

## O-CITY PLATFORM FOR EDUCATIONAL FACILITIES

Digital transformation has had a tremendous impact on industry verticals such as commerce, banking and mobility. The way we engage, shop, and entertain ourselves has dramatically changed with the introduction of new technologies such as chat and video conferencing.

Consumers now expect to be able to do everything from their mobile and it is no different in education. This sector is going through rapid transformation and in order to remain competitive has to adapt, from the introduction of digital learning tools to supporting digital payments.

The evolution of payment methods has accelerated. driven by e-commerce giants and consumer demand - especially from younger, tech-savvy groups accustomed to tap-and-touch

solutions. Paying using a bank card, mobile or smart watch leveraging NF technology is now commonplace, rendering closed-loop plastic cards and paper tickets obsolete.

The private sector has long been a leader in digital transformation, but governments and public sector institutions are now starting to embrace technology. The educational sector is looking at innovative, dynamic solutions to improve services to students and accessibility of services such as catering and libraries with the objective of attracting a new generation of students for whom technology-enabled institutions are a prerequisite.

Putting a digital approach at the core of public and private education strategy is critical to remaining competitive in this fast changing market.

# ONE CITY ONE PLATFORM











## **CREATING A DIGITAL ECOSYSTEM - A VIRTUAL 'CITY' CAMPUS**

Educational establishments bring together multiple disciplines from student ID management and social and sport activity provision to catering and transport. Although this ecosystem enables the establishment to benefit from the support of multiple third party suppliers, it can also be cumbersome to manage as the establishment deals with multiple databases.

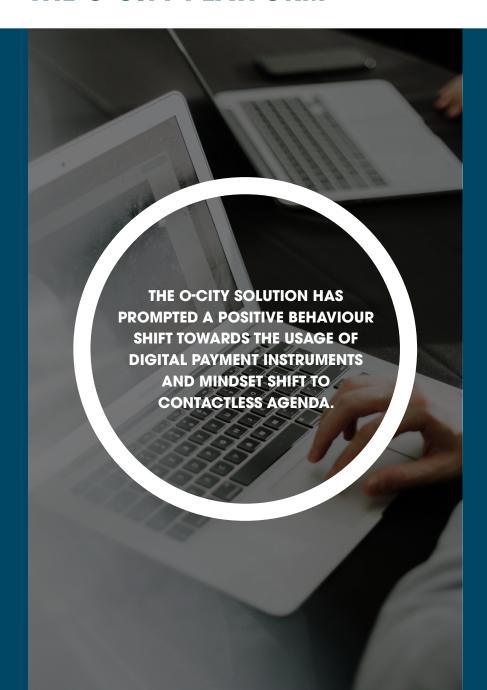
O-CITY by BPC allows educational establishments to bring together all partners in a single ecosystem, providing a 360-degree view of services for the establishment and its students. The platform allows establishments to invite partners to connect their solutions into a single and portal for all interactions with students, offering a virtual 'city' environment students and parents can easily navigate through.

A central location does mean standardisation, however. O-CITY leaves room for personalisation of each space by the network of partners and for student preferences.

The gain in transparency is evident - all information is shared and all partners contribute to the life of the campus through a single platform. Facilities usage by end users can be analysed and coupled with student behaviour to promote underused facilities or better understand the popularity of others.



## THE O-CITY PLATFORM



The system offers open-loop usage, which means the key token can use any type of data and device to unlock a set of services. This allows students to use cards, digital tokens or any other smart card or device or dynamically generated QR code used as a key to access their campus services. O-CITY uses account based principles so all types of keys are tied to a unified account with linked information centrally stored on a server.

## The system can record and store data pertaining to:

- Services provided
- Issued books and materials
- Academic performance and attendance
- Medical indicators and recommendations
- Assignments and personal recommendations from teachers

## The O-CITY platform brings many benefits:

- A single database with protected use of student, parent, teacher and, campus data
- Easy management of third party partners
- Automation of services and payments
- Increased attractiveness of campus for partners and new joiners
- Centralised and easy introduction and management of policies and regulations
- Transparency with a 360-degree view of all interactions

# **FLEXIBILITY FOR UNIVERSITIES**

O-CITY is an easy to deploy platform which takes just weeks to adopt and is intuitive for end users, establishment employees and partners. It can be integrated into existing infrastructure such as access turnstiles, validators and scanners to accept new or existing campus cards, ID and other devices while using highly secure EMV technology.

The service is appealing to partners such as financial institutions, agents and sponsors as it can become a platform to offer additional services and generate new revenues for the campus.

Any edits to the platform can be done at a central level, offering flexibility and efficiency to campus employees. The account-based nature of O-CITY accepts changes from the issued token or ID card of the student, improving management of policies and rules around the campus, student management, and security. All the configuration of parameters is done from the server and against the customer account (or a group of accounts in case of bulk change) and is implemented as per the system administrator activation date and time.

## **EXAMPLE:**

Specific benefits can be set on catering for students of different segment categories during holidays, other dates or at specific times.



# **FLEXIBILITY FOR UNIVERSITIES**



#### UNIFIED SCALABLE NETWORK

Being a scalable solution built for ecosystems of different scale from city-size to country-size, all educational institutions operating on the platform can be joined together in a unified system with common standards and tools, IDs and cards for campuses. The multi-institution principles of O-CITY allow for the creation of a unified network for different schools, institutes, and universities.



#### **CROSS INSTITUTION SERVICES**

With agreements and connections between educational entities, the O-CITY platform can be used for cross-institutional benefits and services such as school bus sharing, sports club facilities, libraries, and attendance of seminars, improving the integration of student and graduates into campus life, as well as making the educational sphere more attractive for ecosystem partners to participate in.



#### HIERARCHICAL CONTROL

Hierarchy management and control through O-CITY allows for the establishment of complex hierarchies with users given access rights based on their roles and institute. The platform allows for differentiation of access policies by criteria such as age, location, demographic characteristics, educational characteristics, and attendance. The availability of certain data is configured for each user of the system, depending on the tasks and requirements assigned.

- Student
- Parent
- Teacher
- Administrative staff
- Other roles

The system has no restrictions on creating the necessary roles for organising access and processes and receiving data.



# **FLEXIBILITY FOR UNIVERSITIES**



#### **EASY INTEGRATION**

The O-CITY platform is delivered with a set of open APIs that provide the possibility to integrate with available web portals and mobile applications for student application processing, extracting activity history logs, and transactional data exchange.



#### FLEXIBLE ACCESS MANAGEMENT

Entities can set permissions for students in groups or individually depending on assigned access rights. Available facilities are defined in the system as a service. Administration of the educational entity has the freedom to configure service availability and prices depending on the user rights.



#### **ACCESS TO BIG DATA**

Thanks to digitisation of access keys and IDs, all activities and entry/exit attempts users (students, administrators, or other personnel using ID tags linked to the system) can be tracked in the system web portal, irrespective of whether the attempt is successful or not. This tool provides valuable data which can be analysed and used to optimise campus catering, usage of facilities, and other resources.

## **EXAMPLE:**

The configuration of the O-CITY system allows setting of logic and parameters for swimming pool facilities that can be set to be used by the students free of charge from 4p.m. till 7 p.m, while between 7p.m. and 10 p.m. a fee will be applied.



## MODERN TOOLS FOR QUICK ADOPTION

#### VARIOUS ACCESS TOOLS

As an open-loop, modern solution, O-CITY supports various access methods increasing accessibility and ease of enrollment. The key can be issued as a card for those who prefer a physical key, or as a mobile application with access, or both.

As information about student privileges, permissions, and access policy is stored on the server, the card, token, mobile device or QR code play the role of key to access the server-based information. The purpose of the key is to uniquely identify the holder. The following media devices can be used as a key:

A single 'card' can be:

- a personal identifier of students and teachers
- a means of payment (kiosks, food, services, transport, etc.)
- an access control (campus, swimming pool, seminars, etc.)
- an accounting tool

#### **BANK CARD**

The bank card can be used as a key token without any additional application or changes in the personalisation process on the bank side. The student enrols in the university with the card details that results in the card usage within the university/school facility as per its processes and rules and enabled services.

#### CLOSED-LOOP CARD

Being built with hybrid qualities, O-CITY supports issuance of closed-loop cards. The personalisation process may include cardholder photos printed on the card. Closed-loop cards will be processed on equipment and resources connected to and maintained by the platform or an integrated partner network only.

#### **VIRTUAL CARD**

O-CITY has built a mobile application that is designed for Android-based mobile devices. The virtual card stored in mobile applications can be used contactlessly with NFC technology, allowing students to tap on a validator or other terminal.

#### **OR CODE**

The O-CITY mobile application can be configured to generate dynamic QR codes, which can be scanned on the validators with the respective scanners. QR code as a key is provided for both iOS and Android-powered devices. It contains user ID, expiry time, and a digital signature generated and provided to the application online through the central server, where all information is kept.

#### **FACIAL RECOGNITION**

The access key becomes the cryptogram generated as the result of facial recognition. The validator scans the user's face, validates the picture on the server and if successful, validates the user's operation.

## MODERN TOOLS FOR QUICK ADOPTION

#### **WEB PORTAL FOR PARENTS**

Being a flexible and user-friendly platform, O-CITY can be used by parents of students as well. Parents can configure notifications and monitor their child's activity based on the subscription rules configured through a convenient web portal. Within the system they can track a student's bus boarding time, entry, catering and other information.

#### **NOTIFICATIONS**

The notification engine provides the possibility to configure notifications based on service usage. The following notification methods are supported by the platform:

- Push notification
- SMS notification
- Email notification

Parents can transparently see and manage spending for small children, ensuring healthy food consumption for example.

#### MODERN E-LEARNING ENVIRONMENT FOR TEACHERS

Teachers can be provided with a configurable e-learning portal where they can assign the tasks for students and grade their homework. Teachers are allowed to design how additional information is linked, granting the student access to the information for better education.

#### **EXPERIENCE SHARING**

In addition, teachers can exchange knowledge and practice with teachers from other schools and regions for professional development through the customisable e-learning portal.

#### REPORTING CAPABILITY

All grades, attendance figures, facilities usage and other statistics can be aggregated into reports provided to teachers and parents on a daily, weekly, monthly or yearly basis.





# **APPEALING TO PARTNERS**

#### SCALABLE PARTNER NETWORK

The O-CITY solution is built with the ability to extend and scale. It supports unlimited additions of partners to its ecosystem, which makes its ideal for inviting additional partners into a network, such as independent libraries, museums, swimming pools, catering or other facilities useful for students.

#### ADOPTION OF DIGITAL PAYMENT PRODUCTS

Adopting the O-CITY solution on campus improves its attractiveness to partners, especially issuers of cards such as banks. The platform supports closed-loop issued cards as well as open-loop local bank or internationally branded plastic cards, which means the campus can become a place for digital product adoption, enrolling young customers to banking and digital products early. The platform provides the possibility to establish the payment infrastructure within the school/university such as:

**BANK ACCOUNT.** When students use a standard bank card the bank account can be used as a funding source, thus enrolling students to other ecosystem player digital products

**WALLET ACCOUNT.** University/school can maintain the account for each student through the O-CITY platform, who can use the funds on the account to pay for incampus services. The wallet account can be topped

up using several options, such as online using bank cards/accounts or kiosks either managed by the O-CITY platform in campus or the agent partner network.

#### **CASHLESS AGENDA**

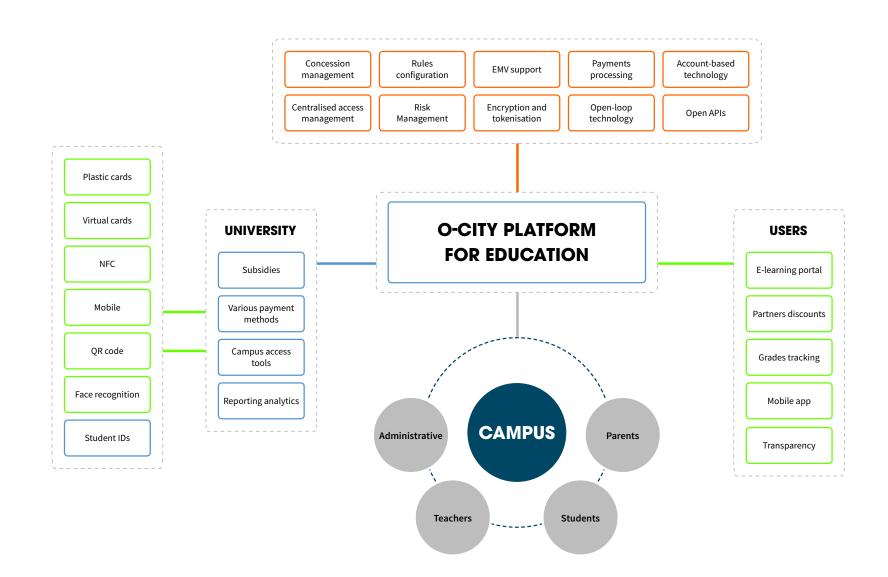
Entities delivering services can be moved to contactless operations, driving the cashless agenda for students using the facilities. School/university management can configure different pricing rules to manage facilities efficiently and provide students with convenient and attractive services.

- Subscription-based
- One-time purchase
- Purchase in small batches

The O-CITY automated fare collection engine provides the possibility to configure tariffs based on the student category to accommodate groups of students that receive special subsidies from government or grants provided by the school. This feature provides a convenient option for automatic charging.



# O-CITY PLATFORM FOR EDUCATION



## **RICH FUNCTIONALITY**



Leveraging the expertise of our parent company BPC, an award winning payment provider with more than 25 years of experience, O-CITY experts possess considerable expertise and knowledge about payments automation while the solution combines all modern methods of security, payments of fares, and technology to support necessary infrastructure and provide universities and educational facilities with robust systems and services for students, teachers, and campus participants.

#### **FOR UNIVERSITIES**

- · Campus access system
- Concession management
- Campus app
- eLearning portal
- Grading and performance tracking
- Task management
- Configurable definitions of facilities and student categories
- Various fare media types acceptance
- Encryption and tokenisation
- · Payments processing
- Customer support services
- EMV support
- · Risk management
- Claims management
- Big data analytics
- · Historical reporting
- · Tariff management
- Lists management
- Ease of enrollment and integration
- Web application
- Centralised platform management
- Cross-institution services
- Hierarchy management and control

#### FOR END USERS

- Web portal with interface
- Mobile application
- Transparency
- Partners offers/discounts
- Tracking of activities
- Reports and notifications
- Quick recovery of ID tag
- · Various access medias

#### **FOR PARTNERS**

- Acceptance of agent devices
- Acceptance of payment schemes (Visa, Master, Meeza, Amex, Diners)
- Improvement of network
- Open APIs
- Easy integration





