

HÁ LIMITES PARA O CRESCIMENTO
DO SETOR IMOBILIÁRIO?

CONVENÇÃO
SECOVI SP
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City of Johannesburg

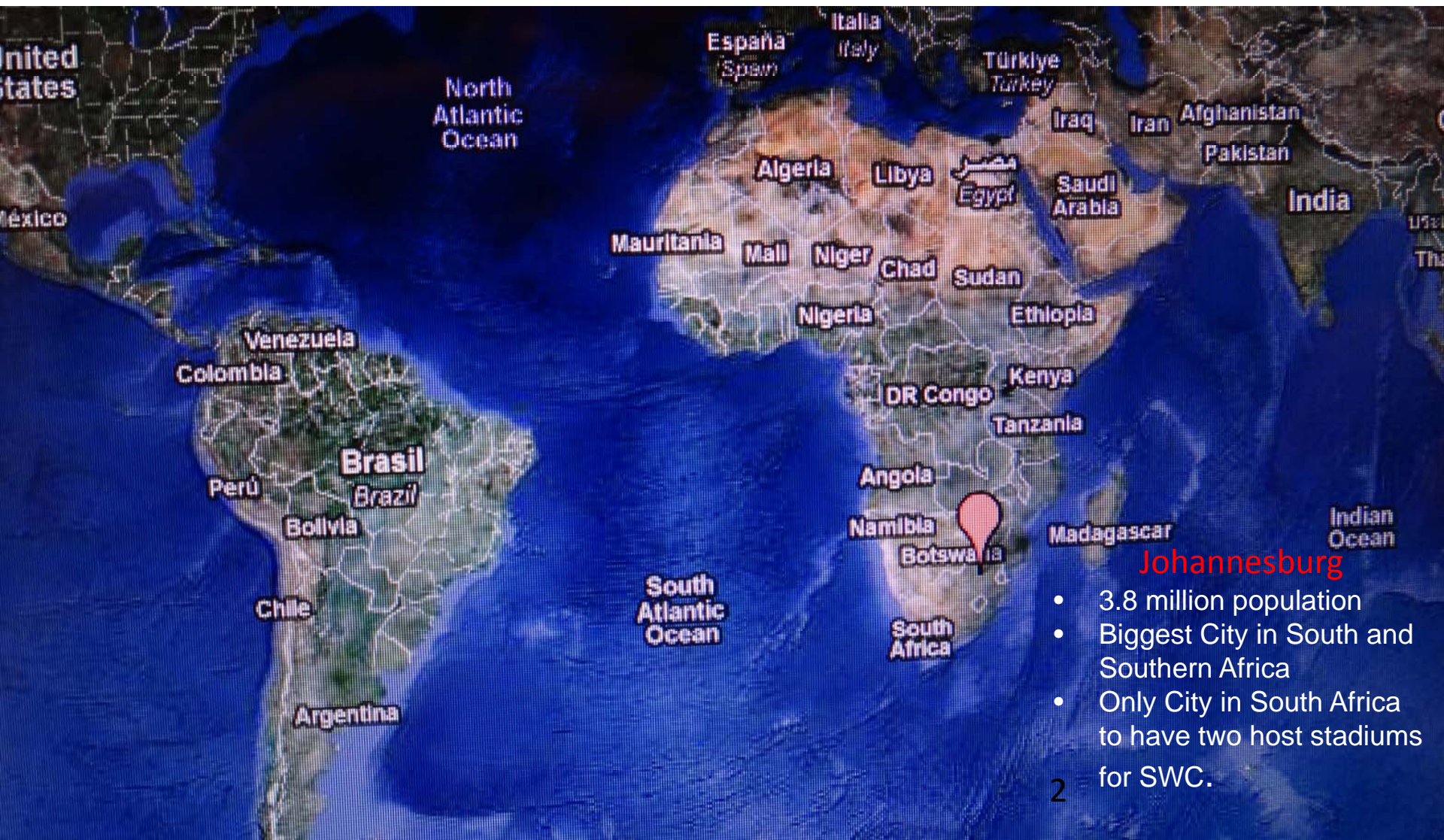
Bus Rapid Transit Implementation for FIFA Soccer World Cup 2010 and beyond

Jacques van Zijl
Rea Vaya Project Manager



HÁ LIMITES PARA O CRESCIMENTO DO SETOR IMOBILIÁRIO?

Johannesburg – South Africa



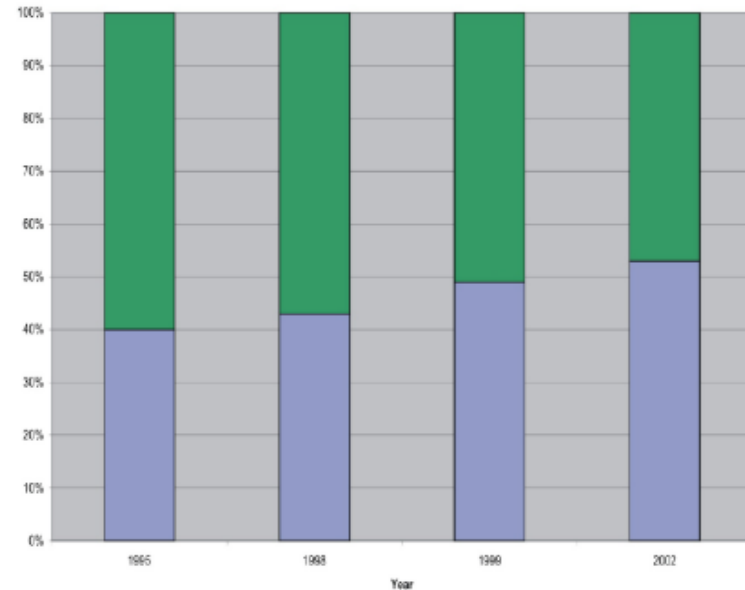
- 3.8 million population
- Biggest City in South and Southern Africa
- Only City in South Africa to have two host stadiums for SWC.

HÁ LIMITES PARA O CRESCIMENTO DO SETOR IMOBILIÁRIO?

SOCER CITY STADIUM JOHANNESBURG

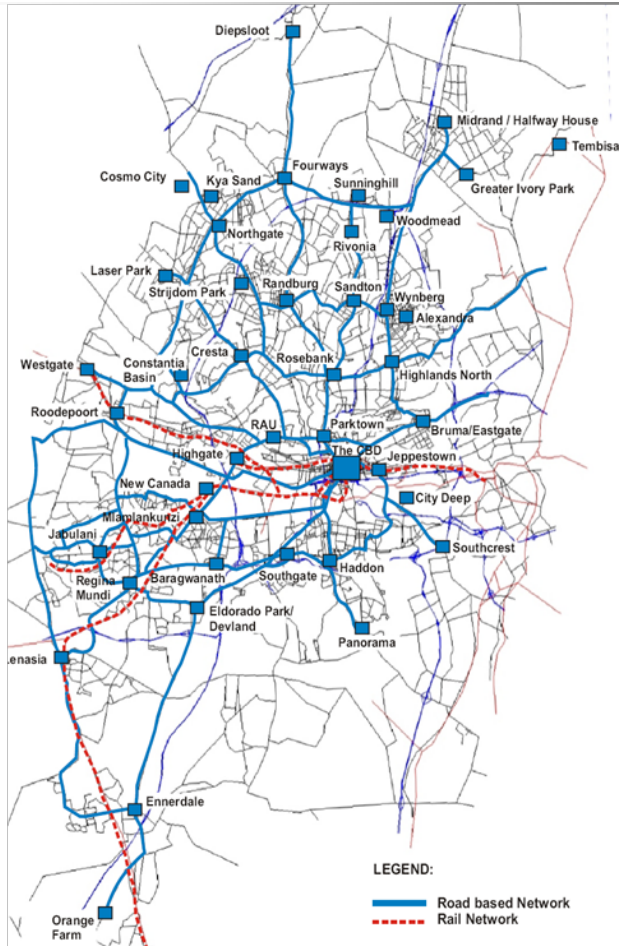
Background 1

- Johannesburg has an official population of about 3.8m inhabitants.
- The vehicle population pre-project is around 1m vehicles, including 800 000 private cars.
- 1995 to 2002: car share of motorised trips in Joburg increased from 40% to 53%.
- The balance was by minibus-taxis (35%), rail (8%) and bus (4%).
- City adopted an Integrated Public Transport Plan in 2003 which aimed to give priority to public transport.

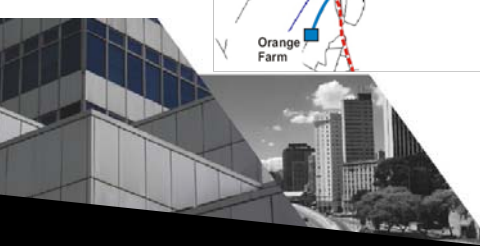


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Background 2



- The central idea of the Plan was to create a “Strategic Public Transport Network” (SPTN). The aim was to focus public transport on these corridors, and provide kerbside priority to buses and minibus taxis.
- **In late 2006**, a BRT scoping study was carried out, and the Council approved the implementation of BRT infrastructure and operations on the busier SPTN corridors.
- BRT was selected as the backbone model for an effective modern mass transit system.
- Ops Plan completed in **May 2007**
- Team assembled and project commenced in **September 2007**
- First trip **30 August 2009**



Background 3

The Institute for Transportation and Development (ITDP) with Executive Director, Dr Walter Hook, at the helm, made a huge contribution to the success of the Rea Vaya Project for which the City of Johannesburg will always be thankful.

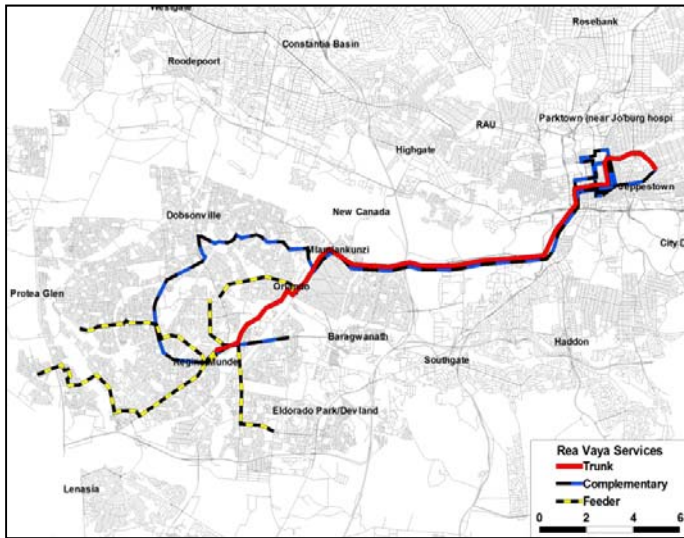
Amongst a long list of leadership, mentoring and specialised services the ITDP:

- Raised funds and project managed the initial Scoping Study and Operations Plan
- Assisted with critical study visits to established operations in South America for key Rea Vaya and taxi industry staff
- Assisted with environmental and safety strategies, and project performance evaluation

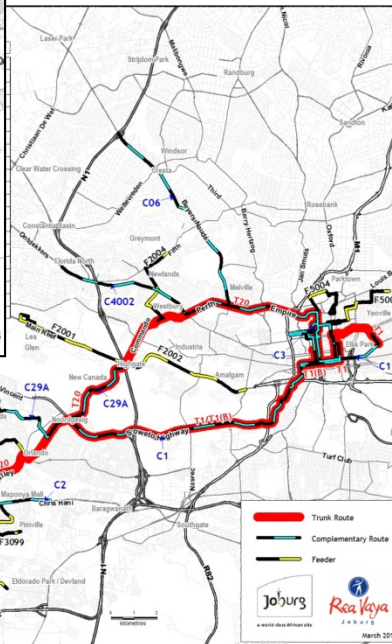


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Phase 1 Network

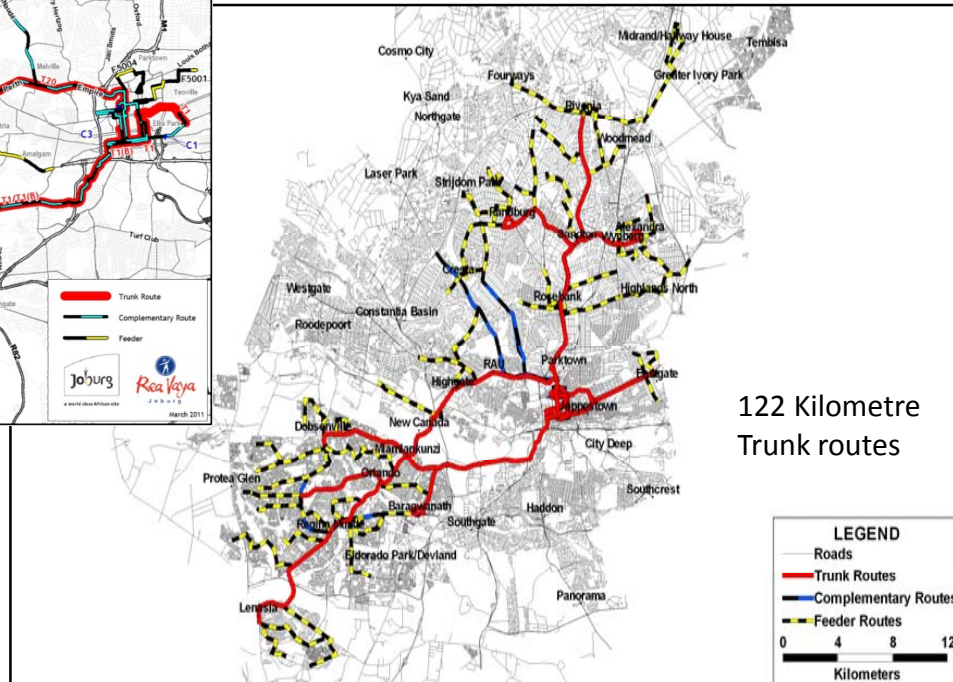


1A – In operation



1B – Under Construction

Full Phase 1



122 Kilometre Trunk routes



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Phase 1A

- Operations began on 30 August 2009
- Trunk busway is 25.5km, served by 27 stations.
- Routes are:
 - T1 Trunk route from Soweto to the City Centre
 - 5 feeder routes in Soweto linking to three stations
 - Four “complementary routes” which run in both mixed traffic and on the trunk route.
 - Buses: 42, Articulated and 102 Complementary Scania/Marcopolo buses built in Brazil
 - Euro 4 emission compliant buses
- All complementary buses equipped with wheelchair lifts

Phase 1B

- Second trunk busway (18km) under construction - will bring total busway distance to 43 km
- 15 Additional stations
- In Phase 1B (incl. Phase 1A) there will be 3 trunk routes, 12 feeder routes (62km one-way) and 6 complementary routes (totalling 82km one-way).
- Operated by 41, 18-metre Articulated and 93 13-metre Complementary buses
- All buses are Euro 4 emission compliant
- All complementary buses equipped with wheelchair lifts



How Rea Vaya Works 1

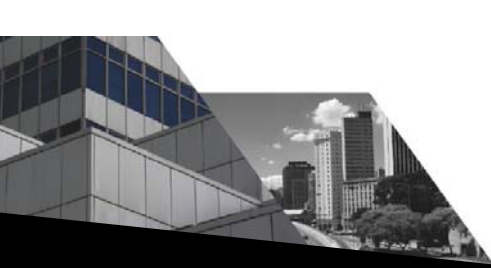
Rea Vaya is a full BRT system:

- Public transport priority system with exclusive right-of-way lanes in the centre of the road over extended trunk routes
- No vehicles except BRT buses are allowed to use these lanes
- Passengers board at enclosed stations in the centre of the road
- The station platform and the bus floor are at the same height so boarding is “level” – similar to rail platform operating style
- All fares are paid before boarding the bus
- The buses have multiple doors for rapid boarding and alighting



How Rea Vaya Works 2

- Rea Vaya also uses “complementary” buses which have doors on both sides. This allows them to run on ordinary roads and pick up passengers at the kerbside. These buses can also enter the trunk busways and passengers can board at the stations.
- Feeder routes also use buses with doors on both sides so transfers are direct at station platforms.
- System is designed to cope with high volumes of buses in the future, with passing lanes for express buses, and multiple stopping bays at stations.



How Rea Vaya Works 3

- Rea Vaya uses 18-metre articulated buses on the trunk routes. These buses accommodate 2 wheelchairs
- The axle loads of a fully loaded articulated bus are too high for normal roads. New trunk busways had to be constructed with sufficient depth and strength to accommodate these buses.
- Rea Vaya uses 13-metre “rigid” buses on the complementary and feeder routes. All these buses have kerbside wheelchair lifts and one wheelchair bay
- A Control Centre run by the City tracks buses, communicates with bus depots and drivers, monitors and communicates with stations, and controls real-time passenger information

Rea Vaya Trunk Route Stations



A typical trunk route station with individual artwork by local artists

An end of the line double module trunk route station with turning circle and pedestrian crossings

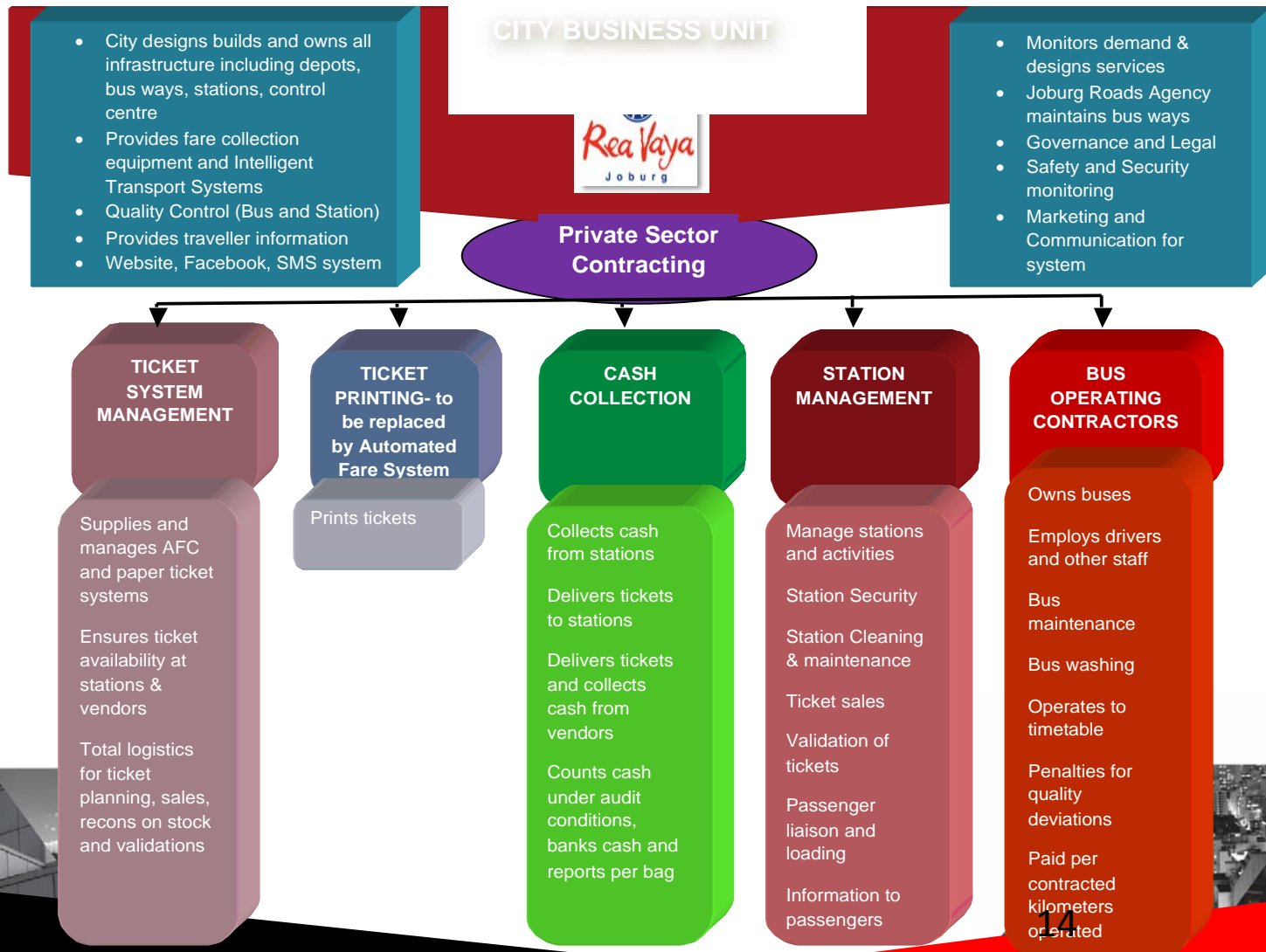


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Rea Vaya Structure & Functions



Fare Collection System

- Current fare collection System still an interim paper ticket system
- A Mifare-type closed AFC smart card system was planned and put on public tender
- SA National Department of Transport published regulations in June 2011 specifying that all future automated fare systems are to be EMV-based (Europay, Master & Visa)
- Rea Vaya is in process of changing implementation of the automated system to comply
- Goal is to implement EMV (Bank card) automated fare system based on tap-on/tap-off distance based access gate controlled system by February/March 2012

Bus Operating Company for Phase 1A

- Phase 1A was implemented in partnership with existing minibus taxi operators on affected routes.
- Phase 1A was calculated to displace 585 minibus-taxis on overlapping routes. Ten taxi associations were involved.
- Affected operators were offered 100% shares in the first Bus Operating Company (BOC) in return for handing over their operating licences and withdrawing their minibus-taxis from services, plus payment of R54 000 as equity contribution per share.
- This achievement created the benchmark model in SA for the successful transformation of the informal minibus taxi industry

Bus Operating Company for Phase 1A

- After a year of negotiations, 313 minibus-taxi owners submitted 579 vehicles and operating licences to the City in order to become shareholders (1 share per vehicle). National minibus taxi recapitalisation programme pays out R54 300 as a scrapping allowance to operators.
- New shareholders signed a 12-year operating contract with the City and took over the temporary operating company, Pioneer Transport (Pty) Ltd, on 1 February 2011. Piotrans entered into a management agreement with Fanalca.
- All displaced taxi drivers are accommodated in Rea Vaya jobs (stations and Bus Operating Company).
- Phase 1B preliminary discussions with affected operators started late 2010.

Rea Vaya and Job Creation

- Rea Vaya had created the following jobs by March 2011:
 - 860 permanent jobs
 - 6 900 temporary jobs (mainly in infrastructure construction)
- The permanent jobs are as follows:
 - 300 in the bus operating company
 - 280 at the Metropolitan Trading Company (as station cashiers, station ambassadors and station customer marshalls)
 - 240 jobs in security and cleaning contracts for the stations
 - 40 jobs in Rea Vaya Business Unit



Infrastructure

All infrastructure used in the Rea Vaya system is supplied and owned by the City of Johannesburg and rented to contractors on a no-cost basis. Contractors are responsible for the maintenance of the assets

Main components:

- Exclusive roadways
- Stations
- Signage and signaling
- Intelligent Transport Systems
- Control Room
- Depots



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Rea Vaya BRT exclusive roadway with rumble strip lane division

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Orlando Stadium with
Rea Vaya Station and
exclusive roadways



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Soccer City Stadium

Served by a transport hub with rail station and 3 Rea Vaya stations. Main Rea Vaya station connected by tunnel



HÁ LIMITES PARA O CRESCIMENTO DO SETOR IMOBILIÁRIO?

Modular station building



Stations are pre-built and assembled modularly



Stations designed to enhance accessibility for persons with disabilities

The First Rea Vaya Bus Depot

Built to accommodate 270 buses

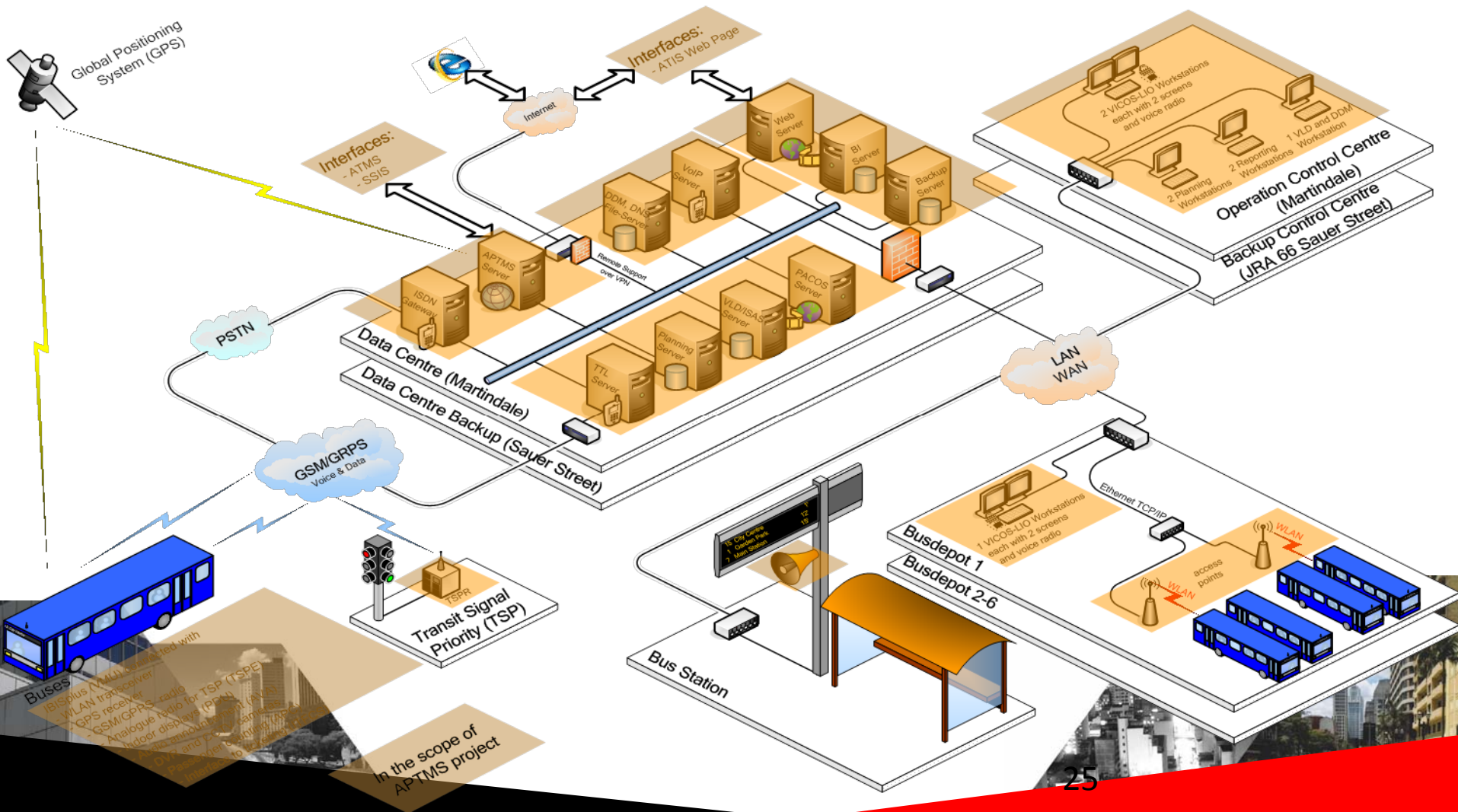


BRT PERMANENT DEPOTS- DOBSONVILLE VIEW 1

21 October 2010

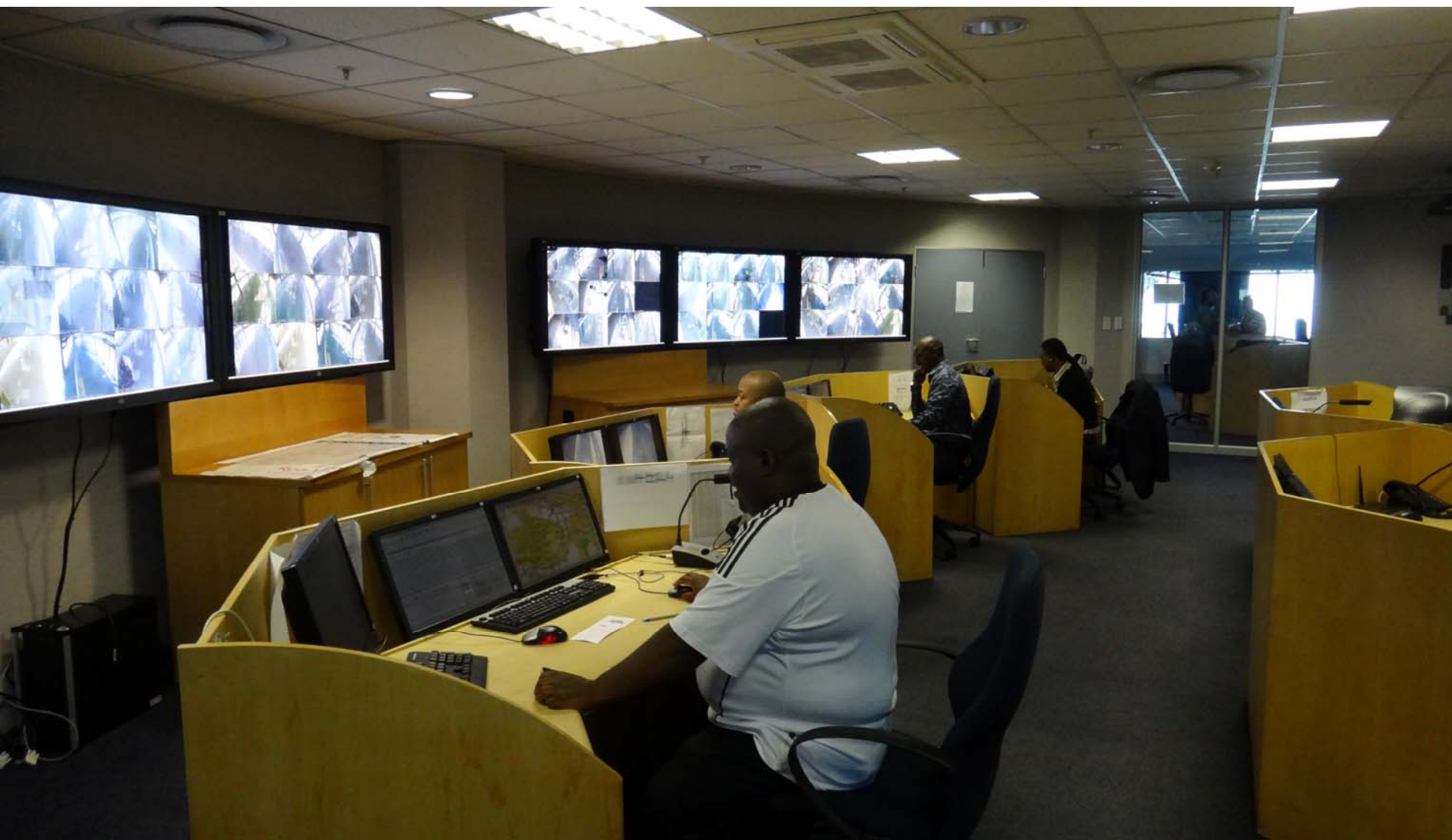
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Rea Vaya Automated Passenger Transport Management System



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Rea Vaya BRT Control Room



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Rea Vaya and 2010 FIFA Soccer World Cup

Miss World contestants enjoying a trip on the Rea Vaya
BRT system during the World Cup



HÁ LIMITES PARA O CRESCIMENTO DO SETOR IMOBILIÁRIO?

South Africa has managed to stage an impressive World Cup and has left a good impression on the people of the world. You can be proud of that.

FIFA had trusted that South Africa would deliver, and it has done so.

The compliments should go to you and not to FIFA – Sepp Blatter July 2010 after the World Cup



City Vision was:

- To host and deliver the best World Cup ever
- Meet all FIFA's requirements for staging a great World Cup
- Delight all the fans and visitors
- Build a legacy for the people of Johannesburg

The provision of effective passenger transport was a critical component



Rea Vaya participation 1

- Johannesburg is the only City to have two game venues for Soccer World Cup, Soccer City Stadium seating 95 000, and Ellis Park Stadium seating 65 000 spectators. Kickoff Concert was at the Dobsonville Stadium on the night before the opening for 40 000 fans, also on Rea Vaya Trunk route.
- Transport to and from events included the use of:
 - Trains
 - Minibus taxis
 - Rea Vaya BRT
 - Bus operators
 - Park and walk
 - Park and Ride



Rea Vaya participation 2

- City core Transportation Department arranged and managed the transport supply to the soccer venues
- Rea Vaya policy was not to operate off its normal routes
- Rea Vaya operated Park and ride services from two sites along routes
- Both game venues are situated along the Rea Vaya Trunk route
- Rea Vaya operated regular passenger services from both ends of the trunk route including feeder and distribution services to and from games
- Both game venues have Rea Vaya stations as part of the infrastructure and Soccer City also has a transport hub with two Rea Vaya stations and room for other buses arriving from park and rides to off-load and load fans



Rea Vaya participation 3

- Fares on services were paid for by passengers
- Park and Ride services parking ticket cost was included for bus or Rea Vaya transport to the venues
- Afternoon games necessitated reduced services to normal commuters. Proper communication a must
- Red zones around venues prohibited normal traffic from entering
- Average clearing time at stadiums for Rea Vaya after a game was 40 minutes to 1 hour 15 minutes for the popular Brazil Ivory Coast game
- Rea Vaya transported 15.4% of all fans to games and venues during the World Cup

SOCCER CITY STADIUM

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A lot of happy fans to move



HÁ LIMITES PARA O CRESCIMENTO
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Dutch fans were mostly in enthusiastic groups



HÁ LIMITES PARA O CRESCIMENTO DO SETOR IMOBILIÁRIO?

Brazil training session at Dobsonville Stadium

Brazil games were always packed



Rea Vaya BRT lessons learned during Soccer World Cup

- Successful World Cup should be used to promote public transport
- Fans like to communicate with people on stations and at venues to get information and assistance
- Getting fans to a game is easy, getting them home fast after the game takes proper planning and a lot of effort
- Clear signage is essential to indicate the way to boarding points and especially at game venues
- Fans must know before the game where they will board after the game is over
- Planning is essential to fit normal commuter services into a game schedule as many overlaps will occur. Regular passengers will still be there after fans leave



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Rea Vaya BRT lessons learned during Soccer World Cup

- Orderly transport after games is not possible without good crowd control and the use of passenger flow guides
- Transport ticketing is best contracted to a professional company with wide vendor footprint, even international
- All staff and especially temporary staff need proper training and supervision
- A central operations control room with visual and verbal communication between operators, organizers, police, security, emergency services and venues is essential
- Pre-planning before and post mortem after the game to address any problems that need fixing is important. All service delivery participants must be involved

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The City of Johannesburg wishes
Brazil all of the best in preparing
for the FIFA WORLD CUP in 2014

May you deliver the best World Cup ever!

BRAZIL 2014

HOST CITIES

BRAZIL
SENSATIONAL
Experience

Belo Horizonte

Brasilia

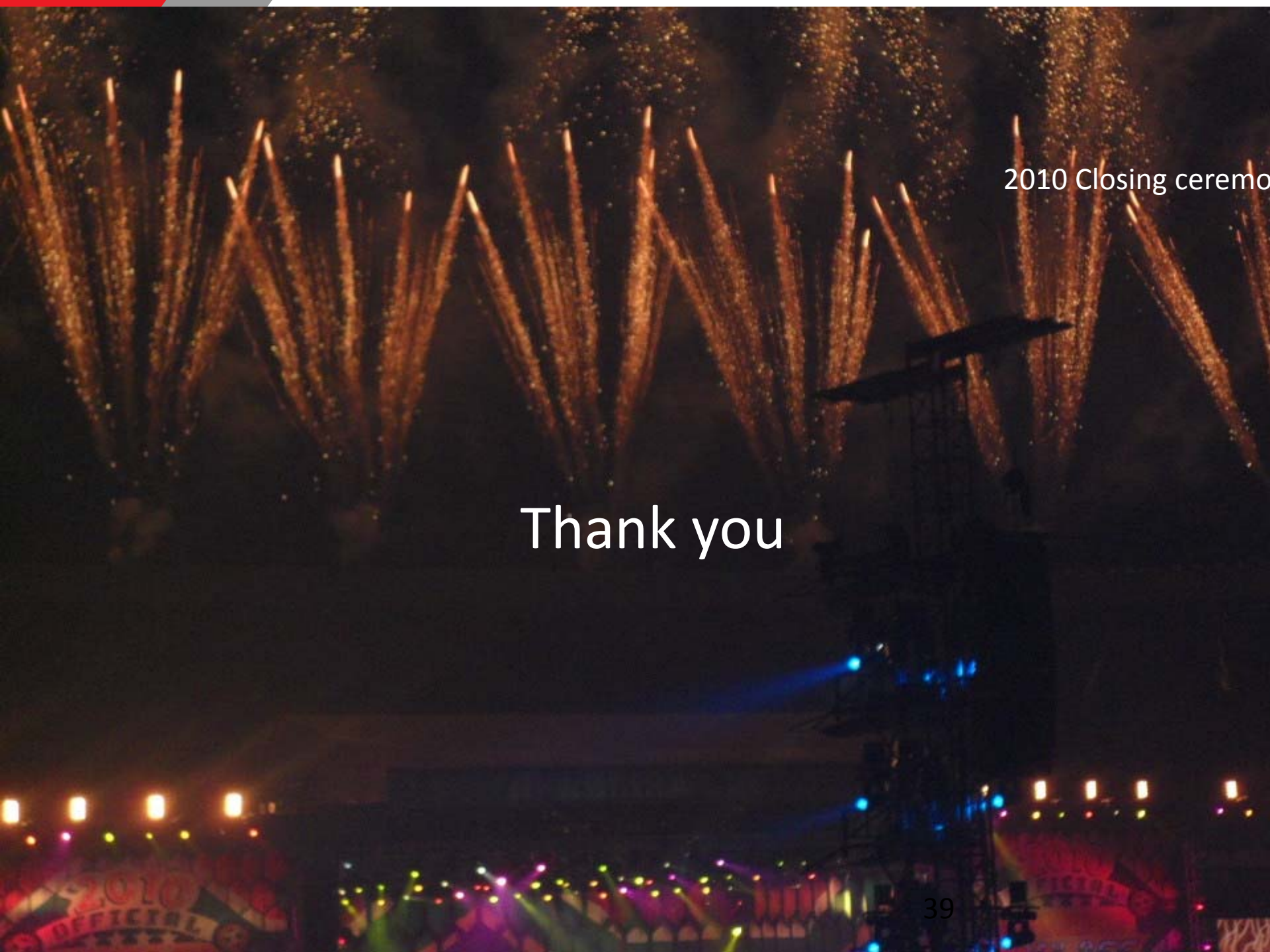
Cuiaba

Curitiba

Fortaleza

Salvador

Sao

A night scene of a closing ceremony. The upper half of the image is dominated by a large display of golden fireworks exploding against a dark sky. In the lower half, a stage is visible with various colored spotlights (blue, purple, green) and banners. One banner on the left says "2010 OFFICIAL" and another on the right says "OFFICIAL".

2010 Closing ceremony

Thank you