



Transportation Accessibility Advisory Committee

Fare Collection

2017

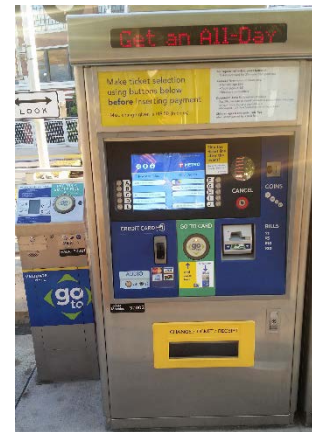
Purpose

- Review Fare Collection system accessibility for Bus Rapid Transit
 - Fare Collection overview
 - Rail
 - Bus
 - BRT
 - BRT Fare Collection system
 - Procurement
 - Installation
 - Accessibility



Fare Collection Light Rail

- Review current Fare Collection Operations at Metro Transit
 - Rail
 - LRT/ Commuter Rail
 - Ticket Vending Machines
 - » Cash
 - » Tokens
 - » Change
 - » Reload Smart Cards
 - Smart Card Validators
 - » Validate Smart Cards
 - » Entrance to each rail platform



Fare Collection Bus

- Bus
 - Fixed Route
 - Fareboxes
 - » Cash
 - » Token/Coupon
 - » Issues Transfers
 - Smart Card Validator
 - » Validates GoTo cards and customer contactless passes



Fare Collection Bus Rapids Transit

- Off Board Fare Payment
 - Ticket Vending Machines
 - Small Footprint
 - Two per Platform
 - Exact Change Only
 - Issues “Flash Pass” tickets
 - Cash
 - Credit
 - Tokens/Coupons
 - Smart Card Validator
 - Validates cards
 - One per platform



Procurement

- Requirements

- TVM

- Cash/Credit
- Token/ Coupon
- Exact change only
- Small footprint
- Affordable (*Less than \$15,000 each*)
- Adaptable for future BRT lines (*up to 400 additional TVMs needed*)
- Programmable for all current/future fare products
- Back office/report/reconciliation
- Meets/exceeds ADA standards



Procurement

- Information Gathering
 - Request for Information (RFI)
 - Response from Parkeon
 - Fact Gathering
 - Seattle, Swift BRT
 - Site visit/demonstration
 - Parkeon TVMs
 - Houston LRT
 - Site Visit/Demonstration
 - Parkeon TVMs



Request for Proposal

- Selection Panel
 - Dennis Dworshak – Project Manager
 - Charles Carlson- Senior Manager, Transitway Development
 - Mary Capistrant – Supervisor Revenue Operations
 - Josh Alswager - Systems Engineer 2 – IS
 - Rich Moore – Revenue Balancing/Ridership
- Three responses to RFP
 - Parkeon \$11,750 per TVM
 - VenTek \$8,596 per TVM
 - Genfare \$46,840 per TVM

Selection

- Demonstrations
 - Parkeon
 - VenTek
- Selection Committee reviews
 - Parkeon Selected
 - Oversight by Procurement specialist Auburn Dees

Why not Cubic TVMs



Cubic

VS



Parkeon

Why not Cubic TVMs?

- Small footprint
 - Stations are smaller than rail stations
- Servicing
 - Up to 400 machines
 - Servicing costs unaffordable
 - Maintenance
 - Cash Collection
- Cost
 - Parkeon \$11,750 each (82 TVMs - \$963,500)
 - Cubic \$86,000 each (82 TVMs -\$7,052,000)

A-Line vs Light Rail

- Each TVM
 - 50 transactions week **A-Line**
 - 580 transactions week **Blue Line**
- A-line - Monthly
 - 31,500 validator tags per month
 - 9,000 TVM transactions per month



TVM Accessibility

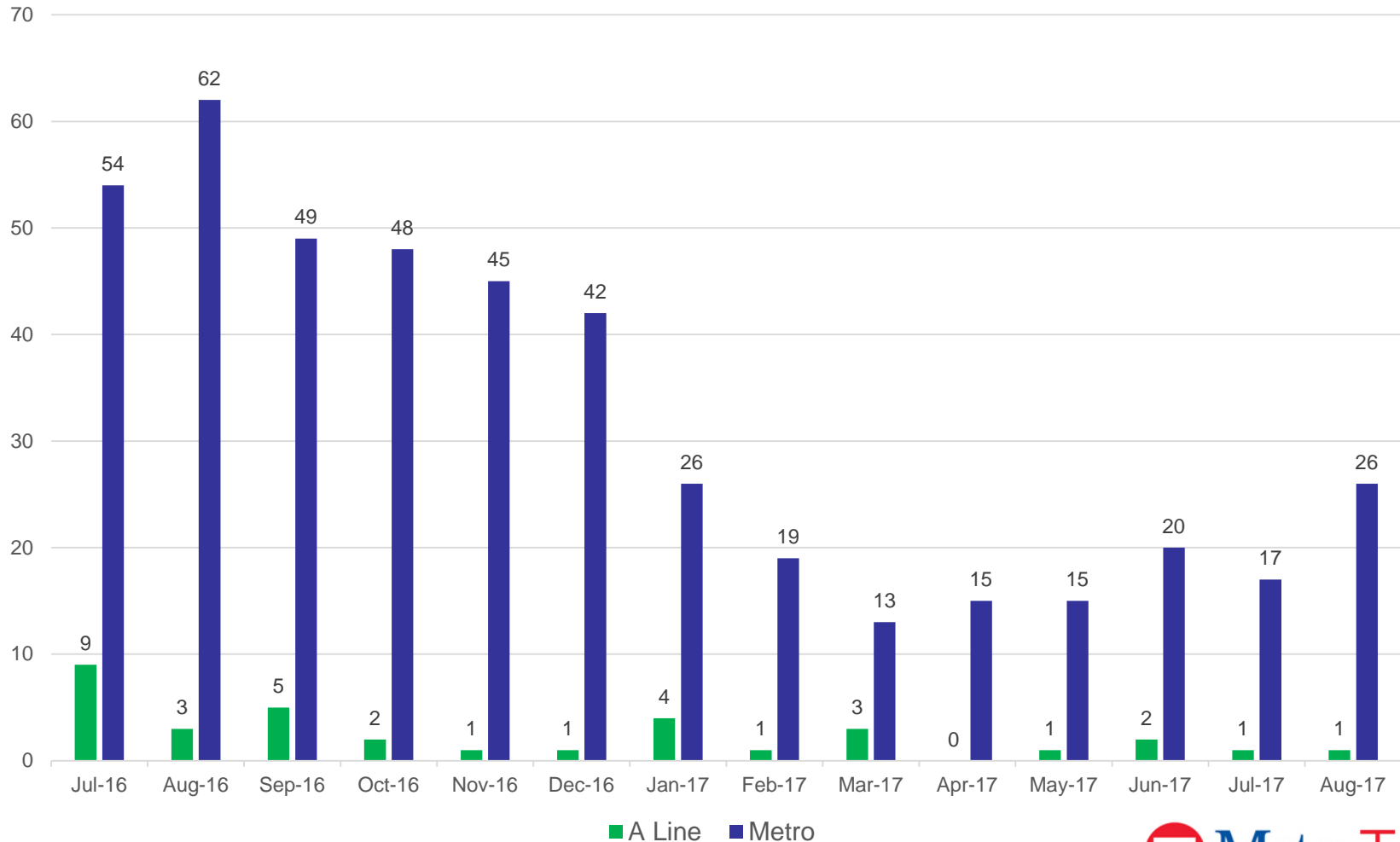
- Customer complaints June 2016-August 2017

Over 4.5 million transactions (Rail/A-Line)

1. Light Rail Validator screens foggy for visually impaired person
Action- Campaign to clear/replace all faded RSV screens
2. Light Rail TVM screen difficult to read visually impaired
 1. Inspected/replaced all out screens



Monthly TVM Customer Contacts Fare Collection Issues



A-Line Accessibility Issue Identified

- A blind customer/advocate contacted Metro Transit
 - Described concerns with A-Line TVMs
 - Action Taken
 - Met with customer, discussed accessibility issues
 - Invited students and instructors of Blind School (Blind Inc)
 - Discussion/ demonstration of all Fare Collection equipment
 - Identified strengths and areas for improvement

A-Line TVM Accessibility

- Improvements completed
 - Shorter transaction time
 - Smoother screen flow with fewer screens per transaction
 - Shorter TVM start-up time
 - Raised lettering, symbols
 - Improved volume
 - Modified headset input jack
 - Accepts both standard headset jacks



A-Line TVM Accessibility

- Ongoing modifications
 - New new key pad
 - Reduce sensitivity
 - Advocate / students agree extreme sensitivity of key pad buttons poses challenge to blind customers- especially first time users
 - New pad reduces sensitivity
 - Advocate is assisting with pilo
 - Modifying language on screens for clearer messaging - (TTS – Text to Speech software)



Next Steps

- Complete field testing of new key pads/software
- Install new keypads/software on A-Line TVMs
- New TVMs purchased will include the modifications and updates



Questions

Comments