

City Pass Combination Smart Card Solution

Background

Red Crater's vision for Combination Smart Card Solutions is that Smart Card technology will be used strategically to support business growth and enrich customer experiences.

Smart Cards offer huge benefits as a strategic tool for combining multiple uses into one technology. For example any combination of identity, bus passes, parking, event tickets, discounts, cash on card, loyalty, building access and computer access can be combined onto a single Smart Card. Because their electronic chip enables data to be stored on the card separately, several discrete applications can all be contained on one card but not be accessible to each other. This ensures complete privacy of data on the card which protects both vendors and customers, and allows solutions to be added onto the card incrementally and in a cost-effective manner.

Red Crater specialises in designing, developing, delivering and managing such highly secure yet extremely flexible Combination Smart Card Solutions. While we can build total systems from new, we can also provide complete hardware and software solutions that integrate with pre-existing Smart Card applications (e.g. bus passes, student identity cards).

The City Pass Concept

Promote your city as a vibrant and attractive place to visit or live, and help grow your economy with a Smart Card City Pass. Encourage people to take a bus to work, exchange their library books, buy tickets to a production at the local theatre, redeem a free coffee, use the public swimming pools, and enjoy a night out on the town with free secure parking, by making such offerings all possible on the one Smart Card City Pass.

A Smart Card City Pass provides the tool to help strategically manage the growth of your city by using an integrated system to increase the use of public transport and city facilities, attendance at events and attractions, and spend in retail and hospitality. It can be used either city-wide for a wide range of complementary businesses and services, or more intensively in a focused market sector such as a shopping mall, entertainment district, in relation to a significant city event or for a specific promotional campaign.

Red Crater are the experts in developing fully integrated Smart Card solutions either from new or that build upon any pre-existing Smart Card systems already in place. Most cities already have Smart Card technology in use somewhere such as for student/corporate identity, or bus passes. Red Crater has the unique expertise to create Combination Card Solutions to enable existing Smart Cards to be used for additional services. This vastly increases return on investment as the uptake of new services gains momentum. For example, the number of Smart Cards used for public transport is greatly increased by capturing tertiary students that have Smart Card ID cards.

A Smart Card City Pass can include:

- Public transport passes (increase your use of buses, trains and ferries with Smart Cards which provide pre-paid ticketing and fast entry – just swipe and board!)
- Parking (pay and display and boom-gate operated – pre-paid, faster, reduced cash handling costs)
- Access to city facilities – libraries, pools, theatre, galleries etc
- Events and attractions – combined transport, ticketing, streamlined entry and cashless payment
- Student and corporate identity – combined identity, building access and transport or parking entitlements
- Loyalty – encourage people to do business within your city by offering benefits (discounts, loyalty credits, spot prizes, free passes etc) based on use of public transport, city facilities or purchases made.

Overseas Examples

The Hong Kong Octopus Card is perhaps the most successful adoption of Smart Card technology for city use in the world. Launched in September 1997 there are now over 19 million Octopus cards in circulation. The system handles over 10 million transactions each day worth HK\$90 million and there are more than 50,000 contactless Smart Card readers deployed, making their system the largest contactless card programme in the southern hemisphere. Over 2000 service providers accept the Octopus Card, 95% of the population aged 16 to 65 possess the card, and it has extended beyond public transport to carparks, fast food outlets, convenience stores, supermarkets, vending machines, pay phones, leisure facilities, schools, and in non-payment uses such as building access.

London's Oyster Card is a contactless prepaid travel card operated by Transport for London to allow everyone to travel across the London public transport system without using cash. The card can be used on all modes of London transport including; the London Underground, trams, buses, District Light Rail (London Overground) and some National Rail services. The Oyster Card was launched in 2003 and there are now 18 million cards issued. 80% of the nearly 10 million daily train and bus journeys use an Oyster card. It is accepted by 4,000 retail outlets mainly newsagents, with 20,000 Oyster card readers deployed across the network. The Smart Card readers read and write over 10 million contactless taps per day making the Oyster Card the largest contactless card programme in the northern hemisphere.

The benefits of both the Octopus and Oyster Card programmes are multiple in terms of streamlining travel, reducing queues, minimising cash handling, reducing the possibility of fraud by customers and cash theft by staff, improving customer experiences and increasing their spend, thereby collectively growing the city economies. These cities have not only reduced the annual operating costs of their transport ticketing systems but have the added advantage of accumulating interest on the unused prepaid monies sitting in their accounts. Developments planned for the future include upgrading the terminals to read and write chip based card payments including Europay, MasterCard and Visa for card payments, and Near Field Communication for mobile payment services.

Red Crater's Approach

The Octopus and Oyster card programmes are definitely at the large end of the scale. However, City Card systems need not be so complex, particularly at the outset. For example, Red Crater has developed a Smart Card system which extends the use of Waiariki Institute of Technology's student ID and building access Smart Cards, to incorporate bus passes and print/copy control. Waiariki are currently looking at extending the use of these cards further to also include gym membership.

Red Crater encourages any city considering Smart Card technology for a particular use, such as transport ticketing, to become aware of where else Smart Cards are being used within their city and how strategically combining uses onto a single card can provide greater benefits to all. We provide the expertise in designing, developing, delivering and managing such flexible Combination Smart Card Solutions that can be built incrementally and therefore cost-effectively.

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