



New Electronic Payments Program – NEPP

November 18, 2014

**MONTGOMERY COUNTY BUS RAPID TRANSIT  
STEERING COMMITTEE**



# Agenda

- Definition / Scope
- Purpose
- Timing
- Features
  - Account-based architecture
  - Hardware (Central System, Bus, Parking, Rail)
  - Retail sales channels

# Problem Definition

- Aging equipment and infrastructure
  - Reliability impacting customers
  - Customers want simple, easy payment options
  - Challenge to maintain State of Good Repair
- Strained capability for expansion and innovation
  - Adding fare products or changing fare structure is complex
- Proprietary legacy technology
  - Changes are expensive with long timelines
  - Obsolete hardware components

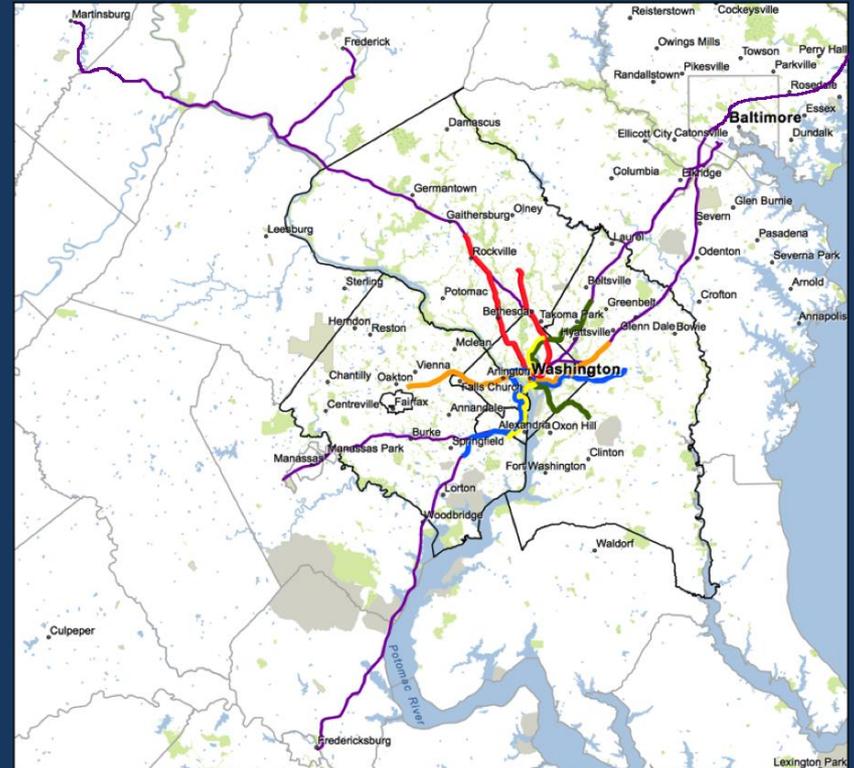


- Complete replacement of existing fare collection system
  - New gates, ticket vending machines
  - New central data system; hardware and software
  - New contactless readers on bus, rail, parking
  - Updated website and customer interfaces for new system
  - Fully contactless system



# Regional Partners

- Alexandria Transit DASH
- Arlington Transit ART
- DC Department of Transportation
- Fairfax City CUE
- Fairfax County Connector
- Loudoun County Transit
- Maryland Transit Administration
- Montgomery County RideOn
- Potomac & Rappahannock Transportation Commission
- Prince Georges County The Bus
- Virginia Railway Express

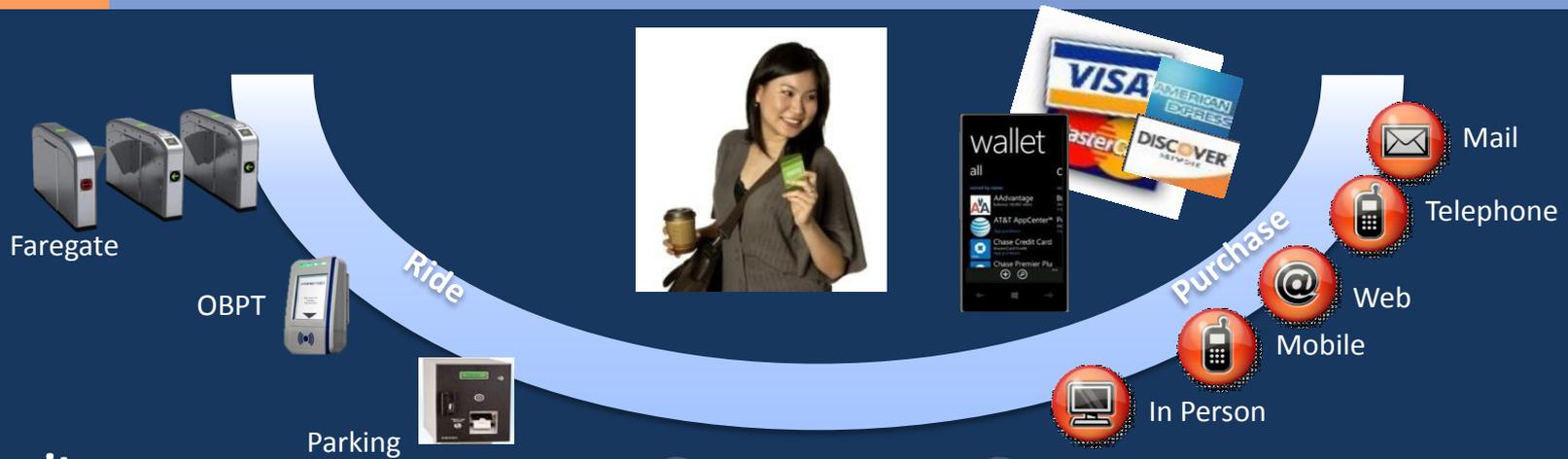


# NEPP Solution

- Regional electronic fare collection system
- Multi-phase approach beginning with Pilot program
- Reconciliation / settlement of electronic fare products
- Provide customer services for purchasing and using electronic transportation and transit products
- Provide operator benefits, including fare collection, revenue and ridership information



# NEPP Solution



## Transit Agencies

- ▲ Transit Services
- ▲ Manage Field Equipment
- ▲ Distribute and load fare media
- ▲ Manage schedules and fare rules



Use

## Central Data System

- ▲ Farecard Management
- ▲ Fare / Topology Mgmt
- ▲ Clearing and Settlement
- ▲ System Supervision
- ▲ Receive reporting

Use

## Back Office

- ▲ Technical Support
- ▲ Customer support
- ▲ System monitoring and maintenance
- ▲ Finance Management



## Financial Institutions



# Benefits of NEPP

- Improve fare system reliability
  - New hardware and software
- Reduce the cost of processing transactions
  - Adopt an open architecture retail sales model
  - Leverage standards and technologies introduced in wireless and payment cards
- Enhance customer experience
  - Simplify the user interface
  - More payment options
  - Easy for commuters and tourists

# Customer Benefits

- Tourists



- Tap & pay with contactless bank card or NFC phone
- Avoid the ticket vending machine altogether

- Government Employees



- Use government issued PIV/CAC card
- Securely use transit benefits

- Commuters

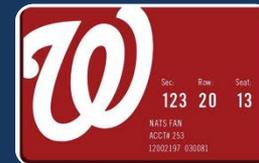


- Use SmarTrip, contactless bank card, or NFC phone
- New opt-in third-party loyalty / affinity programs

- Occasional riders



- Use any contactless bank card or NFC phone
- Link to a contactless season ticket card
  - “Nat’s Ultimate Ballpark Access Card”



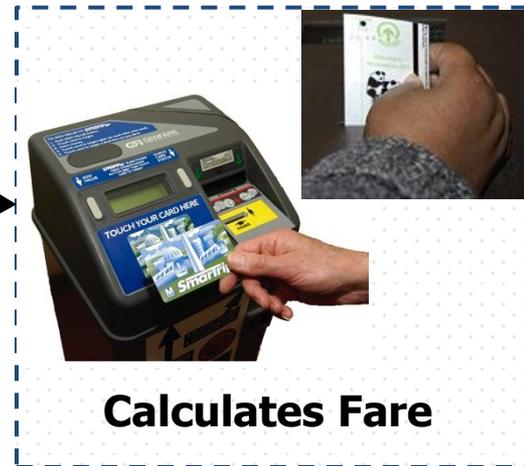
# Legacy Payment System

## Stored Account Value Fare Media

### SmarTrip and Paper Fare Cards

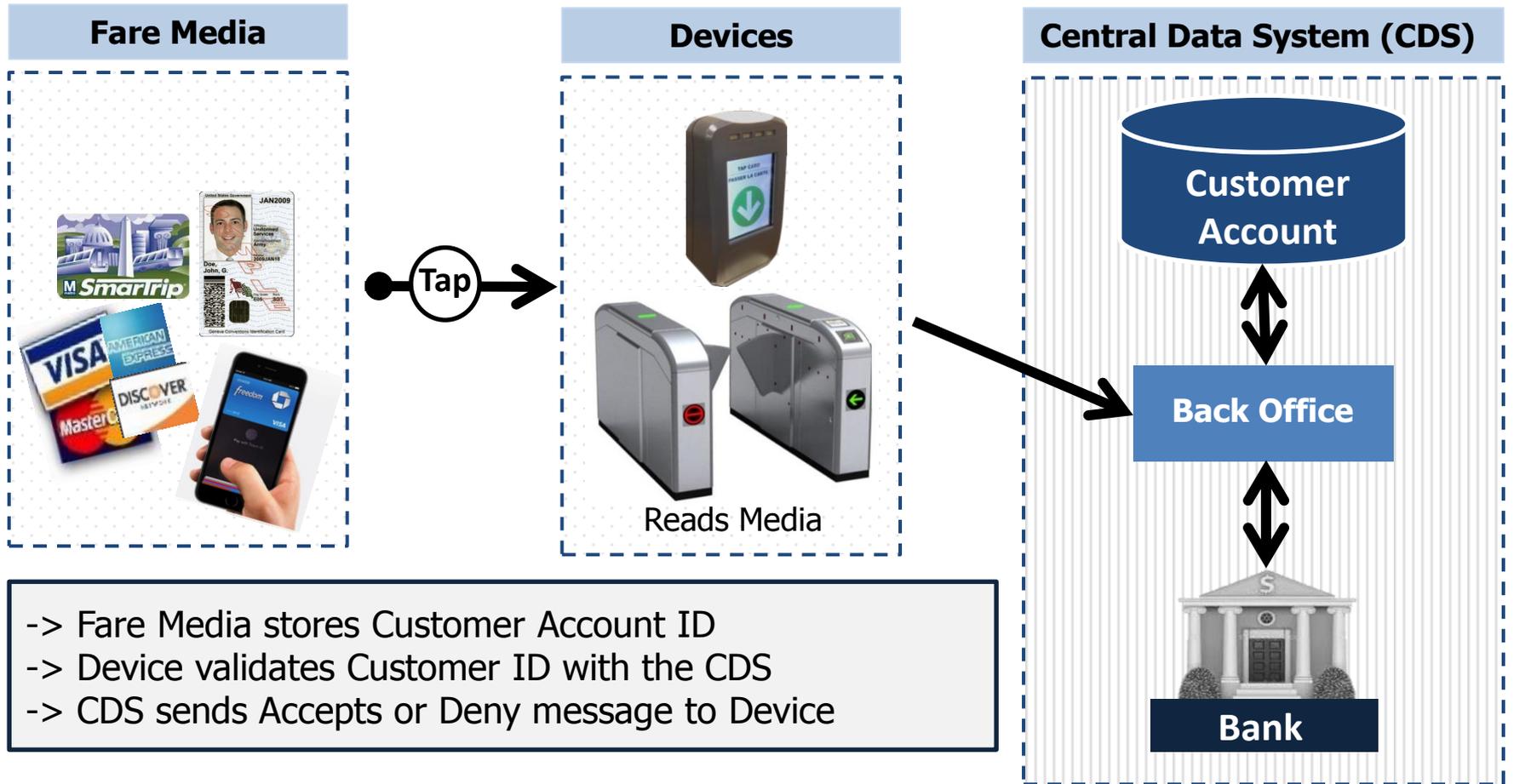


### Legacy Device

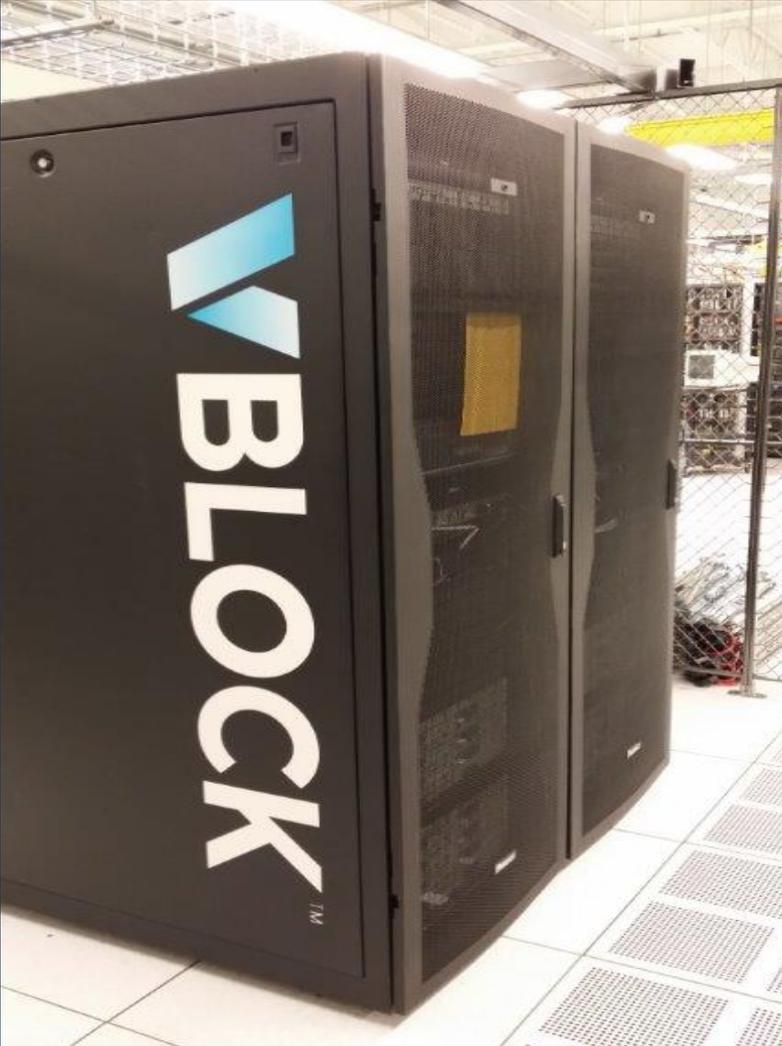


- > SmartTrip and Paper Fare Cards physically store value on the card
- > Legacy devices calculate and deduct fare from the SmartTrip or Paper Card
- > This approach limits Customers Fare Media Options

# New Metro Payment System

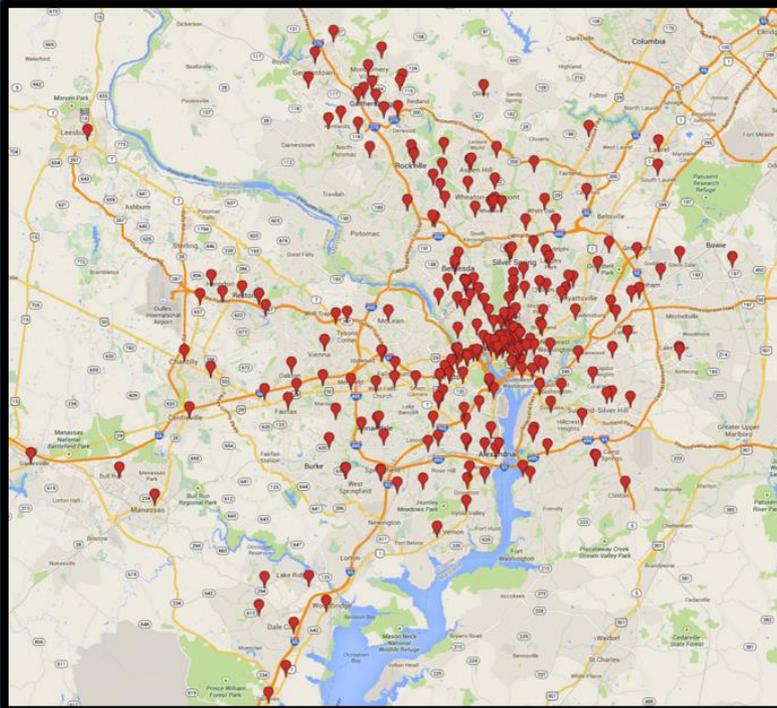


# NEPP Central Data System

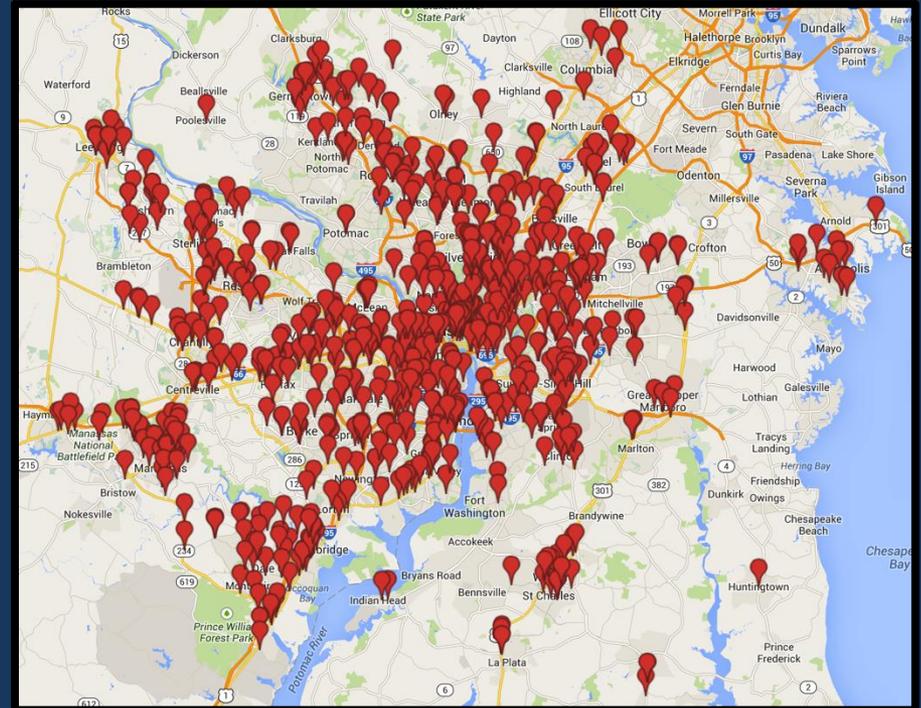


- Application build
- Network development
- Connectivity tests
- Device/System testing
- Integration testing

## Existing



## Future



Locations where customers can purchase fare media and add value.



# NEPP Fare Gates





# NEPP Bus On-Board Device





# Project Timetable

