



GAUTENG PROVINCE
ROADS AND TRANSPORT
REPUBLIC OF SOUTH AFRICA



25-YEAR INTEGRATED TRANSPORT MASTER PLAN (ITMP25)

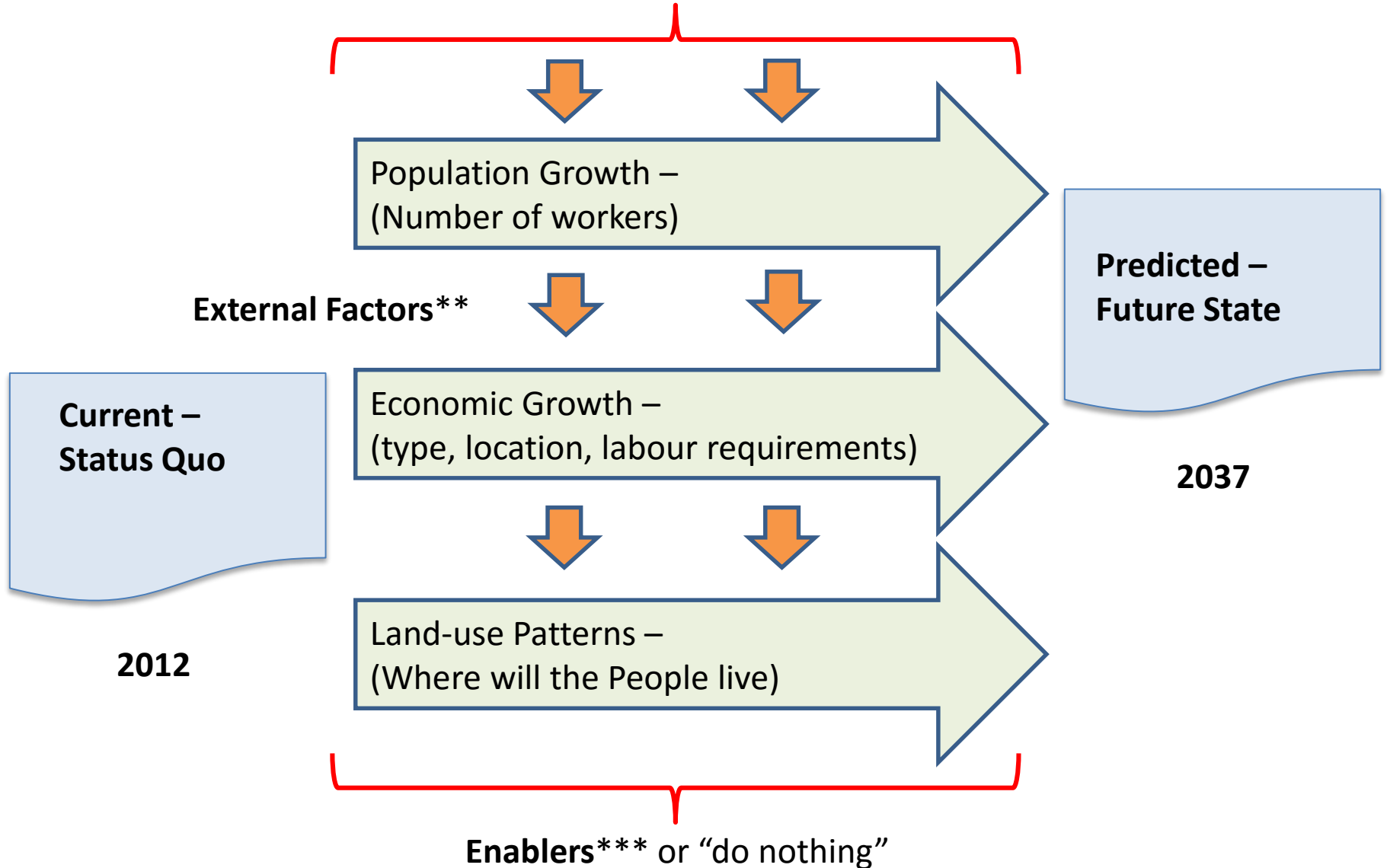


South African Road Federation AGM

27 October 2015

Transport Planning

13 (GTIP5) & 10 (ITMP25) Major **Interventions*** or “do nothing”*



Transport Planning – Interventions*

- **GTIP5**

- Transport Authority
- PRASA Super corridor
- Subsidised Road-based transport
- Taxi industry
- Green Vehicle technology
- TDM
- Access to Freight nodes
- Airports
- NMT
- Provincial wide mobility
- Management of existing infrastructure
- Law enforcement
- Universal access

- **ITMP25**

- Subsidised housing policy
- Local economic nodes
- Land-use densification
- Mainstreaming NMT
- Passenger Rail as PT backbone
- Extend Integrated rapid & road-based PT networks
- Capacity building
- Freight Hubs
- TDM
- Provincial wide mobility

Transport Planning – External Factors**

- **Environmental**
 - Pollution
 - Availability of fossil fuels
 - New propulsion technologies
 - Focus on renewable energy
- **Policy & Legislation**
 - Shift to PT
 - User-pay principle
 - Increased congestion

Transport Planning – Enablers***

- **Government**

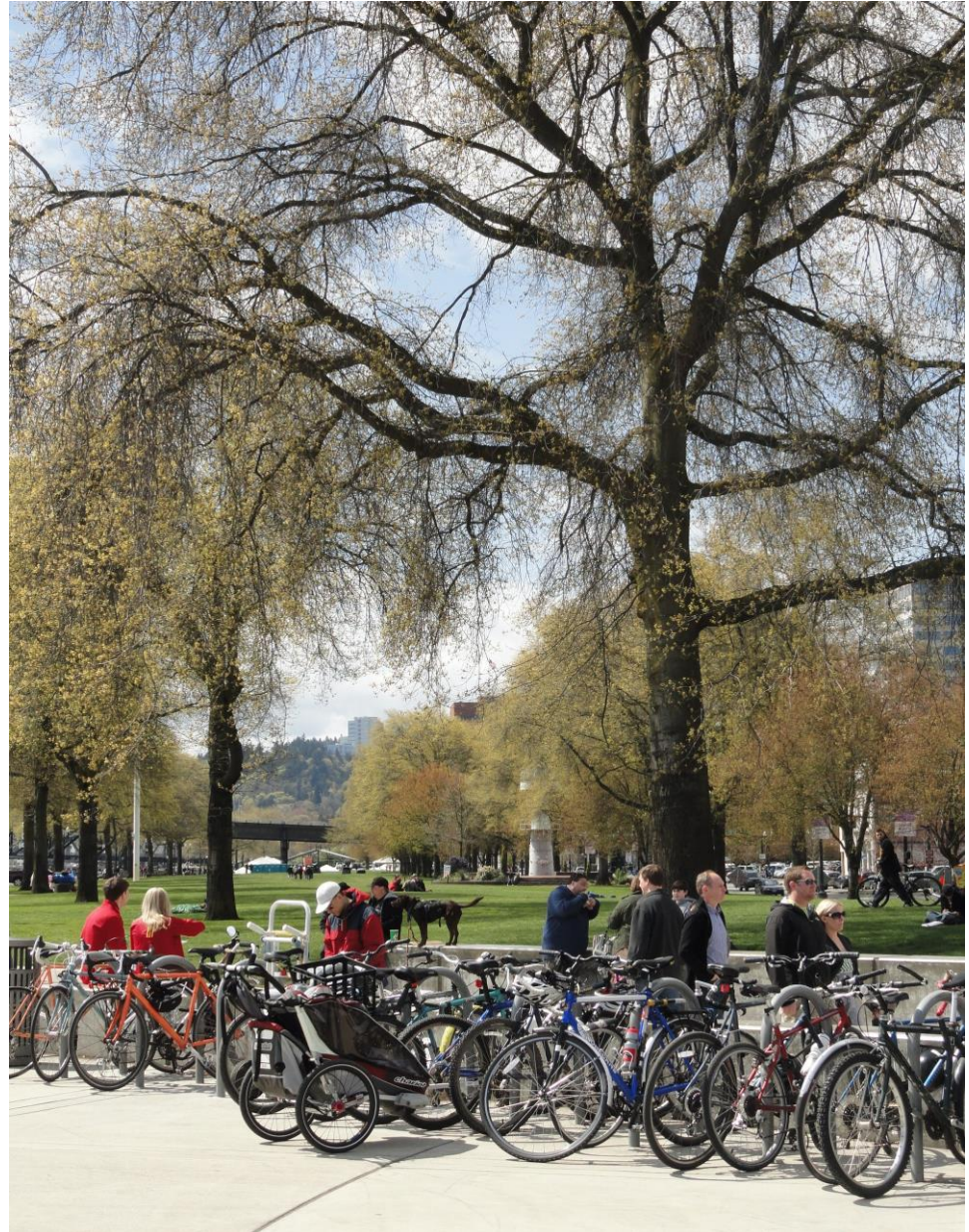
- Long term vision
 - NDP, Gauteng Vision 2055
- Legislation
- Regulations
- Guidelines
- Norms & Standards
- Funding
- “Seed” Capital
- Departmental priorities
- PPP’s

- **Private Sector**

- Long term appetite to invest in infrastructure
- Feasible Business case
- Attracting capital (foreign & local funding)
- Enabling environment
 - Long term stability
 - Governance
 - Perception on Corruption
 - “Red-Tape”
- PPP’s

ITMP25 Vision

“An integrated and efficient transport system in Gauteng that promotes sustainable economic growth, skills development and job creation, fosters quality of life, socially includes all communities and preserves the environment.”



Key focus areas:

- Priority public transport corridors
- Strategic modal transfer nodes and interchanges
- Freight routes and logistics centres
- Rail as the backbone of an integrated public transport system
- Protection of future priority corridors, future road networks, passenger and freight rail networks, and airports.

The plan further includes a vision to support and strengthen the Gauteng Global City Region.



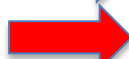
Geographical Information Systems and Intelligent Transport Systems form a practical basis for the plan.

Sustainable Transport

- **Reduce travel:**

- Change travel patterns
 - Regularity & extent of travel in peak periods, trip lengths, etc.

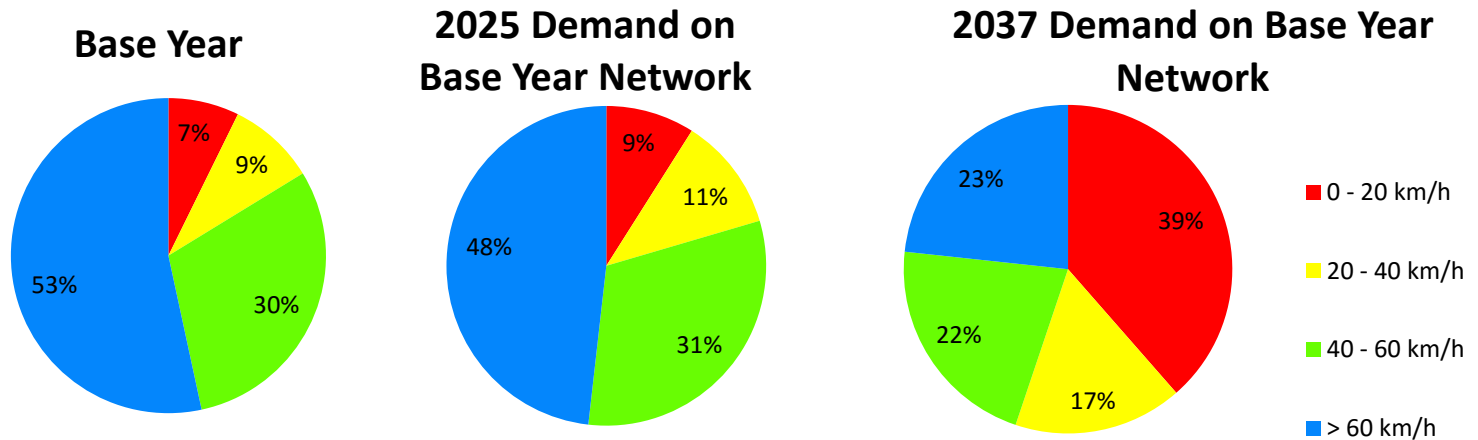
- **Shift in modes:**

- | | | |
|-------------------------|--|-------------------------|
| • Shift from: Motorised |  | Non-motorised transport |
| • Shift from: Private |  | Public transport |
| • Shift from Road |  | Rail |

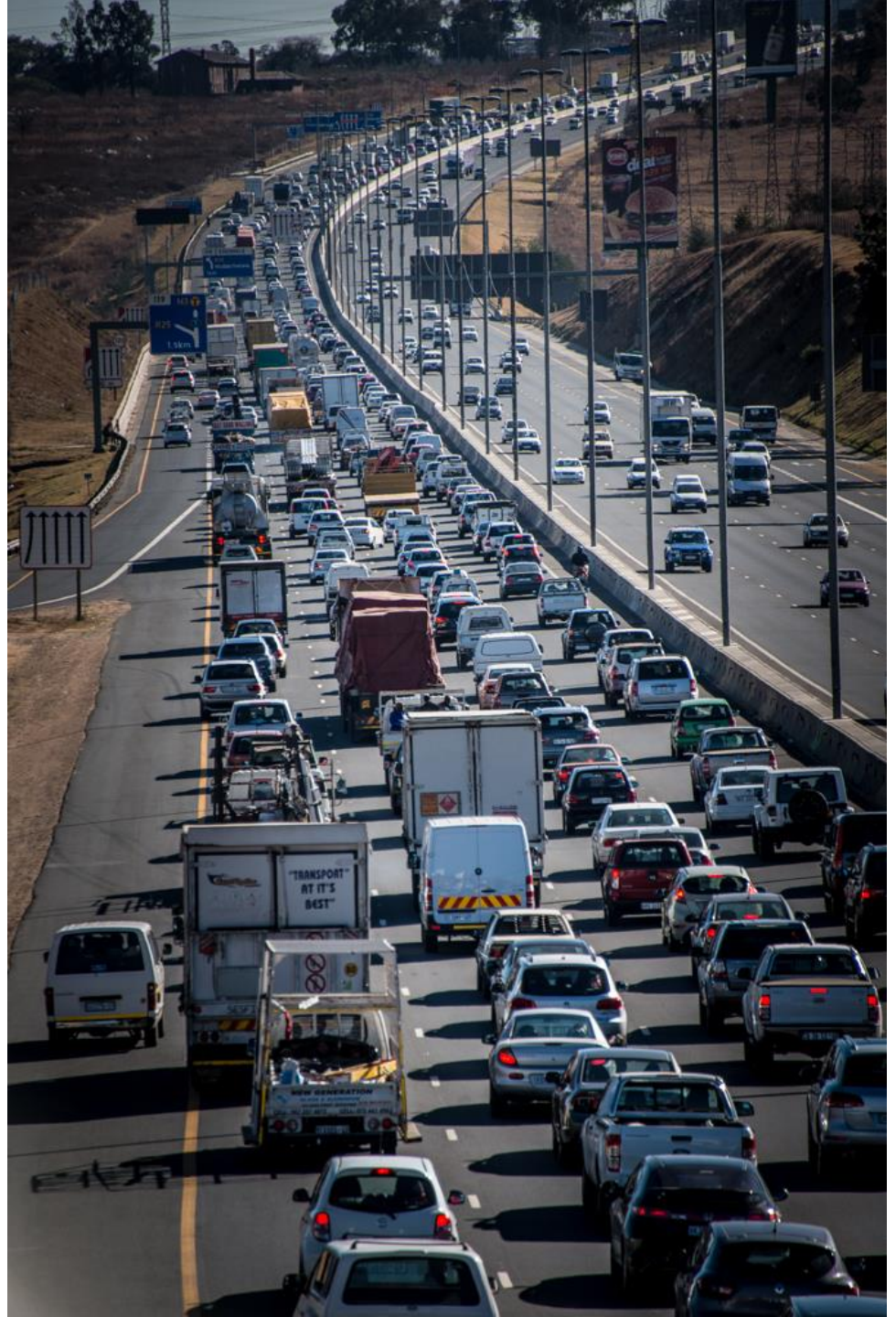
- **Technology:**

- Environmentally friendly technologies
- Intelligent Transport Solutions (ITS)

“The Cost of Doing Nothing”



Economic Growth, Population & Land-use



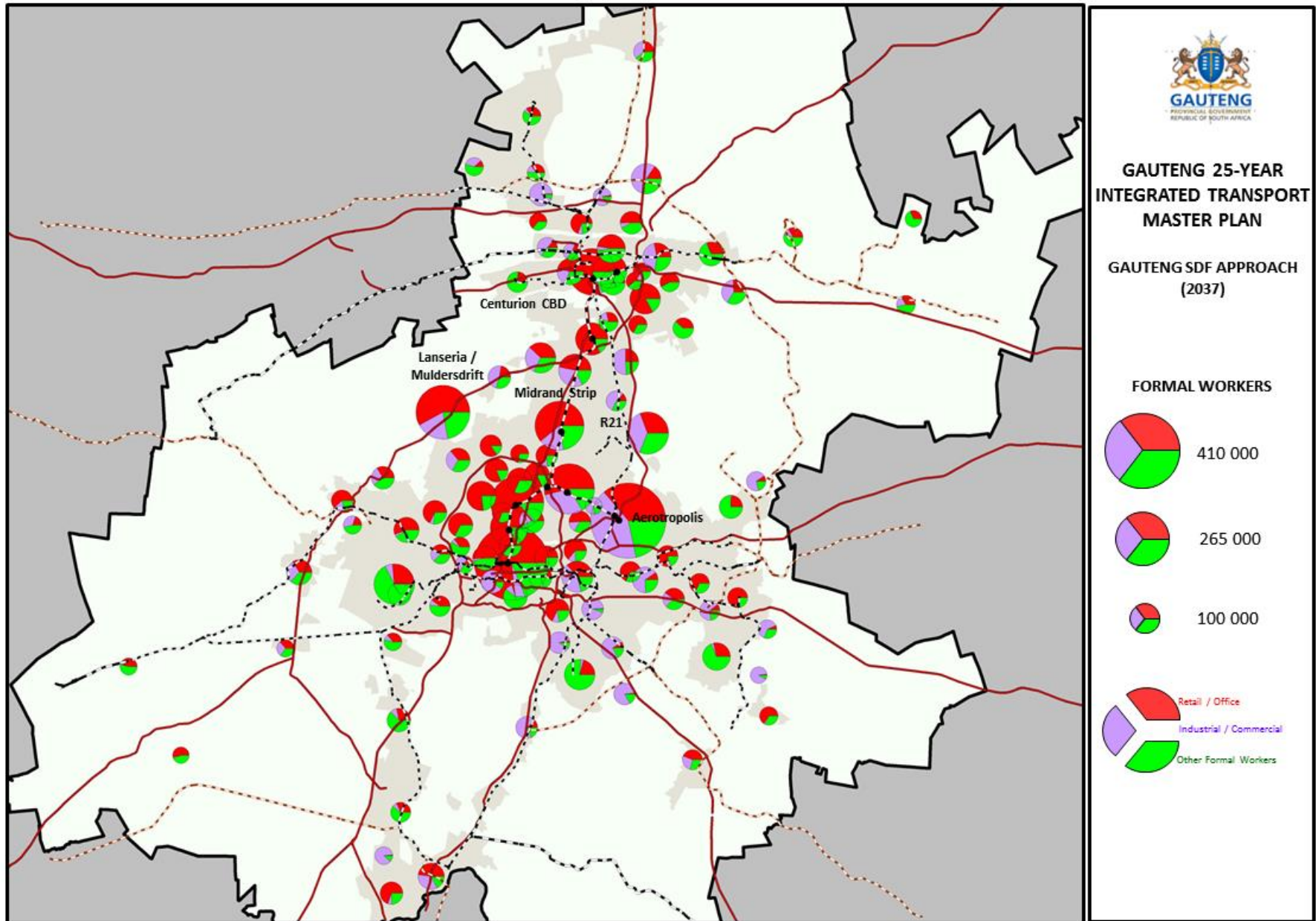
Economic Forecast

- Gauteng Base Scenario* was used for the Economic Growth Forecast, where growth is less than 6%
- Likelihood is estimated at <1 0% that growth would be > 6%

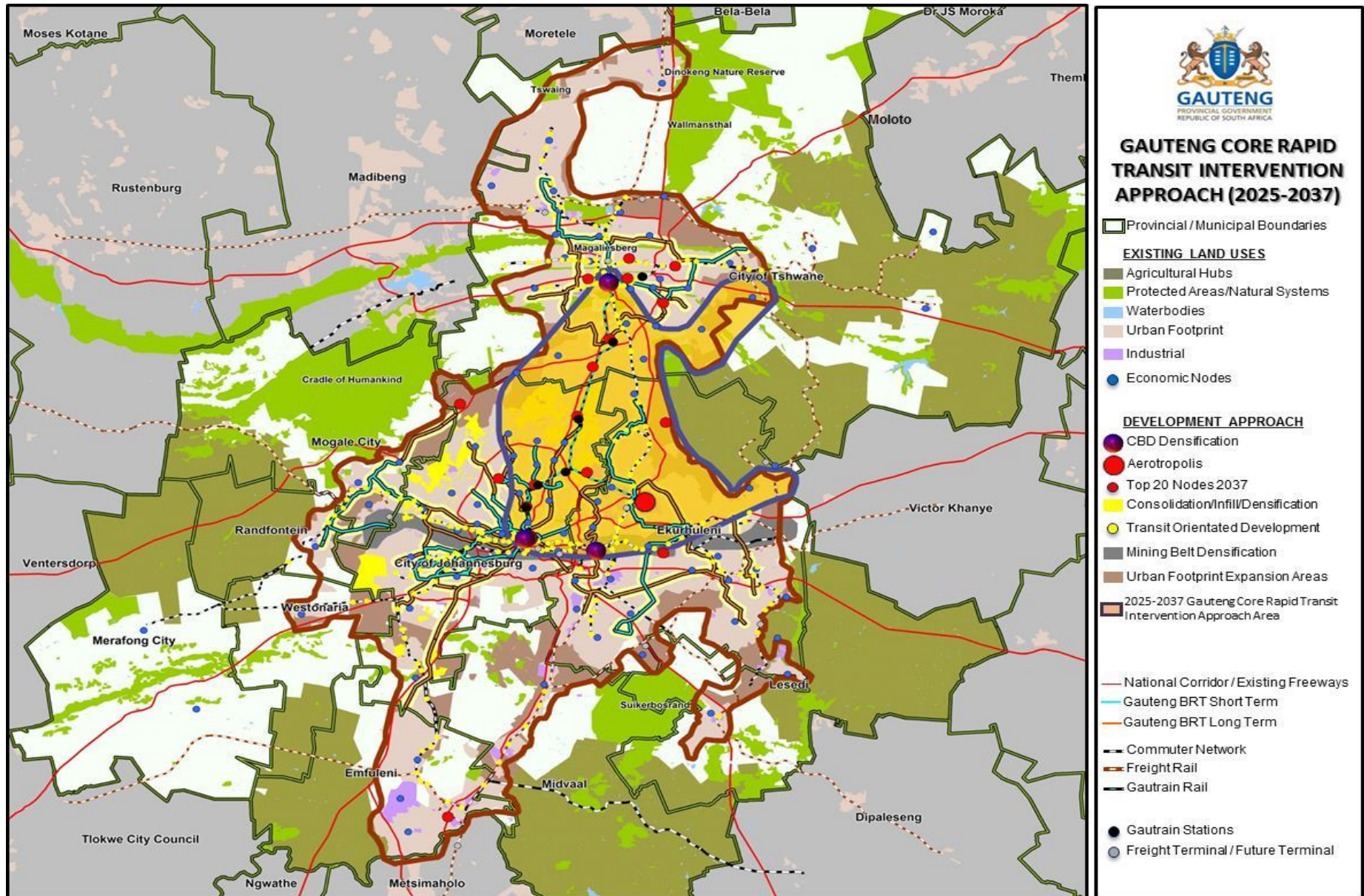
Gauteng	2010	2025	2037
Population	11,2 million	16,3 million	18,7 million
Formal Workers	3,9 million	6,7 million	8,6 million

* Source: Global Insight 2013

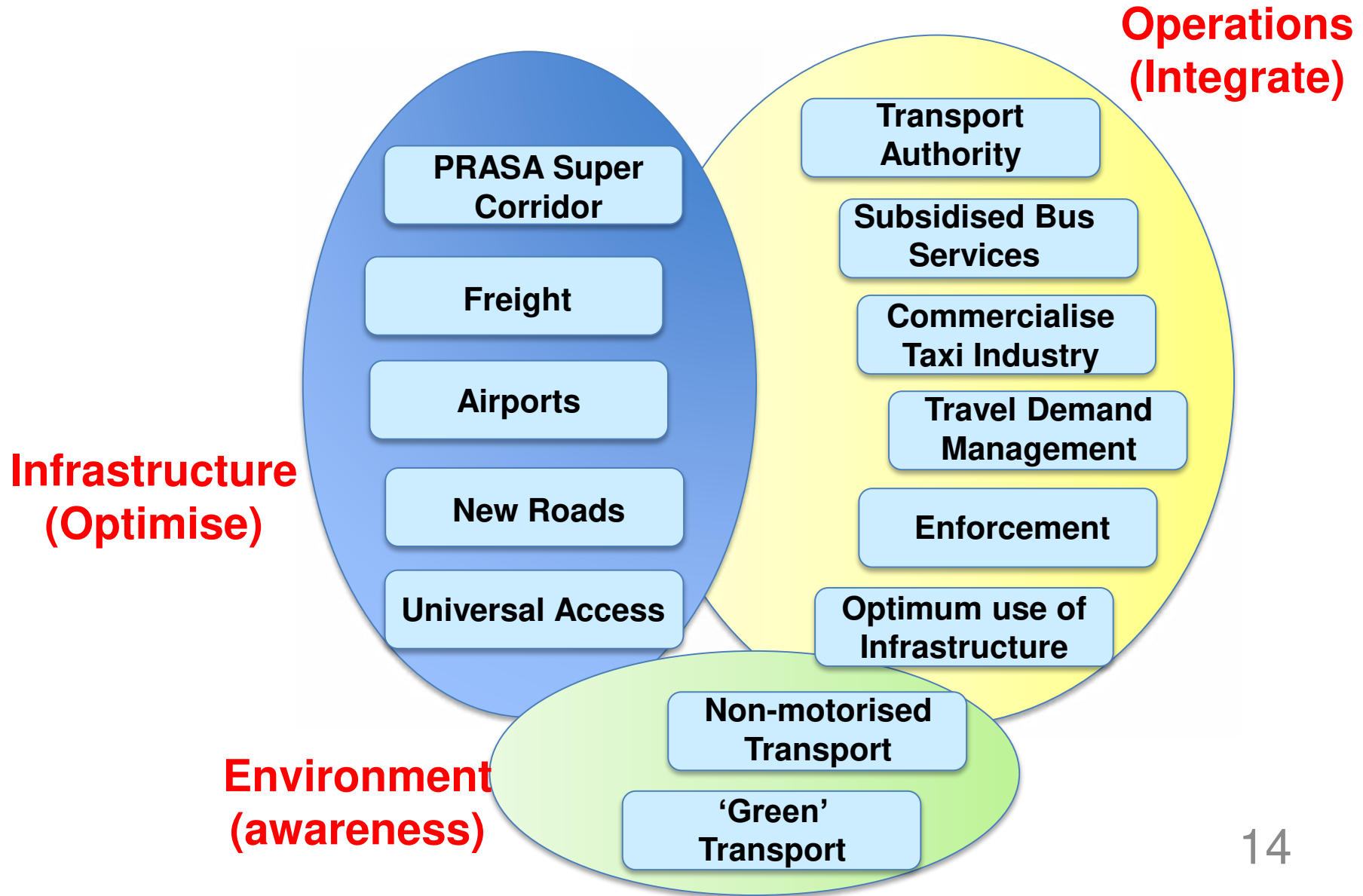
Job Opportunities: Formal Workers



Gauteng SDF Based Approach vs. Core Transit Intervention (2037)



GTIP5 Implementation



25-Year ITMP Interventions

Land Use Development

1. Subsidised housing provision within urban core areas
2. Facilitating local economic development outside the urban core
3. Land use densification in support of public transport

Strategic Public Transport Network

4. Mainstreaming non-motorised transport (NMT)
5. Reinforcing passenger rail network as the backbone of the system
6. Extending the integrated rapid and road-based PT networks
7. Capacity building in the transport industry

Freight Transport

8. Strengthening intermodal freight hubs

Road Transport

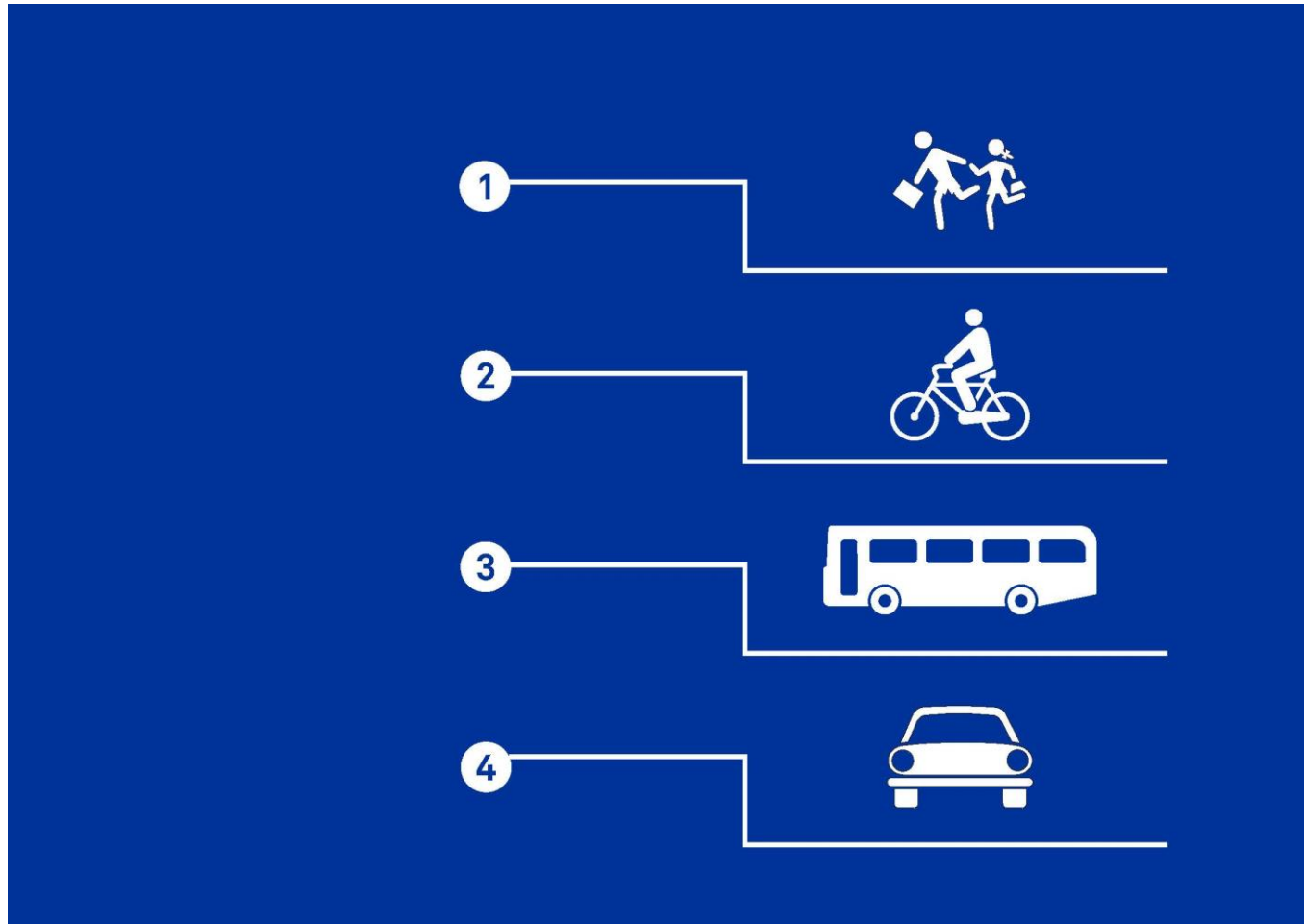
9. Travel demand management
10. Continued provincial wide mobility

Intervention 4: Mainstreaming NMT (1)

	Description
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Proposal	<ul style="list-style-type: none">• 70% of all travellers Gauteng use NMT daily (by choice or force).• The urban development structure has significant deficiencies, when considering the lack & the quality of NMT infrastructure & facilities. (NMT seen as an “add-on”)• Built environment is inconvenient, insecure and unsafe for pedestrians and cyclists.• “Universal Design” on needs to be adopted on a wide base.• Paradigm shift in the approach to roads design and adopting a different “modal hierarchy” from the current.
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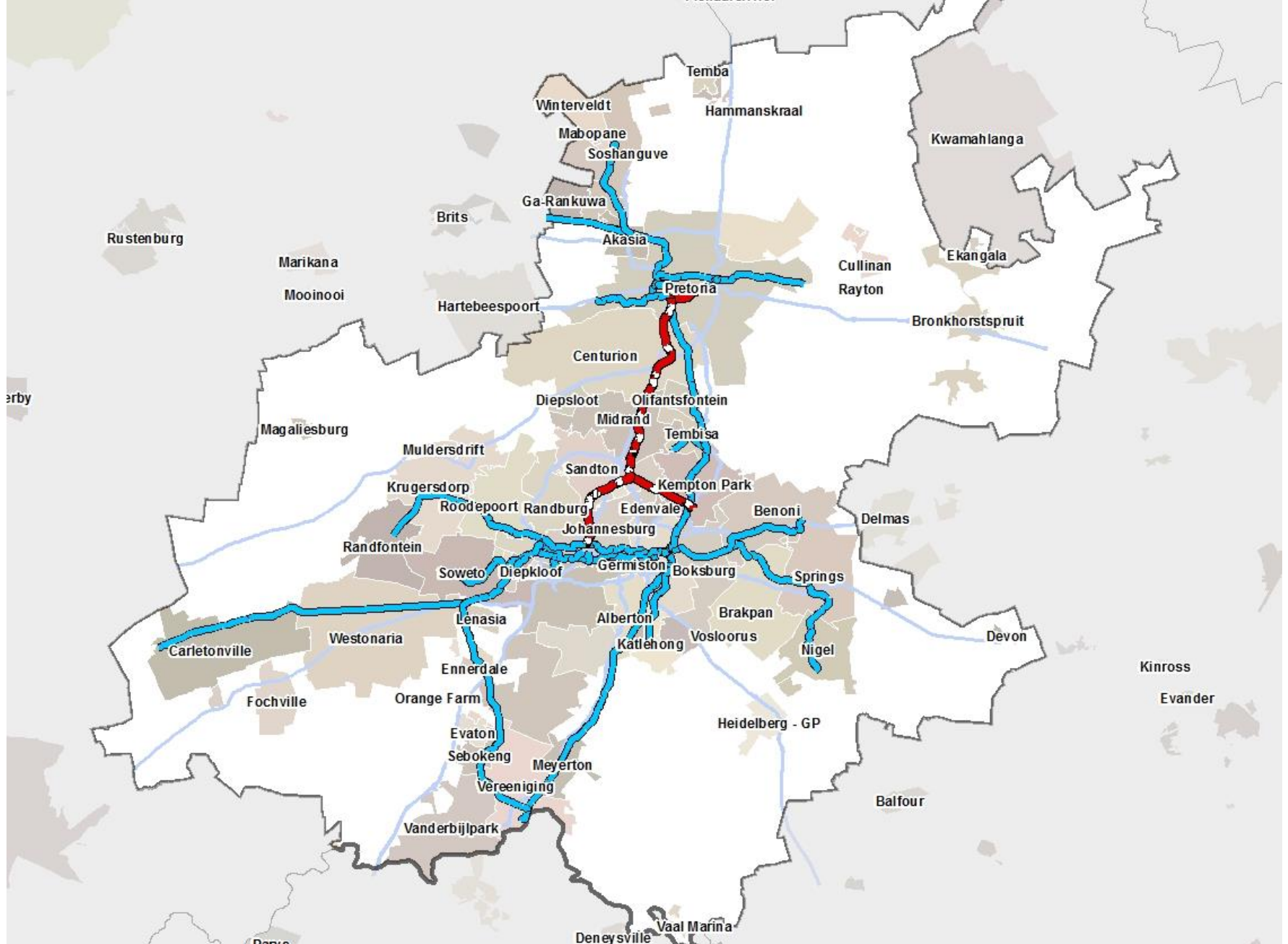
Intervention 4: Mainstreaming Non-motorised Transport (2)



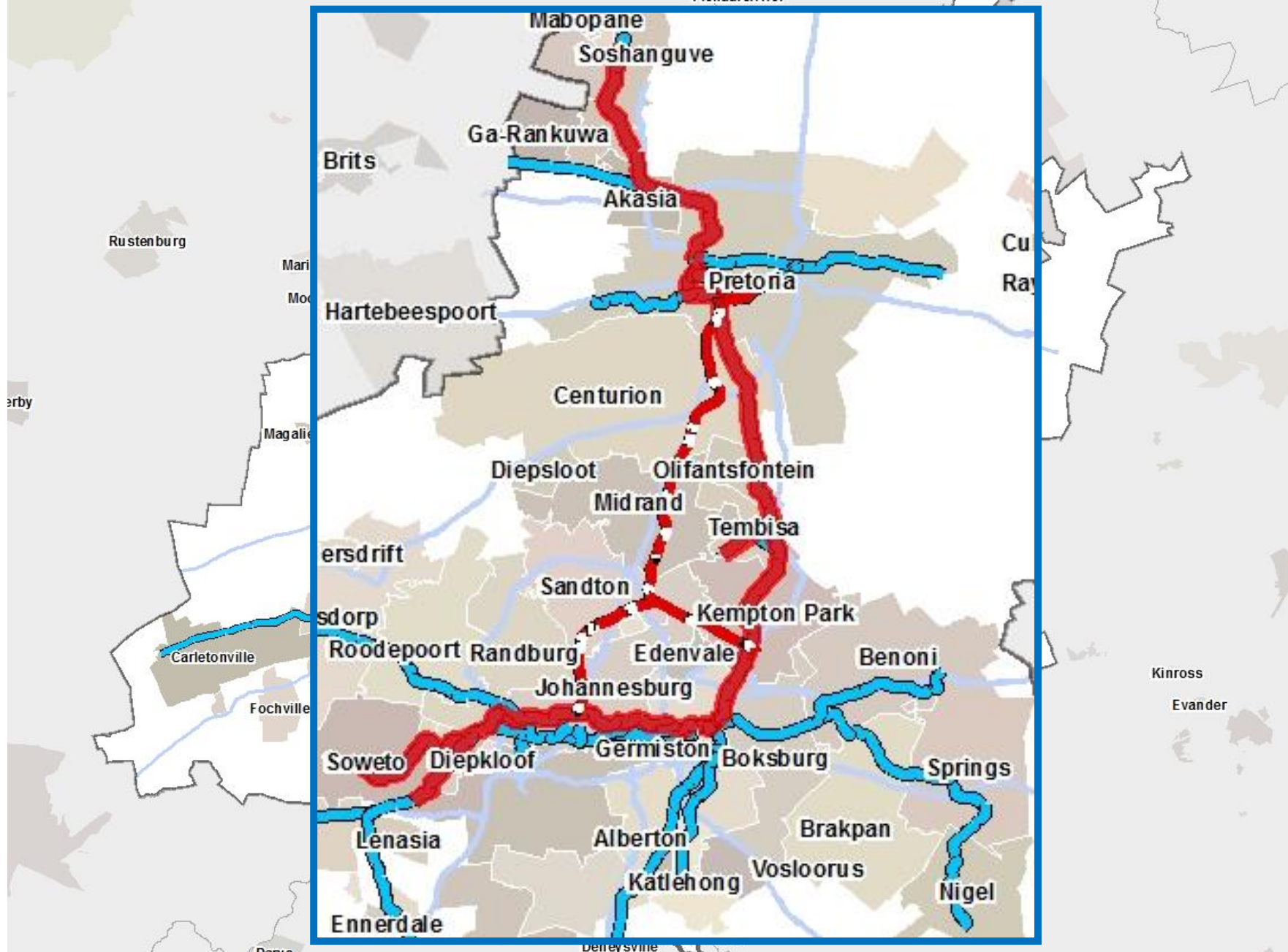
Revised modal hierarchy

Intervention 5: Reinforcing the Passenger Rail Network (1)

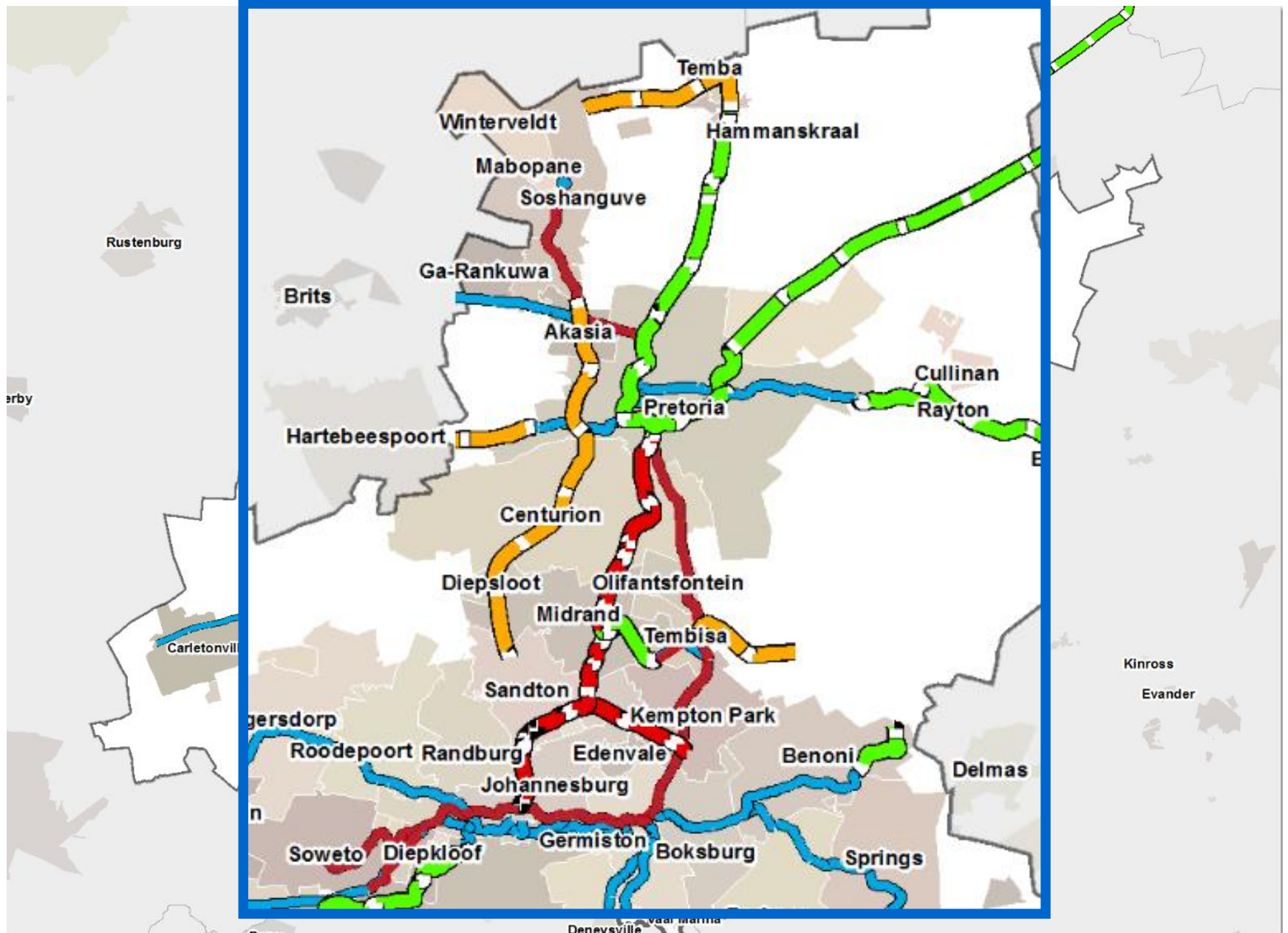
	Description
Proposal	<ul style="list-style-type: none">• Rail is a key form giving element of the City Region.• Rail most appropriate on high-density corridors.• Facilitate and support efforts of PRASA and GMA to Develop Rail Network and Services into a modern system meeting the needs of Gauteng's passengers.• Develop major modal transfer nodes at stations (including NMT)



Existing Gautrain



PRASA Future Metropolitan Rail



**Additional Future Commuter & Metro Rail
To be considered**

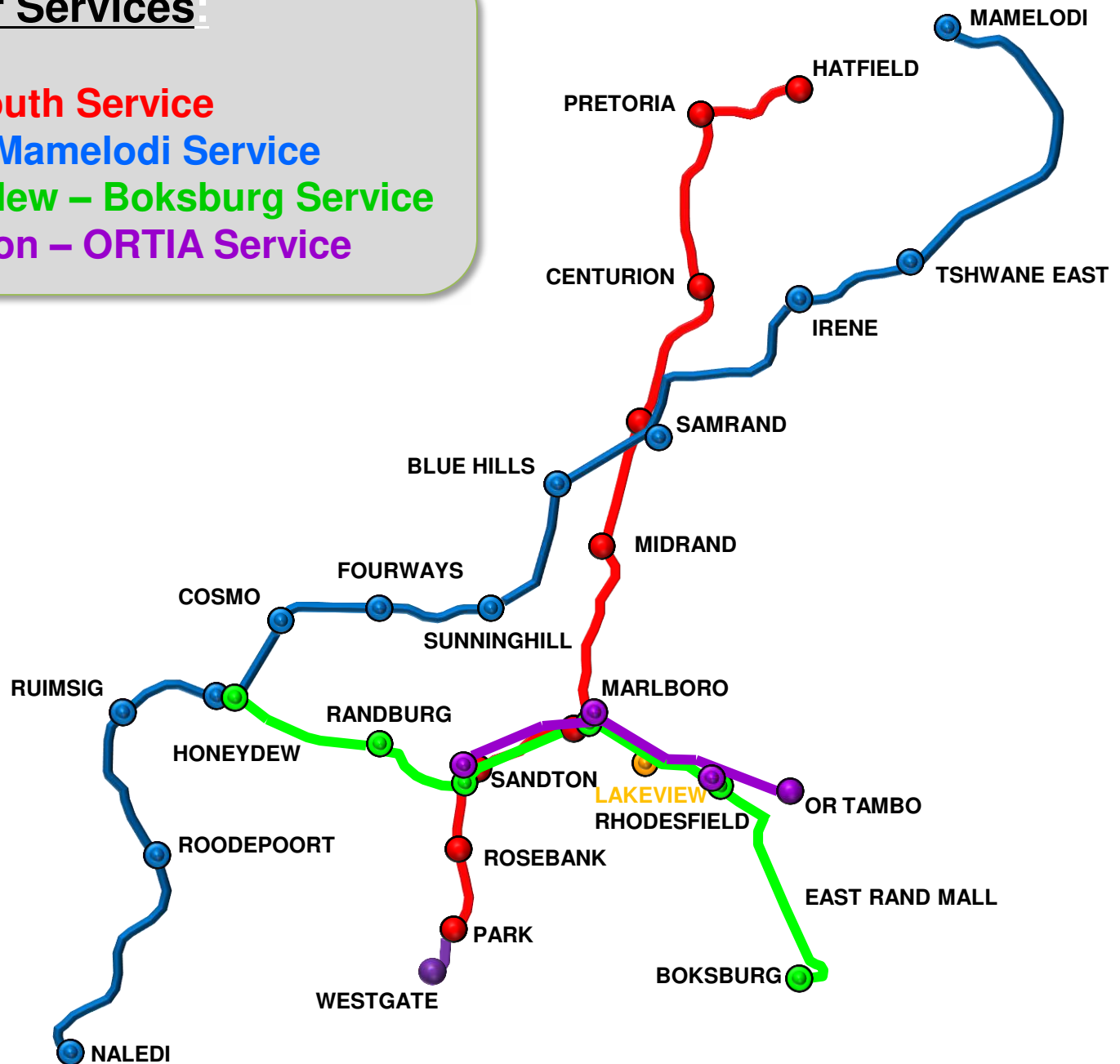
Ultimately four Services:

RED: North – South Service

BLUE: Naledi – Mamelodi Service

GREEN: Honeydew – Boksburg Service

PURPLE: Sandton – ORTIA Service



Intervention 6: Extending Road-based PT Networks (1)

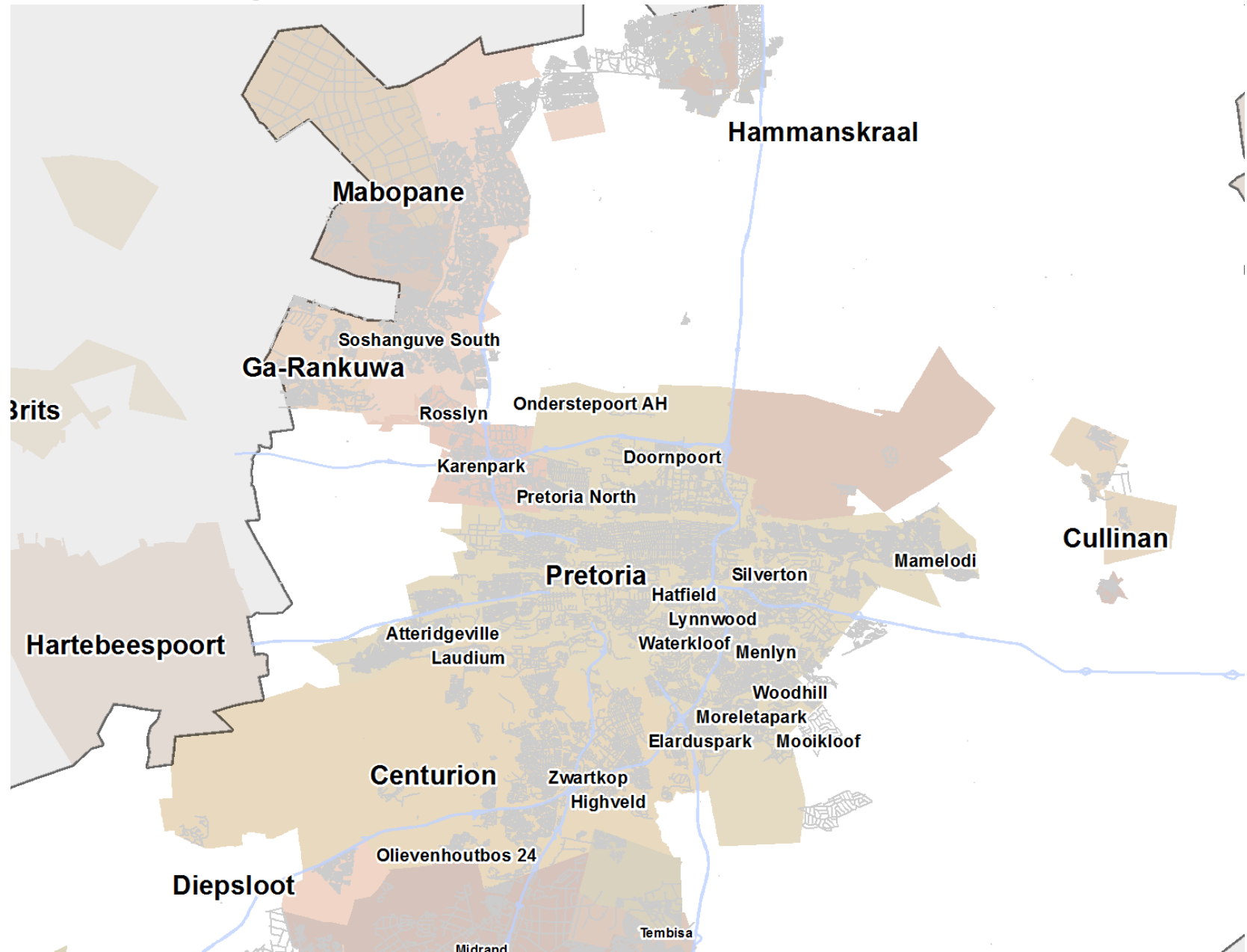
	Description
Proposal	<ul style="list-style-type: none">• Service networks systems still largely based on planning done by operators in isolation from one-another (except BRTs) ,• PT is mostly only used by travellers with no other alternative or choices available to them.• Development of new integrated road-based public transport networks in combination with the expansion of the existing IRPTNs.

Characteristics of the Road-based PT Network

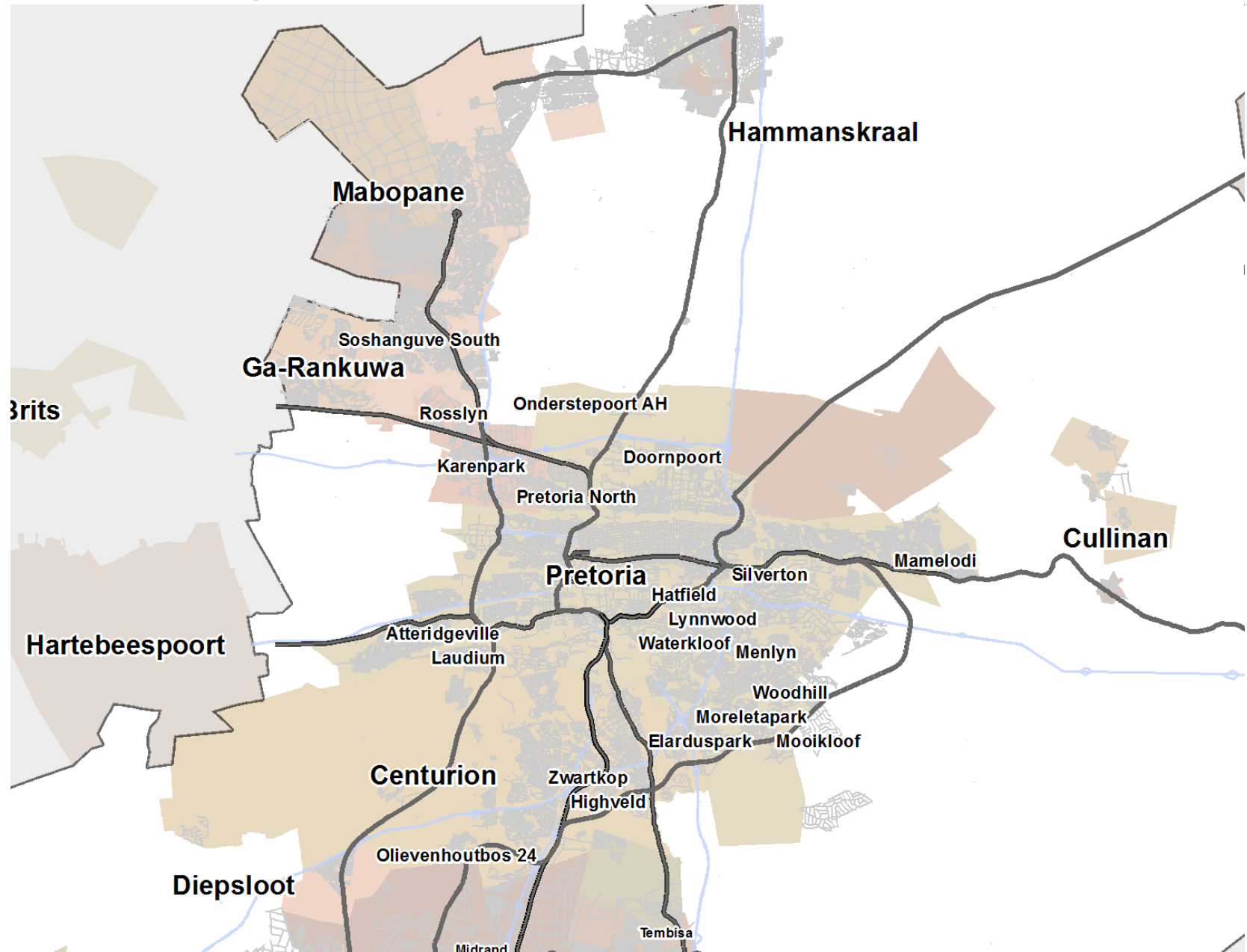
Network component	Service Type	Typical function	Route characteristics	Station/Stops spacing
Black	Rapid	Regional Mobility	Own right of way	8 – 10 km
	Metropolitan			3 - 5 km
	Commuter			2 - 3 km
Red *	Bus Rapid Transit	Urban Mobility	Own right of way	500 – 800 m
		Continuity	Class 1 to 3 roads	
Blue *	Bus	Urban Continuity	Largely own right of way	350 – 600 m
		Medium Accessibility	Class 1 to 3 roads	
Green *	Bus	Urban Continuity	Mixed Traffic	300 – 500 m
	Midi-bus/Mini-bus taxi	Medium Accessibility	Class 1 to 3 roads	
Yellow	Mini-bus taxi	High Accessibility	Mixed traffic	200 – 400 m
			Class 4, 5 roads	
Other	Tuk-tuks, pedicabs	Local Accessibility	Class 5 roads	0-100 m

* Metered taxis to operate across networks

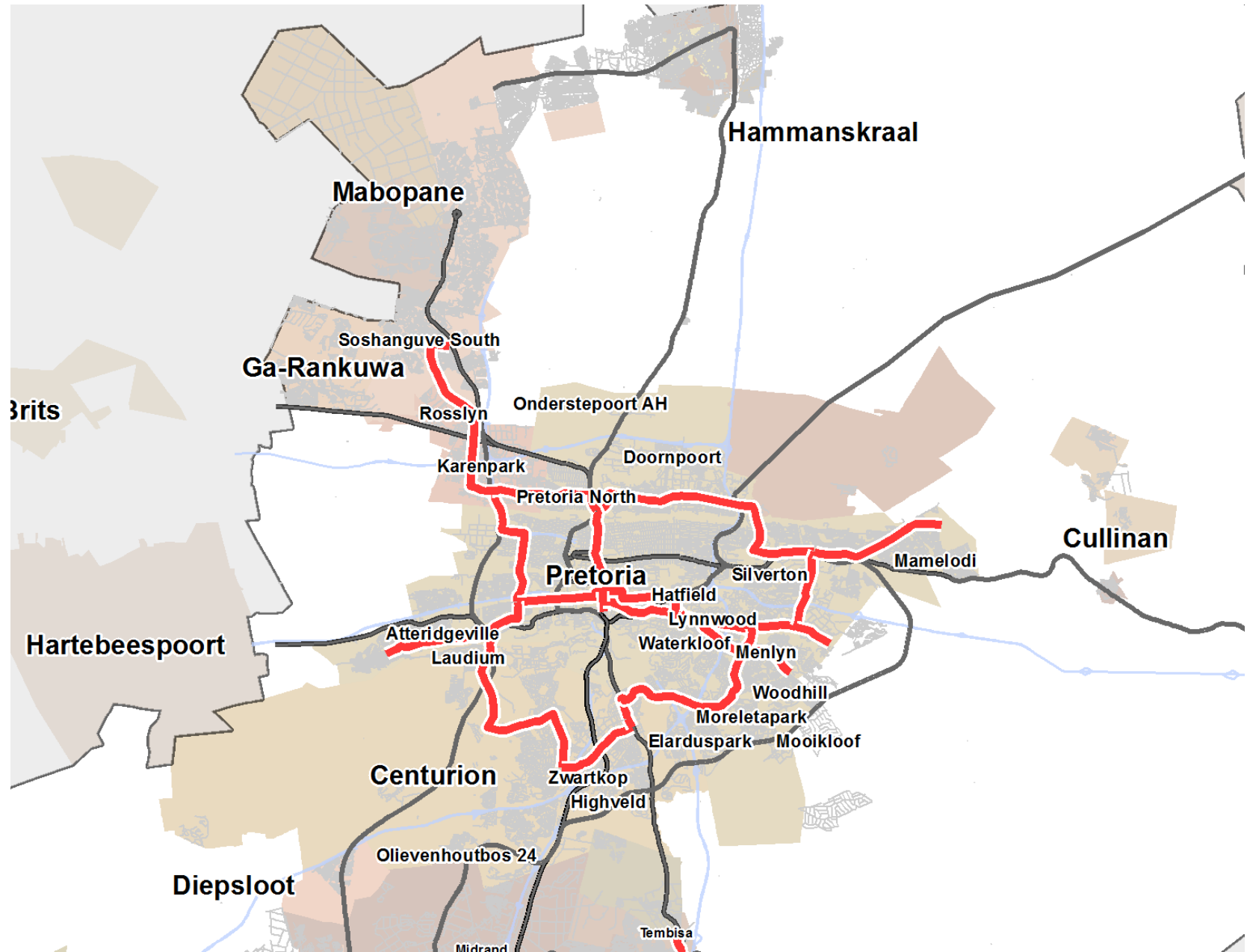
Gauteng North



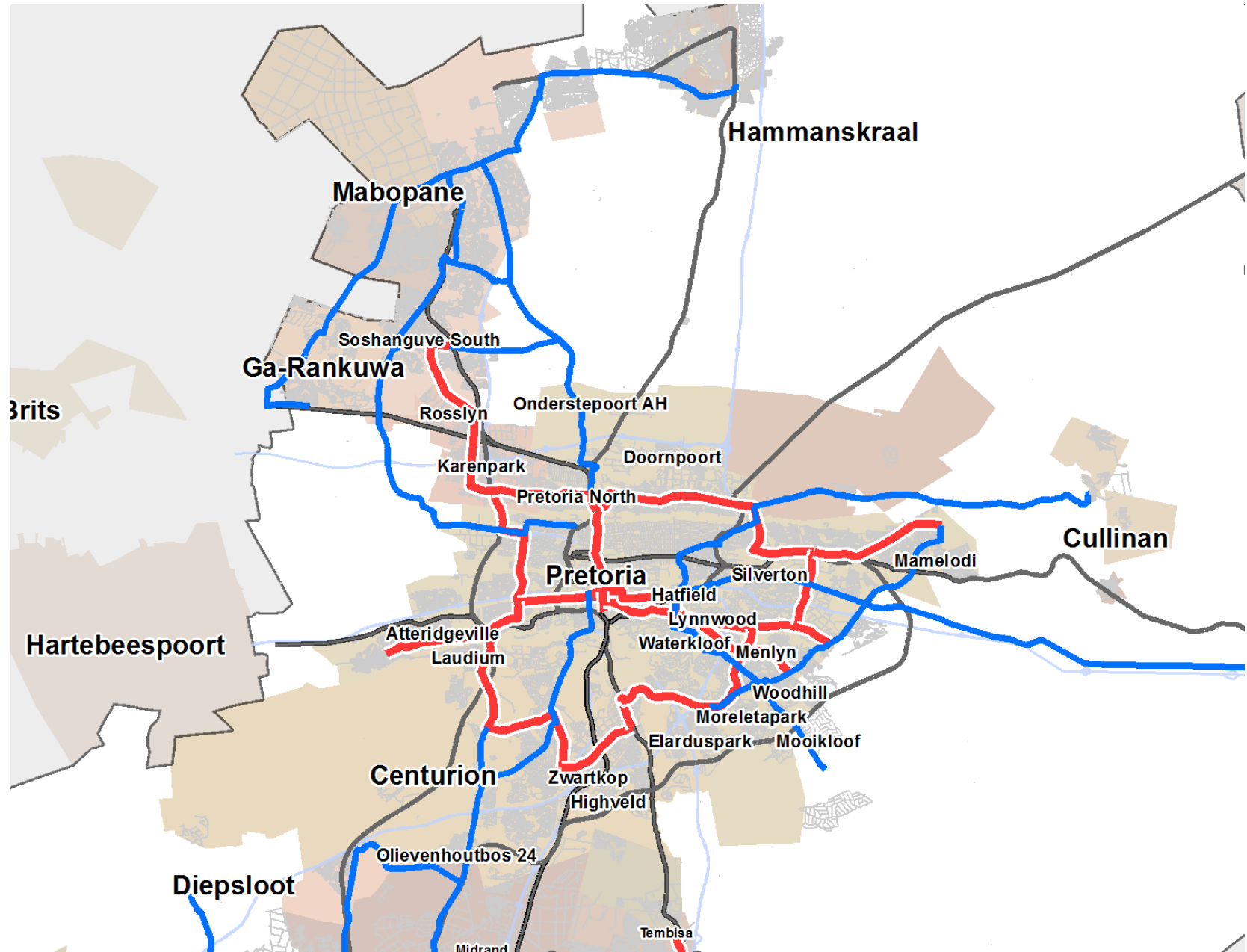
Gauteng North - Rail



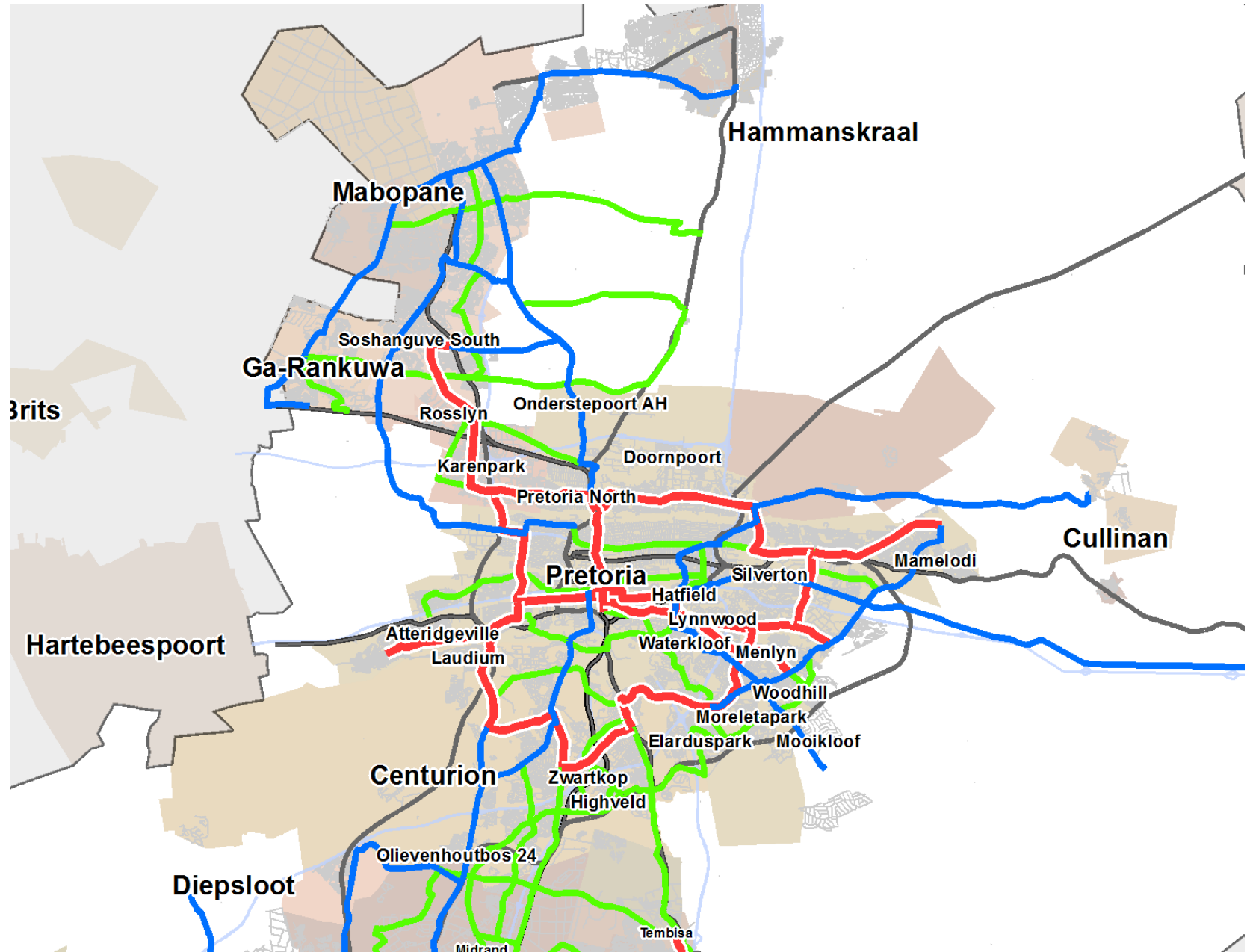
Gauteng North – Red Road-based PT Network



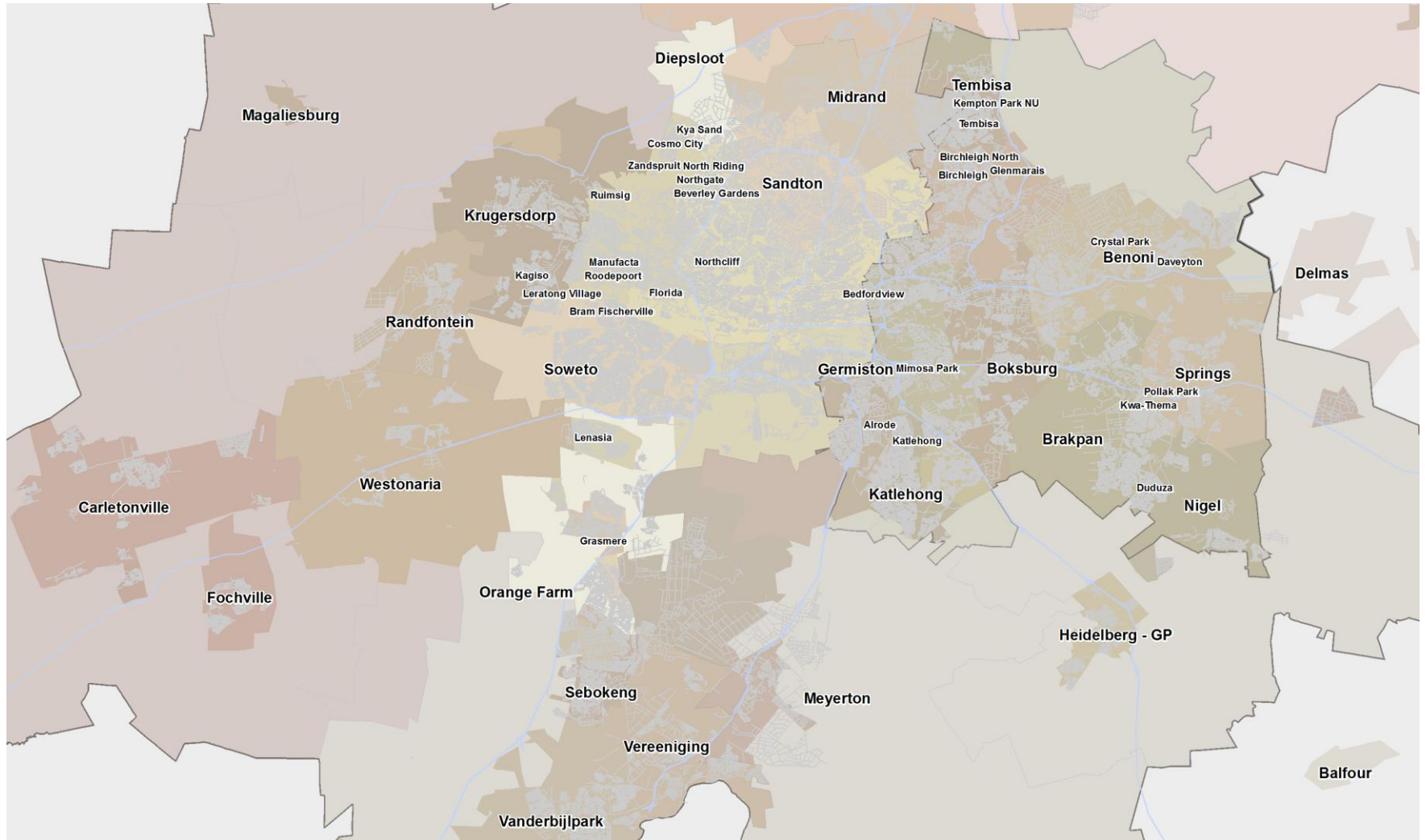
Gauteng North – Blue Road-based PT Network



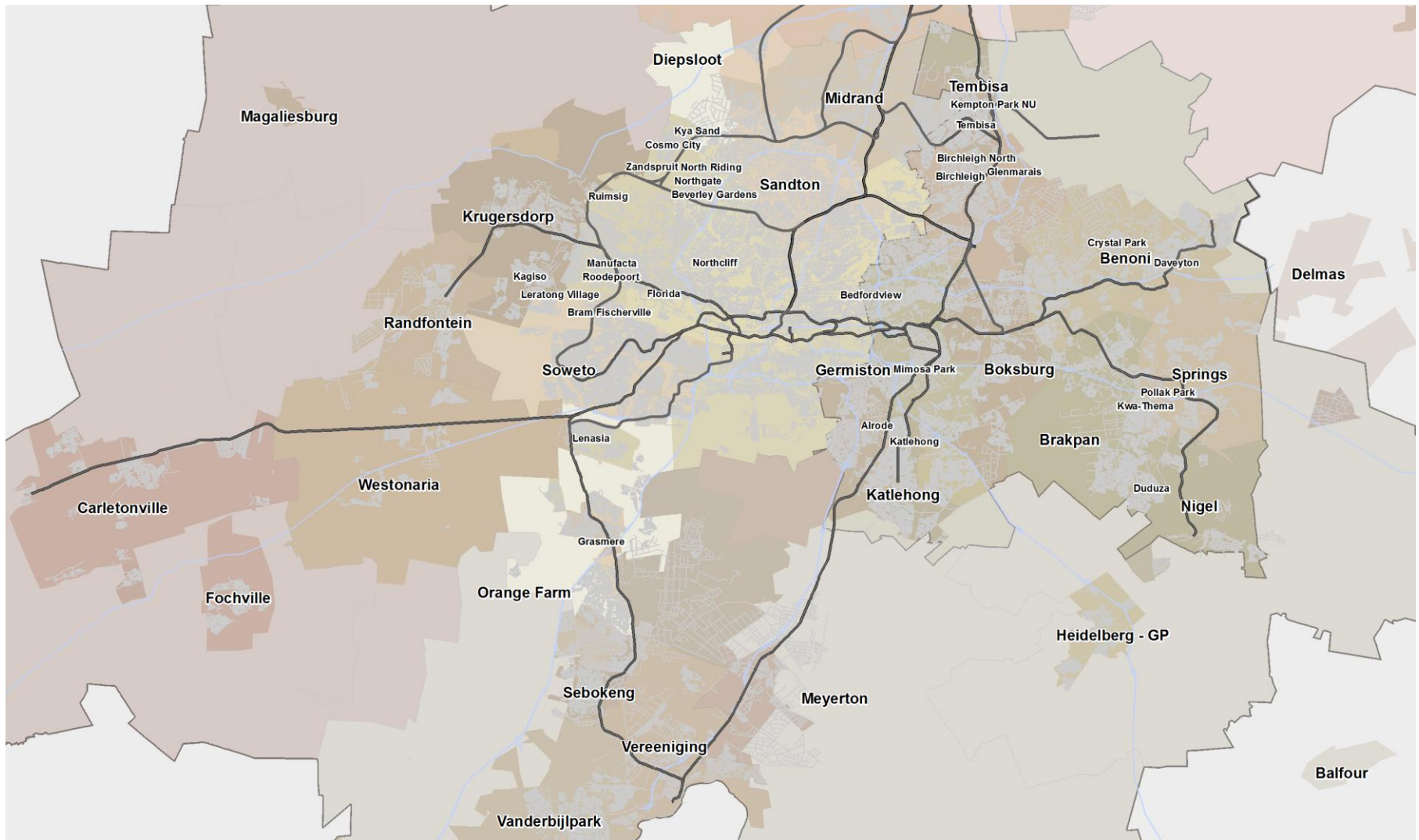
Gauteng North – Green Road-based PT Network



Gauteng South

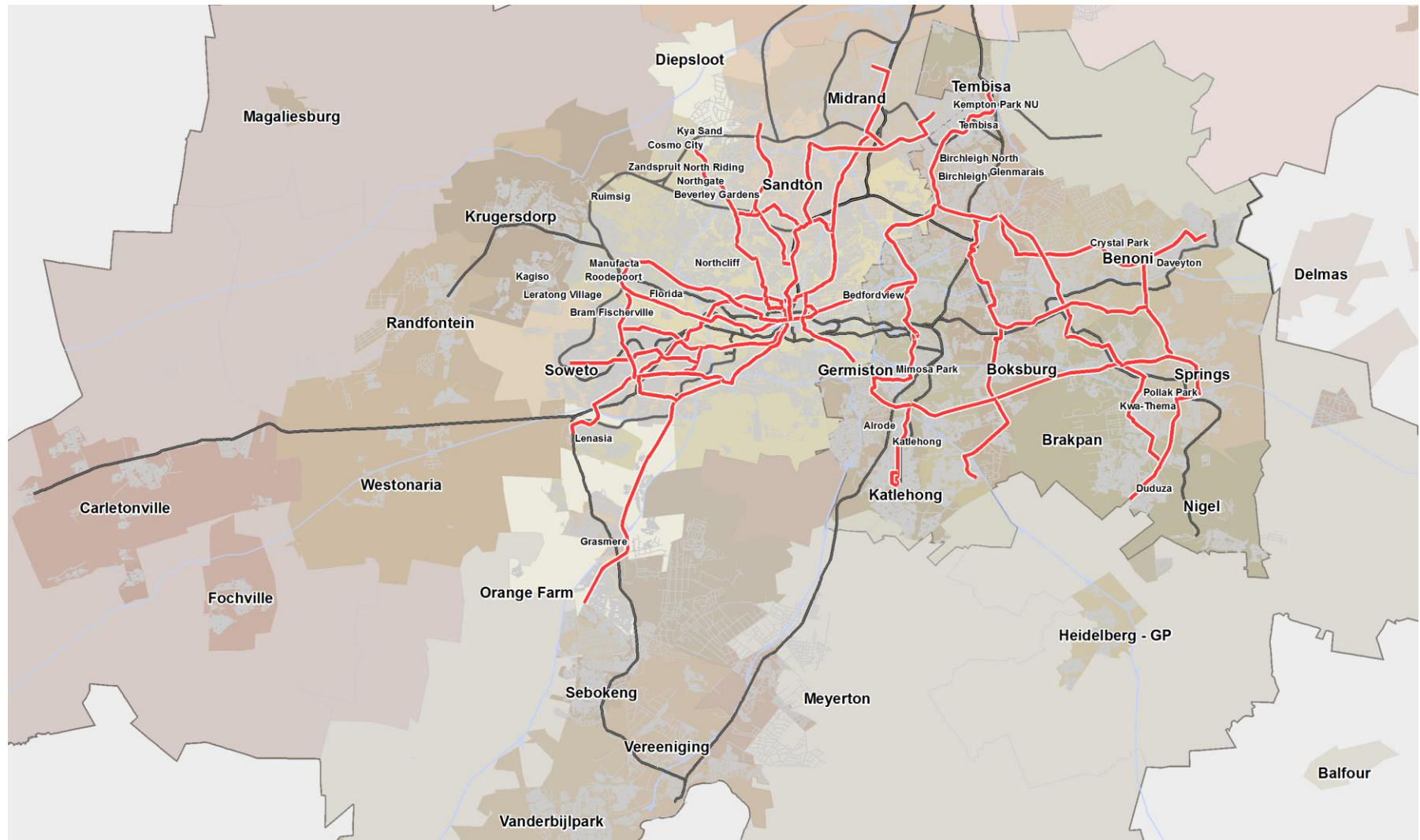


Gauteng South - Rail



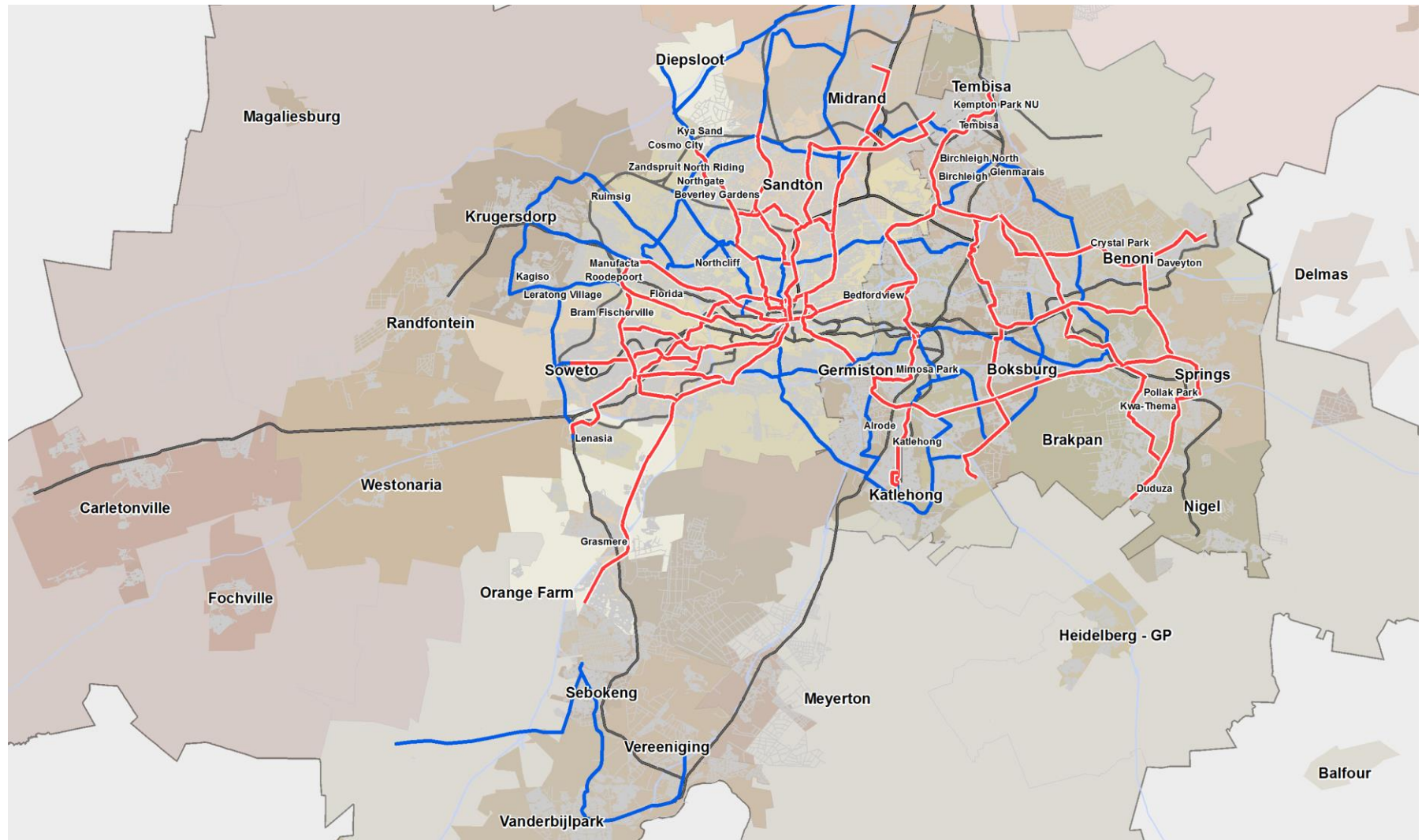
Gauteng South

– Red Road-based PT Network



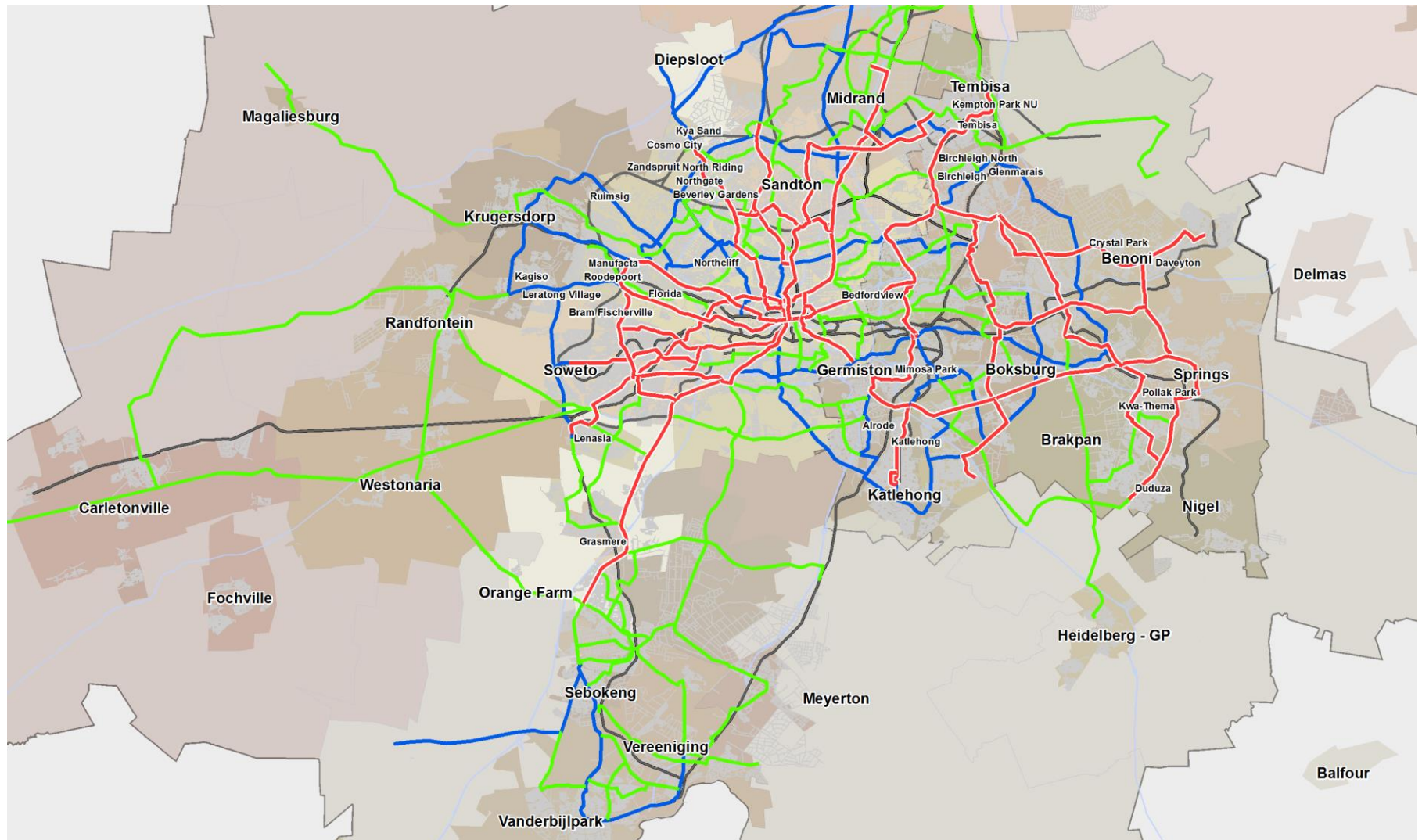
Gauteng South

– Blue Road-based PT Network

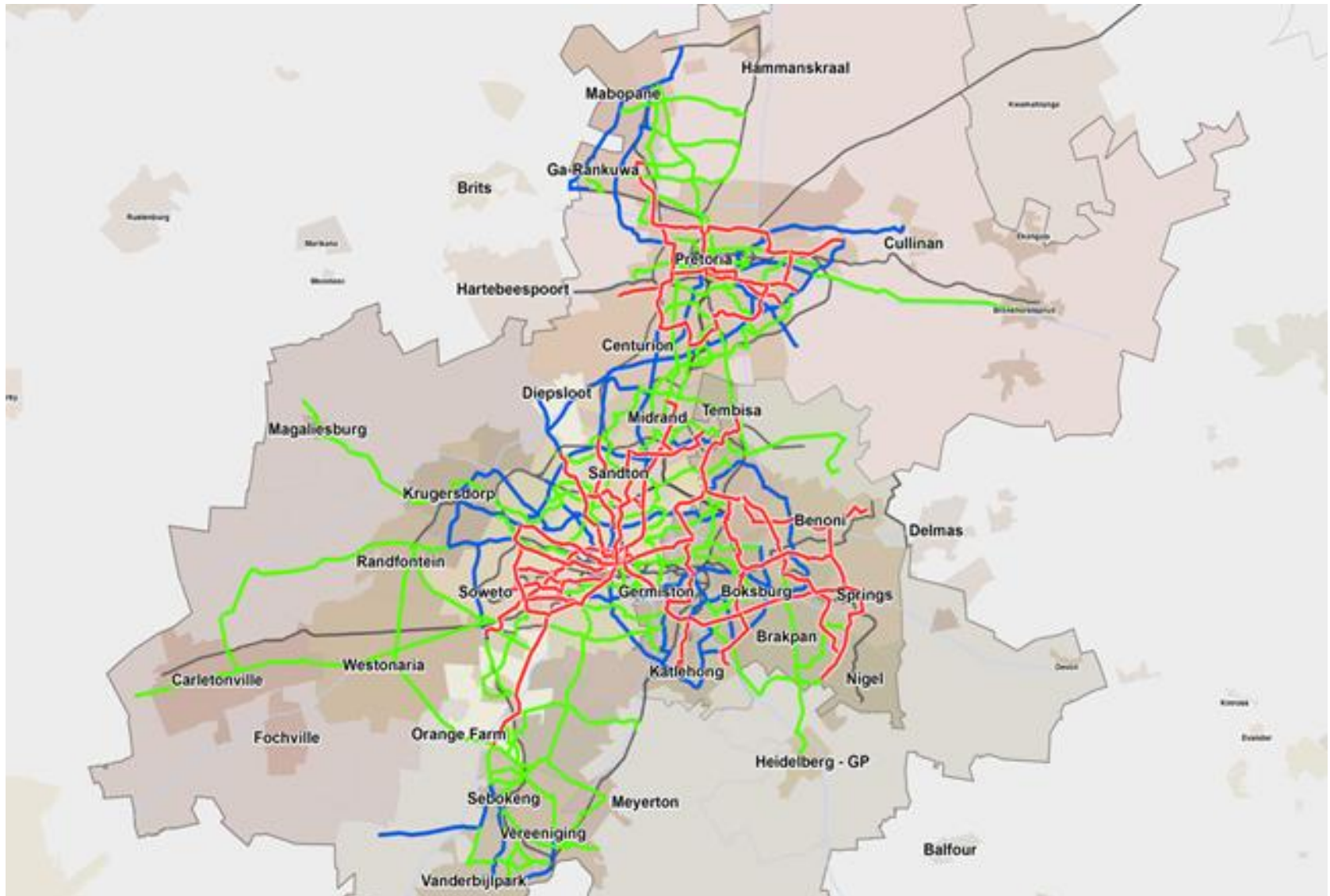


Gauteng South

– Green Road-based PT Network

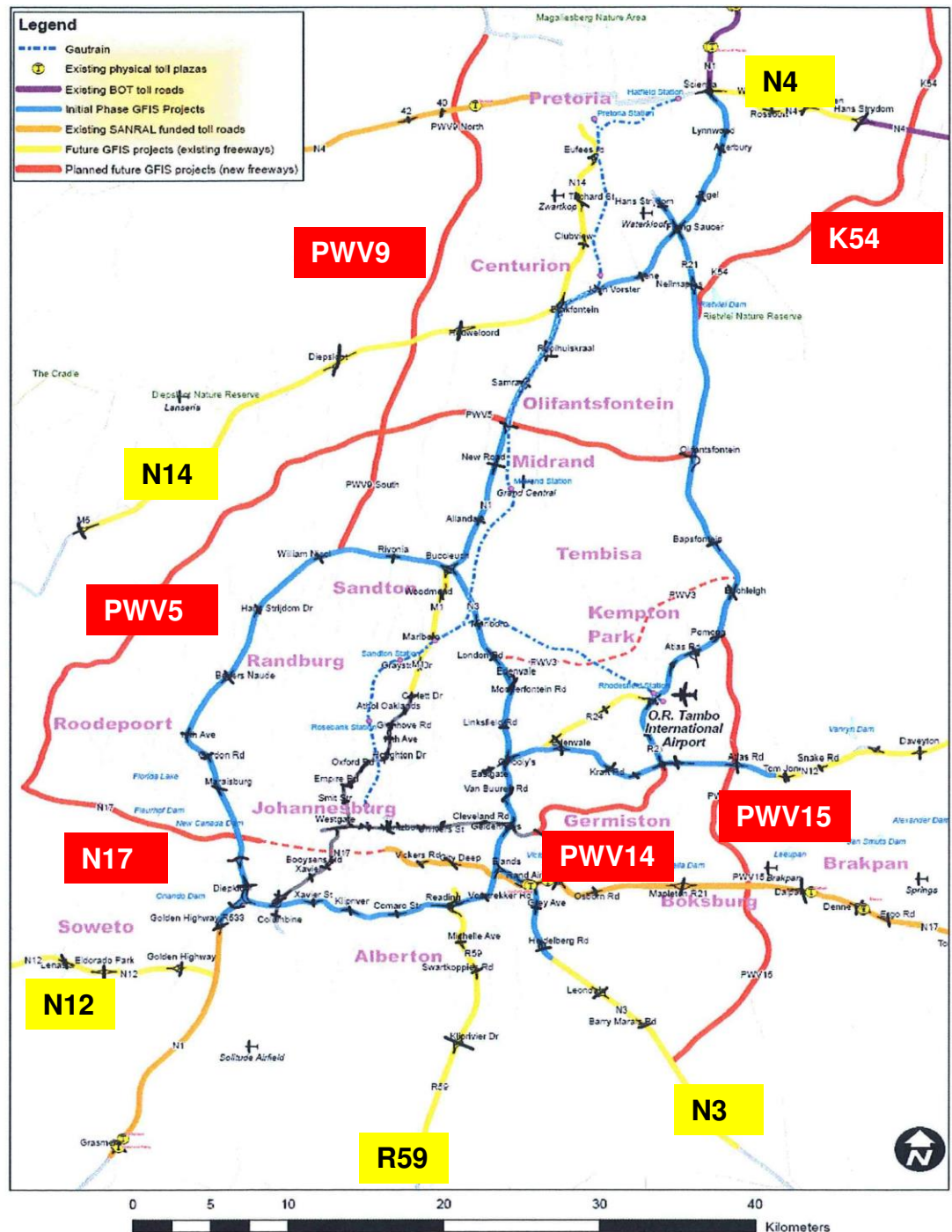


Gauteng – Total PT Network



GFIP

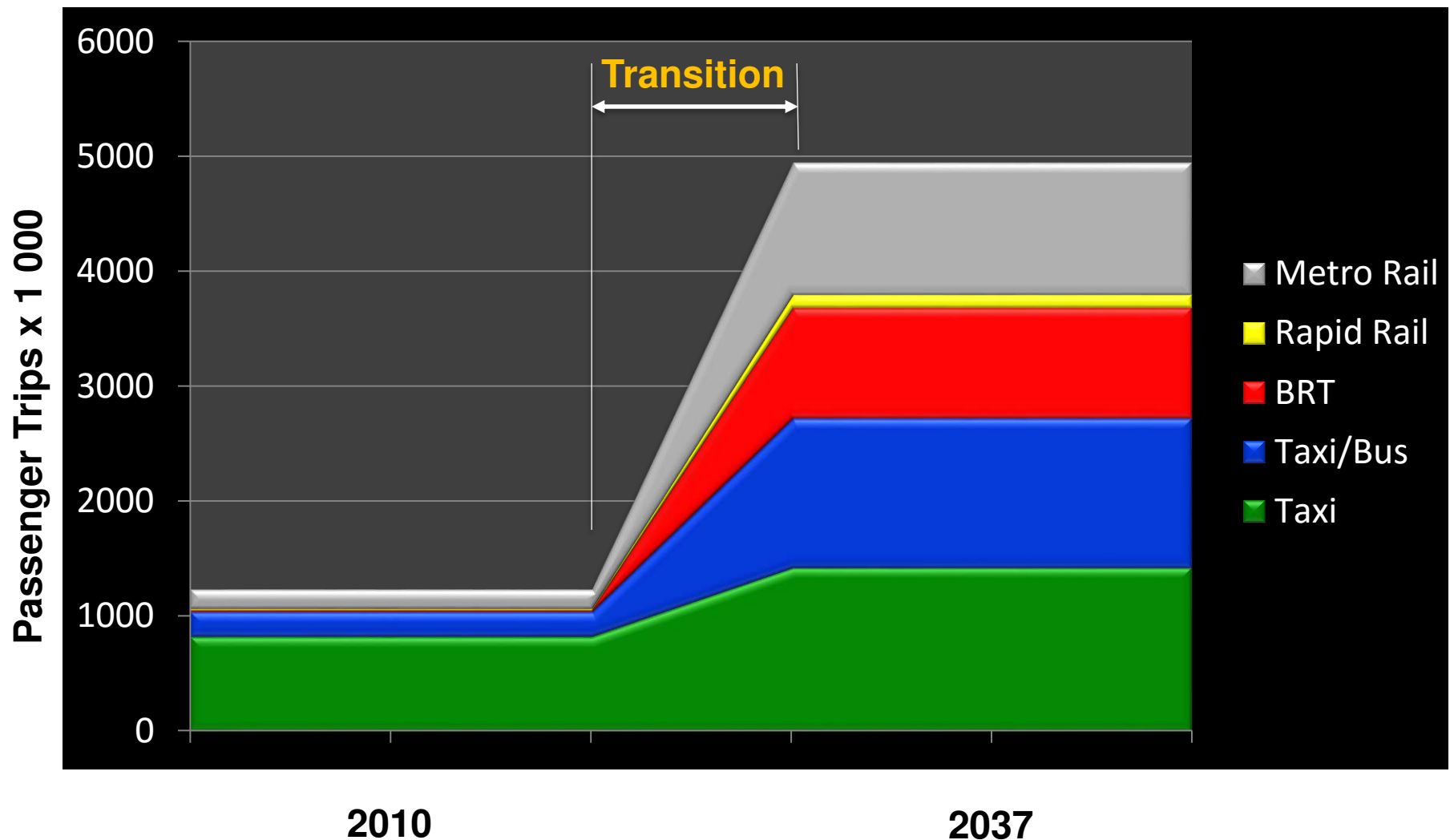
GFIP Phase 1	= 185 km
Future Upgrades	= 223 km
Planned new routes	= 158 km
Final scheme	= 561 km





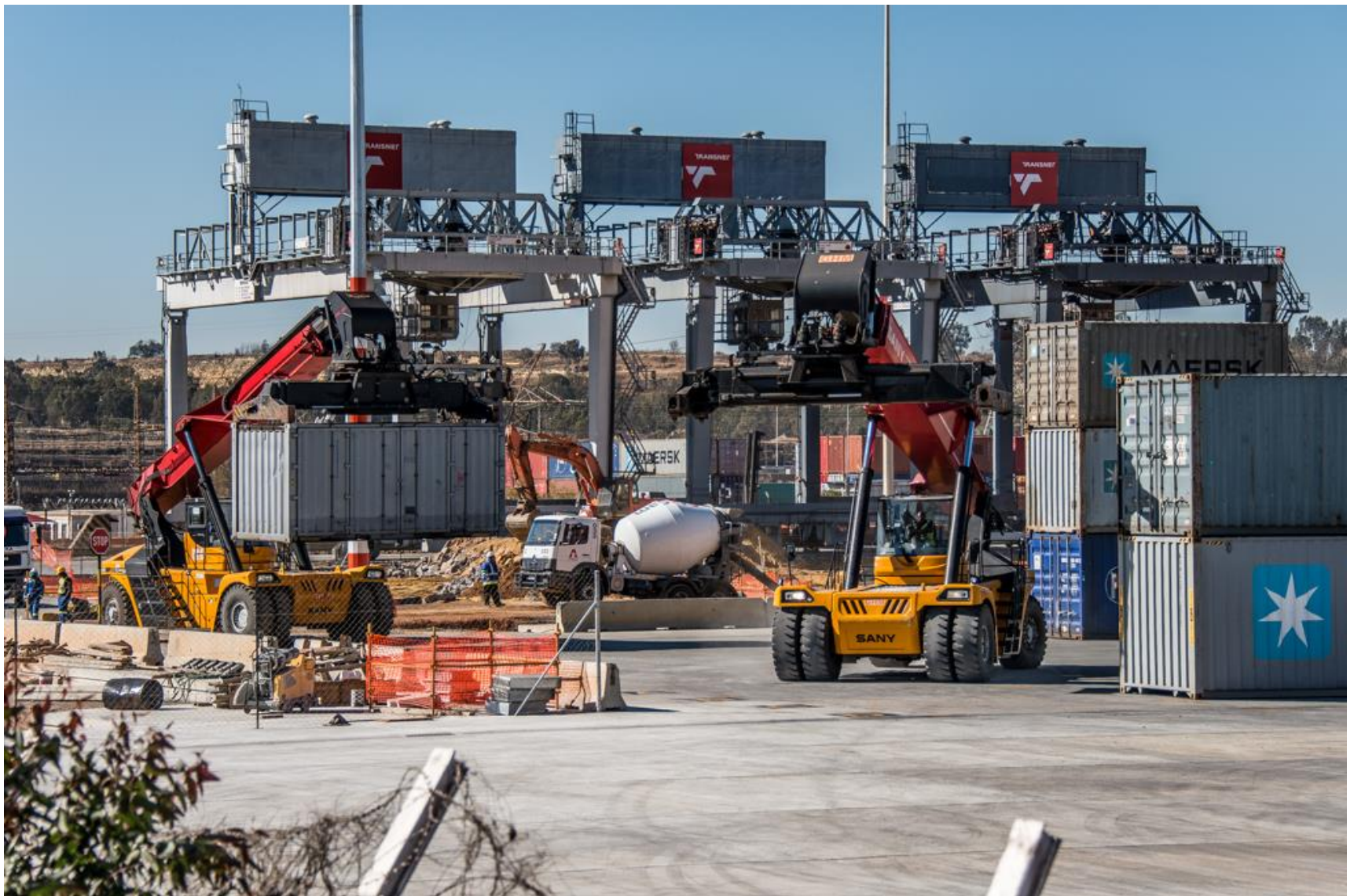
Proposed Modal Split (2037)

25 Year Projections – AM Peak



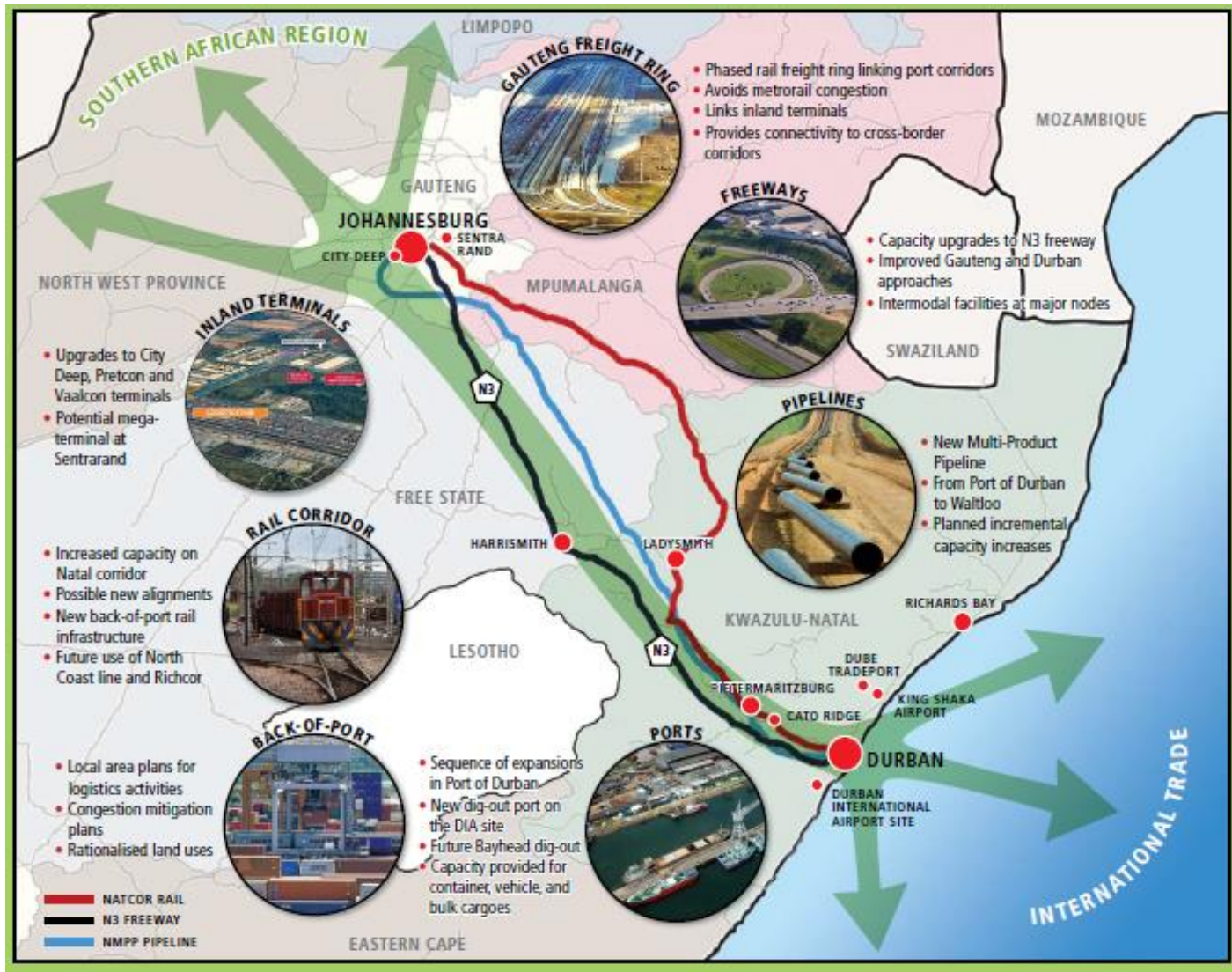
Intervention 8: Strengthening Intermodal Freight Hubs (1)

	Description
Proposal	<ul style="list-style-type: none">• Freight is a key component of sustainable economic growth.• Strengthen freight logistics• Freight logistics constraints can be overcome by strengthening key large freight hub on the periphery of the City Region, ensuring adequate access to these hubs, as well as further developing key freight corridors and routes (rail & road)

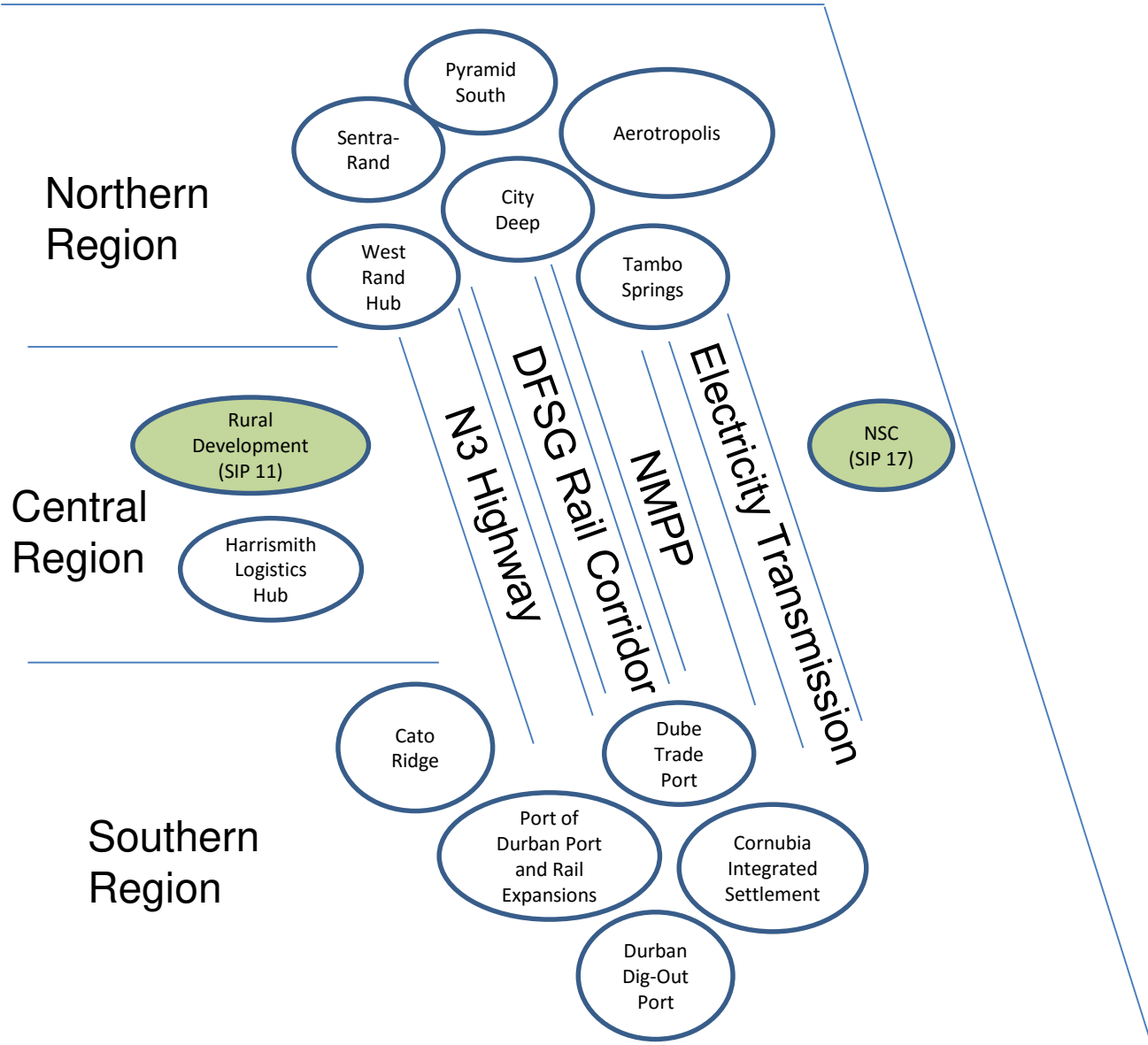


Inland Freight Hub

SIP2 has its origins in the 2050 Corridor Vision Project



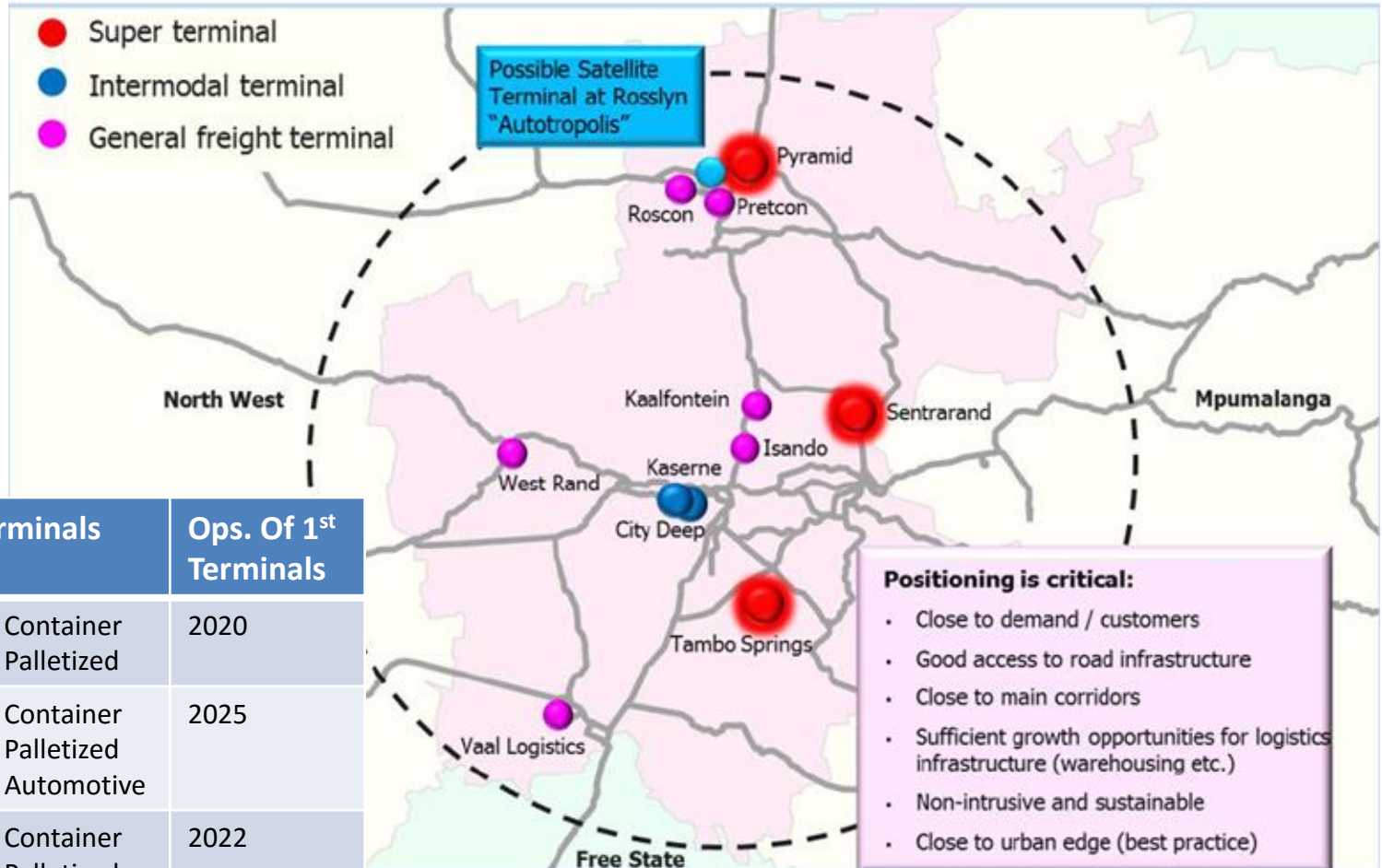
SIP2 Portfolio



Proposed New Durban Dug-Out Port

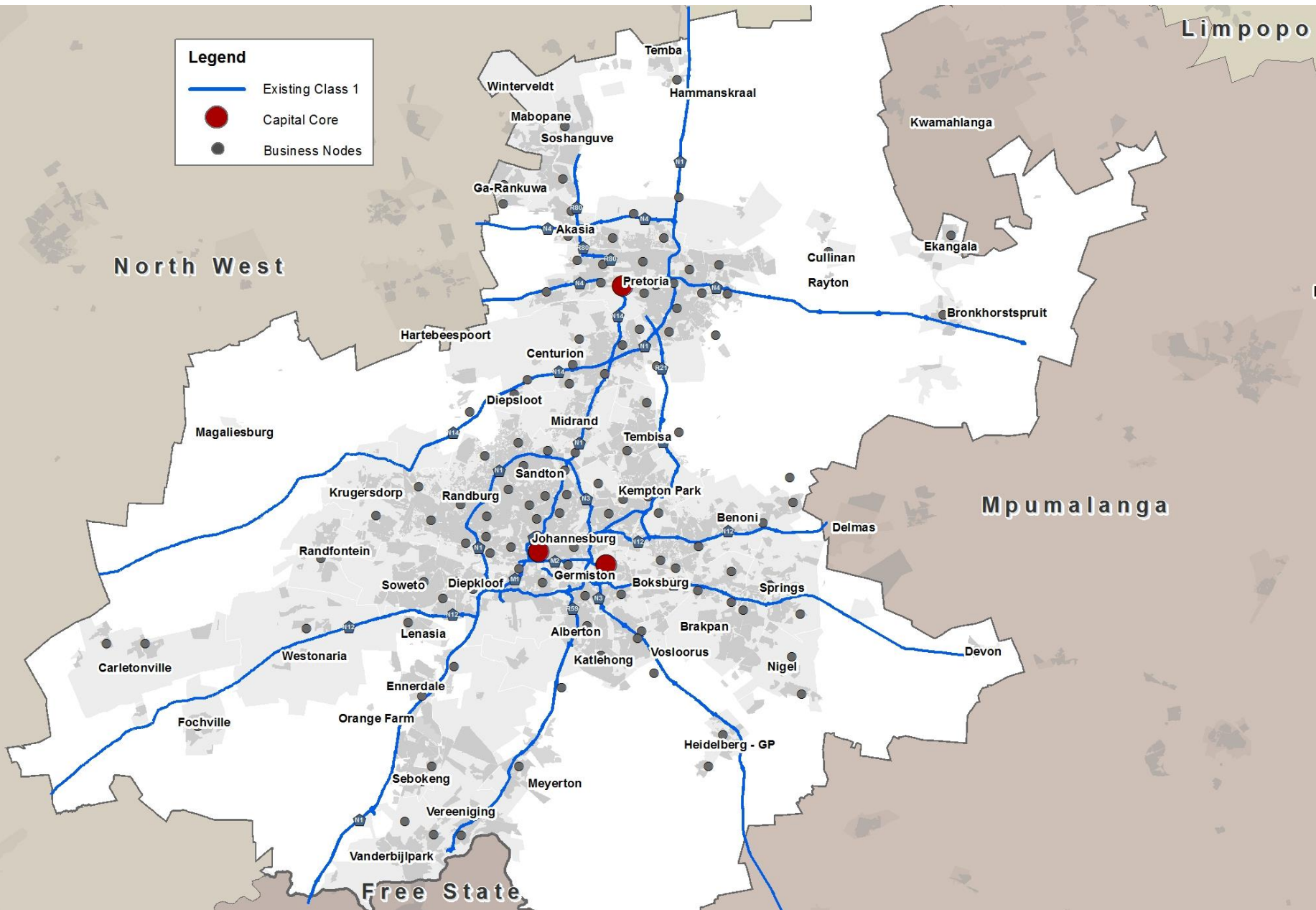


Gauteng Freight Terminals and Road network

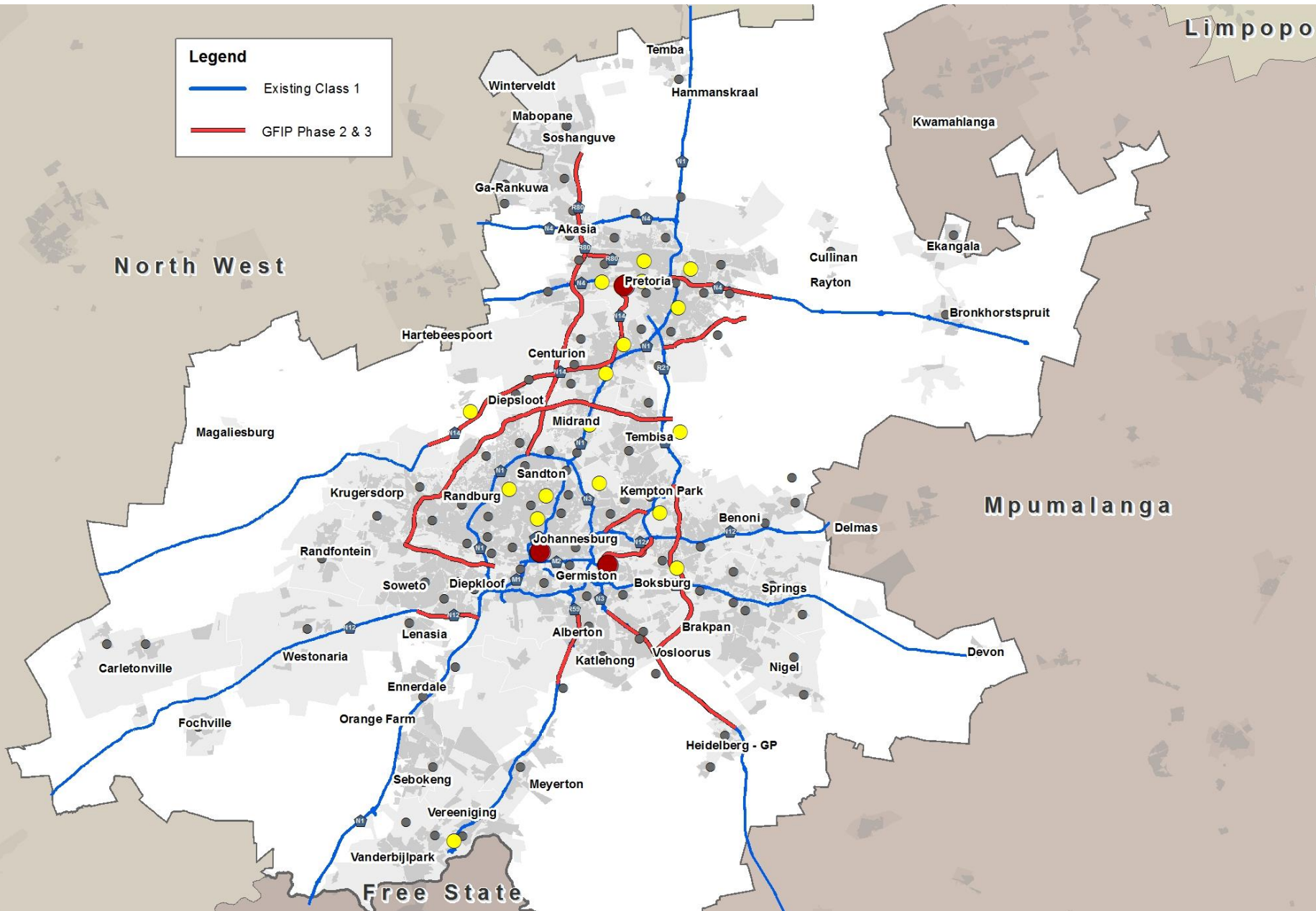


Location	Terminals	Ops. Of 1 st Terminals
Tambo Springs	2 x Container 1 x Palletized	2020
Sentrarand	4 x Container 2 x Palletized 1 x Automotive	2025
Pyramid	1 x Container 1 x Palletized 1 x Automotive	2022

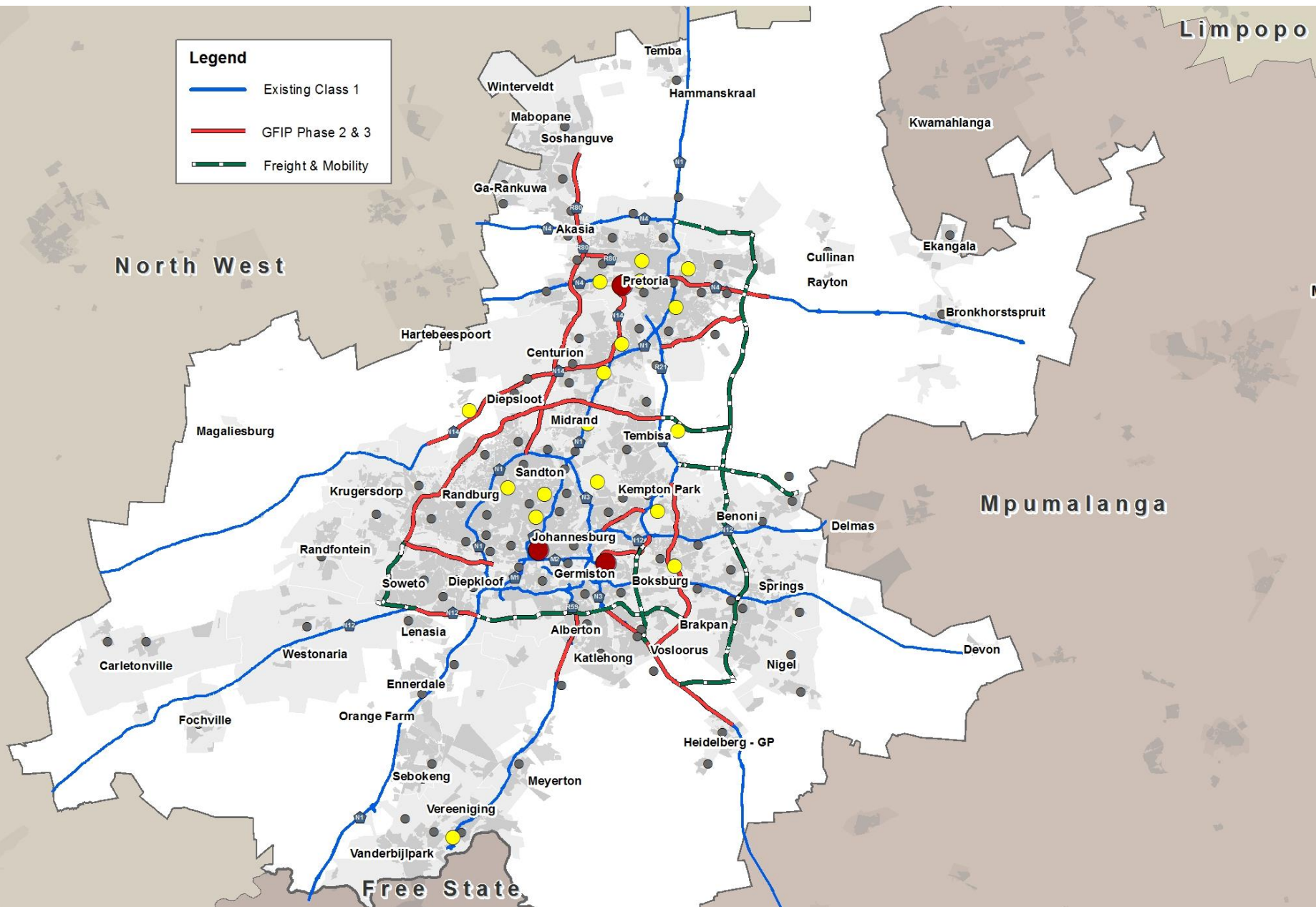
Existing: Class 1 Road Network



Future: Class 1 Road Network



Freight Mobility



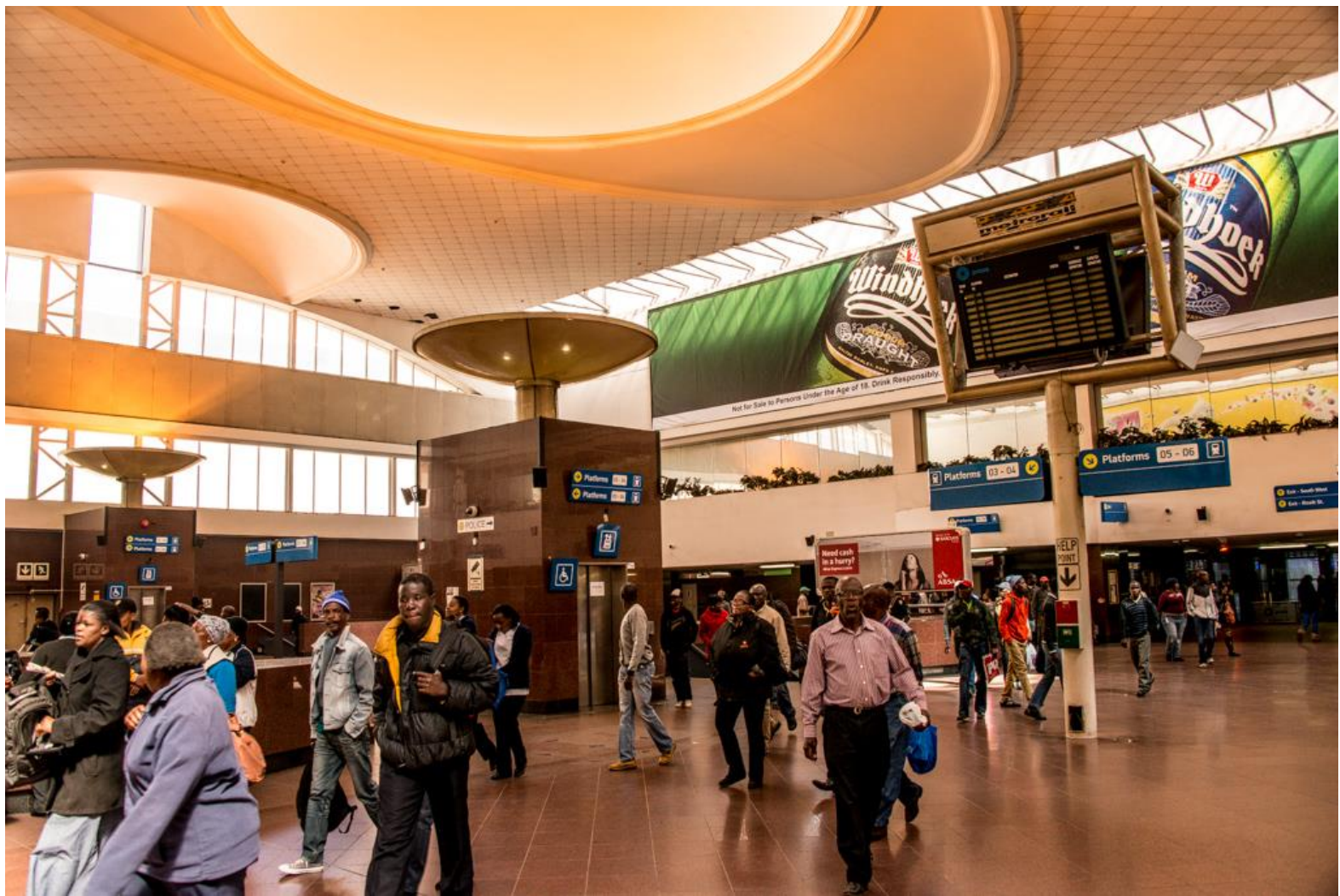


Funding Arrangements

Funding Arrangements (1)

Conclusions

- Inadequate funds are currently allocated to transportation infrastructure and operations, also to the preservation of assets
- A stable source of funding is required
- Transport budget should be doubled in the short-term and increased to about 4 fold of the current over 25 years
- A financing plan is strongly related to policy
- It is important to introduce focused policy enablers.



Institutional Arrangements

A continuum of institutional options



The Status Quo (enhanced)

A GCR Public Transport Commission

(that advises on how to deal with the functions currently *“falling through the cracks”*)

A Unitary Transport Authority for the GCR

**“Economic Growth is the
Oxygen of a Democracy”**

- Prof Nick Binedell

***“The philosophers have only
interpreted the world, the point
however is to change it”***

Karl Marx

***The Future is not for the faint
hearted.”***

R Reagan

Thank You