



Introduction: What's down the road for personal vehicles?



What role will cars play in our future?

The car as an urban mobility icon will never go away, and consumers still see personal vehicles as the gold standard for convenience and personal space.

However, it is unlikely the car of tomorrow will look and feel like today, due to several cultural and innovations in mobility service driven by:

- increasing environmental considerations
- a declining interest in car ownership among consumers
- evolving consumer expectations around shared mobility

The COVID-19 pandemic has also had a significant impact on consumer relationships with personal vehicles:

- the fear of infection has led to a drop in car-sharing and mass transport
- economic concerns has meant less new cars being sold
- less travel and more working from home saw a lesser need for mobility







Consumers at an inflection point

covidence conditions that may or may not stick in the long run.

What will happen to workspaces? When will they go back, if ever, to their pre-2020 routines?

Automotive industry at an inflection point

The industry is being challenged by an increasing awareness of the impact transport modes have on personal carbon footprints, as well as a pandemic that has shaken supply, production and sales.

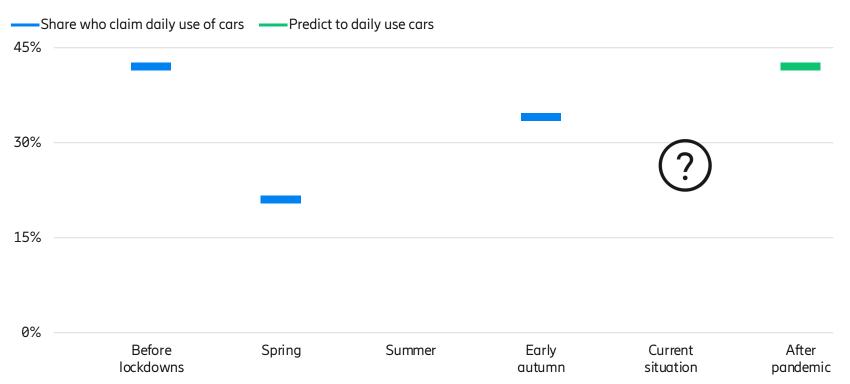


What role and place will cars take in our future?



Car usage is expected to return to normal

Percentage of consumers in the UK reporting daily use of cars throughout the year Data points from different surveys throughout 2020



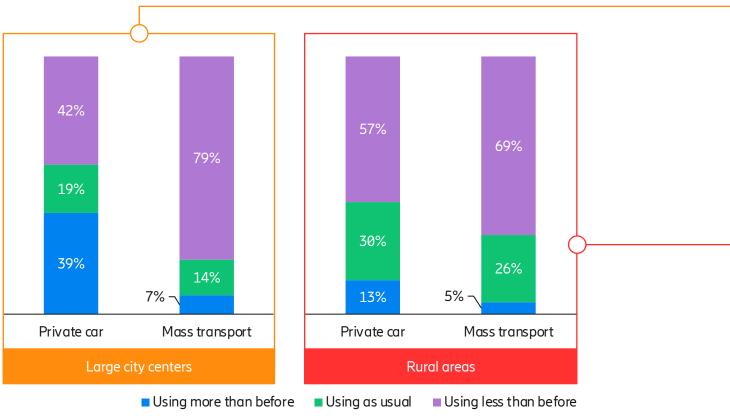
Global trends show that, once restrictions are lifted, most commuters expect to return to their previous transport mode. This is more common in cars and takes longer for public transport users.

Source: Ericsson Consumer & IndustryLab Lab analytical platform (2020) Base: Online population aged 15–69 living within the UK.









49%

Forty-nine percent of residents in large city centers felt internet services helped them a lot with grocery shopping during the crisis.

23%

Less than a quarter of rural residents felt internet services helped them a lot with grocery shopping during the crisis.

Source: Ericsson Consumer & IndustryLab Lab analytical platform (2020)

Base: Smartphone users aged 15–69 within Brazil, China, France, Germany, India, Italy, South Korea, Spain, Sweden, the UK and the US

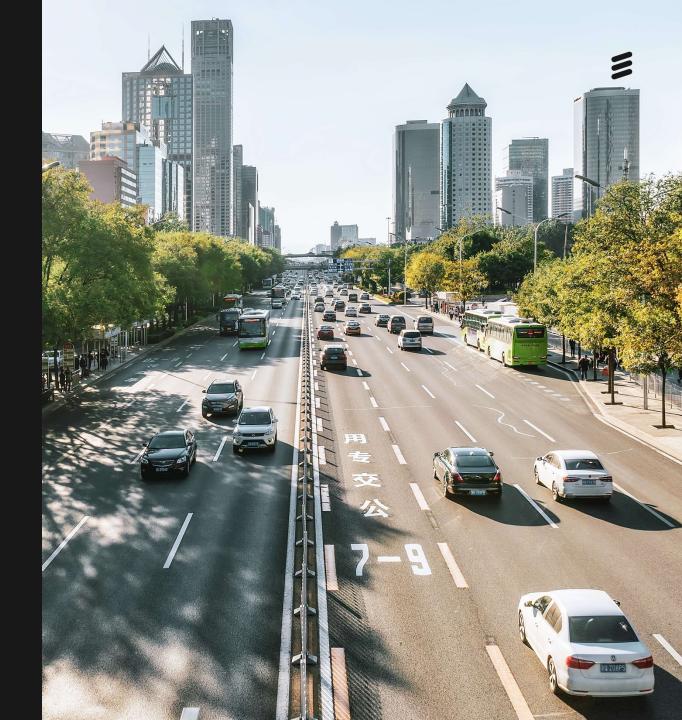
Car access vs ownership: Parents in the spotlight

The perceived convenience of car ownership has been diminished by:

- the emergence of new shared mobility services
- population increases in denser urban areas
- access to more reliable public transport

Many consumers have adapted their behavior in line with these changes.

However, no sharing or hailing service is convenient or affordable enough to make most parents believe that car ownership is irrelevant.



Who thinks is important to own a car in big cities?

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76%

Seventy six percent of millennial parents (20 to 40 years old)

47%

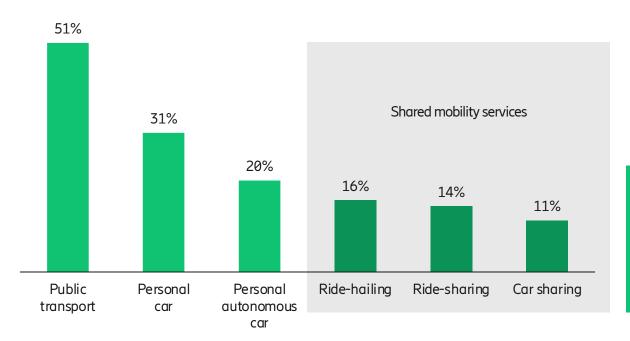
Less than half of adults without children (20 to 50 years old) 38%

Thirty eight percent of youngsters living with parents

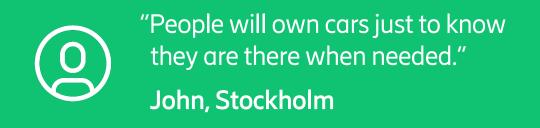


Over half expect shared mobility services to grow over the next 10 years

How do these optimistic consumers expect to commute in 5–10 years?



Fifty-seven percent of consumers expect shared mobility services to grow over the coming decade, but less than one in five of those believers expect to use these services themselves. This shows a paradigm where people expect shared mobility to reduce congestions and carbon emissions but only a fraction expect to be part of that change.



Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15–69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.



"When shared rides meet customer expectations on privacy and personal safety, a new market will emerge between private cars and traditional public transport.

5G will play a key role to enable services and experiences that transform vehicles into more than just transport units."

Anna Haupt, Vice President of Mobility Solutions, NEVS





Part 1 Consumer groups by interest in cars and technology



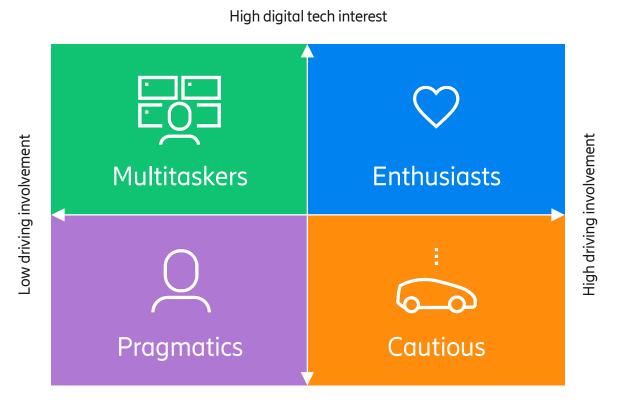
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Grouping consumers by interest in cars and technology

Not all consumer behaviors and expectations are equal. How they think about the future of mobility is closely related to their current life stage and mode of transport, but also how engaged with technology they are. We can see clearly the influence of IT developments on the mobility experience and even innovation in transport modes and services.

We have divided a global sample of 16,000 respondents into four distinct consumer groups based on their interests in cars and technology.

In the following slides we present their preferences and sentiments about cars and the wider context of urban mobility in the future.



Low digital tech interest

Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15–69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

The Enthusiasts Consumers with high Living situation Driving license? 86% interest in both diaital technologies and Eighty-six percent everything car related. 86% Live with family expect an autonomous They show high 59% Have dependent vehicle revolution involvement in the children within 10 years. driving experience. Age distribution Has during commute Feelings about cars 95% Smartphone 47% Laptop 36% Tablet 38% Smartwatch





The Cautious

Consumers with high involvement in the driving experience but who are overly cautious about new technologies.

Age distribution

Living situation

Has during commute

Feelings about cars

Driving license?

62%

Sixty-two percent within 10 years.





The Pragmatic

Consumers that mostly care about getting from A to B, with no particular interest in cars or new digital technologies.

Living situation

Driving license? 30%

> Thirty percent expect an autonomous vehicle revolution within 10 years.

Age distribution Has during commute Feelings about cars







The Enthusiasts



Back to consumer groups <

Consumers with high interest in both digital technologies and everything car related. They show high involvement in the driving experience.

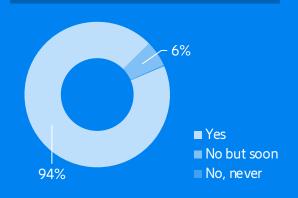
Living situation

75% Are parents

86% Live with family 59% Have dependent

children

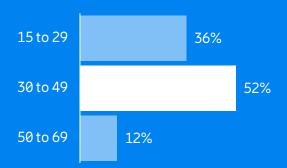
Driving license?



86%

Eighty-six percent expect an autonomous vehicle revolution within 10 years.

Age distribution



Has during commute

95%	Smartphone
47%	Laptop
36%	Tablet
38%	Smartwatch

Feelings about cars



Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15–69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

The Cautious



Back to consumer groups \langle

Consumers with high involvement in the driving experience but who are overly cautious about new technologies.

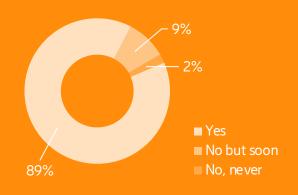
Living situation

62% Are parents

76% Live with family

38% Have dependent children

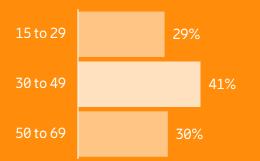




62%

Sixty-two percent expect an autonomous vehicle revolution within 10 years.

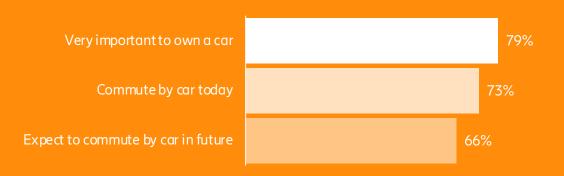
Age distribution



Has during commute

87%	Smartphone
17%	Laptop
13%	Tablet
11%	Smartwatch

Feelings about cars



Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15–69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

The Multitaskers



Back to consumer groups <

Consumers highly engaged with digital technologies but with very low interest in cars and driving involvement.

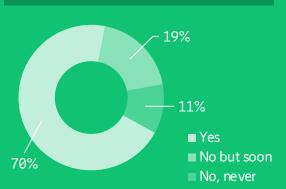
Living situation

51% Are parents

74% Live with family

34% Have dependent children

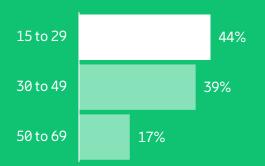




55%

Fifty-five percent expect an autonomous vehicle revolution within 10 years.

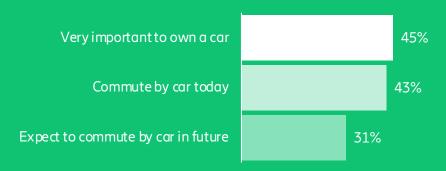
Age distribution



Has during commute

91%	Smartphone
25%	Laptop
19%	Tablet
16%	Smartwatch

Feelings about cars



Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15-69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

The Pragmatic



Back to consumer groups <

Consumers that mostly care about getting from A to B, with no particular interest in cars or new digital technologies.

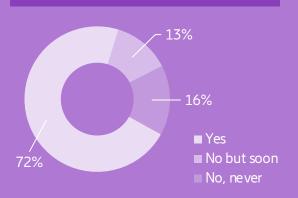
Living situation

50% Are parents 66% Live with family

26% Have dependent

children

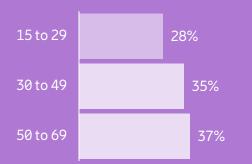
Driving license?



30%

Thirty percent expect an autonomous vehicle revolution within 10 years.

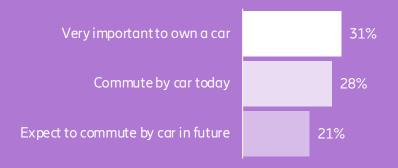
Age distribution



Has during commute

81%	Smartphone
9%	Laptop
7%	Tablet
4%	Smartwatch

Feelings about cars



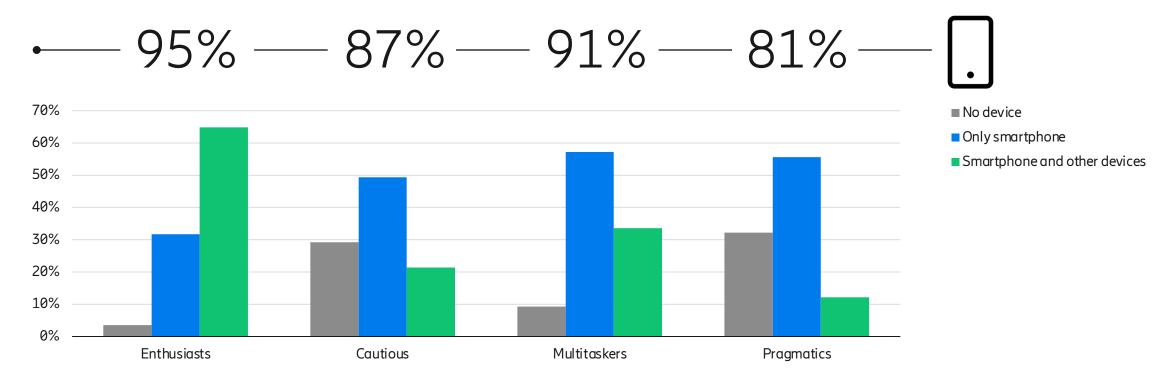
Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15–69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

Devices carried and regularly used while on the go



Percentage of consumers who carry a smartphone (above) and who regularly use devices while on the go (below)

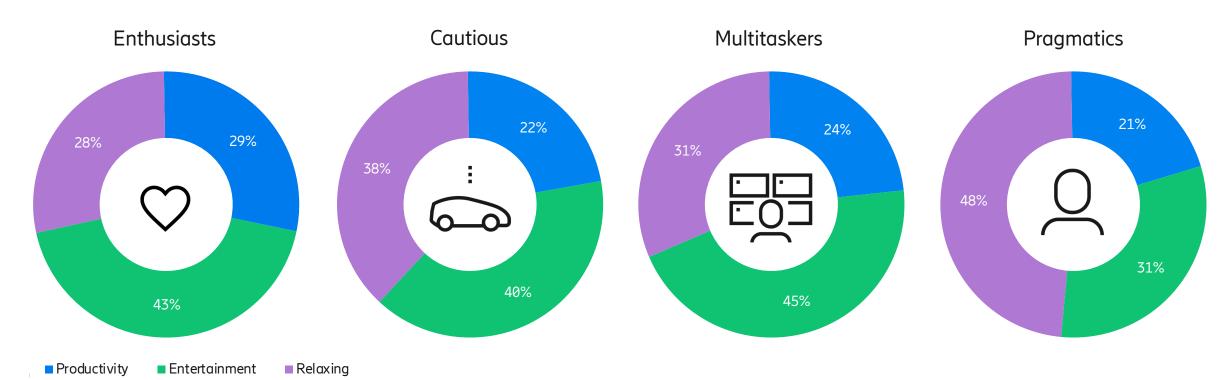


How does each group spend their time on the go?



Proportion of activities done while on the go by different consumer groups

Entertainment activities are most common. However, pragmatics prefer to relax.



Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15–69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

Raking of preferred activities



Preferred activities while on the go by consumer group

Entertainment activities are most common. However, Pragmatics prefer to relax.

Preferred activities while commuting	Enthusiasts	Cautious	Multitaskers	Pragmatics
Enjoying audio content	1	1	1	3
Using social networks	2	5	2	
Getting relaxed		3	5	2
Talking with friends/family	4	2		4
Unwinding without a plan		4		1
Playing video games	5		3	
Watching video content	3		4	
Getting some extra sleep				5
Planning and working				
Personal admin				

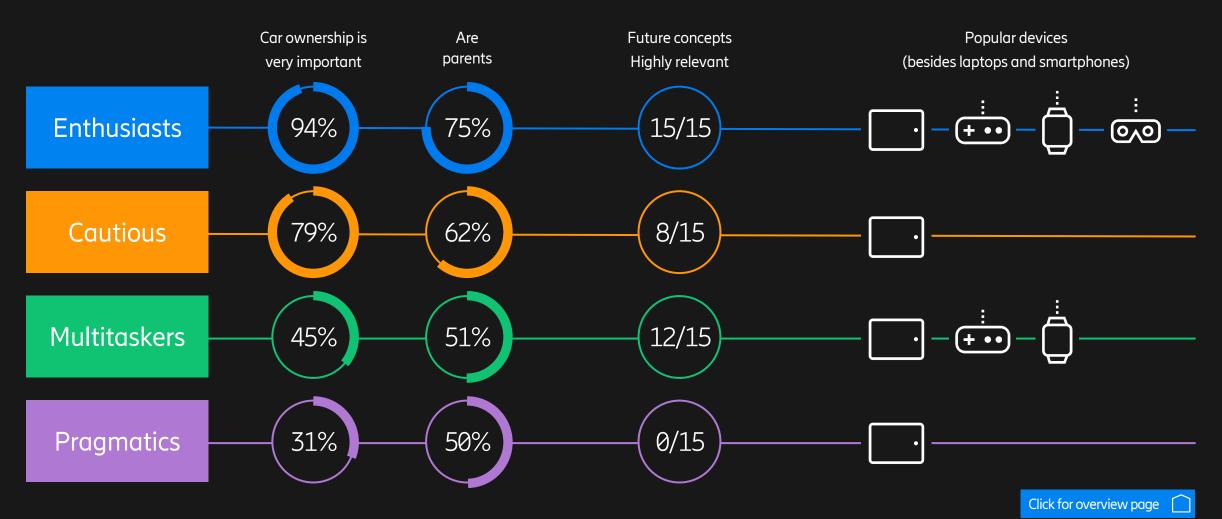
ProductivityEntertainmentRelaxing

Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15-69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

Comparing consumer groups







Part 2: Consumers take on service concepts

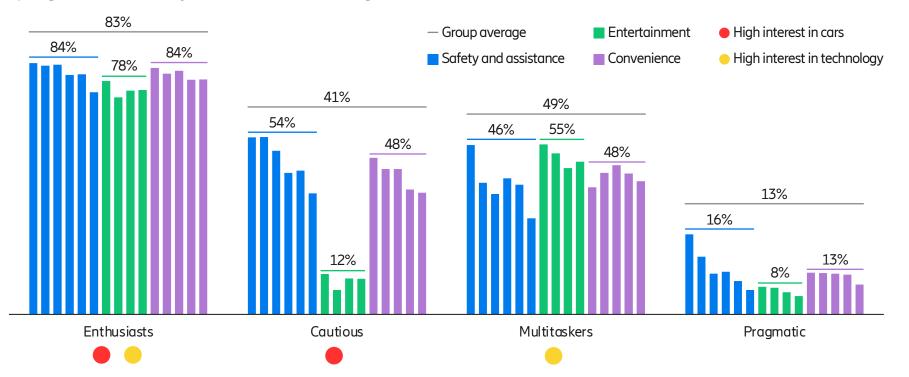




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Consumers reporting high interest in service concepts

Enthusiasts show highest interest across the board while pragmatics are only interested in moving from A to B.



Consumers who are keen on technology (enthusiasts and multitaskers) show similar interest in all categories of services, while the car-focussed cautious group show little interest in concepts related to entertainment.

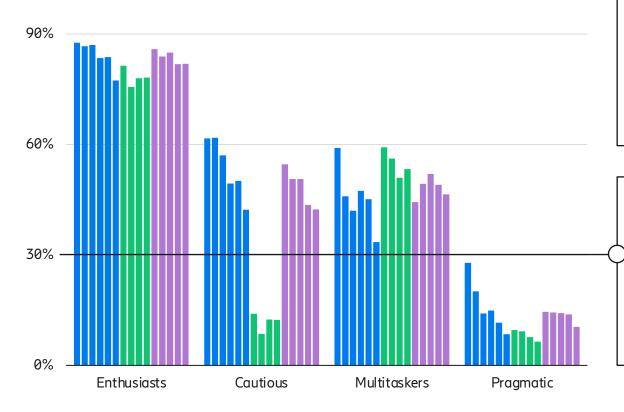
Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15-69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

Interest in service concepts varies by consumer group



Consumers reporting high interest in service concepts



For the cautious group, entertainment concepts are irrelevant within the car.

For pragmatics, none of the concepts presented seemed to be highly interesting, they just want to move from A to B.

<30%

Concepts reporting less than 30 percent high interest are simply irrelevant for that consumer type.

Source: Ericsson Consumer & IndustryLab (December 2020)



Interest in service concepts varies by consumer group

Preferred concepts	Enthusiasts	Cautious	Multitaskers
Distracted driver detection	1	2	2
Connected assisted drive	3	1	
Remote Access	2	3	
Car Software Update	4	4	
In-vehicle continual connectivity		5	
Car voice commands	5		
Augmented Reality Maps			1
Motion sickness support			3
Mood personalization			5
In-seat AR Passenger Entertainment			4

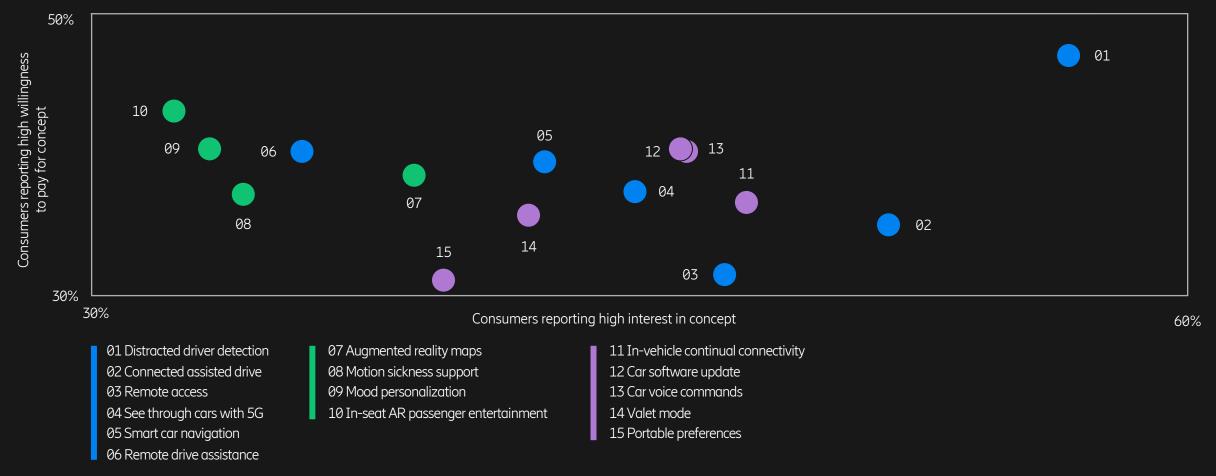
Distracted driver detection is the most relevant concept overall, and is even seen as critical by the multitaskers.

Consumers with high interest in cars favor safety, assistance and convenience concepts, while multitaskers have a strong inclination towards entertainment services in the car.

Source: Ericsson Consumer & IndustryLab (December 2020)

Fifteen concepts to augment the car experience

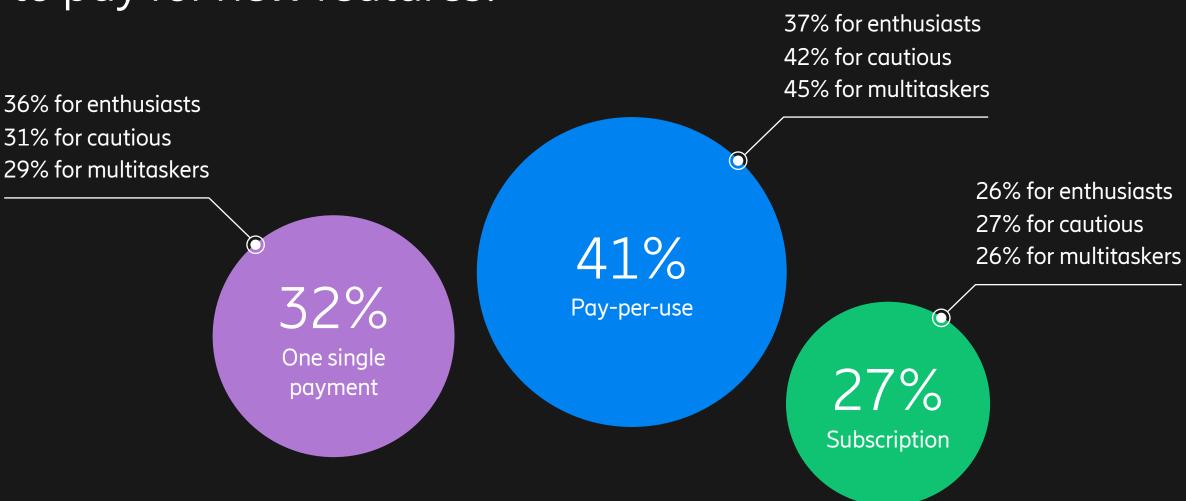




Source: Ericsson Consumer & IndustryLab (December 2020)

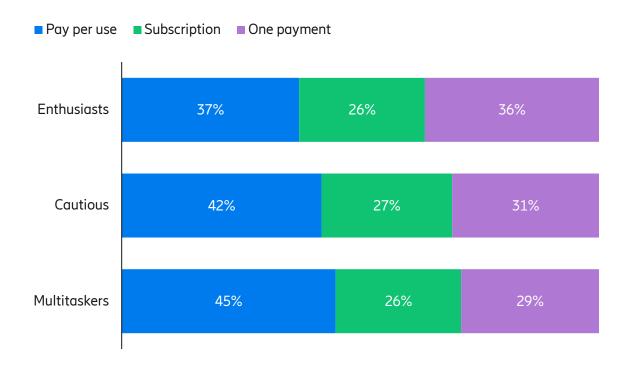






How would consumers prefer to pay for new features?

Preferred payment option for the different groups



Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15–69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.



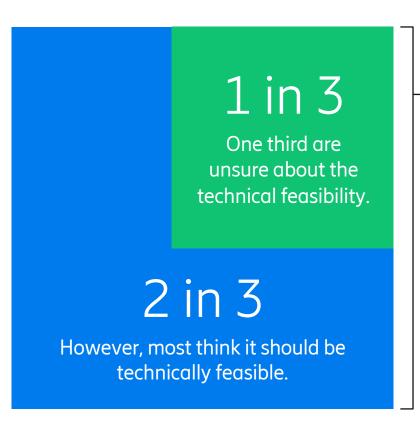
Some prefer a single upfront sum that will keep the service available at all times, others would opt for subscriptions, while many still prefer to pay only when the services are used. This preference also depends on the type of service. Distracted driver detection has the highest proportion of interest to pay via a single sum. Safety features should always be ready to act!

Subscription models are most relevant for in-vehicle continual connectivity while pay-per-use models resonate better with features such as autonomous parking (valet mode). One thing is certain, subscription models don't come as a natural choice for consumers.

Consumers signal high interest in modularity

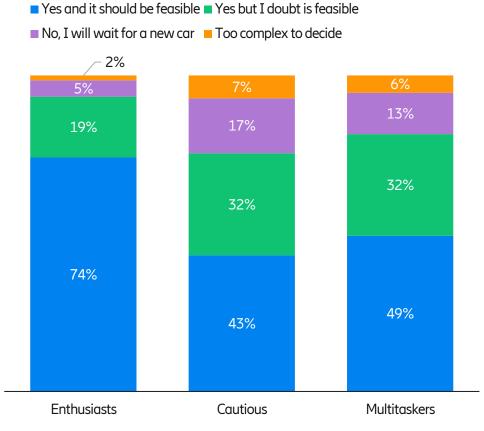


Would consumers like to install new features as add-ons on their current cars?





Eighty-three percent would like to install new features in their current cars.



Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15–69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

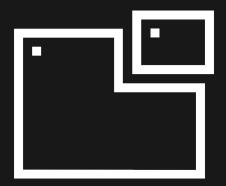
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Consumers signal high interest in modularity

Even if these 15 concepts are future services, it is interesting to test the waters and see if consumers are so interested in them that they would consider investing in a brand new car just for those features.

All groups show a strong desire to have these features as aftermarket products they could retrofit in their cars.

Enthusiasts strongly believe they can install these features in their current cars.



Thirty-two percent of cautious and multitaskers don't think it would be possible to install those features in their existing cars, even if the majority would really like to do so.

Service concepts, explained

Safety and assistance

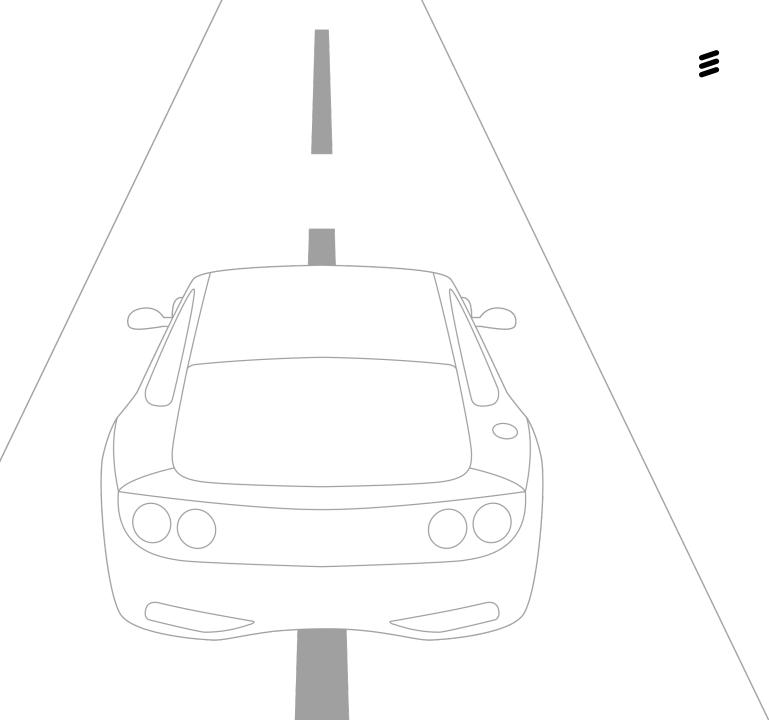
Distracted driver detection Connected assisted drive

Convenience

Car software update
In-vehicle continual connectivity

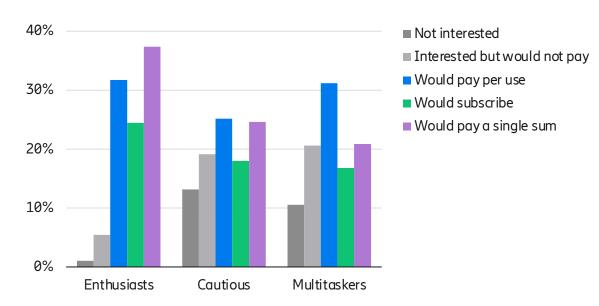
Entertainment

In-seat AR passenger entertainment Augmented reality maps



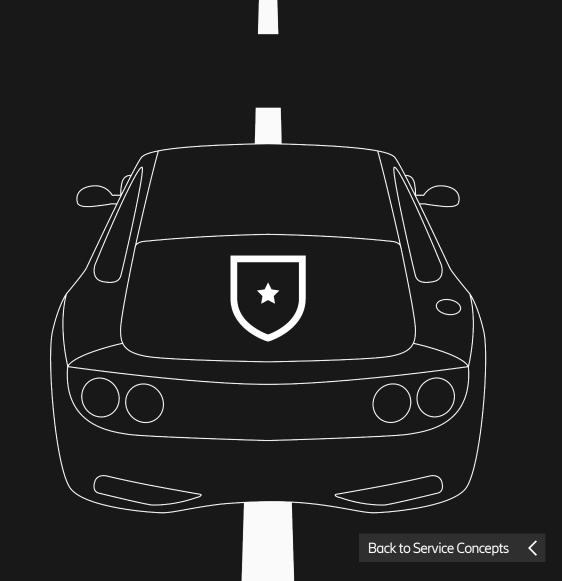
Distracted driver detection

A set of cameras to identify when a driver is not paying attention to a danger ahead. It could then alert the driver to the danger, or even activate automatic breaks if needed.



Source: Ericsson Consumer & IndustryLab (December 2020)

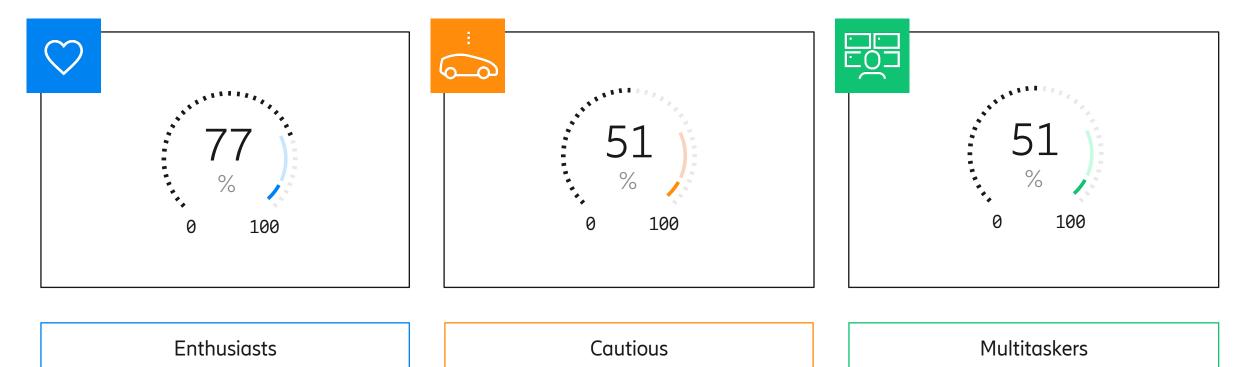
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Distracted driver detection



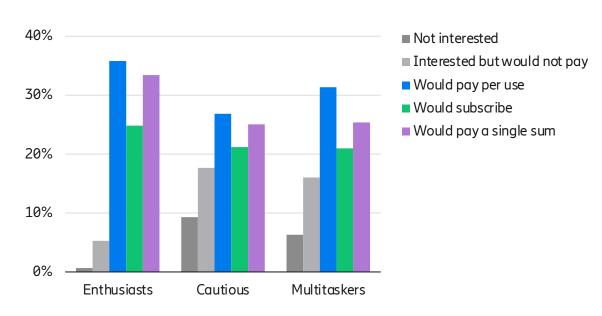
Consumers who want to retrofit this feature in their current car, and believe it should be possible



Connected assisted drive



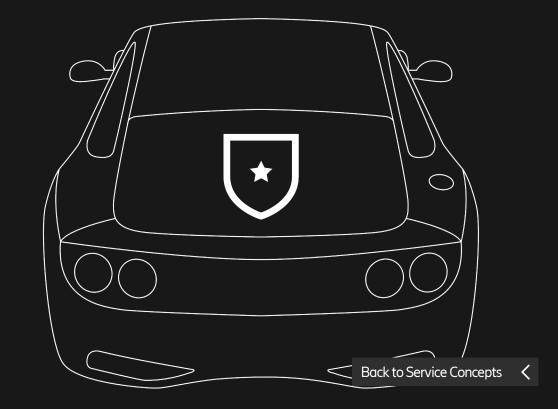
Allow drivers to receive information from other cars, and from cameras and sensors along the road to improve safety, focus, and convenience.



Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15–69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

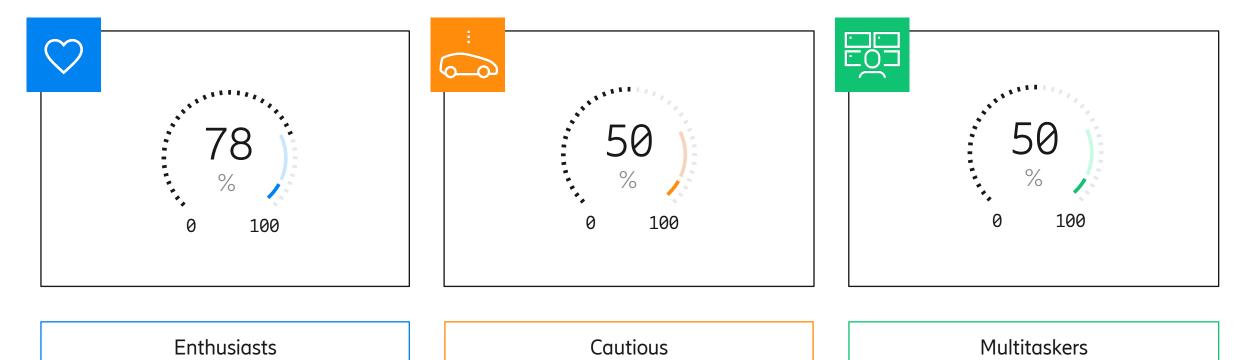
It could provide real-time information about situations beyond the horizon, giving the driver the opportunity to adapt their route before.



Connected assisted drive



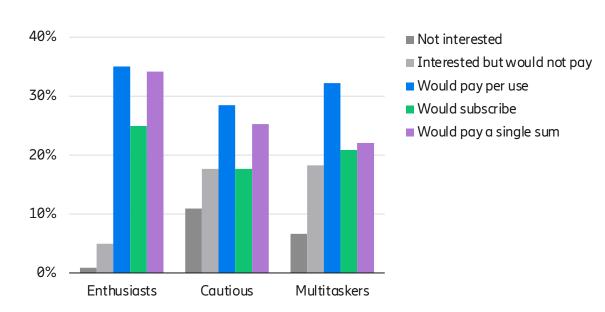
Consumers who want to retrofit this feature in their current car, and believe it should be possible



Car software update



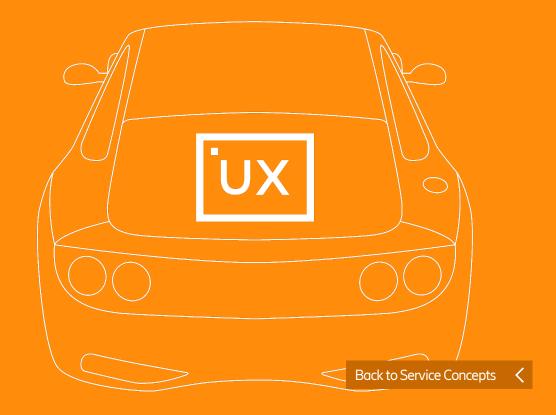
In the same way that smartphones and computers are updated, a car can also receive updates regularly.



Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15–69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

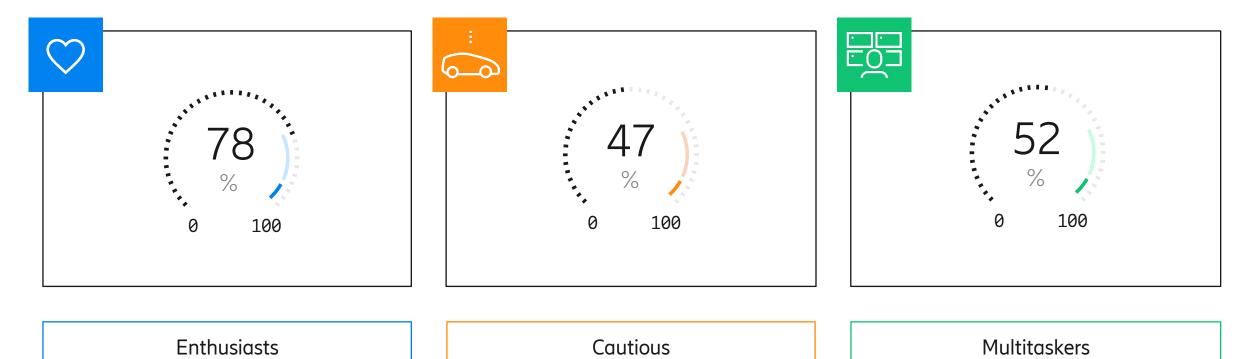
Car software update services can fix issues, upgrade the car, improve security or add new functionalities without visiting a workshop.



Car software update

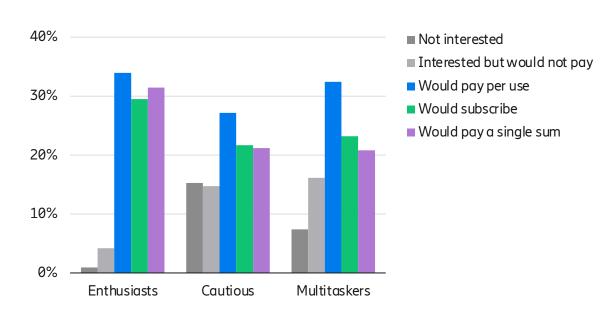


Consumers who want to retrofit this feature in their current car, and believe it should be possible



In-vehicle continual connectivity

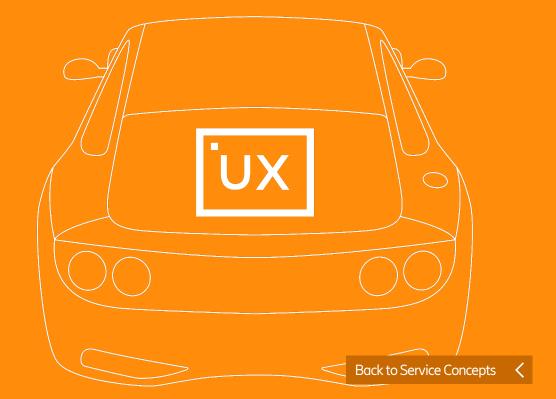
A stronger and more consistent internet connection for all passengers, compared to the regular internet access available on a smartphone.



Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15–69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

Options could be synced with services to avoid disruption, and the car could even suggest alternative routes to avoid lags along the way.

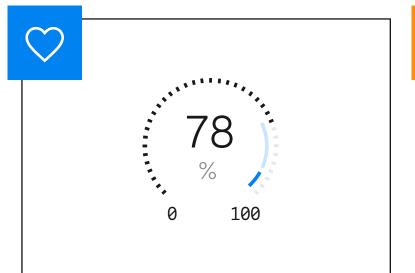


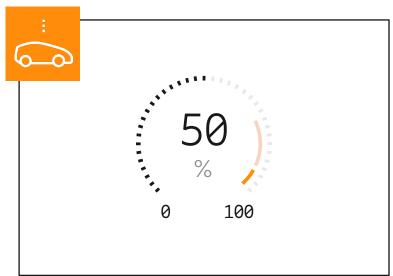


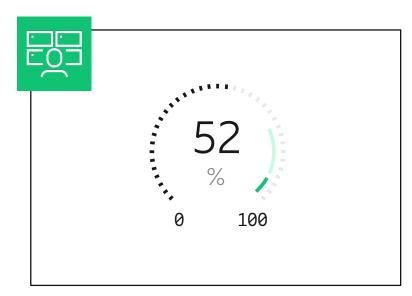
In-vehicle continual connectivity



Consumers who want to retrofit this feature in their current car, and believe it should be possible







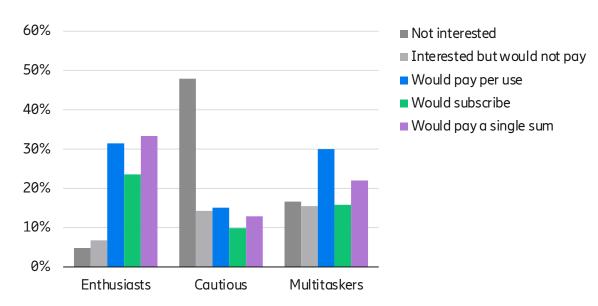
Enthusiasts

Cautious

Multitaskers

In-seat AR passenger entertainment

Using a 5G smartphone and a mobile augmented reality (AR) headset, passengers could enjoy a selection of in-seat AR passenger entertainment, virtually transforming their environment.

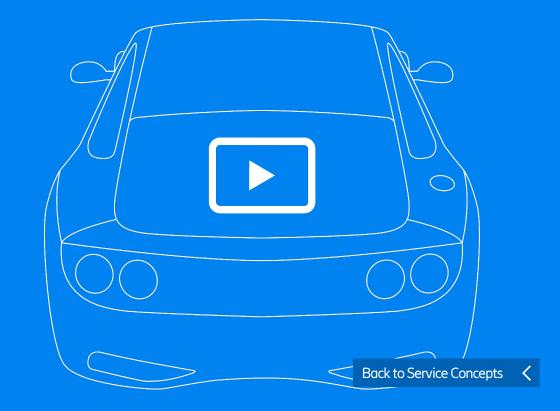


Source: Ericsson Consumer & IndustryLab (December 2020)

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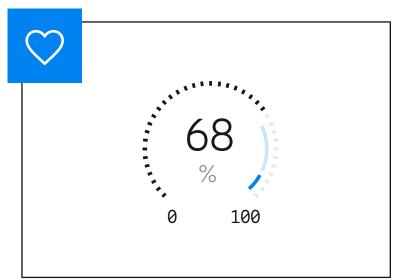
The headset and headphones could be provided as an in-built part of the vehicle, automatically charging when docked and not in use.

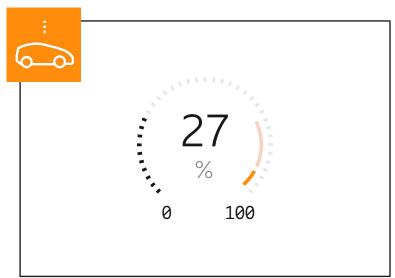


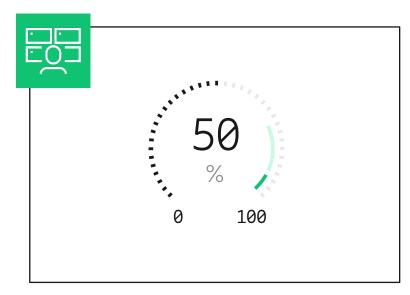
In-seat AR passenger entertainment



Consumers who want to retrofit this feature in their current car, and believe it should be possible







Enthusiasts

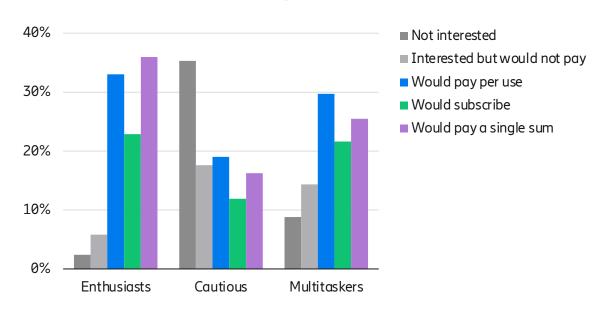
Cautious

Multitaskers

Augmented reality maps



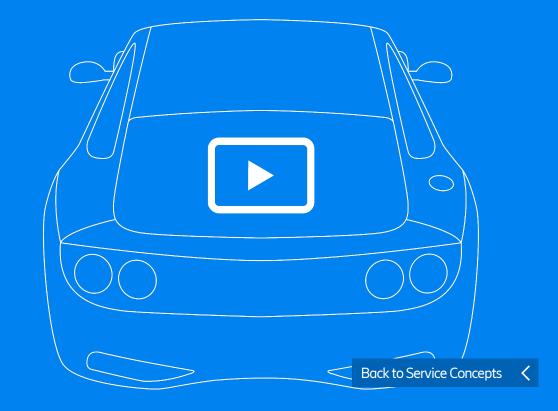
A pair of sleek augmented reality (AR) glasses with a 5G connection could enhance the environment for both drivers and passengers. Eliminating the need to look down at a smartphone screen.



Source: Ericsson Consumer & IndustryLab (December 2020)

Base: People aged 15–69, living within metropolitan areas of New York, Los Angeles, Stockholm, London, Berlin, Paris, São Paulo, Dubai, Tokyo, Seoul, Shanghai, Singapore, New Delhi, Jakarta, Bangkok or Sydney.

AR glasses add a layer of virtual information on top of the wearer's view of their surroundings, such as real-time directions around town, maps and ads.





ericsson.com/consumerlab