

The Impact of Implementing a Contactless Smart Card System on Miami-Dade Transit and its Customers

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CUTR Webcast • May 1, 2014

Center for Urban Transportation Research | University of South Florida

Project Overview

“Ridership Impacts of South Florida’s Easy Smart Card”

Sponsored by the National Center for Transit Research with funding provided by the Florida Department of Transportation



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Project Overview

The Legislature recognizes the importance of encouraging the seamless use of local and regional public transportation systems by residents of and visitors to the state wherever possible. The paramount concern is to encourage the implementation of fare collection systems that are interoperable and compatible with multiple public transportation systems throughout the state. § 341.3025, Fla. Stat.

This project would not have been possible without the full cooperation of Miami –Dade transit staff. Thank you for your efforts!



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Project Objectives

- Identify fare policy choices made in conjunction with deployment
- Identify card distribution practices at sales outlets and via the internet
- Examine the degree to which employers or institutions are participating
- Analyze data on fare policy and pricing
- Examine sales, revenue and consumption
- Summarize lessons learned



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Questions to be Addressed

- Which customers are switching from traditional fare media to EASY Cards?
- What is the growth rate of EASY Card use?
- Which fare categories are most impacted by EASY Card?
- Which modes are configured to accept EASY Cards?
- Which modes are experiencing the greatest utilization?
- What are the purchasing trends with cash versus other fare media?



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System Overview “The Who”



- Metrobus - Approximately 90 fixed-routes
- Metrorail – 22.6 mile elevated heavy rail
- Metromover – 4.4 mile elevated people mover
- Special Transportation Services (Paratransit) – Fleet of 799 vehicles as of 2009



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System Overview "The Why"

- Replace antiquated fare collection system with more reliable technology
- Facilitate seamless travel
- Streamline fare policies and media
- Enhance bus boarding speed
- Reduce fare evasion and cash handling



System Overview "The What" Contactless Smart Card System and Regional Fare Vending and Collection System



Plastic card with microchip

Recognizes fare class and fare category

Can be loaded with up to \$150 in stored value

Auto reload

Balance protection



Paper card with microchip

Stores 1 and 7 day passes

Can be loaded with \$40 stored value



System Overview "The What"

- Metrobus Farebox
- Metrorail Faregate
- Ticket Vending Machines
- Ticket Office Machines
- Retail Point of Sale



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EASY Card System Rollout

- Outreach began in 2008 for 2009 introduction
- Advertisements on buses, trains, stations
- Produced in English, Spanish and Creole
- Mock vending machines at stations and terminals
- Television and radio
- 500,000 free introductory EASY Cards
- 24/7 customer assistance at stations for 16 weeks following implementation
- Commitment, Commitment, Commitment!!



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Highlights of Fare Policy Changes and Incentives

- Metrorail customers required to switch to Easy Card/Easy Ticket
- Metrobus customers transfer for free from bus to bus if using Easy Card/Easy Ticket
- Cash paying Metrobus customers must pay \$2.00 each time they board
- Free Fare Categories: Golden Passport, Patriot Passport, and Annual Social Security Benefit also require an Easy Card/Easy Ticket for boarding



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Sales and Transactions

- Ticket Vending Machines (TVMs)
- Ticket Office Machines
- Sales via the internet
- Ticket outlets



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Ticket Vending Machines

- 62 full service TVMs
- 34 cashless TVMs
- Located at all 23 Metrorail stations and 3 other locations
- TVMs are by far the most popular and most utilized
- Total sales of \$84.82 million over three years



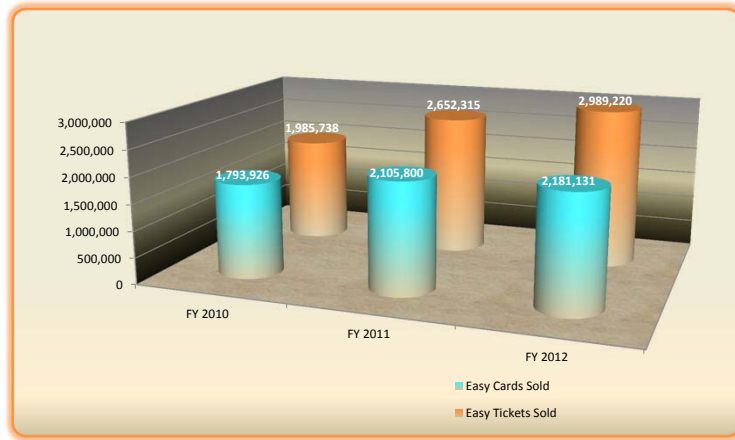
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Annual Ticket Vending Machines (TVM) Sales (FY 2010 - FY 2012)

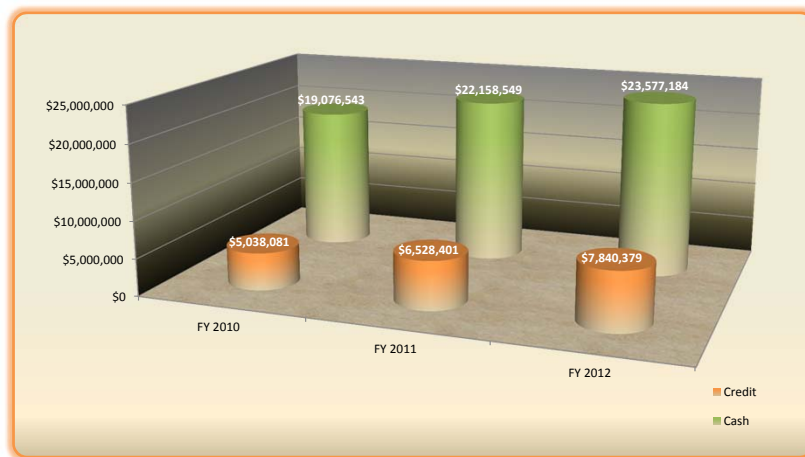


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Annual Ticket Vending Machines (TVM) Sales Broken Down by Transactions for EASY Cards vs. EASY Tickets (FY 2010 - FY 2012)



Annual TVM Sales by Form of Payment (FY 2010- FY 2012)



Ticket Office Machines

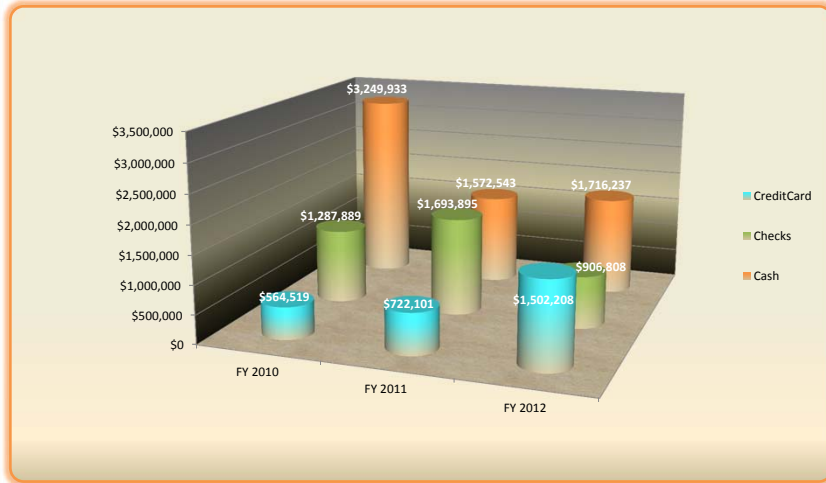
- Four Ticket Office Machines (TOMs) purchased
- TOMs are different than TVMs because they are used at personally staffed sales outlets
- Primary TOM is at Government Center, which has full service capabilities and can accept cash, credit/debit cards, and checks



Annual Ticket Office Machines (TOM) Sales Broken Down by EASY Card and EASY Ticket Transactions (FY 2010 - FY 2012)



Annual TOM Sales by Form of Payment (FY 2010- FY 2012)



Point of Sale Unit

- 86 retail outlets sell EASY Cards and EASY Tickets
- Each retailer is equipped with a Point of Sale Unit (POSU)
- Only data on sales were available; no data on transactions



Miami-Dade Transit Outlet Revenues: Total Annual Revenue, FY 2010-2012 (Excluding August-September)

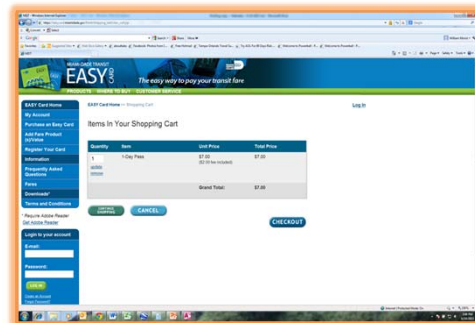


Sales Via the Internet

Internet sales are limited to 5 fare types:

- Stored Value
- Monthly Pass
- Monthly Pass plus Parking
- 1 Day Pass
- 7 Day Pass

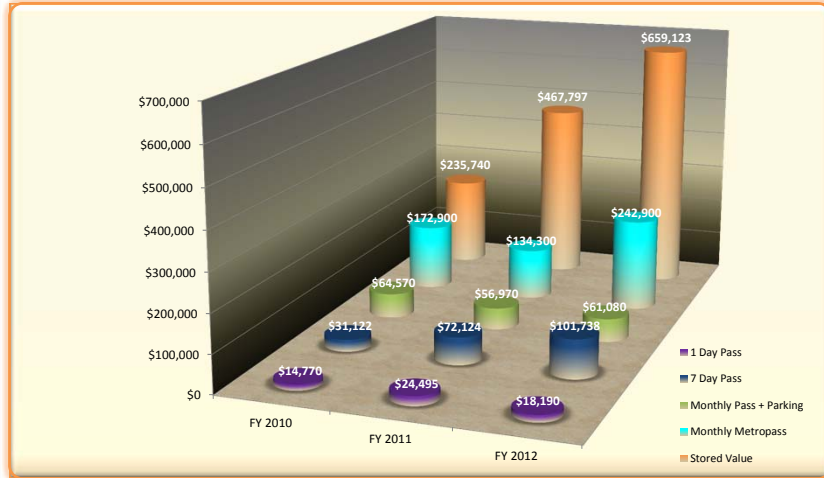
“Stored value” is similar to having a gift card at a retailer. The card starts out with a stored value until the face value has been spent



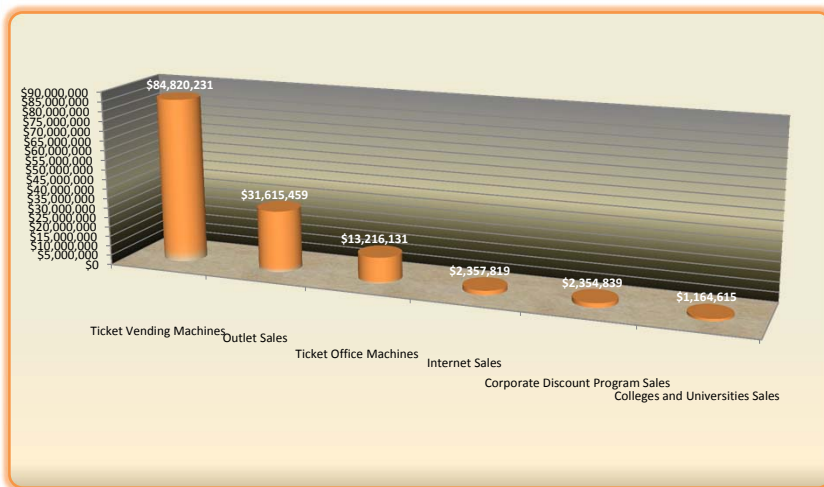
Internet sales were modest but growing over the period 2010-2012. Stored value is the most popular purchase



Web Sales: All Types, Total Revenue (FY 2010-2012)



Total Cumulative Sales - All Outlets and Programs, FY 2010- 2012

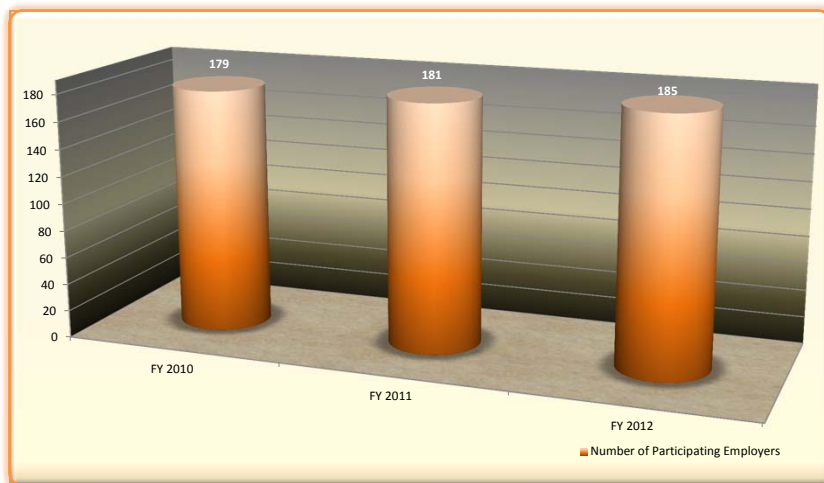


Impacts on Corporate Discount Program

- Corporate Discount Program (CDP) allows participants to save on commuting costs through group discounts and pre-tax savings
- The CDP provides 1-Month transit passes on EASY Cards, good for a month of unlimited rides on Metrobus and Metrorail
- The regular price of an MDT monthly pass on an EASY Card is \$100 per month
- Employers expressed interest in participating when the CDP offers a web-based application



MDT Participating Employers: FY 2010-2012



Total Sales for all Participating Employers: FY 2010-2012



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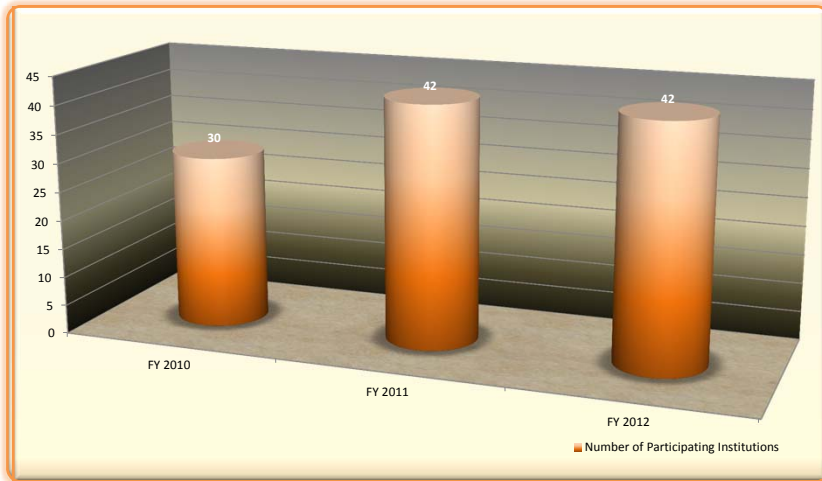
Colleges and Universities

- In 2010, there were 30 colleges and universities participating. (40% increase by 2012 with 42 institutions participating)
- Monthly Easy Tickets distributed to the institutions who sell to students
- FIU and Miami Dade College have dedicated websites promoting the program
- Ridership data was not definitively available

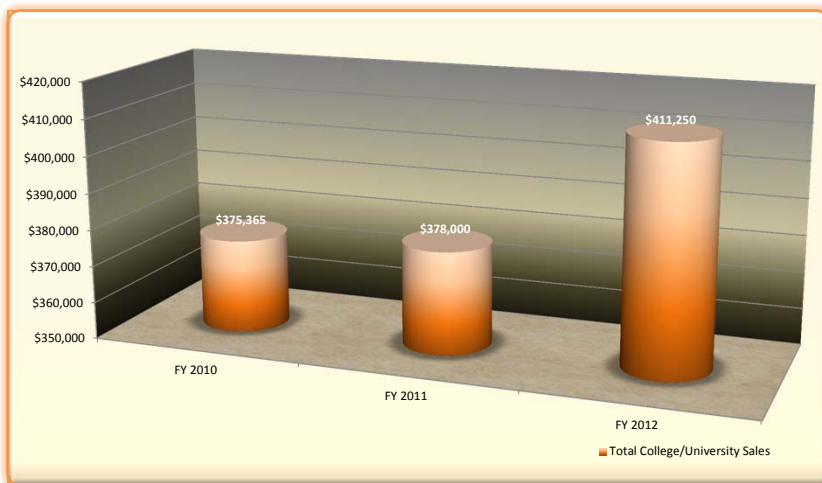


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Number of Participating Institutions, By Year: FY 2010-2012



Total College/University Sales: FY 2010-2012



Highlights of Fare Policy Changes and Incentives

- Incentives for colleges and universities include the flexibility of purchasing Easy Tickets for \$50 (half price)
- FIU and Miami Dade College have dedicated websites to promote Easy Ticket
- Employers benefit by having the monthly pass automatically loaded on participant's cards



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Ridership Impacts - Metrorail

- By policy, all fares on Metrorail were required to be paid by Easy Card/Easy Ticket
- Metrorail had year over year increases in ridership, but could not be attributed to implementation of Easy Card
- Of the 50.8 million passenger trips, 16.8 million (33%) were paid with Easy Ticket and 33.9 million with Easy Card (67%)
- Between 2011 and 2012, Easy Ticket passenger trips increased while Easy Card passenger trips declined



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Ridership Impacts - Metrorail

- Most common fare category is “Stored Value – Full Fare” with monthly Corporate Discount Program the second most popular fare category
- The fare categories of Stored Value Elderly and Annual SSB remained steady at about 2.2 million annual passenger trips



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Ridership Impacts - Metrobus

- Metrobus achieved 69 percent of all trips paid by Easy Card/Easy Ticket
- Metrobus had a modest increase in both Easy Card and Easy Ticket Ridership between 2011 and 2012
- CDP ridership grew by 19 percent between 2011 and 2012



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Synthesis and Conclusions

- The Fare Collection System has been widely accepted with 3 of every 4 trips on Metrobus and Metrorail paid by Easy Card/Easy Ticket
- Easy Cards have a much greater prevalence of use than Easy Tickets; however, Easy Tickets have grown in use on Metrorail
- Metrobus passengers use Easy Card by a 4 to 1 margin over Easy Tickets
- Ridership increases and/or declines could not be attributed to implementation of AFCS



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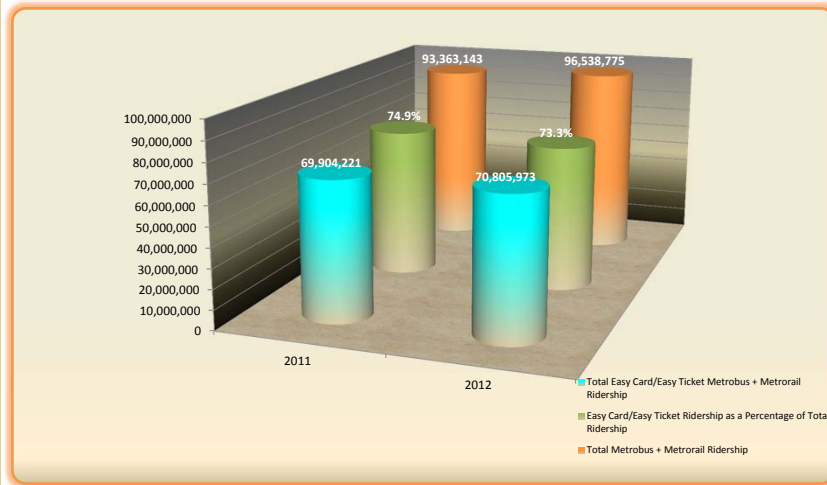
Synthesis and Conclusions

- Incentives
 - Metrorail only accepts Easy Card/Easy Ticket
 - Bus passengers can transfer for free by paying with Easy Card/Easy Ticket
 - Relative ease of purchase
 - Monthly regional pass for use on Tri-Rail and MDT
- Easy Cards are now issued to every customer of Special Transportation Services (STS) – paratransit service



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Combined Easy Card/Easy Ticket Ridership Compared to Total Metrobus + Metrorail Ridership, FY 2011-2012



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Lessons Learned

- Don't rush – create a reasonable implementation schedule
- Carefully evaluate fare policy and structure and incorporate desired changes before introducing the AFCS
- Create a thorough and well-designed card distribution plan, with special attention to the needs of corporate customers
- Engage agency representatives from all functional areas to plan and deploy. Thoroughly document business practices for each department to make post-implementation smoother and more efficient



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Lessons Learned

- Anticipate the need for additional financial and accounting staff
- Create a business processing system closely aligned with the Information Technology function
- Pre-define reporting requirements and data needs by functional area, but be flexible for future reporting needs
- Anticipate significant benefits in terms of enhanced system functionality, control, ridership and revenue reporting, and data reliability



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