



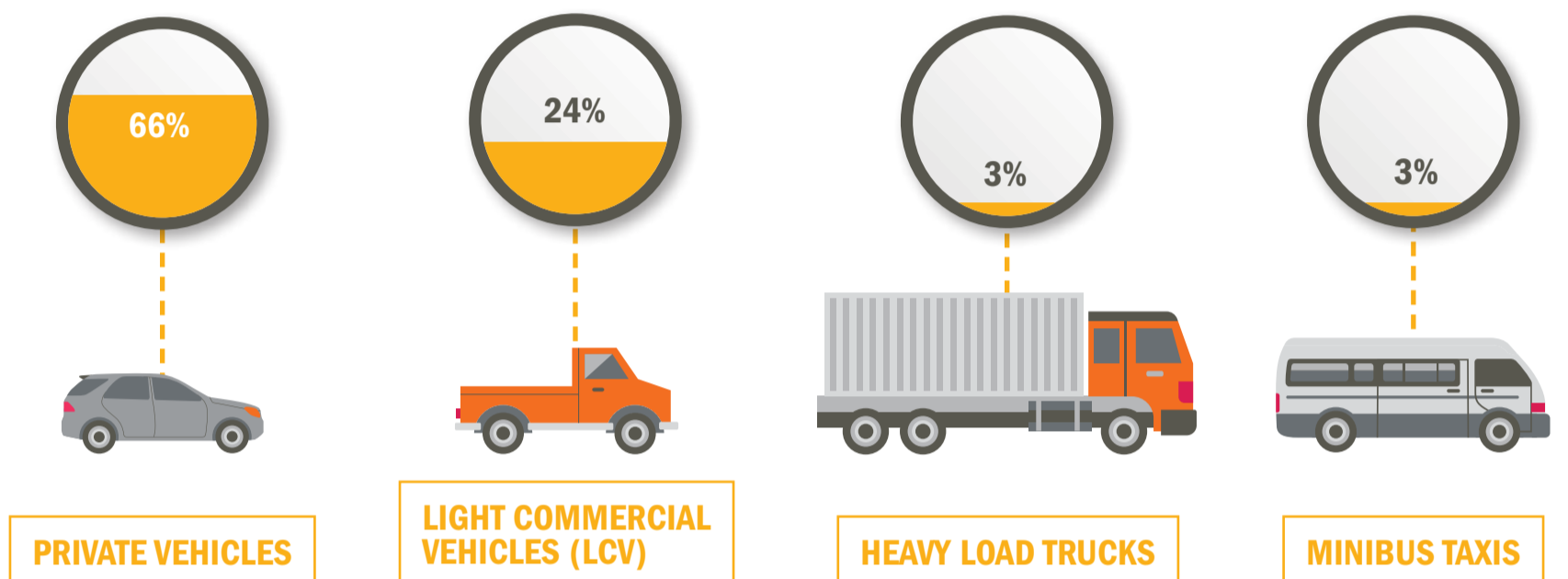
a world class African city

# Vehicle emissions control strategy and action plan for THE CITY OF JOHANNESBURG

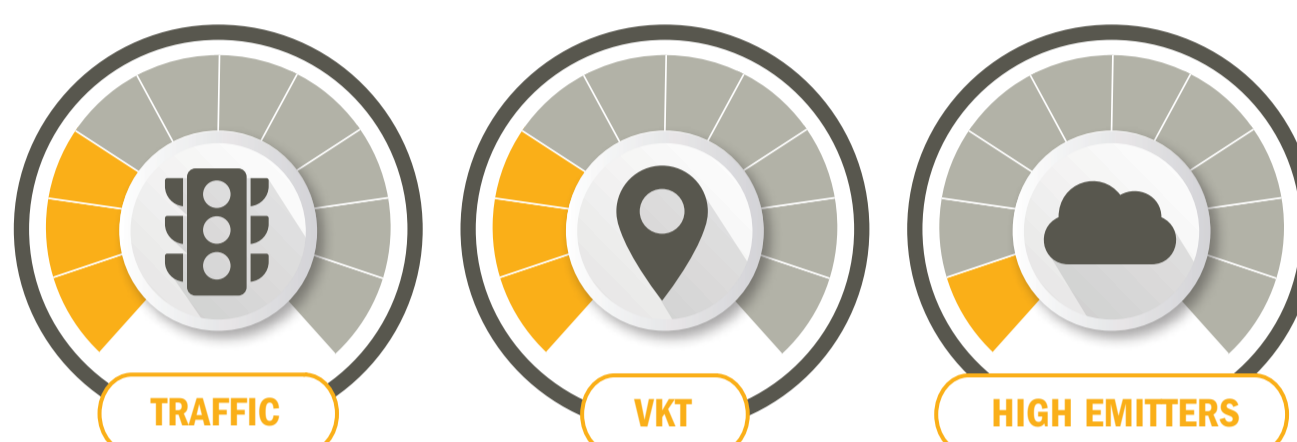
OVER 1 866 283 VEHICLES ARE REGISTERED IN THE CITY OF JOHANNESBURG. 66% OF THESE ARE PASSENGER VEHICLES, 24% ARE LIGHT COMMERCIAL VEHICLES, 3% ARE HEAVY LOAD TRUCKS, 3% ARE MINIBUS TAXIS.

(Source: eNATIS database for Johannesburg registering station, 2019)

## COMPOSITION OF REGISTERED VEHICLES



## AGGRAVATORS



The major factors affecting the amount of emissions per vehicle are the amount of traffic, the kilometres travelled per vehicle (VKT) and the number of high emitting vehicles on the road.

## PROBLEM STATEMENT

Vehicle emissions are a significant source of emissions in the City. They have become pronounced due to various reasons:

- The use of **second-hand, older**, but more-affordable vehicles, which is prevalent in the City, increases the chances of having vehicles with reduced efficiency and more emissions.
- There is **limited transport infrastructure** to support alternative modes of transport, which in turn increases the reliance on private vehicles and vehicle emissions.
- Vehicles, emissions, and traffic **data** in the City is either inadequately collected, collated or monitored. This causes a problem as the policies and required interventions to effect change are dependent on good data.
- There are not enough **awareness programmes and incentives** to encourage walking, cycling or public transport which are perceived as being unsafe by the general public.

## CURRENT MEASURES

Current measures taken to address these challenges include:

- **Emissions tax** paid by a consumer at the point of purchasing a new private vehicle (NAAMSA, 2010a)
- The **Rea Vaya** bus rapid transit system (Growth and Development Strategy (GDS) 2040)

## RECOMMENDATIONS

### VISION

"A LOW CARBON AND HEALTHY COJ THAT SUPPORTS LIVEABLE, SUSTAINABLE AND RESILIENT COMMUNITIES BY IMPROVING AIR QUALITY AND PROVIDING ADEQUATE TRANSPORT AND MOBILITY OPTIONS."

### LOW EMISSION AND NO CAR ZONES

Vehicles not meeting emission standards are charged a fine, according to the size of the vehicle, when they enter certain **emission zones** within the City. Designated areas can also be marked as 'no car' zones.

### CONGESTION CHARGES AND CAR LICENSING PAYMENTS

Fees are charged for vehicles entering high traffic areas at certain times of the day, and emissions tax during car license renewals could be reviewed.

### FREIGHT OPERATIONS

Regulations for freight vehicle operations and new solutions for freight management are enforced to ensure efficiency of freight operations.

### INSPECTION AND MAINTENANCE

An attempt to eliminate older vehicles by setting car **lifecycle limits**, ensuring regular **maintenance** and **road-worthiness testing**.

### CITY PLANNING AND REGULATIONS

The implementation of the proposed Corridors of Freedom project, will transform settlement patterns, reduce travel times and distances, and ultimately reduce the use of private and public vehicles when economic opportunities, access to jobs, schools and other social infrastructure are provided at the city outskirts.

### DATA MONITORING SYSTEMS

The adoption of standard operating procedures for **data management**, training of technical staff and optimal siting of air quality management (AQM) stations would provide more reliable data to inform **better policy making**.

### IMPROVEMENT IN FUEL EFFICIENCY

Applying and enforcing strict vehicle efficiency and vehicle emission standards, creating specifications for lubricants, improving fuel quality, and enlightening consumers on the cost benefits of **fuel efficiency** can significantly reduce vehicle emissions.

### AWARENESS CAMPAIGNS

Increased awareness on **sustainability in procurement** of municipal fleet, on the benefits of non-motorised transport (NMT) on the health of the public and on the environment, would improve the use of public transport and NMT.

### HIGH OCCUPANCY VEHICLE LANES

Spatial planning, **incentives for high occupancy vehicles**, **car-pooling**, and enhanced public transport will also encourage behaviour change from the use of private cars to public and/or non-motorised transport. The restriction on single occupancy vehicles (SOV) can be promoted by **congestion pricing**, **higher parking fees** or **SOV-use restrictions**.

