masabi

Public Transit Research Report 2020:

Key Factors Influencing Ridership in North America

Contents

Methodology

Masabi issued a Google Surveys poll in the Fall of 2019 to a diverse group of over 2,500 US residents in order to gain an overview of the trends taking place with regards to public transit ridership across North America. The survey included both people who use public transit services and those who do not. Of the 2,500 people surveyed, 1,998 respondents were rejected for having no access to public transit; the data is based on the responses of over 500 US residents for whom public transportation is an available option. The survey was conducted to ensure a true cross section of the US population was represented, with relatively even splits between different age categories, geographies and gender. Overall, slightly more males took the survey, but the age range of respondents across all age groups, from 18 to the over 65s were evenly split. In the report we use the term 'rideshare' to refer to companies like Uber and Lyft, who are often also called ride-hailing companies.

Executive summary

The role of Public Transit (or Mass Transit) in helping to reduce congestion and pollution, and increase economic prosperity and equality has arguably never been more important. While many towns and cities across North America still suffer from a paucity of public transit options, the latest public transit ridership report released in December by the American Public Transportation Association (APTA) showed an increase of over 2% in ridership in Q3 2019 compared to Q3 2018.[1] However, this increase in ridership is bucking the trend over the last few years of ridership decline. This is largely down to people's continued over-reliance on their cars, coupled with the growth in shared mobility options (bike, ride and scooter sharing services) which is challenging transit agencies to think afresh about how they can attract and retain riders. Against this backdrop, the research set out to better understand the motivations, opinions and behaviors of public transit riders. In doing so, we hoped to gain insights into the decline in public transit ridership over the last few years as well as shed light on the various services and technologies that riders are using. When planning a journey, it is no longer a binary choice between driving oneself or taking public transit. As the research shows, people are now considering a broad array of options, including multiple forms of shared mobility. At the heart of their decision making process is convenience. In some cases, they choose ridesharing instead of public transportation; but in others it is these shared mobility options that are making public transit more accessible and an easy, more convenient option to choose. What we can see from the results of the survey is that convenience is a crucially important factor - especially for riders that have multiple transportation options from which to choose.

1 American Public Transportation Association, TRANSIT RIDERSHIP REPORT Third Quarter 2019

The research

These conclusions are based on data gathered from a diverse group of over 500 US residents, who have the option to ride public transit, but who don't necessarily do so. Our results produced findings that give unique insights into how public transit agencies can look to increase ridership. However, there is another way of viewing this survey. In order to get to the 500 respondents who have access to public transit, we had to reject 1,998 respondents. So, in effect, most people who we asked to respond did not have access to public transit, even if they wanted to ride. In comparison to other countries, this represents an extremely poor state of affairs, as public transit is the best way to move significant numbers of people in the most efficient way possible, helping to reduce congestion and pollution.

Topline findings include:

- Public transit is not widely available across North America
  - Only 1 in 5 people responding to the survey had access to public transit
  - 60% of people who have access to public transit make use of the services; 20.5% use public transit at least once a week
- Convenience is the top priority for passengers when choosing public transit
  - 30.7% selected convenience as their primary motivator when choosing to use public transit, even higher than cost (22.9%) and speed (7.3%)
- Ridesharing is connecting with public transit and enabling multi-modal journeys
  - 40.9% are now taking multimodal journeys by combining ridesharing with public transit
- Technology convenience enablers are having a big impact on the use of public transit
  - 13.3% have either ridden transit for the first time, or ride more often, since the introduction of mobile ticketing
  - 12.3% of riders would ride public transit, or ride more often if mobile ticketing was available, while an app that combines multiple transit options would do the same for 10.4% of riders.
- Contrary to the perception in the media, public transit services are not declining
  - 33.4% of people with access to public transit believe their public transit service is improving in quality, and 87.7% believe their public transit systems are either staying the same or getting better

Introduction

Public transit is at a critical juncture. While too many communities across the US still lack access to public transit options, people who are able to choose and use bus, rail or ferry services to make daily or weekly journeys are faced with an ever-increasing array of alternatives, but still none come close to the private car – the preferred option for over 78% of people, according to our survey.

According to APTA, a person can reduce his or her chance of being in an accident by more than 90% simply by taking public transit as opposed to commuting by car; traveling by public transportation is 10 times safer per mile than traveling by automobile.[2] But over 54% of people with access to public transit options still feel that driving themselves provides a better experience.

The average household in the US spends 16 cents of every dollar on transportation using private cars instead of public transit, and 93% of this goes to buying, maintaining, and operating cars, the largest expenditure after housing. A household can save nearly $10,000 a year by taking public transportation and living with one less car.[3] Yet, only 23% of riders, our survey found, cite cost as the primary reason why they use public transit.

We do know that some consumers are relatively inflexible regarding their public transit ridership. For some, it may be the only transportation mode available to them, meaning they'll be less responsive to improvements or decreases in quality. But what happens when we look at consumers who might be more responsive to improvements – those who are riding on a less than daily basis?

Of course, people rarely live at the public transit terminus. For many the hardest part of their journey is the first and last mile of their trip; they have to get from their front door to the bus/rail stop, and then to their final destination after disembarking. Too often, this barrier can be the deciding factor in whether people are even able to choose public transit options. People want the freedom to select the best route for them – whether that is determined by price, travel time, or even that day's weather.

This rider research digs into this and seeks to uncover not only riders' perceptions of public transit today, but also the drivers that impact their behavior. As our research clearly shows, the answer to growing ridership can be distilled to one core motivation – convenience, making it easier for people to choose and use public transit.

The ability to purchase tickets through an app, taking ridesharing or shared scooter/bike service options to reach a stop, using an app that combines multiple transit options, and the ability to track the location of a bus or train via an app were all cited as factors in encouraging people to use public transportation for the first time, and to also ride more frequently.

Mobile Ticketing has already had a significant and positive impact on ridership. But as this survey of public transit riders reveals, it is just the beginning. Transit agencies that embark on practical MaaS and integrate ticketing into MaaS and shared mobility apps will be best placed to deliver riders, both present and future, convenient, door-to-door journey experiences they demand.

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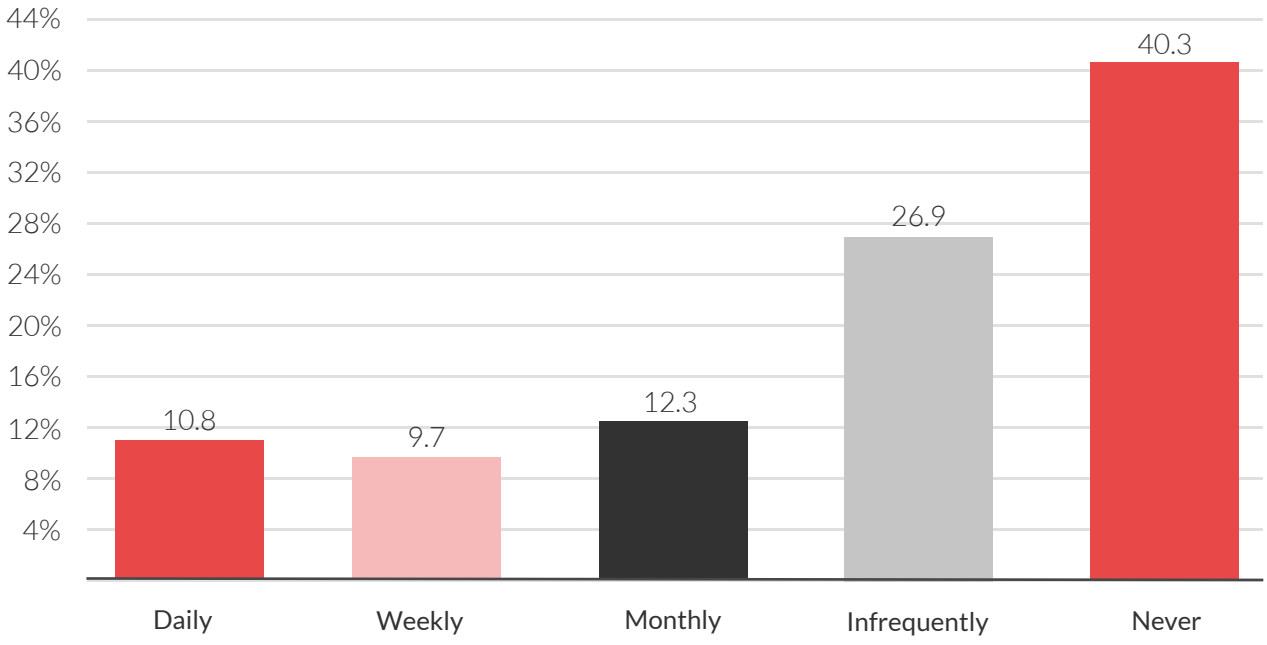
2 American Public Transportation Association, Public Transportation Facts (recovered 6 March 2020)
3 American Public Transportation Association, Public Transportation Facts (recovered 6 March 2020)

Rider perceptions of public transit today

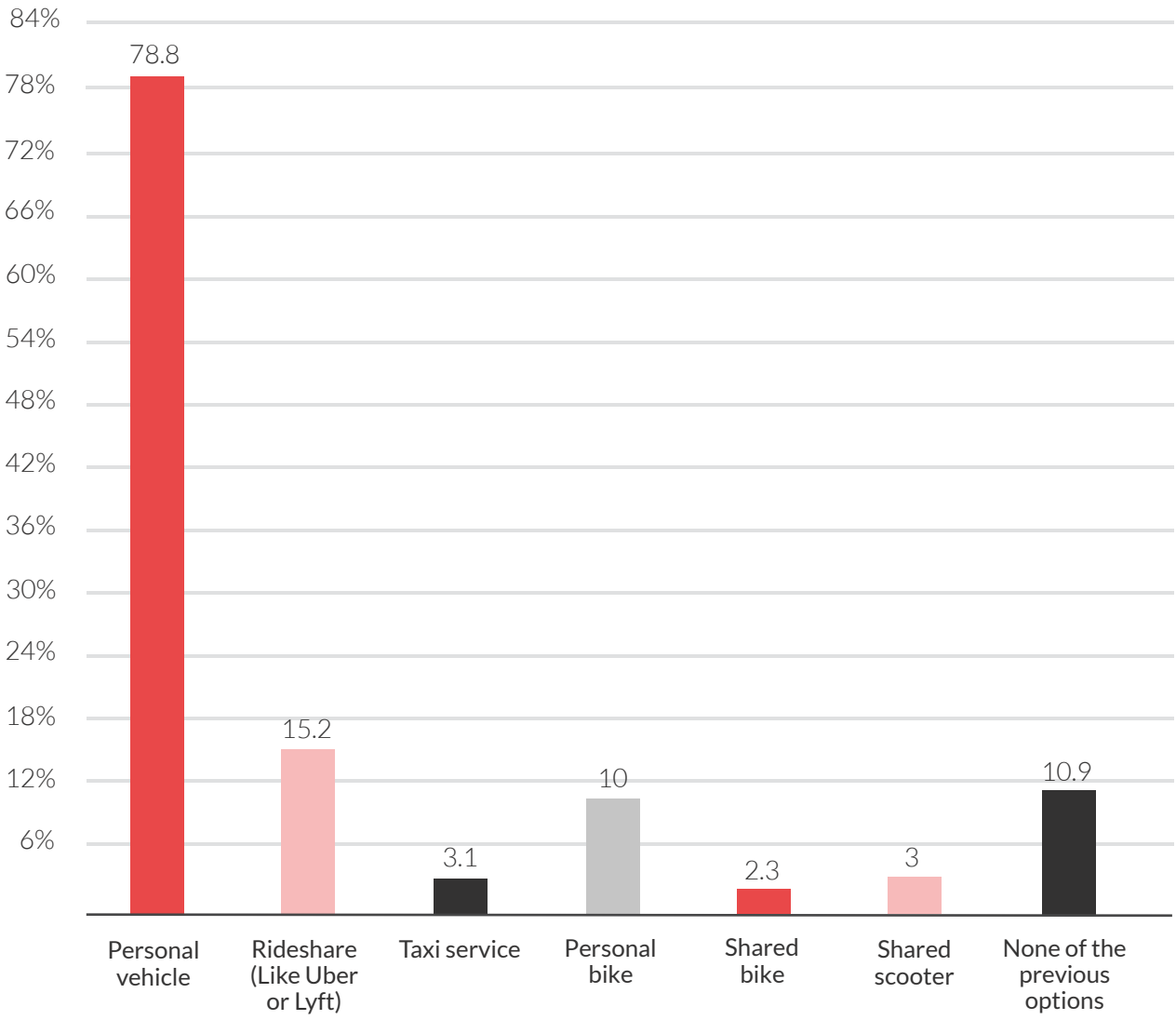
Going into this research, the first thing to understand was the true state of public transit usage. When people have the option, are they choosing it? According to the survey findings, 40% of those surveyed never ride any public transportation, despite having the option. While not surprising, these topline numbers are critical to understanding the current state of public transportation in North America; significant portions of the population choose single-occupancy private car journeys instead of more economical and environmentally friendly public transit, even when they have public transit available to them, leading to the current state of congestion and overcrowding on our roads and highways.

How often do you use public transit services such as the subway, train, bus or ferry?



The scale of the challenge is clear. While over 20% of people with access to transit services use public transit at least once a week, it pales in comparison to private cars which are by far the most popular option with 78.8% using their car on a weekly basis. Significantly, 15.2% of people use ridesharing on at least a weekly basis.

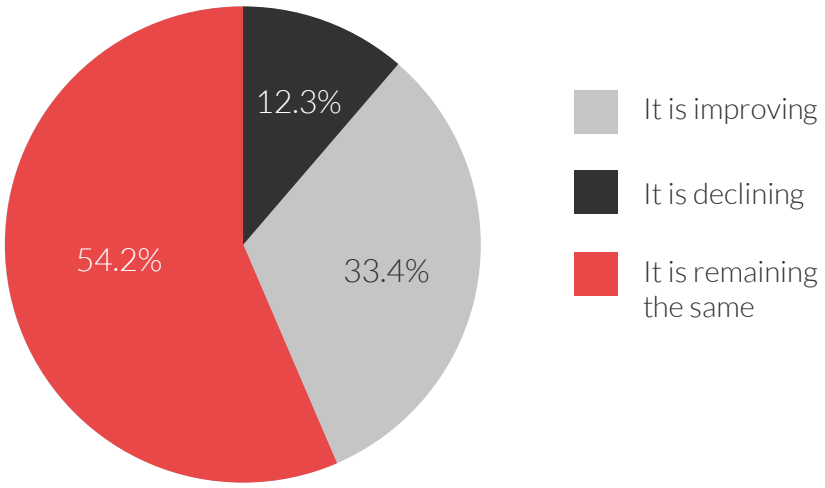
What other type(s) of transportation do you use on at least a weekly basis?



Many media depictions would have us believe that this preference for the comfort of a car, be it a private vehicle or a rideshare service, is dictated by the deteriorating state of public transit infrastructure.

However, when we polled riders to see if their perceptions of public transit aligned with this media narrative, the results suggested otherwise. Instead of highly negative opinions about the quality of public transit amongst our respondents, the majority responded that the quality of their public transit service was either remaining the same or improving.

How would you characterize the quality of the public transit available to you?



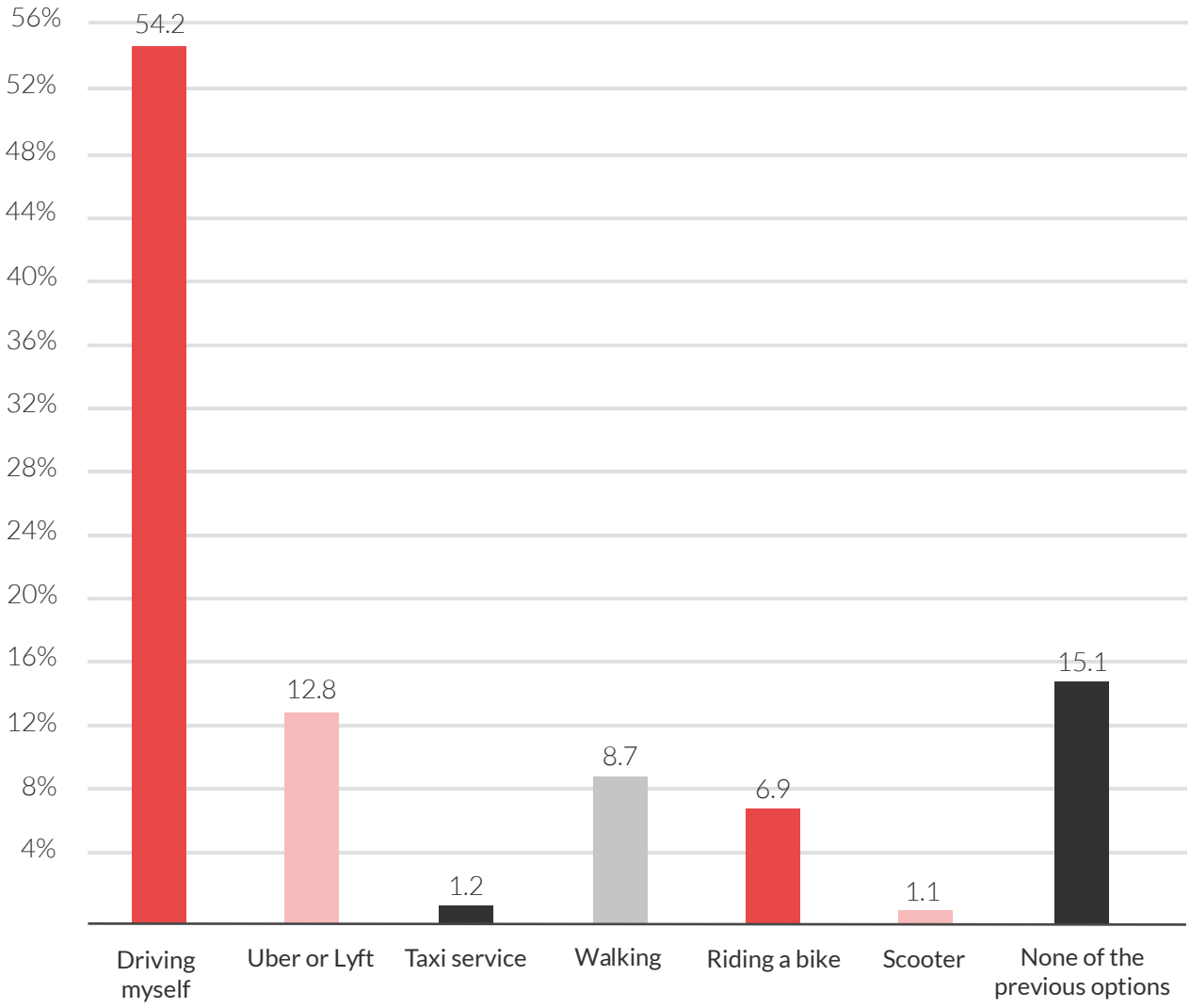
Across all consumers with access to public transit, only 12% believe that their local transit systems are decreasing in quality, while more than 33% think they are improving and 87.6% believe they are either staying the same or getting better.

So, if the quality of the public transit isn't the issue, what is stopping people from ditching their car and choosing a bus or train instead?

The journey experience

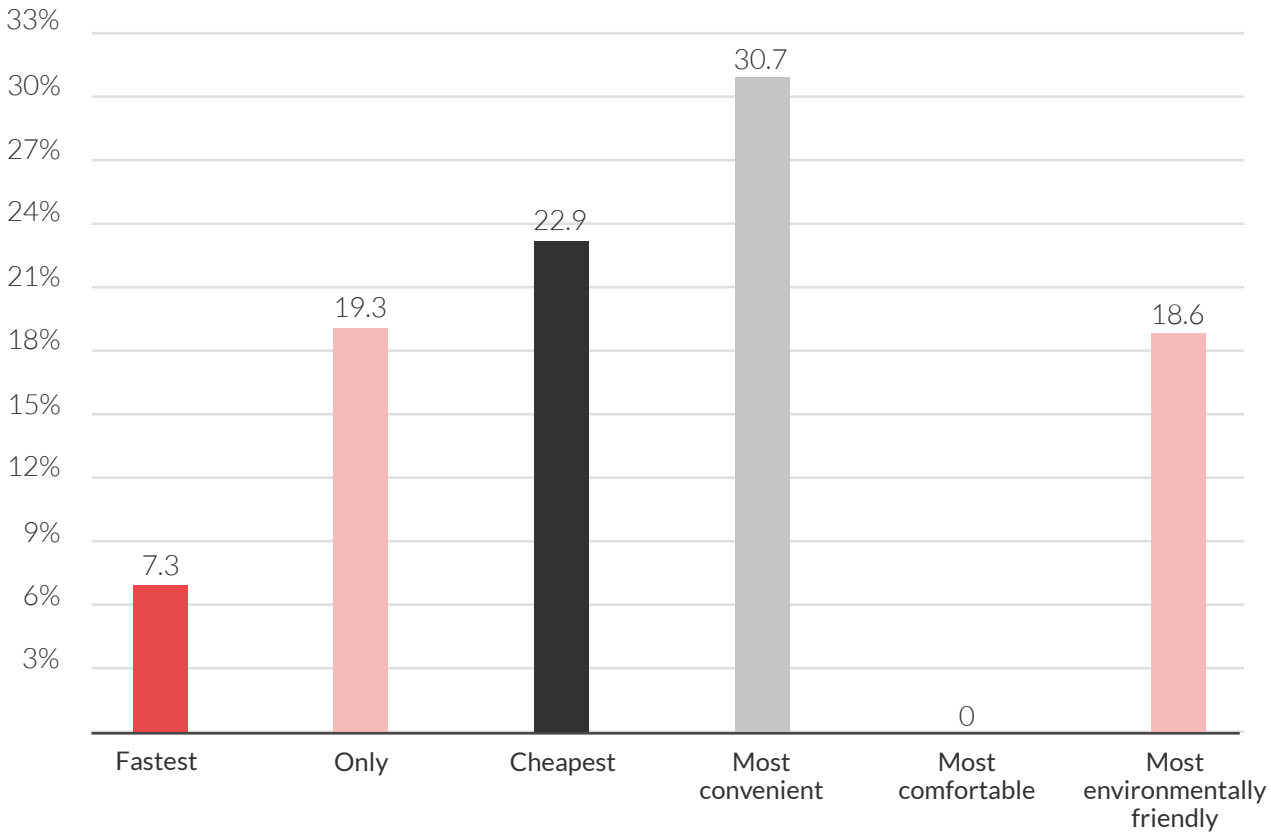
What is clear is that the journey experience is critical. When it comes to grading the public transit experience, our respondents stated that they see driving themselves as the main option which provides a better experience than public transit.

Which of the following transportation options do you feel provide a better experience than public transit?



Of course, 'journey experience' can mean different things to different people. Digging into this, we asked riders about what influences them to choose one transit option or another. Wrapped up in this are factors such as comfort, speed, concern for the environment and - most importantly - convenience.

Fill in the blank:
'I primarily use public transit because it is the _____ option'

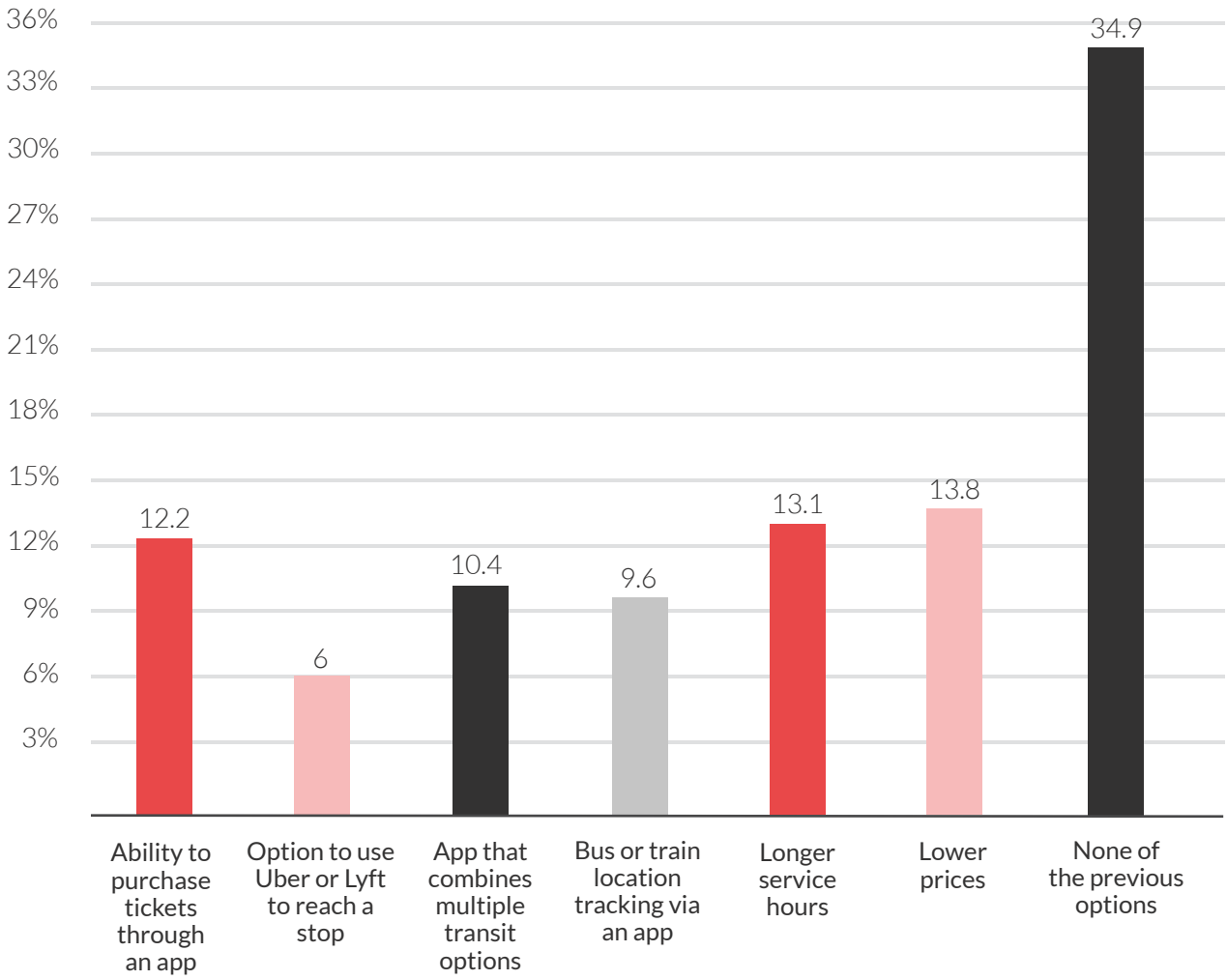


Convenience, more than cost and necessity, is the number one driver behind public transit ridership across all respondents.

When we previously conducted this survey in 2018, 'convenience' meant longer service hours, or being able to track your bus or train via an app. This time around, when we then asked which convenience factors, whether they be transit or technology services, would have made riders use public transit services more, or more often, we noticed a profound change.

Today, 'convenience' is less about service hours and much more about the discoverability and accessibility of transit as an option. The ability to purchase tickets through an app, track your bus or train, and plan your journey across multiple modes of transport - including rideshare - are all shaping people's decision to choose public transportation. In contrast, the relative decline in people stating the importance of transit service frequency and price suggests people are broadly content with these. Not only do they need something more than this to make them ride public transit more frequently, they're willing to pay more if it makes their door-to-door journey more convenient.

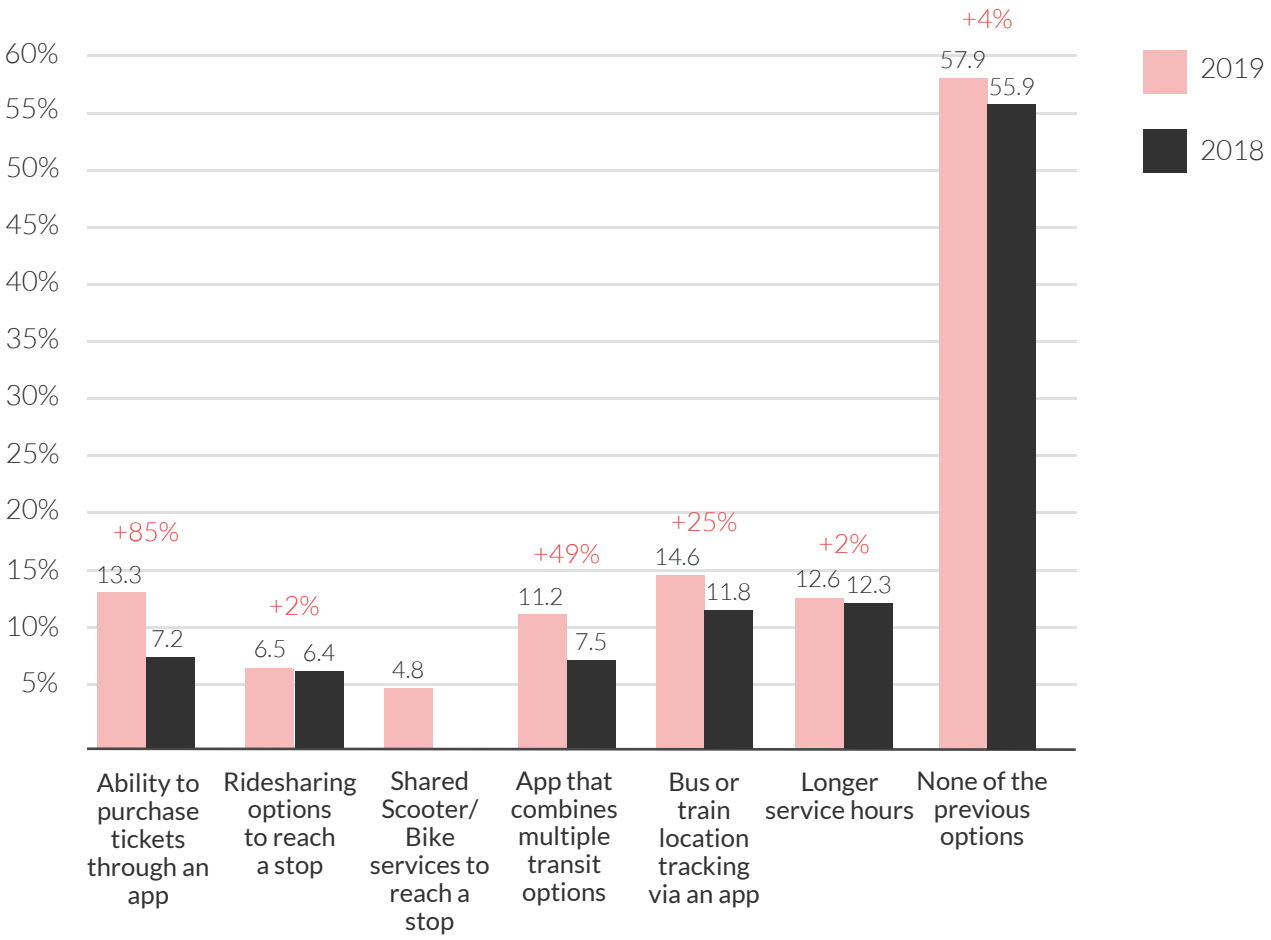
Which of the following would make you ride public transportation more often, if it were available on your local public transit service?



The year-on-year change is significant. While longer service hours and lower prices were still clearly an influence in 2019, in 2018 over 23% and 21% of riders were citing them as influencers on their decision to choose public transit, far more than any other influence. Riders are becoming more sophisticated in their decision-making and being influenced by a wider range of factors.

It is a similar picture when you ask people what influenced them to take transit for the first time, or ride more often.

Have any of the following made you ride public transportation (or ride more often)?



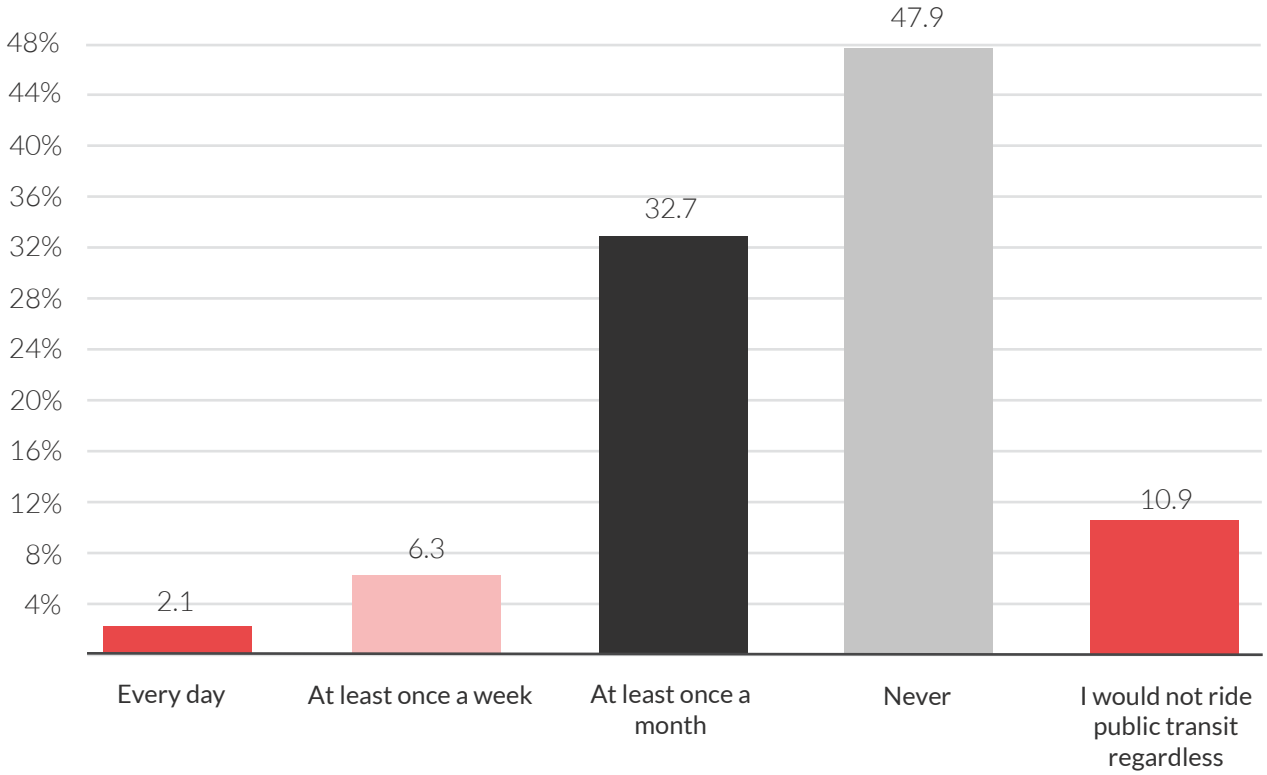
The big changes compared to the previous year are once again the growing importance of the building blocks for Mobility as a Service (MaaS) - with ticketing, real-time data and third-party mobility services, all featuring highly. Interestingly, the options which have increased ridership the most since 2018 are the ability to purchase tickets via an app, which shows the popularity and availability of mobile ticketing, and also the ability to combine multiple transit options via an app.

Ridesharing

With convenience such an important overarching factor in peoples' use of public transit - and with riders willing to pay more for it - ridesharing has a central role to play in making it easier for people to choose and use public transit services for part of their journey.

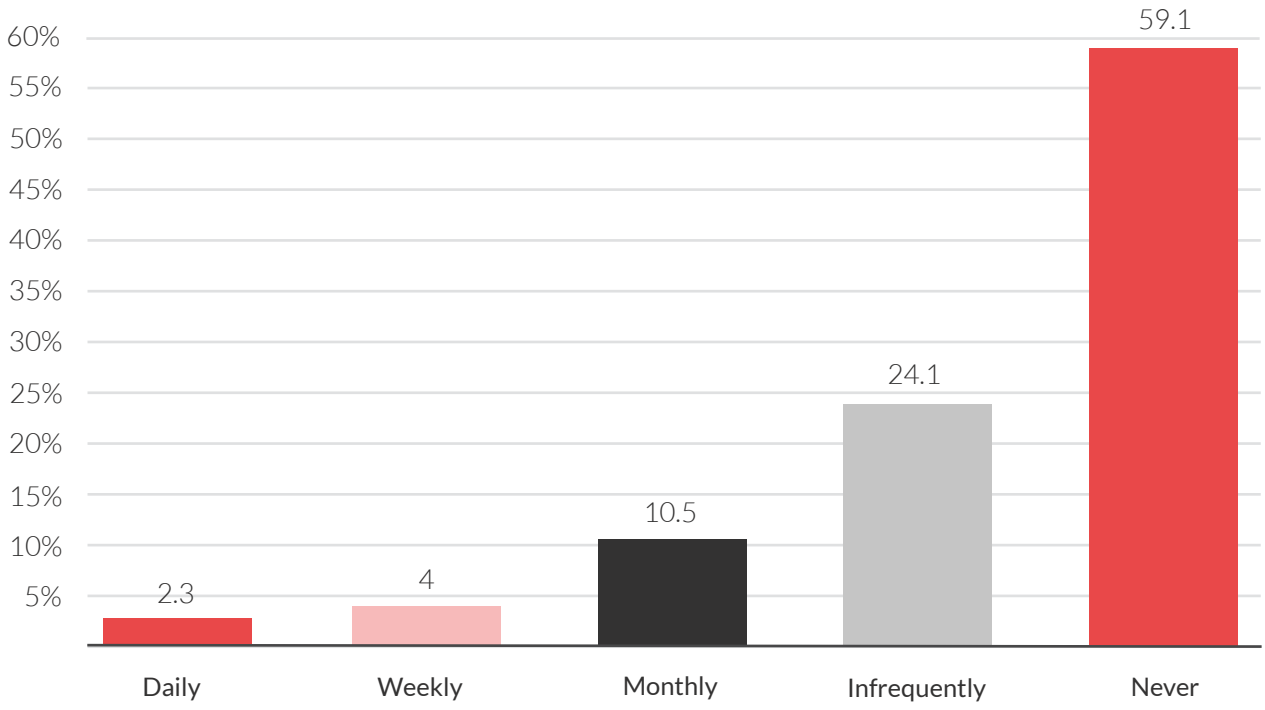
The conventional wisdom says "cars, bad; public transit, good." But it's not that binary or clearcut. Our rider research found that over 41% are actively choosing to use rideshare services instead of public transportation on at least a monthly basis. But is it as simple as to therefore deduce that, for the transit agency, these are lost riders and lost fares? While the need to encourage people to leave their car at home and take public transit instead is clear, it is a more nuanced picture for rideshare services. Yes, the rider research shows that they are churning some riders away from buses and trains, but they are also a key part of the solution.

How often do you use a ridesharing service (like Uber or Lyft) instead of public transportation?



As part of this research, we therefore wanted to try to figure out exactly how ridesharing interacts with other forms of transit. Given the increasing frequency of transit agencies' partnerships with ridesharing platforms to increase first mile-last mile service, are consumers combining ridesharing with public transit to reach their destinations, and how are these services impacting public transit ridership as a whole?

How often do you use ridesharing (like Lyft or Uber) in combination with public transit?



We found that, across all US adults with access to public transit, 40.9% of people are now using a ridesharing service in combination with public transit, with 16.8% doing so on at least a monthly basis.

Given the focus on convenience thus far in this report, it should come as no surprise that it continues to play a factor in how consumers interact with public transit and ridesharing. It turns out that consumers are combining the two together, and replacing public transit, in order to reach their destinations in the most efficient way possible.

Agencies can take a lesson from some of the experience-enhancing features that MaaS and ridesharing apps provide, like location tracking and seamless payment, and deploy them relatively easily as part of their own offering. Increasing ridership by boosting convenience would have a positive impact on street congestion, while ridesharing can serve to replace personal vehicles in the first mile-last mile and in places underserved by public transit.

The data showing riders' tendency to use ridesharing services in combination with public transit offers a clear opportunity for public transit agencies to partner with ridesharing and other shared mobility companies to enable full first mile-last mile multimodal journeys.

To make public transit that much more convenient, public transit should embrace an ecosystem of mobility solutions and start to develop partnerships between private modes of transit. This way, ridesharing, scooter, bike-sharing and public transit agencies can work together to provide the optimal passenger experience based on both city and rider priorities in terms of cost, convenience and the availability of mobility resources.

In this scenario, city centers can optimize and incentivize the use of high occupancy public transit services, with ride and bike-sharing enabling first and last mile journeys around transport hubs, while ridesharing can help fill the gaps in underserved areas and remove the need for large buses to serve routes with low passenger numbers.

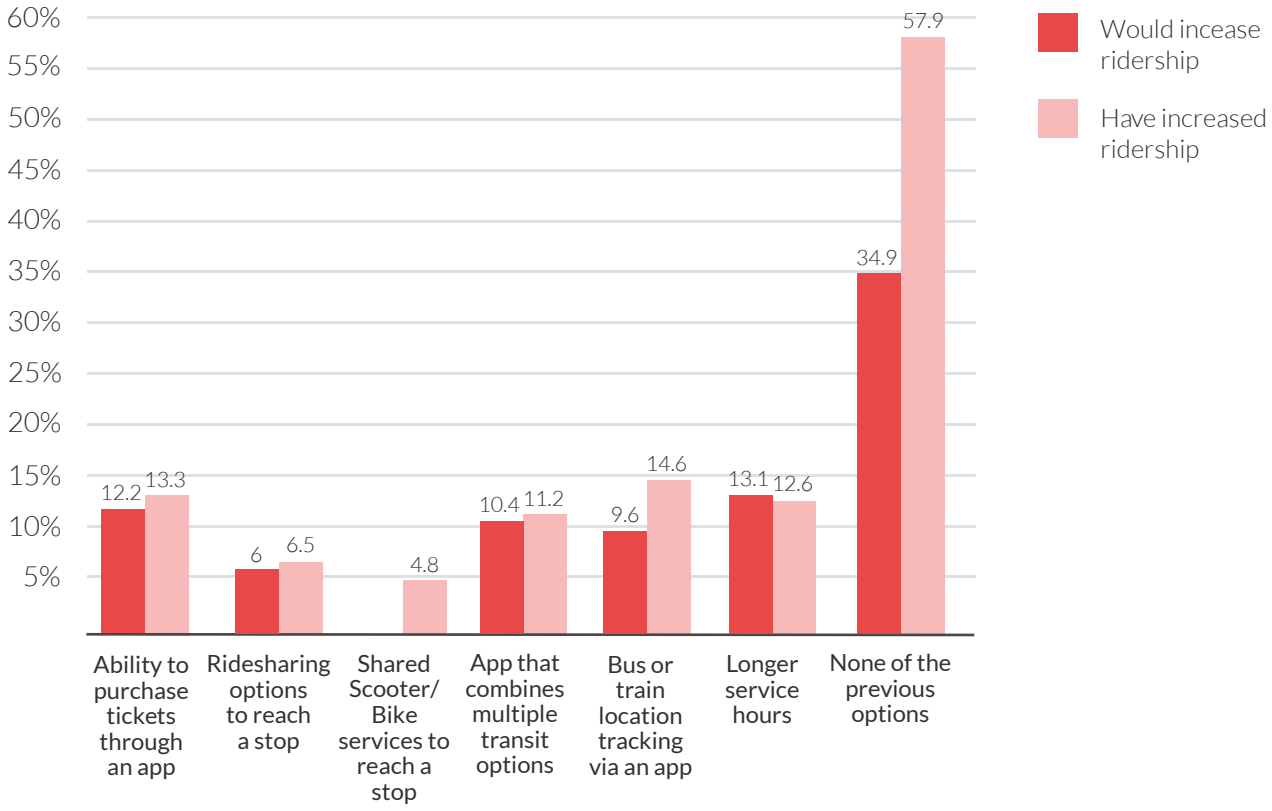
The bottom line question is, what will help reduce private car usage? In this connected urban mobility ecosystem, all shared mobility options have a role to play in making public transit an accessible choice for more riders. Taken together, this will help reduce congestion and should lead to more people moving away from private car ownership in urban areas, especially as more on-demand and autonomous vehicles become the norm.

What agencies can learn

Increase convenience

Convenience represents a major theme in this report, not just in terms of how consumers are currently interacting with a variety of transit options, but in how they responded to various features that might increase uptake. We asked consumers about a number of transit improvements and whether each feature had caused them to increase their public transit ridership, or if the addition of each feature would cause them to increase ridership if it were deployed on their local system.

Convenience features impact on ridership



While fare reductions and service hour changes could certainly be cost prohibitive, the technology changes are relatively inexpensive to implement, and have also measurably increased ridership based on our data.

The research clearly shows that mobile ticketing, ridesharing for first/last mile, trip planning and location tracking are all popular. But, do you notice anything interesting about these features? Mobile purchasing, planning and location tracking are all features of ridesharing services.

This is not a coincidence, and speaks to the way today's public transit riders are being conditioned to expect convenience in their transit offerings. These services increase the predictability and seamlessness, and therefore convenience, of the ride. Public transit agencies can replicate much of what makes ridesharing so compelling, in a way that would drastically increase ridership.

So, what can public transit agencies do to modernize their services to be more accessible and discoverable by as many passengers as possible?

From mass transit to MaaS transit

With convenience being king, riders are looking for easy, hassle-free journeys, and this can be aided hugely by one thing: Mobility-as-a-Service (MaaS). MaaS is defined as the integration of services that allows a customer to use whichever mobility service is the most efficient for a journey (public and private) from the moment they leave their front door until they reach their destination, planning and paying seamlessly based on what they use.

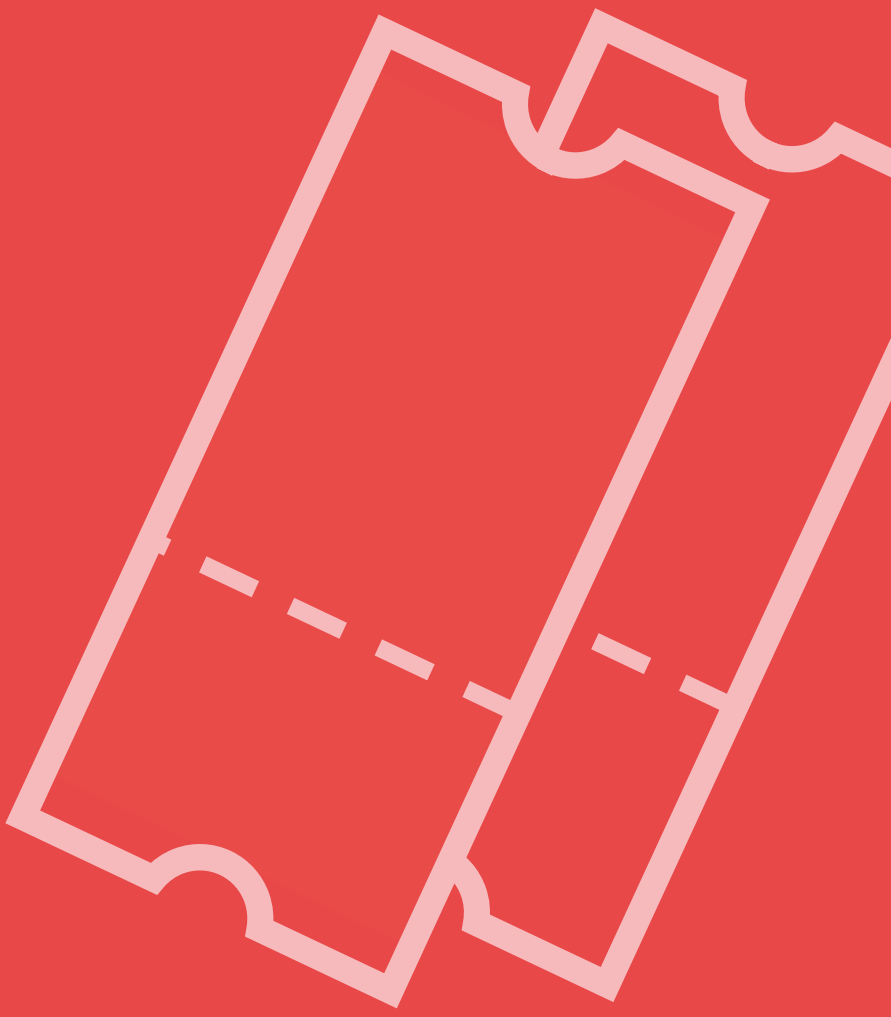
Three roads to MaaS currently exist: Account-based MaaS, Practical MaaS and Subscription-based MaaS. The latter is often referred to as the 'Netflix' approach for MaaS, since riders pay one subscription up front and use a bundle of transport options. While this approach may appeal to people who can afford it, it may not be the best approach for regular commuters, visitors or occasional travellers. This is why we would recommend transit agencies focus on Account-Based MaaS and, as a first step, Practical Maas.

As its name suggests, Practical MaaS has convenience at its core. Individuals open mobility apps such as *Transit* and Uber (or white label city apps), not only to be able to plan their travels, but also to purchase and display their tickets. This can be made possible thanks to Software Development Kits (SDKs) and APIs, enabling transit agencies to integrate their tickets into third-party applications.

Practical MaaS is a powerful solution when it comes to winning those first-time transit users who may not be familiar with the route they are taking. By enabling Practical MaaS through popular consumer-facing mobility apps, public transit services can become more discoverable and public transit tickets easier to access through a familiar application. There are neither additional costs for the agency nor any requirement to provide discounts on tickets - it is simply reselling transit tickets at the usual fare. Put simply, this approach helps public transit options become the most convenient way to travel.

Practical MaaS also offers transit agencies a practical route to implementing a modern fare payment system, using the flexibility, security and pay-as-you-grow scalability of fare payment platforms and cloud-native infrastructure to transform how they run fare payment services and integrate with the wider MaaS ecosystem. This approach is called Fare Payments-as-a-Service (FPaaS).

By taking practical steps such as integrating ticketing into popular urban mobility apps, agencies are also taking important steps towards Account-based MaaS. Account-based MaaS turns tickets into tokens allowing people to simply tap and ride using convenient payment methods, such as contactless bank cards, smartcards or mobile barcodes/payments, with fares calculated in the back-office. This approach removes the hassle of buying tickets or understanding fares altogether. Some agencies may in turn go on to look at Subscription-based MaaS, but we would not recommend starting here due to the issues around discounted tickets and social equity (a topic we've explored in more detail in our ebook Placing Public Transport at the Center of MaaS).



Conclusion

It is clear that our towns and cities have a growing problem with congestion and pollution, and there can be no doubt that public transit is the solution. However, it is easy, lazy even, to simply point the finger of blame at the "the car." It is more nuanced than that; the main problem is private cars, not ridesharing or third party mobility services – rather they can be, and should be, part of the solution.

As this research shows, the single biggest challenge facing transit agencies lies in making it more convenient for people to choose and use public transportation for at least part of their journey. There is a first mile-last mile issue that has to be solved.

The challenge for public transit is making their services more discoverable and accessible. In practical terms, this means giving riders the ability to purchase tickets through an app and to use ridesharing or shared scooter/bike service options for the first/last mile of their journey.

The agencies that can integrate with popular MaaS apps to deliver an intuitive and easy to use journey experience won't just defend its ridership, it will grow with new riders onboard and more journeys taken.

About Masabi

Masabi is bringing Fare Payments-as-a-Service to public transit agencies of all sizes around the globe. Through our multi-tenant Fare Payments platform, Justride, agencies can sign up to mobile ticketing services, enable Mobility as a Service (MaaS), or deploy an account-based full fare collection solution using contactless bank cards, mobile devices and smartcards. With over 75 clients across 11 countries, Justride is the world's leading Fare Payments platform, serving the largest transit agency in the US to local bus operators. Masabi has offices in New York, Denver, London and Cluj, and investors include Mastercard, Keolis and Shell.

For more information, visit www.masabi.com

Introducing Fare Payments-as-a-Service

Fare Payments-as-a-Service is a new and better way of delivering ticketing systems to transit agencies and riders. Instead of purchasing a bespoke Automatic Fare Collection (AFC) system, agencies can now sign up to a service delivered via a Fare Payments platform removing the cost, risk and complexity of providing the latest fare payment innovations and allowing agencies to concentrate on what they do best, operating safe, reliable and convenient transit services to riders. For more information click here.