OC Bus Mobile Ticketing Application Final Report

AB2766/MS16093

Prepared for the Mobile Source Air Pollution Review Committee (MSRC) under the AB 2766 Discretionary Fund Work Program.

Acknowledgments

Disclaimer

Project Description

The scope of the project included (1) the design and development of a mobile ticketing application, (2) purchasing reader hardware, (3) installing, configuring, testing electronic readers, (4) integrating mobile ticketing application with electronic readers, and (5) implementing Public Outreach Plan. Features of the new mobile software include:

- Allowing users to purchase tickets for OCTA entire fare catalog using their smart phones
- Using the smart phone to display valid fare payment on OCTA's buses using dynamic bar codes
- Viewing route maps and schedules
- Locking/Blocking a rider account if fraudulent activity is suspected (OCTA staff)
- A robust back-office system that allowed OCTA staff to effectively assist OCTA riders when they need assistance with their OC Bus mobile applications

Problems Encountered

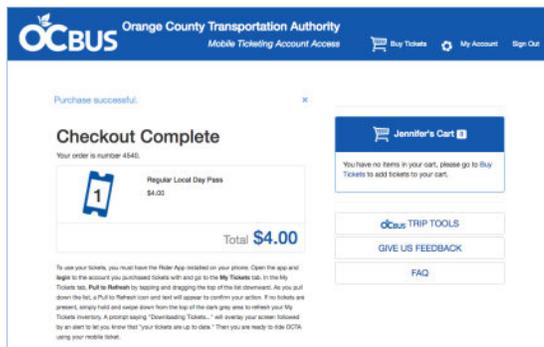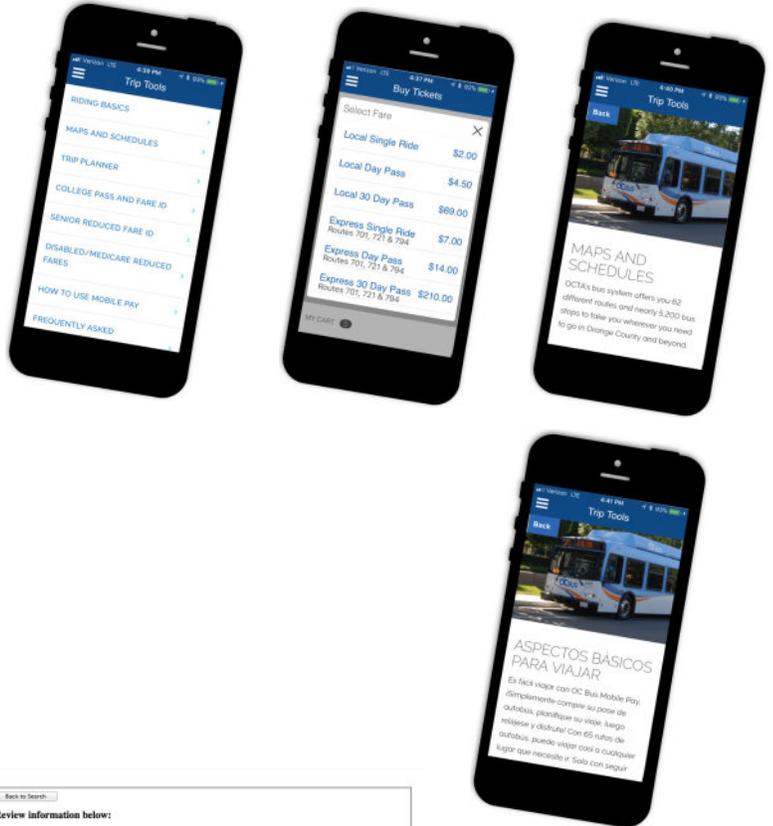Development of the OC Bus Mobile App presented many challenges to ensure goals of the program were met, and that the mobile app provided a positive customer user experience. It was important to ensure that the app functionality met core objectives and created content for app, online portal and stores.

In late October 2016, there was a two-day period in which users were not able to add or edit payment methods in their user profile which prevented users from purchasing tickets. This issue was resolved by Braintree, who is the payment processing vendor for the mobile ticketing application, as there was a connection issue between Braintree and our mobile ticketing application.

The hardware manufacturer for the Electronic Readers ran into a delay with building our devices. In an unforeseen circumstance the manufacturer was put in a position where they had to fulfill large orders for three different agencies during the same quarter. This resulted in a one-month delay from our original schedule, which OCTA was ok to accept.

Benefits

As of September 2018, there are just over 78,800 registered users on the Mobile Ticketing app with roughly 950,000 fare purchases since the launch of the application. There have been electronic readers installed on OCTA's entire fixed route fleet and OCTA has activated the readers for production use during OCTA's February Service Change on February 11, 2018.

Additional benefits of mobile ticketing include:

- Increasing ease of use for customers to promote customer self-service
- Giving OCTA the ability to accept fare media from neighboring agencies through electronic readers
- Stimulating growth in ridership
- Decreasing emissions from personal motor vehicles
- Eliminating the hassle of carrying paper passes or exact change
- Storing multiple passes on your phone for future use
- Allowing payment of a single fare or multiple fares for a group of riders
- Speeding up boarding times

Program Overview

OCTA's existing fare collection system has been in operation for nearly 15 years. New payment technologies such as mobile phone apps allow transit agencies to adopt a variety of innovative fare collection methods incorporating the use of mobile phones, contactless credit cards and debit cards. OCTA studied ways to improve fare collection and identified three goals:

- Modernize OCTA's fare collection system and move towards the next generation in fare collection
- Create a better user experience for bus riders and coach operators
- Improve regional integration

OCTA conducted several fare collection pilot project projects and found customers favored a mobile ticketing application for fare purchases. In 2015 OCTA secured a vendor to develop and maintain a mobile ticketing solution for the fixed-route bus service. The development of the OC Bus Mobile App occurred in several phases:

- Express Riders – May 2016
- OC Fair Express Riders – July 2016
- System-wide and College Fares – October 2016
- Senior and Disabled Reduced Fares – March 2017
- Reader Validation Hardware – February 2018

Mobile App Development

Development of the OC Bus Mobile App presented many challenges to ensure goals of the program were met, and that the mobile app provided a positive customer user experience.

- Ensured app functionality met core objectives and created content for app, online portal and stores.
- Development of bus customer information as an "in-app" experience, in English and Spanish
- Built a back-end solution to provide reduced fares on the mobile app while preventing fraud opportunities.

Apple/Google Store

OC Bus Mobile Content

Moovel
Customer
Online Portal

Reduced Fare Solution

Marketing Strategy and Tactics

Brand the mobile ticketing as part of OC Bus to carry forward the new branding. Each rollout phase included a targeted campaign engaging current riders, while bringing new riders to trial through a compelling value proposition for regular and destination services.

- Express Bus Riders: Download/use the app, take the survey for a chance to win a 30-day mobile ticket.
- OC Fair Express Riders: Download/use the app, take the survey and win prizes.
- System-wide Regular Fare: Introduce current customer base to mobile via a multi-tactical media campaign, including a video, social media, print and digital ads, billboards, and printed flyers.
- College Fares: Download and purchase reduced fare college passes. Promote during summer registration periods for awareness; send targeted email to current college pass users.
- Senior/Disabled Fares: Conduct outreach in the senior/disabled community to increase OCTA RFID cards, target community with email, newspaper ads.
- Reader Validation Hardware: Introduce current mobile users, and potential new users, to newly installed mobile app validator hardware and how to scan their QR code upon entering bus.

Results

In the first six months that mobile ticketing was offered as fare payment, 32% of downloads resulted in ticket purchases. Industry average of conversions from download to purchase within the first year is 20%-40%. OCTA's mobile ticketing achieved the mid-point of this average in only 6 months.

As of August 2018

- Registered users increase on average 3-5% monthly
- 64% are repeat purchasers
- Achieved 7% of sales on mobile within 1 year (industry stand is 2% in 2 years)

User Acquisition Funnel
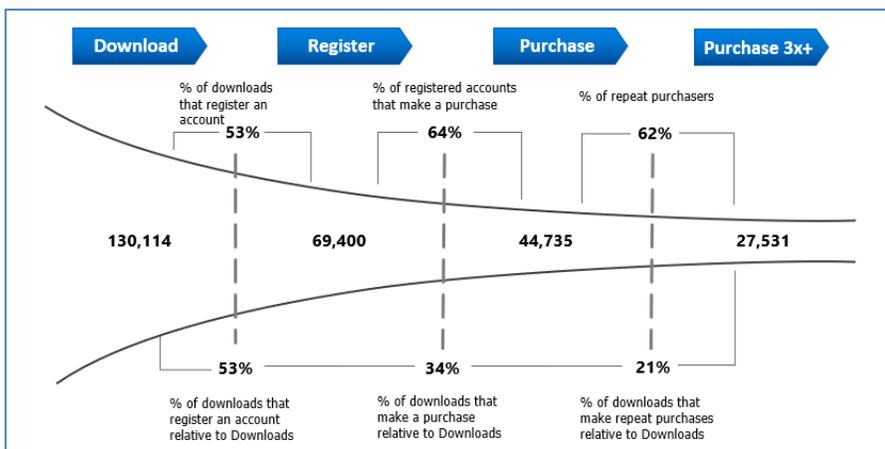
Sales Penetration (June 2018)
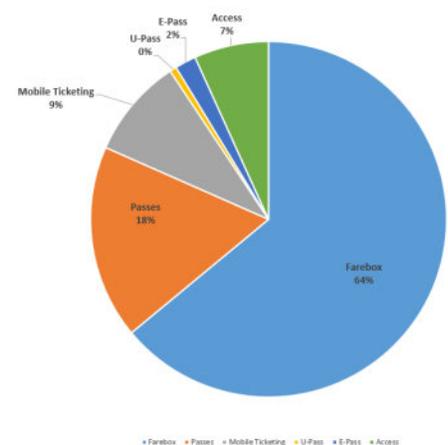
Campaign Tactics

Express Routes 701/721 – June 2016

Targeted campaign included bus interior cards, on board flyers, Facebook ads, email and website, as well as integration into existing materials, such as individual route maps, online ebusbook, and website pop up ads.

Onboard Flyer

Email

Route Map

Digital Pop Up Ad

Interior Card

OC Fair Express – July 2016

Campaign targeted existing riders and those interested in going to the fair utilizing bus interior ads, website information and banner ads and social media engagement. Additional messaging was integrated into OC Fair Express ridership materials, such as bus ads, print ads, direct mail, outdoor signage, in mall signage, website ads and pop up ads in bus section.

Online Ad

Website
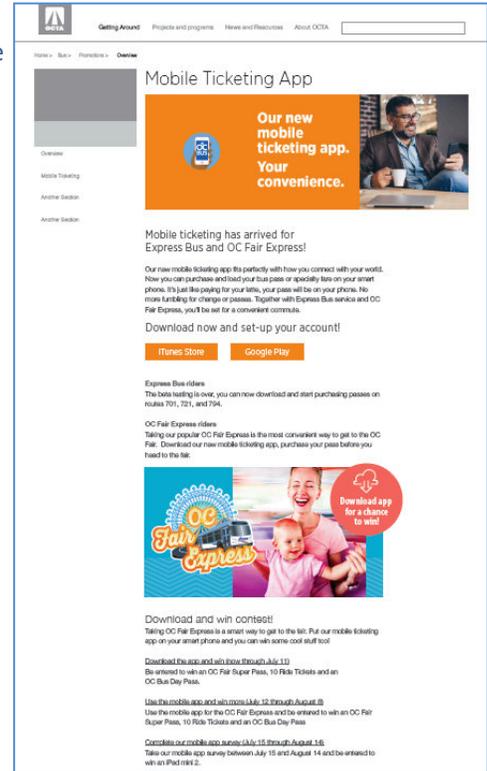
Interior Card

Brochure

Facebook Ads

System-wide – October 2016

Introduced current customer base to mobile via a multi-tactical media campaign, including a video, social media, print and digital ads, billboards, and printed flyers. A variety of tactics were implemented through:

- Baseline customer communications and integration into existing materials.
- Diversity marketing reaching Hispanic community

Social Engagement
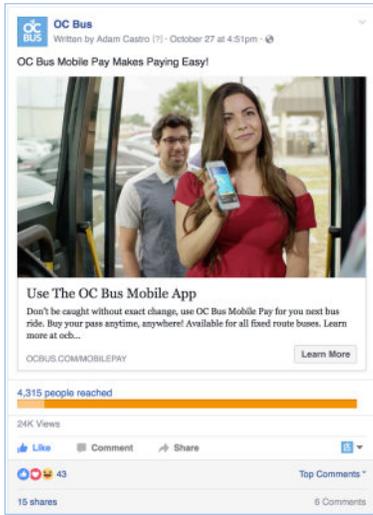
Email

Website
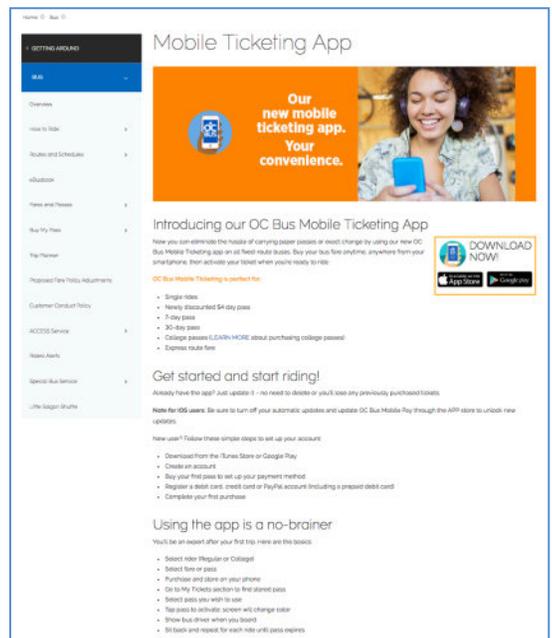
Website & Mobile Pop Up Ads
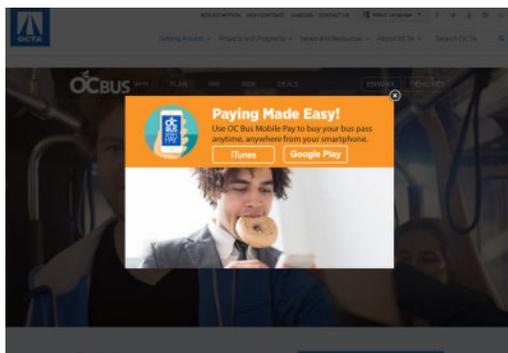
How To Use Video Series
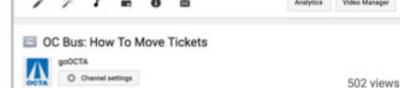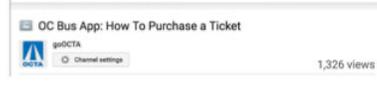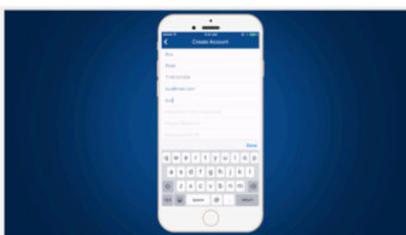
System-wide – October 2016 (continued)

Print Ad
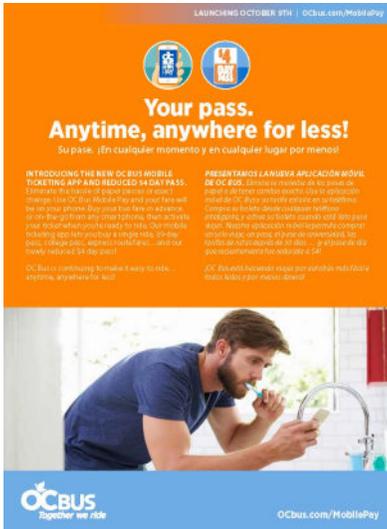
Bus Stop Signage
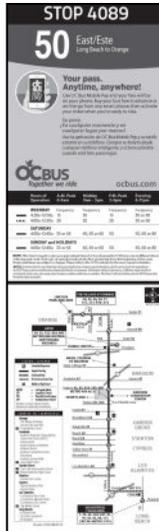
Outdoor Billboards

OnBoard Flyers

Interior Cards

Bus Window Signs

Bus Exterior Ads

Senior & Disabled Reduced Fares – March 2017

Targeted communications and outreach to the senior/disabled community creating awareness and education of purchasing reduced fares on OC Bus Mobile.

Flyers

Direct Mail

Newspaper Ads

Reader Hardware Validation – February 2018

Beginning in February 2018, mobile users switched from visual validation to validation through on-board reader hardware utilizing a QR code. Provided customer education materials focusing on how and when to use the QR code to validate tickets with the reader and what constitutes a valid scan. Developed a multi-tactical media campaign, including outdoor ads, social media, email, print and digital ads, and printed flyers.

Bus Book Ad

Print Ad

Service Change Brochure

Interior Card

Kiosk Panel and OnBoard Flyer

Facebook

Generated News Clippings

There were several news clippings generated by this project. The Orange County Register, Metro Magazine, ITS International, and Mass Transit also released articles to promote the new mobile ticketing system-wide.

Link to article

Link to article

Link to article

Link to article