J-CARD

An RFID Based Multi-Purpose Mobility Card for the city of Jabalpur

JABALPUR

➢ **Third largest urban agglomeration in Madhya Pradesh.**

➢ **Country's 26ᵗʰ largest urban agglomeration.**

➢ **Population of Jabalpur metropolitan area 1,267,564.**

➢ **One of the 20 cities selected initially in Smart City Challenge.**
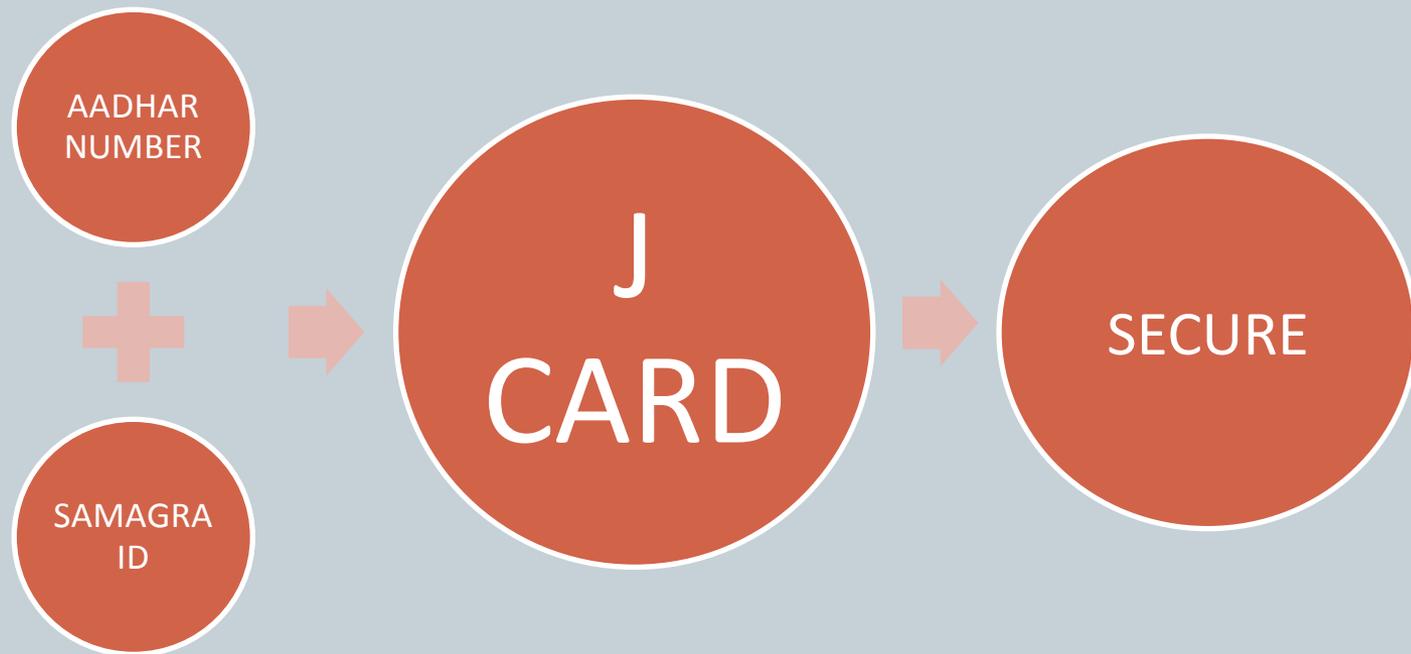
J CARD

Plastic Money for Jabalpur.

VISION OF THE PROJECT

Reduce the cash handling in the city.

OBJECTIVES OF PROJECT

➢Wide usage of electronic payment system, led by AFC .

➢ Wide acceptance in majority of retail establishments for small payments.

➢Using J card as an identity card for the residents of Jabalpur.

➢Using the J cad as Smart City Card.

➢To make it indispensible in the city.

Integration with id

AADHAR NUMBER + SAMAGRA ID → J CARD → SECURE

J CARD IN PUBLIC TRANSPORTATION

Main focus is on its utility in public transportation system, where the card would help to collect the fare automatically.

PUBLIC TRANSPORTATION SYSTEM IN JABALPUR

In Jabalpur city the Public Transportation System includes Semi Low Floor buses which are operated by Jabalpur City Transportation Services Limited and are run on PPP model.

Present system of Fare Collection

➢ Electronic Ticketing Machine

Bus conductor using ETM and handling cash

➢ PVC Passes

Pass for distinctly able person

Student Pass

Student Pass for particular route

NEED FOR THE PROJECT.....

Why Ongoing???.....

Drawbacks of fare collection system:

➢ Revenue Leakage

➢ Inconvenient
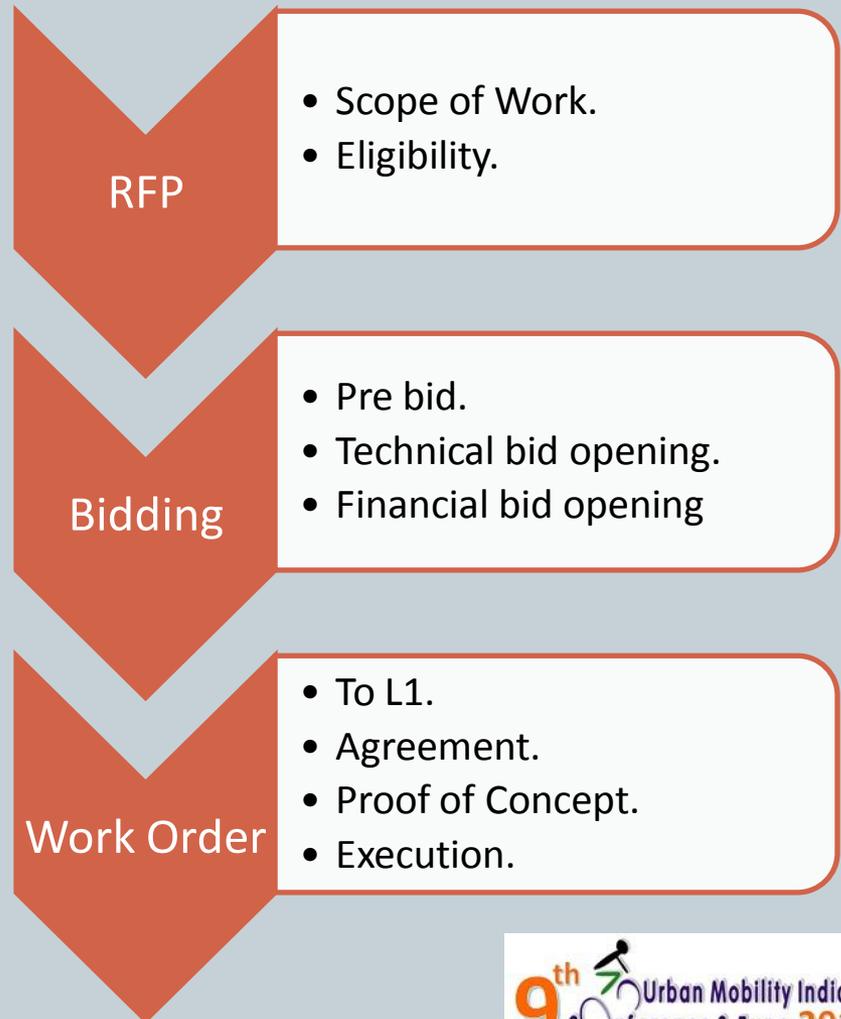
➢ User Inacceptance

➢ Duplication of Passes

Hence a new system is needed to replace it.

Submitted now as.....

➢ Target on cash free/ paper free transaction which is demand of time.

➢ Integrated payment system.

➢ One of the key projects of smart city Jabalpur and was launched this year only.

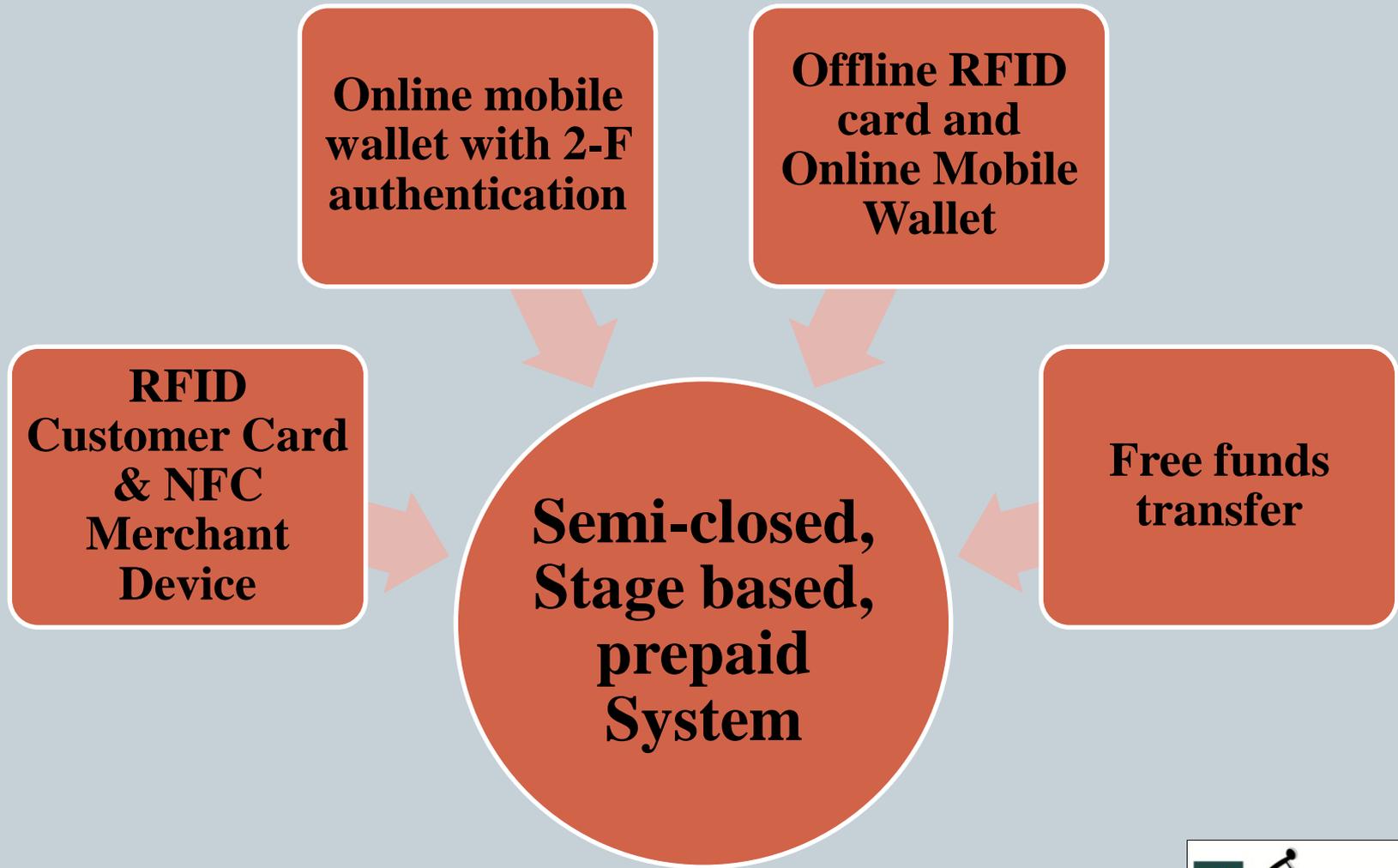# Steps of execution of j card

Since the project has to be executed in Public Private Partnership and since it is a new concept for company hence a **Request for Proposal** was floated by JCTSL to start with it.

RFP
- Scope of Work.
- Eligibility.

Bidding
- Pre bid.
- Technical bid opening.
- Financial bid opening

Work Order
- To L1.
- Agreement.
- Proof of Concept.
- Execution.

PPP STRUCTURE

JMC

JCTSL

AFC Partner

Lead Bidder

Bank

Government Sector Entity

Private Sector Entity

Public Service:

1. **Automatic Fare Collection in Public Transportation**
2. **Paying for Parking Lots**
3. **Entries in Gardens and Parks**
4. **Municipal Taxes**
5. **Paying for Public Utilities**
6. **Bill payments in retail shops**

Public Private Partnership

User Fee Based Built , Operate and Transfer type

J CARD- AUTOMATIC FARE COLLECTION SYSTEM IN PUBLIC BUSES

Entry and Exit Validating machine

Dashboard in every 2 hours

automatic stage based fare collection

J CARD FOR AFC

T+1 settlement

update fare tables over-the-air

GPS based stage change

RFID cards

ETM with printer

Prepaid System

Online mobile wallet with 2-F authentication

Offline RFID card and Online Mobile Wallet

RFID Customer Card & NFC Merchant Device

Semi-closed, Stage based, prepaid System

Free funds transfer

SYSTEMS INVOLVED

➢ **NFC based front-end system:**
- Maximum 0.3 seconds for a complete AFC transaction
- Minimum 4K memory
- 7 year data retention.
- NFC front-end devices for merchants, buses etc.
- NFC phones and wearable for consumers.

➢ **Cloud Based Back-end System:**
- Cloud based scalable and highly available AFC

➢ **Device Management System**
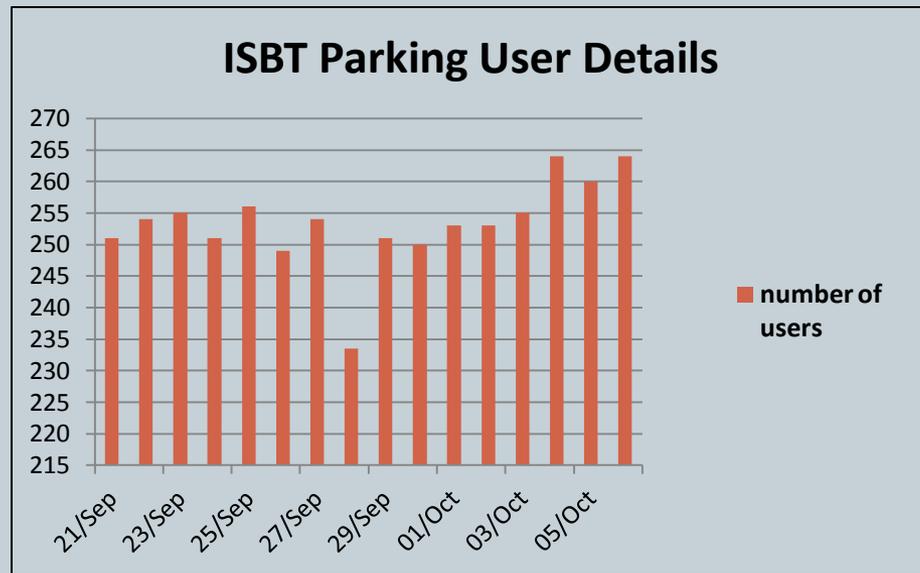- Remote application updates and device diagnostics on all front-end NFC devices.

Present Scenario of Project

Implementation

➢ ISBT

– For Parking payments in ISBT.

– Total 750 cards have been made and 250 are the daily users.

Out Come

➢ ISBT

– Convenient and Secure parking system for operators & public.

– Convenient and Beneficial system for authority & public.

ISBT Parking User Details

The average number of people using the Jcard for parking is increasing.

Present Scenario of Project

Implementation

➤ City Buses

- ₋ Implemented only in one route.
- ₋ 100 cards have been made out of which only 12 are the regular users.

Out Come

➤ City Buses

- ₋ Cards have been used only in one route.
- ₋ Still the ticket system is in vogue.

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Investment and Returns

The lead bidder(Simpal) has to make all the investments which include:

Frontend System

- Validating Device, NFC ETM, NFC retail counter, Card, Parking system.
- Estimated investment is 4.4 crore.
- Investment made so far is 15 lakhs.

Backend Solution

- Cloud based back end system.

Marketing

- Paper and e media, promotional balance etc.
- Investment made so far 20,000.

Since it is a user based PPP system so all returns of investments are made by users for which **CUSTOMER PAYS A NOMINAL FEE (Rs. 10 per month + applicable taxes)** for unlimited financial transactions and other non financial usage.

COST EFFECTIVENESS

For Users-

➢The Commuters- 10% discount
➢The Bus Operators- Reduces the leakage
➢The Merchants - No transaction charges

For Facilitators –

Based on OPEX model which is cost free for facilitator.

For Service Provider-

The investment cost would be recovered from the users.

KEY LEARNING

- Public awareness and Promotion.
- Educating the Facilitator.
- Versatile and Strong Back End Solution.
- Facilities to strengthen the system.
- Financial Transactions Related Information.
- Return & Refund.
- Exception Handling / Risk Management rules should be framed.
- Issuing duplicate card in case of lost / stolen / damaged registered card.

Conclusion

➢ The J card is an RFID based transaction card which will act as plastic money and also as identity card for the residents of Jabalpur city.

➢ The project is USER FEE based, BOT, Public Private Partnership.

➢ All investment is done by private entity, there is no investment form central/ state government or Urban Local Body.

➢ The project is cost effective and has led to convenience to users, service providers, operators and authority.

Thank You….