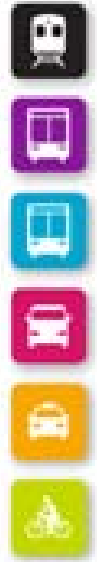


Integrated Public Transport Network (IPTN)

Project Overview

9th April 2015



Gershwin Fortune
Manager: System Planning & Modelling



PRESENTATION OUTLINE

1. Project Background
2. Project Methodology and process
3. IPTN Proposal
4. Role of Transit Orientated Development
5. MyCiTi BRT Project – Executive Summary
6. Conclusions

1. Project Background



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2015/04/09

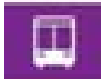
1.1 What is an IPTN plan?

The IPTN plan determines the role of appropriate public transport modes to provide users of the system with optimal solutions to able to travel from origin to destination in a seamless and in the most cost effective manner

- ✓ Ensures the **correct mode** responds to the **correct function** to ensure maximum efficiency
- ✓ Ensure viability and efficiency within the development of the City



Rail – Mass rapid transport across the Metropolitan area



BRT – Large volumes carried by dedicated bus ways



Feeder bus– Distribution and feeder service



Mini-bus taxi– on demand local service



Metered - taxi



NMT

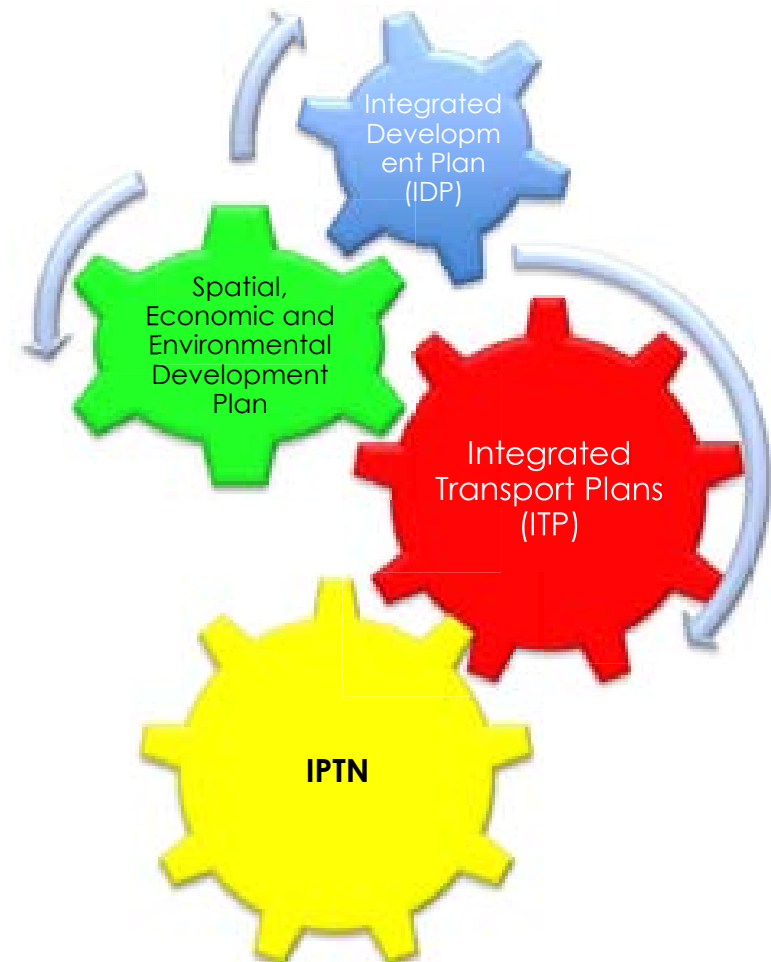
1.2 Purpose of an IPTN Network Plan?

- Provides the long term public transport **network plan** for the City
- Establish the **role of each mode of transport**
 - Rail
 - BRT
 - Scheduled Feeder bus
 - Mini-bus taxi
- Provide strategic direction for **investment**
- Shows **commitment** towards achieving an efficient and well run city (investment mechanisms)



1.3 Scope of the IPTN

- Takes **guidance** from existing policies, strategies and plans to produce a network plan:
- Provides the picture for a **20-year time horizon** i.e. 2032
- Incorporates both **rail and road**-based public transport



1.4 IPTN Deliverables

The **key deliverables** of an IPTN Network Plan includes:

- Identification of metro wide transport corridors
- Defining the role of rail and road based modes
- System route descriptions (rail and road-based)
- Projects passenger demand per route into the future
- Route service frequencies
- Fleet types and sizing by mode

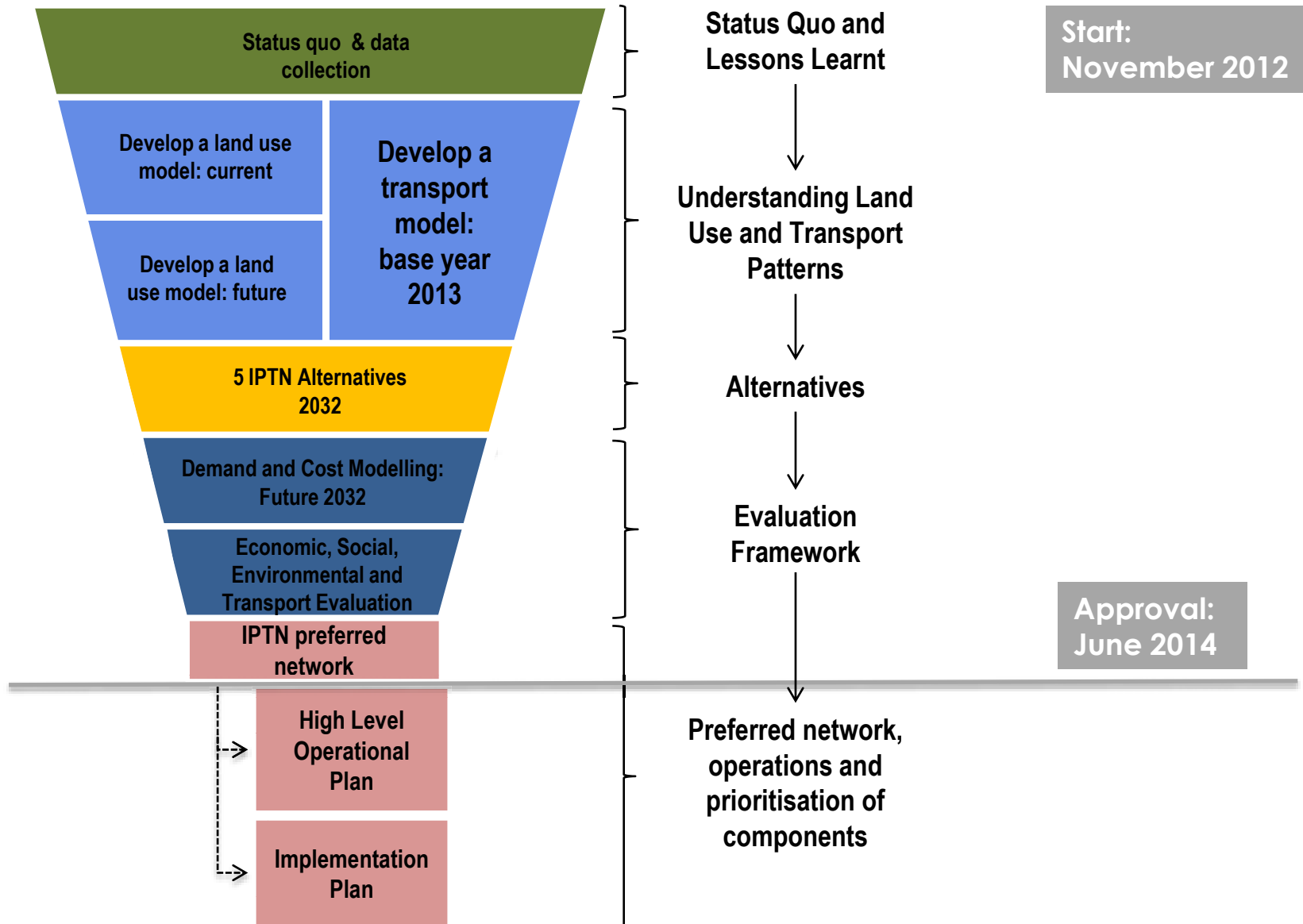


2. Project Methodology



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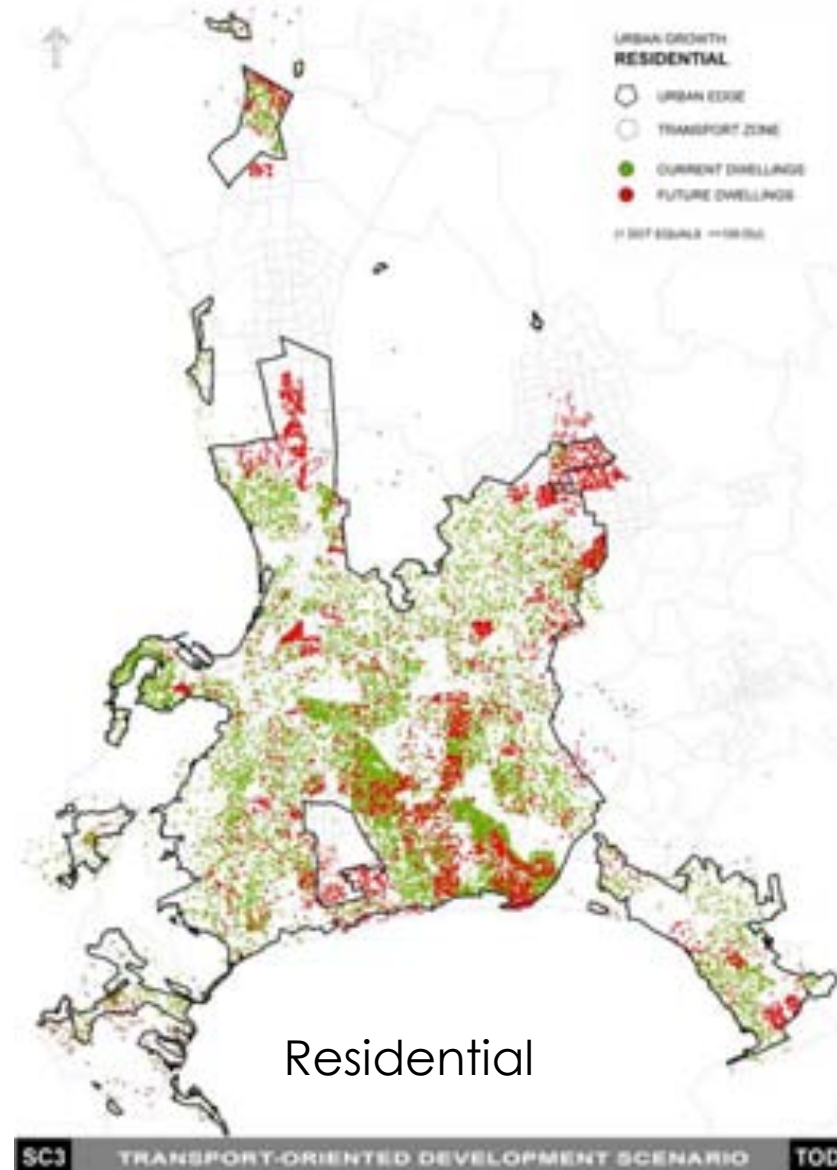
2.1 METHODOLOGY



Land Use in 2032: Pragmatic TOD

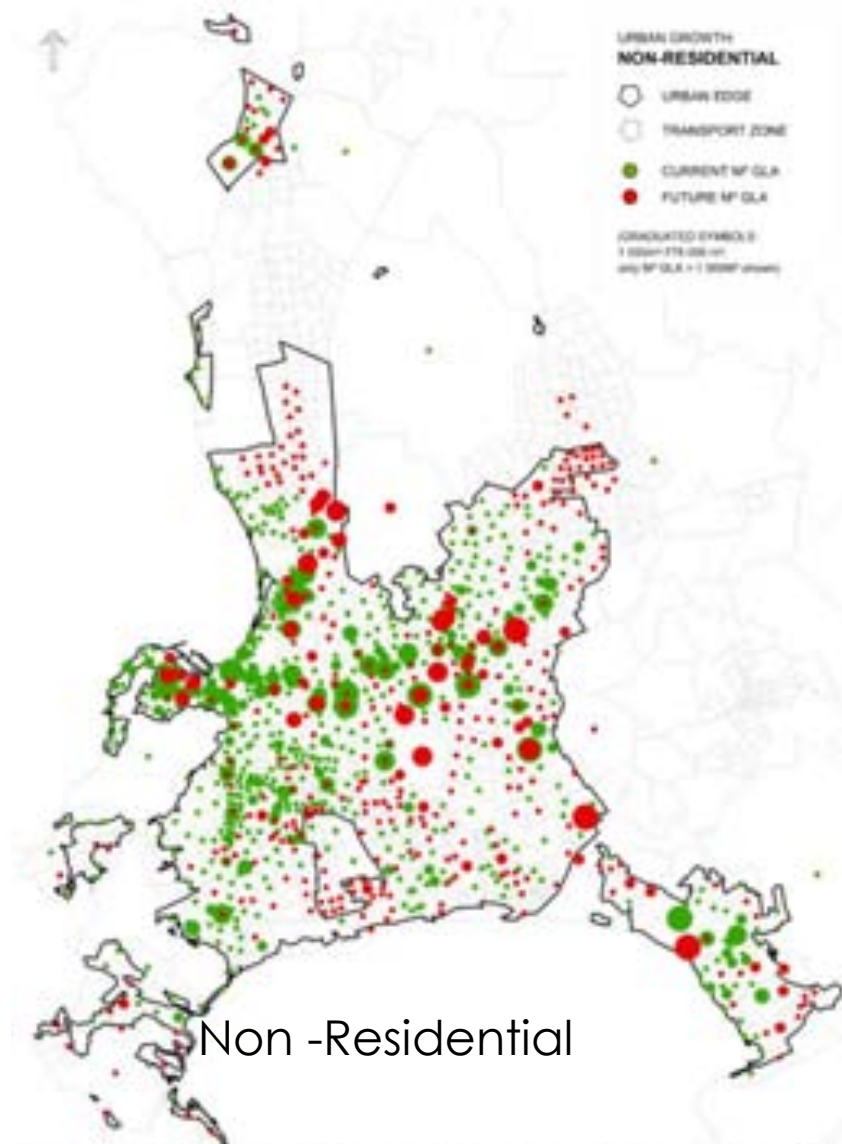
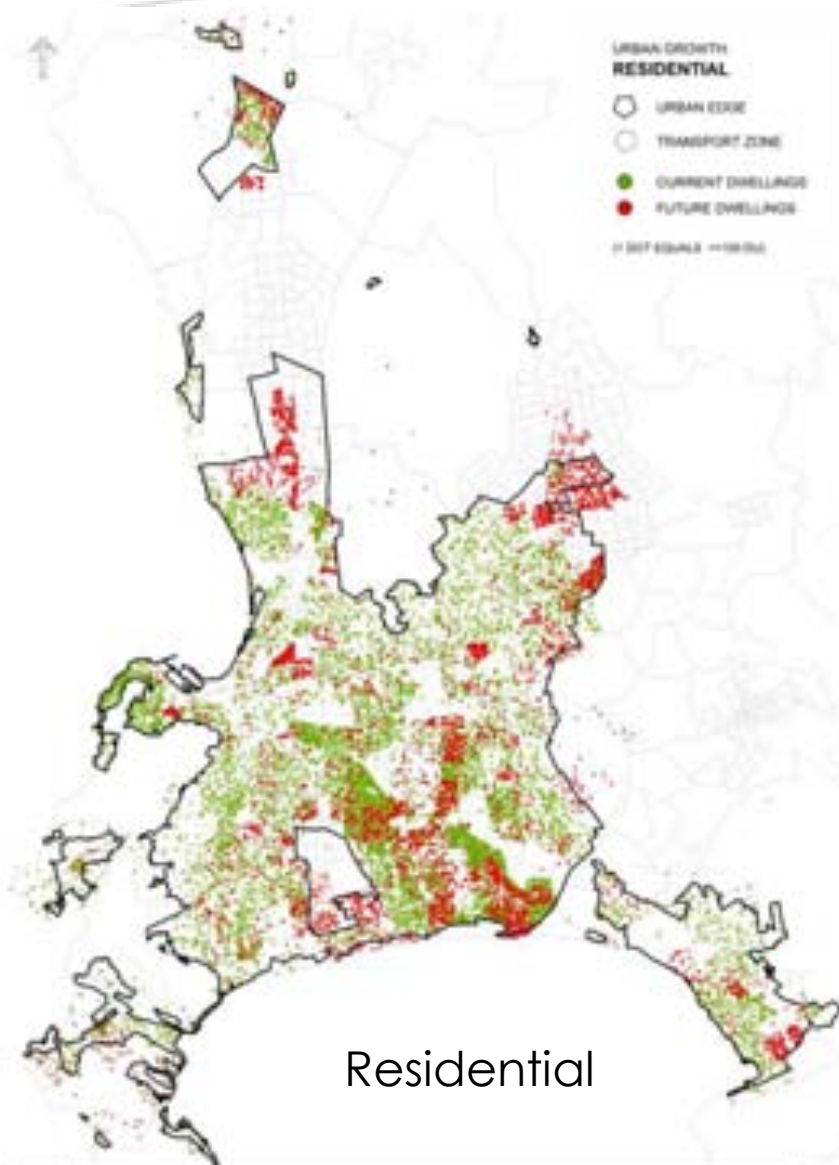


Residential

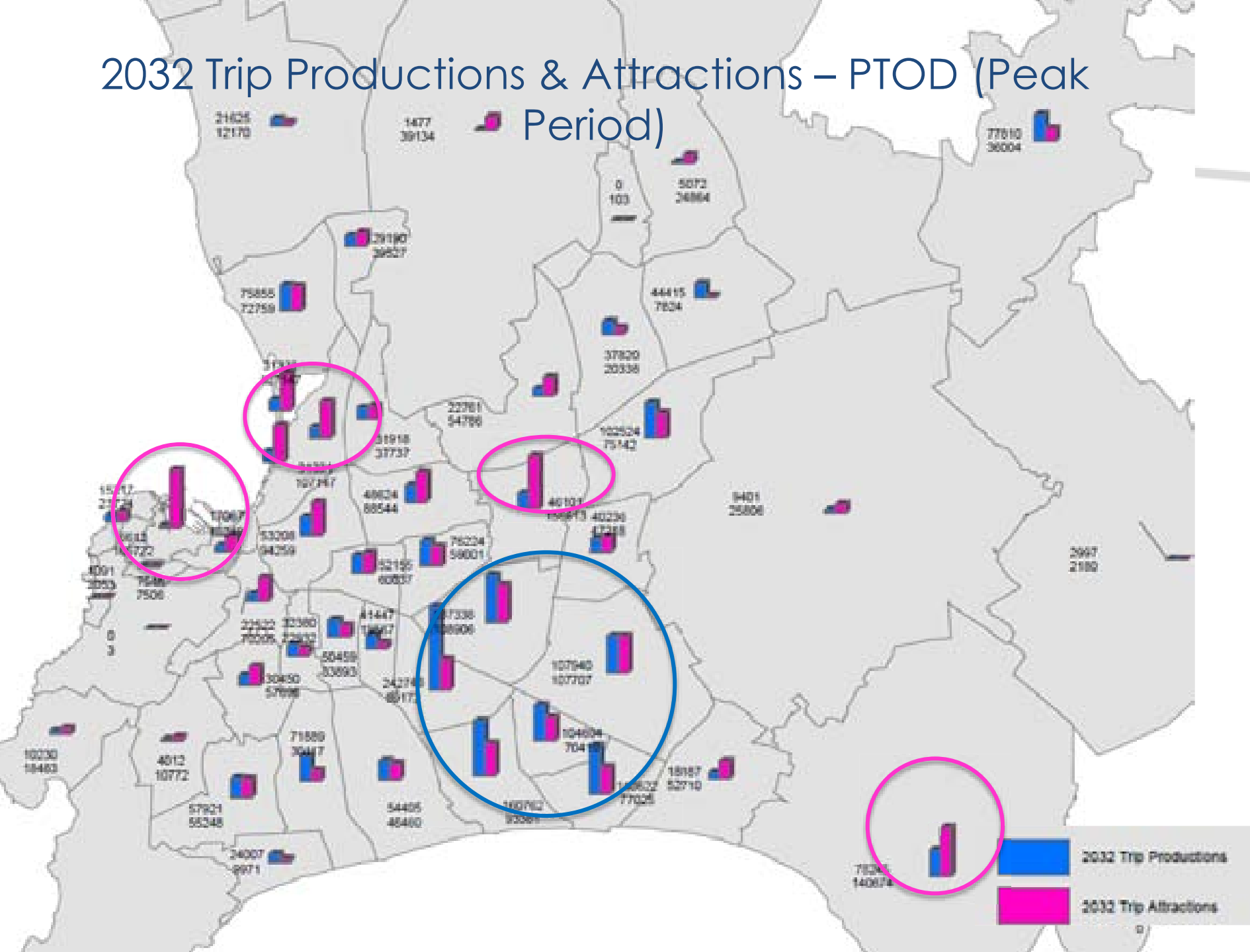


Residential

Land Use in 2032: Pragmatic TOD



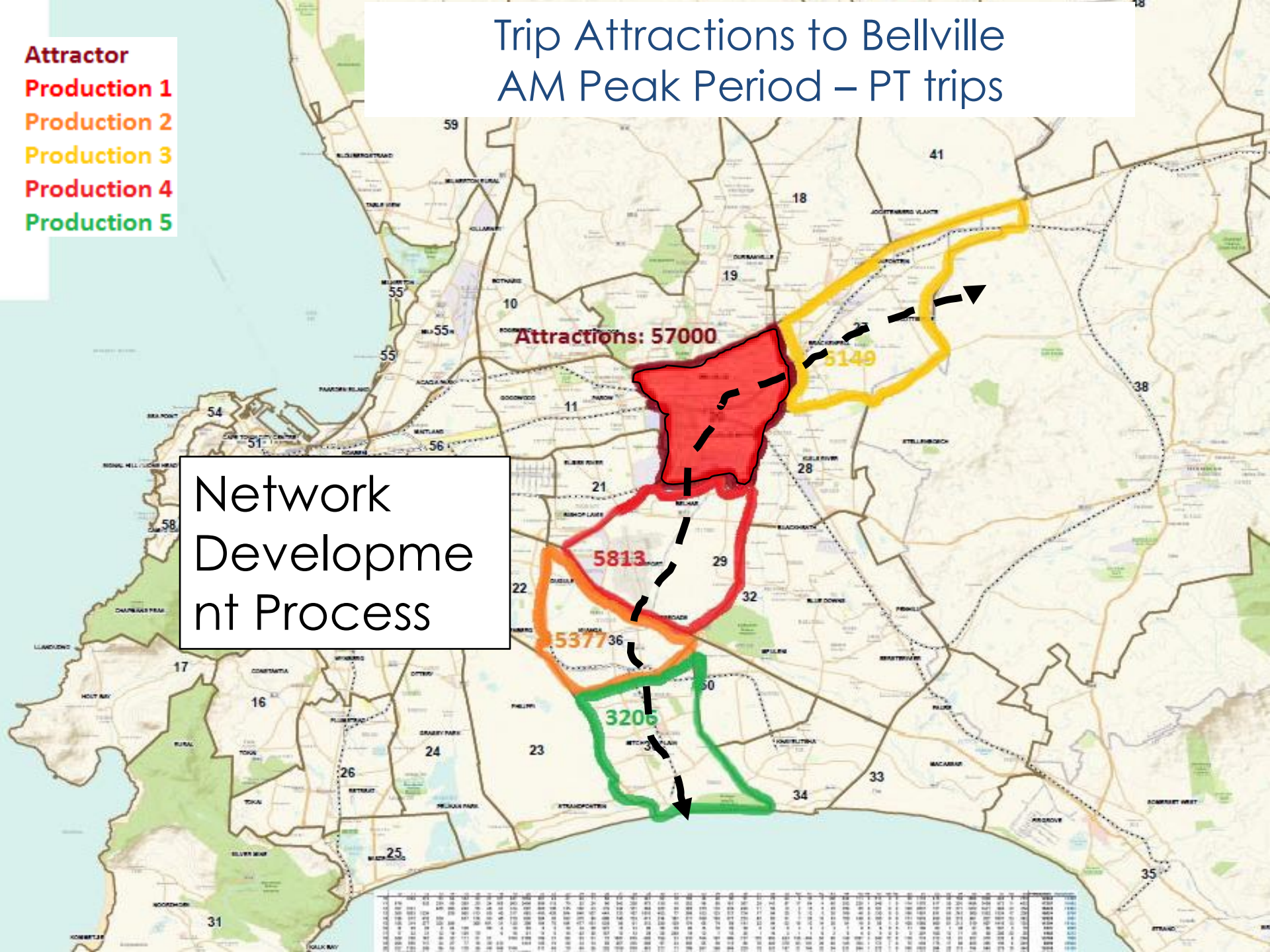
2032 Trip Productions & Attractions – PTOD (Peak Period)



Attractor
Production 1
Production 2
Production 3
Production 4
Production 5

Trip Attractions to Bellville AM Peak Period – PT trips

Network
Development
Process



3. 2032 IPTN



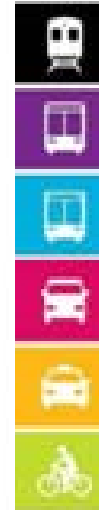
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- Rail
- BRT
- Feeder bus and taxi

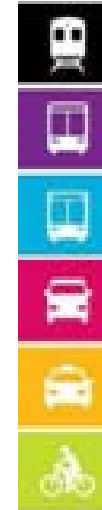
- Rail
- BRT
- Feeder bus and taxi



Proposed Rail Network



- New Blue Downs Rail Link
- Doubling of the existing Strand line
- Extension of Chris Hani Rail link to Somerset West subject to planned development in Somerset West
- Special attention to be given to the Fisantekraal line during the operational plan



BRT Network

BRT routes covering the following corridors:

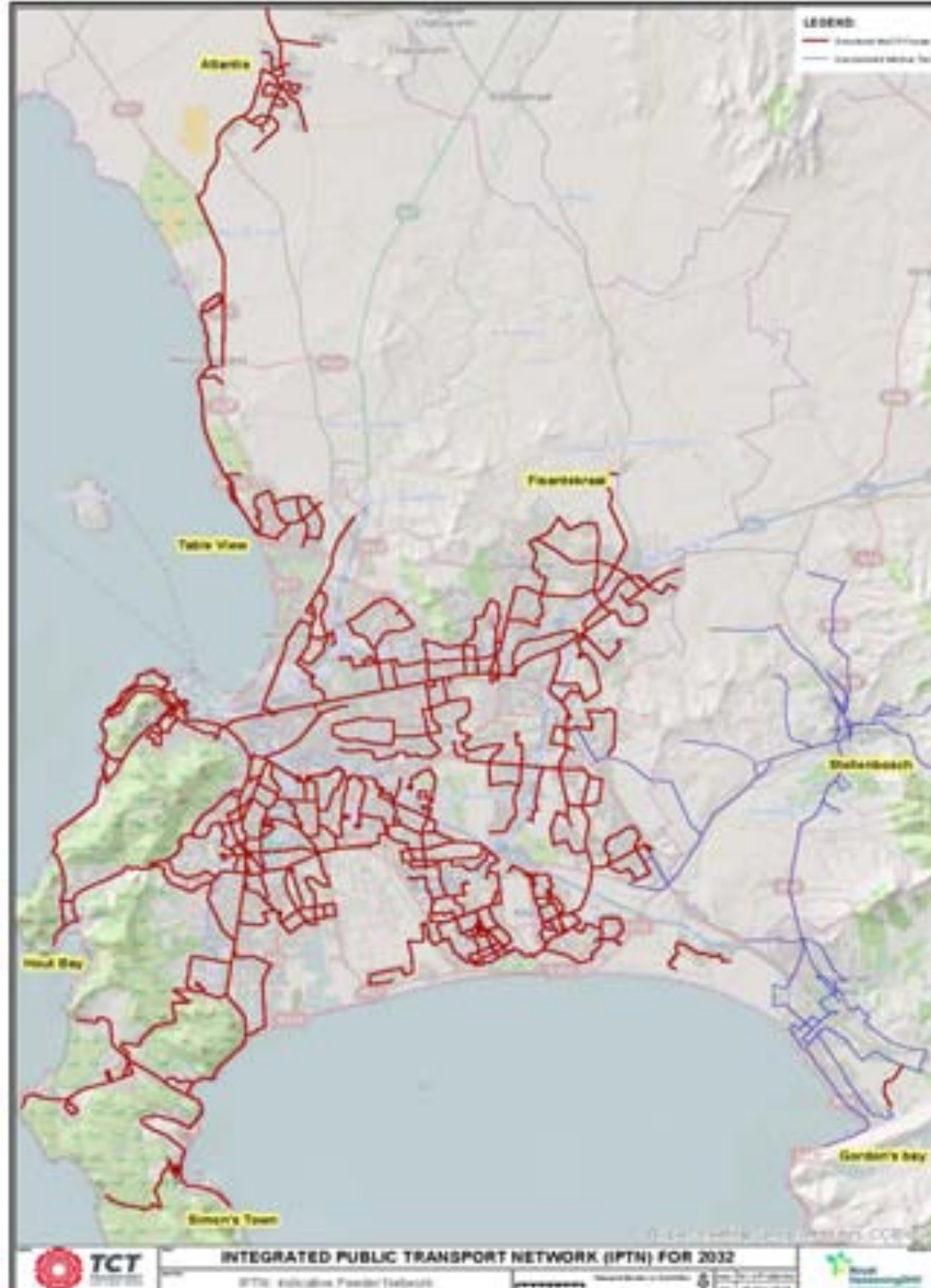
- Lansdowne – Wetton
- Klipfontein Road (Distributor)
- Gordons Bay to Retreat
- Symphony Way
- Westlake/ Retreat to Bellville
- Strandfontein Road
- Blue Downs to West Coast
- Metro South East to West Coast
- Frans Conradie Drive



Feeder bus

Mini-bus taxi

Supporting feeder services to both rail and BRT trunk services



4. Role of Transit Orientated Development (TOD)



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Transport & Land-use

- Transport is a derived demand from land-use activity
 - *E.g. Commuters travel because of work*
- Transport is influenced by land-use type, distribution, intensity and mix:
 - **Type** refers residential, office, industrial, recreation and others
 - **Distribution** refers to location
 - **Intensity** speaks to density, and
 - **Mix** land-use. Example: Century City
- This transport and land-use relationship affects:
 - Optimal use of public transport
 - Cost of public transport to both passenger and City
 - Type of public transport
 - Viability of public transport
 - Impacts on the economy, environment and social aspects of the City

Progression of land use scenarios

? – More aggressive TOD still required

- ★ Pragmatic TOD
- ★ Pragmatic Density
- ★ Business as Usual

Densification, **intensity and mix** of land use **located** around transit in order to make the most of transit and lower operating costs

*Density and **mix** near transit to optimise flows*

Densification policy implemented and **located** around transit

Density located at transit & slightly improved mix-use

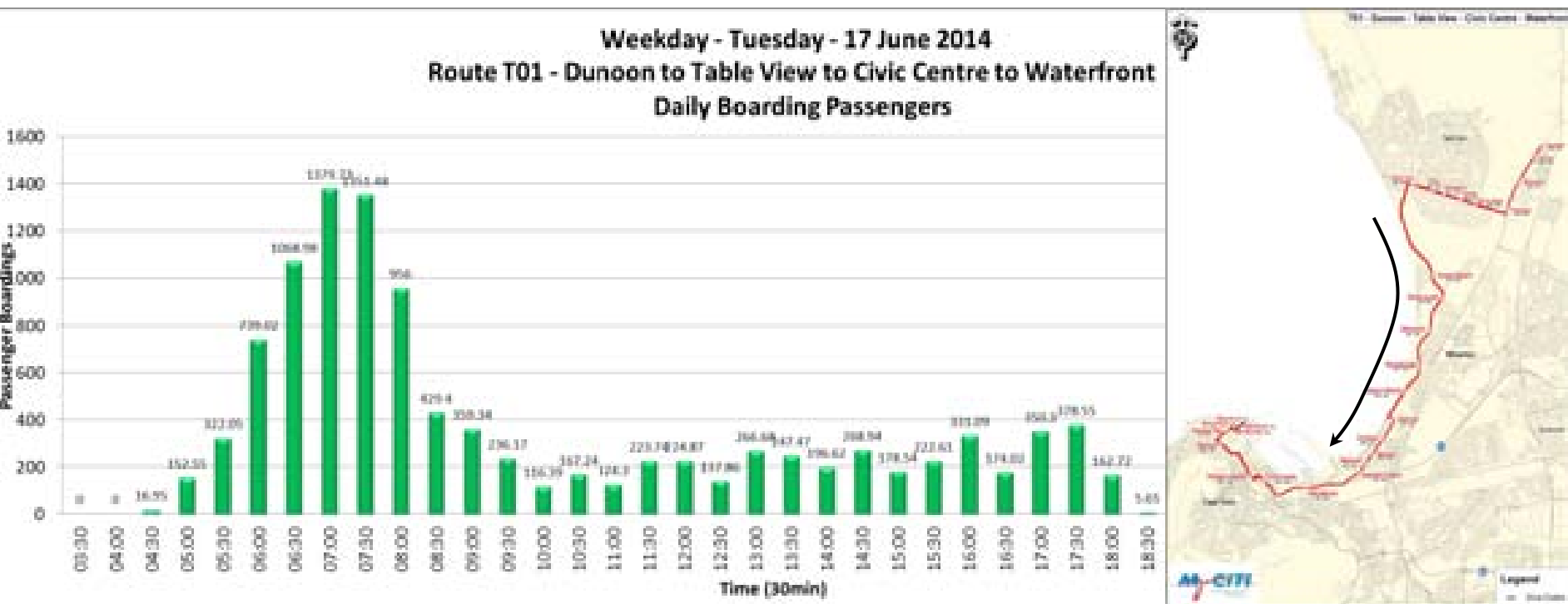
Densification policy implemented

General increase in density

Existing trends

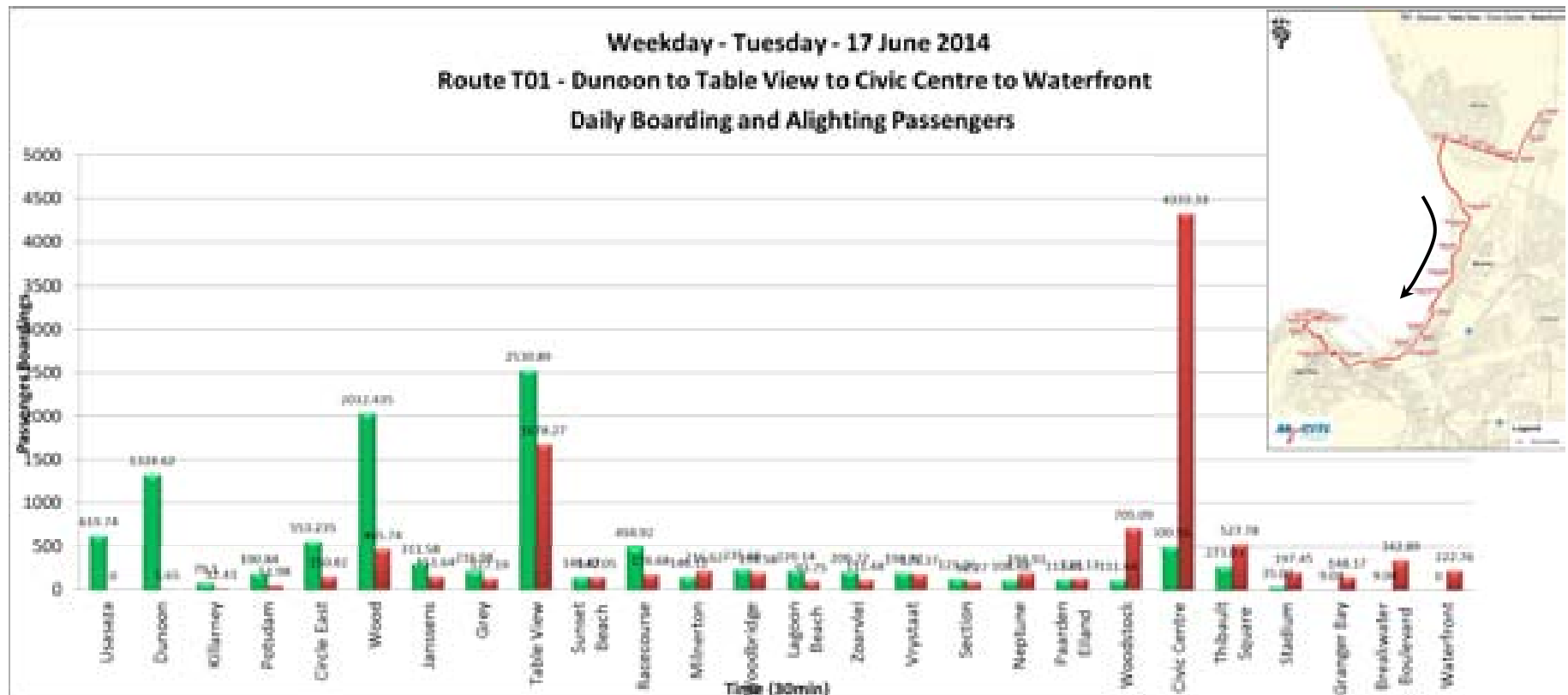
How will TOD can help?

- Overcoming the Tidal Movement



How will TOD can help?

Improve Seat renewal



Transport & Land-use

KEY CONCLUSIONS

- ✓ **Lower density** implies more public transport provision for a relatively lower return
 - ✓ **more cost** to the City
- ✓ Further away land-use located **more it cost** in money and time for the **passenger**
- ✓ Effective **land-use mix** provides **benefit to both** City and passenger
 - ✓ Improved return on City Investment
 - ✓ Passenger travels shorter distances and saves time and money
- ✓ **Location** of land-use types is critical to **efficient use** of public transport which improves viability of the public transport system

Political support and champion

At the Mayoral Committee when IPTN was approved:

The Executive Mayor P de Lille suggested that Transport for Cape Town, Human Settlements, Utility Services and Community Services meet to discuss the issue of **integrated planning** by utilising the City's Integrated Public Transport Network (IPTN) Plan as a guideline for the alignment of all planning and projects relating to community development along the identified corridors.

The Executive Mayor further requested that the outcomes of the above meeting form the basis of detailed discussions on integrated corridor development plans at the next Strategic Mayco/EMT session in September 2014.



5. MyCiTi BRT Project: Executive Summary



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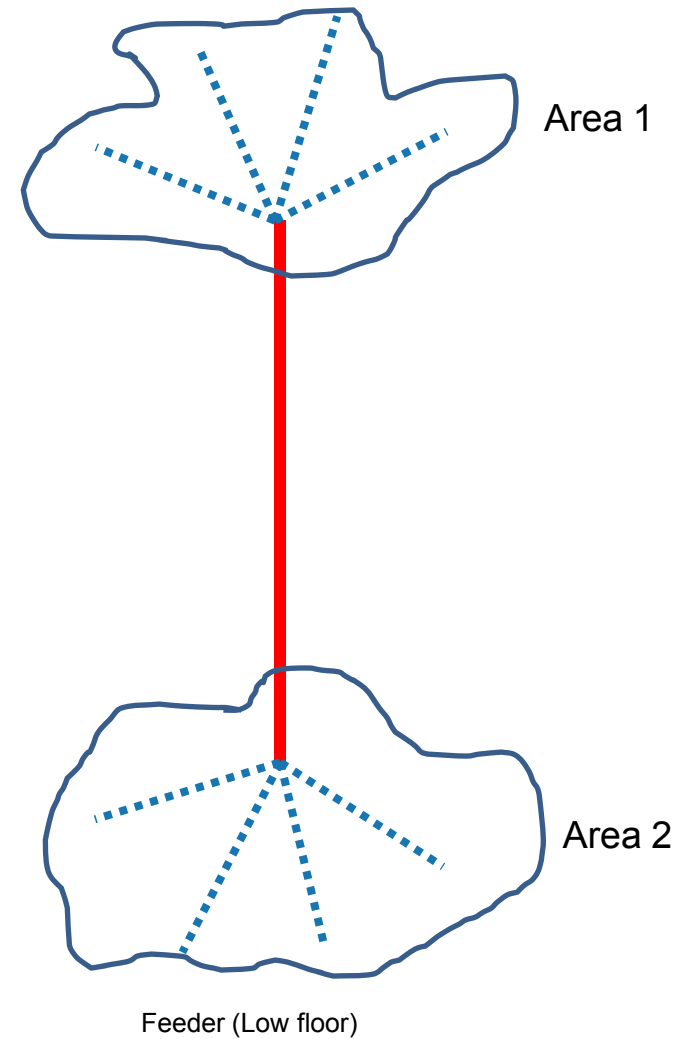
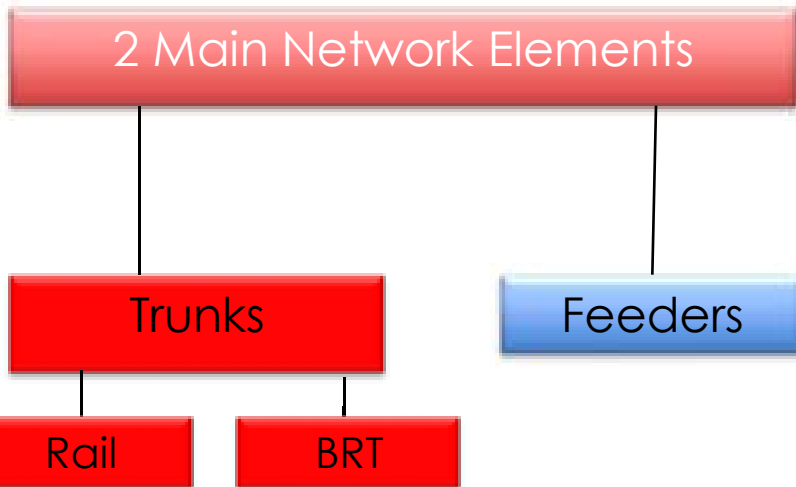


KEY SYSTEM CHARACTERISTICS

- Integrated **network** of routes consisting of Trunks & Feeder services
- **Dedicated median** priority Trunk infrastructure
 - Frequent and rapid service between major origins and destinations
- **Rapid** Trunk boarding and alighting, facilitated by:
 - Pre-board fare collection and fare verification on the trunk services
 - Multiple right sided doors
- **Reliable and accessible** feeder service network
- **Universal Access**
- **Fare-integration** between routes, corridors, and feeder services
- Passenger **information**
- Enable and support **City Development**



Integrated Network



System Structure & Design



Advantages of Median Operation

- Least Friction
 - Parked/ break-down vehicles
 - Minimise interaction with private vehicles
- **Maintain consistent operating speeds**
- Requires one station per location
 - Reduce Costs
 - Facilitates transfer between routes
- More easily enforced
- Making a statement for public transport



07/01/2013

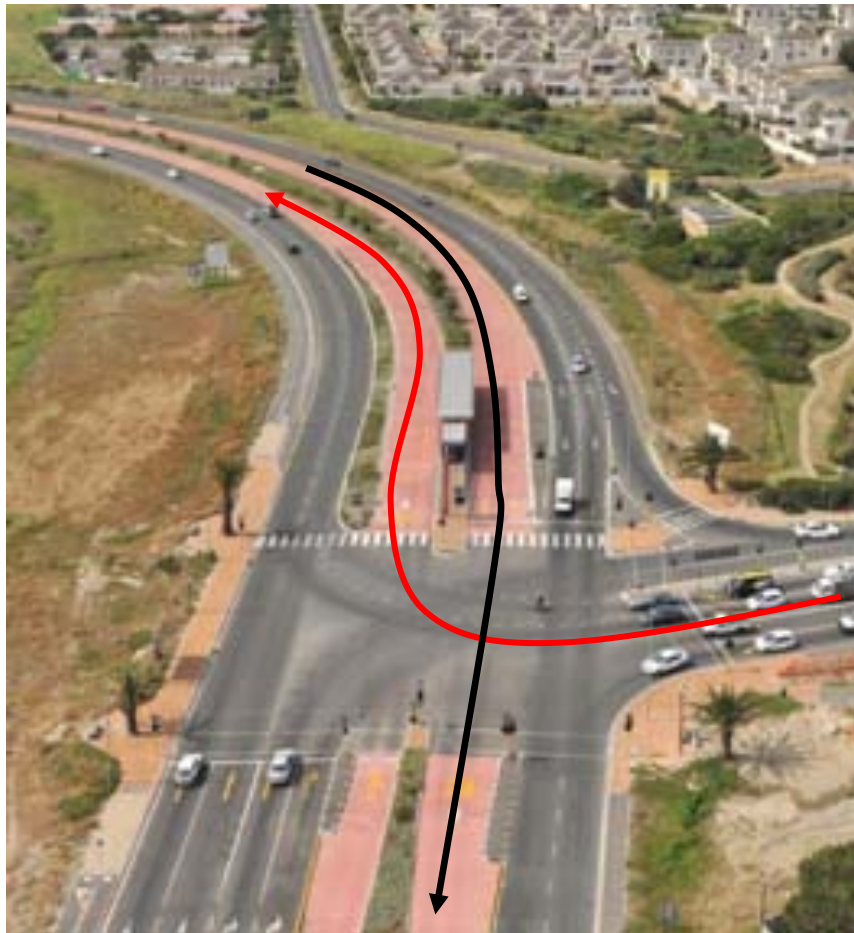
System Structure & Design



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System Structure & Design

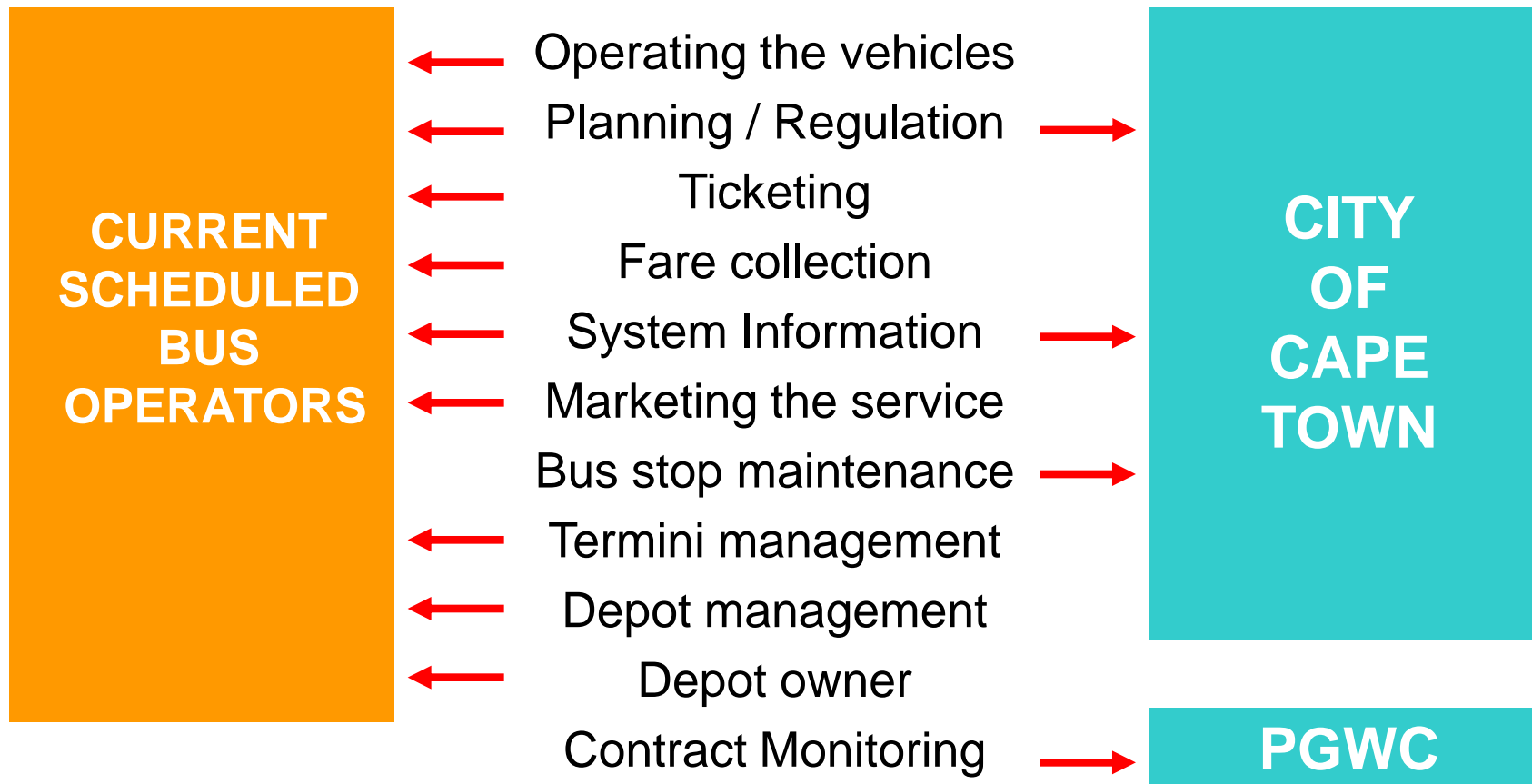


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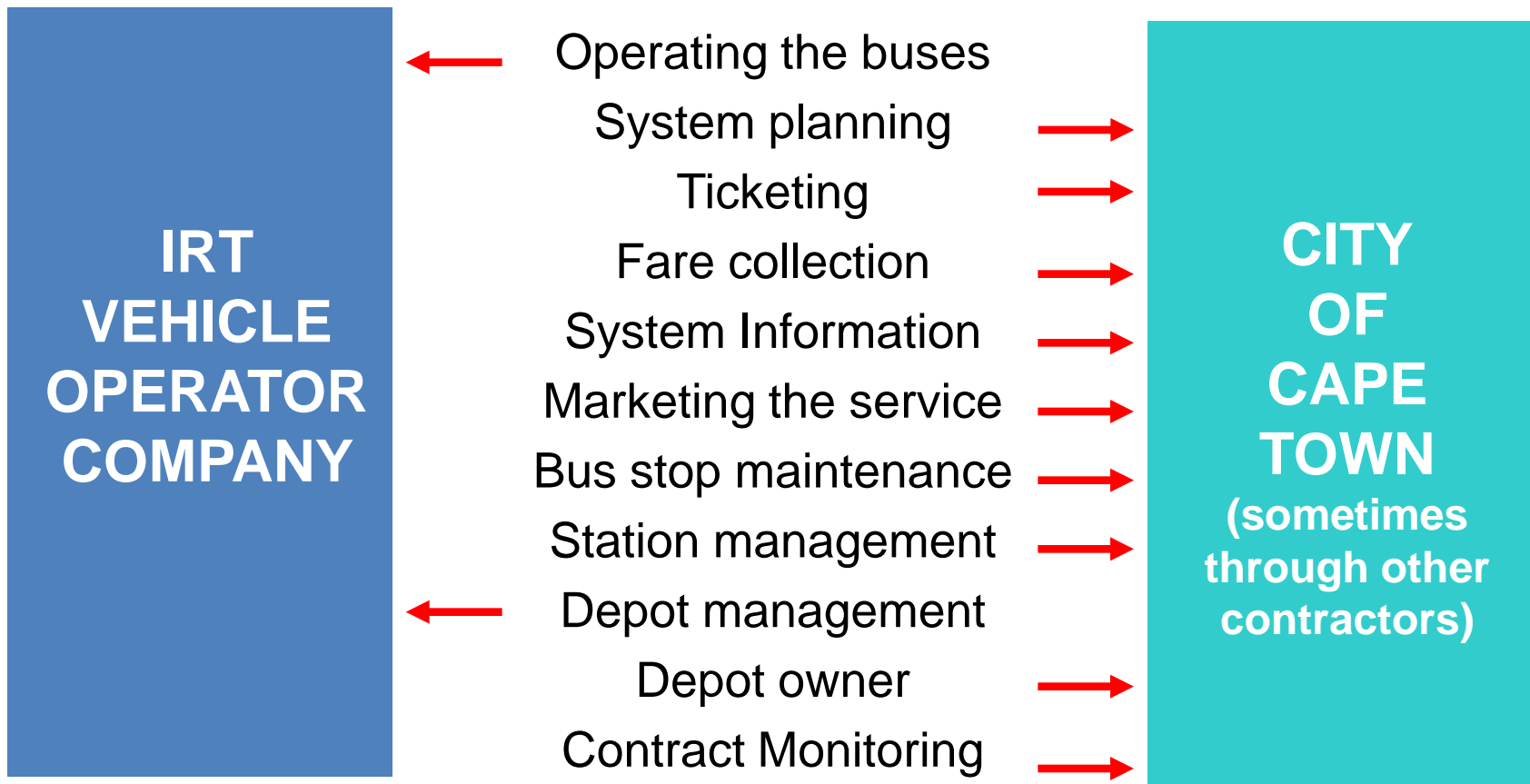
IRT Business Model

Old Model



IRT Business Model

IRT Model



5. Conclusions



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Key Lessons Learnt

1. IPTN Development

- Good, regular and credible transport data to continuously calibrate Transport Demand Model and monitor projection
- Active engagement with Land-use planners to push the boundaries with respect to Transit Orientated Development

Key Lessons Learnt

2. BRT Project

- Key driver for bus operation efficiency
 - Physically separated busway
 - Zero tolerance enforcement
 - Priority Intersection treatment
- Key contributors to operational costs
 - Cost involved in managing closed stations
 - Kiosk management, Security, Cleaning, Faulty doors

Key Lessons Learnt

2. BRT Project

- Key contributors to operational costs (2)
 - Slow feeder services
 - Provide more priority lanes for feeder services
 - Need to strike a balance between extensive coverage and operational cost

Key Lessons Learnt

2. BRT Project

- Planning
 - Well Calibrated Model to improve accuracy of the demand projection which impacts revenue projection
 - Very High Peak hour Demand & Low Off-peak demand
- Fleet type
 - Move from High Floor to Low Entry bus
 - Low Entry Bus provide more flexibility and provides opportunity to further reduce operation cost

Key Lessons Learnt

2. BRT Project

- Industry Transition
 - Informal Transport industry cannot be 100% replaced
 - Requires a hybrid model
 - City is developing this hybrid model

Change has started...

—ADAM C. LARSEN, *Author of "The Last Days of Pompeii"*

Claremont won't miss this bus



Access for all

CONCLUSIONS

Long Street is just one of the streets set to become more accessible to people with disabilities.

Chen et al. do not do much more to gauge the degree of interview success or interview failure in other key areas.

Throughout the Cape Town, the city's largest authority, confirmed a confirmed case of Long Street from Walter 31 Avenue to Rosherville, says says the Mayor, Mayor Committee Member

It might be concluded that there are more problems along this stretch of Long Street. "It is difficult for probationers, people in jail or people who are financially in a pinch," he says.

and the placement of advertising signs and street furniture on the the presence of industrial facilities were also limited (universal ac-

has been initiated to set up a network of interventions to reduce destruction along the coast.

including the dropping of keys
and so on. In addition, as well as
the use of sidewalks at intersections,
sidewalks at intersections
making changes for the green
light and prevent red
lighting the pedestrian
area.

www.elsevier.com/locate/jmb

...and the drug
is listed as Schedule
II.

1. **Abstract**

Always leave space to be clean, such as inside the refrigerator, on the table, and so on.

"This is a frequent situation in Hong Kong, and a great source of the stress and conflict felt in the office. Without more coffee and more place for tables and chairs in the Hongkong Housing Corporation's canteen, I'm often being told why no little space is made available to wheelchair users and people with mobility issues," he says.

Alameda, Alameda, Alameda Committee Members for Tourism, Events and Economic Development, were the City given permission to use the city's name for the purpose of the restaurant, coffee shops, cafes and bars. I would like to place before you and share my thoughts, professional skills and experience.

the planting of rubber seedlings in rows at four feet intervals is granted at the satisfaction of the rubber grower.

and is only issued if there are no automobiles permitted from the City streets in terms of pedestrians, including their pedestrians, and vehicular and of from an asphalt, planning and eight feet of view.

complaints are assigned to a

own City Improvement District
along officer Tamas Evangelinos.
Commission supports any strate-
gy to be developed by the City (re-
port in terms of universal ac-

By important for any country
not to be easily accessible by
a whether they come for busi-
ness, to visit for leisure purposes
and," he says.

Thank you



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2015/04/09