

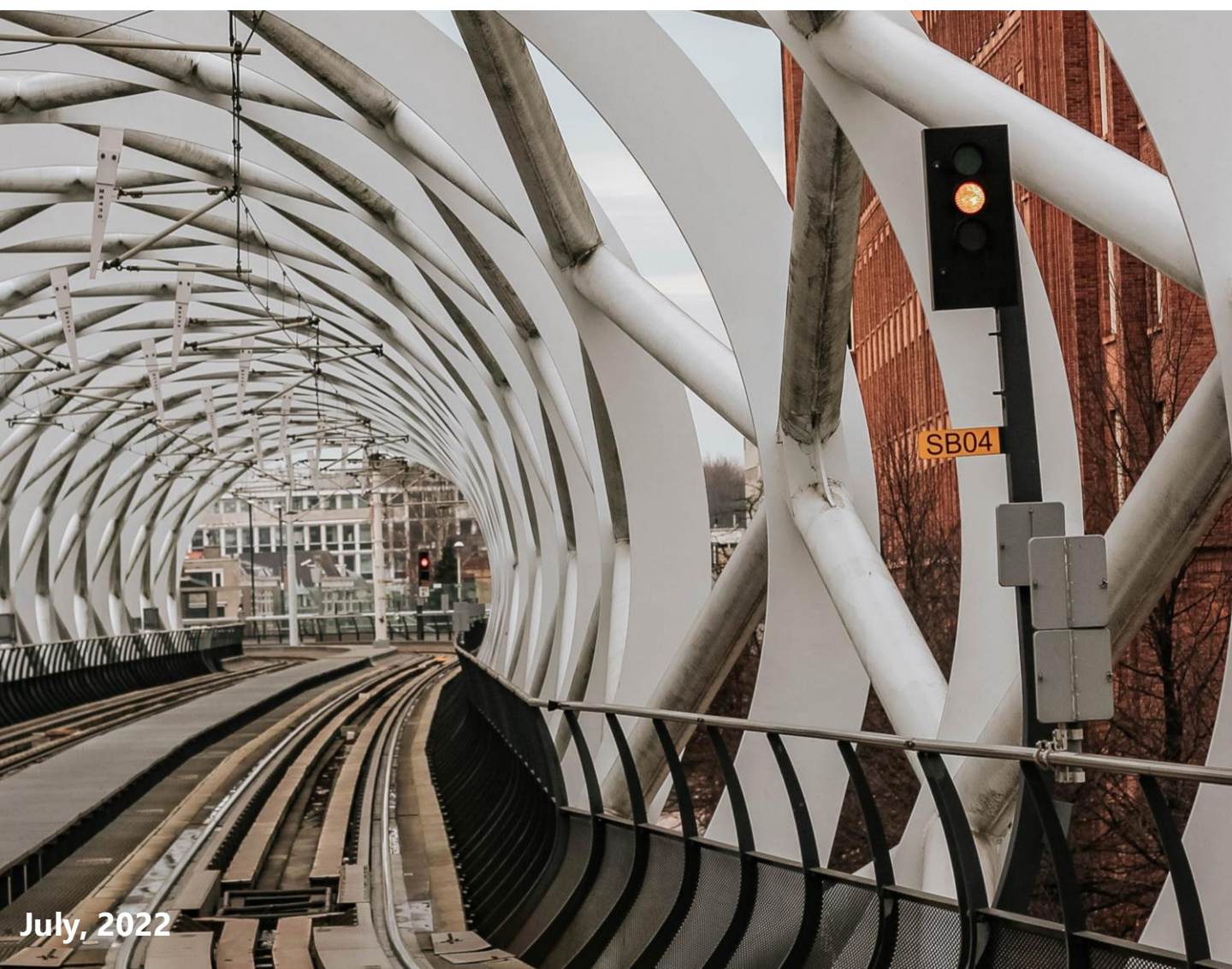


Ministerie van Infrastructuur
en Waterstaat

AEBEL

Global mobility trends and analyses:

Mobility's 'new normal'



July, 2022

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Introduction

The Dutch Ministry of Infrastructure and Water Management aims to understand and collect international experiences surrounding the Covid-19 pandemic's impact on mobility. In order to do this, they have developed several knowledge questions aimed at categorizing, organizing, and providing further insight into international developments.

The aim of this report is to gain insights from various examples from around the world that are able to highlight the emerging trends brought on by the current pandemic in the mobility sector. These trends will be illustrated through various examples. Each of these examples serves to answer one, or more, knowledge questions that have arisen as a result of the pandemic. These questions were developed in consultation with the Ministry.

In order to organize these questions, they have been grouped into one of three clusters, highlighted below. These different questions all focus on different elements of past, present, and future developments in the mobility space. The overarching theme is moving towards a sustainable, accessible, and equitable mobility sector that is prepared for future challenges.



Cluster 1

This first cluster focuses on questions relating to contracts, support packages, and policy. Here, we take a deeper look at the policies countries are introducing as we emerge from the pandemic.

Support packages

What kind of (financial) support packages are offered to the public transport operators (PTOs), and under which conditions? How have these changed in the past months? And how will they change in the coming months?

What do PTOs do to cut costs? *This question will be explored further in the next edition of this half-year report.*

Cluster 2

The second cluster explores the changes that have occurred in the mobility sector as a result of the pandemic. Here, both differences before and after the pandemic as well as differences between regions will be explored.

Trends and differences across regions, and before and after the pandemic

What impact has the pandemic had on cities and city-centers in particular? *This question will be explored further in the next edition of this half-year report.*

What are the developments around passenger numbers? And what are the changes, like working from home, that stick?

What differences do we see internationally between recovery of different modes?

Supply and demand

What is the minimum level of public transport required for it to remain attractive to passengers?
How has the demand for public transport develop internationally and what differences do we see between regions/modes/certain demographics?
Do all public transport lines see the same demand, or are there differences?
How is peak-shaving being stimulated internationally?
What international examples are there of using demand-responsive transit (DRT) to replace traditional public transport services? *This question will be explored further in the next edition of this half-year report.*

Cluster 3

The final cluster explores what is needed to ensure people return to public transport, and what roles different actors play in this process.

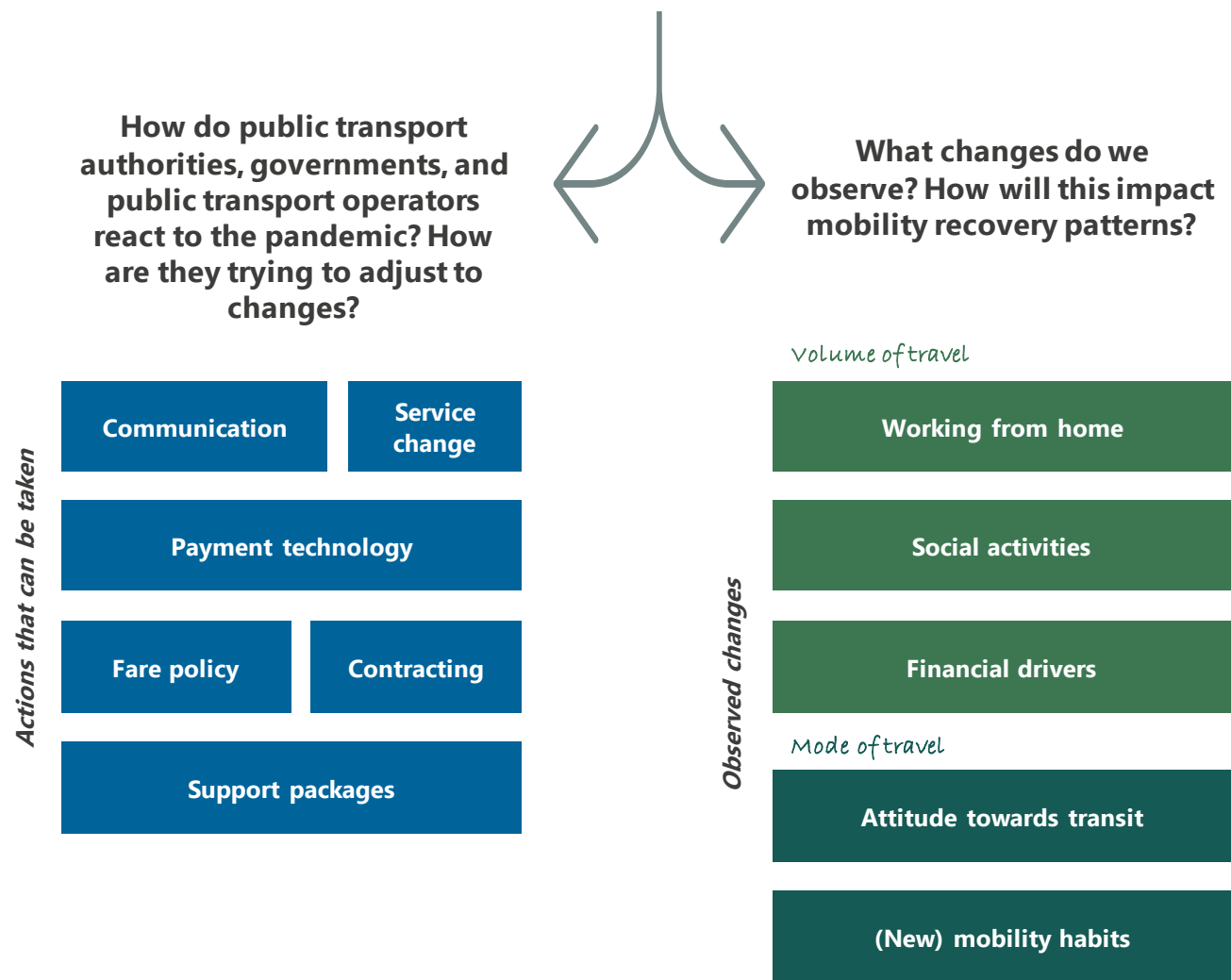
Getting people (back) into public transport

What have PTOs and PTAs done to get people (back) into public transport?
What policies can be introduced in other policy domains to promote sustainability mobility options? *This question will be explored further in the next edition of this half-year report.*



Structure of the report

Although, on a more macro level, it is difficult to influence the pandemic, there are ways of addressing its consequences. We believe that the following key factors will strongly influence the recovery of public transport. They have been divided into two groups. On the left are examples of actions that can be taken by PTOs, PTAs, and governments in order to stimulate certain developments that will influence the recovery of public transport. These actions specifically address consequences of the pandemic. On the right are examples of behavioral changes due to the pandemic that will influence, either positively or negatively, the recovery of public transport.



Since the last publication of this report, we have included one small addition to this scheme. As a result of inflation and the overall increase of prices in many sectors, we have included 'financial drivers' as something that can impact the overall volume of travel. Increasing gas prices are a good example of this.

Each of the examples given in this report is linked to one of the key factors listed above. The color of the text box of the example matches the colors in the scheme above. A complete list of categorized examples can be found on the following page. We have selected examples whilst answering these questions. This list of examples is by no means exhaustive, many more examples are available.

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Methodology

In order to answer the knowledge questions previously introduced, we use information gathered in three different ways. These are outlined below.

Desk Research

We follow various international developments and use these to highlight various relevant examples used to answer the knowledge questions. These sources include anything from research reports to newspaper articles.

Data Monitoring

We use various data sources to provide further insight into the examples we use. We previously also used Apple Mobility Data, but since April 2022, this data is no longer being published. These sources are as follows:

Google COVID-19 Community Trend Report

Google data estimates how the number of visits and length of stay at different places have changed compared to a pre-pandemic baseline. The baseline is the median value, for the corresponding day of the week, during the five-week period Jan 3–Feb 6, 2020. These changes are calculated using the same kind of aggregated and anonymized data used to show popular times for places in Google Maps and are based on data from users who have opted-in to location history for their Google account. The location types provided include retail and recreation areas, grocery stores and pharmacies, parks, transit stations, workplaces, and residential areas. For more details, visit <https://google.com/covid19/mobility>.

Transaction data for public transport

We obtain transaction data for public transport from our network, and use this to develop analytical analyses of trends, often together with the previous data sources mentioned.

TomTom congestion data

TomTom congestion data shows how congested roads are in cities around the world. The percentage congestion aligns with how much longer (in percentage terms) a trip would take versus when the road would not be congested. For more information, visit this link: https://www.tomtom.com/en_gb/traffic-index/.

Expert Knowledge

We actively approach experts from our international network of public transport operators and authorities to gather supplementary information that helps us provide detail to the examples we use.





Cluster 1

**Support packages,
contracts, and EU policies**

1.1 Support packages

What kind of (financial) support packages are offered to PTOs, and under which conditions?

(Financial) support packages in the wake of the pandemic

As the world emerges from the pandemic, governments around the world have to decide whether they will continue providing emergency funding to public transport.

Public transport ridership remains below pre-pandemic levels. This has placed public transport agencies and authorities in a difficult position, where on the one hand they are suffering from a loss of revenue but on the other hand also want to continue providing an adequate level of service to riders.

Below, we explore several examples of funding public transport. Here, we aim to demonstrate the difficulties faces by PTOs and the different ways in which these difficulties are accommodated.

Example 1: United Kingdom

Support packages

Support packages in Scotland

The Scottish government has announced that it is providing additional funding of £25.7 million to extend recovery funding for the country's bus sector. The Network Support Grant (NSG) Plus, a temporary scheme intended to support the bus network in its recovery from the pandemic, has been extended until October 2022. NSG Plus aims to support services and protect fares while patronage continues to recover from the impacts of the COVID-19 pandemic. This funding is in addition to the £93.5 million that has been allocated to support bus services throughout 2022, which includes funding for bus priority infrastructure, improved data services and ticketing options, the National Concessionary Travel Scheme and free bus travel for all under 22s. (S)

Conditions for receiving funding

The NSG Plus scheme is intended to help offset lost revenue while the bus networks adjust to the new travel patterns emerging following the COVID-19 pandemic. There are many conditions attached to receiving this funding, some of which have been outlined below:

- notification to Transport Scotland of significant reductions to service kms, causing them to drop below 90% of their initial level, or of service frequency reduction of 10% or more in a service that was every 30 minutes;
- provision of regular data on farebox revenue, costs, patronage and other relevant measures to Transport Scotland;
- a commitment to consult with relevant local transport authorities on timetabling, having regard to bus services which may support children to travel to school and that are required to minimize public transport connectivity disadvantages;
- a commitment to respond positively and quickly to reasonable requests from local transport authorities to amend service patterns, hours of operation, vehicles used or levels of provision;
- a commitment to communicate changes to services with the relevant local transport authority and the public in a timely fashion;
- a cap on permissible fare rises with increases limited to the Consumer Price Index from an agreed date pre-COVID;
- a financial reconciliation and a margin sharing agreement of:
 - up to 7% Earnings Before Interest and Tax (EBIT) to be retained by the Grantee
 - between 7% and 20% EBIT to be shared equally between the Grantee and Transport Scotland;
 - over 20% EBIT to be retained by Transport Scotland

The full list of conditions is available via the [website of Transport Scotland](#).

Support packages in England

Bus and light rail operators across **England** will benefit from over £150 million of government support, ensuring services continue to run and millions of passengers can continue to get around as the country emerges from the pandemic. The funding package announced (1 March 2022) builds on almost 2 years' of government support to keep bus and light rail networks running, with around £2 billion made available to over 160 operators during the pandemic. This represents the final tranche of pandemic-related support to operators and will run for 6 months until October 2022. (S)

Conditions for claiming the Bus Service Operators Grant

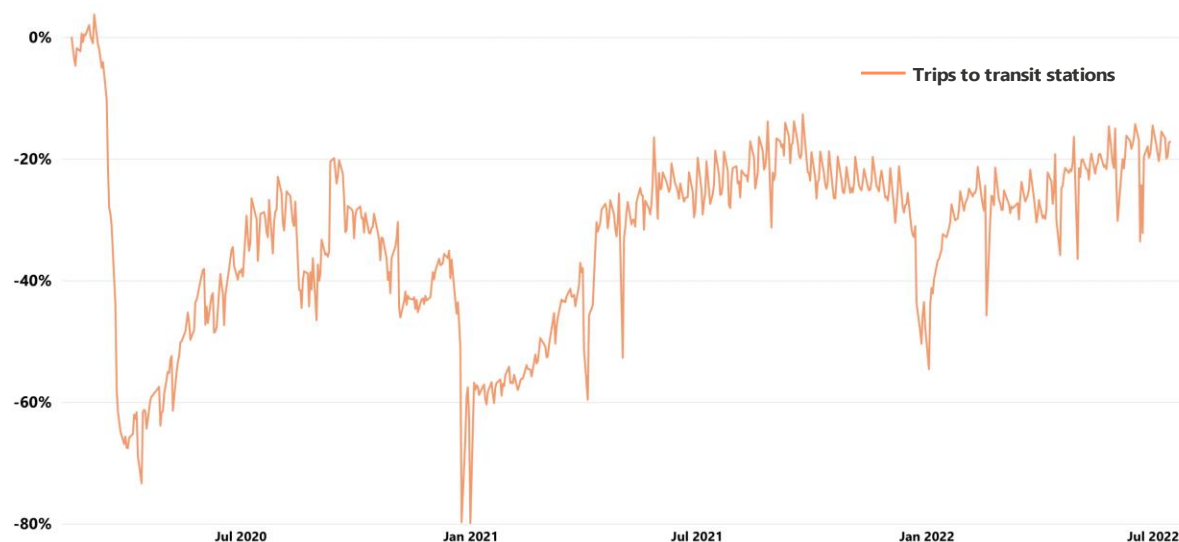
Local services will qualify for the grant if conditions are met, several of which are included below:

- The service is regularly used by the general public, stopping places are situated where the public is likely to use them and all the fixed stopping places (whether marked or otherwise generally recognised) are located where they are likely to be used with reasonable frequency.
- The public can make a single journey between any 2 stopping places at a fare that is not designed to deter them from using the service (for example, a long distance service on which very high fares are charged for short journeys could be ineligible for the grant).
- The arrangements for paying the fare are not a deterrent to using the service.
- There are no signs or descriptions giving the impression that only particular categories of people can travel on the vehicle.
- Members of the public can inform themselves about the service, the places served and times of operation.
- The service is not a tendered service.

A full list of conditions is available on the UK government's website.

Public transport usage in the United Kingdom

Google Mobility data (see chart below) shows us that trips to transit stations are still roughly 20% lower than before the pandemic.



Considering that trips to transit stations are a good proxy for the actual usage of public transport, this is likely a key factor contributing to the extension of subsidy packages.

Note: The Google Mobility data shows trips to transit stations, encompassing all transit stations. It is not possible to split out types of transit stations (eg. Bus stations or train stations).



Example 3: Austria

Support packages

Covid-related funding for public transport ended in Austria in 2021. Since then, however, the Austrian Association of Cities (Staedtebund) has called for more funding. They claim that although ridership has decreased significantly as a result of the pandemic, the pressure on public transport (in part due to the national government's ambitious climate goals) is only increasing. (S)

According to the Google Mobility data, trips to transit stations were at pre-pandemic levels during the summer of 2021, which could have been a contributing factor to deciding to stop funding. However, peaks in trips to transit stations coincide with summer holidays, begging the question of whether or not this peak is due to tourists, as opposed to a more sustainable recovery.



Managed decline is a term that is often used during negotiations between TfL the Central Government.

If a funding deal cannot be reached, TfL has outlined the “**managed decline**” scenario:

- **18–19%** cuts to bus services, impacting around 100 routes
- **9%** service reduction to the Tube network.
- Projects already underway / critical safety projects can continue; **all other projects must cease** (AKA no new investment).

Sept. 2020

Due to the onset of Covid-19, Transport for London (TfL) records a **90% loss** in revenue.

March 2022

TfL **increases fares** across the network by an overall average of 4.8%, the largest fare increase in over ten years for TfL.

April 2022

Contactless open-loop **payments revenue return to pre-pandemic levels** in London, despite small gains in ridership levels.

9 May 2022

Despite some gains in recovery from the pandemic, **TfL’s debt rating is downgraded by Moody’s due to the “uncertainty” of its long-term funding.** The agency’s forecast for TfL’s 2023 revenues is £400 million down from last year and ridership levels aren’t expected to exceed 80% of pre-pandemic levels by 2024.

21 May 2022

Without funding secured beyond June 2022, TfL leaders warn of a “**managed decline**” scenario to reduce services and pause any capital investment projects.

24 June 2022

↓ The fourth extraordinary funding settling for Transport for London worth **£200 million expires.**

The key demand from the government on the latest round of funding is that TfL must find an additional £500 million a year in revenue and further cut costs.

Key takeaway

The way financial support is granted to PTOs is very country specific. This is especially true now that we are moving into a post-pandemic era. We now see a split between regions that continue to provide emergency funding to public transport, and regions that have stopped their emergency funding. As a result, there is no consistent trend with regards to funding public transport in the post-covid era.





Cluster 2

Trends, differences,
supply, and demand

2.1 Trends and differences

How do others deal with peak hour travel? Has peak-shaving occurred? If yes, what policy allowed for that to happen?

In many regions, we see peak hour travel making a come-back. It will, therefore, become increasingly difficult to influence behavior. Below, we have included several examples on this. We see that the time for influencing a behavioral change, towards non-peak hour travel, has passed.

Example 1: Washington, D.C.

Service change

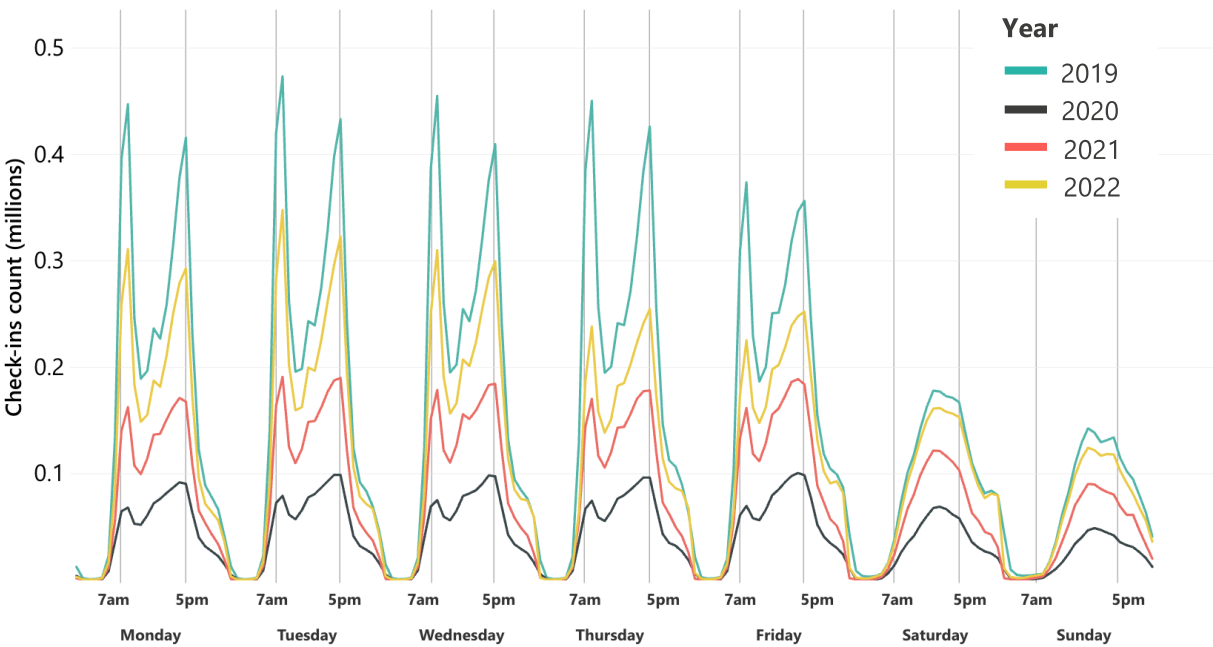
The Metro Board approved a set of changes that will bring the return of some rail service as well as enhance a network of fairly-frequent bus routes. The changes aims at moving the agency in the direction of providing more, all-day service to riders, rather than focusing on the morning and evening peak “rush hour” periods¹.

As we’ve stated, peak-hour travel in public traveled has returned to many regions. This is highlighted in the data and example below.

Example 2: Peak hour public transit ridership

(New) mobility habits

In the Netherlands, peak-hour travel has made a strong comeback in 2022 but remains below 2019 numbers².



Key takeaway

Throughout the pandemic, there has been a focus on building back better. ‘Shaving the peak’ in both public transport and other modes was an important part of this. Many initiatives were introduced, although none were able to significantly change behavior, which means that as people return to their pre-pandemic daily patterns, such as traveling to the office or to school, they are also returning to their pre-pandemic habits.

¹ Read more about the initiative in Washington, D.C. [here](#).

² The data used to make this chart has been obtained via Trans Link Systems.

What are the developments around passenger numbers? And what are the changes that stick? What externalities influence these developments?

Developments around passenger numbers

We continue to see an uptick in passenger numbers across the regions we explore³.



One key driver for this uptick is a slow return to the office and a return to in-person education.. A very important driver is the perception of safety regarding the use of public transport. Below, we outline several examples illustrating the impact of these drivers on passenger numbers.

Perceptions of safety in public transport

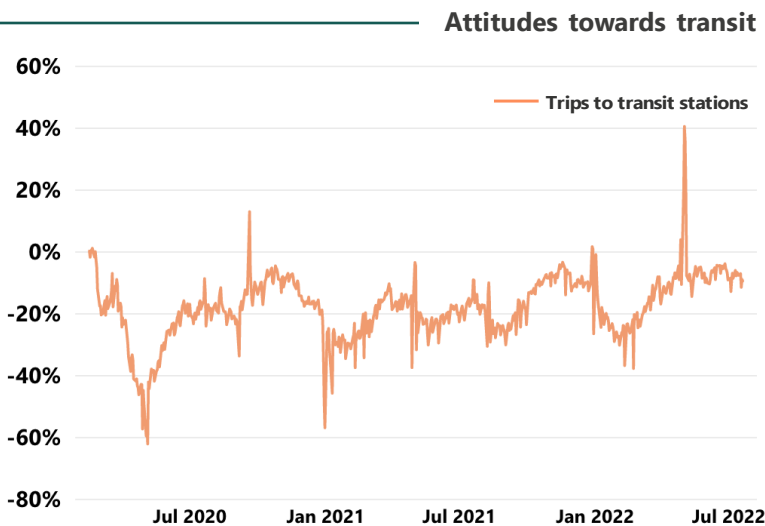
A key driver for the recovery of public transport is how safe people feel. Below, we highlight some research on this subject. In some countries, riders experience greater levels of anxiety while taking public transport. In the below examples, we highlight several studies. We noticed that there are not many studies available on this topic, which could indicate that this is not an incredibly important area of study.

Example 1: Japan

In Japan, longer travel time and greater distances increase the anxiety levels of riders. Anxiety is caused by the association with close contact and greater risk of infection.

Google Mobility data (chart to the right) shows that trips to transit stations in Japan are 10% below pre-pandemic levels, and have been for some time.

Note: the spike on May 4th was due to a national holiday.



³ This chart was generated using transaction data from the respective PTOs and PTAs in the regions included in the chart.

Example 2: Spain

Attitudes towards transit

In Spain, residents have a 70% lower perception of risk in taking public transport versus visitors. This boost of restored confidence is due to repeated use of public transport without testing positive.



Google Mobility data (chart above) shows that trips to transit stations experience strong peaks in the summer, likely due to an influx of tourists.

Example 3: Australia and New Zealand

Attitudes towards transit

In Australia and New Zealand, attitudes towards public transit are becoming less negative after the removal of travel restrictions. In Australia, confidence recovered by about 4% and NZ by 0.2%, after an initial drop of 20% and 10% in confidence at the start of the pandemic.



Google Mobility data (chart above) shows that the recovery of trips to transit stations in Australia was largely dependent on restrictions that were in place. Dips in trips to transit stations all align with lockdown periods.



Working and learning from home

Working from home is here to stay. We reported on this in the last edition of the half-year report and see that this remains true. Below, the example of a study conducted in Melbourne highlights this.

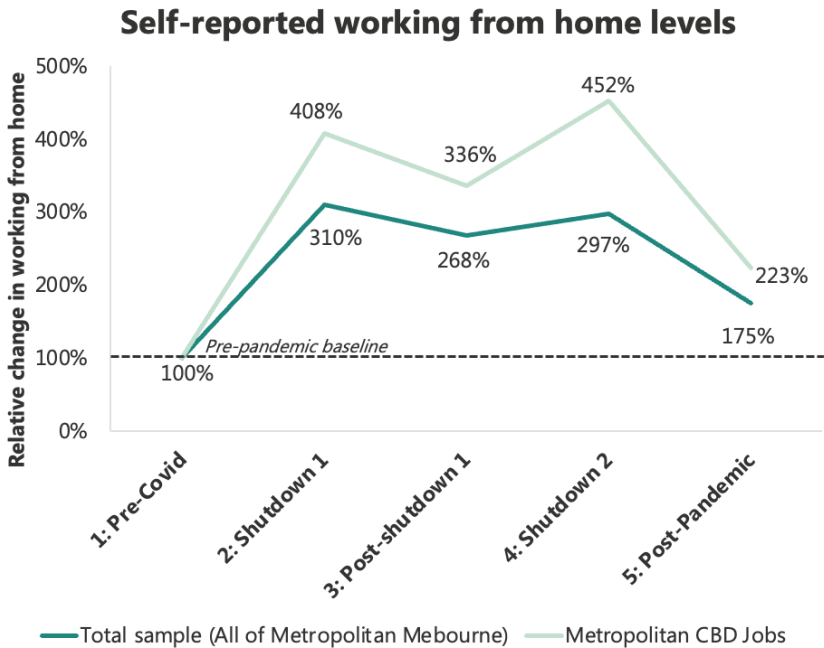
Example 1: Melbourne

Working from home

A Melbourne study⁴ showed that post-pandemic working from home levels are expected to remain significantly higher than pre-pandemic working from home levels. This study asked respondents to document their travel patterns, including working from home, throughout 4 phases. For the 5th phase (post-pandemic) respondents were asked to give their predicted travel behavior.

The results showed that working from home levels increased significantly during both shutdowns in Melbourne. However, working from home levels for workers employed in the city’s central business district were much higher than the overall city average. The researchers found no statistically significant differences in post-pandemic working from home levels between men and women, and age groups. They did, however, find statistically significant differences for income levels and blue and white collar workers.

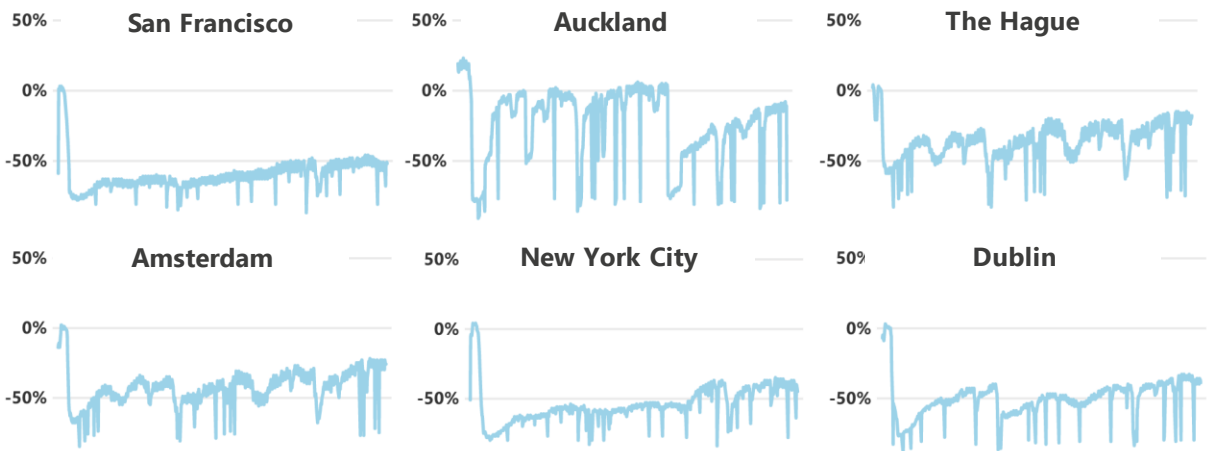
As both groups of respondents expect to work from home more post-pandemic than they did prior to the pandemic, this will, ultimately, have an impact on the total volume of passengers using public transport. The next slide illustrates this.



Example 2: Trips to workplaces

Working from home

Around the world. The Google Mobility Data shows us that trips to workplaces are still at significantly lower levels than before the pandemic. This is likely an indication of people continuing to work from home.



⁴ Source: Transportation Research Journal CBD stands for central business district. Shutdown 1 was between March 23rd and May 13th in 2020. Shutdown 2 was between July 9th and August 2nd in 2020.

Increasing gas prices

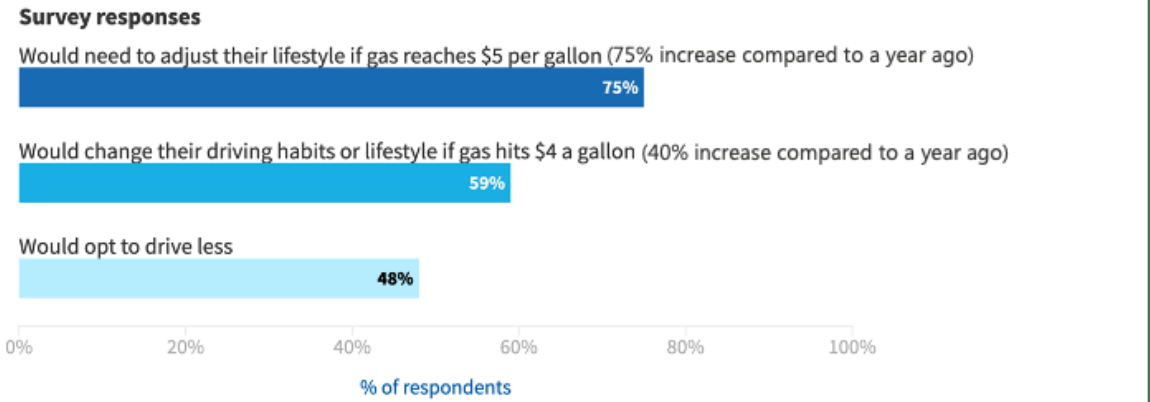
As a result of several factors, gas and oil prices around the world are increasing rapidly. Below, we explore the potential implications of this on the use of cars and public transport.

Example 1: United States

Financial drivers

In the past several months, gasoline prices in the US have risen sharply to a 10-year high. At the same time, many workers are returning to the office, causing new financial burdens for commuters who drive. A recent survey by the American Automobile Association has shown that many drivers are considering adjusting their driving habits, as well as other lifestyle choices (such as combining trips and spending less on shopping and dining out) in response to the rising costs. (S)

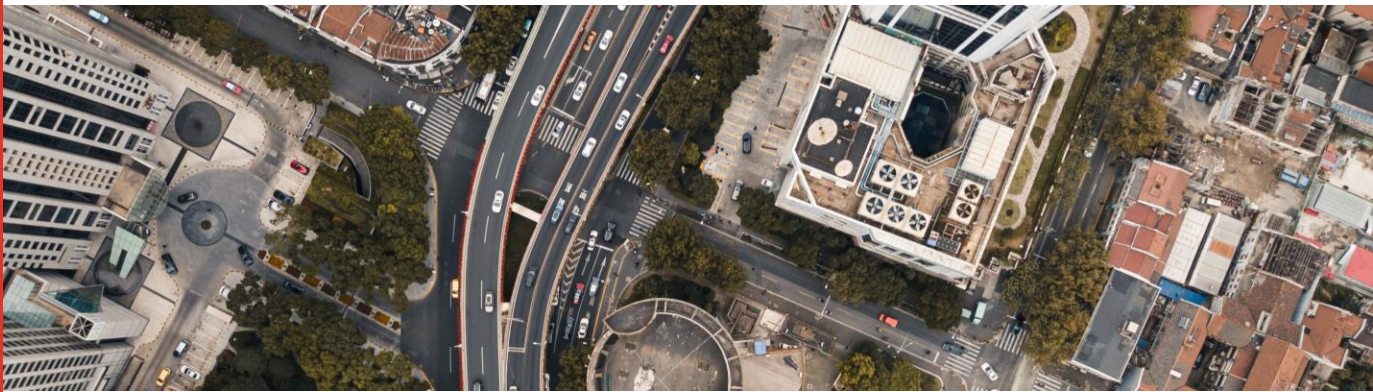
Americans are changing their driving habits.



Potential long-term² effects

Analyzing the effect of the change in gasoline prices on public transit ridership in ten selected US urbanized areas over the time period of 2002-2011, a study³ showed that even a small rise in gasoline prices in the US led to a noticeable increase in public transit ridership. Light rail, was a particular beneficiary of rising prices.⁴

| Long-Term % Increase in Ridership as a Response to a 10% Increase in Gas Prices | | | | |
|---|---------------|------------|------------|---------------|
| Bus | Commuter Rail | Light Rail | Heavy Rail | The Aggregate |
| 1.67% | 2.05% | 7-9% | 0.41% | 1.80% |



Key takeaway

As explored, many factors play an important role in ridership numbers. Therefore, it is essential for policymakers and PTOs alike to understand these driving factors behind these developments. Understanding this is the basis for also understanding where they can, and cannot, influence behavior. Regions around the world have been unable to shave the peak, begging the question of what is needed to make this possible in the future.



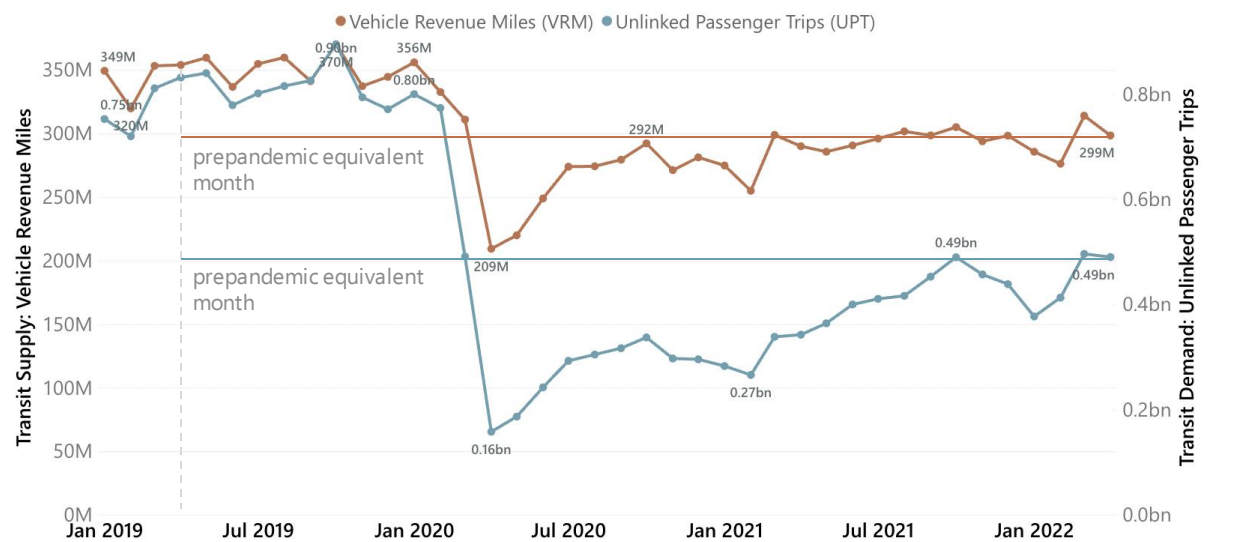
2.2 Supply and demand

What developments do we see around supply and demand?

As illustrated in previous sections, public transport ridership continues to lag behind pre-pandemic levels. This is a global trend. We also see that in many regions, supply of public transport is back at pre-pandemic levels, meaning there is a mismatch of sorts between supply and demand. The below example illustrates this.

Example 1: United States (New) mobility habits

The chart below shows the average US transit supply and ridership from Jan 2020 until Feb 2022, using data from the Federal Transit Administration.



While both supply and demand followed similar uptake trends in 2021, transit ridership is a little over half of its pre-pandemic equivalent (59%). Service, on the other hand, is close to 85% of pre-pandemic figures.

Key takeaway

Supply continues to be higher than demand in public transport. This can potentially lead to a financial mismatch, which is something that PTOs and PTAs alike should be aware of, so that they can act on it.

What differences do we see between modes?

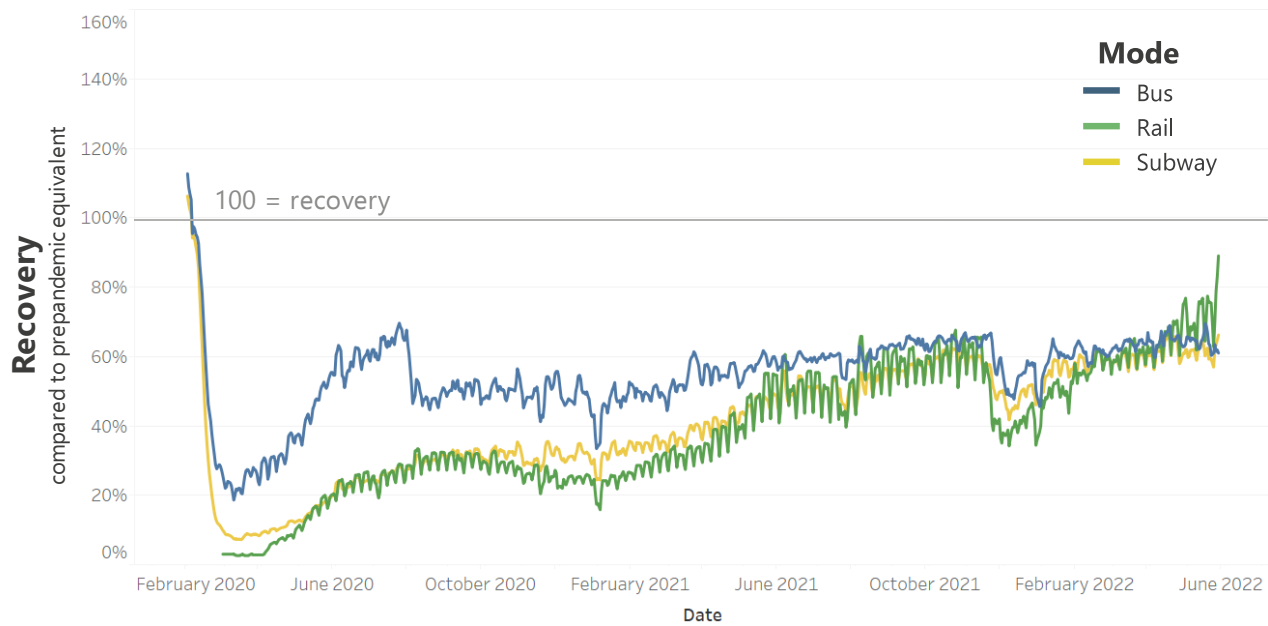
Differences across modes of public transport

In the regions we explore, we see that different modes of (public) transportation often recovery at a different pace. In the beginning of the pandemic, we often saw that the use of buses recovered more quickly than the use of other modes. This is most likely linked to the specific demographics that make use of certain modes as opposed to others. However, this is no longer the case.



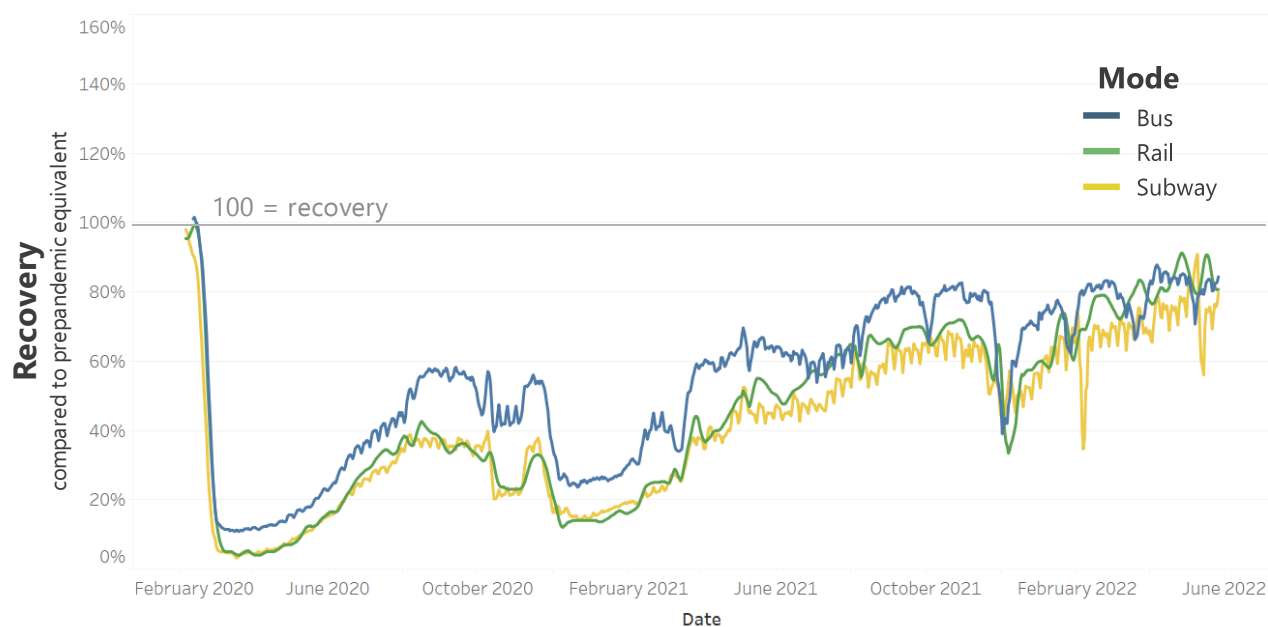
Example 1: New York⁵

(New) mobility habits



Example 2: United Kingdom⁶

(New) mobility habits



Interestingly, we see that, in the above examples, the differences in ridership between different modes of public transport continue to decrease over time. Where, last year, the differences between modes were significant, this is no longer the case. This is in line with the overall trend that more and more people are travelling.

^{5, 6} These charts were generated using transaction data from the respective PTOs and PTAs in the regions included in the chart.

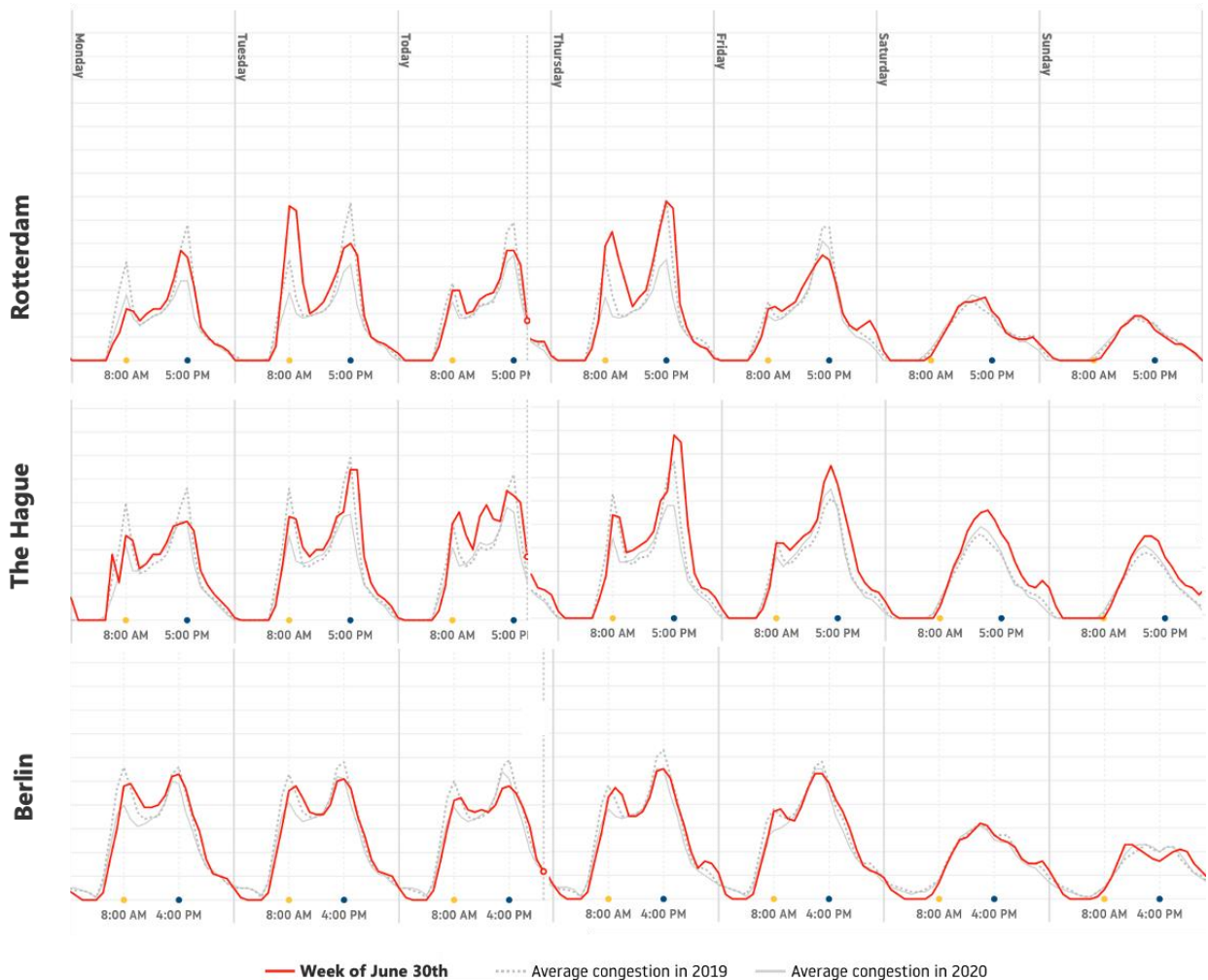


Example 3: Congestion levels

(New) mobility habits

A worrying trend is the fast recovery of congestion levels in many metropolitan cities. This development could be a major setback for global sustainability goals and milestones.

The below charts⁷ show the congestion levels for the week of June 30th (in a red line), congestion levels for 2020 (in a grey line) and congestion levels for 2019 (in a dotted grey line).



Key takeaway

Based on different sources, we clearly observe two things: (1) that the differences in ridership levels in different modes of public transport are becoming less significant and (2) that the use of cars is recovering more quickly than the use of public transport. The latter is a worrying trend, as it makes attaining sustainability goals more difficult.

Do all PT lines see the same demand, or are there differences?

Commuter services

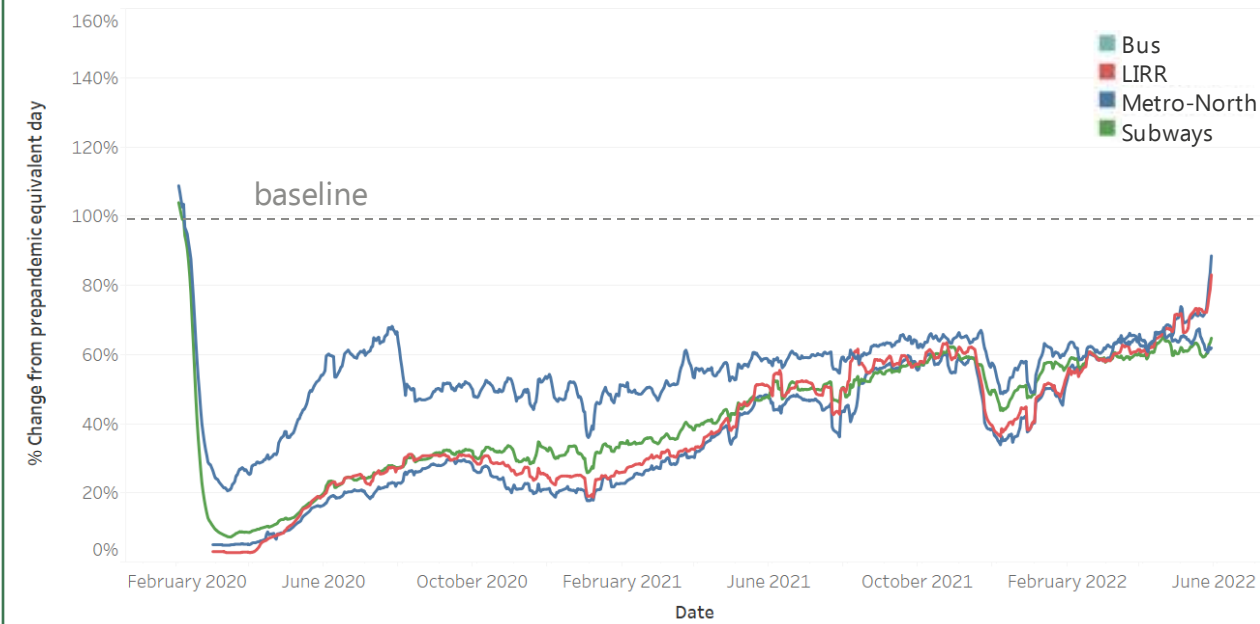
Internationally, we are seeing a slow but steady recovery of commuter services in public transport. Below is one example from New York City.

⁷These charts were generated by TomTom.

Example 1: Commuter rail services in New York City

(New) mobility habits

The commuter rail services in New York, the Long Island Railroad (LIRR) and Metro-North, have been recovering steadily in recent months. This recovery has been boosted by reopening plans in the city.



Key takeaway

When looking at different types of public transport, we consistently saw that commuter lines have been hit hardest by the pandemic. However, this is no longer the case in some regions, where commuters are making a slow return to the office.

⁸ Vehicle Revenue Miles refer to transit supply and Unlinked Passenger Trips to ridership.





Cluster 3

**Getting people (back)
into public transport**

3.1 Getting people (back) into public transport

“We need to be quick, to help reduce our climate emissions but also to use this unique moment in time to create a more attractive and safer local environment.”

- Irish Minister for Transport, Eamon Ryan



What have PTOs and PTAs done to get people (back) into public transport?

Both PTOs and PTAs around the world have initiated several different methods to get people (back) into public transport. These different methods can broadly be categorized in four ways: marketing, price incentives, changes in service, and changes in fare products. We use this categorization of the examples below.



Marketing

Example 1: Wales

Communication

In an effort to encourage the public in making sustainable travel a priority, **Wales** has launched the 'Real Social Network' campaign. This long-term initiative will focus on promoting walking, cycling, bus and rail use as a sustainable mobility way. (S)

Example 2: Brussels

Communication

Recently, **Brussels** celebrated the World Environment Day. The city's public transport operator, STIB, run a poster campaign and several knowledge awareness sessions with the public, encouraging them to use public transport modes more. (S)

Example 3: Vancouver

Communication

By partnering with Destination Vancouver, Translink's "Reconnect Campaign" was launched to inspire passengers to explore Metropolitan **Vancouver** by offering discounts at hundreds of local sightseeing tours, attractions and activities. (S)

Example 4: England

Communication

In **England**, North York Moors National Park partnered with local authorities to publish the "Sit back and enjoy the ride" guide to highlight the region's main attractions and how to access them via public transport. (S)



Price incentives

During the pandemic, we noticed the emergence of three categories of price strategies, or incentives: 'welcome back' discounts, permanent discounts, and the postponement of fare increases. We also see the introduction of road charging as a potential mechanism to boost the use of public transport. Below, we highlight several examples for each of these categories.



Example 1: The Netherlands

Fare policy

In a new trial with Dutch Railways in the **Netherlands**, passengers can receive up to a 60% discount on fares if they are travelling outside of peak hours. The trial is now only available on certain routes, but could be expanded if it is deemed successful. (§)

Example 2: Auckland

Fare policy

Since February 2021 in **Auckland**, off-peak fares of a 10% discount have become a permanent fixture for anyone traveling between 9am and 3pm and at night weekdays and all weekend. (§)

Example 3: Ireland

Fare policy

Ireland introduced a 20% reduction in fares in all subsidised public transport services as of April 2022, in combination with a 50% reduction for customers under the age of 24 through the Young Adult Card. On page 27 of this report we explore the impact of these fare changes. (§)

Example 4: Vancouver

Fare policy

Since September 2021, Translink in **Vancouver** is offering free fares for services for children aged 12 and under. (§)

Example 5: Albuquerque

Fare policy

Since January of this year, **Albuquerque**, New Mexico, launched zero-fare collection for the city's bus services until the end of 2022. (§)

Example 6: Scotland

Fare policy

From 31 January 2022, under 22s living in **Scotland** can benefit from free bus travel, with the scheme set to tackle inequality, respond to the climate emergency and improve the lives of young people. (§)

Although we see several examples of fare changes, it is difficult to analyze the success of these initiatives. Data on the usage of discounted fare rates is not available in the regions we explored. Furthermore, data is also not available for free-fare systems, as there is no longer a need for passengers to tap in or tap out of public transport vehicles.

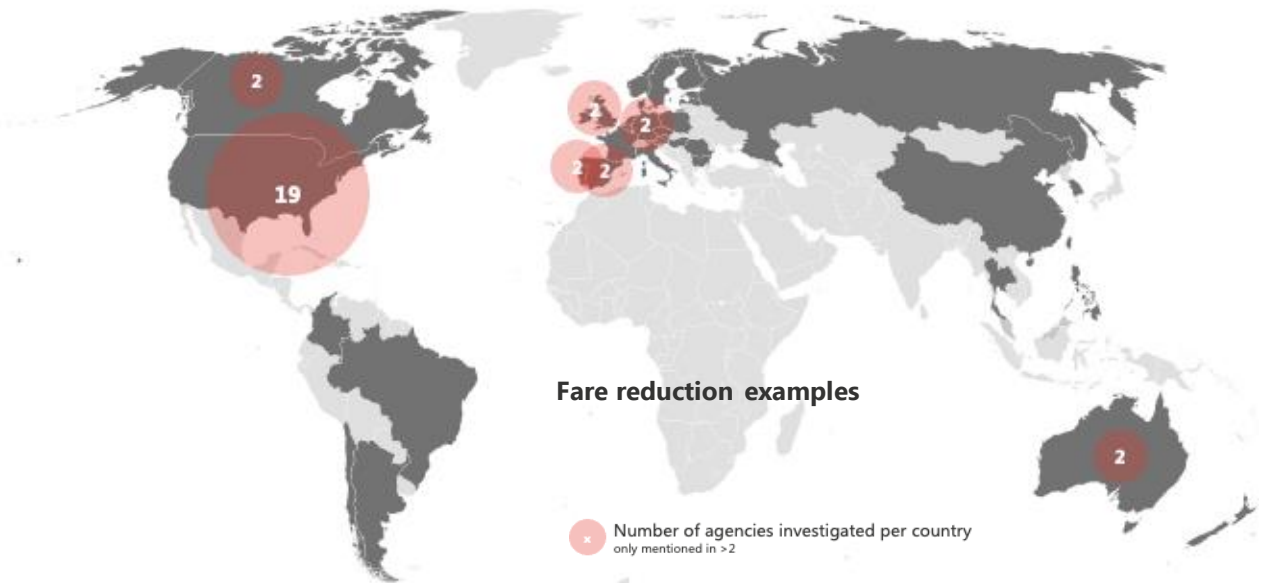
It is important to note that, although it may seem like there are many examples of fare decreases, there are many regions and cities that have decided against them. This is illustrated by an analysis on the following page.

Example 7: Global scan

Fare policy

We looked into 62 leading transit agencies around the world to answer this question. Less than 25% of them have reduced their fares and even less have combined these discounts with the introduction of a new fare structure. **15** of the **62** leading transit agencies in the world reduced their fares in 2022. These discounts mainly impact weekly or monthly passes, and the transit agencies also expanded their transfer rules and offers.

- 8 out of the 15 agencies that introduced fare decreases are in the US
- 2 out of the 15 transit agencies made their 2021 fare reductions permanent in 2022
- 11 out of the 15 transit agencies introduced new fare structures and programs instead of/besides fare reduction
- New York's MTA introduced a monthly cap on its pay-as-you-go price, and



Aside from this, it is difficult to measure the impact of such fare changes on ridership levels. We highlight this through several examples below.

Concerns and considerations

- 1** While operational revenues fall, customer behavior will stay unaffected.
- 2** When fare discounts are discontinued, ridership levels plummet and offset any earlier gains.
- 3** Under the right circumstances, reduced fares might increase ridership levels and total revenue could be maintained.

Fare reduction examples

In **Tallinn**, free-fare transit has been available since 2013. A 2021 national audit to review this policy determined that the number of car journeys in the city remained the same from year to year despite the zero-fare fee.

In **China**, researchers found that any cancellation of fare discount schemes could decrease passenger ridership levels by as much as **29%** in response to the hike in prices.

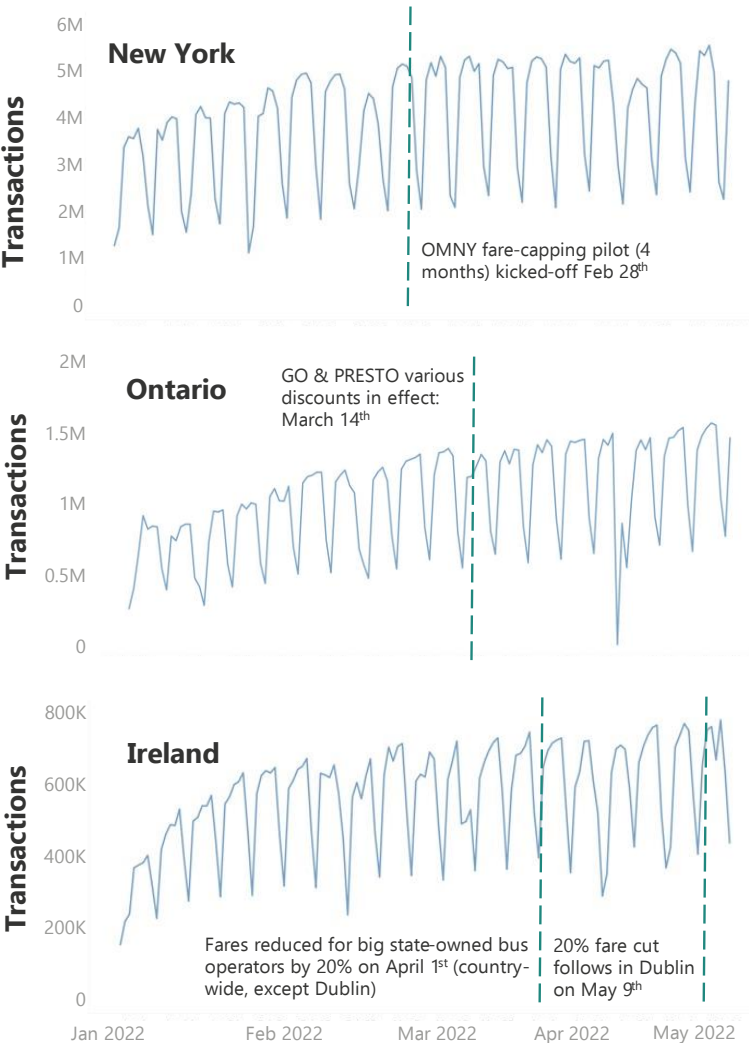
In a small town in **Japan**, when bus pass prices were reduced by 50-70% for one year from September 2019, the number of pass holders increased by a factor of 2.6, ridership increased by a factor of 1.1, and revenue remained stable.

Measuring the impact of initiatives

Example 1: New York

Fare policy

Recent reductions in fare in some large transit systems have not led to immediate big jumps in ridership.



Ireland and New York City introduced fare reduction schemes this year, and this has not had an appreciable effect on general ridership.

Similarly, in Ontario we see that the gradual increase in ridership across the board is more likely due to seasonal effects and the ongoing restart after COVID-19 than the introduced discounts.

Example 2: Hong Kong

Fare policy

A 2015 study in **Hong Kong** found that introducing a 35% off-peak travel discount (valid from 7:15 to 8:15) mainly influenced the behavior of commuter-like travelers. There was ***an overall decrease of around 3% of trips in peak-hour travel*** following the introduction of the off-peak discount.

Example 3: Taipei

Fare policy

A 2010 analysis on the **Tapei Metro** examined different fare scenarios, including a 25% and 50% off-peak travel discount and a 25% and 50% peak-hour surcharge. Overall, Metro ***riders are most sensitive to fare changes during peak-hour periods during shorter, 1 or 2-hour, windows of time***. For example, if morning peak hours are extended from 6:30 – 10:00, 86% of passengers will continue to travel at this time due to the high time penalty.



Change in service

Example 1: Wales

Change in service

Transport for Wales announced a new Demand-Responsive Transport (DRT) scheme in and around the Ruthin area, in addition to several other similar pilots happening across the country to support residents in rural communities. (S)

Example 2: Boston

Change in service

Boston's MBTA is rolling out a newly designed bus network at the beginning of this year to create corridors with more frequent service for areas which rely heavily on mass transit. Full implementation is planned for 2026. (S)

Example 3: Sydney

Change in service

Starting April 2022, western Sydney is adding 2,000 additional weekly bus services and increasing the frequency of buses on existing routes. (S)

Example 4: Toronto

Change in service

In September 2021, outside of Toronto, the longest AV shuttle route in North America was launched to integrate with local public transit. (S)



Change in fare products

Example 1: New York

Fare policy

New York's MTA introduced a weekly fare cap for passengers on OMNY trips at \$33 per week. (S)

Example 2: Boston

Fare policy

Boston's MBTA announced it is expanding its fare payment system by adding open loop contactless ticketing and a new digital version of their CharlieCard. (S)

Example 3: Austin

Fare policy

In Austin, Capital Metro is rolling out a new smart fare card and contactless payment system this fall. The rollout involves replacing Capital Metro's app, implementing the new Amp smartcard, and offering fare capping for low-income residents. (S)

Example 4: Genoa

Fare policy

Local transit operator AMT partnered with Visa to launch a pilot of open-loop fares payments with group ticketing and multi-passenger fare capping in Genoa, Italy. (S)

Example 4: Melbourne

Fare policy

From 2007 to early 2008, A “Free Before 7” campaign in Melbourne offered free-fare rides for passengers travelling before 7:00 am. ***This study finds that 23% of passengers shifted their time of travel and there was an overall 10% growth in ridership*** following the introduction of the free-fare incentive.

There is also a flipside to offering large fare decreases. The example below illustrates this.

Example 5: Germany

Fare policy

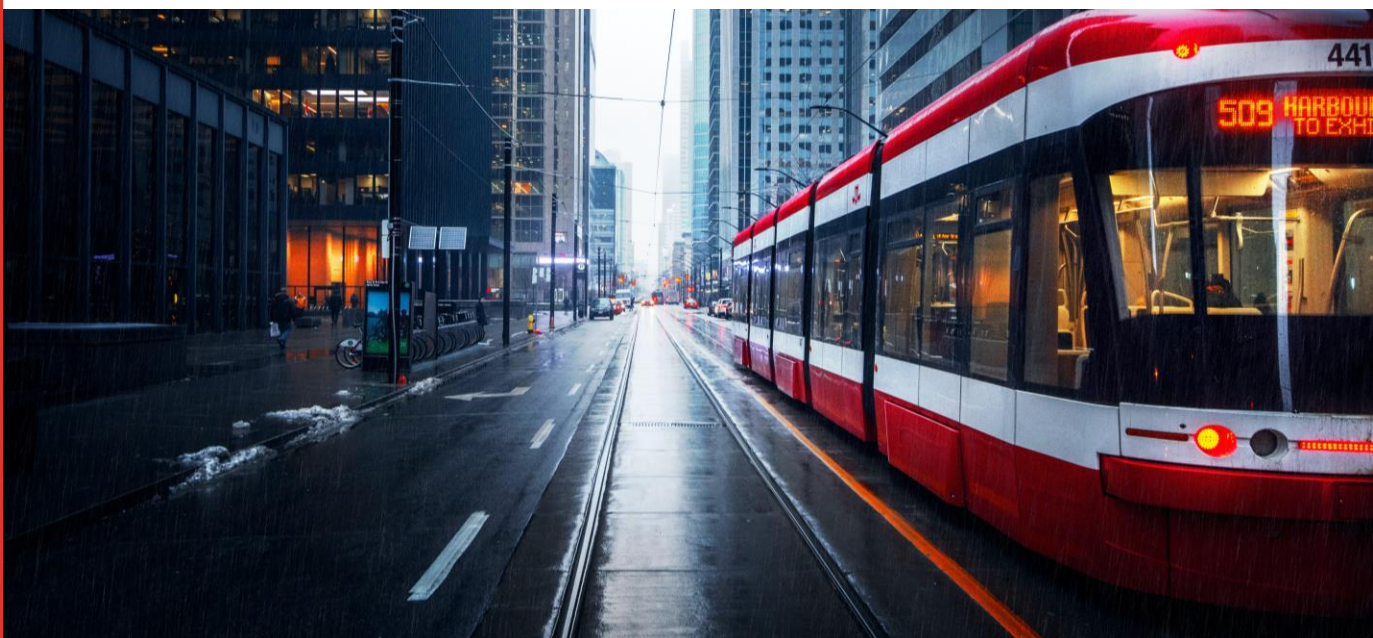
From June through August, passengers across the country can purchase a 9€ per month public transport pass as part of the national initiative to alleviate the high cost of fuel and to promote sustainable travel. However, unintended consequences are already underway.



- More than **7 million** (~8.4% of Germany's population) people bought the €9 ticket ahead of its official launch on June 1st.
- On the first weekend after the introduction of the pass, Deutsche Bahn reported **400 overcrowded trains** each day.
- In total, there were around **700 reports of congestion problems** with passengers, or disruptions to the operations center per day, over the long weekend.
- Deutsch Bahn also reported increased pressures on staff, having to approve **thousands of overtime** working hours over the weekend to accompany the needs of the passengers.

Key takeaway

Developing more equitable transit systems through introducing new payment products (such as fare-capping) seem to be popular. However, we do not see that these initiatives have a clear impact on ridership.



The background of the slide is a photograph of a road surface. It features a red-painted area with white directional arrows pointing towards the top-left. Below the red area is a dark, textured asphalt surface. A semi-transparent red rectangle is overlaid on the right side of the image, and a white rectangle is overlaid on the bottom right.

Chapter 4

**Summary of key
takeaways**

Summary of key takeaways

1

The way financial support is granted to PTOs is very country specific. This is especially true now that we are moving into a post-pandemic era. We now see a split between regions that continue to provide emergency funding to public transport, and regions that have stopped their emergency funding. As a result, there is no consistent trend with regards to funding public transport in the post-covid era.

2

Throughout the pandemic, there has been a focus on building back better. 'Shaving the peak' in both public transport and other modes was an important part of this. Many initiatives were introduced, although none were able to significantly change behavior, which means that as people return to their pre-pandemic daily patterns, such as traveling to the office or to school, they are also returning to their pre-pandemic habits.

3

As explored, many factors play an important role in ridership numbers. Therefore, it is essential for policymakers and PTOs alike to understand these driving factors behind these developments. Understanding this is the basis for also understanding where they can, and cannot, influence behavior. Regions around the world have been unable to shave the peak, begging the question of what is needed to make this possible in the future.

4

Supply continues to be higher than demand in public transport. This can potentially lead to a financial mismatch, which is something that PTOs and PTAs alike should be aware of, so that they can act on it.

5

Based on different sources, we clearly observe two things: (1) that the differences in ridership levels in different modes of public transport are becoming less significant and (2) that the use of cars is recovering more quickly than the use of public transport. The latter is a worrying trend, as it makes attaining sustainability goals more difficult.

6

When looking at different types of public transport, we consistently saw that commuter lines have been hit hardest by the pandemic. However, this is no longer the case in some regions, where commuters are making a slow return to the office.

7

Developing more equitable transit systems through introducing new payment products (such as fare-capping) seem to be popular. However, we do not see that these initiatives have a clear impact on ridership.

*Based on these takeaways, what is needed to move towards a **future-proof mobility system**?*

An aerial photograph of a rural landscape. A river flows from the top left towards the bottom right. On the left bank, there is a village with many small houses and a church. The right bank is mostly green fields. A road runs along the river. A large red semi-transparent rectangle covers the top right portion of the image.

Chapter 5

An aerial photograph of a rural landscape. A river flows from the top left towards the bottom right. On the left bank, there is a village with many small houses and a church. The right bank is mostly green fields. A road runs along the river. A large red semi-transparent rectangle covers the top right portion of the image. A white semi-transparent rectangle is overlaid on the bottom right portion of the image.

Moving forward

Moving forward: an action perspective

Since the start of the pandemic, we've explored changes in behavior around the way people travel, and what can be done to influence this behavior. We will continue to explore this. However, we also see that uncertainty is here to stay, and that this is the new normal. As a result, we need to find new ways to deal with this. Throughout the pandemic, we've seen that it is incredibly important to coordinate between different organizations and to avoid silo-thinking. In order to do this, we need to start thinking about mobility from a broader perspective.

The below examples illustrate some of this thinking. This will be the key theme of the next half-year report, which will be completed in December.

In the Flemish region of Belgium, the passage of the Mobility and Public Works Policy has ensured the investment of €2.2 billion towards improving the region's mobility infrastructure. The policy comprises a total of 929 projects of which €328 million will be dedicated to cycling infrastructure. An additional €225 million will be spent on road improvements. (S)

Transport for West Midlands has expanded their on-demand bus program in Coventry as part of its commitment to both reduce congestion and tackle climate change. The pilot program will now also cover the city center. The pilot was initially launched in spring 2021 as part of the Future Mobility Zone, a scheme which aims to test innovative transport solutions. (S)

A new survey conducted in the United Kingdom shows that respondents back actions by the government to encourage cycling and public transport usage. More than half (55%) of respondents say there is too much traffic congestion in their local area, with a smaller proportion (45%) in favor of schemes that would charge road users a fee to drive around towns and cities. (S)



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