

## 4 Operational Concept Description

### 4.1 Shared Vision

#### 4.1.1 System Overview

##### Key Partners

1. TAP

##### Key Activities

1. Software Design and Development
2. Integration with Metro infrastructure
3. Marketing of application

##### Key Resources

1. Development Team
2. PhoneGap API
3. NFC technology
4. QR technology

##### Value Proposition

1. Convenience for customers to purchase and use metro tickets
2. Ticket elimination reducing cost and environmental impact
3. Technological advancement of public transportation system.

##### Customer Relation

1. LA Metro
2. Apple Appstore
3. Android Store
4. Windows Phone Marketplace

##### Channels

1. Application stores
2. LA Metro website
3. Posters and billboards at stations.

##### Customer Segments

1. Transportation Companies

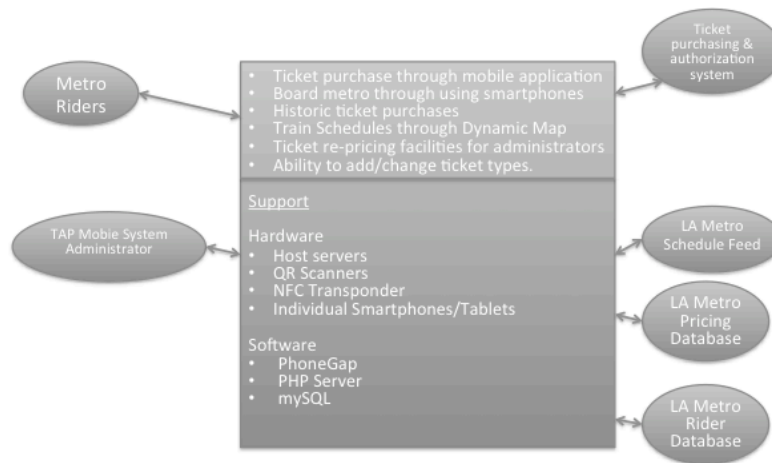
##### Cost Structure

1. Development Team
2. Back-end System Administrator

##### Revenue Streams

1. Flat fee for project implementation
2. Recurring fee per ticket sale through application

#### 4.1.2 System Boundary and Environment



## 4.2 System Transformation

### 4.2.1 System Objectives, Constraints, and Priorities

Capability Goals	Priority Level
<b>OC-1</b> Cross-platform Compatible: The application is compatible with iOS Android and Windows Phone	Must have
<b>OC-2</b> Account Creation: The application is able to create new rider accounts update information and log in users using existing information.	Must have
<b>OC-3</b> Usage: The application allows metro riders to board trains via NFC or QR code technology.	Must have
<b>OC-4</b> Payments: The application allows metro riders to pay for tickets using a secure payment gateway.	Must have

Level of Service Goals	Priority Level
Reliability of application	1
Usability	2
Performance of system	5
Inter-operability	3
Maintainability	4

#### Organizational Goals

**OG-1** Increase convenience for ticket buyers.

**OG-2** Decrease cost for LA Metro and ticket buyers.

**OG-3** Increase efficiency of public transit system by advancing technologically.

#### Constraints

**CO-1** Align with Current Infrastructure: The new application must complement the existing tap card system, and be implemented with minimal changes to existing infrastructure.

**CO-2** Cross Platform Compatibility: The new application must be compatible with major smartphone operating systems(iOS, Android and Windows)

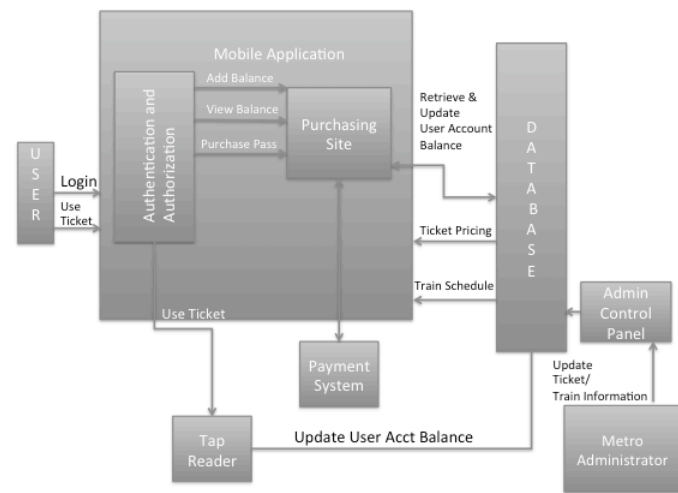
**CO-3** Phone Hardware: The application must be compatible with the existing hardware in major smartphones.

### 4.2.2 Proposed Operational Concept

The application will allow metro riders to use their mobile devices to purchase tickets and board trains eliminating the need for physical TAP cards. The new system will act as a complement to the TAP card system; allowing riders to use existing metro facilities if they wish.

For those smartphones enabled with NFC, the rider will be able to tap their phones instead of their tap cards. For those smartphones not enable with NFC, QR readers will be installed at stations that have turnstiles. For stations that do not have turnstiles, Metro agents will be given a QR reader to verify tickets on the train.

### 4.2.3 Proposed Element Relationship



#### 4.2.4 Proposed Workflow

