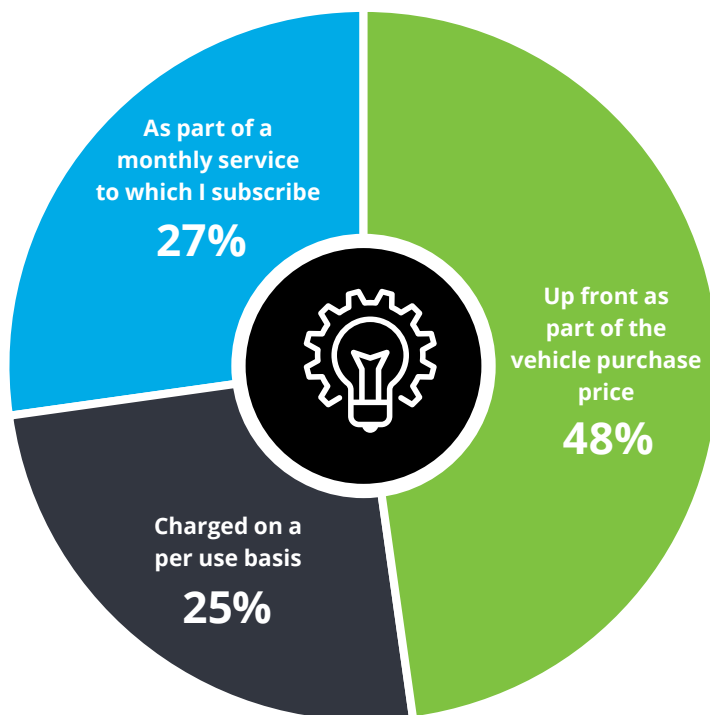


Half of vehicle buyers prefer to pay for **added features** up front

On the other hand, the remaining consumers are divided between paying as a monthly subscription service or on a per use basis



How would consumers prefer to pay for additional connectivity technologies?



What do SA consumers think about autonomous vehicle technology?

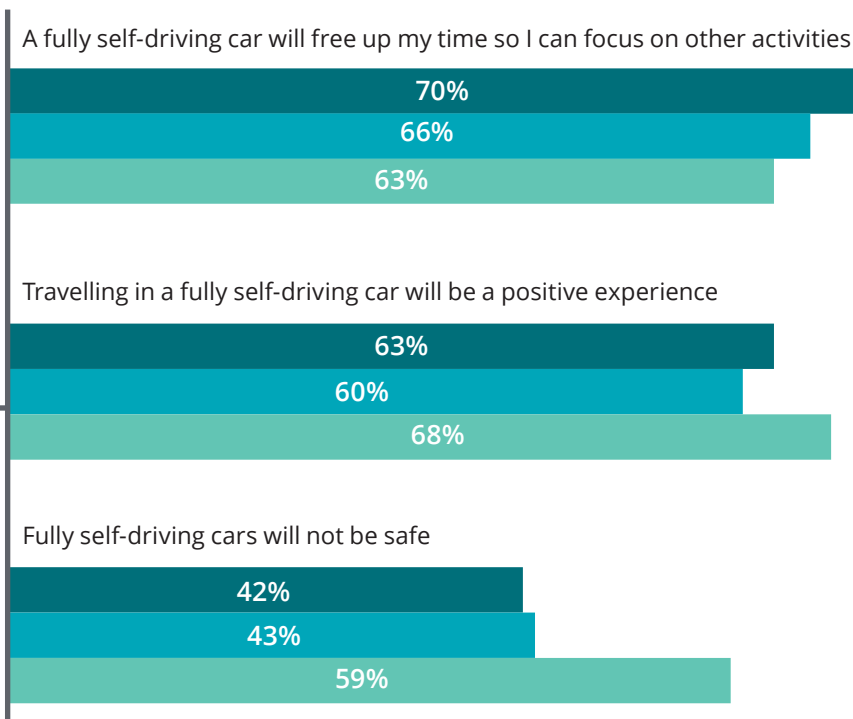


SA consumers see **multiple benefits** of self-driving cars

Two-thirds of consumers think that travelling in a fully self-driving vehicle helps them do other activities and will be a positive experience



Percentage of consumers who agree that...



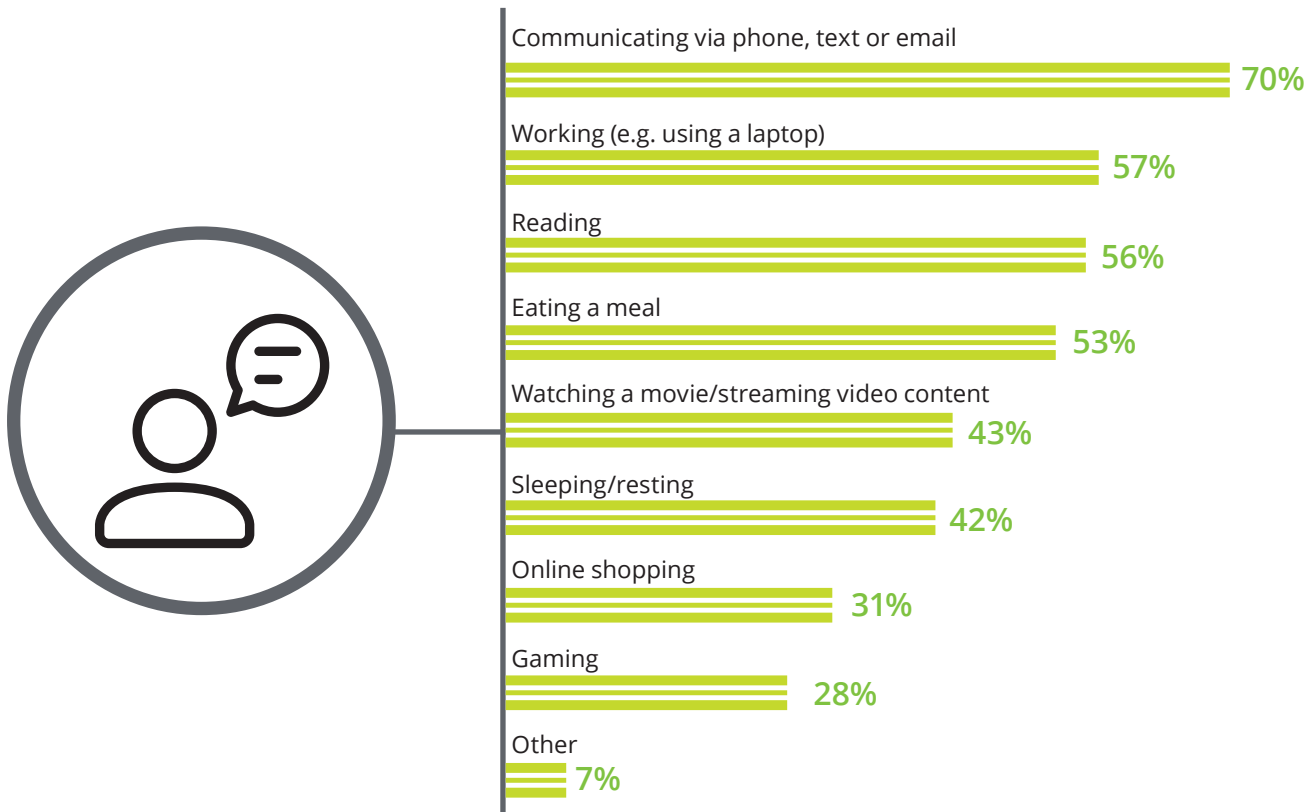
2019 2018 2017

People would **most prefer** to communicate while riding in an AV

Other top activities such as working suggest that future vehicle interiors may need to be different than the ones we have now



Activities consumers would most likely engage in while riding in an autonomous vehicle

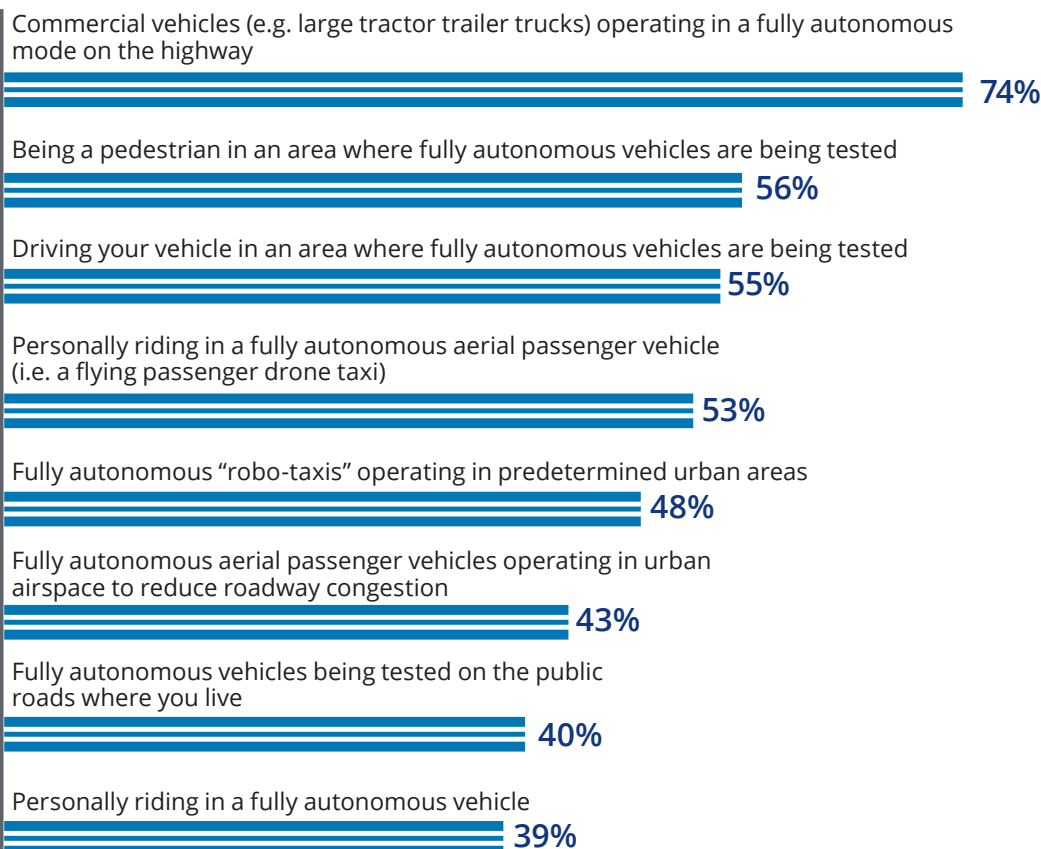
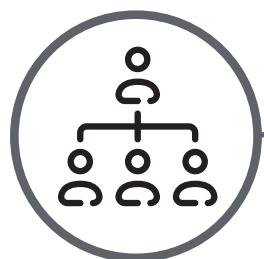


Consumer apprehension goes well beyond riding in an AV

More than half of consumers are concerned to drive or walk in an area where fully autonomous vehicles are in operation



Percentage of consumers who are concerned about...

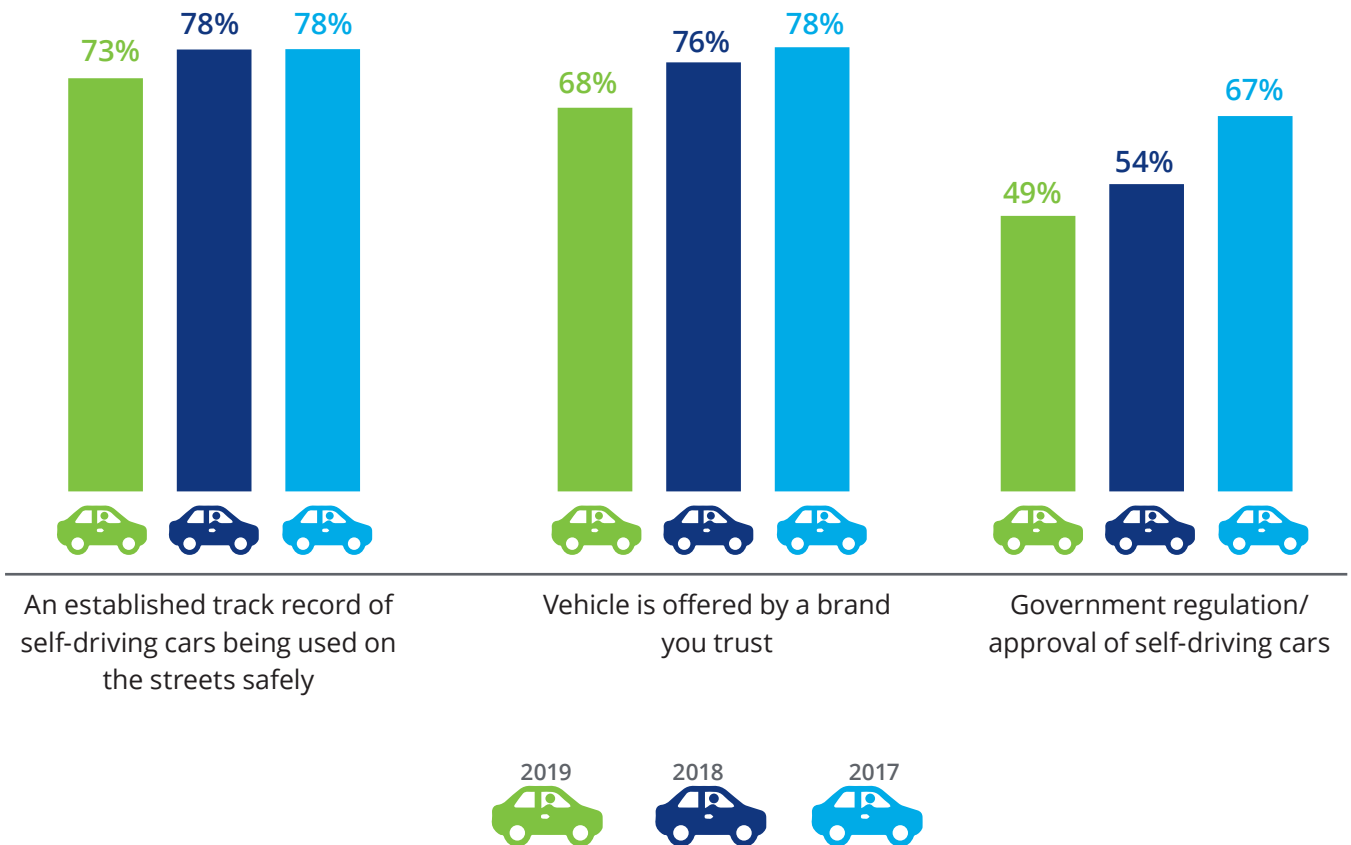


Consumers want an **established** safety record for AVs

They also want the vehicle to be offered by a brand they trust – government oversight also still important for 67 percent of consumers



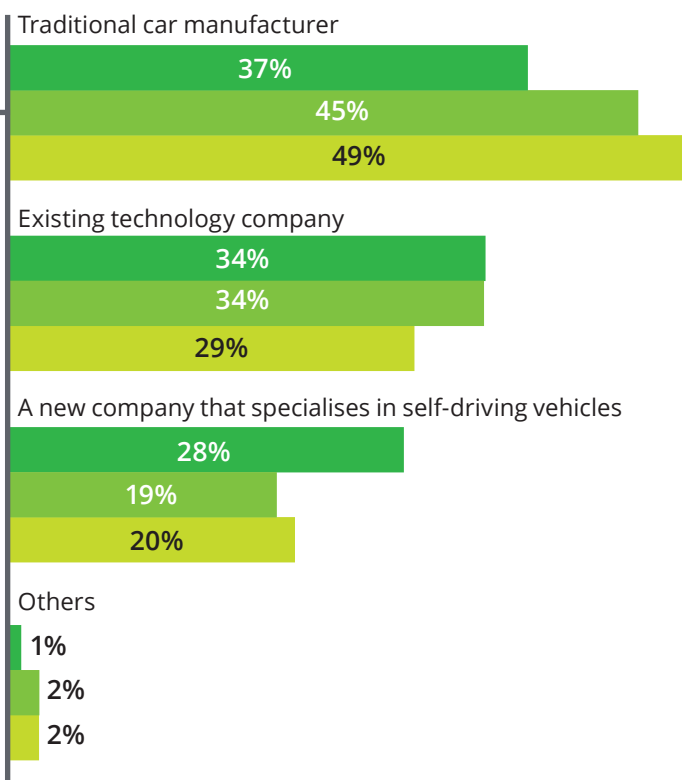
Factors making consumers feel better about riding in a fully self-driving vehicle



Speaking of trust, consumer faith in OEMs remains

Trust in traditional car manufacturers, in bringing self-driving vehicles to market has increased

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



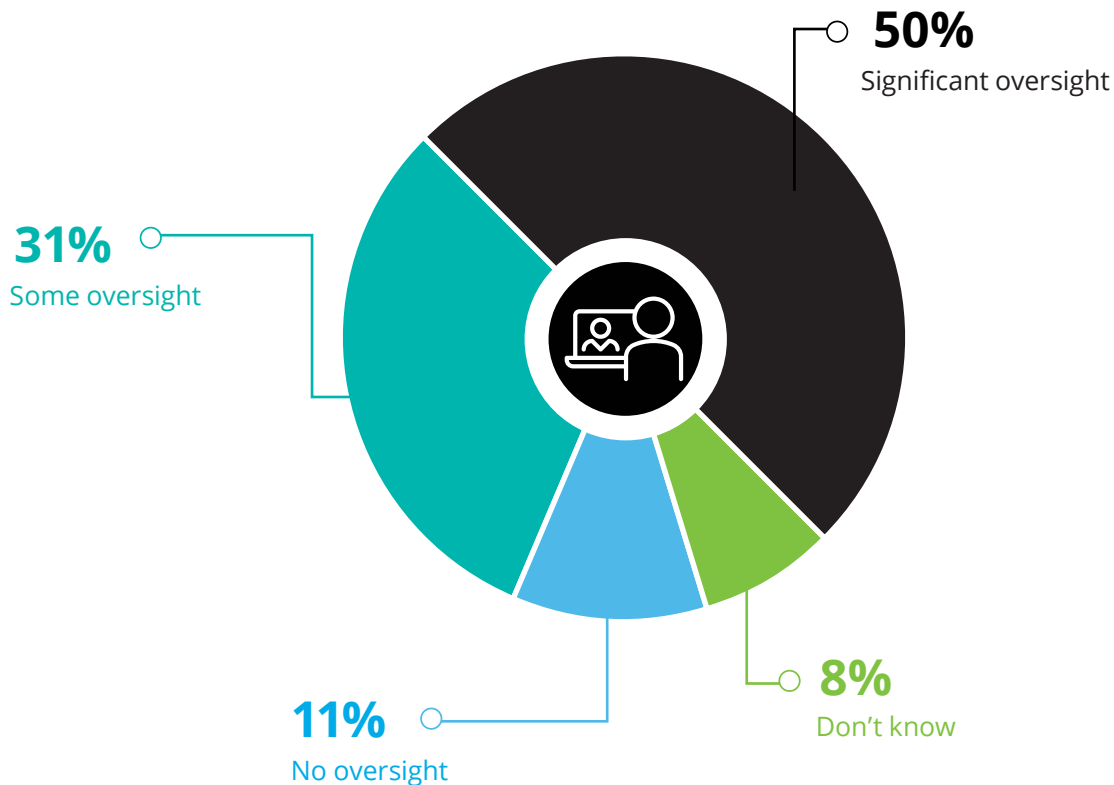
2019 2018 2017

Majority of consumers want a lot of regulatory oversight for AVs

81% of consumers think that government should have oversight and provide standards in the development and use of autonomous vehicles



Expected level of government oversight (% of consumers)

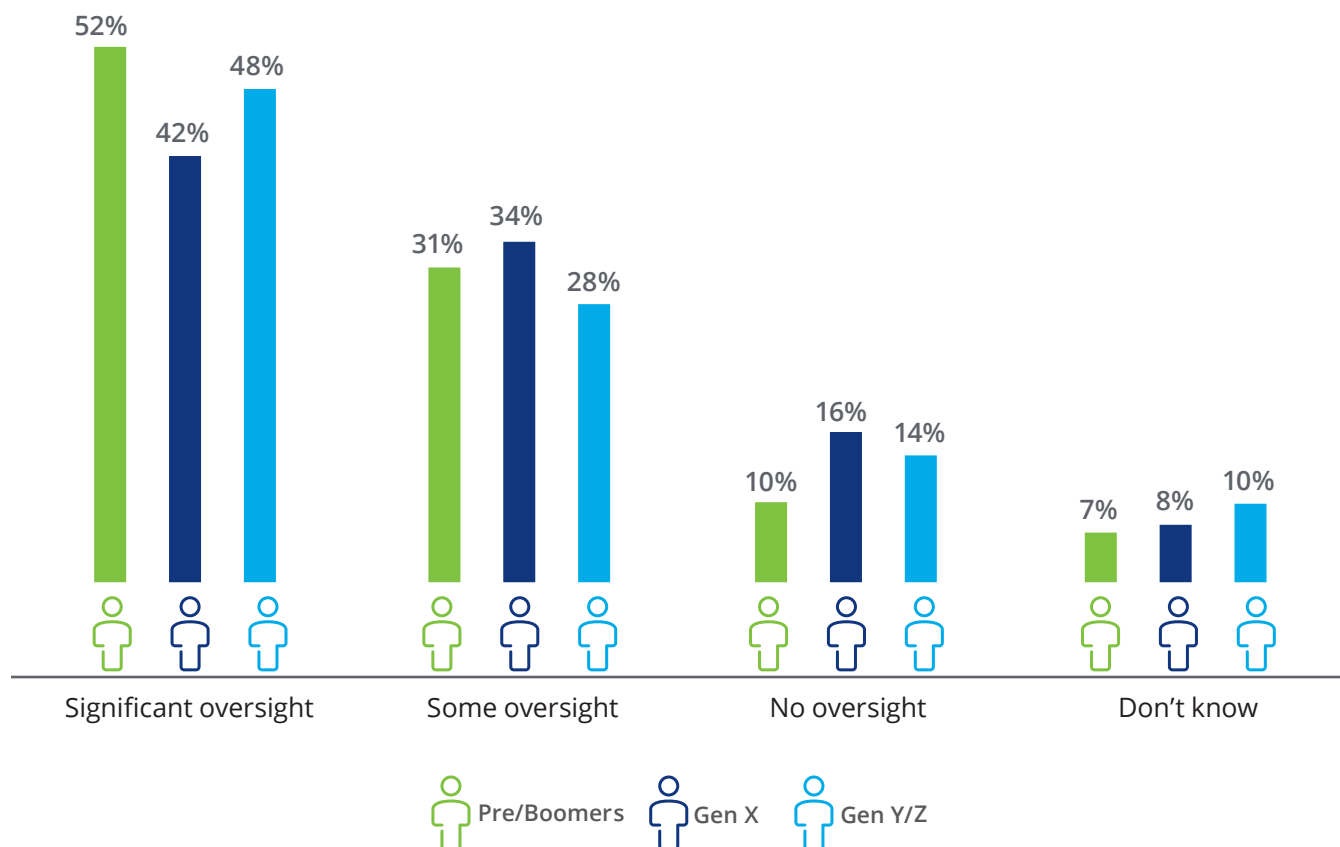


Consumers, across generations, **prefer** regulatory oversight

No significant difference among various generations of consumers in their desire for government oversight regarding AVs



Expected level of government oversight (% of consumers)

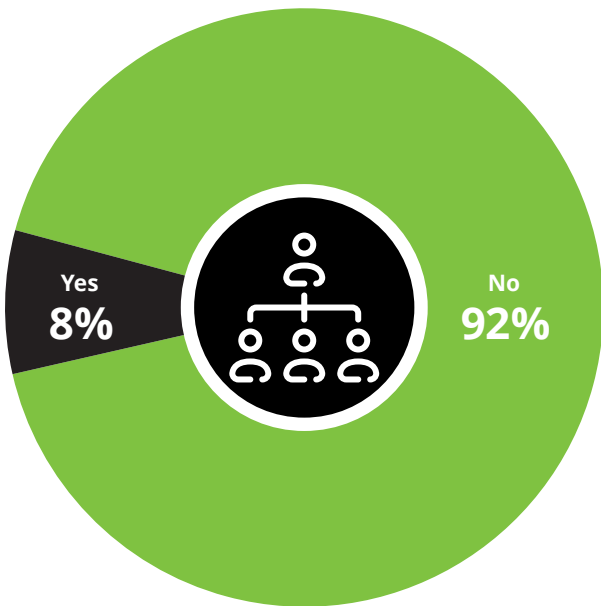


Very few consumers have experienced an AV first-hand

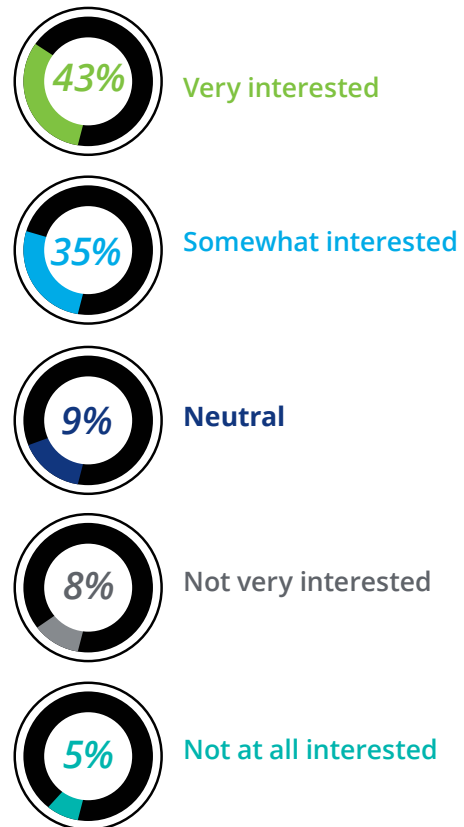
However, 78% of the consumers who haven't experienced an AV said they are at least somewhat interested in giving it a try



Percentage of consumers that have experienced an autonomous vehicle



Percentage of consumers who are interested in riding in a fully autonomous vehicle





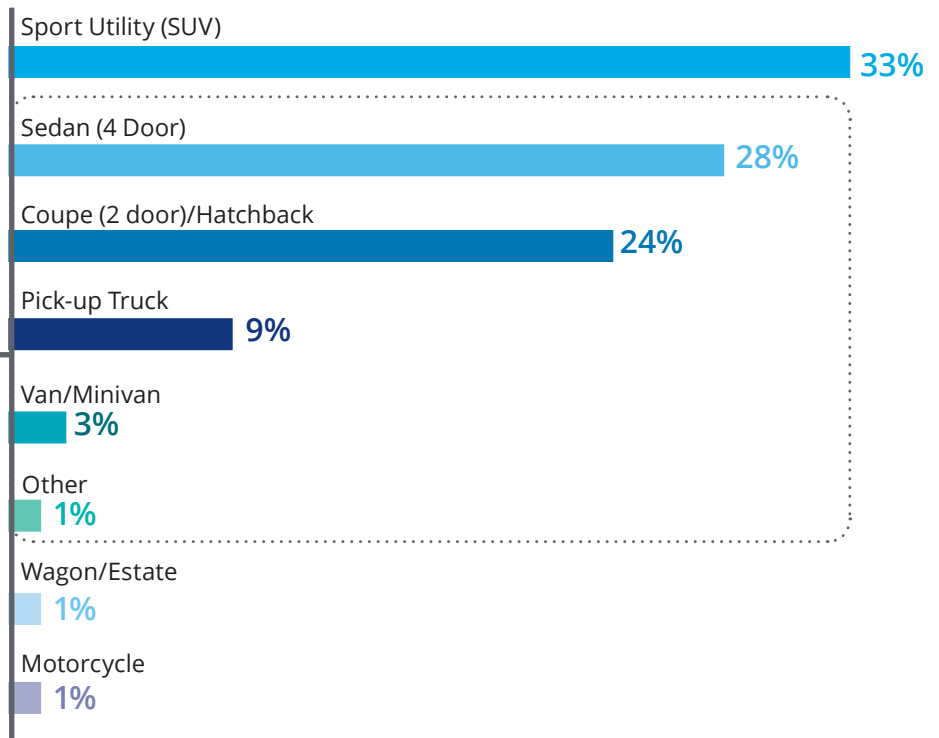
Looking forward to a
consumer's next vehicle....

52% of people still intending to buy a car

69% of the consumers think it is at least somewhat important to have the same technology interface across multiple vehicles



% of consumers considering a particular vehicle type

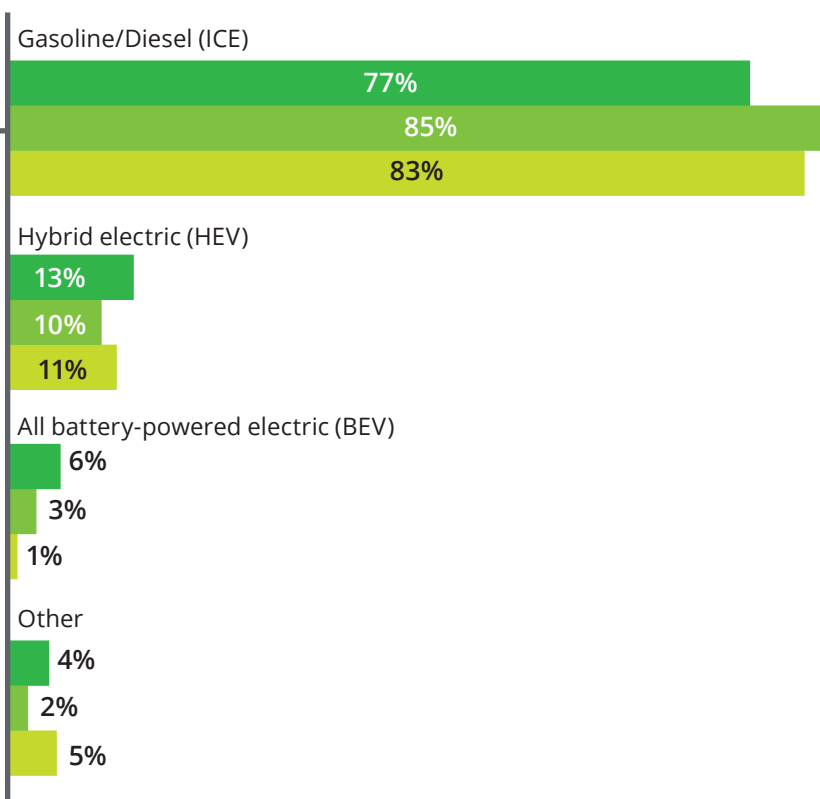


SA consumers **still prefer** to own petrol/diesel engine vehicles

In-country sustainable power supply and high taxation rates on BEV imports continues to inhibit SA consumers' purchasing decisions for electric vehicles



What type of engine do consumers want in their next vehicle?



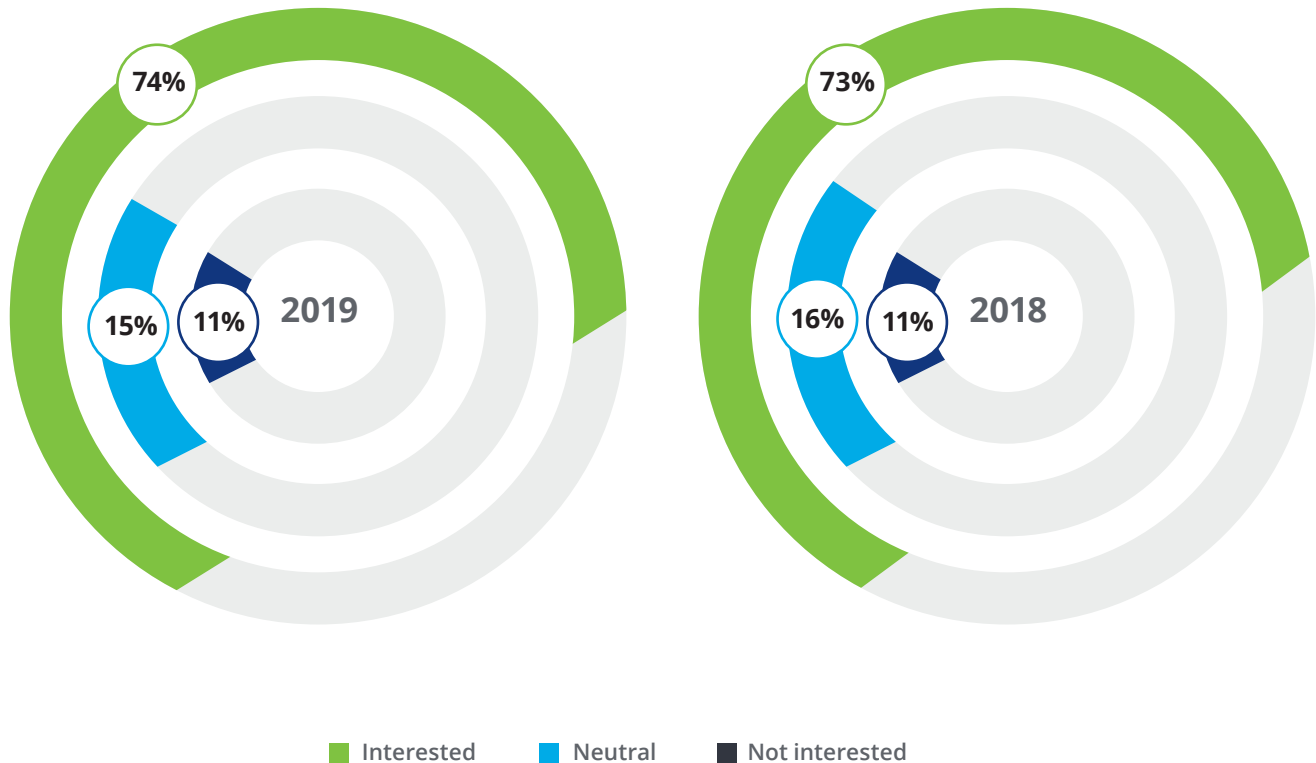
2019 2018 2017

74% of consumers interested in buying direct from OEM

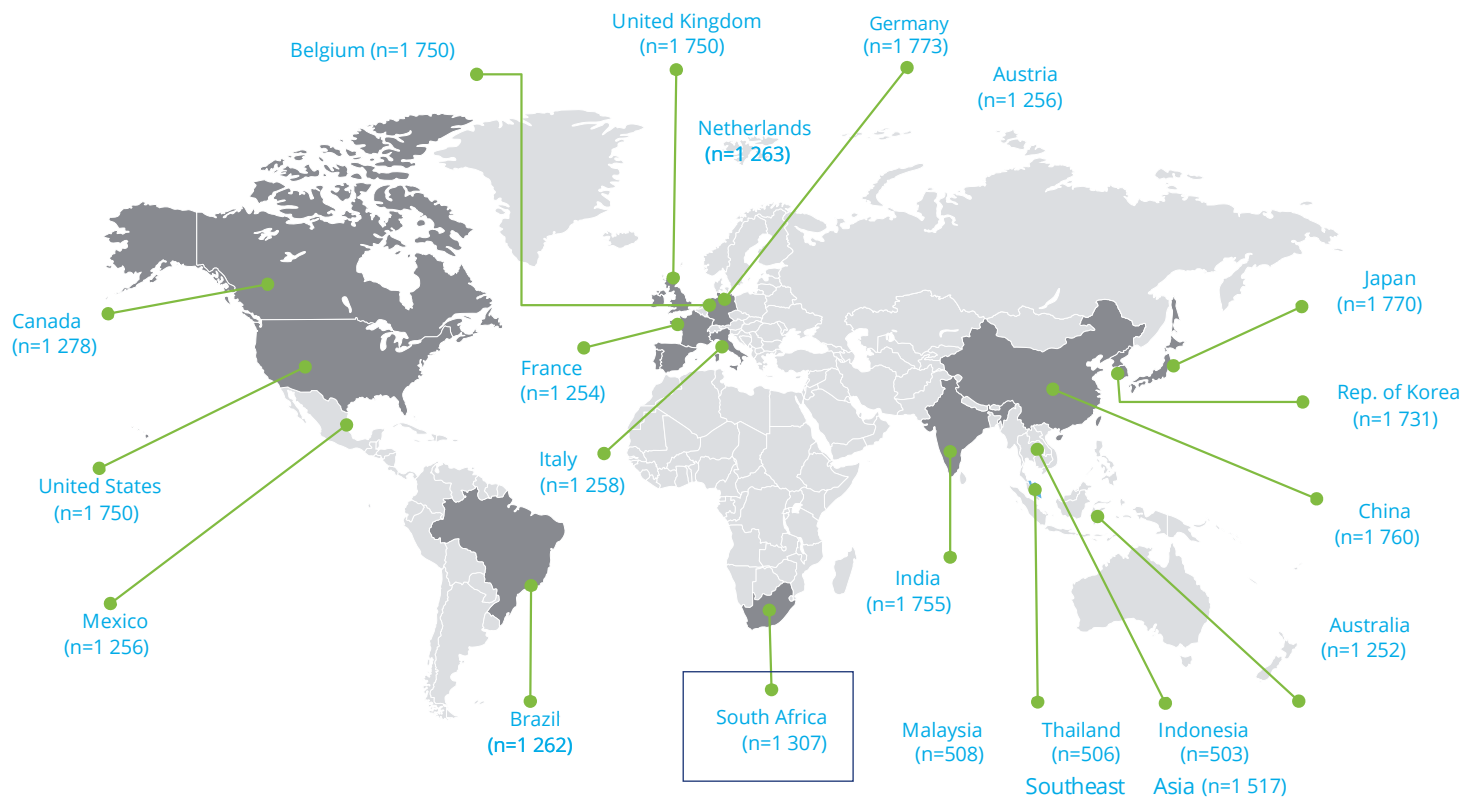
A need for a change in OEM models remain high



How interested are consumers in bypassing the dealer?



The 2019 Deloitte Global Automotive Consumer Study includes more than 25K consumer responses across 20 global markets



Study methodology

The study is fielded using an online panel methodology where consumers of driving age are invited to complete the questionnaire (translated into local languages) via email. It was fielded in 20 countries and designed to be nationally representative of the overall population in each market.

Further Mobility Insights

Major global city analysis

Johannesburg compared to other cities

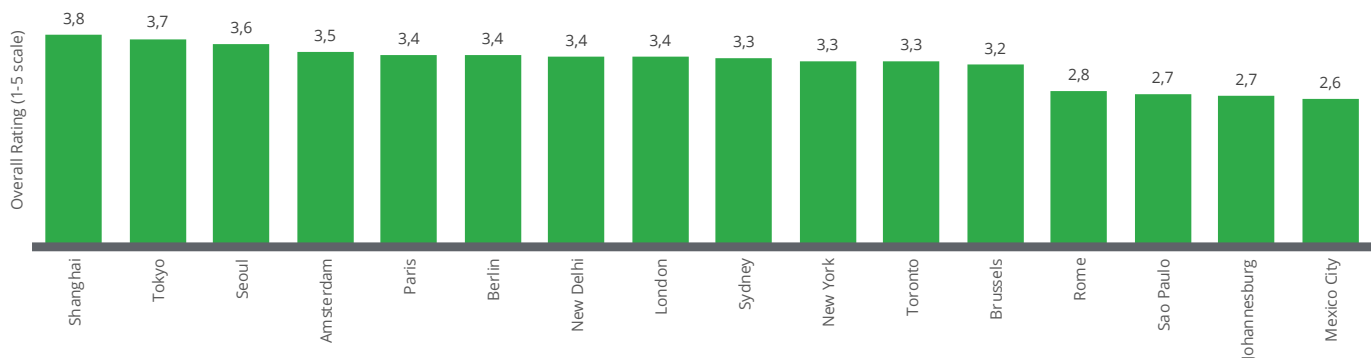
Average rating of public/mass transit system (1-5 point scale)

Rank	Country	City	Congestion	Reliability	Timeliness	Safety	Integration	Coverage	Affordability	Versatility	Accessibility	Cleanliness	User Friendliness	Overall
1	China	Shanghai	2.8	4.0	3.7	4.1	4.0	4.1	4.0	3.9	3.5	3.6	3.7	3.8
2	Japan	Tokyo	2.6	3.8	3.8	4.0	3.9	3.9	3.8	3.6	3.6	3.6	3.9	3.7
3	South Korea	Seoul	2.6	3.8	3.7	3.8	3.8	3.8	3.7	3.8	3.4	3.6	3.6	3.6
4	Netherlands	Amsterdam	3.1	3.6	3.3	3.7	3.7	3.4	3.3	3.6	3.4	3.4	3.5	3.5
5	France	Paris	2.7	3.5	3.3	3.6	3.7	3.8	3.4	3.6	3.1	2.7	4.0	3.4
6	Germany	Berlin	2.7	3.2	3.1	3.6	3.6	4.0	3.6	3.7	3.5	2.9	3.4	3.4
7	India	New Delhi	2.8	3.3	3.4	3.3	3.6	3.7	3.9	3.6	3.3	3.0	3.4	3.4
8	UK	London	2.6	3.4	3.3	3.7	3.6	3.9	3.4	3.5	3.2	3.0	3.4	3.4
9	Australia	Sydney	2.8	3.2	3.1	3.7	3.5	3.4	3.6	3.4	3.4	3.3	3.5	3.3
10	US	New York	2.9	3.2	3.1	3.5	3.5	3.6	3.7	3.4	3.3	2.9	3.2	3.3
11	Canada	Toronto	2.6	3.2	3.1	3.6	3.4	3.3	3.5	3.3	3.4	3.1	3.4	3.3
12	Belgium	Brussels	2.8	3.3	3.1	3.6	3.3	3.4	3.3	3.3	3.0	2.8	3.7	3.2
13	Italy	Rome	2.3	2.7	2.4	2.9	2.8	3.0	3.1	2.9	2.6	2.3	3.3	2.8
14	Brazil	Sao Paulo	2.0	2.9	2.5	2.6	2.9	2.9	2.7	2.7	2.6	2.7	3.3	2.7
15	South Africa	Johannesburg	2.5	2.5	2.5	2.5	2.9	2.7	3.5	2.7	2.6	2.3	2.6	2.7
16	Mexico	Mexico City	2.1	2.4	2.3	2.1	2.8	3.1	3.1	3.0	2.4	2.2	3.2	2.6

Note: analysis represents survey responses where v=>5 and <125 km/h.

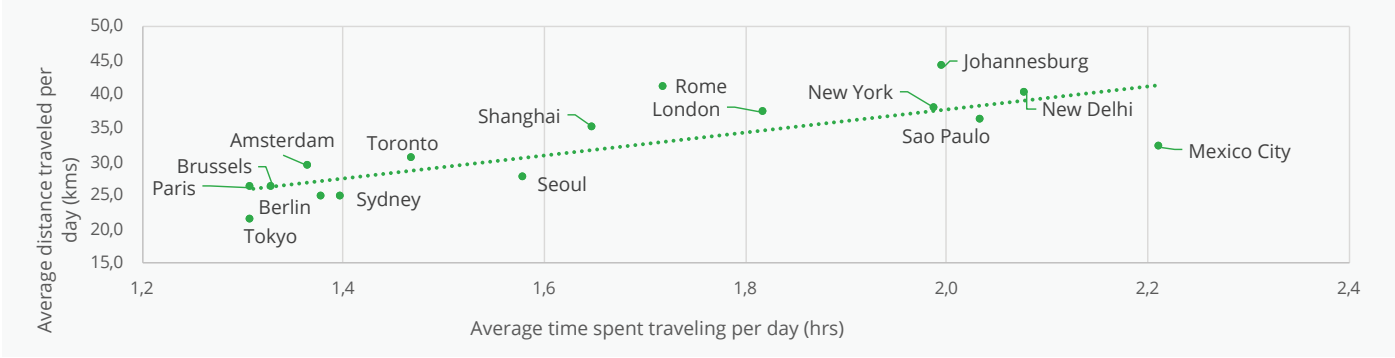
Note: overall average assumes equal weighting between measurement categories.

Overall Rating of Mass Transit System (5-point scale)



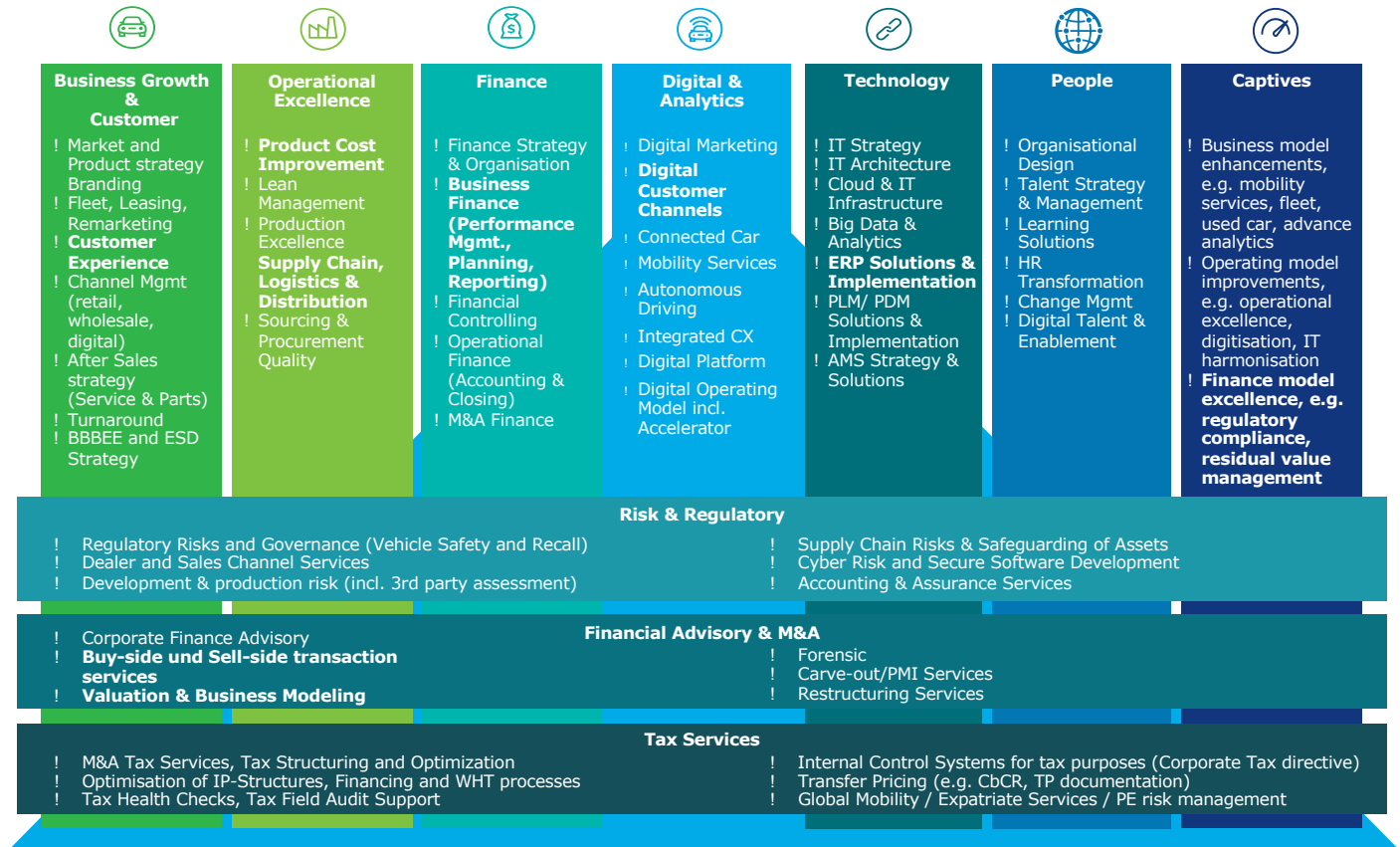
Rank	Country	City	n	t (hrs)	d (kms)	v (km/h)
1	Italy	Rome	122	1.72	40.70	23.72
2	South Africa	Johannesburg	346	2.00	43.92	21.98
3	Netherlands	Amsterdam	89	1.37	29.04	21.26
4	China	Shanghai	190	1.65	34.86	21.18
5	Canada	Toronto	143	1.47	30.31	20.63
6	UK	London	239	1.82	37.15	20.42
7	France	Paris	196	1.31	26.15	20.02
8	Belgium	Brussels	151	1.33	25.89	19.49
9	India	New Delhi	201	2.08	39.96	19.17
10	US	New York	123	1.99	37.74	18.97
11	Germany	Berlin	123	1.38	24.63	17.79
12	Brazil	Sao Paulo	248	2.03	35.94	17.66
13	Australia	Sydney	265	1.40	24.62	17.53
14	South Korea	Seoul	640	1.58	27.48	17.37
15	Japan	Tokyo	469	1.31	21.32	16.33
16	Mexico	Mexico City	270	2.21	31.91	14.42

Global Urban “Velocity”



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