

Automated Fare Collection 2.0

Next Generation MBTA Fare System

Legislative Briefing

August 14, 2018

Overview

THE MBTA SEEKS BROAD PUBLIC INPUT ON THE UPCOMING UPDATE OF ITS FARE COLLECTION SYSTEM. INPUT WILL INFORM KEY FARE POLICY DECISIONS.

1. Background

2. New Fare Collection System (AFC 2.0) Overview

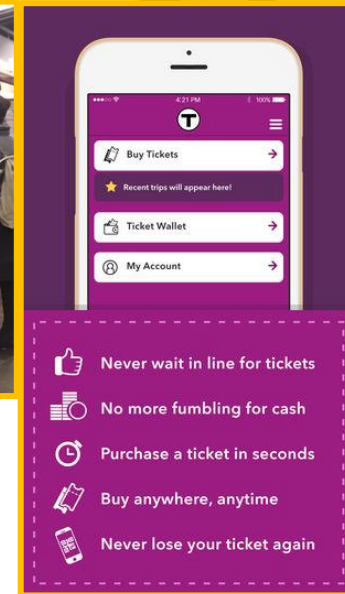
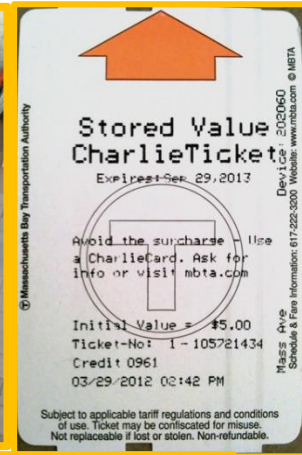
3. Upcoming Policy Considerations & Decisions

- Data Privacy
- Access to Fare Cards & Fare Sales Locations
- Fare Inspections
- Fare Structure & Products

4. Outreach Plan

5. Feedback Mechanisms

Fare collection impacts everyone



Limitations of our existing system

THE MBTA'S CURRENT FARE COLLECTION SYSTEM IS OUTDATED AND LIMITED.

The current system is
offline

The current system is
not **expandable**

The current system
has
Accessibility
constraints

There is limited
regional
integration

The system is at the
End of its life
and requires overhaul

Cash payments slow buses & Green Line

4.7%

of riders* currently
pay cash onboard

3.7%

of riders* add value
to a card onboard

**Boardings on bus, green line, and Mattapan trolley*



One-door boarding decreases efficiency



The CharlieCard has little flexibility...



CharlieCards cannot be used
on the

**Commuter
Rail or Ferry**

...and is generally unavailable.

FARE VENDING MACHINES DO NOT DISTRIBUTE CHARLIECARDS, MAKING IT DIFFICULT TO FIND ONE OUTSIDE OF THE CHARLIECARD STORE.



NO
Charlie CARDS AVAILABLE
HERE
EVER

Riders are suggesting change

WHAT IS THE PROBLEM WITH THE MBTA'S FARE COLLECTION SYSTEM TODAY?

"Make a single integrated way to pay for commuter rail, ferry, AND subway/bus."

"Make it easier to reload online...**Imagine how easy it would be if there was an app to add money to your Charlie Card.**"

"Adopt proof of payment system for commuter rail and light rail systems. It would speed boarding."

"I'd prefer not to have to pick up a new pass every month."

"Start allowing users to pay via smartphone tap."

"...make everyone use a Charlie Card rather than tickets or cash. When people get on without a card they either are let on free as it will take too long to put the money in the machine and they don't have correct change or they act like they don't understand what the driver is saying or they haven't enough on their fare ticket and the drivers let them on."

"Updating cards on buses is time-consuming and non-intuitive. Riders should be able to pay using a credit/debit card."

"No one seems to know how to get a plastic Charlie Card...**How about a vending machine that can provide the plastic card?**"

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What's AFC 2.0?

AFC 2.0 IS A NEW APPROACH TO FARE PAYMENT IN THE GREATER BOSTON AREA ALLOWING FOR ADDITIONAL FLEXIBILITY AND EFFICIENCY FOR THE MBTA AND ITS PASSENGERS.

- AFC 2.0 is the next generation **automated fare collection** system for the MBTA. It will replace the current system which was established in 2006.
- The project was approved by the MBTA's Fiscal Management and Control Board on **November 20, 2017**.
- The MBTA has engaged a vendor to implement a new system which incorporates **new payment methods, updates fare media and vending machines, and allows for new approaches to fare structures**.
- Initial deployment of the new system is slated for **May 2020**. Full implementation of the system (and retirement of the current system) is scheduled for **May 2021**.

Initial rollout includes all transit modes



What's changing from 1.0 to 2.0?

AFC 2.0 AIMS TO IMPROVE THE FARE PAYMENT PROCESS BY ALLOWING GREATER FLEXIBILITY WHILE ALSO INCREASING SIMPLICITY AND ENSURING EFFICIENCY.

AFC 1.0 – the OLD system

AFC 2.0 – the NEW system

CharlieCards, Charlie Tickets	Fare Media	Fare cards, smartphones, contactless credit cards
CharlieCards available at select stations and the CharlieCard Store	Fare Media Access	Fare cards available at all Fare Vending Machines and retail locations
Limited ability to purchase fares outside of stations	Availability Outside Stations	Greater ability to purchase fares outside stations via on-street and retail locations
Cash payments on buses and Green Line	Cash Policy	No on-board cash payments
Not used across all modes in the system	Scope	Tap on across all modes in the system
Limited flexibility to make updates or changes to fare policy	Fare Policy Flexibility	Significant, built-in, flexibility for new fare policies and products

Board at any door

All-door boarding on bus and Green Line

- Multiple readers will be installed at all doors on buses and Green Line trains
- Passengers can quickly board at any door and tap on
- Large tap area means that users don't have to be as precise with their taps

Removing cash from on-board vehicles

- Validators will replace fare boxes
- Will be installed alongside fareboxes during the transition
- Fare boxes will be removed after the transition is complete



Faster buses and Green Line trains

- Having tap areas at every door of vehicles supports all-door boarding
- Improvements to customer experience and service
- Loading passengers through all doors is expected improve bus speeds by up to 10%



Pay before you board more easily

Easier to get a fare card and add value

- Fare vending machines dispense cards
- Cards available at retail locations



Travel without a fare card

Bring your own media options:

- Contactless credit card
- Mobile devices

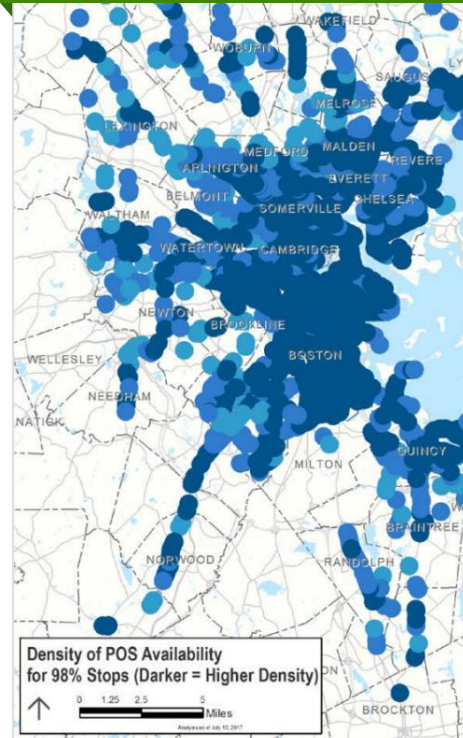
In stations



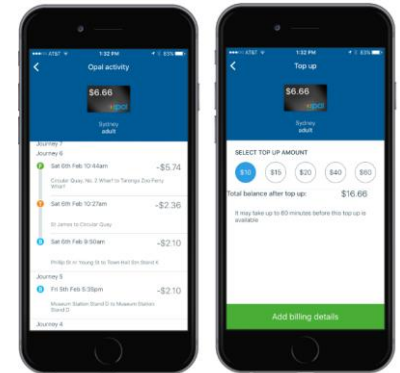
At bus stops



At more retail locations



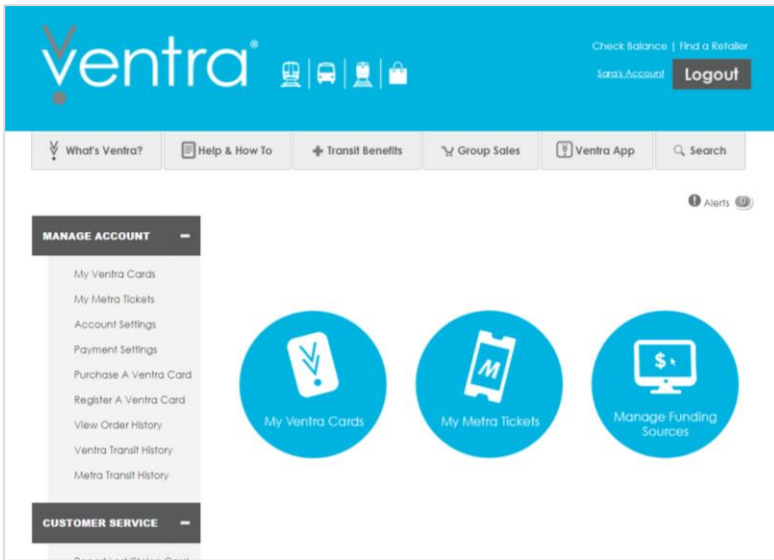
Pay with cash at all locations



Manage your account

Website, mobile app and call center services

- Check balance
- Purchase value or passes
- Set auto-recharge
- View account history
 - Travel taps and charges
 - Payments and purchases
 - Inspections
- Request a new or replacement fare card
- Register a fare card for loss protection
- Set personal preferences
 - Language
 - Accessibility
 - Alerts



Manage accounts for members of your organization

- New website for group account management
- For employers, schools and other organizations to manage transit accounts for their members
- Group administrators can manage membership and process orders in bulk
- Order custom fare cards which can double as a school or employer ID or access control card
- Group members will have self service options through the website, mobile app and call center

Tap everywhere

Initial rollout includes all transit modes



Pay on the platform

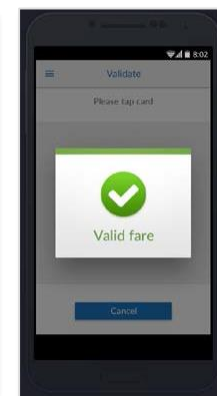
Station validators will be installed on all platforms at Commuter Rail and Mattapan Line stations

- Top up or purchase a pass before you ride
- Tap on before you board
- Use any media: fare card, mobile phone or contactless credit card



On board inspections

- Handheld devices will be used on board to check validity of fare media
- Passengers may be asked to present proof of payment



Tap off for distance-based fares



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Policies need to achieve benefits

UPCOMING POLICY DECISIONS ARE NECESSARY TO ACHIEVE THE GOALS OF AFC 2.0.

Goals

Speed up buses and Green Line trains

Make it easier to pay

More flexibility in fare options

Protect customer data privacy



System Design

- All door boarding
- No cash onboard
- Allow for negative balance

- Standards and quantities for sales locations

- Ability to implement different fare structures and products

- Technical requirements to partition customer data and travel data



Supporting Policies/Programs

- Proof of Payment inspections
- Charge for fare cards

- Access to fare cards
- Fare vending machines placement

- Process to set new fare structure and fare products

- Customer data privacy policy

Four Main Policy Areas

PUBLIC OUTREACH FOR AFC 2.0 WILL PRIMARILY FOCUS ON THESE FOUR POLICY AREAS.

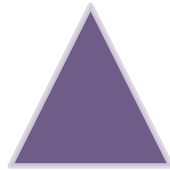
- **Policy Area 1: Data Privacy**
 - AFC 2.0 will enable an increased amount of passenger and travel data. Policy Area 1 aims to mitigate any potential data privacy issues that may arise due to this increased information.
- **Policy Area 2: Access to Fare Cards and Sales Locations**
 - A goal of AFC 2.0 is to make paying for the system easier. Policy Area 2 will consider the policy implications of removing cash onboard, including requirements for fare machines and sales locations, and charging for fare cards, including programs for cards for free.
- **Policy Area 3: Fare Inspections/Proof of Payment**
 - In order to achieve the benefit of increasing the speed of vehicles through all door boarding, fare inspection and proof of payment will be needed. Policy Area 3 will determine equitable, fair, and efficient methods for deploying a proof of payment/inspection program.
- **Policy Area 4: Fare Structure and Products**
 - The technology advancements in AFC 2.0 will allow for a broad range of fare structure changes and new fare products. Policy Area 4 will identify potential changes in the fare structure, pricing, passes, programs, and other products.

Key Policy Tradeoffs

KEY POLICY TRADEOFFS WILL GUIDE THE PUBLIC OUTREACH CONVERSATIONS

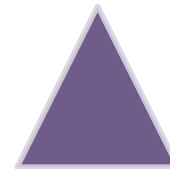
Operational
improvements to
speed up service

Fare inspections



Flexible and new
fares products

Revenue impacts
for the MBTA



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Public Input in AFC 2.0

INPUT WILL BE NEEDED THROUGHOUT TECHNOLOGY DEVELOPMENT.

AFC 2.0 Public Input Timeline



*denotes public input period

2018

2019

2020

2021

Technology Development

★ AFC 2.0 Launch

★ AFC 1.0 Retired

Data Privacy

Updated MBTA Privacy Policy

Access to Fare Cards & Sales Locations

Fare sales locations identified

Programs for free fare card distribution

Evaluate programs

Fare Inspections

Principles for fare inspections

Evaluate program

Fare Structures & Products

New fare structure and products



Outreach Principles

THESE PRINCIPLES WILL GUIDE THE PUBLIC OUTREACH PROCESS AND DECISION-MAKING FOR AFC 2.0 POLICY DECISIONS.

- **Accountable**
 - Prioritize gathering input directly from communities and people most impacted by changes
 - Gather both opportunities and concerns and attempt to solve the root causes of problems
 - Establish mechanisms to get people answers to questions that cannot immediately be answered
 - Acknowledge there can be disagreement with proposals/decisions and provide space for that dialogue
- **Accessible and Proactive**
 - Meet people where they are: go to community meetings and events, schedule events at convenient times in accessible locations, provide translation as needed, develop online tools for input
 - Allow feedback on all components of the project (and MBTA in general) at all meetings/events regardless of their focus and share that feedback with relevant MBTA departments and decision-makers
 - Actively seek out feedback from communities most impacted by decisions
 - Information in multiple languages
- **Transparent**
 - Provide clear information about the project, what decisions have been made, what decisions still need to be made, how those decisions will be made, and how and when people can provide input
 - Provide access and explain data used in decision-making
- **Iterative**
 - Provide opportunities for input at multiple stages of the policy development
 - Understand that problems identified in one policy area might be solved with solutions in a different area
 - Develop relationships with community organizations so there are channels for feedback during and after implementation

Outreach Tactics

THE OUTREACH FOR AFC 2.0 WILL USE A VARIETY OF TOOLS AND TACTICS TO FIT ALL COMMUNITIES AND POLICY AREAS.

- Multiple stages of input:
 - Education and listening to concerns/opportunities,
 - Brainstorming solutions to main concerns, feedback on proposals
 - Presenting proposed outcomes before final decisions
- Types of outreach activities
 - Focus groups with impacted communities facilitated by/with community partners
 - Shadowing customers to identify key issues
 - Open discussion sessions with experts in each area
 - Attendance at community meetings and events, coordination with other MBTA outreach
 - Online tools
 - Standard public meetings and public hearings
 - Workshops with stakeholder groups on proposed options or policy tradeoffs
 - Briefings for elected officials
- Iterative feedback mechanisms
 - Build relationships with community organizations
 - Establish regular update and input meetings on these policy components of AFC 2.0

Ongoing Outreach Meetings

REGULAR UPDATES AND INPUT SESSIONS

Policy Development Working Group (quarterly, beginning in August 2018, during the business day)

- Open to all stakeholders, MBTA will invite traditional transit advocates. The Working Group will:
 - 1) Identify specific user communities or organizations for future engagement
 - 2) Brainstorm solutions to identified policy issues
 - 3) Provide feedback on MBTA proposed policies

Public Advisory Meetings (quarterly, beginning September 2018, rotating locations, evenings)

- Will be an opportunity to share and discuss policy and technology updates regarding AFC 2.0