UK Pilot Overview

January 2016

Pilot Overview

MobiWallet

The UK pilot in West Midlands, **Birmingham,** will implement a fares management engine **'MobiWallet Engine'**, offering a complete public transport mobility solution for the region, in partnership with private travel operators.

Using our current Swift Smartcard platform to enhance and develop a full end to end ticket less service offering

centro
transforming public transport

ttr®
Transport & Travel Research Ltd.
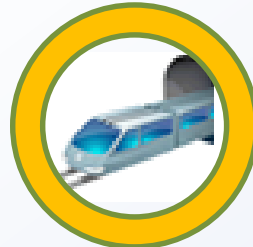
Pilot Objectives

Centro aims to develop a fares management engine that will support customers in selecting the most appropriate fare for the specific journey needs, increasing smart mobility, journey planning and integrated ticketless travel across the conurbation.

- Provide passengers with the ability to purchase a ticket as the final function of the journey planner.

- Provide passengers with an intelligent list of options of the most appropriate ticket to purchase based on the journey they have planned.

- Enable the fulfilment of purchased tickets through an NFC enabled mobile phone or a remote device.

- Inform passengers of the most appropriate ticket for them based on their actual travel habits.

- Provide an intuitive solution that is easy to use and supports the delivery of an increase in customer satisfaction
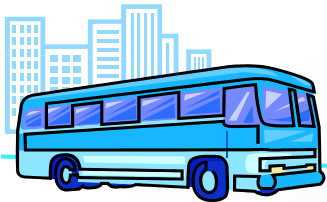
- Increase public transport use

Baseline Information
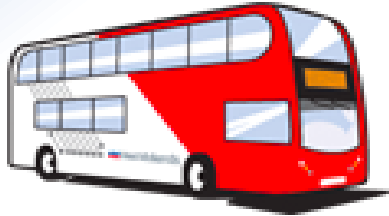
- ❖ 1400+ Smart ETM deployed and in use by West Midlands Bus Operators
- ❖ Supported via Centro Managed Service

- ❖ Swift Smart Card
- ❖ Limted Ticketing Products on Swift
- ❖ Purchase via Direct debit
- ❖ Fulfilment via Paper ticket

- ❖ Bus only
- ❖ 10 Bus Operators
- ❖ Lack of buy in via main operator

MobiWallet

cip competitiveness and innovation framework programme 2007–2013

MobiWallet Impacts/Effects

ETM's

- ❖ Provides validation to travel
- ❖ Equipment performance challenges
- ❖ Improves boarding times
- ❖ Paperless ticket provisons

- ❖ Removes need for paper ticket
- ❖ Provides seamless Customer travel offering
- ❖ Provides travel ticket discounts
- ❖ Safe & Secure – no need for cash
- ❖ 18000 Registered users

Operators

- ❖ On bus boarding times reduced/streamlined
- ❖ Mutli modal travel
- ❖ Investment for on vehicle and back office infrastructure
- ❖ Swift Agreements

UK Pilot Customer Journey
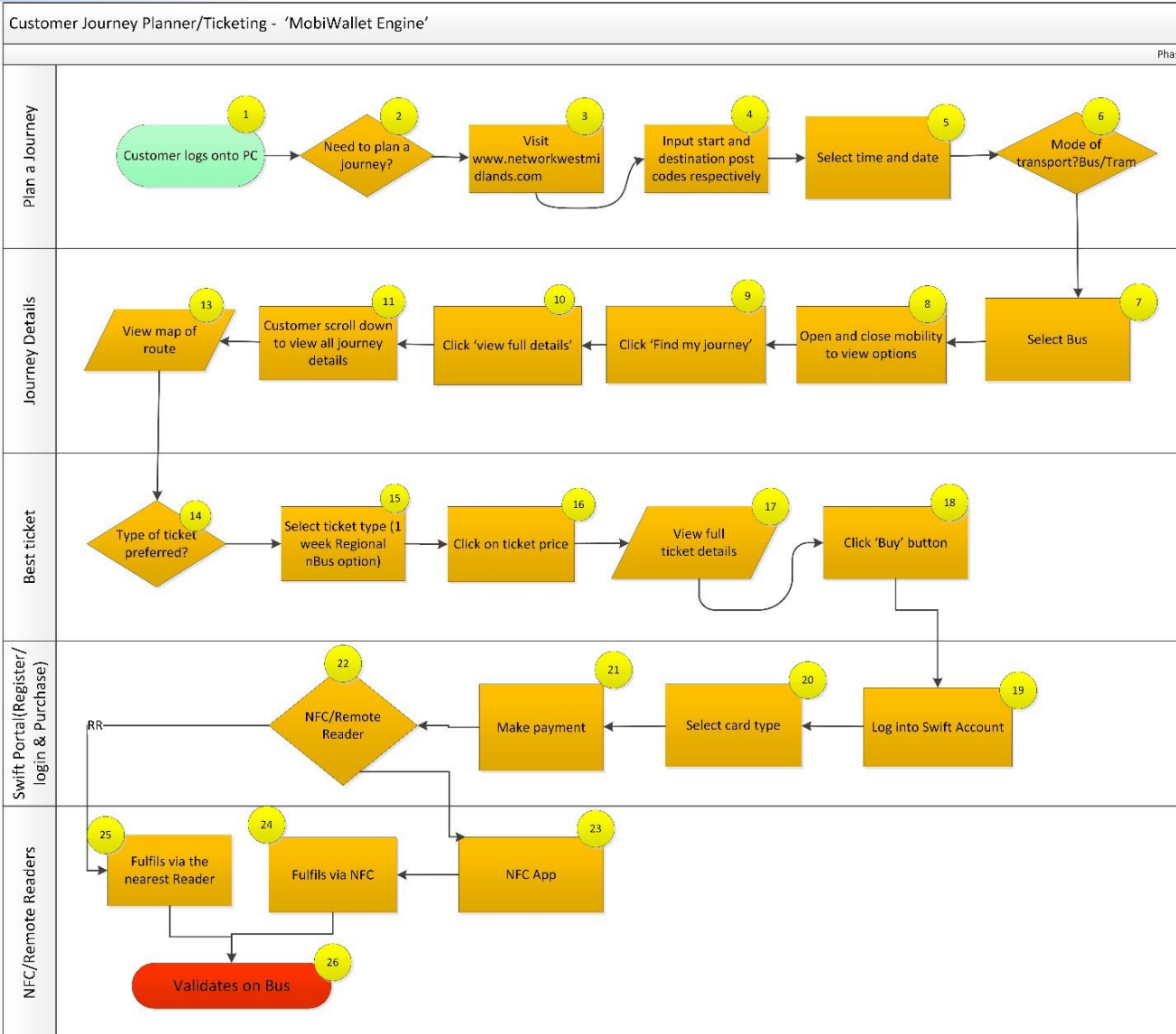
Interoperability Solutions: Key Elements implemented
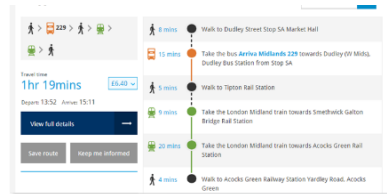
MobiWallet

Medium

Swift App

+ **NFC** **+**

Allow users to….
• fulfil and load travel ticket onto Swift card

cip competitiveness and innovation framework programme 2007–2013

Platform

Mobiwallet Engine:
WebServices+DataBases

Journey Poanner API and Tciket Database

Core of the Platform: Stores user´s travel data, transactions, swift card data and ticket fares data (HOPS/ Ticket database/ JP)

Gateway

Swift

+ **+** Operator Reimbursement model

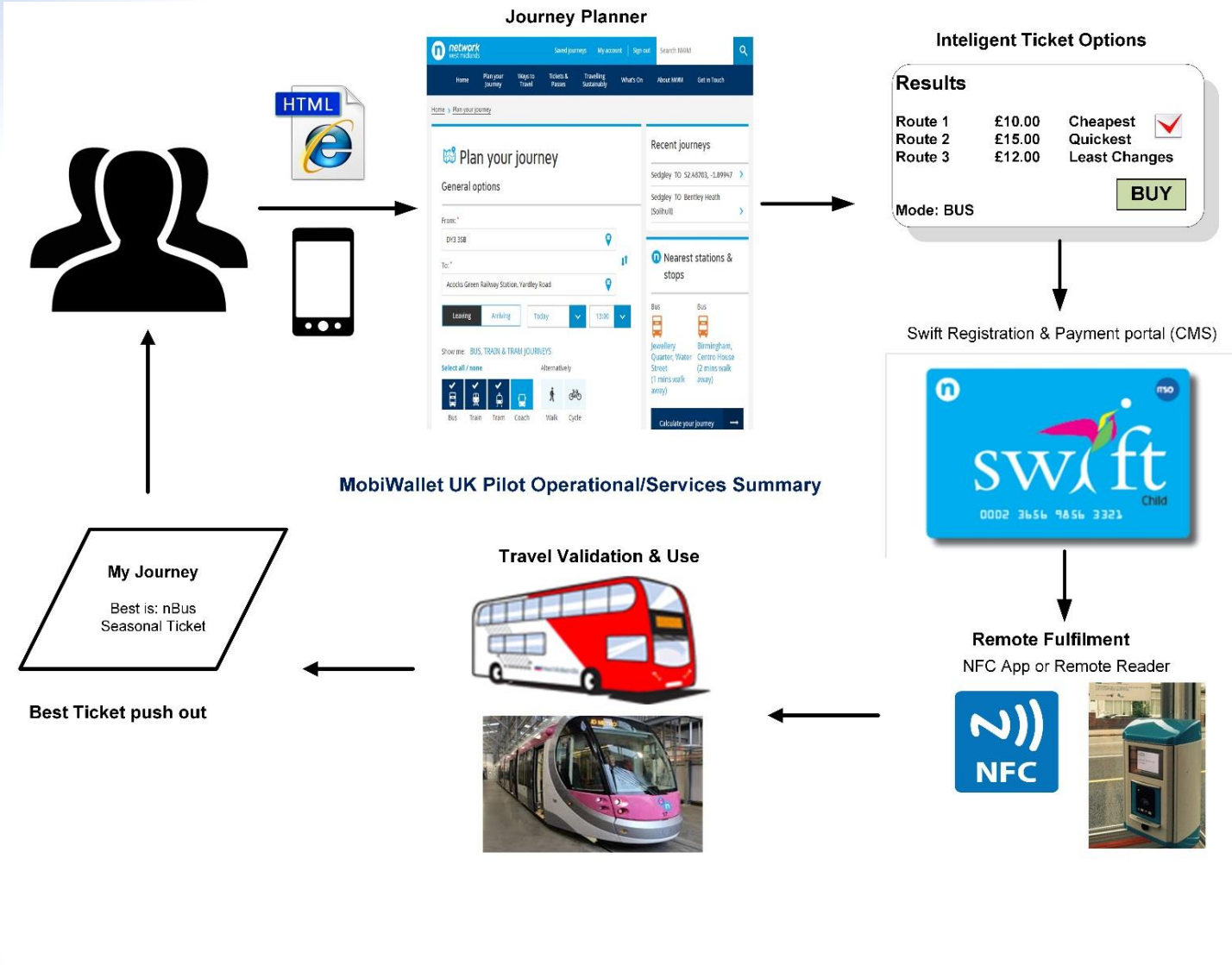Swift Payment portal (CMS) and credit call systems

Payment gateway and clearing system to manage user´s credit and payments as well as all the transfers to the different operators according to the use of their services.

Services

MobiWallet

Journey Planner

Inteligent Ticket Options

Results

Route 1	£10.00	Cheapest	✓
Route 2	£15.00	Quickest	
Route 3	£12.00	Least Changes	

BUY

Mode: BUS

Swift Registration & Payment portal (CMS)

MobiWallet UK Pilot Operational/Services Summary

Travel Validation & Use

My Journey

Best is: nBus
Seasonal Ticket

Best Ticket push out

Remote Fulfilment
NFC App or Remote Reader

NFC

Services

MobiWallet

Core Services
(Fare management and validation)

| Intelligent Ticket Options | Registration & Payment |

| Interfaces (Web) | Remote Fulfilment | Validation |

Additional Services

- Journey Planner
- Timetable Information
- Travel Disruptions
- Cycle Storage and
- Station gate acess

Integration with existing Services/APP

- Swift Smartcard platform
- Journey Planner API
- NWM Website Interface
- MS Dynamics Ticketing Database

Core Services

MobiWallet

Purchase of a ticket, from a list of ticket options, selected intelligently based on the user journey planned and load the ticket onto their Swift card using a mobile phone, or on-street reader.

Core Services	
Platform	
Journey Planning	**Intelligent Ticket Options**
Enhanced Journey planner (web portal) user interface	JP API & Ticket Database integration

- User Plans a journey
- MobiWallet engine provides intelligent list of ticket options
- User selects preferred to purchase

Core Services

Core Services	
Payment Gateway	
Registration & Ticket Purchase	**Payment Validation**
Swift CMS	Bankers card & Credit call

- User registers through Swift Portal & CMS

- Existing User can purchase card using Swift CMS payment portal

- Verification of payment via credit call

Core Services

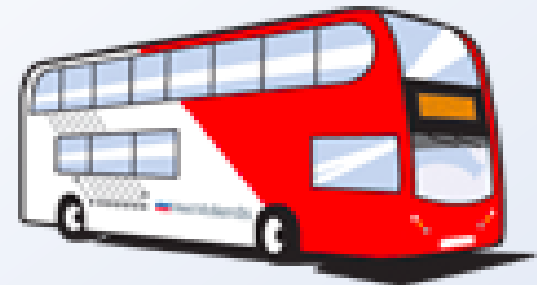| Core Services |
| :--- |
| Medium |
| Fulfilment |
| NFC App & Remote Reader |

- User selects preferred fulfilment option – Download NFC app or collects via an on- street remote reader

Ticket & Travel Validation

Validation:

- Operator validates travel via ETM

- Operator is reimbursed through reimbursement

system/model

Users Recruitment

Initial User testing: Enhanced JP Fucntionality tested via internal test group x30 test volunteers (complete)

Phase 2 Users: contacted **personally** 15 respondents form previous same Pre trial survey exercise.
• Promote the survey via a data capture form on the Centro Swift website and Unicard site and via email receipt from Unicard portal.

- Incentives; capture users for through survey immediately with incentive of £10 high street vouchers

•Phase 2: 200 users: Jan – March: Register interest as part of phase 1 Through survey data capture to be entered into a prize draw

Phase 2.2: March- July: promote both surveys via Swift Twitter account to drive traffic to the survey

Users Recruitment

MobiWallet

User Timeline/plan

Nov	Dec	Jan	Feb	March	April	May	June	July
15- 30 user s		200 users						
Phase 1		Phase 2						

15 respondents: survey on Swift and Unicard website portal areas

Promotion of survey via email receipt from Unicard portal

200 respondents: Register interest as part of phase 1 Through survey data capture above, incentive to be entered into a prize draw, promote both surveys via websites, Swift Twitter account, data capture form will be developed within Communicator Corp email system placed with various sites, also promote this at travel centres and Payzone retail outlets,
(Pre/Post & Through trial approach requirement)

cip competitiveness and innovation framework programme 2007–2013

Users Recruitment Scope

MobiWallet

Test Areas

- Ticket payment & Fulfilment (phase 1)
- Journey Planner Interface Phase 2
- Mobiwallet Engine Functionality (full end to end) Phase 2

Test Medium

- Journey planner & Mobiwallet engine website
- Swift Card Portal (CMS)
- NFC App
- Remote readers (on street/at stop)
- On bus/tram ETM & swift card (validation)

MobiWallet

Remote Fulfilment (NFC App & Readers)

THE FOCUS GROUP:

15 participants who were and were not familiar with Near Field Communication (NFC) technology and the Swift CMS and Wesite.

Live demonstration and subsequent support provided by Centro. Participants were given 45 minutes to trial and experience the following:

- Selecting a ticket for a journey using the Swift website
- Downloading the Application
- Adding a ticket onto a Swift card using mobile phone NFC
- Adding a ticket onto a Swift card using the on-street card reader

Pilot Monitoring & Evaluation

MobiWallet
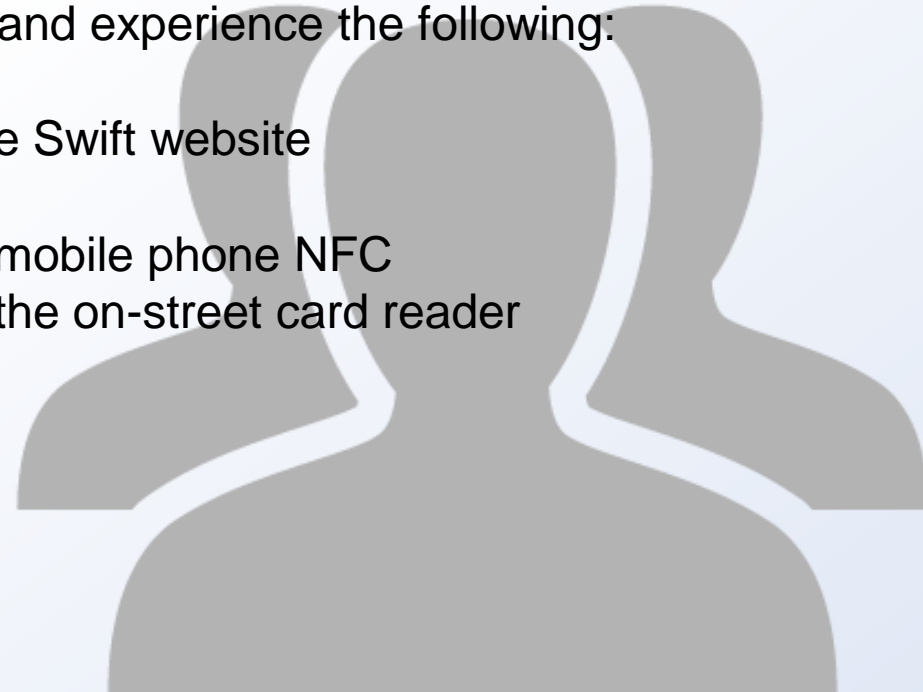
Findings/ Feedback Results:

Website: Participants described the website as having a logical interface and found it easy to use. One participant specifically stated they felt the website would be good for older users given its simple design,

Downloading the Swift App: 13 of 15 participants were able to successfully download the App. The remainder of the group either had smartphones without NFC technology (Window's phones, iPhones or older smartphones) or had not previously downloaded Apps.

Loading ticket onto a Swift card using mobile NFC: Instructions on this process were required as well as troubleshooting instructions. Uncertainty on how close the card should be held to the phone, or where on the phone the card should be placed

Loading ticket onto a Swift card using Remote Reader :
Participants felt confident in using the machine and felt the coloured lights made it clear when a card had updated.

Pilot Monitoring & Evaluation Plan

Pre Trial Survey: this included data from the agreed pre trial questionnaire provided by TTR and specific fulfilment questions compiled within a formal Swift survey quedstionaire; 190 completed surveys.

Pre Trial Survey Result data;

52% of respondents either strongly agree or agree that that they are likely to continue to use the Swift Pay as you go card

45% of respondents strongly agree or agree that they are satisfied with the range of top up payment methods available

85% of respondents feel it is very important or important that online top ups via the swift card are available

27% of respondents are aware that they can collect online purchases using the Swift App on Android NFC phones

Recent/on going developments

- System Build & Integration

- JP Front End Interface Design

- JP Upgrade UAT Testing

- JP Mobiwallet Engine Testing

- Best- ticket pushout logic
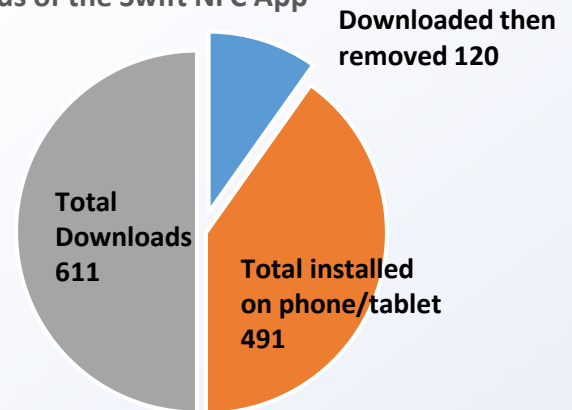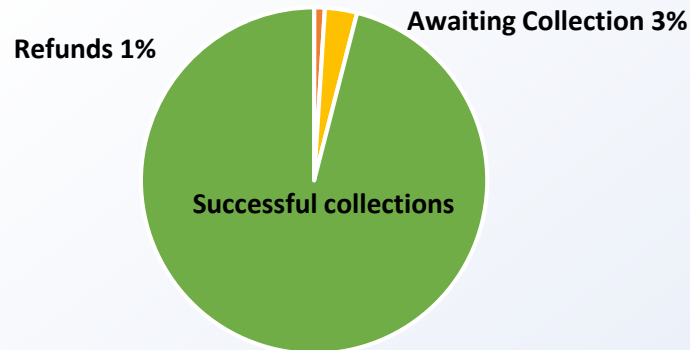
Current Status

Remote Fulfilment:

- Number of registered Swift Card users: 1000+
- Number of Tickets purchased on Swift: 1005 tickets
- 18,000 Registered Swift card users
- Number of fulfiments via NFC app and Remote Reader: 657 collections

MobiWallet

Succesful downloads of the Swift NFC App

- Downloaded then removed 120
- Total Downloads 611
- Total installed on phone/tablet 491

Successful Colections via Remote Readers and NFC App

- Refunds 1%
- Awaiting Collection 3%
- Successful collections

Current Status

Swift (West Midlands Smartcard) has progressed significant works and has currently deployed the following;

- **Enhanced PAYG Ticket Product**

- **Swift on Metro (Tram)**

- **NX Operator Tickets**

- **Rail Development**

- **Cycle & Rail Access**

Stay tuned!

MobiWallet

www.mobiwallet-project.eu

info@mobiwallet-project.eu

www.linkedin.com/company/mobiwallet

twitter.com/MobiWallet_EU