New era for transport with cashless smart card

✓ **No Cash**　✓ **Less Risk**　✓ **No Problem**

If you've ever made use of public transport, close your eyes and imagine a world where commuters are able to tap a smart card to pay for all their transport – whether on a taxi, train or bus. Now open your eyes and watch as SANRAL, with the Department of Transport, launches a contactless, cashless Account-Based Ticketing (ABT) system.

Integrated travel is a critical success factor for sustainable public transport systems, and interoperable fare collection systems are emerging globally as key enablers of multimodal, integrated travel. As a major contributor to South Africa's knowledge economy, SANRAL is spearheading innovation that holds massive benefits for both transport operators and commuters, using the Mobility Account hosted at SANRAL's Transaction Clearing House (TCH) as the key for interoperable fare collection functionality.

If you're battling to wrap your head around this, it simply means that SANRAL has developed and successfully tested this innovative fare collection system to enable commuters to use a smart card to pay for different modes of public transport. This will eliminate the need for multiple cards, paper-based ticketing or carrying cash on journeys. It furthermore offers a host of benefits to transport operators, including cost savings, simplicity of operations, quick multimodal integration and public transport subsidies, to name a few.

At a time when social distancing is the new phrase of the day, smart technology that supports this effort with practical applications becomes seriously impressive. Once we beat the coronavirus and reclaim our streets, the daily commute could be poised to enter a new and modernised era.

HOW WILL IT WORK?

It's simple. Commuters purchase a card from any public transport provider or "Travel Card" issuer. The card will have a unique identifying number linked to a "Mobility Account", into which they can transfer money via electronic funds transfer (EFT), set up a monthly debit order, or top up the funds via vendors and retailers – like buying airtime for your mobile phone. This is similar in concept to

This one card works across all public transport services and will be accepted by all participating operators.

the current collection of tolls via an e-tag, and uses technologies which already exist.

Validators fitted in the bus, minibus taxi or at the station gates allow commuters to tap their card to pay for their journey. This one card works across all public transport services and will be accepted by all participating operators.

This ABT system has the potential to eliminate the use of cash, reduce operating costs and improve fare collection efficiency for transport operators and the millions of commuters who rely on public transport in South Africa.

For transport operators – such as taxi owners and bus or train operators – a passenger's fare is calculated and deducted from the card at the time of travel. The operator submits these transactions to SANRAL's back office at the TCH, whereupon SANRAL debits commuters' Mobility Accounts

and reimburses the operator for all transactions submitted. This differs from the current system, where operators each issue their own proprietary fare media and manage each system individually, with no interoperability or integration between the different modes of transport.

Once the new technology is launched, commuters could sidestep the hassle of long queues and

manage their own travel costs more efficiently. Operators and regulators could look forward to operational cost savings and improved reliability and security in their business. And that's not to mention the job creation possibilities in the informal sector, as vendors will be trained and equipped with hand-held devices on which to top up commuter cards and Mobility Accounts.

This smart solution could take the pain and risk out of the daily commute for thousands of South Africans, allowing them to get from A to B as quickly, safely and efficiently as possible by using one card to pay for fares on all public transport services.

It's just another way SANRAL is improving our roads, one kilometre at a time.

Fact Box

INTEGRATION SIMPLIFIED

SANRAL's Transaction Clearing House (TCH) system can provide participating public transport operators with functionality and services whereby, in an integrated network, all operators utilise the account-hosting and transaction-processing services provided by the SANRAL TCH to collect fares for ridership services provided to commuters.

To achieve a fully integrated solution for fare management, the following forms of integration are being considered:

- **Fare Media Integration**
  Interoperable fare media describes different fare collection systems that are able to accept the same fare media. For example, a commuter may use the same card to pay for a ride on a taxi, bus or train operated by any number of operators. However, this implies that the use of each operator's service is paid for individually.

- **Fare Structure Integration**
  Future developments could include compatible fare structures (such as flat fare, distance-based, zonal, or time-based fares) by different transport operators. This ensures that commuters are presented with potentially simple and consistent fare schemes throughout a region, thereby promoting public transport acceptance by users.

- **Fare Integration**
  This is the ability to charge a commuter once for a journey that uses the services from more than one transport operator. For example, a commuter travels by bus to a train station where he/she transfers to a train to complete the journey, but only pays once for the combined journey from start to finish.