Demystifying open loop payment in public transport

Webinar, 25 April 2023
Webinar Agenda

- Introduction of UITP
- Open Loop Payment in public transport
- System elements and payment process
- **Case study Ostava** – one of Europe’s very first implementations
- Open loop payment – today and tomorrow
- **Your turn** - Questions and answer

You will receive the presentation via email.

Write your questions & comments in the chatbox.

Raise your hand to speak, introduce yourself & happy to see you!

Let’s keep it short and sharp.
THE INTERNATIONAL ASSOCIATION OF PUBLIC TRANSPORT
We are working to enhance quality of life and economic well-being by supporting and promoting sustainable transport in urban areas worldwide.
A DIVERSE MEMBERSHIP ASSOCIATION
WHO ARE OUR MEMBERS?

AUTHORITIES

OPERATORS

INDUSTRIES

RESEARCH INSTITUTES & ACADEMIA

ASSOCIATIONS
WHERE ARE OUR MEMBERS?

- **NORTH AMERICA**: 136
- **EUROPE**: 1129
- **AFRICA**: 31
- **LATIN AMERICA**: 96
- **MENA**: 92
- **ASIA-PACIFIC**: 369
- **EURASIA**: 100
WHAT WE DO

ADVOCACY
We engage with decision makers and key international organisations to promote sustainable mobility solutions.

KNOWLEDGE
We inspire excellence and innovation by generating cutting-edge knowledge and expertise.

NETWORKING
We bring people together to exchange ideas, find solutions and forge partnerships.
CONCRETELY...

We release publications & statistics

We lead knowledge and innovation via Committees and projects

We organise events, bringing together the public transport community

We deliver training sessions

We safeguard and promote our sector and the benefits of public transport

We advocate with and for our members

...and much more!
Join the Defining Event in Public Transport
- Covers all urban and regional transport modes
- Wide variety of sessions and an outstanding exhibition
- A truly global event with participants from over 80 countries

www.uitpsummit.org
WHY BECOME A UITP MEMBER?

- GROW YOUR EXPERTISE
- GROW YOUR INFLUENCE
- BROADEN YOUR NETWORK
- DEVELOP YOUR BUSINESS
- BE PART OF THE PUBLIC TRANSPORT COMMUNITY
Open loop payment in public transport
Ticketing system has evolved over the period of time. The challenge has shifted from choosing a tariff scheme to understanding the potential of technology...
CLOSED/ OPEN LOOP

From separate processing of payment and ticket validation to directly accepting payment cards

Closed Loop: Money in the fare collection system

Open Loop / EMV: Money on your bank account
Open loop solutions

Multi modal transit
Contactless
Speed at faregate
First ride risk

EMV is interoperable with a certified Terminal
Use your contactless card, mobile device or wearable to pay
Delayed authorization allows the customer to walk through the faregate
ODA, Deny lists, Declined Authorization Protection, Card not present Debt Recovery*

*Scheme policy applies
Six steps to implement open loop payment in public transport
# System Elements

<table>
<thead>
<tr>
<th>Eco-System</th>
<th>DWH</th>
<th>ERP</th>
<th>CRM</th>
<th>Payment</th>
<th>Payment service provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABT back office</td>
<td>Revenue Management</td>
<td>Reporting</td>
<td>Transaction processing</td>
<td>Operator</td>
<td>Option: Customer database</td>
</tr>
<tr>
<td>L2/3</td>
<td></td>
<td></td>
<td></td>
<td>Device Manager</td>
<td></td>
</tr>
<tr>
<td>Field devices</td>
<td>Validation</td>
<td>Fare gate</td>
<td>Platform validator</td>
<td>Vehicle validator</td>
<td>Farebox</td>
</tr>
<tr>
<td>Media</td>
<td>VISA</td>
<td>Mastercard</td>
<td>JCB</td>
<td>Apple Pay</td>
<td>Pay</td>
</tr>
</tbody>
</table>
PROCESS FLOW, MODEL 2 – TAP 1

- Field devices
  - Present
  - List check
  - Send Txn
  - ODA
- Media
- L2/3
- ABT back office
  - Verify card
- Verification
- Potentially: list update
- List check
- Send Txn
- ODA
- Present

Payment
PROCESS FLOW, MODEL 2 – TAP X, Y, Z

- Payment
- ABT back office
- L2/3
- Field devices
- Media

Potentially:
- Intraday charge
- List update

ODA
Send Txn
List check
Present

Field devices

Payment

ABT back office

L2/3

Media

ODA
Send Txn
List check
Present

Potentially:
- Intraday charge
- List update
PROCESS FLOW, MODEL 2 – PAYMENT

Payment

Charge fares

Aggregate all fares

Potentially: list update

Field devices

L2/3

ABT back office

Media
## (TECHNICAL) PRE-CONDITIONS

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment</td>
<td>Merchant agreement with acquirer needed</td>
</tr>
<tr>
<td></td>
<td>PSP must support <strong>all desired payment schemes</strong></td>
</tr>
<tr>
<td></td>
<td>Model 2: PSP must support open payment mass transit <strong>for all desired schemes</strong></td>
</tr>
<tr>
<td>ABT back office</td>
<td>Relevant system parts must be PCI compliant</td>
</tr>
<tr>
<td></td>
<td>Operations must be PCI certified</td>
</tr>
<tr>
<td></td>
<td>ISO 27001 to be considered</td>
</tr>
<tr>
<td></td>
<td>Check GDPR / PII with Data Security Officer</td>
</tr>
<tr>
<td>L2/3</td>
<td></td>
</tr>
<tr>
<td>Field devices</td>
<td>Devices certified according to EMV L1 and EMV L2 <strong>for all desired schemes</strong></td>
</tr>
<tr>
<td></td>
<td>Devices must have online connectivity</td>
</tr>
<tr>
<td>Media</td>
<td>Model 2: The desired scheme must support open loop mass transit</td>
</tr>
</tbody>
</table>

System approved according EMV L3 end-2-end
Ostrava – one of Europe’s very first open-loop implementations.
Previous paper validators

New validators with cEMV acceptance
Greetings from Ostrava

Daniel Morys
Chairman of the Board
Public Transit Operator Ostrava

Link to the video
GOING CONTACTLESS IN OSTRAVA

- Ostrava was the first city in Czechia to introduce ticketing through contactless bank cards
- It was the second such solution in Europe (after London)
- The system incorporates more than 2,200 check-in terminals in over 600 vehicles
BENEFITS OF CONTACTLESS TICKETING

- **Seamless travel** – contactless ticketing facilitates seamless travel across transport modes and geographic boundaries.
- **Safe & comfortable** – in a world touched by a global pandemic, contactless ticketing is preferred by most travellers.
- **Savings for passengers** – contactless technology automatically calculates the most optimal fare available to a customer.
- **Lower costs for operators** – contactless ticketing and fare collection leads to significant cost savings for transport operators.
- **No ticket needed** – there is no need for a paper ticket – a bankcard, smartcard, phone or a smart wearable will do the trick by becoming your ‘Digital Ticket’
In 2016, paper tickets prevailed in the city of Ostrava.
In 2022, most payments made by cEMV.

- Paper tickets: 0%
- cEMV: 72%
- Other: 28%

City: Ostrava
Since November 2018, digital ticket sales have exceeded paper ticket sales.

The main objective has been achieved!
1 ton of paper saved on tickets and counting
1,703,720 €
saved since implementation - and counting
Open loop payment: Today and Tomorrow
Consumers are tapping to ride in greater numbers than ever

Source: Visa processed contactless transit transactions, Oct 2019 – Sept 2022
45% of riders would take more public transit trips if paying were easier

Source: Visa Economic Empowerment Institute: Reimagining ridership: Open-loop payments and the future of urban mobility. 75 Transit agencies surveyed globally in addition to 3,000 passengers across 6 cities during 2022.
9.5% growth of ridership with the introduction of open-loop payments

Source: Visa Economic Empowerment Institute: Reimagining ridership: Open-loop payments and the future of urban mobility. 75 Transit agencies surveyed globally in addition to 3,000 passengers across 6 cities during 2022.
83% of transit agencies plan to adopt open-loop systems in the future.

Source: Visa Economic Empowerment Institute: Reimagining ridership: Open-loop payments and the future of urban mobility. 75 Transit agencies surveyed globally in addition to 3,000 passengers across 6 cities during 2022.
Connecting our door-to-door journeys

More connected and convenient payment options encourage ridership, making cities more livable and sustainable, and paving the way for enjoyable and efficient door-to-door journeys.
Interested to learn more about open loop payment in public transport? Visit the website of the Urban Mobility Open Payment Forum: https://openloopmobility.uitp.org
How can we help you?

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