



**Feasibility Study for the Introduction of
ICM Approach for Roodeport –
Johannesburg Inner City Corridor and
Roodepoort – Randburg Corridor in the
City of Johannesburg**

Stakeholder Engagement June 2022

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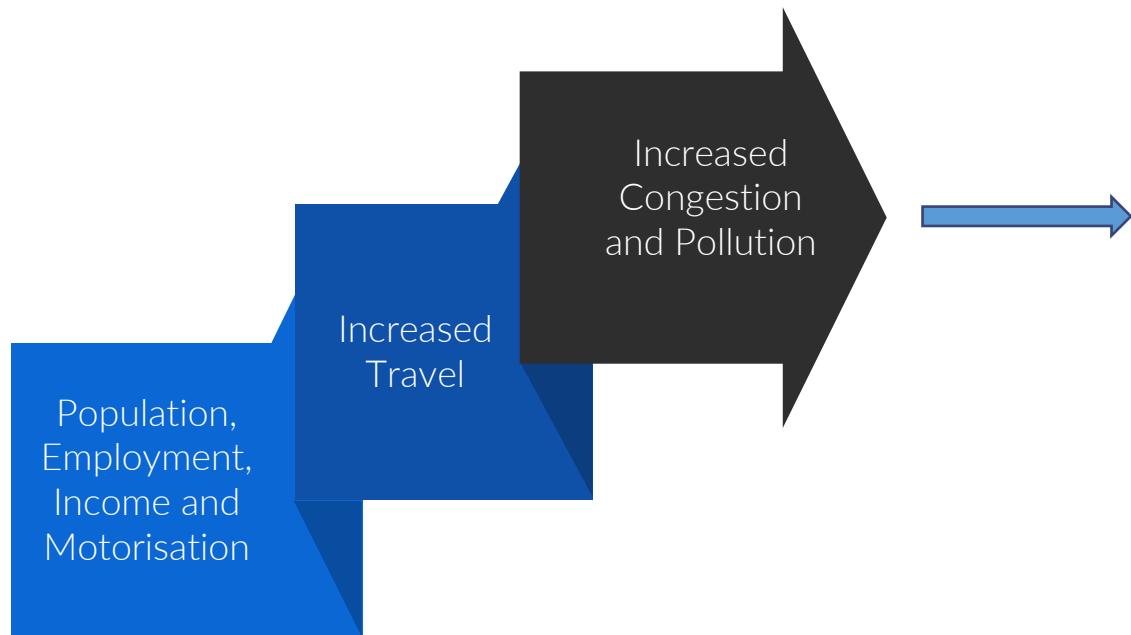


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Project Background

- City of Johannesburg like other developing cities experience exponential growth.



- City of Johannesburg population: 6,065,000 (increasing at 2.5% annually).
- 68% of world population to live in urban areas by 2050 (UN).
- Need for optimization of effectiveness and efficiency of all transport system resources.



Effects of Increased Urbanisation in Cities

Introduction

- Cities need comprehensive package of:
 - Travel Demand Management.
 - Roadway Supply Management.
 - Public Transport and Non-Motorised Transport (NMT) priority.
 - Safety Improvements on the corridor.
- Need for Integrated Corridor Management Approach.
- CoJ is undertaking feasibilities studies to:
 - Introduce Integrated Corridor Management (ICM) Approach.
- Purpose of ICM:
 - To use roadway infrastructure and public transport supply to move **most** people **safely**, **quickly** and **reliably** with **minimum environmental impacts** and at **reasonable cost**.



What is an ICM?

- The Federal Highway Administration (FHWA) defines ICM as:

"the coordination of individual network operations between adjacent facilities that creates an interconnected system capable of cross-network travel management."
- A **corridor** is a combination of discrete, adjacent surface transportation networks (freeways, arterials, and PT networks) that **link** the same major origins and destinations.
- Assets in a corridor cover all modes and includes:
 - **Infrastructure** (roads, PT ways for all modes, sidewalks, cycle lanes, pedestrian overpasses, bridges, tunnels, tracks, on-street parking and communication lines)
 - Facilities (stops, stations, passenger terminals, PT depots, parking spaces):
 - Equipment (rolling stock (buses, rail cars) and Intelligent Transport System hardware and software).

What could an integrated corridor management (ICM) response plan look like?

A major incident has occurred on the freeway in an ICM corridor. Travelers are advised via dynamic message sign and other traveler information sources (e.g., 511) to take a parallel route or shift to alternative modes, where there is spare capacity. Signal timing on the parallel route is changed to better manage the flow of the detoured traffic, and transit operators prepare for the increased volumes by adding more buses along the impacted route.



What is an ICM?

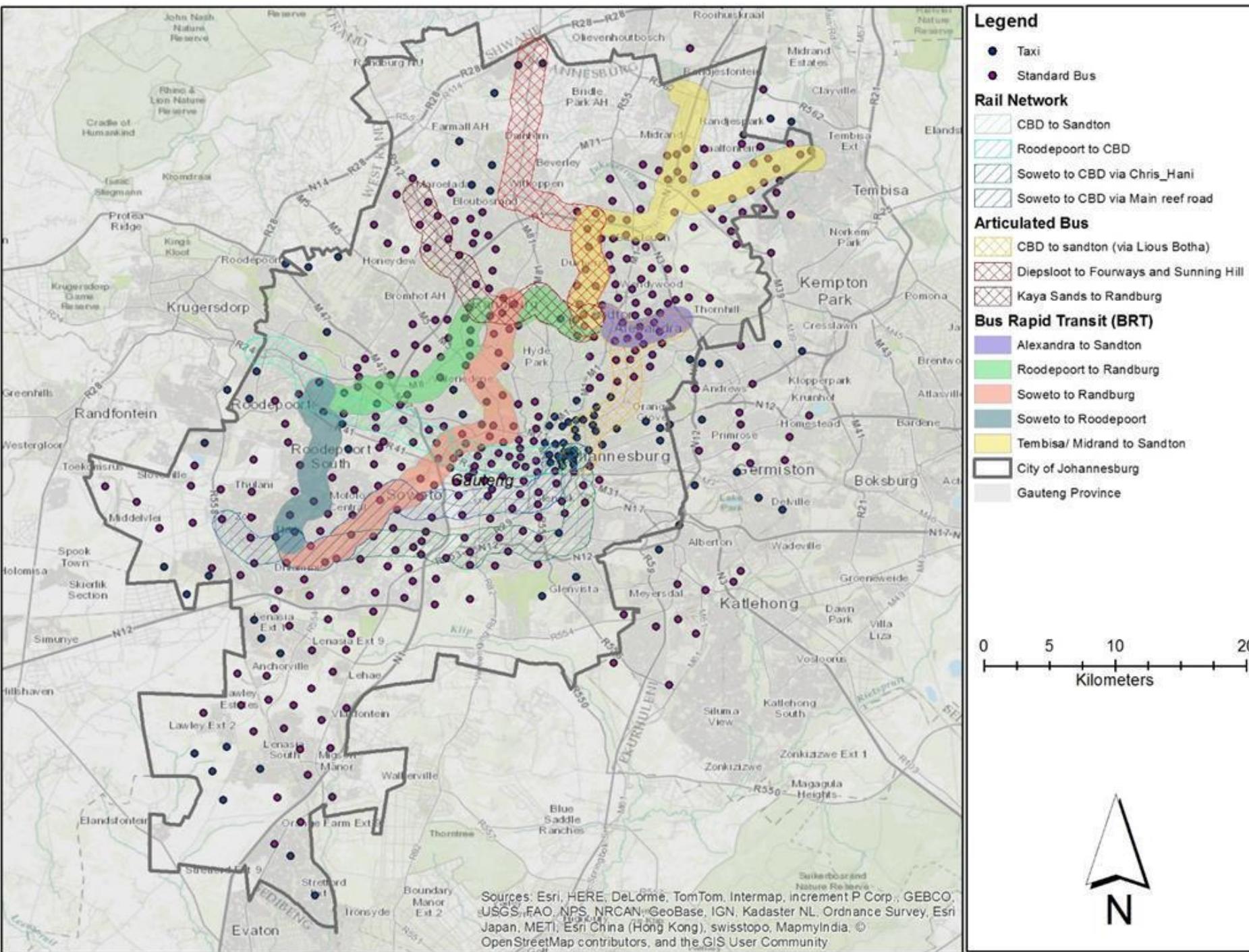
- In terms of **IPTN Hierarchy**, ICM falls below Type C but with possible links and some overlaps and even complementary services to SIPTN Type C.



MODE CATEGORIES	TYPOLOGY	DEMAND	MODE	FUNCTION AND FEATURES
Rail Public Transport Network	SIPTN-Type A	9000-15000	Gautrain, Metro Rail	<ul style="list-style-type: none"> To move people quickly from area of high residential to areas of employment/income opportunities Limited stops. (closed stations)
Rapid Road Public Transport Network (High Capacity)	SIPTN-Type B	6000-9000	Bus Rapid Transport, Light Rail	<ul style="list-style-type: none"> Corridors of Freedom, mixed use development , three story residential To move people quickly from area of high residential to areas of employment/income opportunities Limited intersections and right turns so buses can be relatively speedy Limited mostly closed high or low floor stations
Road Public Transport Network (Medium Capacity)	SIPTN-Type C	3000-6000	Bus Rapid Transport	<ul style="list-style-type: none"> Corridors of Freedom and areas where the City wants to densify along the corridor Mixed use development, Three story residential, social housing along corridor. Fairly frequent closed and open low floor stations and some stops
Road Mixed Traffic Public Transport Network (Medium to Low Capacity)	IPTN-Type D	1000-3000	Bus (Double Decker, Standard)	<ul style="list-style-type: none"> Frequent stops with shelters Some public transport priority (e.g. queue jumping) On street stopping by public transport vehicles Low to medium density

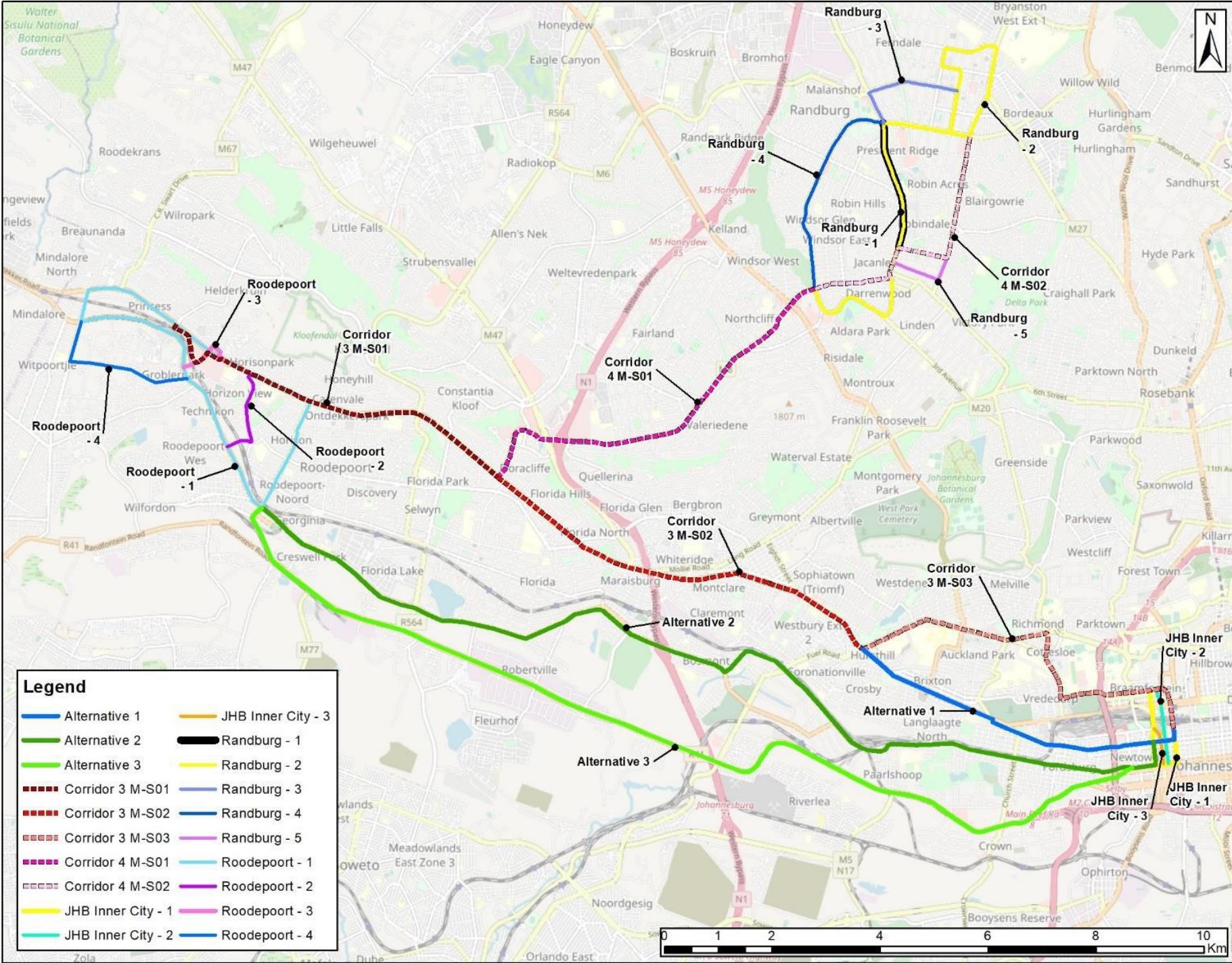
Proposed Demand Responsive Network

- Roodepoort – CBD: should be Rail Network.
- Roodepoort – Randburg: Bus Rapid Transit (BRT)



Proposed Corridors

- Roodepoort – Johannesburg Corridor options.
- Roodepoort – Randburg: Corridor options.



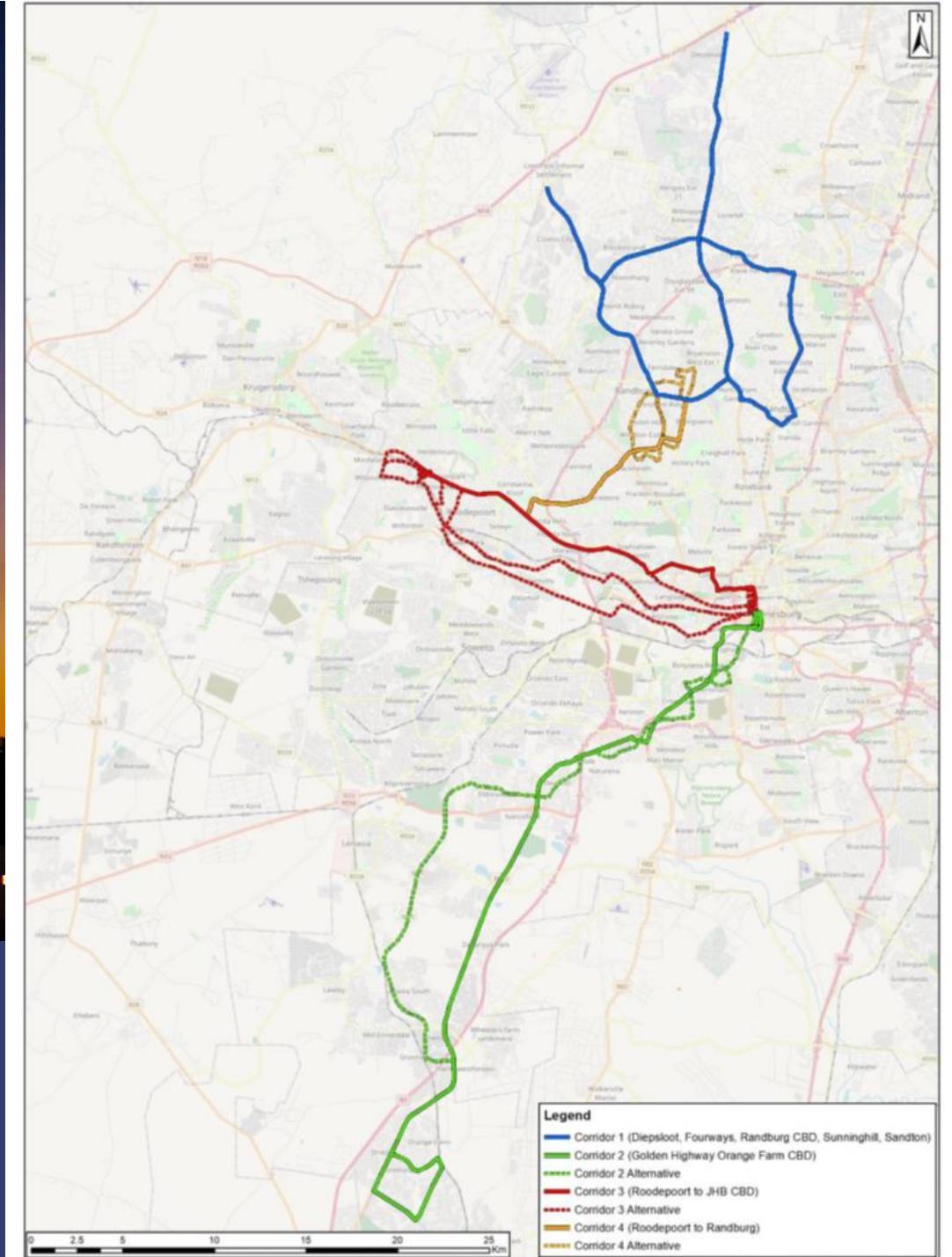
Project Scope

- AM Consulting Engineers appointed by JDA on behalf of CoJ Transport Dept to:
 - Undertake Feasibility Study for **ICM Approach for Roodepoort – Johannesburg Inner City Corridor and Roodepoort – Randburg Corridor** in the City of Johannesburg.
- Project part of **suite of 3 corridor studies**:
 - Northern Corridor: Diepsloot – Fourways – Randburg CBD – Sunninghill - Sandton
 - Southern Corridor: Soweto – Randburg – Sandton Rea Vaya Corridor
 - **Roodepoort – Johannesburg Inner City Corridor and Roodepoort – Randburg Corridor.**
- Project divided in 5 distinct phases.



Proposed CoJ Corridors

- Corridor 1: Diepsloot, Fourways, Randburg CBD, Sunninghill, Sandton.
- Corridor 2: Golden Highway Orange Farm CBD.
- Corridor 2: Alternative.
- Corridor 3: Roodepoort to Johannesburg CBD.
- Corridor 3: Alternative.
- Corridor 4: Roodepoort to Randburg.
- Corridor 4: Alternative.



Project Phases

Phase 1: Project Inception

- Project Inception Report has been developed and submitted to the Client.
- Capacity Building Plan developed, and 2 Interns appointed by AMCE.

Phase 2: Data Collection and Surveys

- Survey Methodology was prepared and submitted to Client.

Phase 3: Status Quo Assessment

- Reviews the current status of transport infrastructure and operations within the study area.
- Reviews current policies, plans and previous and previous studies within the corridor.

Phase 4: Feasibility Study

- Development of Corridor options in collaborations with Key Stakeholders.
- Refinement of developed options and selection of preferred options.

Phase 5: Implementation Plan

- Development of the Implementation in conjunction with Key Stakeholders.



WHERE ARE WE NOW?



- Reason for using the corridor.
- Other alternatives available.



Phase 2: Data Collection and Surveys

Screenlines / Cordon Counts Surveys:

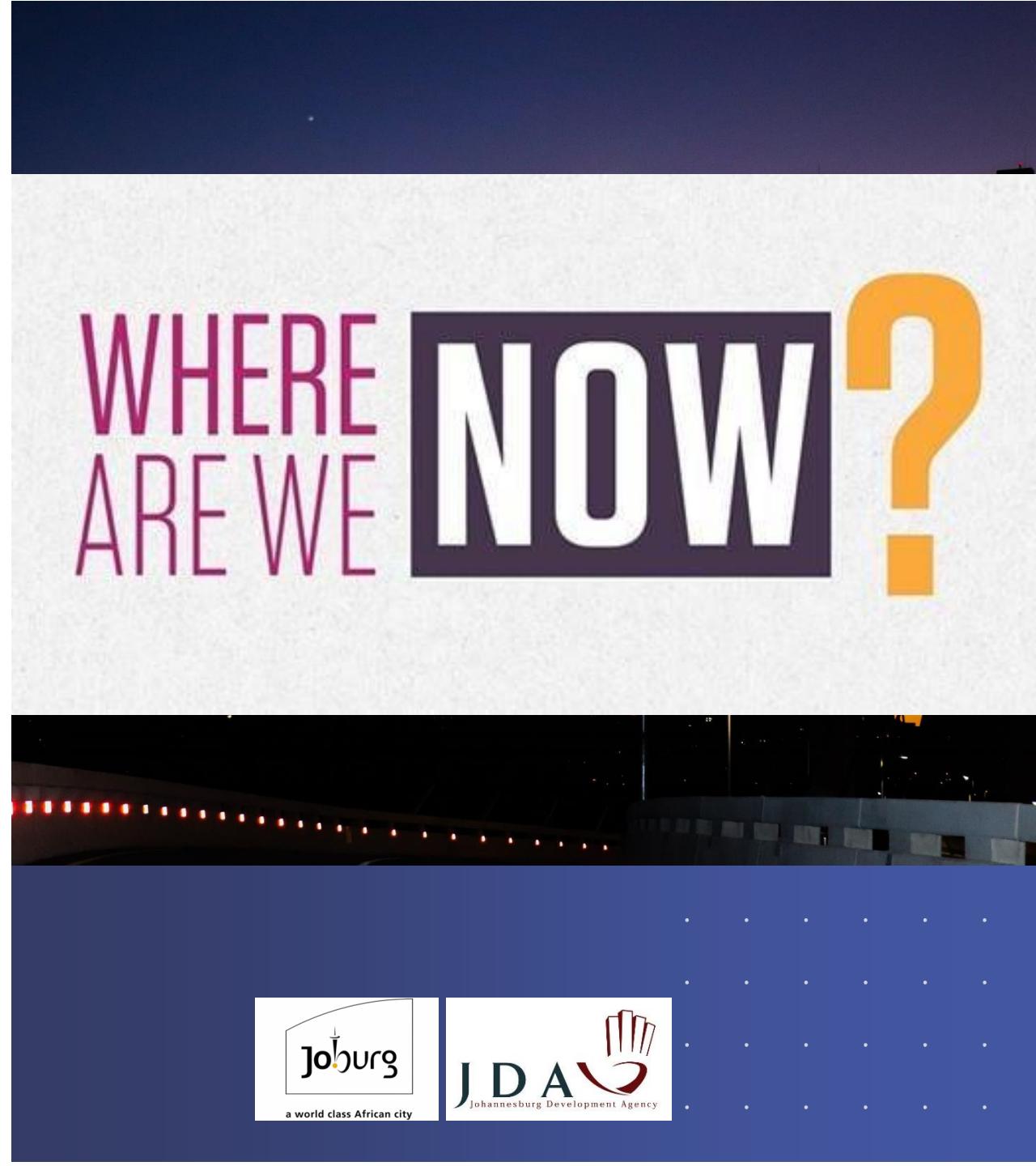
- Cordon / Screen lines counts undertaken 17 – 19 May 2022.
- Undertaken from 05:00 – 10:00.

14 hour Classified Intersection Counts:

- Classified Intersection Counts undertaken 24 – 26 May 2022.

O-D Roadside Interviews Surveys:

- Roadside interview surveys undertaken on 25 May 2022 from 05:00 – 20:00.
- Objective of O-D Roadside Interviews is to determine:
 - Trip purpose.
 - Transport mode choice and whether it is preferred or only alternative i.e., captured (reasons).
 - Time of trip.
 - Reason for using the corridor.
 - Other alternatives available.



Screen lines / Cordon Points

Johannesburg CBD:

- Data collected at 12 Cordon / Screen line points.



Screen lines / Cordon Points

Roodepoort:

- 10 Cordon /
Screen line Count
Points identified.



O-D Roadside Interview Survey Points

Randburg (4)

- Malibongwe and Hills Street – McDonalds, Gym, Shops.
- Bram Fischer and Bond Street – Intersections.
- Bram Fischer and Selkirk Avenue- Intersection.
- Republic and Weltevreden Road – Cresta Mall.

Roodepoort (4)

- Albertina Sisulu Street and Dumet Street (Shopping Centre).
- Albertina Sisulu / Du Plessis and Ninth Street (School and Business Park).
- William Nicol and Hendrik Potgieter (Residential Area, Hospital and Business Park).
- 14 th Avenue and Weltevreden/ Bagley – Shopping Centre.

Johannesburg CBD (5)

- Main Reef and New Canada Road – China Mall West.
- Main Reef and Dorado Road – China Mall other . . .
- Main Reef and Wedtern Road - A Moosa Blankets.
- Bertha and Jorrison Street – Wits.
- Beyers Naude and University Road- Campus Square. . .



JMPD Assistance Required



- Assistance was requested from JMPD to conduct O-D Roadside Interviews.
- Assisted with stopping of vehicles to participate in the surveys.
- A minimum of 2 JMPD officials were required per survey point = 26 members.
- Feedback:
 - JMPD provided excellent service and surveys were successful.

Phase 2: Data Collection and Surveys

Land Use and Development Data Surveys:

- Land Use and Development Data Surveys undertaken 04 – 07 May 2022.
- Purpose:
 - To collect land use and development data along the corridor.
 - To determine existing land use to inform Status Quo Assessment.
 - To perform Land Use Analysis to support identified ICM Options.

Informal Trading Data:

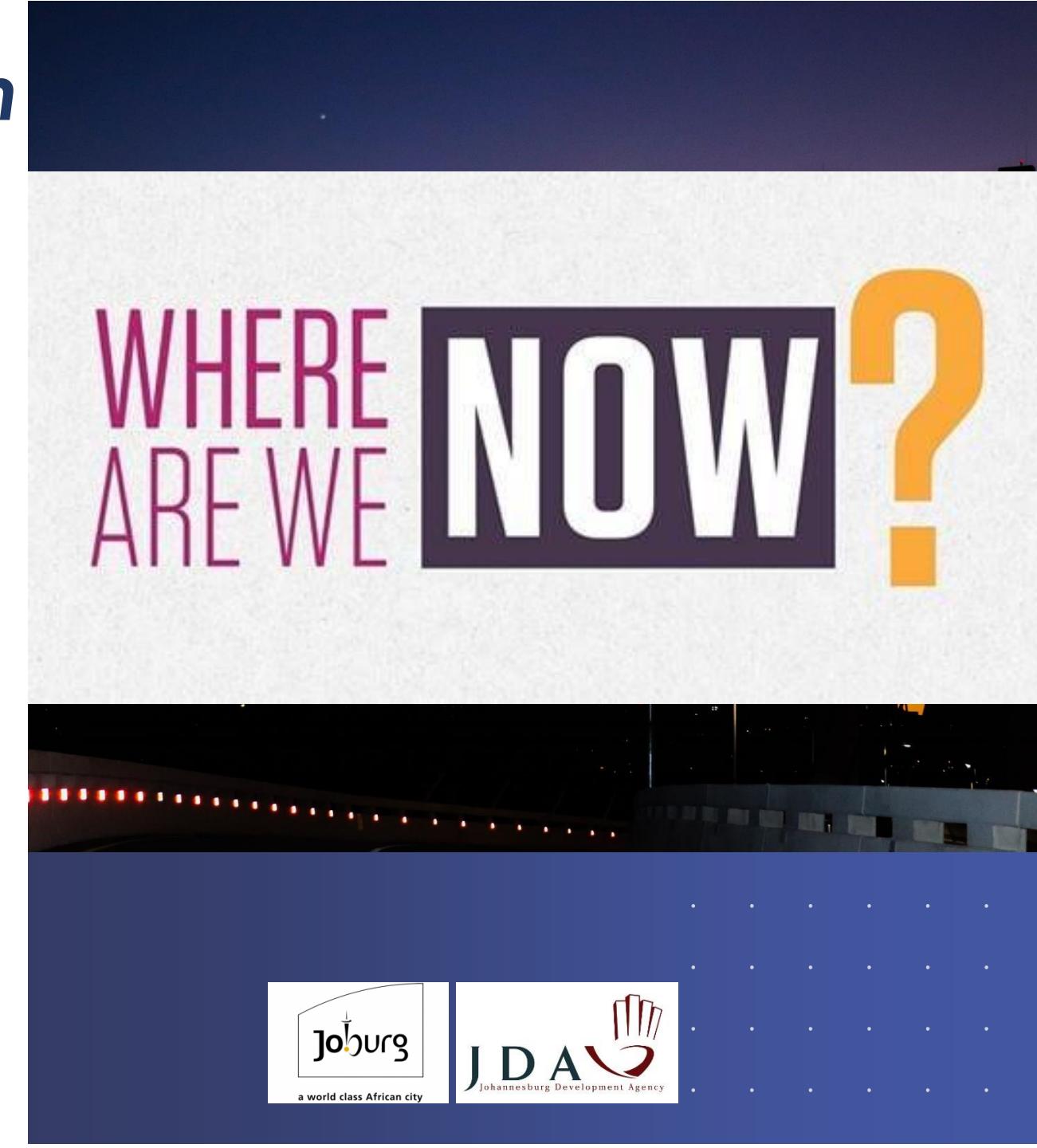
- Existing Informal Trading Data along corridor collected on 04 -007 May 2022.

Park and Ride Data:

- Park and Ride Data collected on 04 -07 May 2022.
- To determine current P&R facilities and future P&R options.

Journey Time Surveys:

- Journey Times to understand current travel times undertaken on week beginning 06 June 2022.



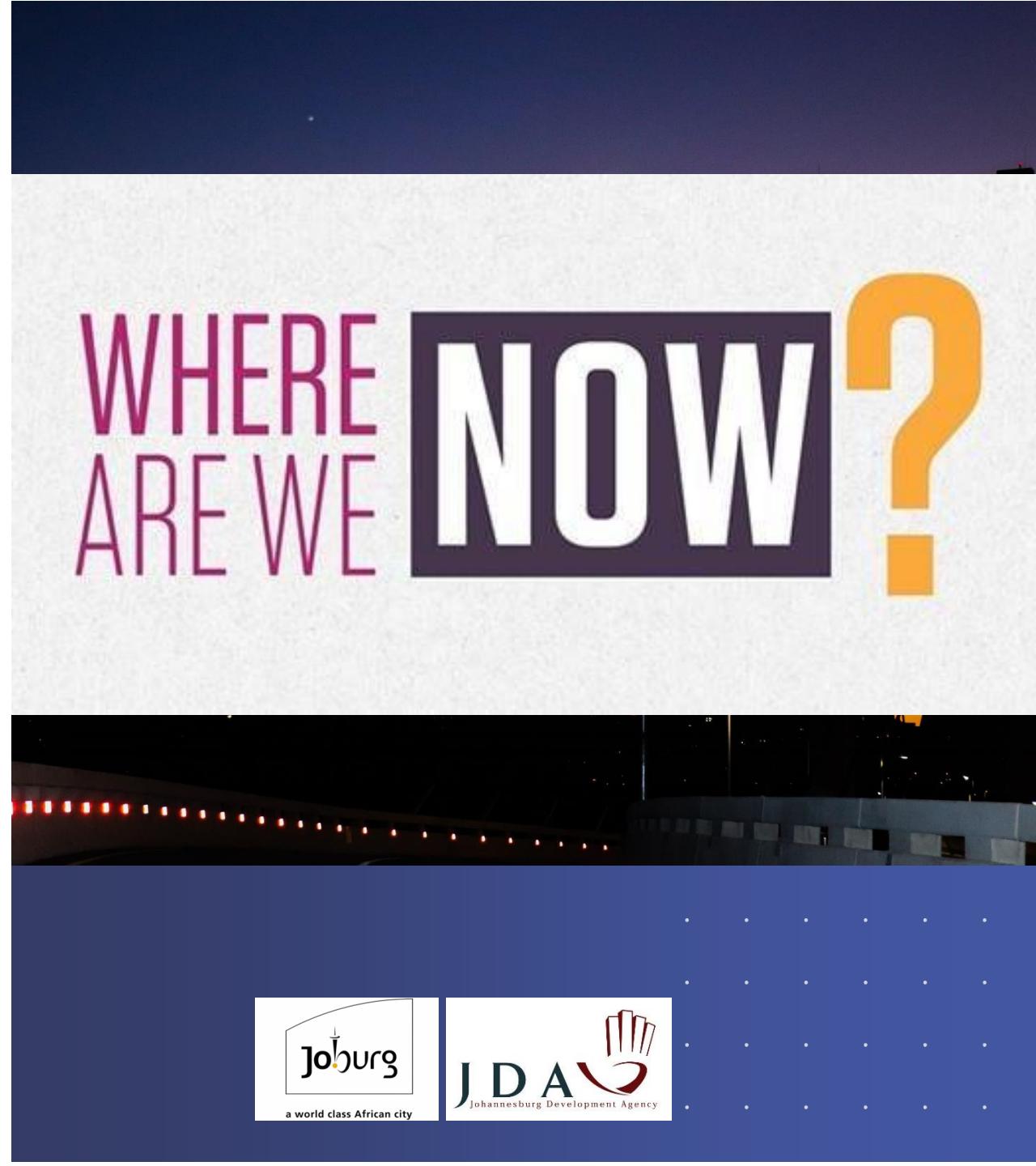
NEXT STEPS

Data Capturing and Analysis:

- Data collected for all surveys being captured and analysed.

Transport Survey Report:

- Survey Data to be presented in the form of the Transport Survey Report.
- Development of the Transport Survey Report has commenced.
- Land Use and Development Data Report is at an advanced stage:
 - The report will indicate the current land zoning along the corridor.
 - Land use development options along the corridor will be part of the Project Report.
 - Land Use and Development Report part of the Transport Survey Report..



Thank You

