Presentation by PRASA GCEO to the Select Committee on Public Services

Rail Investment Programme

Date: 30 July 2013
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• Strategy and Key Investment Plans
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  – Signaling
  – Station Modernization Programme
  – Depot Programme
  – Rail Extensions
The Primary object of PRASA according to the Legal Succession Act is to:

• Provide Urban Rail Commuter Services in the public interest
• Provide Long Haul Passenger Rail services
• Provide Long haul Bus Services

The Secondary Object of PRASA according to the Legal Succession Act is:

- To generate income from the exploitation of assets acquired by PRASA – giving due regard to Government’s Socio-Economic and Transport Objectives.

Responsibilities of PRASA

- To effectively develop and manage rail & rail related transport infrastructure and to provide efficient rail road based passenger transport within, to and from urban and rural areas.
Passenger Rail Agency of South Africa

PRASA GROUP

PRASA TECHNICAL

AUTOPAX

City to City Translux

METRORAIL (Commuter)

SHOSHOLOZA MEYL (Long)

FACILITIES AND PROPERTY MANAGEMENT

• Real Estate Asset Management
• Station/Facilities Management

INTERSITE ASSET INVESTMENT

• Leverage Investment on Key Assets
<table>
<thead>
<tr>
<th><strong>FACT SHEET</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Rail Network</strong></td>
</tr>
<tr>
<td><strong>Commuter Rail Network</strong></td>
</tr>
<tr>
<td><strong>Number of Metro Coaches</strong></td>
</tr>
<tr>
<td><strong>Number of MLPS coaches</strong></td>
</tr>
<tr>
<td><strong>Number of Buses</strong></td>
</tr>
</tbody>
</table>
| **Passenger Numbers** | Metrorail – 625 million passenger trips  
Bus Service – 3.1 million passengers  
SMEYL – 3 million passengers |
| **Total Number of Employees** | 16 260 |
| **Stations** | 370 stations  
Value of Assets R23bn |
Critical Role of Rail

- Effective Instrument for Social and Economic Development
- Economic Unity of the Republic - Union of South Africa in 1910
- Provide much-needed links between urban metropolitan and rural areas
- Movement of Goods and People
- Investment in rail infrastructure has a significant multiplier effect
- Engineering and other technical skills
- Rail Engineering creates significant direct and indirect jobs in the Economy
- Affordable transport for urban workers, the unemployed and Students
- Contribute to an efficient transport system (High-Capacity and Bulk)
- Fixed nature of rail enables cities to “defend” the urban form against urban sprawl
- With right investment and proper maintenance, Rail is the safest mode of transport
- Environmentally Sustainable – “Greenhouse gas emissions produced by a railway system are notable lower than those produced by road and air travel per passenger kilometer”.

Challenges of Our Railways

- Railway infrastructure and technology has reached the end of its design lifespan
- Poor levels of reliability and predictability
- High costs of maintenance
- Failure to contribute to an efficient transport system
- Inability to support economic activity
- Limited access to socio-economic opportunities for rural and urban poor
  - Long - Distances
  - Low – Densities
  - Low - Incomes

Economic and Structural Viability
Challenges of Our Railways .....Cont

• Investment in new rail rolling stock had been on declining trend for over three decades

  • The last new train sets were purchased in the mid 80s

• Currently, PRASA has 4 638 coaches for Metrorail operations,1 223 coaches & 124 locomotives for Smeyl operations

• The design and technology dates back to the 1950s

  • The technology is old and inherently obsolete

• The average age of the current coaches is 40 years while the life span of rail rolling stock is of the order of 46 years
Coach Age Distribution
within a 54 year Life Cycle Model

- 383- 10M Upgrades
- 110- 6/7/8M Coaches
- 4117- 5M2A Coaches
- Acquire New R/S
## Need for Fleet Recapitalisation: Current vs Contemporary Technology Standards

<table>
<thead>
<tr>
<th>CRITERION</th>
<th>Metrorail 5M/10M</th>
<th>Contemporary EMU</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobility</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High acceleration</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>High retardation</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>High speed</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td><strong>Security</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Video surveillance</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>Control-to-passenger communication</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>Passenger-to-driver communication</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic train protection</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>Enduring crashworthiness</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td><strong>Greening</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficient power electronics</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>Regenerative braking</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>High-capacity signaling</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td><strong>Convenience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level entry</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>Passenger information system</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>Air springs</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>Tight-lock couplers</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>Stepless braking control</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>Stepless traction control</td>
<td>Red</td>
<td>Green</td>
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<tr>
<td>Sound insulation</td>
<td>Orange</td>
<td>Green</td>
</tr>
<tr>
<td>Plug doors</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>Heating</td>
<td>Green</td>
<td>Green</td>
</tr>
<tr>
<td>Ventilation</td>
<td>Red</td>
<td>Green</td>
</tr>
<tr>
<td>Air conditioning</td>
<td>Red</td>
<td>Green</td>
</tr>
</tbody>
</table>
PRASA STRATEGY 2012 – 2015
MODERNIZING PASSENGER RAIL FOR QUALITY PUBLIC TRANSPORT IN SOUTH AFRICA
Drivers of Strategy

URBANISATION

- United Nations Reports had shown that one-half of the World’s population now lives in urban areas, a figure that is expected to rise to 60% in 2030.
- It is expected that over 2 billion more people will live in cities in developing countries by 2030.
- Increasing pressure on urban infrastructure
- Growing poverty and inequality in cities
  - 1.1 billion do not have access to safe, drinking water
  - 2.6 billion do not have access to basic sanitation
  - 1.2 billion suffer from hunger
URBANISATION (Cont…)

“It is estimated that by 2015 there will be as many as 60 megacities (cities with more than five million inhabitants), together housing more than 600 million people. Megacities require human and natural resources for energy, industry, construction, infrastructure, and maintenance, and the “ecological footprint” they create has a huge impact, both locally and globally. The consequences of high population densities include pollution, energy consumption and waste. Ignoring any of these will compromise a city’s sustainability…”

Drivers of Strategy

URBANISATION (Cont…)

“It is estimated that by 2015 there will be as many as 60 megacities (cities with more than five million inhabitants), together housing more than 600 million people. Megacities require human and natural resources for energy, industry, construction, infrastructure, and maintenance, and the “ecological footprint” they create has a huge impact, both locally and globally. The consequences of high population densities include pollution, energy consumption and waste. Ignoring any of these will compromise a city’s sustainability….”

Socio / Economic Environment

Increased urbanisation (Census 2011)

- Outflow of people from Eastern Cape, Northern Cape, Free State, KwaZulu Natal and Limpopo over past 10 years
- Highest inflow of people to Gauteng (highest) and Western Cape
- Increase of 1 Million people to Gauteng (Census 2011)
- Significant impact on PRASA Services
  - Increased demand for services in Gauteng and Western Cape
  - Eastern Cape commuter services feasibility reduced
  - Increased need for travel to “home”
  - Increase need for expansion of rail services to under-served areas

StatsSA Census 2011
SIP7 a major responsibility for PRASA
PRASA Strategy

“Shift Focus:

- From Stabilisation of Commuter Rail Services towards the delivery of High-Quality Passenger Services by 2015:

- The long-term goal of PRASA is to be a commercially viable entity capable of delivering efficient, high-quality passenger transport services on a sustainable basis.
Three Critical Pillars of Strategy

- Improve **Quality and Reliability** of Rail Services

- Invest in **New Capacity** by
  - new, modern trains,
  - signaling, telecommunications,
  - Train Control and Operating Systems,
  - Speed-gates;
  - Expanding the network to address imbalances inherited from the past.

- **Unlocking the Value of Assets** to ensure Financial Sustainable
PRASA CAPITAL INVESTMENT PROGRAMME
## Group Capital Outcome and Forecast

### Capital Outcome and Forecast

<table>
<thead>
<tr>
<th>Key Programmes</th>
<th>2010/11 Outcome</th>
<th>2011/12 Outcome</th>
<th>2012/13 Outcome</th>
<th>2013/14 Budget</th>
<th>2014/15 Forecast</th>
<th>2015/16 Forecast</th>
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<tbody>
<tr>
<td>New Rolling Stock Programme</td>
<td>-</td>
<td>2 194 397</td>
<td>2 441 679</td>
<td>-</td>
<td>4 000 000</td>
<td>5 250 000</td>
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<tr>
<td>Accelerated Rolling Stock Programme (Locos &amp; Coaches)</td>
<td>1 003 848</td>
<td>2 414 679</td>
<td>2 924 890</td>
<td>2 557 322</td>
<td>2 685 188</td>
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<tr>
<td>Station Improvement and Upgrade Programme</td>
<td>343 517</td>
<td>241 676</td>
<td>516 144</td>
<td>1 216 220</td>
<td>1 484 919</td>
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<tr>
<td>Signaling Programme</td>
<td>191 368</td>
<td>97 384</td>
<td>548 397</td>
<td>814 080</td>
<td>854 784</td>
<td>1 590 973</td>
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<tr>
<td>Rail Extension Programme</td>
<td>183 313</td>
<td>494 768</td>
<td>366 358</td>
<td>415 000</td>
<td>321 500</td>
<td>604 875</td>
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<tr>
<td>National Speed Gates Programme</td>
<td>285 000</td>
<td>129 266</td>
<td>1 123 974</td>
<td>235 000</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Perway &amp; Electrical Programme</td>
<td>23 506</td>
<td>97 955</td>
<td>45 709</td>
<td>504 400</td>
<td>508 170</td>
<td>533 579</td>
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<tr>
<td>Capital Intervention Programme</td>
<td>115 685</td>
<td>241 572</td>
<td>442 870</td>
<td>496 750</td>
<td>497 338</td>
<td>522 204</td>
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<tr>
<td>Depot Programme</td>
<td>-</td>
<td>-</td>
<td>18 574</td>
<td>330 860</td>
<td>301 403</td>
<td>567 314</td>
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<tr>
<td>Other (ICT, AY Type Wagons, Security Systems</td>
<td>701 905</td>
<td>89 395</td>
<td>785 883</td>
<td>557 910</td>
<td>453 806</td>
<td>626 495</td>
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<tr>
<td><strong>Total</strong></td>
<td>2 848 142</td>
<td>3 586 413</td>
<td>6 289 588</td>
<td>7 481 110</td>
<td>10 710 959</td>
<td>13 865 547</td>
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</table>
## Capital Programme over the 2013 MTEF

### Capital Allocations over the 2013 MTEF

<table>
<thead>
<tr>
<th>Capital Programme</th>
<th>Medium-Term Expenditure Framework</th>
<th>Total MTEF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013/14</td>
<td>2014/15</td>
</tr>
<tr>
<td>Rolling Stock Fleet Renewal Programme</td>
<td>4 000 000</td>
<td>5 250 000</td>
</tr>
<tr>
<td>Corridor Modernization Programme</td>
<td>1 688 080</td>
<td>1 534 890</td>
</tr>
<tr>
<td>Signalling and telecommunications Programme</td>
<td>814 080</td>
<td>854 784</td>
</tr>
<tr>
<td>Station Modernization Programme (134 stations)</td>
<td>310 000</td>
<td>307 606</td>
</tr>
<tr>
<td>120km Perway Programme</td>
<td>199 000</td>
<td>200 000</td>
</tr>
<tr>
<td>National Speed Gates Programme</td>
<td>235 000</td>
<td>-</td>
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<tr>
<td>Asset Protection Programme</td>
<td>130 000</td>
<td>172 500</td>
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<tr>
<td>PRASA Rail</td>
<td>518 850</td>
<td>520 543</td>
</tr>
<tr>
<td>Capital Intervention Programme (minor works, safety &amp; SNP)</td>
<td>385 450</td>
<td>380 473</td>
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<tr>
<td>Rolling Stock Facilities</td>
<td>133 400</td>
<td>140 070</td>
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## Capital Programme over the 2013 MTEF

<table>
<thead>
<tr>
<th>Capital Programme</th>
<th>Medium-Term Expenditure Framework</th>
<th>Total MTEF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013/14</td>
<td>2014/15</td>
</tr>
<tr>
<td>PRASA Technical</td>
<td>3 694 050</td>
<td>3 143 690</td>
</tr>
<tr>
<td>General overhaul of Metrorail Coaches</td>
<td>2 109 971</td>
<td>2 072 222</td>
</tr>
<tr>
<td>New Locomotives and Refurbishment of Smeyl Coaches</td>
<td>681 519</td>
<td>345 030</td>
</tr>
<tr>
<td>Depots Infrastructure &amp; Equipments</td>
<td>330 860</td>
<td>301 403</td>
</tr>
<tr>
<td>Electrical Programme: Substation, New Overhead Lines &amp; OHTE</td>
<td>305 400</td>
<td>308 170</td>
</tr>
<tr>
<td>Footbridges, Level Crossings and Structures</td>
<td>111 300</td>
<td>116 865</td>
</tr>
<tr>
<td>AY-Type Wagons</td>
<td>50 000</td>
<td>-</td>
</tr>
<tr>
<td>Metrorail/Gautrain Stray Current Mitigation</td>
<td>105 000</td>
<td>-</td>
</tr>
<tr>
<td>PRASA Corporate Real Estate</td>
<td>1 033 970</td>
<td>1 057 869</td>
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<tr>
<td>Station Improvement Programme</td>
<td>303 340</td>
<td>318 507</td>
</tr>
<tr>
<td>Station upgrades/transit oriented developments</td>
<td>332 880</td>
<td>349 524</td>
</tr>
<tr>
<td>Upgrade of Park Station</td>
<td>140 000</td>
<td>110 000</td>
</tr>
<tr>
<td>Mabopane Station</td>
<td>116 000</td>
<td>131 000</td>
</tr>
<tr>
<td>Workplace Improvement Programme (incl facilities)</td>
<td>141 750</td>
<td>148 838</td>
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</tbody>
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# Capital Programme over the 2013 MTEF

## Capital Programme

<table>
<thead>
<tr>
<th>Capital Programme</th>
<th>MTEF 2013/14</th>
<th>MTEF 2014/15</th>
<th>MTEF 2015/16</th>
<th>Total MTEF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information and Communication Technology (ICT)</strong></td>
<td>131 160</td>
<td>132 468</td>
<td>289 091</td>
<td>552 719</td>
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<tr>
<td>ICT Systems</td>
<td>71 160</td>
<td>95 718</td>
<td>250 504</td>
<td>417 382</td>
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<tr>
<td>Enterprise Resource Planning (ERP)</td>
<td>60 000</td>
<td>36 750</td>
<td>38 587</td>
<td>135 337</td>
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<tr>
<td><strong>Rail Network Extensions</strong></td>
<td>415 000</td>
<td>321 500</td>
<td>604 875</td>
<td>1 341 375</td>
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<tr>
<td>Bridge City</td>
<td>155 000</td>
<td>-</td>
<td>-</td>
<td>155 000</td>
</tr>
<tr>
<td>Green View - Pienaarspoort Project</td>
<td>100 000</td>
<td>105 000</td>
<td>-</td>
<td>205 000</td>
</tr>
<tr>
<td>Queenstown - Umtata</td>
<td>50 000</td>
<td>101 000</td>
<td>106 050</td>
<td>257 050</td>
</tr>
<tr>
<td>Motherwell Rail Extension</td>
<td>110 000</td>
<td>115 500</td>
<td>498 825</td>
<td>724 325</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>7 481 110</strong></td>
<td><strong>10 710 959</strong></td>
<td><strong>13 865 547</strong></td>
<td><strong>32 057 616</strong></td>
</tr>
<tr>
<td><strong>2013 MTEF Allocation</strong></td>
<td><strong>7 481 110</strong></td>
<td><strong>10 710 959</strong></td>
<td><strong>13 865 547</strong></td>
<td><strong>32 057 616</strong></td>
</tr>
<tr>
<td><strong>Unallocated</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Year-on-year growth</strong></td>
<td><strong>11.6%</strong></td>
<td><strong>43.2%</strong></td>
<td><strong>29.5%</strong></td>
<td></td>
</tr>
</tbody>
</table>
KEY INVESTMENTS PLANS
Rolling Stock Fleet Renewal Programme

New Fleet requirement
7224
procurement at
~360 coaches
per year for two x
10 year contracts

Total R123.5bn over
the 20 year period

The Programmatic procurement will result in:

Creating
~65 000 direct
and indirect
jobs

Long term
procurement will
allow local capability
to evolve to above
65% of the value of
a coach produced
locally
Needs analysis

Rollout of the new fleet

Rollout of 360 vehicles per annum

8M  Salvaged 5M  Salvaged 10M  5M  5M GO  5M GO C2  10M  10M GO  10M GO C2  New RS

<Rolling Stock Fleet Renewal Feasibility Study, Completed June 2011>
# New Rolling Stock for Metro Rail Service

## Project Description
Procure approximately 7,224 new rolling stock with projected investment of R123 billion over a period of 20 years (2015 – 2035).

### Location:
Gauteng, KZN & Western Cape

## Project Progress
- Gibela Rail Transport Consortium (ALSTOM-ACTOM) was appointed as preferred bidder to supply 3,600 new Metro Rail coaches – R51 billion over a 10 year period (2015 – 2025).
- Noting of the Preferred bidder by Cabinet - 100% Complete

## Benefits/Impact
- Rolling stock reliability
- 69% local content by year 2
- R797 on development of rail skills
- 33,000 direct and indirect jobs to be created over the next 10 years of production (2015 – 2025)
- Stimulate the rail industry
- Development of small enterprises in the rail sector

### Project Timeframes / Next Steps
- Reach financial close - end July 2013
- Delivery of test trains – First Quarter
- Delivery of operational trains – fourth quarter 2015
- Local factory operational – June 2016

### Expected Capital Costs
- R123bn
and PRASA will leverage the procurement for Economic Development…

- 30% for Equity Partners

- Subcontracting spend:
  - ~R 33bn to empowered entities
  - ~R 5bn to QSE and EMEs (SMMEs)
  - ~R 1.7bn to Woman owned entities

- 8088 direct jobs will be created

- ~R 797m on B-BBEE Skills Development
- Types of initiatives include:
  - on-the-job training
  - Apprenticeships
  - Bursaries
  - training at OEM plants
  - learnerships

- ~R 750m to be spent on the development of enterprises in the Rail Sector

- ~R 273m to be spent on Socio-Economic Development
- Identified communities in North West and North East Regions of the City of Tshwane for development
Achieve Localisation Objectives

- ~69% Local Content will be achieved in Year 2\(^1\)
- An average of ~73% Local Content will be achieved over the Delivery Period
- ~99% Local Content will be achieved in Year 10\(^1\)

- The first Local New Train will be produced for PRASA within Year 1\(^1\)
- The Local Factory will produce PRASA’s entire annual vehicle requirement from Year 2\(^1\) onwards

- A Product Evolution Facility will be operational by Year 3\(^1\)
- This Facility will have an 80% Local employee base by Year 5\(^1\)

- 1.75% of Contract Value (~R 841m) will be spent on Rail Related Skills Development
- ~19500 number of individuals will be skilled throughout all tiers of production
## Gauteng Stage 1 & 2: Signalling Programme

### Project Description
The first Phase of the project includes the construction of Gauteng Nerve Centre (GNC), installation of interlocking systems in the Gauteng Region. The estimated duration for the project is 5 years.

The second phase includes the re-signalling of the system with modification of the existing remote control system.

### Project Progress: Phase 1 and 2
- Environmental Impact Assessment (EIA) Gauteng Nerve Centre (GNC) approval completed.
- Approval of Detailed Concept Design of GNC completed.
- Phase 2 – PRASA has completed the negotiations with Siemens.

### Benefits/Impact
- Reduce number of signalling failures
- Reduce train delays and cancellations due to signal failures
- Improved reaction time from a Centralized Operational Control Centre servicing the whole region
- High frequency

### Location: Gauteng

### Project Timeframes / Next Steps: Phase 2
- The SICAS interlocking validation is expected to be completed by June 2013
- Mobilization of Phase 2 – Gauteng South

### Expected Capital Costs
Siemens – Gauteng Phase 1 = R1.1bn
Siemens – Gauteng Phase 2 = R2.7bn
- **Overall = R3.8 billion**
# Western Cape Region: Signalling Programme

## Project Description
- Modification of the existing remote control system
- Implementation of the interfacing system with the interlocking system
- Re-signalling of the system

## Location: Western Cape

## Project Progress
- Thales Maziya Consortium was appointed to modernize the signalling system for a 5 year period.
- Currently mobilizing to start with the implementation.

## Benefits/Impact
- Reduce number of signalling failures
- Reduce train delays and cancellations due to signal failures
- Improved reaction time from a Centralized Operational Control Centre servicing the whole region
- High frequency

## Project Timeframes / Next Steps
Thales company is now mobilizing to start with the actual installation of modern signaling system. The works are expected to commence before end of first quarter in the 2013/14 financial year.

## Expected Capital Costs
Thales Maziya Consortium - Western Cape: R1.8 billion
Durban Region: Signalling Programme

Project Description
- Modification of the existing remote control system
- Implementation of the interfacing system with the interlocking system
- Re-signaling of the system

Location: KZN

Project Progress
- Bombardier was appointed to modernize the signalling system – 5 year contract.

Benefits/Impact
- Reduce number of signalling failures
- Reduce train delays and cancellations due to signal failures
- Improved reaction time from a Centralized Operational Control Centre servicing the whole region
- High frequency

Project Timeframes / Next Steps
Bombardier company is now mobilizing to start with the actual installation of modern signaling system. The works are expected to commence before end of first quarter in the 2013/14 financial year.

Expected Capital Costs
- Bombardier - Durban: R1.3 billion
# Accelerated Rolling Stock

## Project Description
- Aimed at accelerating the rate of coach overhauls and upgrading in the short term, which is mainly expected to improve the availability and reliability of the rolling stock fleet in the interim; and
- This Programme is expected to run parallel with the introduction of new rolling stock over the next twenty years until the last train set is retired approximately in 2033.

## Project Progress
- 2009/10 – 505 coaches delivered
- 2010/11 – 334 coaches delivered
- 2011/12 – 510 coaches delivered
- 2012/13 – 536 coaches delivered

## Benefits/Impact
- Safe rolling stock
- Reliable operational coaches
- Meet social and economic goals
- Reduce train delays and cancellation
- Increase in patronage

## Location:
Gauteng North, Gauteng South, KwaZulu Natal, Eastern Cape (Port Elizabeth & East London) and Western Cape

## Project Timeframes / Next Steps
- 2013 MTEF – 1 500 coaches planned for refurbishment and upgrade

## Expected Capital Costs
- R6.4 billion over the 2013 MTEF
# Bridge City

## Project Description
- The Bridge City Development is located in the Inanda, Ntazuma and KwaMashu.
- This includes the construction of a railway station (situated in KwaMashu) and a 3.2 km rail line. This is a rail extension project for the Metrorail Durban Region. The rail line will be servicing the newly constructed Bridge City shopping centre and the surrounding areas.
- The rail service will be complemented by an integrated bus and taxi interchange located adjacent to the railway station.

## Location:
Inanda, Ntuzuma & Kwa-Mashu

## Project Progress
- **Phase 1** – Station Box (100 percent complete)
- **Phase 2** - Construction of the new station building (100 percent complete)
- **Phase 3** - Pilling for bridges and viaducts – 100 percent complete

## Benefits/Impact
- Direct Construction Project Jobs : 150 jobs
- The New Rail Link will result in more efficient train service operations
- Will ensure that the network is effective and efficiently operated
- Increase in Patronage

## Project Timeframes / Next Steps
- Overall project completion is end August 2013
- Phase 3 – Construction of the new rail link (87 percent complete)

## Expected Capital Costs
- R1 billion (inclusive of Duffs Road Enabling Works and Dalbridge-Congella Stations Infrastructure works)
## Greenview-Pienaarsport Rail Extension

### Project Description
The project is to deliver the:
- The doubling of the line from Eerste Fabriek to Greenview
- The construction of a new station at Greenview
- The upgrading of the Stations at Pienaarspoort and Mamelodi Gardens
- The elimination of the level crossing at Pienaarspoort.

### Location:
Eerste Fabriek, Mamelodi, Greenview, and Pienaarsport - Gauteng North

### Architectural Design:
Greenview & Pienaarsport Stations

### Project Progress
- **Greenview Station Construction**
  - Piling for station (55% complete)
  - Platform construction (62% complete)
- Doubling of the lines from Eerste Fabriek to Greenview (83 percent complete)

### Benefits/Impact
- Direct Construction Project Jobs : 200 jobs
- Efficient train service operation
- Increase in patronage

### Project Timeframes / Next Steps
- Upgrading of Mamelodi Gardens Station - 31 September 2014;
- Greenview Station Construction- 31 September 2014;
- Upgrading of the Pienaarspoort Station - 31 October 2014; and
- Rail Infrastructure – Pienaarspoort Station - 31 March 2014.

### Expected Capital Costs
- R432 million
Modern Architectural Design

Mamelodi Gardens Station

Greenview Station

Pienaarspoort Station
**134 Stations Modernization**

**Project Description**
This forms part of the majority of the 134 planned station improvements, upgrades and new over rail stations that are currently dealing with higher than normal passenger numbers. These have been prioritised for future growth and in line with current passenger demand in order to deliver quality passenger rail services. Station Modernization, ISAMS, and Intermodal facilities.

**Location:**
1. Mabopane – Pretoria- Germiston – JHB – Naledi
2. Umlazi – Durban – Kwa Mashu – Bridge City
3. Khayelitsha / Kapteinskili – Cape Town

**Project Progress**
- Phase 1 – 20 Stations mainly super core stations: concept design and preliminary designs (100% complete)

**Benefits/Impact**
- Direct Construction Project Jobs : 1 000 jobs
- Improved revenue collection
- Improved station operations
- Enhanced commuter flow/access in and out of the station
- Enhanced station surroundings – intermodal facilities, shops, and other commuter requirements
- Provide universal access

**Project Timeframes / Next Steps**
- Phase 1: 23 Stations mainly super core stations at detailed design Development stages (complete) – 2013
- Phase 2: 64 mainly super core and core stations (currently at Initiation stages) - 2014
- Phase 3: 50 intermediate, small and Halt stations (currently at planning stages) - 2015

**Expected Capital Costs**
- R5.4 billion
# 120 Km Perway Programme

## Project Description
The proposed solution is about replacement of rails, replace turnouts 1:9 & 1:12, replace turnout sleepers (universal type), replace single & double slips, replace scissors & diamond crossings, drainage upgrading, refurbish rails via grinding, re-alignment of track via continuous tamping and refurbishment of track sub-structure via screening.

## Location:
1. Mabopane – Pretoria- Germiston – JHB – Naledi
2. Umlazi – Durban – Kwa Mashu – Bridge City
3. Khayelitsha / Kapteinsklip – Cape Town

## Project Progress
- Detail needs/deliverables for every priority corridor (100% complete)
- Identify “no go” 120km/h zones (60% complete)
- Perway drainage rehabilitation (15% complete)

## Benefits/Impact
- Direct Construction Project Jobs: 180 jobs
- Increased availability of the asset for Train Ops to run service
- Reduction in train delays and cancellation
- Increased speed
- Increased reliability of train service

## Project Timeframes / Next Steps
- Procurement of AY Type Wagons – 2013 (15% complete); and
- Route layout design changes – 2015:
  - Upper ballast sub-system;
  - Sleeper sub-system;
  - Rail sub-system;
  - Fastening sub-system; and
  - Turnout technology for 120km/h – 60kg/m rail.

## Expected Capital Costs
- R1.4 billion
# Integrated Stations Asset Management Systems

## Project Description
The technology to be installed will be able to manage fare evasion, manage access, provide a ticketing system, retrofitted with CCTV, Railcom, help points & display boards.

## Location:
1. Mabopane – Pretoria- Germiston – JHB – Naledi
2. Umlazi – Durban – Kwa Mashu – Bridge City
3. Khayelitsha / Kapteinsklip – Cape Town

## Project Progress
- Designs have been approved for all three regions – 100% completed.
- Site access for all three regions has be obtained – 100% completed.
- Current installations is 71 Speed gates.
- 41 stations complete

## Benefits/Impact
- Reduction in fatalities caused by trespassing
- Increase in revenue due to passengers only able to alight or disembark at station buildings
- Safe and secured assets, available rail network at all times.
- Reduction of train delays due to vandalism and sabotage.
- Reduction in train cancellations due to vandalism and sabotage.

## Project Timeframes / Next Steps
- Southern Gauteng Region – 2014 March (85% complete)
- Northern Gauteng Region – 2013 March (91% complete)
- Western Cape Region – 2013 July (86% complete)
- KwaZulu Natal Region - 2013 December (83% complete)
- Overall project progress is 86.47%.

## Expected Capital Costs
- R1.7 billion
## Depot Programme

The new technology brought by the new fleet as well as the improved and enhanced maintenance practices envisaged for this new fleet will require either new, or refurbished or upgraded maintenance depots. In order to support the new fleet, a Depot Modernization Program is required to upgrade the existing rolling stock maintenance Depots at:

- Gauteng South - Braamfontein Depot
- Gauteng North - Wolmerton Depot
- Western Cape - Salt River Depot
- eThekwini - Durban Staging Yard
- eThekwini - Springfield Depot

### Location: Gauteng South, Gauteng North, Western Cape and KZN

![Map of depots](image)

### Project Progress
- Concept designs completed

### Benefits/Impact
- Cater for the increased new fleet maintenance demand required by the full fleet deployment.

### Project Timeframes / Next Steps
- RFP Advertisement – October 2013
- Commencement of Construction work – April 2014:
  - Running shed, lifting shop and component workshop upgrade;
  - Refurbishment of existing admin building/training centre and maintenance shed;
  - Construction of new Train Operations building, intensive cleaning shed, Controlled Emission Toilet clearing facility, Under Floor lathe, reversing line and turn table;
  - Remodeling of lines to accommodate new generation trains; and
  - Yard signaling.
- PRASA Commissioning (2015 requirements) - 30 April 2015.

### Expected Capital Costs
- R5 billion
PLANNED RAIL EXTENSION
**Moloto Rail Corridor**

### Project Description
- The scope is a resultant of the R573 (Moloto road) which suffers from a systematic deterioration due to the movement of large numbers of people to metropolitan areas. Also due to abnormal commuting patterns result in traffic congestion, emotional stress and loss of life through accidents.
- Solution is providing rail access connecting Mpumalanga and Gauteng.
- ±113km development area

### Location: Moloto, Gauteng

![Map of Moloto Rail Corridor](image)

### Project Progress
- Feasibility Study is complete;

### Benefits/Impact
- Providing a modern technology multimodal integrated transport system to commuters between the western regions of Mpumalanga province and Gauteng.
- Acting as a catalyst for new economic development in the rural areas along the Moloto Corridor.
- Helping commuters avoid long commuting times and its corollaries.
- Minimising traffic accidents, injuries and loss of life from road accidents.

### Project Timeframes / Next Steps
- Project is currently registered with the PPP Unit of the National Treasury; and
- Feasibility Study – currently undergoing a review.

### Expected Capital Costs
- R12 billion
**Project Description**

- The proposed line begins at Nasrec Station via the Nasrec and Orlando Dam development areas. The future corridor then moves southwards and passes through Eldorado Park and Lenasia to link with the Vereeniging-New Canada rail line in the vicinity of Lenz Station.

- Provide rail linkages to the Soweto areas and access to the following developments: The Orlando Ekhaya redevelopment (residential, commercial and retail), University of Johannesburg (Soweto Campus), Development corridor along Potchefstroom road and Chris Hani Hospital, Industrial Development in Aeroton areas, Greater Nasrec re-development and FNB Stadium.

- Development of Nasrec Station / BRT Station as an intermodal hub for daily commuting/travel.

**Location:** Nasrec Station via the Nasrec and Orlando Dam, Gauteng

**Project Progress**

- Feasibility study complete and a review is currently underway to include economic evaluation.

**Benefits/Impact**

- Enable a full through services for the residents of south-western sector

- Enable services from the eastern areas of Gauteng to access the area through this link that is not currently justifiable due to the single link spur to Nasrec.

- The proposed corridor will transport approximately 40,000 commuters daily.

- Other public transport road based modes will complement the rail service by providing feeder and distribution services.

**Project Timeframes / Next Steps**

- Review of earlier planning concepts is currently underway. The review will also include economic evaluation; and

- The City of Johannesburg in conjunction with PRASA will be investigating the development of Nasrec as an Intermodal Transport Hub.

**Expected Capital Costs**

- R2 billion
Motherwell Rail Link

Project Description
Motherwell is situated 20km north of Nelson Mandela Bay CBD, and has expanded rapidly with over 200 000 dense settlements with low per capital income. The Motherwell extension will enhance the role of rail in Nelson Mandela Bay with 15 000 – 20 000 new daily passenger in the short term and increasing to 35 000 daily passengers by 2020. The Motherwell Rail Spur is considered the first phase of the full Motherwell Loop (±17km).

Location: Nelson Mandela Bay CBD, Eastern Cape

Project Progress
- Confirmation of preferred vertical and horizontal alignments, including tie-in point with the mainline (TFR)
- Preferred station locations
- Updated demand forecasts
- Draft service / operational design
- Economic evaluation exercise now underway
- Bi-lateral meetings with TFR on preferred location for tie-in to the mainline.
- Bi-lateral meetings with the City on IPTN and land use planning

Benefits/Impact
- The Motherwell extension will enhance the role of rail in Nelson Mandela Bay with 15 000 – 20 000 new daily passenger in the short term and increasing to 35 000 daily passengers by 2020
- The development of the full “Loop” becomes more attractive in the medium – long term with the Coega Development has reached greater density

Expected Capital Costs
- R1.5 billion

The rail planning review is currently underway and expected to be completed by July 2013;
- In the 2013/14 financial year, a detailed design and Environmental Impact Assessment (EIA) will be conducted; and
- The construction is expected to commence in the 2014/15 financial year with anticipated completion by October 2017.
Cape Town International Airport Rail Link (CTIA)

**Project Description**
Providing rail connectivity to CTIA:
- Phase 1: Linking CTIA CBD
  - 4.5km link & airport station
- Future Phases (Medium / Long Term)
  - Eastern link: Bellville and Northern suburbs
  - Extension to metro southeast

**Location:** Cape Town, Western Cape

**Project Progress**
- Market study completed with full assessment of the total airport market, airport passenger travel patterns, assessment of competing models, current and future passenger volumes
- The detailed feasibility study is complete

**Benefits/Impact**
- The new ±4 km link between the existing railway line and the airport ensures that existing infrastructure is used optimally and also improves the reach and accessibility of the rail network

**Project Timeframes / Next Steps**
- Ongoing considerations on the funding concepts in the form of commercial banking, development banking, commercial paper, equity, government guarantees and non-fare revenue streams; and
- Detailed examination of funding scenarios.

**Expected Capital Costs**
- R3.2 billion
King Shaka and Northern Links

Project Description
Rail based solution is being investigated to serve the airport and the
Cornubia development, as well, as a rail connection between the new
airport and south to Durban CBD, to north of Ballito:

• Investigate the possibility of a new commuter rail corridor
• Route identification, station location and Environmental
  investigation

Location: Dube Trade Port, King Shaka, Durban CBD and
Ballito, KZN

Project Progress
• In the process of commissioning a feasibility study for the project

Benefits/Impact
• Such a link would make a rail connection between the new airport
  and south to Durban CBD, as well as north to Ballito, thereby
  facilitating in connectivity and integration at a regional level
• Proposed services to include a new international conference
  centre, residential, light industrial and retail/office uses

Project Timeframes / Next Steps
• Identification of route alignment options; and
• Passenger demand analysis.

Expected Capital Costs
• Yet to determine capital cost
# Daveyton - Etwatwa Rail Extension

**Project:** Daveyton – Etwatwa Rail Extension

## Project Description

To extend the existing line and services eastwards from the terminal station at Daveyton into the areas of Chris Hani, Etwatwa and Knoppiesfotnein

- ±10km, 4-5 new stations
- Phase 2: ±18km, 6-8 stations

## Project Progress

- Basic planning and high level feasibility: 1995 & 99 respectively
- Planning update / economic feasibility study underway (Oct 12 – Jun13)
- Rail corridor identified as priority in Rail Plan and City’s ITP
- Project Management team established with relevant stakeholders is discussing with TFR on how to accommodate PRASA requirements.

## Benefits/Impact

- Over 50% of Ekurhuleni population located in Daveyton – Etwatwa area
- ± 25000 passenger / peak period
- High community support
- Services currently performed by minibus taxis

## Project Timeframes / Next Steps (Phase 1 only)

- Planning update - 8 months (underway)
- Design, EIA & Tender - 18 months
- Construction - 30 – 6 months

## Expected Capital Costs

- ±R2.5bn excluding Rolling Stock
  (Note: Estimated cost and project timeframes will be reviewed once Planning Update has been completed)
Improving Safety - Platform Corrections

Befor

e
The step here was 650mm. A standard step in a building is 170mm. The standard step for commuter trains is 190 mm - 230 mm.

After

View of completed platform
Station Upgrades and Modernisation

Cape Town Station

East London station interior revamp

King William’s Town Station waiting area
Some of the key highlights in the Performance of PRASA for the 2012/13 Financial Year

• Conclusion of the procurement process in relation to the Rolling Stock Fleet Renewal Programme

• Commenced with the implementation of the 5-year Signalling Upgrade Programme in Gauteng, KwaZulu-Natal and the Western Cape.

• A total of 578 coaches delivered as part of the Accelerated Rolling Stock Programme.

• Awarding of over 500 bursaries as part of skills development contribution and Learnerships

• PRASA Co-operatives Cleaning Programme was launched at Umlazi Station in June 2013. The programme prioritises 87 stations in 3 provinces, namely, Gauteng, Western Cape and KwaZulu-Natal. The programme is targeting 80% of women participation and 60% of youth. It has the potential to benefit 3,616 indirect beneficiaries.
Thank You