Transit sector payment acceptance needs are changing fast

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Major changes are underway in how consumers wish to pay for goods and services around the world, and this is having a massive impact on all merchants, but especially for transportation operators.

The latest UK statistics reveal that cash usage is in fast decline. Between 2016 and 2021, the use of cash for payments had dropped from 40% down to 15%, with consumers using contactless for 71% of all transactions, representing a volume increase of 13.5% over the previous year. As transit is a high transaction volume, low value sector, this transformation is especially important. A recent survey commissioned by Visa showed that 91% of respondents expected public transport authorities to accept contactless payments.

# What types of business are included in the transit sector?

This sector includes a wide range of transportation types, including taxis, trains, buses, coaches, ferries, aeroplanes, cars, road tolls, bicycles, and more recently scooter rentals. These are operated by a mix of public and privately owned organisations, which vary considerably in size, from independent traders to fleet operators and large corporations, municipal authorities and even government departments.

Why is change happening?
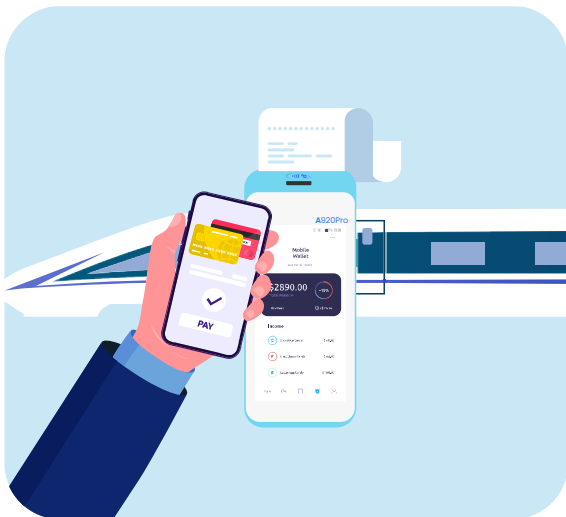
COVID-19 was undoubtedly an accelerator in the switch to contactless. Digital payments offer both consumers and transport operators many benefits. From a consumer perspective this includes time savings, increased convenience, reduced crime, float savings and improved expense tracking. Service providers recognise that digital payments reduce theft and pilferage, deliver labour savings, provide enhanced customer data and deliver a better customer experience. Both sides appreciate the benefits from reduced friction in the payment transaction.

Transit operators are shifting to greater use of self-service, with customers increasingly buying tickets at kiosks, from ticket dispensing machines and other formats of unattended devices, as well as initiating payment at card acceptors located at entry points and exit gates. This is being driven by the need to reduce staffing levels and reduce operating costs. Buses are increasingly removing the option of paying by cash.
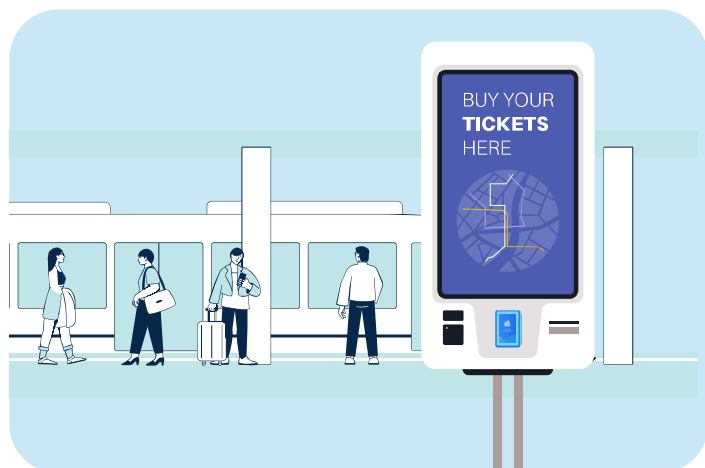
Most transit authorities made the decision to move from closed loop to open loop payments because they no longer wanted to bear the cost of managing a payment scheme in-house. Additionally, new fare types (and dynamic pricing) are being introduced to respond to changing journey patterns. Open loop payment systems use regular bank cards and the correct fare is calculated after the customer has tapped in and out at both ends of the journey. A newer demand is to support multi operator fare capping,

allowing a single fare to be paid when travelling across a combination of transit networks which may even be managed by different providers.

Payment acceptance needs to be fully integrated with other systems, as this reduces the opportunities for errors and shrinkage, speeds up transaction times, allows data sharing, and enables hardware devices to be shared by several applications.

Governments are encouraging these change as it drives higher tax revenues, captures better customer data, supports social responsibility, reduces the amount of subsidies needed, forms a key part of smart city initiatives, and enhances the rider experience for consumers.

What is needed from a payments acceptance device?

Transportation operators have multiple needs when selecting a new payments acceptance device. Some of these, like security and PCI compliance, are the same as for all merchant categories but others, like faster transaction processing, have heightened importance. A fraction of a second's extra processing time will quickly result in lengthy queues forming at ticket barrier gates or when boarding vehicles.

High reliability is paramount as passengers will be unable to travel, or be charged the incorrect fare, if acceptance points are not working. Terminals must be engineered to operate in high throughput environments, use high quality components, eliminate points of failure, support remote device management, to reduce downtime. Acceptance devices are frequently used away from a fixed location and so fast wireless or WiFi communications and a long battery life are other necessities. Providers are required to offer a range of accessories including docking cradles, recharging stations and holsters.
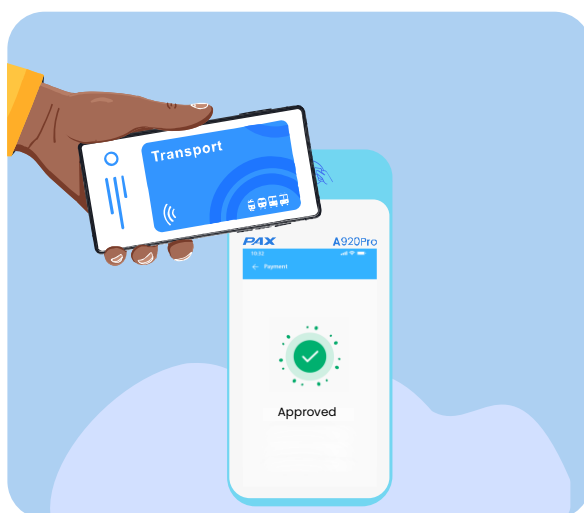

Furthermore, digital wallets, like Apple Pay and Google Pay, need to be supported, meaning the necessary NFC reader (with optimum reader and antennae positioning), software and certifications are required.

A balance needs to be applied to choosing the right level of Protection to Impact (IK) and Water Resistance (IPX). It should be recognised that in the transit sector, the devices will often be used in an attended or semi-attended environment and so may not demand the highest rating levels, which attract a pricing premium.

Usability is critical both for the operator and customer, and this requires the right combination of hardware capabilities and software design. Large, colour, touch-screen displays, coupled with a well-

designed user interface are needed in order to deliver a great user experience (UX). Payment acceptance devices must also be usable by those with special accessibility needs.

Additionally, payment terminals need to be able to read barcodes and QR codes in order to support alternative payment methods, like Alipay, plus paper tickets, coupon redemption and for other types of value-added-services.
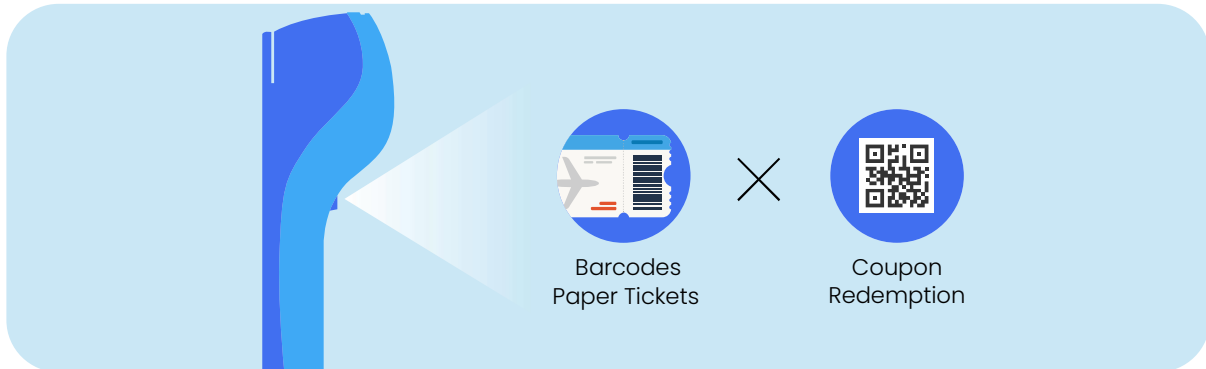

What are some of the key use cases?

Transit operators have developed an extensive range of use cases that align with the needs of their customers and business. These maximise the capabilities of Android powered SmartPOS terminals. The most popular is to run a smart ECR application on the same device as the payment application removing the cost of hardware duplication.

For taxis, the provision of digital receipts which can be delivered by text message or email has become an important feature. Train operators are using portable payment terminals to validate fares/tickets, process onboard ticket sales and allow penalties to be paid on the spot, all through a single device.

Airlines also have developed a wide variety of use cases including for in-flight duty-free purchases, the onboard sale of high profit margin digital services like theatre shows and excursion packages, crew scheduling purposes, to grant access to passenger lounges and more recently for compensation payments in the event of flight delays. These coupons can also now be redeemed after a passenger has completed their journey.
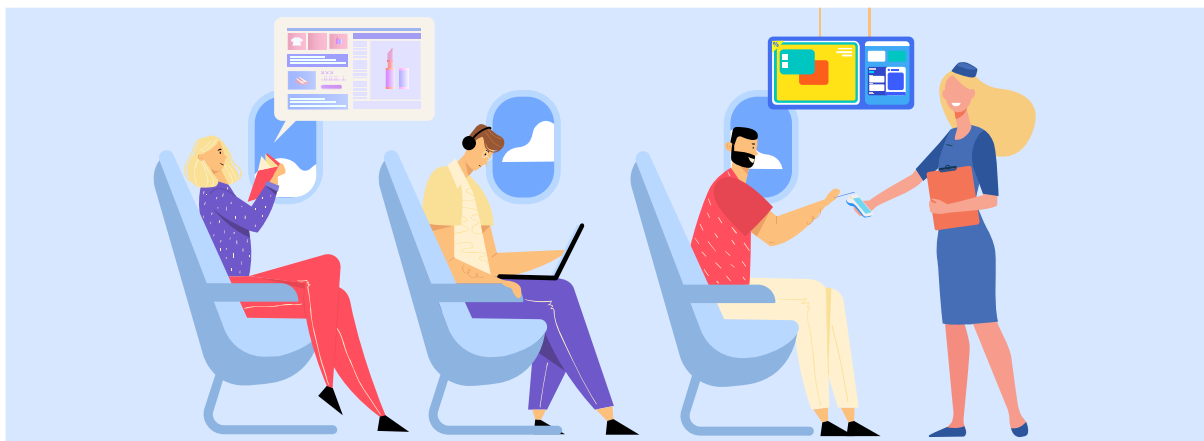
New transit sector use cases are constantly emerging including for in-vehicle payments and eCharging.

The PAX perspective

We recognise the significant changes taking place in the transit sector from a payments acceptance perspective, and are excited by the opportunities presented. Each sub-sector has its own slightly different needs and challenges, and that is why we pay so much attention to establishing a comprehensive network of partners who specialise in this space. These include independent software vendors (ISV), kiosk providers and system integrators. We also work closely with payment gateways and acquirers who have a transit sector focus.

PAX Technology designs products to deliver maximum value & future proof investment for customers. Apart from being beautifully designed and looking great, they are easier to use, and offer high reliability & security. PAX products come packed with many advanced technical features that open new opportunities.

In the transit space, we recognise the critical need for longer battery life, extremely quick transaction processing, fast wireless communications and large displays that incorporate advanced touch screen technology. Our Android SmartPOS terminals, such as the popular A920Pro, include fast Arm A53 quad core processors, 4G wireless communications, high-definition cameras and barcode readers (5MP & 8MP) and large (5.5") displays. PAX models have been deployed by many train operators and municipalities around the world.

PIN entry can be made directly onto the glass display of our SmartPOS models thanks to PAX Technology's high security design and PCI certification. This avoids the need for a separate PINpad to be purchased. Our accessibility mode, developed in conjunction with visual impairment user groups, helps those with special needs.

For kiosks, the IM30 UPT, an 'All-inOne' unattended payment terminal model, offers many advantages over modular unattended products, as it packs all the features requested by transit operators into an attractive single unit and offers simplified installation/upgrades.

The introduction of value-added-services requires a powerful mobile device management and app store which we provide through the independently recognised market leading MAXSTORE. Our GoInsight application delivers in realtime the business intelligence needed by transit operators.

We have a comprehensive range of models for use by transit service providers. The global PAX community looks forward to discussing the value we can deliver from our advanced products and services. Please do get in touch to arrange a conversation and demonstration.

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