

Successful deployments of ticketing solutions

||||| Worldwide implementations of contactless transport payment systems



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Gemalto helps transport operators to provide and reliable contactless payment systems



Public transport users are looking for a convenient and speedy service, this includes how they pay for and access the bus, tram or train, while transport operators' want to provide high level of services to their customers, optimizing their fare system to generate additional revenues, have a robust ticketing system and reduce fraud. Contactless technology gives both parties peace of mind thanks to interoperable ticketing systems that also help limit city congestion.

The success of the first contactless deployments for mass transit ticketing has led more and more transport operators to choose this technology for its reliability, security and ease of use.

Gemalto's over 10 years' experience in contactless, unrivalled industrial capabilities, worldwide coverage and commitment to innovation make that more operators are relying on us to supply for a transport solution to fit their needs.

Gemalto has been providing transport operators with products and services for the main and most ambitious transport deployments in the world from late 90s. Paris, London, Netherlands, Santiago de Chile, São Paulo and China are just some

examples of the successful integration of Gemalto technology within worldwide transport infrastructures.

Paris transportation gets 21st Century smart card ticketing

Paris' urban transportation is reputed for its flexibility and ease-of-use. The secret is probably a unique combination of underground (Metro), extensive municipal and commercial surface bus lines, and wide local rail service.

As the city is successfully preserving the traditional, local flavor of the Metro, it is also continually investing to meet the ever-increasing stresses of a growing, fast-moving modern city.

Gemalto has been one of the major suppliers of Paris' "NAVIGO™" project for cards and personalization services since 2000.

The NAVIGO™ pass uses Gemalto's dual-interface (contact and contactless) smart cards with Calypso* microprocessor technology. The card is personalized with a photo ID, a name and electrical data and then mailed by Gemalto.

With more than 1.5 million cards in circulation and increasing fast, NAVIGO™ passes are usable right across the urban region's metro, bus, and rail systems. The first cards, launched in 2000, comprised various staff passes for current and retired personnel of the RATP (metro) and SNCF (rail) and suppliers (150,000 units). Implemented since 2001 to replace the Carte Intégrale (annual passes for adult commuters, roughly 300,000 units), the card was also made available in 2002 to students eligible for the Imagine "R" passes (700,000 units). From 2006, the Paris system delivers monthly passes such as Carte Orange, Mobilis, Paris Visite, and even the 10-ticket booklets. An expected volume exceeding 3 million is anticipated.



Travelers go smart in London

London's PRESTIGE project is one of the largest contactless smart card initiatives in the world, changing the way people pay for travel on the Tube, bus, DLR and Tramlink. Smart card technology has been the key to Transport for London's ground breaking ticketing and payment program covering the British capital's public transport network.

From the project's conception in the mid-1990s by the prime TranSys consortium partners, EDS and Cubic, the smart card, branded Oyster®, has been positioned as the public face of the new London ticketing system.

Oyster® means no more queuing and is quick and easy to use and recharge. In fact, Oyster® is the smartest way for customers to travel around London. Gemalto is a key supplier to TranSys, providing over 5 million cards to the scheme since 2002. Since their first full deployment in mid-2003, Gemalto contactless cards have helped smooth urban transport for over 8 million passenger-trips a day on London's public transport network. Oyster® cards are currently used for concession passes, weekly, monthly, and longer period Travel cards as well as a flexible prepaid stored value e-purse facility which enables automatic payment for single journeys. Some 16,000 smartcard readers give Oyster® card holders access to the world's largest and most complex urban-transport system, including some 273 Underground stations and over 8,000 buses.



Seamless integration of all transport means across the Netherlands

The Trans Link Systems project in the Netherlands is the world's first deployment across an entire country involving different means of public transport. Trans Link Systems is an initiative of five major public transport companies in the Netherlands: Nederlandse Spoorwegen (NS), Connexion, GVB (Amsterdam Municipal Transport), RET (Rotterdam Electric Tram) and HTM (The Hague Tramways). This alliance serves more than 80% of the Dutch public transport market.

Conducted by Trans Link Systems and the East West consortium, the program involves 300,000 to 1.4 million contactless cards for the pilot phase, out of the total 12 million cards to be deployed.



Gemalto was selected by Thales, partner in the East West consortium to provide smart cards of its e-ticketing solution and the associated personalization services. One single contactless card will allow the citizen to equally access ferries, buses, metros, trams or trains to travel across the country. More than two million passengers per day are expected to use the national transport once the project is fully implemented.

SPTrans, Brazil: a leading transport project in Latin America

With one of the world's busiest transport networks, SPTrans of São Paulo chose Gemalto to provide a contactless solution which turned the fare collection system in one of the most modern in the world and dramatically reduced the problem of fraud.



Selected in the project, as early as 2002 to supply the first contactless cards for retired citizens. Gemalto has delivered a total of **over 5 million cards** so far.

Thanks to the great success of the deployment on the bus network, it was later adopted for the underground service in 2005.

Today over 16,000 vehicles are equipped and there are 1,500 points of recharge to serve 6 million commuters daily.

Why Gemalto

- Local card manufacturing and personalization
- High quality cards
- Reliability of supplies

Transantiago, Chile: Smart tickets become integral part of new bus and metro network

The renovation of the Chilean transport system started by the implementation of the contactless project on the underground network with more than 300 terminals and 160 re-load points of sale in 2003, successfully extended for Metrobus with Multivia cards achieving 1 million units during 2004.

Today, in addition to the underground, 8,500 buses are equipped with contactless readers. The 5 million daily travelers can reload their cards at stations or at one of the 900 shops around the city. In 2006, Gemalto is delivering around **4 million cards** for Santiago transport system.



Why Gemalto

- Successful transport roll-outs such as SPTrans
- Innovative semi-transparent card body delivered in a short timeframe
- Capacity to handle complex projects involving banks and a technology integrator;
- Local manufacturing and sales presence

China

Gemalto has been present in the Chinese market and has contributed to many transport projects for over 10 years. Being a country of early adopters of contactless technology, Gemalto has helped to deploy the world's first programs and has delivered several million cards across China. Cities such as Beijing, Guangzhou, Chongqing, Chengdu, Zhuhai, Dalian, Hefei, Zhenjiang, Foshan, Anshan, and Macau use today Gemalto products and services for transport applications. Gemalto also provides solutions for road tolling applications with successful roll-outs in Jingzhu, Liaoning, South China Express, Chengyu, Henan, and Heilongjiang.

Why Gemalto

- Local manufacturing
- High quality cards
- Complete solution including personalization
- Lead-time delivery second to none



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