

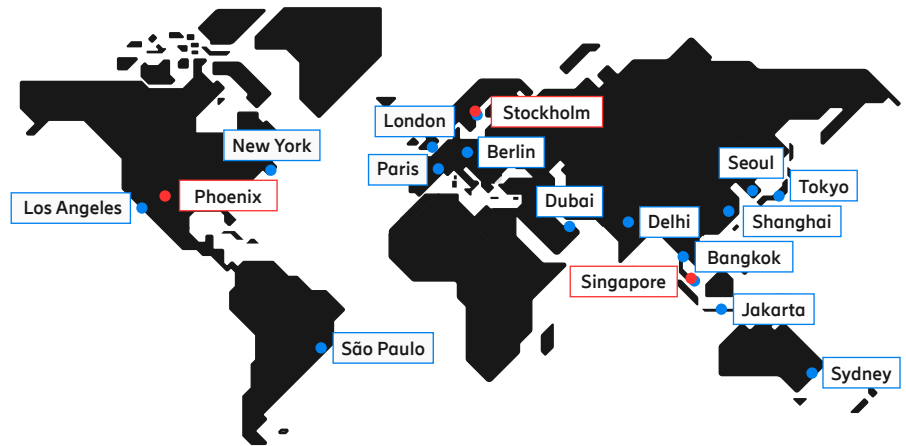


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# Augmenting the daily commute

Metropolitan mobility experiences:  
how consumers make travel time valuable

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## Methodology

Qualitative insights were gathered through 30 in-depth interviews and accompanied journeys in Phoenix, Singapore and Stockholm. These respondents were using emerging commuting modes and demonstrated high digital engagement. Quantitative data was collected from 16 cities. Online interviews were held with 16,000 people aged 15–69 in Bangkok, Berlin, Delhi, Dubai, Jakarta, London, Los Angeles, New York, Paris, São Paulo, Seoul, Shanghai, Singapore, Stockholm, Sydney and Tokyo. All respondents use the internet on a daily basis. This study is representative of the opinions of 130 million smartphone users globally.

In addition to the consumer interviews, 10 expert interviews were conducted with senior executives from telecom operators, mobility service providers and vehicle manufacturers to gain a perspective on industry sentiment around the future of mobility for consumers. Ericsson Consumer & IndustryLab would like to thank the individuals listed below for their valuable inputs to this study.

**Anna Haupt**, NEVS  
**Arwed Schmidt**, EasyMile  
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**Malena Heed**, Uber  
**Ola Boström**, Veoneer  
**Peter Hafmar**, Nobina Technology  
**Stefan Thulin**, Samtrafiken

## About Ericsson Consumer & IndustryLab

Ericsson Consumer & IndustryLab delivers world-class research and insights for innovation and sustainable business development. We explore the future of consumers, industries and a sustainable society with regards to connectivity by using scientific methods to provide unique insights on markets, industries and consumer trends.

Our knowledge is gained in global consumer and industry research programs, including collaborations with renowned industry organizations and world-leading universities. Our research programs cover interviews with over 100,000 individuals each year, in more than 40 countries – statistically representing the views of 1.1 billion people.

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# Navigating a hectic metropolis

With so many things to accomplish in a day – work, chores, socializing – how do we even cope? Surprisingly, for many individuals, the answer lies in the daily commute.

It turns out commuting is not seen as a necessary evil by everyone, but as an opportunity to recharge the mind. Research also points at the benefits of using commuting as an opportunity to transition between home and work roles.<sup>1</sup> Some even say it is the only time they have in their busy city lives to think and reflect without feeling pressured.

One-quarter of the commuters in this study claim to be highly satisfied with their commute, having found a way to actively turn it into an experience worth having. In this study we refer to this group as Savvy Commuters, and reflect on how their strategies and habits could be used to improve commuting in cities around the world.

## Key findings

- More than 1 in 4 commuters are willing to add 20 or more minutes of commuting to their weekdays for a better experience. Most do not complain about travel time but are dissatisfied with the delays they regularly experience.
- Two in five of all respondents don't think it is very important to own a car. However, more than half commute by car today and do not want to lose the flexibility and convenience that it provides.

- Fifty-four percent of highly satisfied commuters claim to have plenty of mental and physical space during their commute. Digital engagement is a big contributor to their satisfaction – 65 percent of them always use their smartphone, compared to only 47 percent in the unsatisfied group.
- Fifty-eight percent of our respondents are highly interested in features that send alerts when a driver is not paying attention to a danger ahead. Commuters express most interest in future services that enhance safety and reduce stress in demanding situations.
- Over one-third believe their city's infrastructure is becoming more strained every year and 25 percent of commuters believe authorities will promote shared mobility alternatives in addition to existing mass transport services in order to alleviate congestions.
- Thirty-five percent expect new automotive companies to be the leaders of the autonomous vehicle revolution, followed by tech giants and traditional car manufacturers.



## Commuting has been heavily disrupted during 2020

Primary data collection for this report was finalized in January 2020. Since then, everyone has been impacted in some way by the COVID-19 pandemic. Measures during this unprecedented time have influenced changes in consumer mobility patterns and future expectations. In a study carried out during April 2020 in 11 countries, half of the respondents felt their use of public transport had been severely impacted during the crisis.<sup>2</sup> Moreover, only one in four were eager to go back to their usual mobility patterns after the lifting of restrictions. Knowing what consumers valued before this crisis could influence positive change and adapt the commuting experience going forward.

<sup>1</sup> Gino, F., Staats, B., Jachimowicz, J. M., Lee, J., and Menges, J. I. "Reclaim Your Commute." Harvard Business Review (2017)

<sup>2</sup> Ericsson Mobility Report (June 2020)

# Get me there on time!

Being in control of the arrival time is more important than minimizing travel time at all cost.

Reducing commuting time would not necessarily make city dwellers happier. The majority of our respondents reported commutes of over 45 minutes per day, yet more than 1 in 4 would be willing to add 20 or more minutes to this if they could improve the experience. Why? Because convenience tops time-efficiency as the reason to choose between commuting options.

Time-efficiency is still one of the three most relevant factors in the decision-making process for consumers (falling between convenience and cost). However, time-efficiency is not only about how long a journey takes, but also how reliable any time predictions can be. Being in control of the arrival time is more important than minimizing travel time overall. However, almost half are not satisfied with the sources of real-time information that could otherwise help them plan and adapt their commute.

Access to reliable real-time information not only influences overall satisfaction levels, but consumers also indicate that it makes them feel secure and in control of their commute.

Two main factors disrupt this sense of control over journey time:

- **Endless halts:** Almost half of our respondents feel strongly affected by idle periods during the commute that require focus and provide little certainty over how long they will last, such as being stuck in a traffic jam, or struggling to catch a ride or bus.
- **Planning:** Nearly one-quarter of our respondents feel strongly affected by long periods of time needed to prepare or adapt a route, where timely information plays a key role.

Total travel time is therefore not the main concern; it is the unexpected time variations which generate more dissatisfaction. What matters most is to arrive on time while making the best use of time on the go.

In this report, we explore how the most satisfied commuters – a group we have named “Savvy Commuters” – see their commute as more than just time spent moving from A to B, and are using everyday trips to free up time for the rest of the day.

“The perception of travel time decreases when you have full control of the trip.”

Peter Hafmar,  
Managing Director,  
Nobina Technology

**Testimonials from commuters regarding time**

“There’s a peace of mind knowing that I can get to my destination on time and it helps me plan out my day better.”

Ridesharing commuter, 28  
Singapore

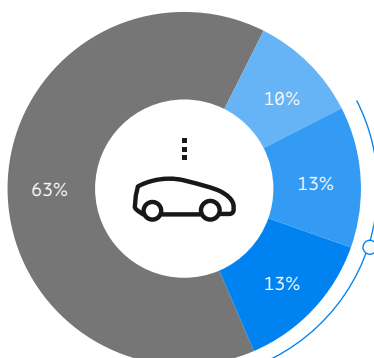
“If you don’t like driving or your car is not comfortable, the time aspect matters more. Having a positive experience makes the time matter less.”

Driver, 27  
Phoenix, US

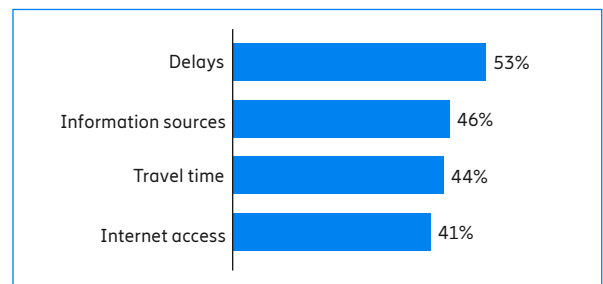
Figure 1: Consumer viewpoint on time-related aspects of their commute

**Willingness to extend commuting time**

- Not willing to commute longer
- 10 more minutes per day
- 20 more minutes per day
- 30 or more minutes per day



**Consumers not satisfied with time-related aspects**

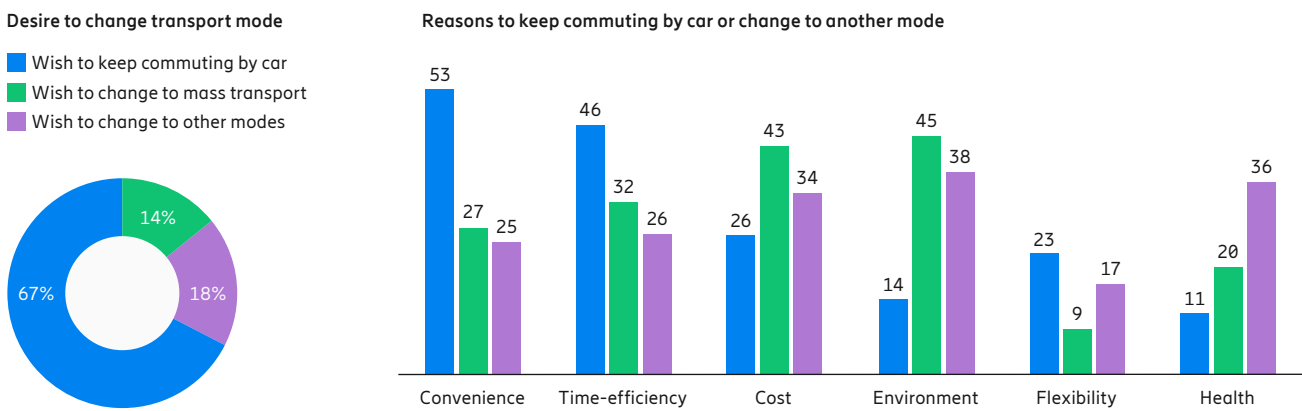


Over one-quarter of respondents would be willing to add 20 minutes or more to their daily commute. This rises to two in five in Delhi, Shanghai and Bangkok.

# Personal vs. mass transport

Consumers identify different benefits in each transport mode.

Figure 2: Car commuter desires and motivations to choose transport mode



Each urban transport mode has its own unique benefits to commuters. Drivers rely on the indisputable availability and privacy of a car, while mass transport users appreciate delegating the responsibility of driving to allow them to focus their attention on other activities. Our respondents in this study use a wide range of transport modes, including personal car (alone or with others), metro, bus, train, tram, motorcycle, scooter, bicycle and shared mobility options.<sup>3</sup>

Choosing mass transport is strongly motivated by cost and environmental concerns, while a distinctive reason to choose a car is personal logistics. One in three car commuters would like to switch to a different mode; however, they do not want to lose the flexibility and convenience that owning a car provides. Car users specifically praise the ability to easily coordinate household plans, such as day care and school pick-ups, or after-school activities.

Of course, not everyone can have a car. In fact, two in five of all respondents don't think owning one is important. It is already evident from the burdened roads and traffic infrastructure in most cities that a different approach is needed for the future of urban mobility. Our respondents are showing less desire to commute by personal cars in mega-cities, and a growing interest in using shared mobility options or alternative means like bicycles and scooters. However, most consumers are hesitant towards drastic change and 55 percent of our respondents are not interested in changing their current commuting mode at all, even if they are unsatisfied with their experience.

Therefore, rather than focusing on the satisfaction level in different modes, it is more insightful to explore the most common aspects among the most satisfied, Savvy Commuters. If these factors can be recreated by means of physical or digital features, then consumers will be able to bring a better experience into different types of vehicles and transport modes.

# 56%

Personal vehicles are the most common mode of transport among our respondents, with 56 percent commuting by car.

<sup>3</sup>“Shared mobility” options in this study refer to ride-hailing, ride-sharing, car-sharing or traditional taxi services

# The experience of Savvy Commuters

Savvy Commuters are those who claim to be highly satisfied with their commute and know how to actively create positive conditions for their trips.

Some people make the most of their time on the go by having a purpose for their commute. Who are they and why do they have such a worthy experience? One-quarter of our respondents claim to be highly satisfied with their overall commuting experience. We refer to this group as Savvy Commuters because they actively create positive conditions for their trips. Those looking to further urban mobility innovation can draw inspiration from this group when it comes to improving the experience of drivers and passengers alike.

Savvy Commuters show less tolerance than others to external aspects that affect their commute, but still rank their experience better than the rest. Their expectations are higher because, for them, commuting is not time to be wasted. The majority feel strongly affected by unexpected delays; the painful halts where commuters lack control. Likewise, an absence of space strongly affects almost half of them, compared to only one-third of the unsatisfied group.

Accordingly, a crucial criterion for a positive experience is the feeling of having enough physical and mental space. Fifty-four percent of Savvy Commuters say they have plenty of mental space during their commute, compared to only 19 percent in the unsatisfied group. This partly depends on the transport mode they use (a higher proportion of Savvy Commuters travel by car). However, this group is also more engaged in creating their sense of space:

- Over four in five Savvy Commuters adapt times, routes and modes to avoid crowds and congestions. This offers peace of mind and prevents disruption to commuting activities.
- They immerse themselves in different digital experiences, mainly through smartphones but also by using headphones and other portable devices.

These habits are consistent and frequent amongst Savvy Commuters, and even if the majority of them use their own cars, mobility service providers should use their behaviors as inspiration when considering how to recreate positive conditions for all commuters.

“I like to have the personal time for myself while I drive to work. I like to enjoy my own music and not communicate with anybody and just relax.”

Car-sharing user, 33  
Singapore

Figure 3: External aspects which strongly affect commuters

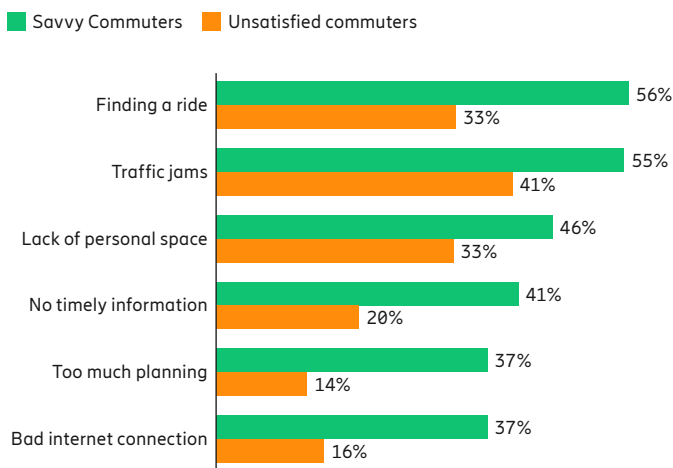
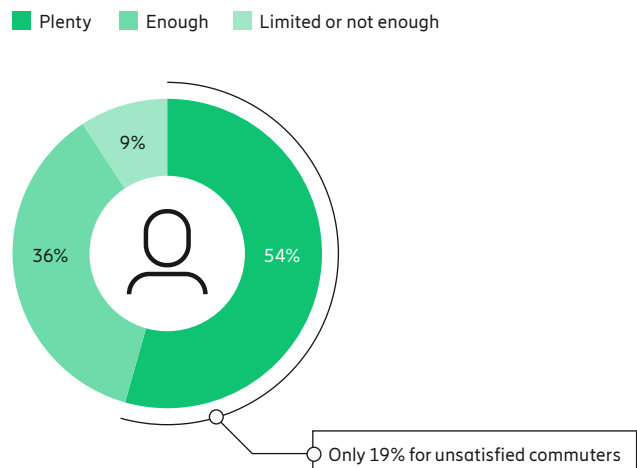


Figure 4: Savvy Commuters’ ranking of their mental space



# Digital engagement for Savvy Commuters

A common trait of Savvy Commuters is to make the most out of their time on the go by engaging in different activities with the support of digital devices.

When it comes to internet connectivity, Savvy Commuters claim to have a higher availability of advanced mobile networks, with 83 percent claiming most of their trip has 4G or 5G coverage versus 68 percent in the unsatisfied group. Moreover, the majority rate their connectivity as fast and stable, allowing them to immerse themselves in digital experiences. Despite more than four in five of all commuters having a smartphone available during their trip, Savvy Commuters use them the most. Sixty-five percent of them always use their smartphone during their commute, compared to only 47 percent in the unsatisfied group.

The predominant commuting activity among all respondents is listening to audio content, which makes sense since it keeps hands and eyes unrestricted.

However, commuters also engage in other activities to give additional meaning to their time in transit. While some partake in social and recreational activities, others claim to be highly productive as they prepare for or wrap up their day.

It is interesting to note that Savvy Commuters talk, watch video content and work on the go a lot more than other commuters. They prefer a mix of activities, and being able to switch between different things is part of the reason they are happy. Half of Savvy Commuters claim to regularly do 3 or more activities during their commute, while 70 percent of the unsatisfied group feel their choice is limited to 2 or fewer activities.

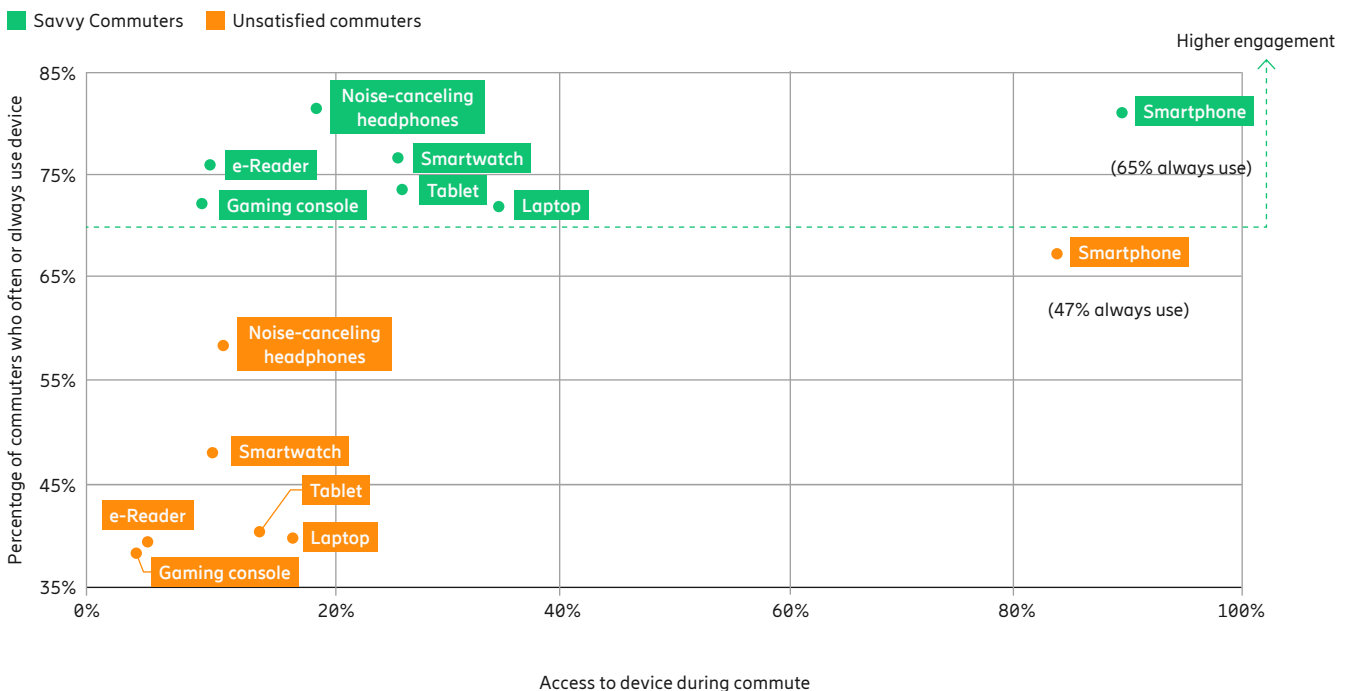
Savvy Commuters are present across every mode and trip length, and while they all seek to increase their mental

space through digital engagement, their priorities vary. Those in personal vehicles tend to take a more productive approach to their digital engagement and, perhaps ironically, those with long public transport rides focus more on de-stressing and having some time to themselves.

“I do online shopping, social media, news, banking and take notes of things I need to do. I even work: I open my laptop and do my work.”

Ride-hail user, 34  
Singapore

Figure 5: Device engagement during commute



# Experience beyond transport modes

If the common factors defining the experience for Savvy Commuters can be recreated by means of physical or digital features, then consumers will be able to bring a better experience into different types of vehicles and transport modes.

While the majority of Savvy Commuters use their own car, higher satisfaction for commuters in any transport mode can be achieved by recreating the conditions that make a commuting experience enjoyable in terms of two key factors: personal space (both physical and mental) and flexibility. Regarding personal space, 9 in 10 Savvy Commuters claim to have enough physical space and can focus on their own activities while commuting most of the time. In the unsatisfied group, more than 4 in 10 claim to only have limited space and can focus during brief periods at most.

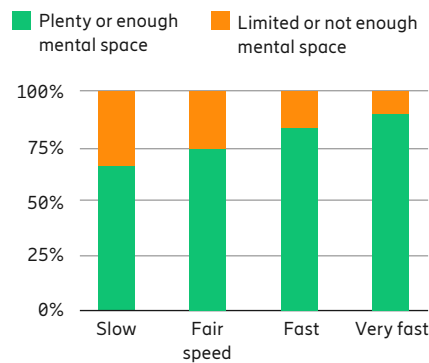
While the majority of mass transport users do claim to have enough space to focus and use digital devices, what they are missing is better internet connectivity, since half of them find it quite unstable. Here lies a real challenge, as they are lacking basic connectivity. This limits their ability to create a sense of privacy and personal space through digital engagement. Of respondents who enjoy a fast internet connection, 85 percent claim to have enough mental space to focus on their activities during their commute.

When it comes to flexibility, one of the reasons car ownership is most valued is the adaptability offered by personal vehicles, providing convenience to commuters without too much planning ahead. The majority of mass transport users are frustrated with their inability to adapt routes and transport modes when needed. Some industry players already understand the value consumers place on information awareness and are developing solutions to notify commuters of all relevant aspects that could affect their trip. However, good connectivity is an underlying requirement for their successful operation, regardless of transport mode.

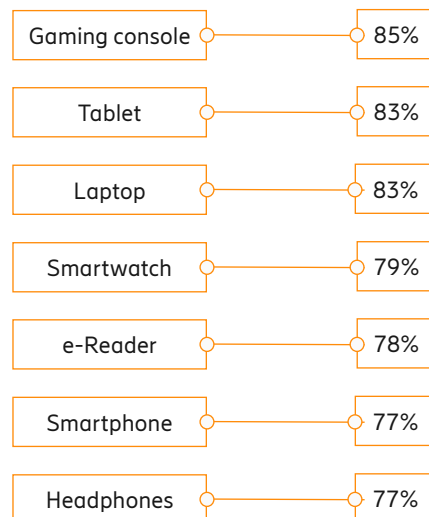
Next, we look at other developing and future services that have the potential to increase every angle of commuter satisfaction, and therefore bring the experience of Savvy Commuters to a larger portion of city dwellers.

**Figure 6: Internet connectivity improves the sense of mental space**

Commuters' mental space in relation to mobile internet speed



Percentage of frequent users of devices who enjoy good mental space



"Public transport is more than what happens onboard a bus; it is the full journey from A to B which includes the experience at the stations and the way to the bus. We are working more broadly in the coordination among transport authorities, operators and city infrastructure players. To meet the user needs of tomorrow, I believe the key quality for all of us that is shaping this industry is a people-centric mindset."

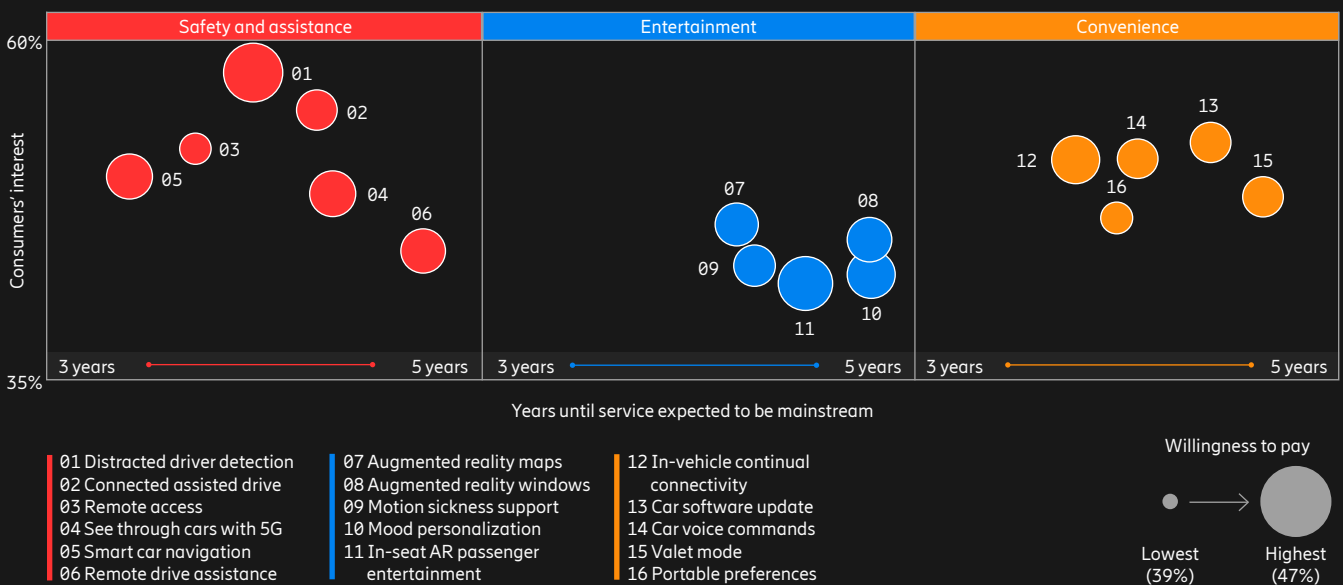
Jenny Gustavsson,  
Head of Industry,  
Urban Transport, Telia



# Mobility service concepts

Over half of respondents are highly interested in features that can recognize when a driver is not paying attention to a danger ahead, and alert both the driver and other road users.

Figure 7: 16 mobility service concepts to augment the commuting experience, rated by consumers



Commuters express the highest interest in services that enhance safety and reduce stress in demanding situations – without safety, there is no room for fun in commuting.

It is no surprise to see high satisfaction in drivers with features such as assisted drive. They report reduced stress levels during their commute since they feel protected by additional safety features. Experts agree, suggesting that drivers who use assisted drive show a reduction in stress levels while keeping vigilant and paying attention to the road.

The majority of respondents show high interest in enhanced assisted drive features supported by connectivity; for example, where information is collected from vehicles and sensors regarding hazards beyond the horizon. Information awareness is relevant for all commuters because safety on the roads affects drivers, passengers and pedestrians alike. 5G will

be instrumental in helping to maximize the safety, efficiency and sustainability of urban transportation.<sup>4</sup>

When it comes to entertainment and productivity, three in four Savvy Commuters are very interested in continual in-vehicle connectivity being provided to all passengers. This group would even appreciate alternative route suggestions from the vehicle to avoid call drops or lags along the way.

In-seat augmented reality (AR) entertainment and mood personalization both stand out as features to potentially improve satisfaction with personal space. The first has the potential to transform physical space even for mass public transport, especially with the use of AR glasses instead of laptops. Mood personalization is a feature where the vehicle adapts sounds, lights and alerts according to the driver's mood, as recognized by an in-vehicle camera.

Two in three Savvy Commuters show high interest in both of these services.

These are just two examples of how digital features can be used to provide a sense of space. Features such as these could be particularly relevant if shared mobility options become the norm for future urban transport in some cities.

"We see that assisted drive features are used very frequently and, while drivers stay vigilant, they also report less stress after driving. There always needs to be a balance between being supported by new features while keeping the driver alert."

Ola Boström,  
Vice President Research,  
Innovation and IPR, Veoneer

<sup>4</sup> Transforming Transportation with 5G, Ericsson Technology Review (September 2019): [www.ericsson.com/en/reports-and-papers/ericsson-technology-review/articles/transforming-transportation-with-5g](http://www.ericsson.com/en/reports-and-papers/ericsson-technology-review/articles/transforming-transportation-with-5g)

# Commuting: the last local experience

Largely unaffected by globalization, each city’s unique commuting experience is perhaps one of the last remains of local life.

The commuting experience remains largely unaffected by globalization and varies significantly with each city’s unique features. Commuting is perhaps one of the last remains of local life and it is closely tied with the available infrastructure, social norms and active participation from different national and international players.

However, one thing can be said about most cities – over one-third of commuters feel that the available infrastructure is becoming more strained every year. The situation is even more dire in Shanghai and Delhi, where over one-quarter believe the mobility infrastructure is already working over its intended capacity. However, in Singapore and Tokyo, the two cities in the study with greatest use of mass transport modes, one-third are positive about the available infrastructure and claim to only face sporadic problems.

Savvy Commuters are not any more present in cities considered to have better mobility infrastructure. In fact, they are more frequent in cities where the majority of commuters use private vehicles, such as Delhi, Los Angeles and Shanghai. Once again, they build the experience regardless of the infrastructure.

Nevertheless, all commuters have expectations for the future of their city and how mobility will be transformed in the coming years.

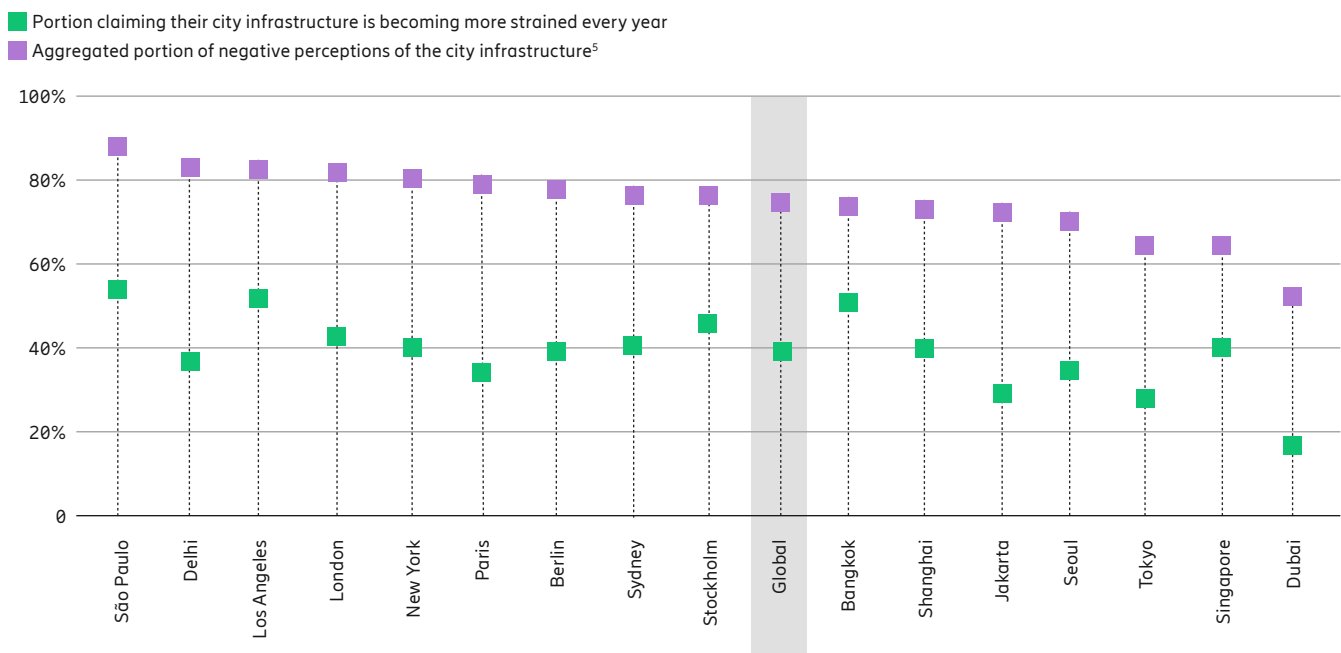
Commuters in some cities expect big changes in the near future. For example, in Bangkok, Shanghai and Los Angeles they expect a decrease in use of private cars, while in Tokyo, Singapore and Stockholm they expect an increase in use of personal transport modes.

Shared mobility and autonomous vehicles are seen as the biggest potential disrupters on the horizon.

## 1 in 3

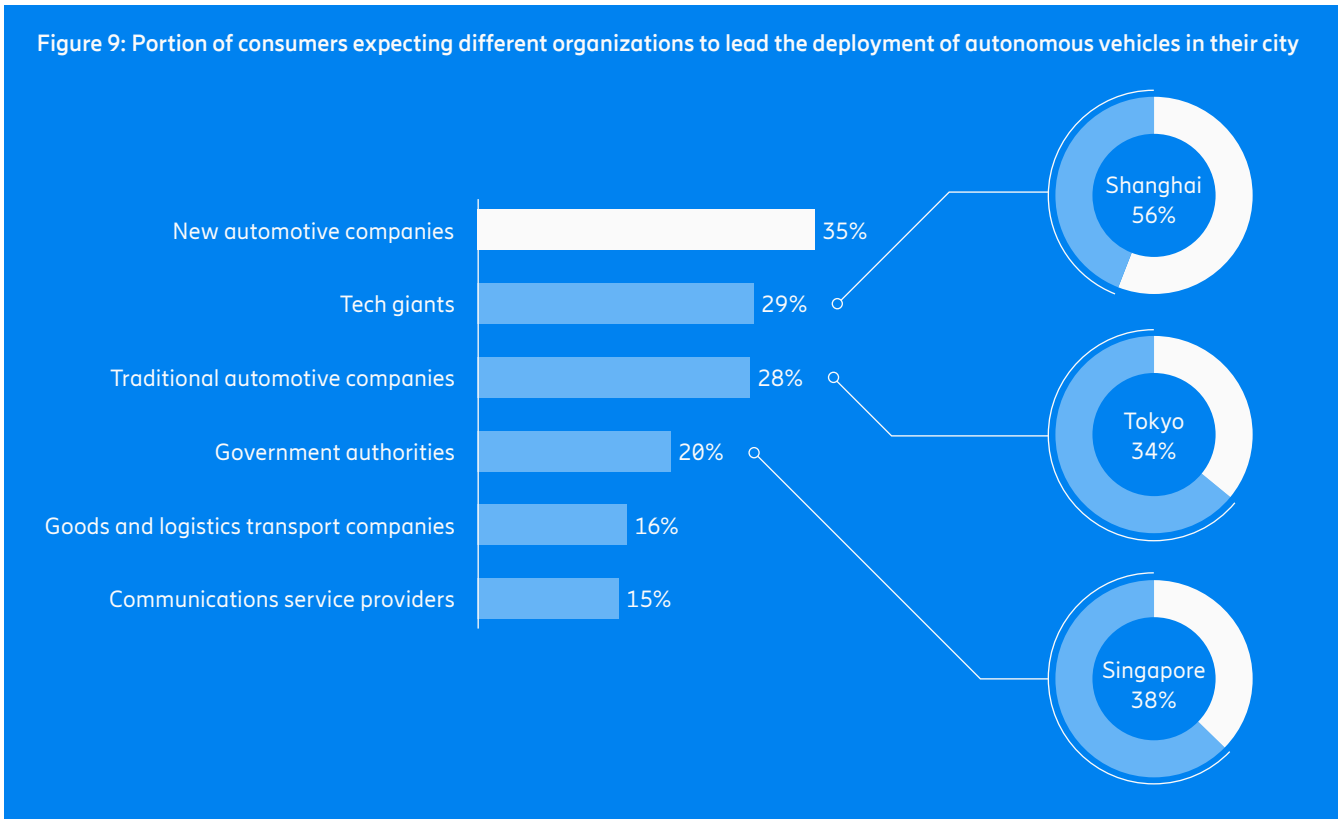
Over one-third of commuters feel that the available infrastructure in their city is becoming more strained every year.

**Figure 8: Commuters’ rating of the available mobility infrastructure in their city**



<sup>5</sup> Negative perceptions of city infrastructure include: becoming more strained every year, reaching a saturation point, and working over the intended capacity

Figure 9: Portion of consumers expecting different organizations to lead the deployment of autonomous vehicles in their city



Shared mobility is expected to be promoted as a solution to reduce congestion by 25 percent of city dwellers. Twenty-seven percent of all commuters believe it will be used by a large portion of the population in the future and over 10 percent of those in Delhi, Jakarta and São Paulo even think it will be used by a majority of commuters in their city within just 10 years.

One city with very high hopes is Los Angeles. Today the majority commute via private cars but only 45 percent expect this to be the case after 5 years. One in seven expect to be able to rely on some type of shared mobility options for their commute and believe this will become even more convenient than using their own car. In Shanghai and Singapore, more than 3 in 10 commuters think these services will be promoted to reduce future congestion.

Regarding the cost of using shared mobility, commuters in different cities diverge on how affordable they think it will be in the future. While an optimistic 18 percent of respondents in Dubai believe shared mobility will become as affordable as public transport is today, 25 percent in Bangkok do not expect it to become any cheaper than it currently is.

But the expectations for the future of commuting go beyond an increase in shared mobility. Of our respondents, 3 in 5 believe autonomous vehicles will completely revolutionize the commuting experience within the next 10 years. Only a few cities offered more conservative views on this, such as Tokyo and Stockholm, where only two in five agree.

Thirty-five percent of consumers expect new automotive companies to be the leaders of this revolution, followed by tech giants, and leaving traditional car manufacturers as their third choice.

It is evident that the commuting experience is influenced by internal and external factors. While some commuters are able to use their commute to their advantage, in most cases they claim to do it in spite of negative external factors such as lack of timely information or personal space. Car users show higher satisfaction but at the same time we see a decreasing interest in owning a car. This does not necessarily mean that cars as manufacturing units will not be an icon of future mobility, but they will need to be adapted to meet new types of use, such as shared commuting, whether that is done privately or even as an integrated part of mass transport.

A likely effect after the COVID-19 pandemic will be an increased share of people working from home, which will impact transport patterns in cities. Even when physical transport is reduced for some, it may not mean the end of their need for a commute. As we have shown in this report, commuting is not only a necessary evil. For many, it is in fact an opportunity to recharge the mind before they grapple with all the needs and demands that face them during the day. Mobility service providers who today succeed in providing a worthwhile physical commuting experience could even be the ones offering a satisfactory virtual commuting experience in the increasingly digital world of tomorrow.

“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,  
Acting Vice President  
Mobility Solutions, NEVS

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