

## **INCREASE THE WELLBEING OF RESIDENTS**

With more than half of the world's population now living in urban centres, transport operators are under increasing pressure to address challenges relating to aging infrastructure (such as crowded public transport systems) while tackling increasing rates of pollution due to the rise in private car usage. In this context London, Singapore, Moscow and Dubai are setting new trends by competing on quality of life, promising to increase the wellbeing of their residents and turning to smart technology to ease movements.

Smart cities have moved to the top of government agendas, with transport operators striving to balance the wellbeing of passengers and improvements to the profitability and competitiveness of their networks. However, investing in improvements in fleet infrastructure is only part of the solution: the customer experience and digitalisation of payments are fundamental to smart city planning.

# ONE CITY ONE PLATFORM











## A STEP TO PAYMENT AUTOMATION AND FLEXIBILITY

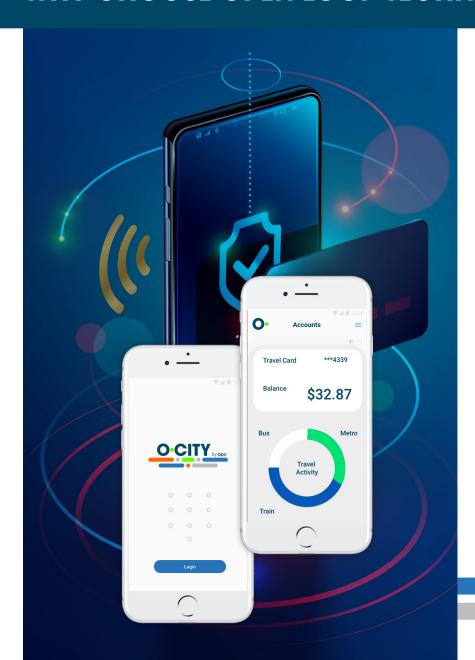


Transport payment systems have evolved from coin, ticket-based and single use cards to today's open technology enabling any contactless bank card to be used across a network or QR codes on mobile wallets rendering paper-based tickets obsolete. In order to keep up with this trend, public transport operators need to look for efficient ways to collect fares and provide simple and convenient payment options to make their service more attractive to passengers. At the same time, it is vital that operators keep operating costs under control and increase turnover.

The automation of fare collection creates an opportunity to build a comprehensive and convenient user experience. Cash or paper-based ticketing systems incur high operational costs due to the resources required to accept and manage cash. In cashless systems (which are also referred to as open-loop systems) data related to ticketing is typically stored in multiple locations: credits are stored on the user's transportation card, while information on applicable fares is stored on servers along with other data that can be analysed to improve future fare strategy.

This is the technology used by O-CITY to deliver a frictionless experience for passengers while ensuring transport operators can manage their network efficiently.

## WHY CHOOSE OPEN-LOOP TECHNOLOGY OVER CLOSED-LOOP?



FEATURE	CLOSED-LOOP, CARD-CENTRIC SYSTEM	OPEN-LOOP, ACCOUNT-BASED O-CITY SYSTEM
Interoperability	Limited	Full
Intermodality	Limited	Full
Balance	Stored on the card	Stored on server
Loss of card	Loss of money	Easy to recover and replace
Tariff updates	Software update on all devices across network	Automatic update via centralised rules configuration on the server
Top-up infrastructure	Mandatory	Optional - top-up online
Card issue	Mandatory	Optional - use banking card instead
Adding new members	Costly	Plug-and-go

## **DISCOVER O-CITY**

O-CITY is a platform for all transport modes. Unlike traditional card-based models, it is account-based which means that both transport operators and passengers can track their journey or fleet from a single view in real time, using multiple payment methods or transport modes. It delivers an integrated digital ticketing experience, making city transport attractive to use.

Responding to demands for more agility and reduced time to market without the need to invest in new equipment, O-CITY has been designed to be hardware agnostic. It can be installed on top of transport agencies' existing validators and payment terminals, which greatly reduces implementation time and up-front investment costs, while its EMV-native component makes it highly secure.

## **QUICK FACT ABOUT O-CITY:**

O-CITY serves more than 150 transport operators in more than 100 cities, which provides more than 30 million transactions per month



## **CHOOSE THE MODEL THAT SUITS**

Deployment of O-CITY is flexible and suits any model. Its key differentiator is its partnership model whereby it can support the deployment of new digital transport models and share knowledge with transport agencies.

## On-premise YOU HOST IT AND RUN IT

O-CITY is installed on your chosen environment and you have full control over your transport network

#### SaaS WE HOST IT, YOU RUN IT

O-CITY is delivered in the cloud with a monthly recurring contract for more flexibility using a 'pay as you grow' model

## Managed Services or JV WE HOST IT AND CO-RUN IT

O-CITY experts manage and operate many cities' network around the globe, providing dedicated resources, training teams and sharing knowledge



## **BENEFITS OF O-CITY**

Transport operators require efficient yet flexible tools to run their businesses. By centralising all processing and data in the core services layer rather than rolling out pieces of information across dispersed systems, operators can better control and operate their networks. With this approach, data is available 24/7 and in real time, allowing operators to manage tariffs efficiently and apply new rates instantly. Field devices such as validators and mobile inspection devices can be managed from a central location, allowing public transport companies to provide customers with secure and convenient access to their service.

#### YOUR BUSINESS ADVANTAGE



#### MAKES CASH REDUNDANT, ALLOWS FOR PAYMENT CHOICE

Digitalisation reduces the need to process cash, reducing operating costs of processing physical currency. In addition, cashless payments reduce fraud as business operations become more transparent. From the user perspective safer operations increase trust and loyalty in your network. The solution allows customers to use different types of identifiers, such as dynamically generated QR codes displayed on smartphone screens, contactless cards or other devices to get access to transportation services without ever having to go to a ticket office.



#### **INCREASE REVENUE**

The solution reduces operational expenditure by eliminating the need to hire additional cash operators or set up ticket machines. These functions are replaced by digital operations, which can be controlled via your account from a central portal. In addition to cost reduction, effective tariff management improves accessibility of services to different groups of customers, increasing the overall volume of passengers using your routes.



## **BENEFITS OF O-CITY**



#### **IMPROVE ROUTE VELOCITY**

Digitalisation and automatisation of the boarding process on public transport improves the velocity of end user journeys. By allowing passengers to use contactless payments (via QR-code, plastic card or NFC compatible device) to board a vehicle, boarding time is significantly decreased and the shortened overall duration of travel positively impacts commuter opinion on public transport, shifting usage towards more convenient routes.



## IMPROVE EFFICIENCY BY ENCODING, PROCESSING AND DISTRIBUTING TICKETS ELECTRONICALLY

O-CITY improves business efficiency by processing and storing information in the back-end server. Information on ticket purchases is also kept on the server, which can be used in business modeling or for marketing purposes. Moreover, the system allows fares and tariffs to be managed centrally, reducing the potential for human error and improving the speed and efficiency of operations.



#### **EASY TO ADD NEW UNITS INTO BUSINESS**

It is crucial that operational efficiency is ensured and the cost of implementing the system is kept under control. The solution can be easily deployed in parallel with existing systems and is not tied to specific services, which opens the possibility for multiple transport companies to share the cost of implementation. New buses or other transport vehicles can be added on a plugand-play basis, reducing the time to introduce new transport modes and fare collection infrastructure.



## COST REDUCTION AS A RESULT OF CENTRALLY MANAGED TICKETING SYSTEM

The ticketing system is managed centrally across all channels using the O-CITY solution. Due to the centralised management of data information is processed more quickly, resulting in lower costs. Any number of transport operators can be connected to the platform, as well as multiple acquirers and payment providers. Due to its cloud-based structure the solution facilitates a 'build and operate'



## **BENEFITS OF O-CITY**

service approach to system implementation, meaning anyone interested in joining the system can use open APIs to connect to its customised products.



#### REDUCED TICKET FRAUD, INCREASED CONTROL

Automated fare control (AFC) systems can substantially reduce losses from ticket fraud. In the UK alone £150 million is paid out each year in compensation for delayed train journeys with operators estimating that up to 30% of those claims are fraudulent. With cashless transactions the risk of fraud from employees and passengers is minimised. The O-CITY platform also improves reporting , allowing operators to track daily transaction volumes on routes, manage tariffs, manage the number of buses, trams and trolleybuses in the fleet and aggregate passenger-consented data to make more informed business decisions.



#### LANGUAGE SUPPORT

O-CITY supports multiple languages - the initial build includes 10 different languages and additional vocabulary, translations and languages can be quickly added to the system.



#### LOW INVESTMENT COST

As a hardware agnostic solution, the initial investment cost of O-CITY AFC is low. There is no need to deploy ATMs or ticket machines since tickets are digitised and the solution is easily integrated with existing infrastructure. No special equipment is needed to process transactions - everything is handled centrally on O-CITY servers except for validators, which are easily plugged into the platform.

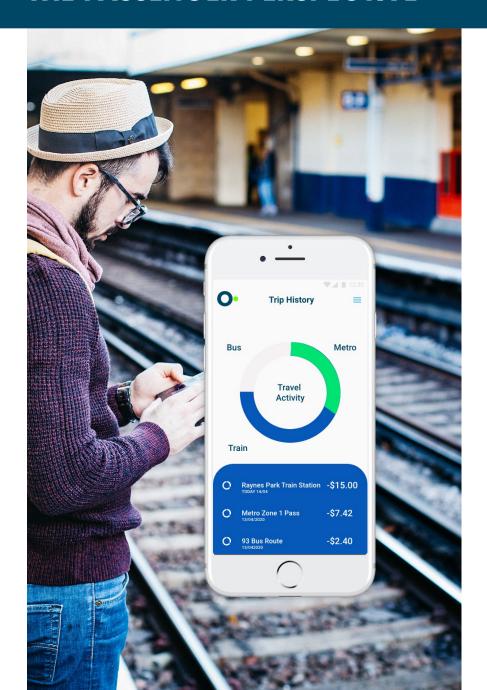


#### LEVERAGE DATA AND ANALYTICS

The solution provides transport service operators with valuable data on users which can be processed and analysed for marketing and business purposes. With the help of O-CITY AFC, historical data on fleet usage, passenger average age and category or buses used can be organised into reporting dashboards, helping management make better decisions.



## THE PASSENGER PERSPECTIVE



The seamless journey for the passenger starts with the convenience of the travel experience. They do not have to worry about anything except identifying themselves when starting their journey - the O-CITY platform takes care of everything else, including finding the optimal journey tariff and visualising all possible routes. Ticket tariffs and supplementary products can be determined automatically based on user profile, current rates and issued ticket details.

With O-CITY passengers no longer need to wait in line to purchase paper tickets or spend time calculating complex tariff rates. They can pay for their fares from an account, topping it up with the payment instrument of their choice:



#### PLASTIC CARD

Allowing the payment for the journey to be made with a plastic card simplifies the process for the commuter, increasing their perception of the service and therefore boosting public transport usage. Plastic cards are accepted with a single tap on the validator.



#### **PAYING BY MARKETPLACE TICKET**

Sometimes it is more convenient to sell tickets online for trains, buses, flights or other public services. Using a dedicated portal, you sell a verification key (in the form of a dynamic QR code, barcode or other encryption) which can be used by commuters. Scanning the code at a terminal immediately confirms the validity of the ticket, while the operator receives user data which can be analysed to inform future strategy. Moreover, e-tickets decrease boarding times, improving service quality for end-users who are increasingly Internet-enabled.

## THE PASSENGER PERSPECTIVE



#### **E-WALLET**

The O-CITY solution allows commuters to pay with their e-wallet. The technology is accepted by the AFC platform, expanding the variety of payment options available to commuters as well improving the operator's competitiveness relative to players with less flexible technology.



#### **WEARABLES**

One of the notable ways in which payment options are evolving is in the use of smartwatches and other wearable electronic devices. O-CITY's compatibility with NFC and RFID technology means commuters can make payments by tapping a smartwatch, key fob or other devices with NFC support into the terminal. The ability to accept NFC and RFID device payments significantly increases commuter satisfaction and operator loyalty.



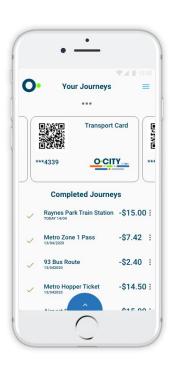
#### PAYMENT FROM AN ACCOUNT

O-CITY provides commuters with a 360-degree view of tariffs, costs and historical data. Payment for different means of transport can be made via account, where the user stores card information. By linking fleet infrastructure to O-CITY, operators allow customers to travel freely using only a mobile phone or wearable device, track changes on their routes and feel part of the smart city environment.



#### ACCOUNT TOP UP WITH PAYMENT INSTRUMENT OF CHOICE

The O-CITY solution gives customers confidence in their ability to top-up their account via different sources, such as ATM, mobile device or desktop. Making top-ups easier and more accessible increases the likelihood of commuters using the service, leading to increased business turnover and decreasing the percentage of non-paying passengers.



## THE PASSENGER PERSPECTIVE



#### ADDED VALUE SERVICES, RICH TRAVEL EXPERIENCE

While on their journey, the user of the O-CITY mobile app can immediately track a route and expenditures, plan trips and budget for future journeys from their mobile device or tablet. The app is designed with a user-friendly interface that can be quickly mastered by any level of user. By using open API on an AFC platform, you and your local partners will be able to design additional features for commuters.



#### **AUTOMATICALLY GET ACCESS TO BEST RATES**

Commuters often stop using services when the tariff structure becomes too complex. Our commitment to transparent and open cities means our O-CITY solution offers the best tariff for each customer's journey and can also be used to track the time to destination and select more convenient journey options.



#### **MULTI-MODAL TRAVELLING**

It is common for passengers to use more than one mode of transport to reach their place of work or home. According to the International Association of Public Transport (UITP), many city dwellers use at least two different modes of transport to reach their destination. The O-CITY solution is designed to help commuters move freely by delivering a seamless payment experience. Connecting all stakeholders under the umbrella of AFC, we offer an ecosystem of payments that helps commuters make their journeys while allowing transport service providers to link the various transport modes in their fleets and offer unified payment methods across all routes.



## **BEYOND MASS TRANSIT**



We view micro-payments and transactions across the city to be the most important driver of a cashless, contactless economy and a main pillar of the Smart City environment. O-CITY is designed to support not only public transport activities, but also a variety of other services. Automated fare collection can enhance and automate payment for services such as parking, bike rental, vending machines, tourist attractions, fast-food restaurants, museums and indeed any other public service, creating a stepping stone to building a complete Smart City.

## TRANSPORT OPERATORS FEATURES

- Centralised management portal
- Transaction processing
- Card & account management
- Fare management
- Notification engine
- Clearing & settlement
- Loyalty management
- Government subsidies allocation
- Dashboards & reports
- Dispute management
- Customer care
- List management
- Fraud prevention

#### **PASSENGER FEATURES**

- User-friendly app & portal
- 360-degree view of journey
- Smart notifications
- Social benefits
- Various payment method options
- Top-up anywhere, anytime
- Promotions & discounts
- Loyalty & rewards
- Dispute logging & tracking





