

Transit in Post-COVID-19 World



Overview and takeaways

Trends	Takeaways
What are transit agencies doing now to address COVID-19's impacts?	<ul style="list-style-type: none">• <i>Manage transit supply and demand</i>• <i>Apply congestion pricing and related measures</i>
What might transit agencies do lot more of after COVID-19?	<ul style="list-style-type: none">• <i>Foster micro-transit and micro-mobility</i>
What might transit agencies do in longer-term?	<ul style="list-style-type: none">• <i>Simplify travel cards and fares, go cashless</i>

Overview

- **What are transit agencies doing now to address COVID-19's impacts?**
- What might transit agencies do lot more after COVID-19?
- What might transit agencies do in longer-term?

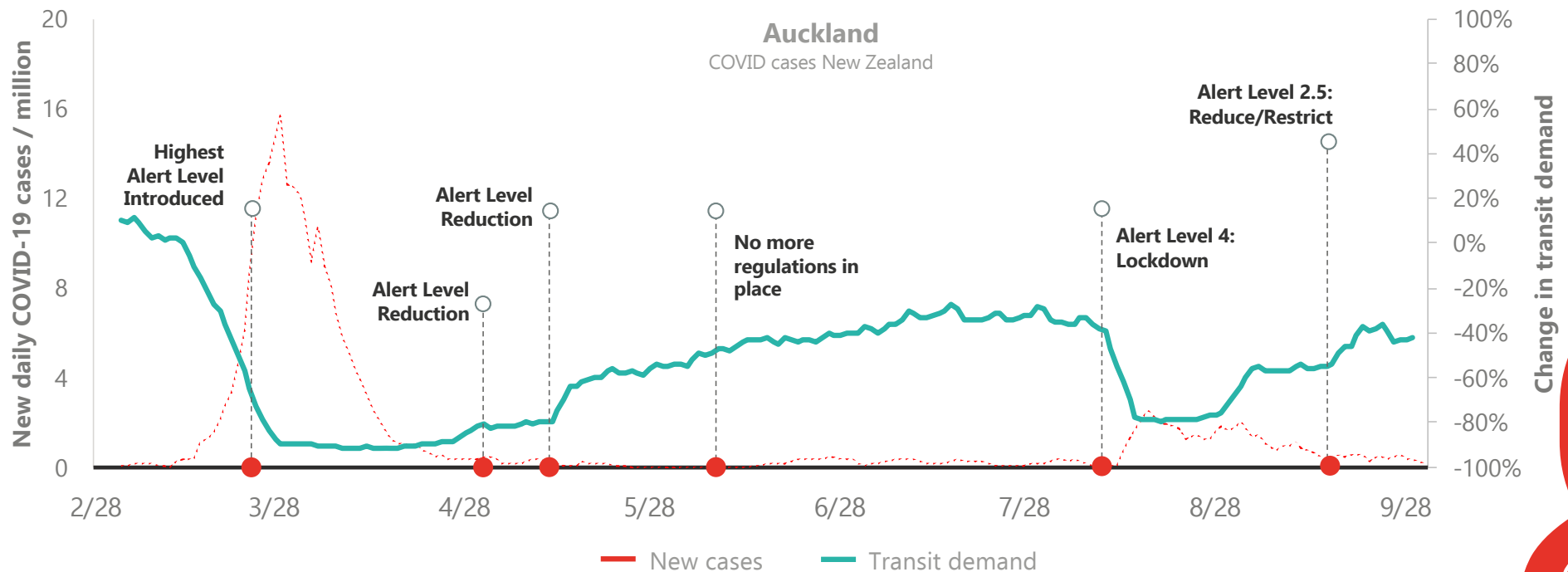


Auckland, New Zealand: Challenges even for “perfect” island nation



Auckland: Transit demand up & down, with COVID-19

New Zealand's government defined clear restriction packages, four "alert levels." Changes in alert levels had significant and immediate impact on transit ridership

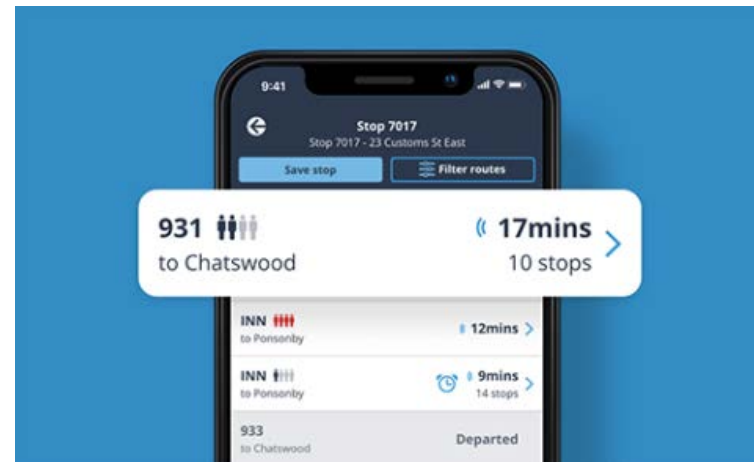


Data Source: Transit demand: Moovit, COVID-19 cases: Johns Hopkins



Auckland Initiatives: Collecting data to manage crowding and peak shaving

- During start of COVID-19 pandemic, public transport in Auckland was free
- Even then, checking in and out continued to be required to allow for continued monitoring of crowding data
- In June 2020 and during its level 2 alert, Auckland Transport implemented **off-peak travel discount**, providing as much as 30% off to commuters



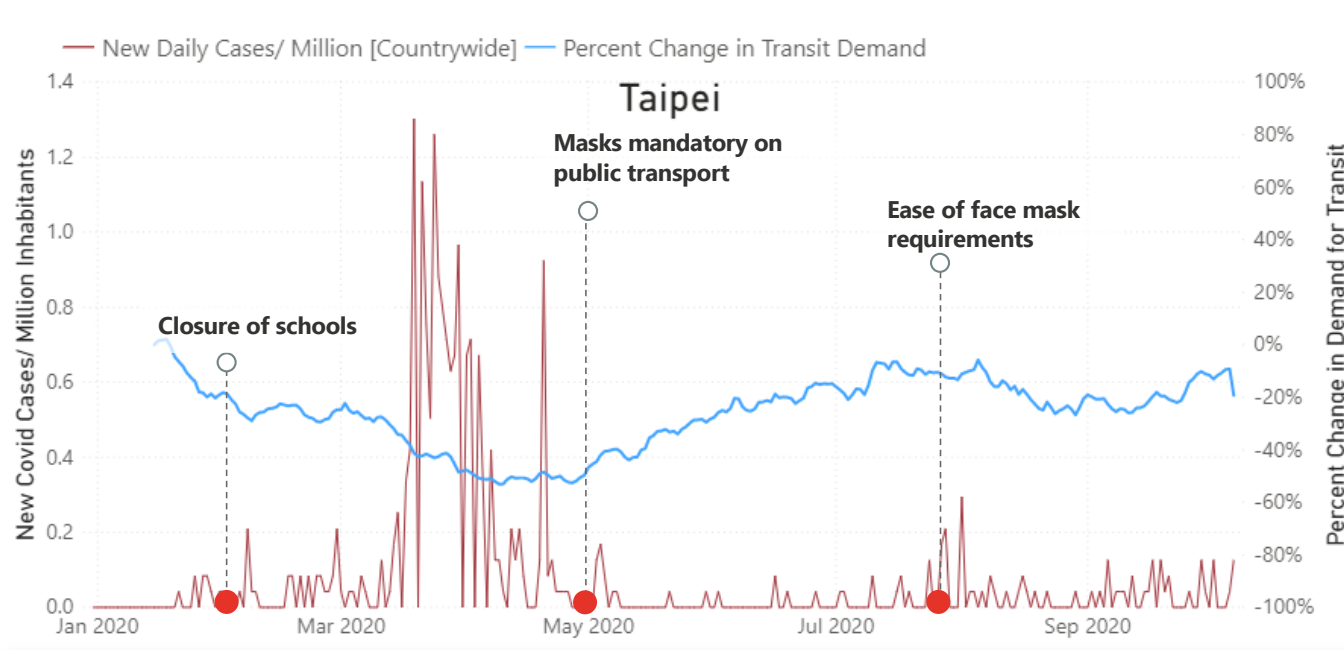
Mobile application of Auckland's transit agency showing real-time vehicle crowdedness

Taipei, Taiwan: Despite density, low infection rates



Taipei: Despite density, low infection rates

Taiwan – due to its quick and accurate response to virus – managed to keep infection rates low, which positively impacted transit usage compared to other regions.



Ridership Demand data source: Moovit

Latest data update: 7th of October

Ridership Demand: lowest since first COVID case confirmed

-55%

Ridership Demand: current

-19%



Taiwan Initiatives: Applied health measures and heavy used of tracking and tracing technology

- Taiwan responded to virus quick; since early on, public transit riders were obliged to wear face coverings and maintain strict social distancing rules
- To empower tracking and tracing options, Taiwan used **geo-location and cellphone** data
- Through those, alerts were generated based on patient's symptoms and travel history and helped monitor population movements

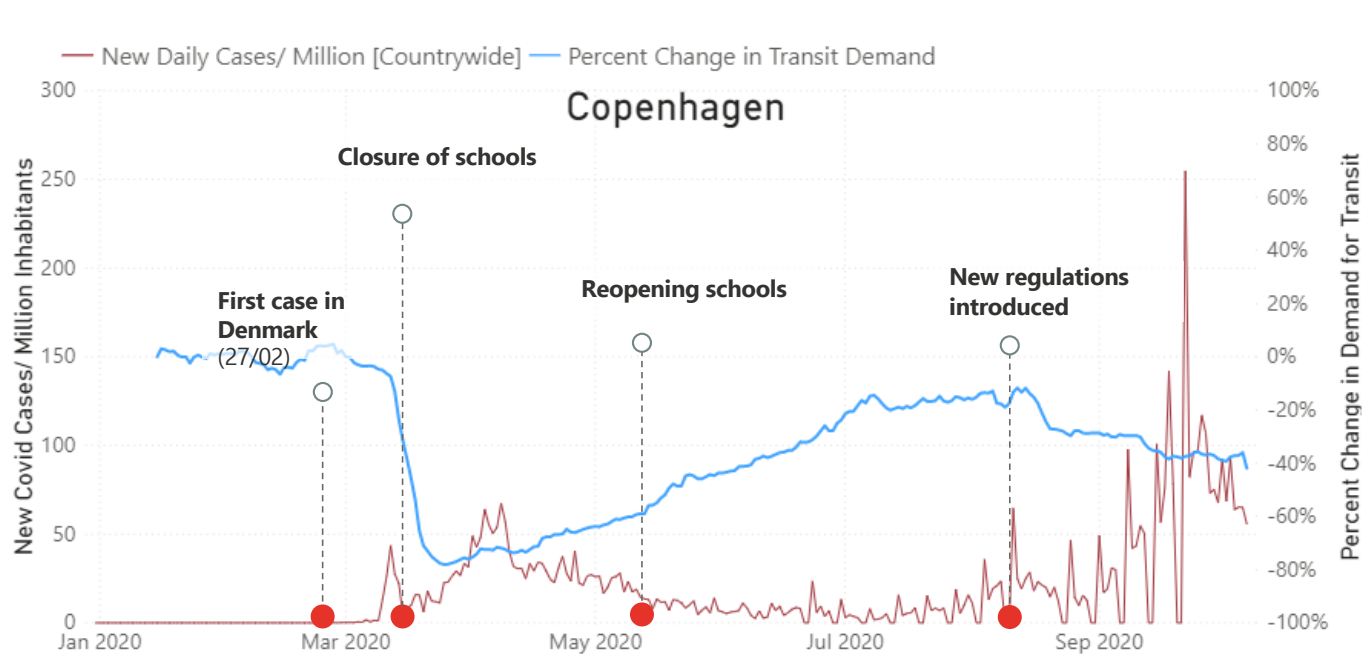


Copenhagen, Denmark: Laboratory for early easing



Copenhagen: Laboratory for early easing

Denmark – after shift response to global pandemic – was first country in Europe that started to step-by-step ease restrictions introduced due to COVID-19



Latest data update: 7th of October

Ridership Demand: lowest since first COVID case confirmed

-81%

Ridership Demand: current

-42%



Copenhagen: Early example of modal shift to cars

- While pre-COVID-19, Copenhagen had relatively low passenger car modal share (~25%), mobile app data showed that **driving activities reached pre-COVID-19 level way before public transport**
- While car registration data for months of April and May followed same pattern and showed rising trend on car usage, this later stabilized

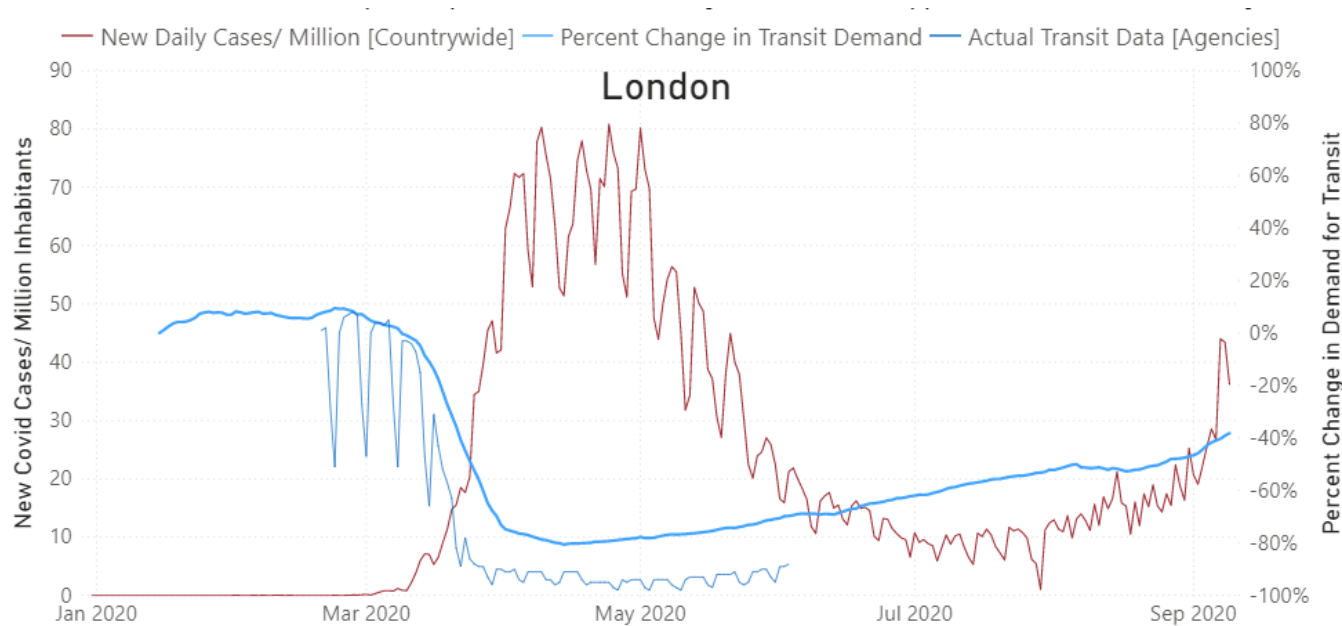


London, UK: Also addressing rising traffic levels



London: Also addressing rising traffic & COVID-19 levels

London, similar to other densely populated areas was impacted by COVID-19, imposed restrictions for non-essential travel. Transit ridership has declined significantly as result.



Latest data update: 9th of September

Ridership Demand: lowest since first COVID-19 case confirmed

-81%

Ridership Demand: current

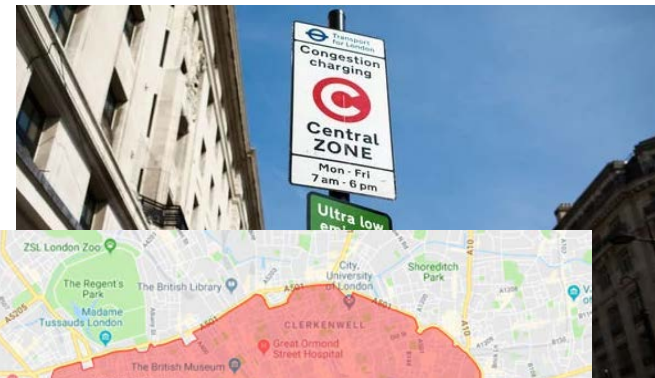
-38%

Data Source: Moovit and Transit Operator



London Initiatives: Increasing congestion charge

- In May, Transport for London (TfL) increase of congestion charge from 11.50 pounds/day to 15 pounds/day
- Intended to supplement lost revenue while discouraging shift away from public transportation
- As non-governmental entity, TfL receives limited funding from UK government

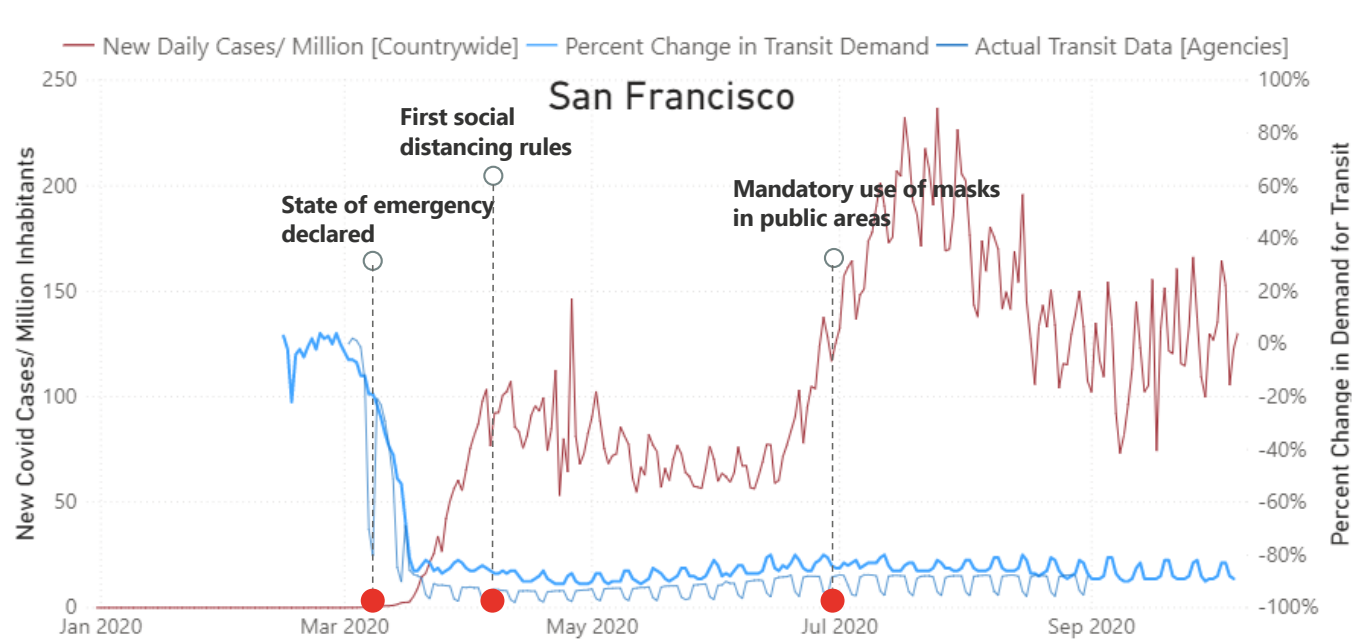


San Francisco: Dramatic transit demand decrease



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Peak of pandemic arrived later to San Francisco compared to other regions, but still had devastating impact on transit demand



Latest data update: 6th of October

Ridership Demand: lowest since first COVID case confirmed

-91%

Ridership Demand: current

-89%

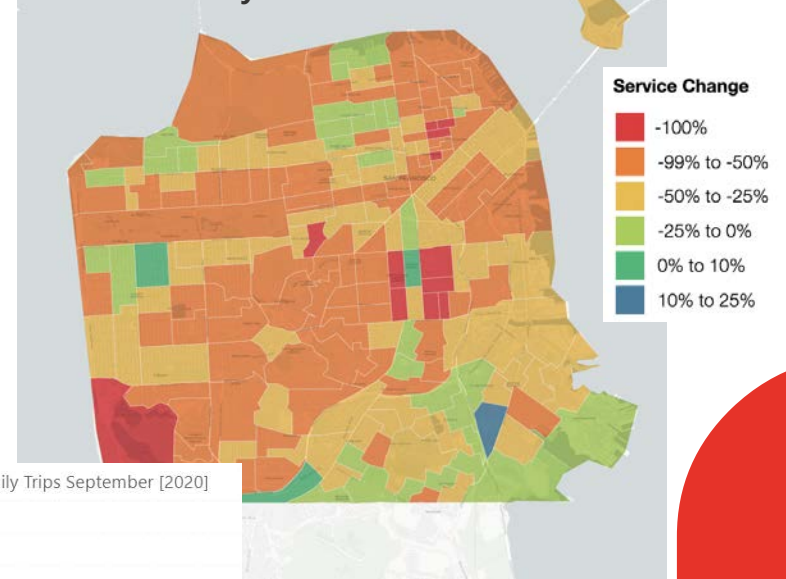
Ridership Demand data source: Moovit, Actual ridership: SFMTA



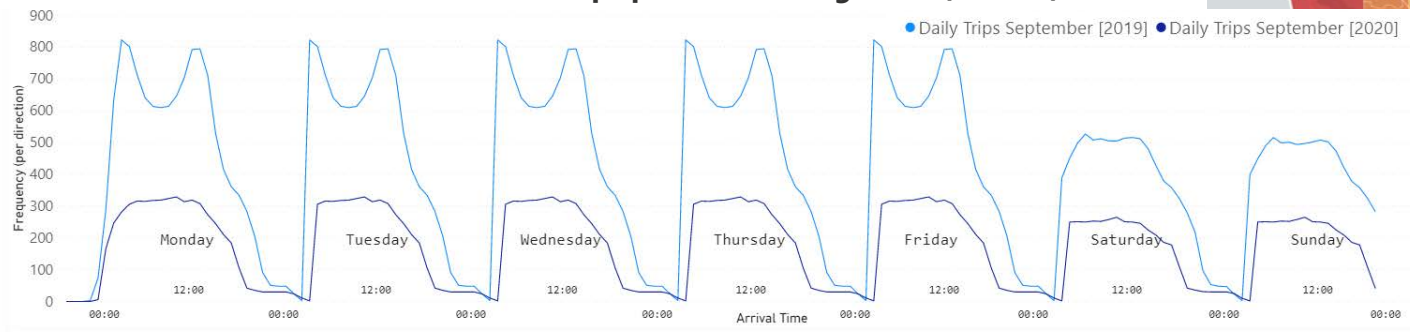
San Francisco: SFMTA reduced supply

- In April, SFMTA faced difficulties delivering service due to operator availability and changing demand
- It cut back service to core routes reducing vehicle trips by 87% in April compared to February
- SFMTA resuming some services in time for school year and rethinking service offerings

Transit service change in San Francisco between January 2020 and June 2020.



Number of vehicle trips per hour during week (SFMTA)



Data source: GTFS feed of SFMTA



Overview

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- **What might transit agencies do lot more after COVID-19?**
- What might transit agencies do in longer-term?



The Netherlands: Bike highways for some regions

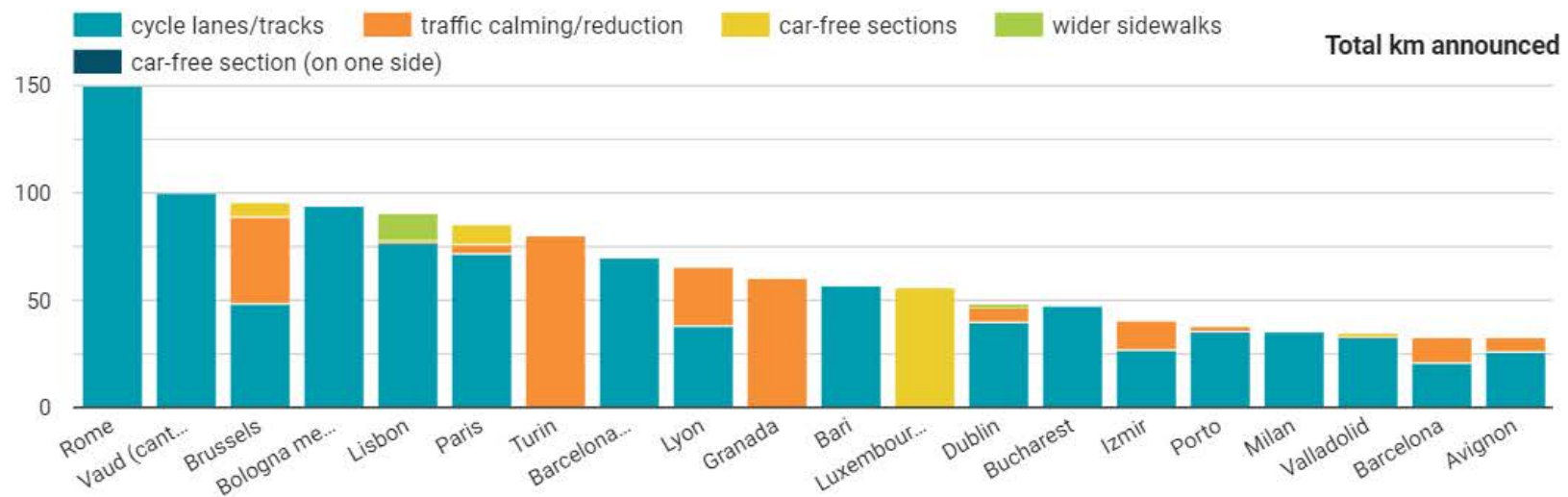


The Netherlands: Bike highways for some regions

- Since 2006, Dutch national and local governments have developed network of over 300 miles of bike highways
 - More than 30 routes
 - Often built alongside vehicular highways, railways, and canals
- Generally are protected lanes
 - Link suburbs to cities and cities to cities
 - Built wider than traditional lanes
 - Painted red so that they are clearly differentiated from roads & sidewalks
- Around $\frac{1}{4}$ of Dutch workers commute by bike, half of them cycling three miles or less each way on variety of bike routes

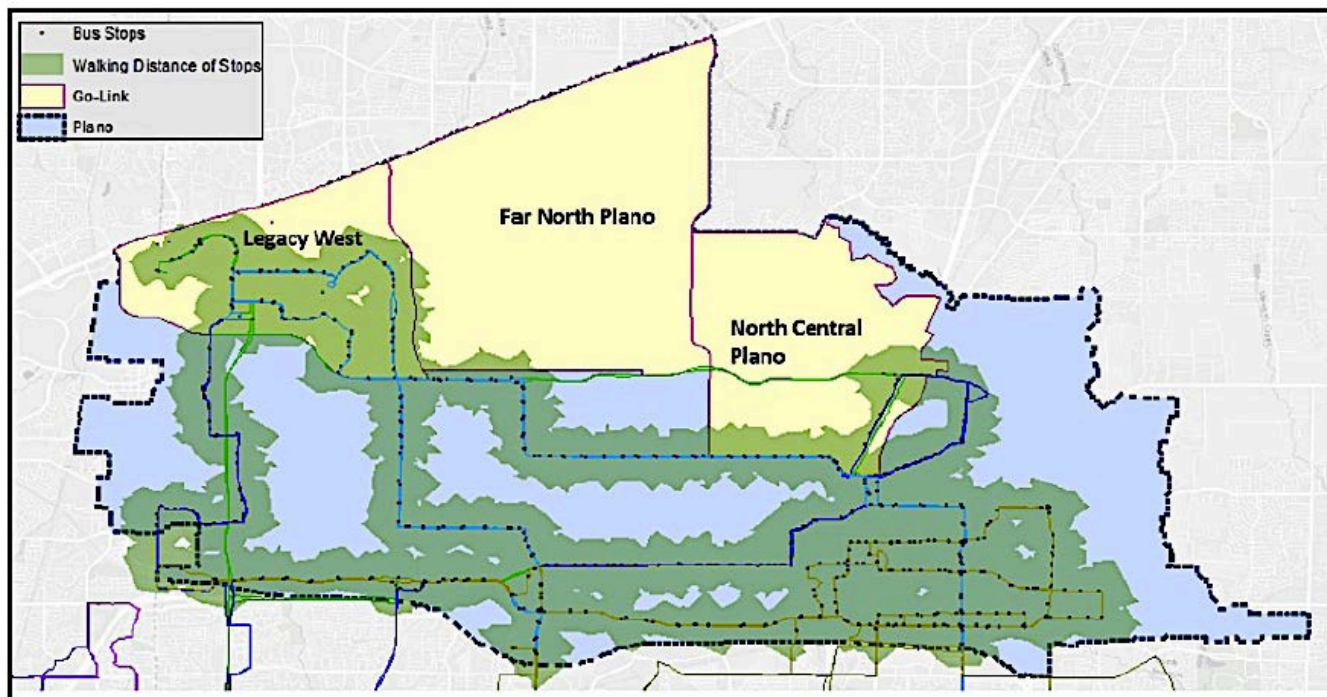


Europe-wide: Numerous cities are investing in ways to encourage modal shift



Source: European Cycling Federation

Dallas: Expand microtransit for last mile+ service



Dallas: Expand microtransit for “last mile” + service

- GoLink, demand-response service, builds upon Dallas Area Rapid Transit's (DART) on call services by providing access to/from rail/bus network
- GoLink on-demand buses carry up to 15 passengers
 - Customers can request GoLink ride via app and track location of bus, like private ride-sharing service
 - Customers without smartphones can order ride by phone booking 30 minutes in advance
- Beginning in March 2018, DART initiated GoLink
- Under FTA grant agreement, DART awarded also contract to Uber to provide UberPool service as supplement; Uber now serves 13 GoLink zones



Dallas: Microtransit provides ok response time . . .

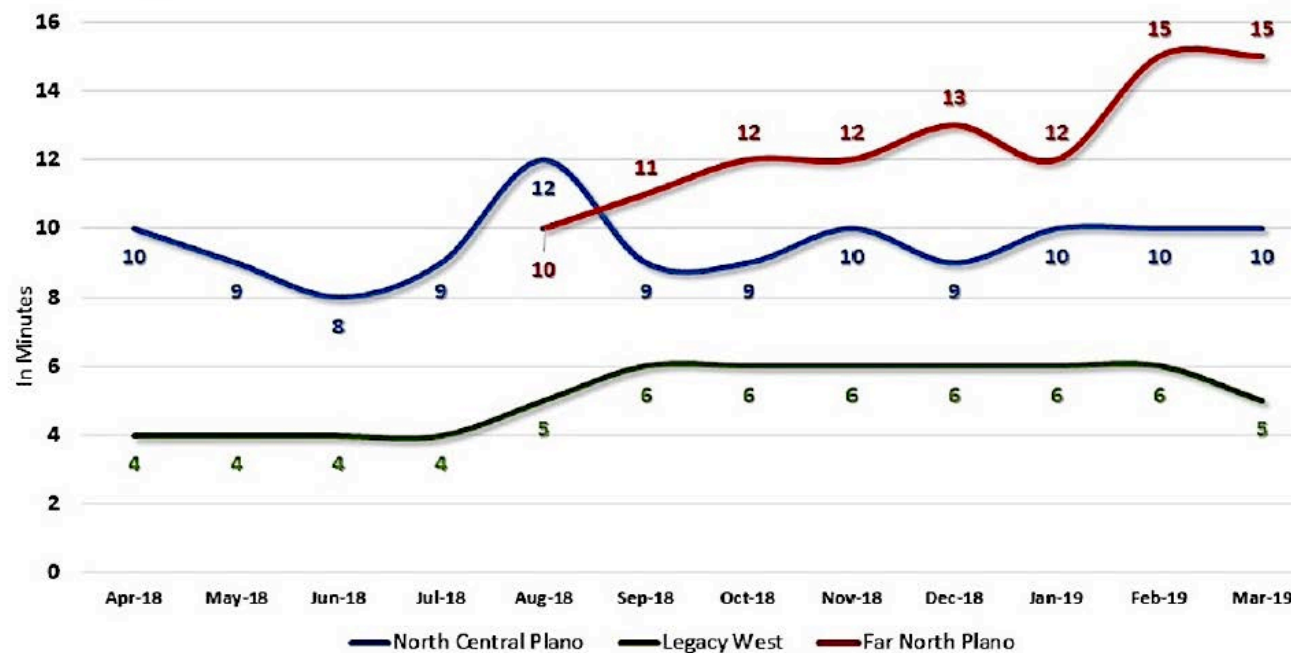


Figure 4-5

GoLink average response time for all Plano zones, April 2018–March 2019

Source: R. Parks and S. Moazzeni, "Mobility on Demand (MOD) Sandbox Demonstration: DART First and Last Mile Solution," Federal Transit Administration, April 2020

DART . . . in comparison to UberPool, also offered

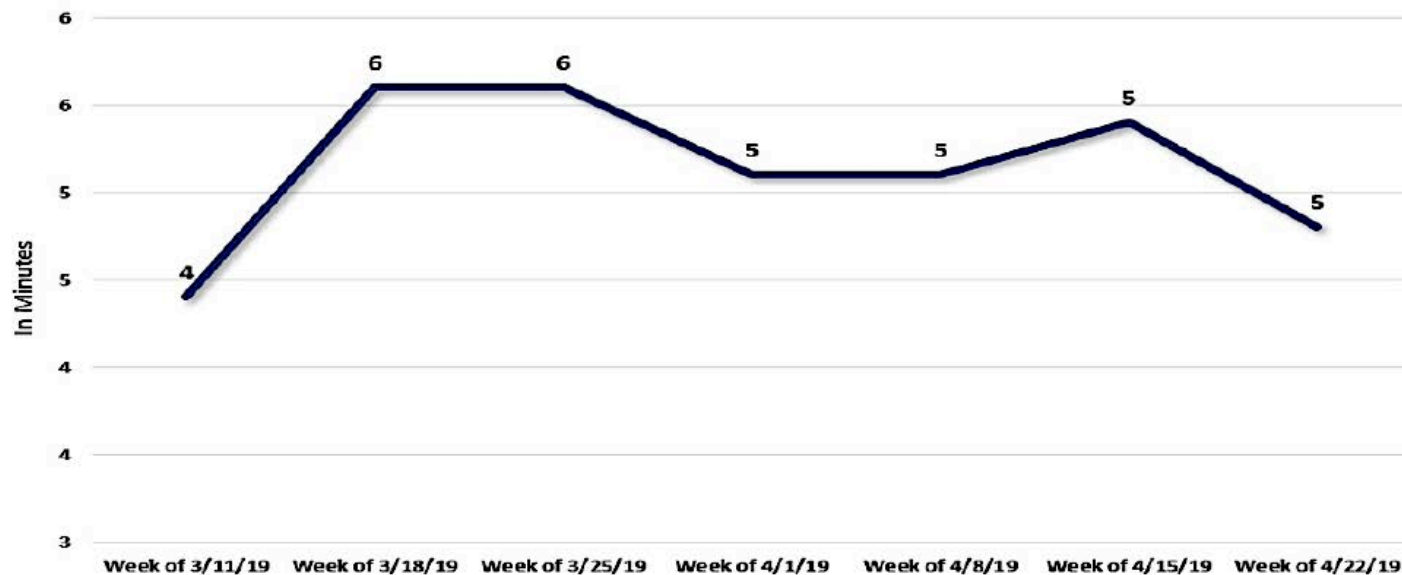


Figure 4-9

UberPool average response time for all Plano zones, March 11–April 22, 2019

Source: R. Parks and S. Moazzeni, "Mobility on Demand (MOD) Sandbox Demonstration: DART First and Last Mile Solution," Federal Transit Administration, April 2020

Dallas: Ridership substantially increases vs. fixed route

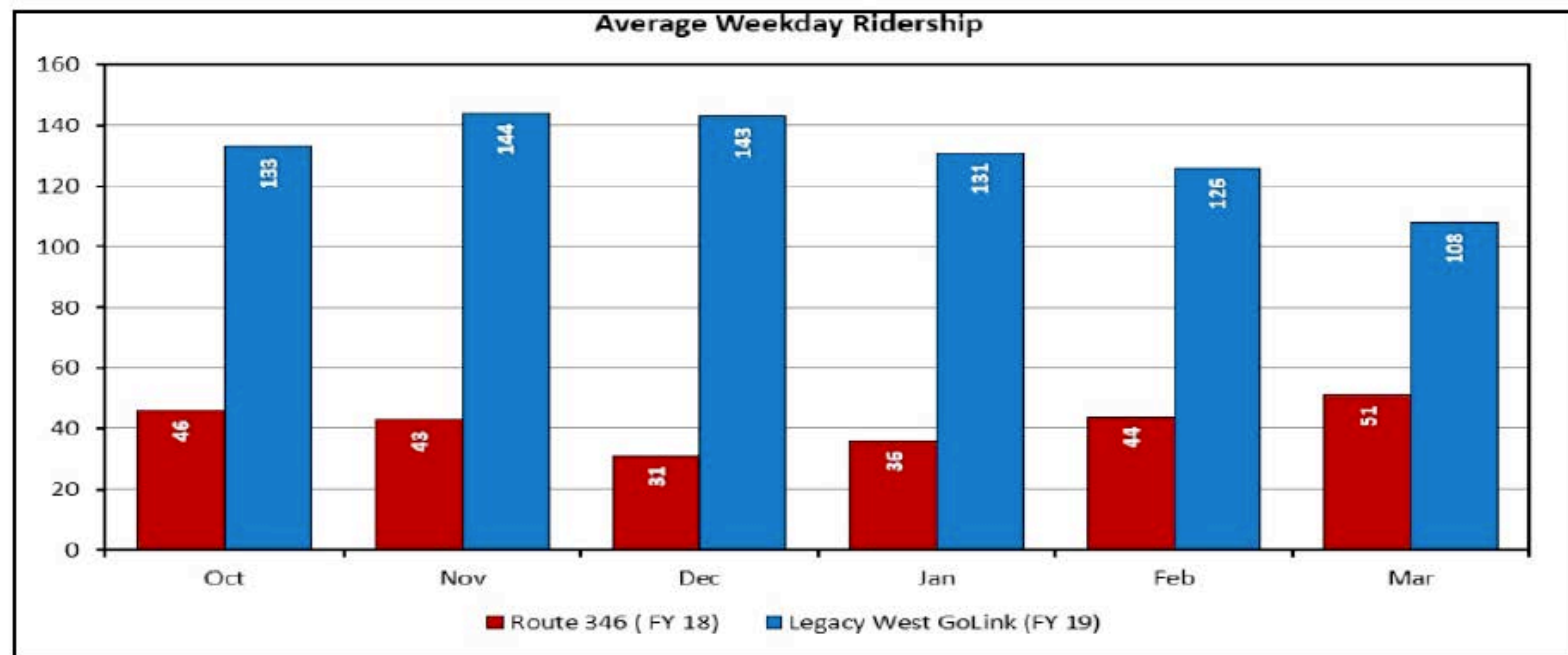


Figure 4-20

Average weekday ridership for Legacy West GoLink and Route 346, October 2018–March 2019

Source: R. Parks and S. Moazzeni, "Mobility on Demand (MOD) Sandbox Demonstration: DART First and Last Mile Solution," Federal Transit Administration, April 2020

Dallas: Subsidy per passenger down in some cases

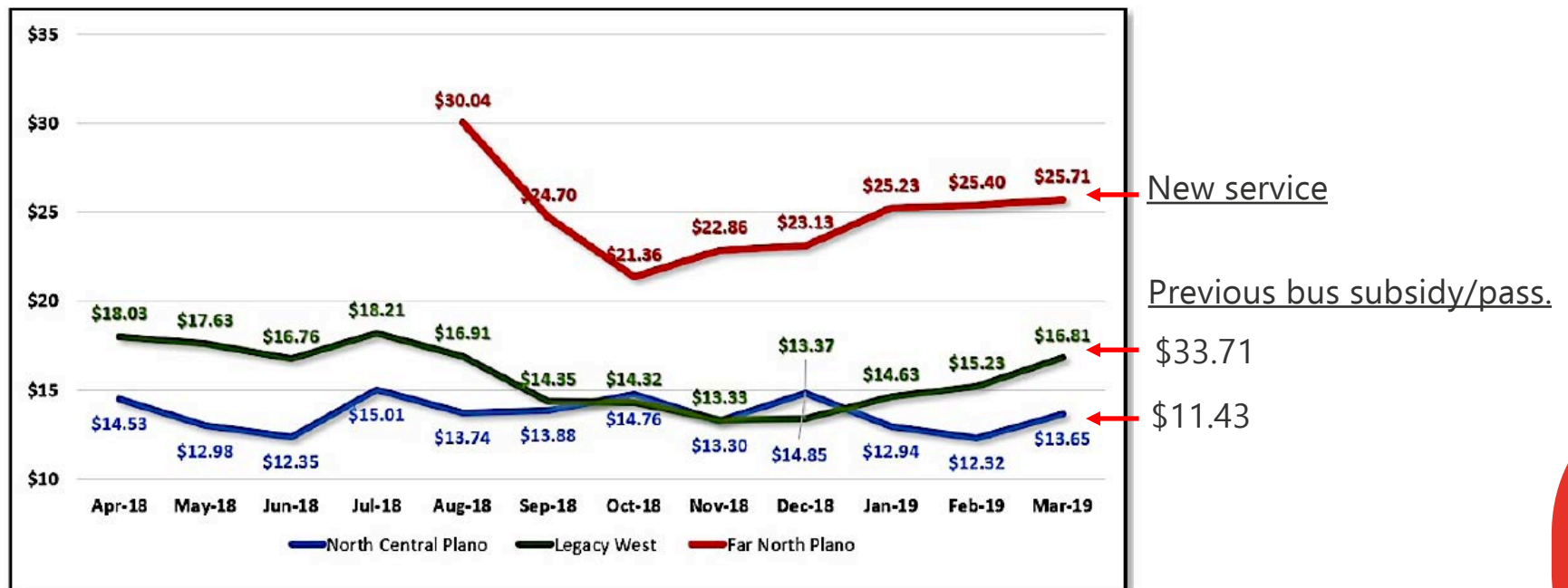


Figure 4-24

GoLink subsidy per rider for Plano zones

Source: R. Parks and S. Moazzeni, "Mobility on Demand (MOD) Sandbox Demonstration: DART First and Last Mile Solution," Federal Transit Administration, April 2020

Dallas: Riders find transit more accessible

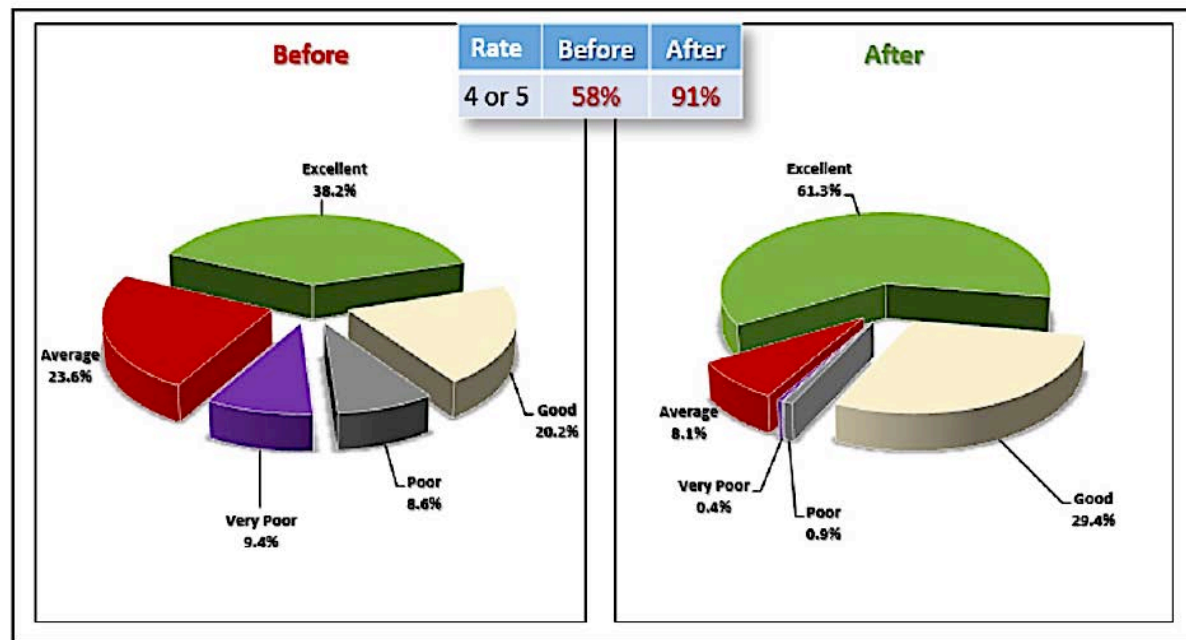
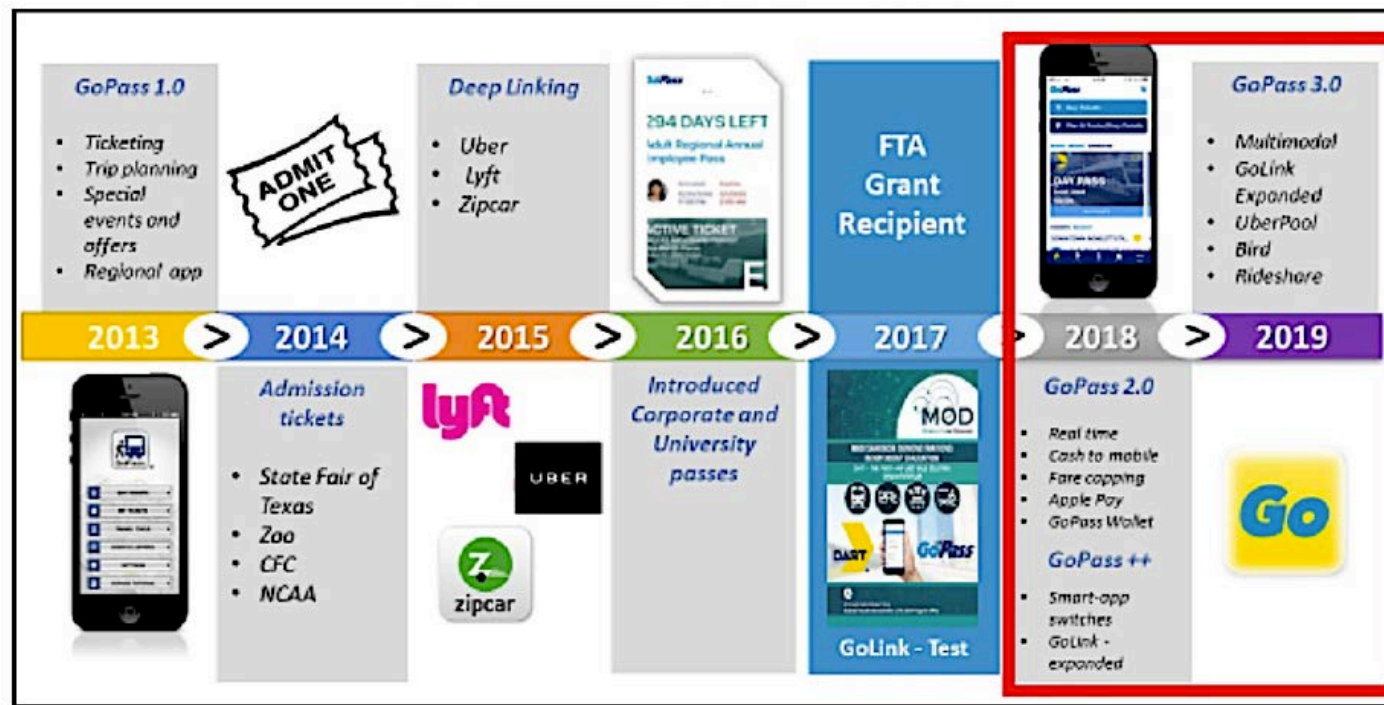


Figure 4-1

Ratings of access to DART bus stops, transit centers, and light rail stations before and after GoLink by all users

Source: R. Parks and S. Moazzeni, "Mobility on Demand (MOD) Sandbox Demonstration: DART First and Last Mile Solution," Federal Transit Administration, April 2020

Dallas: GoLink success based, in part, on GoPass app



Source: R. Parks and S. Moazzeni, "Mobility on Demand (MOD) Sandbox Demonstration: DART First and Last Mile Solution," Federal Transit Administration, April 2020

Overview

- What are transit agencies doing now to address COVID-19's impacts
- What might transit agencies do lot more after COVID-19?
- **What might transit agencies do in longer-term?**



Monterey–Salinas and CAL-ITP: Simplify and encourage cashless fare payments



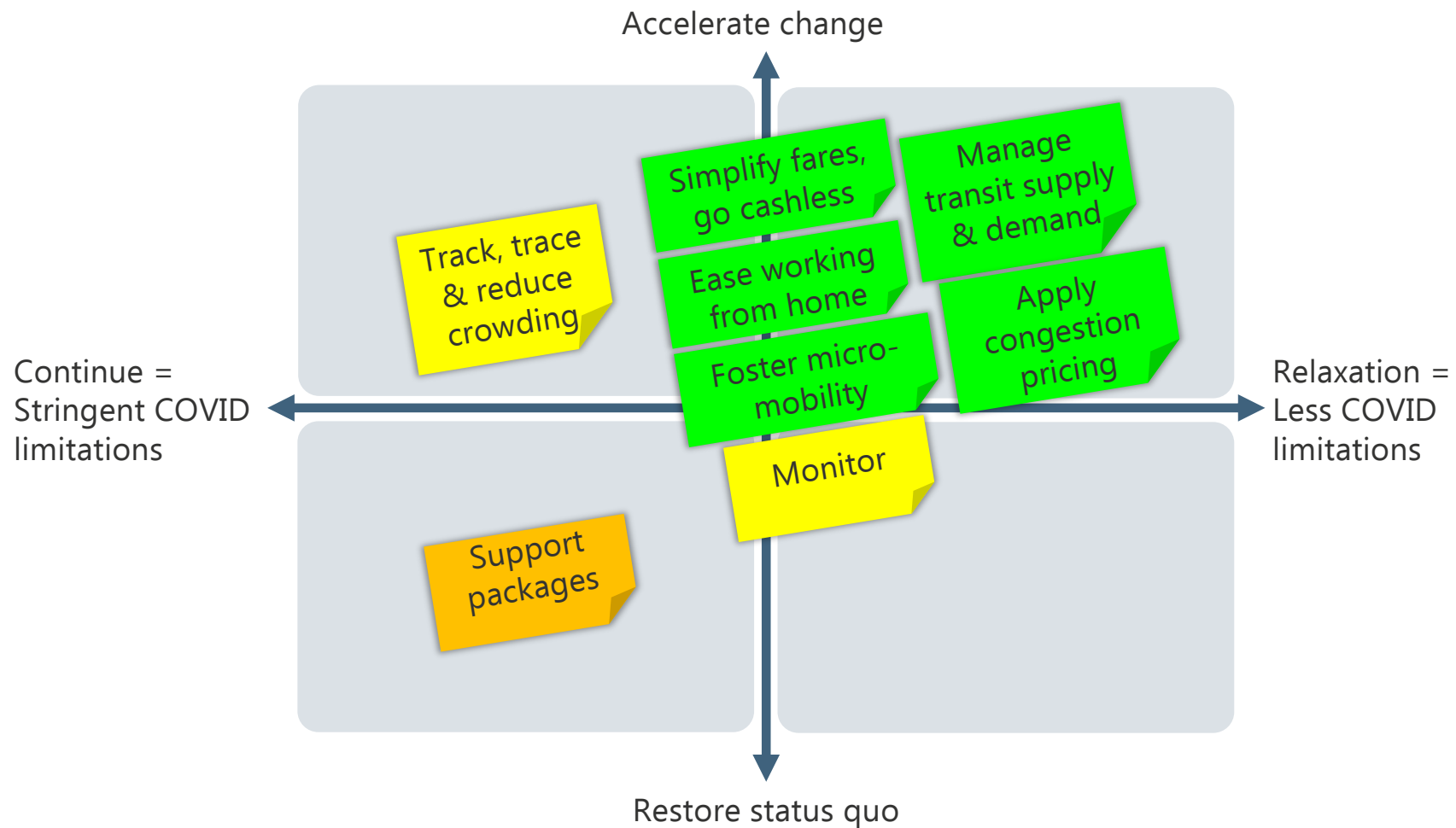
Monterey–Salinas and CAL-ITP: Simplify and encourage cashless fare payments

- California Integrated Travel Project (CAL-ITP) is state-led initiative facilitating easy and accessible travel planning and payments across California
- Cal-ITP collaborates with MST to offer seamless contactless payments system for transit in “real-life” environment. As of mid-October, travelers—both domestic and visitors—will simply tap their Visa contactless card or digital wallet to pay fares
- Goal is to offer this statewide
- Cal-ITP is currently engaging with market to identify solutions for un- and underbanked transit users

Demonstration partners:



What are lessons learned?



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