

REPORT | OCTOBER 2021

MAKING FARES WORK:

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FARE PROMOTIONS & PRODUCTS

FOR THE HYBRID COMMUTE

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ACKNOWLEDGEMENTS

Special thanks to A Better City summer intern Noah Jacobson (Williams College '22) for his research and assistance in developing the proposed ReadyPass and former MassDOT Secretary James Aloisi for his guidance and for connecting the team to topic experts, Ruben Morgan and Joshua Fairchild, Esq. Additional thanks to the following partners and team members for their guidance and thoughtful review: Jarred Johnson, Executive Director, TransitMatters; Matthew Peterson, Co-Lead, Mobility Hubs Campaign, TransitMatters; Scott Mullen, Transportation Demand Management Director, A Better City; Tom Ryan, Senior Advisor, Government Affairs, A Better City; and Isabella Gambill, Senior Policy Advisor, Energy and Environment, A Better City.

REPORT NOTE

This report looks at short- to medium-term options for innovative, transitional fare promotions and products to win back pre-COVID-19 riders and attract new riders to the MBTA by catering to emerging hybrid work schedules. The primary focus of the report is on the MBTA Commuter Rail given the significant rate of attrition that occurred during the pandemic. While this report will make the case that more affordable fare products, e.g. *ReadyPass*, could be developed that are less expensive than driving and reduce commuting costs for public transit, this report neither seeks to solve the long-term issues related to MBTA fare policy nor endorses the current Commuter Rail fare structure.

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A Better City represents a multi-sector group of nearly 130 business leaders united around a common goal: to enhance the Greater Boston region's economic health, competitiveness, equitable growth, sustainability, and quality of life for all communities. By amplifying the voice of the business community through collaboration and consensus-building, A Better City develops solutions and influences policy in three critical areas: 1. transportation and infrastructure, 2. land use and development, and 3. energy and the environment. A Better City is committed to building an equitable and inclusive future for the region that benefits and uplifts residents, workers, and businesses in Greater Boston.

EXECUTIVE SUMMARY

Massachusetts and Boston are open for business, and the Massachusetts Bay Transportation Authority (MBTA) has a critical role to play in supporting the region's economic recovery. Even with concerns about the Delta variant delaying the "Great Return," Greater Boston will see increased commuting over the next few months, and it may look different than the traditional pre-COVID-19 commute as work from home policies take root. Recent studies indicate that potentially 20% to 25 % of employees who have jobs that allow for telework may not come back five days a week.¹ If the hybrid work model takes hold, emerging work habits and commuting trends may no longer match up with the transit passes and fare products currently offered by the MBTA.

The time is now for the MBTA to continue to innovate and explore solutions that are flexible, cater to new commuting patterns, and most importantly, attract new riders and bring lapsed riders back to the MBTA. The MBTA generates enormous, quantifiable benefits to Metropolitan Boston residents and businesses through time savings, travel cost savings, vehicular crashes avoided, and reduced vehicular emissions. Recently, A Better City calculated this savings to be almost \$11.4 billion annually, with nearly two-thirds from travel time savings.²

The MBTA is also an integral and critical part of the Commonwealth's decarbonization roadmap, as the transportation sector accounts for 44% of Massachusetts greenhouse gas emissions, with 20% coming from passenger vehicles.³ The region cannot afford to go back to pre-COVID-19 traffic or worse—the Commonwealth's economic recovery and climate goals depend on a robust return to public transit. Unfortunately, roadway congestion is almost back to pre-COVID-19 levels, which leaves little room for additional cars on the road for those commuters returning to the office this fall and beyond.⁴

A Better City surveys with employees and employers suggest that how, when, and the extent to which lapsed riders come back to the MBTA and new riders are attracted to the T will depend on several factors, including the public perception of public transit safety; MBTA service levels, offerings, and fare products for hybrid commuters; and changing business commuting policies.⁵ A variety of short- and medium-term solutions, such as temporary incentives, affordable pricing, and flexible service, may be necessary to implement this year to appeal to riders in this new commuting climate.

The MBTA received more than \$2 billion in federal transit aid to buffer the significant financial impact induced by the COVID-19 pandemic. This funding will continue to support the MBTA's operating budget for the next few years, but also allows for the MBTA to have a significant financial reserve fund through FY24 as the agency recovers from the pandemic. While some traditional fare products, such as passes, offer pre-tax benefits and the possibility for employer subsidies, not all commuters have access to these and therefore are left with less cost-effective choices.

New challenges demand new strategies to support transit and commuters in search of a better way forward. Now is the time for the MBTA to build on the positive actions in place, go to the next level, and consider the following approaches to meet the short- to medium-term needs of the transit system, stay ahead of demand, respond to the "hybrid commute," and empower riders to return to the MBTA.

RECOMMENDATIONS

1. CONTINUE TO COMMUNICATE & COLLABORATE WITH EMPLOYERS & THE RIDING PUBLIC

A Better City recognizes the MBTA's proactive efforts to communicate and collaborate with employers and the riding public on the safety, benefits, and value of the MBTA through the <u>Ride Safer</u> and <u>Take the T</u> campaigns, as well as related outreach materials, including the <u>Take the T' Employer</u> and <u>Student toolkits</u>. The MBTA should continue and deepen these efforts, including by ramping up the *Take the T* outreach campaign as well as promoting, expanding, and taking over management of online resources such as the <u>A Better City Break-Even Fare Calculator</u> that underscore the value of riding the MBTA.

NOTE: Since writing, the MBTA has made progress as it relates to this recommendation, including (1) launching Phase II of the Take the T campaign, which includes billboards, gas pump commercials, Ride Safer ads, rider testimonials, and 5-day Flex Pass promotion; and (2) providing a link to the A Better City Monthly Pass Break-Even Calculator on the MBTA website with the intention of taking over management and potentially expanding the fare calculator.

2. RETAIN EXISTING FLEXIBLE FARE PRODUCTS & PILOTS

A Better City acknowledges the recent extension of the 5-day Flex Pass. The organization urges the MBTA to continue all existing fare and service options during the transition back to school and the workplace, including *Perq for Work* passes and existing Zone 1A pilots. Further, the MBTA should consider exploring the possibility of implementing additional Zone 1A pilots. Offering flexible and affordable options is vital to bringing back and retaining riders.

3. OFFER TEMPORARY PROMOTIONS TO INDUCE DEMAND & INTRODUCE NEW FARE PRODUCTS THAT CREATE PARITY & REIMAGINE COMMUTER RAIL PRICING

A Better City urges the MBTA to offer temporary promotions to attract riders back to the system, such as 50% Promo and Parking's on Us. Further, A Better City calls on the MBTA to consider additional innovative fare products for the new normal, like the discounted *ReadyPass* presented in this report. To this end, A Better City recommends that the Federal Transit Administration (FTA) work collaboratively with the MBTA and provide the Authority with the highest level of flexibility to induce demand by supporting MBTA actions to launch and run pilot fare initiatives. In addition, A Better City encourages the MBTA to extend *Perq for Work* benefits to *mTicket* users to create parity across MBTA Commuter Rail fare products, and to open a dialogue on Commuter Rail pricing.

A BETTER CITY CALLS ON THE FTA TO SUPPORT MBTA FARE PILOTS

A Better City acknowledges that as per <u>FTA regulations</u> (Title VI), long-term or permanent changes to MBTA fares (more than six months) have implications to the system and require an equity analysis. However, the FTA does make <u>exceptions during an emergency</u>, allowing for temporary fare changes that last no longer than six months. In some circumstances, temporary fare changes can be extended beyond six months without an equity analysis if a waiver is requested and granted by the regional FTA Civil Rights Officer.

SPOTLIGHT ON RECENT MBTA ACTIONS

Throughout the pandemic, the MBTA took measures to mitigate the risks of COVID-19 (cleaning and disinfecting, mask mandate, service levels, etc.) to keep the region's public transit system running. During the re-opening phases, and in anticipation of an eventual return to the workplace and in person classes for students, the MBTA gradually increased service levels and started to prepare for the new normal and an uptick in ridership. A Better City recognizes the MBTA for these efforts and stands ready to provide continued support to make public transit the preferred mobility option in the new normal. Today, the MBTA is operating at approximately 90% of pre-COVID service levels across much of the system.

5-DAY FLEX PASS

The 5-day Flex Pass is valid for 30 days and provides five 1-day passes (unlimited travel on the Commuter Rail up to designated purchased zone, no transfers) at a 10% discount to users compared to standard round-trip travel. It targets the hybrid worker coming to the office 3 days a week. The 5-day Flex Pass program was set to sunset on September 15, 2021 (90 days after the Commonwealth's State of Emergency ends) but was extended by the MBTA in August.

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THE MBTA CONTINUES TO MAKE STRIDES TOWARD:

- Bringing back service
- Responding to commuting trends in the new normal with the 5-day Flex Pass
- Disseminating information through the Ride Safer campaign; making the case for public transit through the We're *Ready; Take the T* campaigns
- Collaborating with the business community, specifically A Better City, to empower employers, employees, and students to make informed decisions about commuting in the new normal

FIGURE I: Public Transit is Essential to the Commonwealth's Economic Recovery

"What the MBTA does today to lead demand and win back, retain, and attract new riders is critical to the future of our region's economy and quality life, underpinned by our public BETTER transit system. Offering promotions and incentives, now, could be difference between a return to crippling congestion or a thriving MBTA, an agency that provides undeniable and essential benefits to the Commonwealth's economic recovery and ability to achieve the region's decarbonization goals."

RICK DIMINO. PRESIDENT & CEO. A BETTER CITY

ANTICIPATING NEW COMMUTER NEEDS

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FIGURE 2: Next Time Take the T, SOURCE: Jonathan Berk, (September 1, 2021)

WE'RE READY & TAKE THE T CAMPAIGNS

The MBTA launched the *We're Ready* campaign in July 2021, just after *Ride Safer 3.0* in June 2021. The campaign was designed to bring riders back to the system for recreational activities and to promote tourism in the region. In essence, the campaign sought to reacquaint riders with public transit, see firsthand what the MBTA is doing to make the system safe for riders, and hopefully, have a good riding experience so they want to come back when they return to work.

As students, employers, and employees map out the new normal, information on the precautions the MBTA is taking to create a safe commute, outlining the benefits of public transportation to the commuter, informing riders about fare products, and encouraging ridership return to the MBTA over driving to the office are all critical to bringing riders back to the MBTA. To target these groups, a second phase of the outreach campaign was launched, <u>Take the T</u>, this fall that pivots to workplace return, back to school, and commuting in the new normal. A Better City collaborated with the MBTA on several of the components included in the campaign, including the <u>Employer/Employee</u> and <u>Student</u> toolkits, <u>Break-Even Fare Calculator</u>, and <u>Vaccine Map</u>. It is vital that the MBTA continue to push out the messaging to bring riders back and induce demand.



FIGURE 3: Benefits of Public Transit

FARES MATTER IN THE NEW NORMAL

Pre-COVID-19, the MBTA provided an average of 1.2 million daily trips across Greater Boston. The Commuter Rail delivered an average of 130,000 daily trips.⁶ This number dropped significantly during the pandemic to 392,000 daily trips system wide and 17,000 on the Commuter Rail.⁷ It remains unclear how many riders will come back to the system in the next few months, but according to commuters, fare products and other promotions will likely play a significant role in bringing back riders, attracting new riders, and addressing equity and accessibility issues. There is greatest potential for users of the Commuter Rail, which will bring systemwide benefits of shifting commuters away from driving.

Transportation Demand Management is a collective responsibility involving employers, employees, and public transit systems. There are strategies that employers can take to incentivize public transit use, including to continue transit pass subsidies and discontinue parking subsidies for employees, amongst others. Riders also need to consider the range of impacts of their commuting decisions when they return to the workplace, e.g. financial, environmental, etc., and public transit agencies should develop schedules and fares that are fit for the hybrid and new normal commute.

Action by all parties will be integral to shaping commuting during the transition back to the workplace and beyond. And taking steps to address how to best tackle this unprecedented challenge before workplace return is anticipated to begin in earnest may be the difference between robust or anemic public transit use when employees return to the workplace. For the MBTA, this means designing and offering fare products, service levels, and schedules that are fit for the new normal.



FIGURE 4: What Riders Are Saying About Fares

INNOVATIVE SOLUTIONS THAT WORK FOR COMMUTERS & PROMOTE PUBLIC TRANSIT USE

Fares matter to MBTA riders according to recent A Better City surveys with employees and employers.⁸ The cost of commuting is a concern for lapsed and current public transit users. Creating incentives that address this issue is a great place to start to win back lapsed riders and attract new users. Communicating the value of existing fare products and creating parity across fare products is an area where action could make a difference and influence a return to public transit—for the MBTA it is low-hanging fruit and should be an easy lift that could result in a potentially significant return. In addition, transitional promotions and more affordable and flexible fare products are being tested by peer agencies and could serve as a bridge to the new normal in relation to our commuting patterns here in the Commonwealth.

PEER TRANSIT AGENCY	PROMOTION	TIMING
	• 1 month 50% off monthly pass <i>(Commuter Rail)</i>	September 2021 (1 month)
NTRANSIT The Way To Go.	• 20-Ticket (10 day) FlexPass at 20% discount (Bus, Rail, Light Rail)	Started February 2021 – Ongoing
	 Three-day Convenience Pass (24 trips) (Bus, Trolley, Subway) Individual Independence Pass 3 Pass Bundle (10 trips, each valid one day) (Regional Rail, Transit) 	Starting October 20, 2021
M metro	 30 day "Win Riders" Promotion (50% off Rail/Bus combination passes, 40% off monthly passes) (Bus, Rail) 	Started Labor Day/Fall 2021 (for 30 days)

GET ON BOARD WITH FARE PROMOTIONS

FIGURE 5: Peer Agencies Offering Fare Promotions

PRE-TAX BENEFITS & EMPLOYER SUBSIDIES CUT COSTS FOR COMMUTERS

The MBTA's traditional monthly Commuter Rail pass offered through its *Perq for Work* program comes with pre-tax benefits (employee's financial contribution is taken out of paycheck directly before income and employment taxes are taken out) to the user and, in some cases, employer subsidies. Depending on the users' tax bracket, zone, and/or employer subsidy, the monthly pass may be a legitimate and cost-effective option for commuters returning to the workplace with a hybrid commute. A Better City developed an online <u>Monthly Pass Break-Even Fare Calculator</u> so that employees can calculate the number of trips needed to recover the cost of their monthly MBTA pass.

Today, pre-tax benefits are not available to *mTicket* users or non-*Perq for Work* pass customers. Moving toward parity across MBTA products in the new normal is one way to make more affordable fares accessible to all riders regardless of payment method. The same principle also extends to product fare structures. Base prices vary on the Commuter Rail depending on how the ticket and/ or pass are procured. The cost of commuting has proven to be a decisive factor to riders choosing between returning to public transit or driving; therefore, smoothing out pricing in the short- to medium-term could make a difference and also start a longer-term dialogue about the fare structure and cost of the Commuter Rail.

A FASTER COMMUTE FOR THE SAME FARE

The time savings associated with Commuter Rail use, in particular from Zone 1A stops, feels like a well-kept secret. Getting the word out about the benefits of Zone 1A travel is relatively easy to do and could result in high returns for the MBTA. Since April 2021, when the MBTA put out its new "regional rail" like Commuter Rail schedule, with regularly scheduled service throughout the day, the significant increase in the number of trains stopping in Zone 1A stops makes taking the Commuter Rail into Boston even faster, easier, and more reliable. It also helps to reduce congestion and overcrowding on buses and subways—a "win-win" for riders, the MBTA, and the Commonwealth.

As riders contemplate a return to the workplace and school, they may be more inclined to take public transit over driving or even over another MBTA mode if they can avoid traffic and save time. For the most part, the Commuter Rail



SOURCE: MBTA

MBTA MONTHLY PASS BREAK-EVEN CALCULATOR DOES A MONTHLY MBTA PASS MAKE SENSE FOR **HYBRID COMMUTE?** TOOL BELOW WILL CALCULATE YOUR BREAKEVEN ON A MONTHLY Step 1: Select Your Zone of Travel 🕦 4 Step 2: Input Your Employer Transit Subsidy 🛈 35 % 20 40 50 60 70 80 90 Monthly Pass (Your Portion After Subsidy) \$ 182.65 Full Fare of MBTA Monthly Pass \$ 281.00 Step 3: Add-in Your Pre-Tax Benefit O 25 96 **Real Cost of Monthly Pass** \$ 136.99 BREAKEVEN POINT Number of Individual Trips Per Week 3.6

Days Per Week in Office ① **1.8** stops offers quick service—in many cases just a single stop—to North or South stations from Zone 1A stations for the same cost as a full fare subway ticket, i.e. \$2.40 one-way.

Prior to the pandemic, the MBTA launched Zone 1A service and fare pilots. These pilots expand the positive impact of local Commuter Rail use, functioning as light rail service. Exploring the potential for additional Zone 1A pilots could offer sizable cost and time savings to riders and possibly result in increased demand.

LINE	TERMINUS	ZONE IA STOP	B # OF DELTA		NOTES
FAIRMOUNT	SOUTH	FAIRMOUNT	7	8	This increase applies to all 7 stations on this line
GREENBUSH	SOUTH	JFK/UMASS			JFK net gain 59 trains/day, acts like Express Red Line
KINGSTON	SOUTH	JFK/UMASS	1	15	JFK net gain 59 trains/day, acts like Express Red Line
MIDDLEBOROUGH/ Lakeville	SOUTH	JFK/UMASS	1	23	JFK net gain 59 trains/day, acts like Express Red Line
HAVERHILL	NORTH	MALDEN	1	7	Acts as Express Orange Line
FRANKLIN	SOUTH	RUGGLES	2	11	Ruggles net gain 55 trains/day
NEEDHAM	SOUTH	RUGGLES	2	8	Ruggles net gain 55 trains/day
PROVIDENCE	SOUTH	RUGGLES	2	36	Ruggles net gain 55 trains/day

TABLE I: Increased Service at Zone 1A Stops

SOURCE: A Better City calculations based on <u>historical MBTA data</u>.

NEW, TRANSITIONAL PROMOTIONAL FARES READYPASS

A Better City applauds the MBTA's action to extend the 5-day Flex Pass to cater to the hybrid commuter in the new normal. It shows riders that the MBTA is prioritizing the needs of commuters in the process of transitioning back to the workplace and defining their own new normal. While the pass does have a break-even rate of three days, it is not cost effective for a shorter or longer work week (see Appendix), and it is also set to expire in March 2022. Further, the discount does not make the product comparable with other MBTA fare products like *Perq for Work* that offer pre-tax benefits and employer subsidies.

TABLE 2: Optimal Fare Products (By Days in Office)

	PAY AS YOU GO	READYPASS (7-day Bundle)	PERQ (Monthly*)	5-DAY FLEX PASS	MTICKET (Monthly)
I DAY					
2 DAYS					
3 DAYS					
4 DAYS					
5 DAYS					

NOTE: Compiled based on break-even calculations as shown in the Appendix.

*Assumes 30% pre-tax benefit and no employer subsidy.

To address the need for a more affordable yet flexible fare product in the short- to medium-term that creates more parity across products, offers *mTicket* riders a better option than the monthly pass, induces demand, and prevents rider attrition when users come back the system, A Better City developed a new fare product for consideration: *ReadyPass*. A Better City urges and recommends the FTA to support MBTA efforts to pursue existing and future fare pilots that induce demand.

ReadyPass is a 7-day pass, valid for 30 days after purchase, that offers daily unlimited passes at a 30% flat discount rate from one-way *mTickets*. Unused one-day passes roll over into the next month if not used, expiring 30 days after purchase. It is an innovative transitional fare product that is flexible, affordable, and commuter centered for the hybrid commuter working 2-4 days a week.⁹

ReadyPass also offers savings over driving to the office. Using the Worcester Line as a reference, the average monthly savings for commuters to ride the Commuter Rail instead of driving is between \$164.51 (without a parking subsidy) and \$79.51 (with a parking subsidy of 33%).¹⁰

If the MBTA does not provide flexible, cost-effective fare products to lapsed commuters, there is a real chance that lapsed commuters will shift to driving alone. If this happens, the MBTA is at risk of long-term revenue loss. Some projections show a 50% return to the Commuter Rail by the end of the year. If 15% of *mTicket* users decide to drive due to perceived high costs of Commuter Rail fares, the MBTA would lose \$787,892. If those same 15% purchase a *ReadyPass*, the MBTA would recuperate \$472,263 of that loss (see Appendix).

HOW READYPASS WORKS

One 7-day *ReadyPass* would cost anywhere from \$24.00 to \$130.00 depending on zone. An employee riding the Commuter Rail three times a week, would save from \$339.00 to \$1589.00 annually compared to annual cost of an *mTicket* monthly pass or \$172.00 to \$949.00 compared to the *5-day Flex Pass*.¹¹

ZONE	7 DAY Readypass	COST PER Month (3 Days/week)	MONTHLY Savings (VS. Ticket)
1A	\$24	\$47	\$33
1	\$64	\$127	\$77
2	\$69	\$137	\$85
3	\$78	\$157	\$94
4	\$86	\$172	\$100
5	\$96	\$191	\$110
6	\$103	\$206	\$124
7	\$108	\$216	\$134
8	\$120	\$240	\$138
9	\$125	\$250	\$146
10	\$130	\$260	\$156

- 30% discount from PAYG*
- Targets hybrid commuter working **2-4 days** a week
- Cheaper than driving with average savings between \$80-\$165/month
- Retains more than 900 mTicket users and recovers almost \$1 million in revenue

READYPASS PRICING FOR HYBRID COMMUTE

FIGURE 6: ReadyPass When You're Ready to Come Back

NOTE: *ReadyPass* is designed as an *mTicket* product. For the purposes of this report, the analysis on revenue implications to the MBTA only includes potential costs or ridership gain based on shift from the monthly *mTicket*.

50% PROMO

Offering a one-month 50% discount on all MBTA fares or just the MBTA Commuter Rail for one month would be a great way to say thank you and to welcome back to riders. This type of promotion would send a strong signal to riders that the MBTA is ready for commuters and is an affordable, viable new normal commuting option. BART in San Francisco is offering a similar initiative with 50% off all fares on Clipper for the entire month of September (applied to all fares including already discounted fares).¹²

Based on 2019 MBTA Commuter Rail revenue numbers, the estimated cost to the MBTA for the 50% Promo (*mTicket* and *Perq for Work* passes only) would be \$2.5 million (assuming a 50% ridership return). The estimated cost to the MBTA if applied to all Commuter Rail products, also assuming a 50% ridership return, would be \$5.2 million.

TABLE 3: 50% off Promo - Commuter Rail

COMMUTER RAIL PRODUCT	ANNUAL (2019)	MONTHLY (2019)	50% MONTHLY (2019)	50% OFF (2019)
PERQ	\$100,876,468	\$8,406,372	\$4,203,186	\$2,101,593
MTICKET	\$21,010,462	\$1,750,872	\$875,436	\$437,718
TOTAL (PERQ & MTICKET)	\$121,886,930	\$10,157,244	\$5,078,622	\$2,539,311
TOTAL ALL PRODUCTS	\$252,966,626	\$21,080,552	\$10,540,276	\$5,270,138

SOURCE: Authors' calculations using base data for 2019 MBTA Commuter Rail revenue in Morgan-Roselló, Rubén Grayson, "A Fare Approach to Attracting Transit Ridership After COVID-19", (2021), Massachusetts Institute of Technology, PhD Dissertation, 38

"PARKING'S ON US"

In addition to purchasing a monthly pass, most Commuter Rail riders also pay for parking at Commuter Rail stations. This can add anywhere from \$35.00-\$157.50 to riders monthly commuting costs. While ridership builds back up and there is still sufficient space at parking lots, consider offering three days of free parking at MBTA-operated Commuter Rail stations could help to induce demand when employees begin transitioning back to the workplace.

TABLE 4: Parking's on Us Cost to MBTA

TOTAL	TOTAL CAPACITY	30% CAPACITY	AVG. DAILY COST TO	COST TO MBTA
MBTA LOTS	(All Lots)	(All Lots)	Rider	
101	43,580	130,740	\$4.75	\$1,863,045

NOTE: See Appendix for calculations.

CONCLUSION

Massachusetts is open for business and despite some concerns and delays in plans due to the Delta variant, Greater Boston is seeing a rise in commuting this fall. Students are back to in person classes, and the "Great Return" for many employees is expected to begin earnest over the next several months. As the Commonwealth gradually transitions to the new normal, it is vital to the region's economy and environment that students and employees choose the T over driving.

A Better City surveys with employers and employees indicate that working from home is here to stay. Many employees will not come back to the office five days a week or work from 9 to 5, but rather they will adopt a hybrid work schedule that allows for flexibility both in terms of the days and time of day employees are in the physical office space. Employees, in particular Commuter Rail riders, also reported that the cost of public transit and COVID-19 safety would be top factors in whether they decide to go back to the MBTA or drive alone when they return to the office.

Listening and responding to rider feedback will be an important part of the MBTA's approach to winning back and retaining riders as well as attracting new riders. Given that safety and fares are main concerns, these are critical issues to address first. The T has maintained a clean and COVID-19 safe environment on vehicles and in stations/facilities throughout the pandemic and has an extensive public outreach campaign, *Ride Safer*, that demonstrates the mitigation and measures the T is taking. In late August, the MBTA extended the *5-day Flex Pass* launched in July 2020 in response to COVID-19 and shifting working patterns. The pass offers a 10% discount off a regular *mTicket* purchase and can serve as a bridge to new normal commuting patterns. The 5-day Flex Pass will sunset in March 2022.

A Better City recognizes and applauds the MBTA for the actions it has taken and encourages the T to go further. This report lays out recommendations to support the MBTA and position the agency for success now and in the future related to making fares work in the new normal and public outreach to employers and the riding public. The future of public transit and regional mobility will be decided by the riding public when, and if, they return in the new normal, and those decisions are being made today.

CALL TO ACTION

This report recognizes the MBTA's initiatives, it also calls on the MBTA to seize the moment and opportunity in the short- to medium-term to launch and promote transitional fare and parking promotions as well as additional flexible affordable fare options. This will provide financial incentives to riders and give the MBTA time to better understand new commuting patterns. In the longer term, there is scope to open a dialogue on the MBTA Commuter Rail fare structure to ensure access and affordability for all income levels. And beyond fares, topics that are not addressed in this report, ensuring service levels and schedules that provide the flexibility, frequency, and reliability that commuters need as they define their new commuting routines will also be essential. For today, the MBTA should build on the positive actions it put in place and go to the next level to induce demand and mitigate potential mode shift from the Commuter Rail to driving for employees returning to the office this fall and throughout the rest of the year. The FTA should support MBTA efforts to pursue innovative solutions that meet the moment and bring riders back to the region's public transit system.

APPENDIX: METHODOLOGY SECTION

READYPASS PRICING, BREAK-EVEN, COST TO MBTA, & SAVINGS VS. DRIVING

I. READYPASS PRICING METHODOLOGY

ReadyPass is a 7-day bundle fare product that offers the same unlimited ride benefits as the 5-*day Flex Pass* and the same time duration to use the pass, but is less expensive, allows for rollover, and is more attractive for the commuter working anywhere from 2 to 4 days a week. It is calculated using a flat 30% discount rate.

Column A * 14 = Column B Column B * (1 - 0.3) = Column C

TABLE 5: ReadyPass Pricing Methodology

ZONE	ONE-WAY (A)	COST OF 14 One-Way Tickets (B)	7-DAY READYPASS (C)
IA	\$2.40	\$34.00	\$24
1	\$6.50	\$91.00	\$64
2	\$7.00	\$98.00	\$69
3	\$8.00	\$112.00	\$78
4	\$8.75	\$123.00	\$86
5	\$9.75	\$137.00	\$96
6	\$10.50	\$147.00	\$103
7	\$11.00	\$154.00	\$108
8	\$12.25	\$172.00	\$120
9	\$12.75	\$179.00	\$125
10	\$13.25	\$186.00	\$130

ReadyPass would offer more affordable pricing for the hybrid commuter coming into the office 2-4 days a week. The break-even calculation for *ReadyPass* is as follows:

TABLE 6: ReadyPass Pricing & Break-Even Rate

ZONE	READYPASS (7-DAY BUNDLE)	READYPASS (Monthly Cost)*	BREAK-EVEN (DAYS/WK.)
IA	\$24.00	\$47.00	2
1	\$64.00	\$127.00	2
2	\$69.00	\$137.00	2
3	\$78.00	\$157.00	2
4	\$86.00	\$172.00	2
5	\$96.00	\$191.00	2
6	\$103.00	\$206.00	2
7	\$108.00	\$216.00	2
8	\$120.00	\$240.00	2
9	\$125.00	\$250.00	2
10	\$130.00	\$260.00	2

II. READYPASS BREAK-EVEN CALCULATION

Step 1: ReadyPass Cost * 2 = ReadyPass monthly cost

Step 2: ReadyPass monthly cost / (One-way Fare * 2) = break-even point in days/month (by zone) Step 3: (break-even point in days/month) / 4.2 = break-even point in days/week

Convert break-even point to days/week commuting with the following average rates:

A 5-day a week rider works 21.75 days/month in person on average A 4-day a week rider works 17.4 days/month in person on average A 3-day a week rider works 13.05 days/month in person on average A 2-day a week rider works 8.7 days/month in person on average A 1-day a week rider works 4.35 days/month in person on average

ZONE	ONE-WAY (FULL Fare)	PERQ (Commuter Rail Mth)	BREAK-EVEN (DAYS/WK.)	MTICKET (MTH)	BREAK-EVEN (DAYS/WK.)	5-DAY Flex Pass (MTH)	BREAK-EVEN (DAYS/WK.)	READYPASS (MTH)	BREAK-EVEN (DAYS/WK.)
A I	\$2.40	\$63.00	3	\$80.00	4	\$64.80	3	\$47.00	2-4 DAYS
1	\$6.50	\$149.80	3	\$204.00	4	\$175.50	3	\$127.00	2-4 DAYS
2	\$7.00	\$162.40	3	\$222.00	4	\$189.00	3	\$137.00	2-4 DAYS
3	\$8.00	\$182.70	3	\$251.00	4	\$216.00	3	\$157.00	2-4 DAYS
4	\$8.75	\$196.70	3	\$271.00	4	\$236.25	3	\$172.00	2-4 DAYS
5	\$9.75	\$217.70	3	\$301.00	4	\$263.25	3	\$191.00	2-4 DAYS
6	\$10.50	\$238.00	3	\$330.00	4	\$283.50	3	\$206.00	2-4 DAYS
7	\$11.00	\$252.00	3	\$350.00	4	\$297.00	3	\$216.00	2-4 DAYS
8	\$12.25	\$271.60	3	\$375.99	4	\$330.75	3	\$240.00	2-4 DAYS
9	\$12.75	\$284.30	3	\$396.00	4	\$344.25	3	\$250.00	2-4 DAYS
10	\$13.25	\$298.20	3	\$416.00	4	\$357.75	3	\$260.00	2-4 DAYS

TABLE 7: Summary Table (Break-Even Fare Products)

NOTE: For Perq, this assumes 30% pre-tax benefit and no employer transit subsidy.

III. READYPASS PILOT COST TO MBTA

To estimate the cost of *ReadyPass* to the MBTA, we used zone ridership weights and fare revenue data from FY2019 to project the Fall/Winter 2021 revenue if the *ReadyPass* product were offered by the MBTA.

Average cost of a single *ReadyPass*: \$89.36 (weighted accurately by 2019 trends) Average cost of *mTicket* monthly pass: \$285.73 (weighted accurately by 2019 trends)

FY 2019	MONTHLY Pass	ONE WAY (Monthly Cost)*	ROUND TRIP	IO RIDE	OTHER	TOTAL	PERCENT
CORPORATE Program	\$100,876,468	-	-	\$179,341	-	\$101,055,809	39.9%
FVM SALES	\$7,219,311	\$2,011,370	\$1,664,612	\$181,887	-	\$11,077,179	4.4%
KEOLIS Conductor	\$144,975	-	\$13,841,817	\$9,120	\$298,554	\$14,294,465	5.7%
KEOLIS SALES Office	\$18,483,167	\$2,749,391	\$4,386,482	\$1,274,260	-	\$26,893,300	10.6%
MTICKET	\$21,010,462	\$24,998,744	\$20,345,072	\$20,794,674	-	\$87,148,952	34.5%
OTHER	\$9,947,302	\$565,968	\$1,885,657	\$97,995	-	\$12,496,922	4.9%
TOTAL	\$151,681,684	\$30,325,473	\$42,123,639	\$22,537,277	\$298,554	\$252,966,626	100.0%

TABLE 8: FY2019 Commuter Rail Revenue

SOURCE: Authors' calculations using base data for 2019 MBTA Commuter Rail revenue in Morgan-Roselló, Rubén Grayson, "A Fare Approach to Attracting Transit Ridership After COVID-19", (2021), Massachusetts Institute of Technology, PhD Dissertation, 38.

Step 1: Estimate the approximate ridership weighting by zone on Commuter Rail.¹³ Most riders, approximately two out of every three riders, come from Zones 3-7. Apply this weighting to the average cost of an *mTicket* monthly pass as well as the average cost of a single *ReadyPass*. The weighting formula is as follows (where ZX indicates a Zone X fare):

 $(Z1A^*.024) + (avg(Z1,Z2)^*.214) + (avg(Z3,Z4,Z5,Z6,Z7)^*.667) + (avg(Z8,Z9,Z10)^*.095)$

Step 2: Take the FY2019 Commuter Rail revenue data¹⁴, and scale it to our 6-month, 50% return model, by dividing the FY2019 revenue values by 2 for the half-year scaling and by 2 for 50% ridership return.

50% RETURN REVENUE Model (6-Month)	MONTHLY Pass	ONE WAY	ROUND TRIP	IO RIDE	OTHER	TOTAL	PERCENT
CORPORATE PROGRAM	\$25,219,117	-	-	\$44,835	-	\$25,263,952	39.9%
FVM SALES	\$1,804,828	\$502,843	\$416,153	\$45,472	-	\$2,769,295	4.4%
KEOLIS Conductor	\$36,244	-	\$3,460,454	\$2,280	\$74,639	\$3,573,617	5.7%
KEOLIS SALES Office	\$4,620,792	\$687,348	\$1,096,621	\$318,565	-	\$6,723,325	10.6%
МТІСКЕТ	\$5,252,616	\$6,249,686	\$5,086,268	\$5,198,669	-	\$21,787,238	34.5%
OTHER	\$2,486,826	\$141,492	\$471,414	\$24,499	-	\$3,124,231	4.9%
TOTAL	\$39,420,421	\$7,581,368	\$10,530,910	\$5,634,319	\$74,639	\$63,241,657	100.0%
PERCENT	62.3%	12.0%	16.7%	8.9%	0.1%	100.0%	

TABLE 9: Hypothetical Q1-Q2 FY22 Revenue (50% Return)

SOURCE: Authors' calculations using base data for 2019 MBTA Commuter Rail revenue in Morgan-Roselló, Rubén Grayson, "A Fare Approach to Attracting Transit Ridership After COVID-19", (2021), Massachusetts Institute of Technology, PhD Dissertation, 38.

Step 3: Reduce the mTicket monthly revenue by 30%, indicating 30% of returning monthly pass riders being hybrid and opting out of public transit due to cost of fare products.

LOSING 30% OF Mticket (Hybrids) (6-months)	MONTHLY Pass	ONE WAY	ROUND TRIP	IO RIDE	OTHER	TOTAL
CORPORATE PROGRAM	\$25,219,117	-	-	\$44,835	-	\$25,263,952
FVM SALES	\$1,804,828	\$502,843	\$416,153	\$45,472	-	\$2,769,295
KEOLIS Conductor	\$36,244	-	\$3,460,454	\$2,280	\$74,639	\$3,573,617
KEOLIS SALES Office	\$4,620,792	\$687,348	\$1,096,621	\$318,565	-	\$6,723,325
МТІСКЕТ	\$3,676,831	\$6,249,686	\$5,086,268	\$5,198,669	-	\$20,211,453
OTHER	\$2,486,826	\$141,492	\$471,414	\$24,499	-	\$3,124,231
TOTAL	\$39,420,421	\$7,581,368	\$10,530,910	\$5,634,319	\$74,639	\$61,665,873
PERCENT	61.4%	12.3%	17.1%	9.1%	0.1%	100.0%

SOURCE: Authors' calculations using base data for 2019 MBTA Commuter Rail revenue in Morgan-Roselló, Rubén Grayson, "A Fare Approach to Attracting Transit Ridership After COVID-19", (2021), Massachusetts Institute of Technology, PhD Dissertation, 38.

Step 4: Use the 30% of removed *mTicket* monthly revenue to estimate how many riders were hybrid in the model. To do this, take the 30% value and divided it by the zone-weighted average cost of an mTicket monthly pass to get an estimate of the number of passes sold over the 6-month period. Then divide this value by 6 to get an estimate of the number of monthly riders leaving the system due to hybrid status.

> 30% of mTicket Monthly Pass revenue = \$1,575,785 Weighted average cost of an mTicket monthly pass = \$285.73 Passes sold over 6 months = \$1,575,785 / \$285.73 = 5515 Riders lost due to being hybrid = 5515 / 6 = **919**

TABLE II: Hypothetical Q1-Q2 FY 22 ReadyPass Gain

GAINING 30% BACK BUT ON READYPASS (6-MONTHS)	MONTHLY Pass	ONE WAY	ROUND TRIP	IO RIDE	READYPASS	OTHER	TOTAL	PERCENT
CORPORATE Program	\$25,219,117	-	-	\$44,835	-	-	\$25,263,952	40.4%
FVM SALES	\$1,804,828	\$502,843	\$416,153	\$45,472	-	-	\$2,769,295	4.4%
KEOLIS Conductor	\$36,244	-	\$3,460,454	\$2,280	-	\$74,639	\$3,573,617	5.7%
KEOLIS SALES Office	\$4,620,792	\$687,348	\$1,096,621	\$318,565	-	-	\$6,723,325	10.7%
MTICKET	\$3,676,831	\$6,249,686	\$5,086,268	\$5,198,669	\$944,525	-	\$21,155,978	33.8%
OTHER	\$2,486,826	\$141,492	\$471,414	\$24,499	-	-	\$3,124,231	5.0%
TOTAL	\$37,844,637	\$7,581,368	\$10,530,910	\$5,634,319	\$944,525	\$74,639	\$62,610,398	100.0%
PERCENT	60.4%	12.1%	16.8%	9.0%	2%	0.1%	100.0%	

Step 5: Multiply this estimated monthly rider value by the zone-weighted average cost of a *ReadyPass* to generate a rough estimate of the retained revenue by capturing those hybrid riders on our *ReadyPass* product for the duration of a single *ReadyPass* (compared to letting them leave the system to drive).

Riders lost due to being hybrid = 919

Weighted average cost of a single ReadyPass = \$89.36 Single ReadyPass revenue from hybrid riders = 919 * \$89.36 = \$82,121.84

Step 6. Multiply revenue estimate by 11.5 to scale back to our 6-month estimate. This is because using rollover days, a rider would need 11.5 *ReadyPasses* on average to get through 6 months (depending on the 6-month period this could be 11 or 12). This final figure demonstrates the 6-month revenue retained by offering *ReadyPass* and retaining hybrid commuters.

> One month ReadyPass revenue = \$82,121.84 Six month ReadyPass revenue = \$82,121.84 * 11.5 = \$944,525

MTICKET	HYPOTHETICAL FY2022 (QI - Q2)			
50% RETURN (NO HYBRID)	\$5,252,616			
50% HYBRID RETURN	\$3,676,831			
30% LEAVE MBTA	(\$1,575,785)			
15% LEAVE MBTA	(\$787,892)			
READYPASS	HYPOTHETICAL FY2022 (QI-Q2)			
30% PURCHASE READYPASS	\$944,525			
15% PURCHASE READYPASS	\$472,263			

IV. DRIVING VS. READYPASS¹⁵

To illustrate the cost effectiveness of the Commuter Rail vs. Driving, we used the Worcester/Framingham line as a case study. Taking the Commuter Rail is less expensive than driving for *ReadyPass* and *Perq for Work* users both without and without an employer parking subsidy. For *mTicket* monthly pass users, driving is less expensive if an employer parking subsidy is provided.

Step 1: Find the cost of parking at each Commuter Rail stop for one month of 3 days/week commuting (we took the cheapest option between a monthly pass or daily payments at each stop).¹⁶ Use Google Maps to find the mileage from each stop to South Station (on the fastest route during rush hour), which served as an estimate of the driving distance for a commuter from each stop's general surrounding area.

TABLE 13: Cost of Driving vs. ReadyPass

STATION	PARKING COST	MILES	TOTAL Driving Cost	TOTAL COMMUTER Rail Cost (readypass)	READYPASS Savings	READYPASS Savings W/ Parking Subsidy*
WORCESTER	\$153.00	46.2	\$522.59	\$393.10	\$129.49	\$44.49
GRAFTON	\$52.00	37.7	\$487.23	\$292.10	\$195.13	\$110.13
WESTBOROUGH	\$78.00	36.2	\$469.29	\$293.60	\$175.69	\$90.69
SOUTHBOROUGH	\$78.00	27.8	\$427.85	\$283.80	\$144.05	\$59.05
ASHLAND	\$52.00	27.6	\$427.02	\$257.80	\$169.22	\$84.22
FRAMINGHAM	\$52.00	21.8	\$402.89	\$243.10	\$159.79	\$74.79
WEST NATICK	\$78.00	21.6	\$395.56	\$249.50	\$146.06	\$61.06
NATICK	N/A	21.8	\$396.39	\$171.50	\$224.89	\$139.89
WELLESLEY SQUARE	\$78.00	15.7	\$364.51	\$234.80	\$129.71	\$44.71
WELLESLEY HILLS	\$78.00	14.5	\$359.52	\$234.80	\$124.72	\$39.72
WELLESLEY FARMS	\$78.00	14.1	\$357.86	\$234.80	\$123.06	\$38.06
AUBURNDALE	\$78.00	10.9	\$344.54	\$215.20	\$129.34	\$44.34
WEST NEWTON	\$52.00	9.9	\$340.38	\$189.20	\$151.18	\$66.18
NEWTONVILLE	N/A	8.3	\$333.73	\$127.40	\$206.33	\$121.33
BOSTON LANDING (NO PARKING)	N/A	5.3	\$286.15	\$47.04	\$239.11	\$121.33
LANSDOWNE (no parking)	N/A	2.7	\$266.23	\$47.04	\$219.19	\$134.19
BACK BAY (NO PARKING)	N/A	1.4	\$260.82	\$47.04	\$213.78	\$128.78

*Assumes a 33% parking subsidy

Step 2: Using these routes and the driving mileage, use a \$0.16/mile gas cost to estimate the gas cost from each stop, driving both ways for 3 days/week for a month.¹⁷ We also used these routes in combination with <u>https://turnpikeinfo.com/toll-calculator.php</u> to calculate the toll cost of driving into Boston on the Mass Pike (I-90) 3 days/week for a month. Finally, we used <u>https://spothero.com/city/monthly/boston-parking</u> for a rough estimate of the monthly parking cost in downtown Boston.

Step 3: To calculate the cost effectiveness of driving vs. the Commuter Rail, combine these data points with the fares from each zone for Perq (see Perq Real Cost Methodology), *mTicket*, and *ReadyPass* for 3 days/week for one month. We calculated driving cost as follows:

Driving Cost = Boston Parking Cost + Toll Cost + Gas Cost

And we calculated Commuter Rail cost as follows and we the calculated savings by subtracting the Commuter Rail cost from the driving cost.

Commuter Rail Cost = Fare Price (for 3 days/week for one month) + Commuter Rail Parking Cost

SOURCES

- 1. Mckinsey Global Institute (2021), <u>The Future of Work after COVID-19</u>
- 2. A Better City (2018), <u>The Transportation Dividend</u>

3. <u>https://www.mapc.org/resource-library/the-growing-carbon-footprint-of-ride-hailing-in-massachusetts/</u>

4. <u>https://www.bostonglobe.com/2021/08/12/metro/is-traffic-greater-boston-pre-pandem-ic-levels-explore-data/</u>

5. A Better City (2021), <u>Anticipating Post-Pandemic Commute Trends in Metro-Boston</u>; A Better City (2021), <u>Anticipating Post-Pandemic Return to Work Trends in Metro-Boston</u>; A Better City (2020), Anticipating Post-Pandemic Commute Trends in Metro-Boston

6. https://www.mbtabackontrack.com/performance/#/detail/ridership/2019-09-01///all

7. https://www.mbtabackontrack.com/performance/#/detail/ridership/2021-05-01////

8. A Better City (2021), <u>Anticipating Post-Pandemic Commute Trends in Metro-Boston</u>; A Better City (2021), <u>Anticipating Post-Pandemic Return to Work Trends in Metro-Boston</u>; A Better City (2020), <u>Anticipating Post-Pandemic Commute Trends in Metro-Boston</u>

9. *ReadyPass* would not be cost-effective for commuters working a 4-days a week who take the Commuter Rail on weekends.

10. See Appendix I for *ReadyPass* calculations

11. Annual *mTicket* monthly pass cost ranges from \$960.00 to \$4,992.00 depending on zone).

12. <u>https://www.masstransitmag.com/safety-security/press-release/21223005/bay-area-rapid-transit-barts-15step-plan-to-welcome-back-riders</u>

13. Morgan-Roselló, Rubén Grayson, "A Fare Approach to Attracting Transit Ridership After COVID-19", (2021), Massachusetts Institute of Technology, PhD Dissertation, p45

14. Morgan-Roselló, Rubén Grayson, "A Fare Approach to Attracting Transit Ridership After COVID-19", (2021), Massachusetts Institute of Technology, PhD Dissertation, 38

15. Note that for Boston Landing, Lansdowne, and Back Bay, the last three stops of the Inbound Worcester line route, we had the option of estimating with or without Boston average parking cost as the Commuter Rail parking cost. Since it made little sense to assume riders would pay for Boston parking and Commuter Rail fares, by far the most expensive option available, we estimated our savings under the assumption that riders boarding at these three stops would not pay for nearby parking before boarding and would use either busses or walking/biking to get to their local Commuter Rail station, thus incurring a Commuter Rail parking cost of \$0 from these three stations.

16. <u>https://www.mbta.com/schedules/CR-Worcester/</u>

17. <u>https://www.gsa.gov/travel/plan-book/transportation-airfare-pov-etc/privately-owned-vehi-</u> <u>cle-pov-mileage-reimbursement-rates</u>



MAKING FARES WORK