### **Tags:**

### Industry: Fintech, Government, Transportation

* Product: Hardware, Government Service Platform

### **Smart City Platform for Urban Transport Management**

**Link - <https://play.google.com/store/apps/details?id=com.hoozaroundgdlcampus.domila>**

#### **Overview**

A private transportation company in Mexico partnered with MOBIAN to create a comprehensive urban transport management ecosystem. The solution includes a user-friendly mobile application for passengers to manage routes and payments and a custom onboard ticket validation system using NFC and QR codes. The platform operates seamlessly in offline mode, ensuring uninterrupted service. Over 2.5 years, MOBIAN collaborated with international teams to deliver and enhance this innovative system.

#### **Client Challenges**

* Expanding an event planner app into a full-featured smart transport management system.
* Designing and integrating a ticket validation box for buses, capable of reading NFC and QR codes, while functioning offline.
* Ensuring synchronization and preventing duplicate or lost transactions in areas with limited or no internet coverage.
* Providing transparency and visibility for transportation companies to monitor passenger traffic and improve communication with users.
* Coordinating across international teams for hardware production in China, software development in Europe, and installation in Mexico.

#### **Solution**

MOBIAN strengthened the client’s team and delivered a modular, scalable platform:

* **Technologies and Architecture:**
  + **Passenger App:**
    - Android: Kotlin, MVVM, RxKotlin, Coroutines, NFC module integration.
    - iOS: Swift, MVVM, Alamofire.
  + **Ticket Vending Machine/Validator:**
    - Custom Android-powered device with QR/Barcode reader, NFC module, and hardware integration with the bus onboard computer.
* **Key Features:**
  + **Mobile Wallet:** Supports real-money top-ups and ticket purchases in-app.
  + **Route and Schedule Integration:** Allows passengers to view bus routes, find nearby stations, and check schedules.
  + **Smart Ticket Validation System:** Installed on buses, the system validates tickets via NFC and QR codes and syncs data when connectivity is restored.
  + **Offline Mode:** Ensures reliable operation and prevents data loss during service interruptions.
* **Ongoing Improvements:**
  + Regular updates to the mobile wallet and system features.
  + Development of an NFC-based wallet module, enabling seamless tap-to-pay functionality akin to Apple Pay.

#### **Key Figures**

* 2.5 years of development and iterative improvements.
* 100+ buses equipped with the smart ticket validation system.
* Collaboration across 3 international teams (hardware production in China, software development in Europe, and installation in Mexico).

#### **Visual Elements**

* **Infographic of Ecosystem Features:** Highlighting route planning, ticket validation, and payment processing.
* **Interface Screenshots:** Showcasing the app’s wallet, route manager, and schedule views.
* **Ticket Validation System Diagram:** Displaying NFC and QR code interactions with the onboard validation box.

#### **Why MOBIAN?**

MOBIAN augmented the client’s team with critical technical expertise to build a robust smart transportation system that bridges gaps in connectivity and functionality. By delivering an innovative platform that benefits both passengers and transportation operators, MOBIAN demonstrated its ability to create scalable, future-ready solutions for public services.

**Looking for a partner to transform urban mobility?  
[Let’s collaborate!]**

### **Smart City Platform for Urban Transport Management**

When a private transportation company in Mexico needed to transform its event planner app into a comprehensive smart city platform, they turned to MOBIAN. Over 2.5 years, we developed a mobile app for route management and payments and designed a custom ticket validation system for buses, supporting NFC and QR codes. The platform ensures seamless offline operation, providing reliable service for both passengers and operators.

* 100+ buses equipped with smart validation systems.
* 2.5 years of iterative development and enhancements.
* A fully scalable system that improves passenger experience and operational transparency.

**MOBIAN — your partner in building scalable, innovative urban mobility solutions.**