

# Gauteng Freeway Improvement Project and Open Road Tolling



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# Introduction – Tolling & Standards in South Africa

- ◆ First (modern) toll plazas – mid eighties
- ◆ Tolls mostly non-urban
- ◆ However, with introduction of urban tolling – need to implement best practice
- ◆ In 2000, SANRAL went through a process to determine international best practice w.r.t. electronic toll technology.
- ◆ Objective – to achieve a single standard and promote interoperability throughout South Africa



# Platinum Toll Road – First ETC Rollout

- ◆ 2001 – Platinum Toll Concession awarded
- ◆ Included urban tolling
- ◆ Required ETC standard – selected to be national standard
- ◆ 5,8 GHz CEN 278 adopted



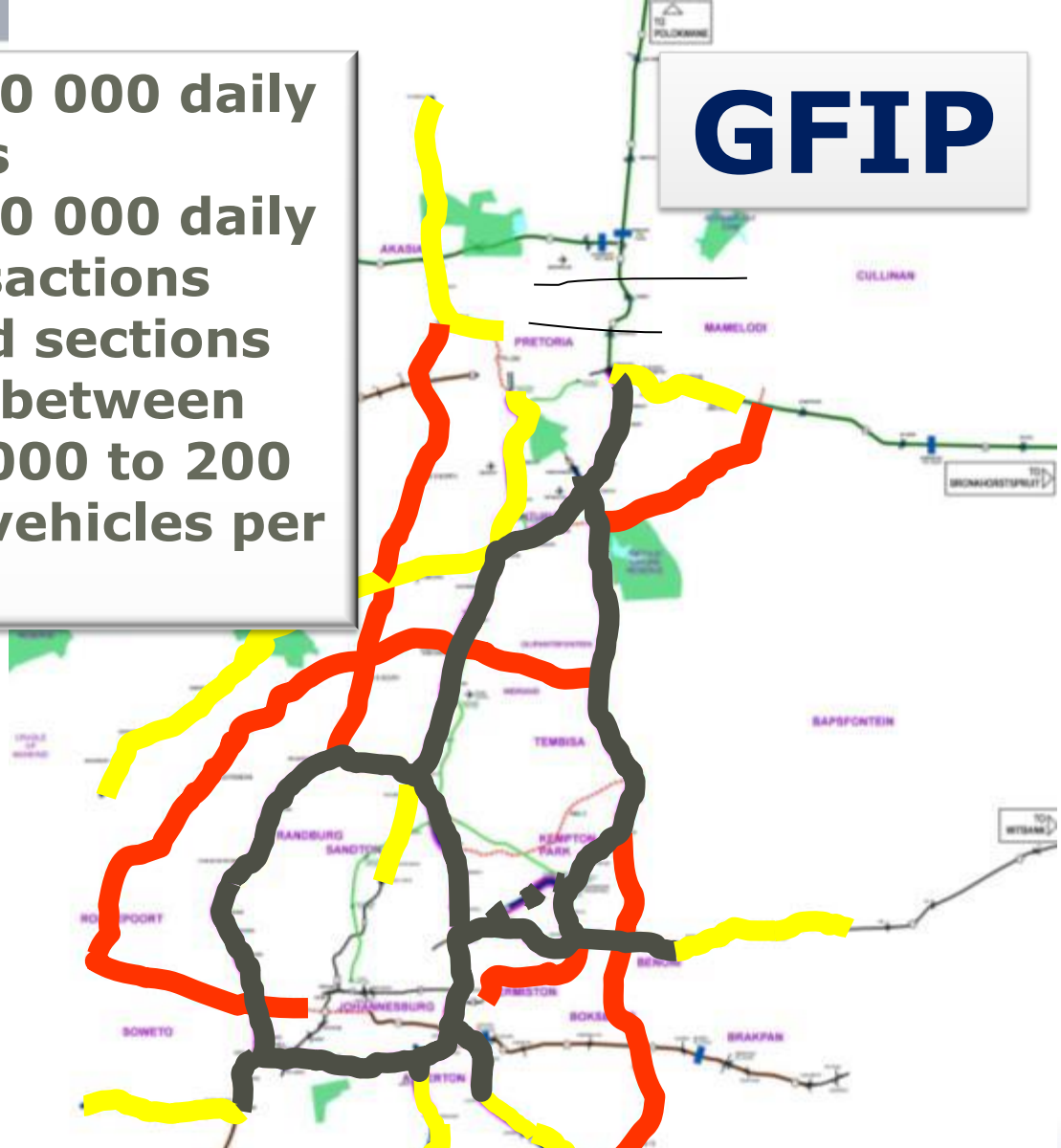
**PLANNED  
LANE  
ADDITIONS:  
201 km  
(2012)**

**FUTURE  
UPGRADES:  
(223 KM)**

**PLANNED  
NEW ROUTES:  
158 km**

- 1 000 000 daily users
- 2 500 000 daily transactions
- Road sections with between 100 000 to 200 000 vehicles per day

**GFIP**



**Open Road Tolling required !**

# Basic Concept for ORT

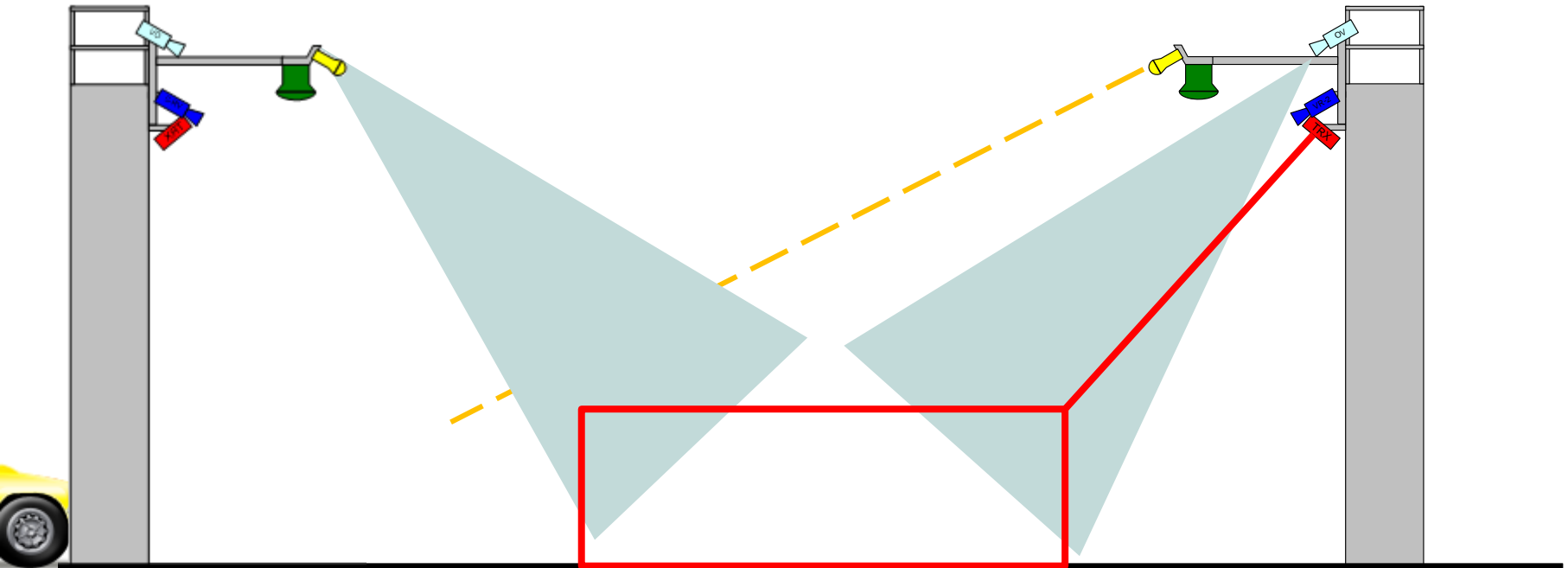
- ◆ Doing a toll transaction that requires:
    - Identification of the vehicle
    - Classification of the vehicle in terms of vehicle size
- all electronically without requiring the vehicle to slow down or stop.



**Reads the e-tag**

**Photographs the front of the vehicle**

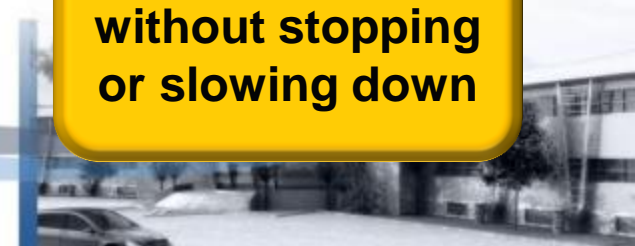
**Classifies the vehicle by volume**



**Photographs the back of the vehicle**

**Verifies that all details are in accordance with registered e-toll Account**

**Toll fees are paid without stopping or slowing down**





# Tolling Advantages

- ◆ Creates the ability to raise funds to construct, maintain, operate and expand a road
- ◆ In urban environment, it also has travel demand management objective:
  - Reduces the number of overall trips
  - Incentive for sharing trips
  - Reduces urban sprawl
  - Incentivise the use of public transport
  - Incentivise travelling outside peak hours by means of time of day discounts



# Gauteng Freeway Improvement Project (GFIP)





# Background

- ◆ Gauteng Province – 38 % of GDP
- ◆ Various economic studies indicated negative effect of congestion on Gauteng economy and standard of living
- ◆ Required an intervention – funding constraint
- ◆ Proposed in 2005 the GFIP to Minister of Transport
- ◆ Several approval processes including toll declaration process were followed in 2006/7
- ◆ Toll declaration concluded in March 2008
- ◆ Thereafter, project procurement was concluded and construction commenced



# Gauteng Freeway Improvement Project (GFIP)

- ◆ First phase of GFIP nearing completion
- ◆ Comprised:
  - 201 km upgraded
  - 585 additional lane km's
  - Estimated 2100 lane km's of final surfacing (asphalt/UTFC)
  - 34 interchanges were significantly upgraded
  - 4 new directional ramps (fly - overs)
  - ITS deployment
- ◆ GFIP has over 1 million users per day – use will continue to grow
- ◆ Was implemented through predominantly the issuing of SANRAL bonds









# Open Road Tolling



# Open Road Tolling (ORT) principles:

## Making payment of toll easy

- ◆ **National Central Transaction Clearing** – key principle for the implementation of ORT
- ◆ Achieve **single account** with multiple account units – central clearing of all transactions country wide where electronic tolling is/will become available
- ◆ SANRAL is the custodian of the **Transaction Clearing House (TCH)** – provides this service to concessionaires (Bakwena)





# Open Road Tolling (ORT) principles:

## Making payment of toll easy

- ◆ e-toll tags works already at Bakwena toll plazas
- ◆ As and when traffic demands, existing SANRAL toll plazas will be fitted with Electronic Toll Collection readers to allow same **e-tag** to be used at these plazas – less congestion and requirement for additional toll lanes – in implementation process





# Central Operations Centre

## ◆ National facility

## ◆ Open Road Tolling (ORT)

- Road side information from gantries
- ORT back office services
  - ◆ Manual processes if automated process needs to be clarified

## ◆ Transaction Clearing House (TCH)

- e-toll Account Management
- e-toll Call Centre

## ◆ Violation Processing Centre (VPC)

- Management of violations and outstanding toll



# Identification Options

- ◆ Register to be identified by your Vehicle License Number (VLN)
  - Only qualify for time of day discounts
- ◆ Register to be identified by an e-tag together with the VLN
  - E-tag is linked to a specific vehicle
  - Qualify for additional discounts



# Distribution of e-tags

## ◆ Retailers

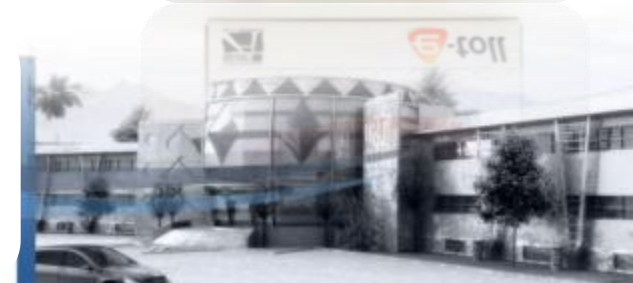
- Checkers,
- Pick & Pay, and
- Shoprite



## ◆ At e-toll Customer Service Outlets

- ◆ **Order** an e-tag on-line or through the e-toll Call Centre (delivery/collection options)

- ◆ Existing **Bakwena e-tag** holders must also register – however, they do not require new tag



# Why/how promoting fitment of e-tag

## ◆ Why:

- Cannot be cloned, linked to Vehicle Licence Plate Number, so cloned number plates will be identified
- Transaction cheaper, less manual processes

## ◆ Access to **discounts**

- 48% e-tag discount
- R550 (\$75 US) monthly cap for light vehicles fitted with e-tag
- Frequent User Discount



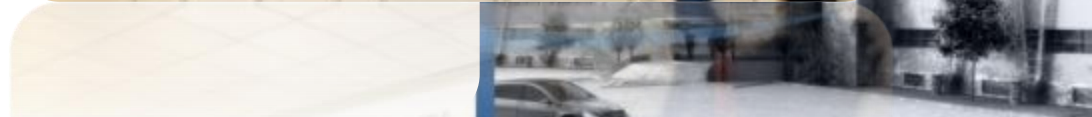
# Enabling Easy Registration

- ◆ **Web** ([www.sanral.co.za](http://www.sanral.co.za))
  - User friendly design to register vehicle/s and select a payment method
- ◆ Through contacting the **e-toll Call Centre** [0800 SANRAL (726 725)]
- ◆ Through various conveniently located **e-toll Customer Service Outlets**
- ◆ Obtain a registration form and **fax** the completed form to 0800 SANRAL (726 725) or **e-mail** to [info@sa-etoll.co.za](mailto:info@sa-etoll.co.za)





# e-toll Customer Service Outlets for the Initial Registration Phase



# e-toll Customer Service Outlets

## Permanent





# e-toll Customer Service Outlets Customer Centres near Interchanges



◆ **ITS and IMS**



# e-toll Customer Service Outlets

## Mobile Outlets



- ◆ Mobile enforcement post toll commencement (on road; at on ramps)



# Providing Various Payment Methods

## ◆ Prepaid Account:

- Transactions for the day are deducted directly from Prepaid Account, on condition that there is a positive balance

- Top-ups can be done:

- ◆ Manually

- At retailers
    - e-toll Customer Service Outlets
    - Electronic Funds Transfer (EFT)
    - In future at ATMs

- ◆ Automatic

- By linking a Credit Card or Debit Order, that will top-up the e-toll Account, once the low balance has been reached



# Payment Methods

- ◆ Credit Card Settlement Account:
  - Directly linked to your credit card – Master or Visa (only post paid option)
  - Transactions for the day are rolled up, and settled from nominated credit card



# Toll Challenges

- ◆ Tolling implementation in urban environment affects commuters – public opposition
- ◆ Affordability – big issue
- ◆ Developed options to lessen financial impact on commuters:
  - Exemption of qualifying public transport vehicles
  - Monthly toll caps
  - Frequent user discounts



# Toll Challenges

- ◆ Developed options to lessen financial impact on commercial users (trucks):
  - Extensive time of day discounts
  - Monthly toll caps
- ◆ Need good vehicle data from national vehicle data base
- ◆ Must have proper enforcement strategies in place
- ◆ Must have enabling legislation in place





**Thank You**

