



Project Prefeasibility Report

1. Project Details

Project Name	Park & Ride
Location	Stellenbosch Local Municipality
Sector	Social
Department	Department of Mobility
Project Owner	Deidre Ribbonaar
Project Manager	Deidre Ribbonaar

1.1 Background & Justification

The Park and Ride (P&R) initiative is a strategic response to the Western Cape's escalating congestion crisis, focusing on two high-demand corridors: Cape Town and Stellenbosch. These pilots are designed as short-term, implementable solutions that can commence within the 2025/26 fiscal year, serving as proof-of-concept for future expansion. The Cape Town pilot leverages the Southern Line rail corridor to restore commuter rail as the backbone of public transport, while the Stellenbosch pilot introduces P&R facilities integrated with a dedicated electric shuttle service to compensate for limited rail connectivity. Both pilots aim to reduce congestion, encourage modal shift from private vehicles to public transport, and foster long-term collaboration among provincial and local governments, PRASA, and other stakeholders. Monitoring and evaluation systems will track usage, satisfaction, and operational efficiency to ensure scalability.

By prioritizing rail recovery and electric mobility, the project supports WCIF's climate resilience and low-carbon objectives. The panoptic principle of innovation for equity is evident in the adoption of electric buses and digital tools for user experience while the principle of transversal governance is embedded through intergovernmental agreements and stakeholder engagement, ensuring collaborative planning and transparent decision-making.

The **justification** for the selection of Cape Town and Stellenbosch is driven by severe congestion and high private vehicle dependency undermining economic productivity and quality of life. Both areas suffer from spatial legacies of apartheid, urban sprawl, and inadequate public transport options. The collapse of rail services since 2019 exacerbated these issues, shifting demand to road-based modes. The pilots complement ongoing initiatives such as PRASA's rail recovery program and Stellenbosch Municipality's integrated mobility strategies, offering short-term feasibility and diverse learning opportunities for scaling P&R solutions across the province.

This aligns with WCIF's **spatial justice mandate**, addressing historical inequities by improving access to affordable, reliable transport. The panoptic principle of sustainable stakeholder value is reflected in the project's focus on reducing congestion costs, improving commuter safety, and enhancing environmental outcomes. The adaptive design of P&R facilities, which incorporate green infrastructure and allow for future expansion is evident in its commitment to the principle of resilience and regeneration.

1.2 Project Scope

1. Project Purpose & Overall Scope

The scope involves assessing, designing, and preparing for implementation of **pilot Park & Ride facilities in Cape Town (Southern Line) and Stellenbosch (R44/R304 corridors)** to reduce congestion, shift commuters from private cars to public transport, and establish scalable models for future rollouts.

2. Scope of Work - Cape Town Pilot (Heathfield & Fish Hoek)

2.1 Site Development & Infrastructure Upgrades

Work includes upgrading existing infrastructure at Heathfield and developing a new facility at Fish Hoek:

- Paving/repaving and painting of bays
- Universal access features
- Fencing, gates, guard hut, access control
- Lighting upgrades
- CCTV installation
- Basic and directional signage
- Toilet facilities (male/female & accessible)

2.2 Systems & Technology Implementation

- Automated vehicle counting sensors
- Real-time parking occupancy indicator linked to a P&R webpage
- Online user feedback system
- Integration with Mobility Department's Integrated Transport Hub

2.3 Operations & Maintenance Framework

- On-site security staffing (minimum two officers per site)
- Routine maintenance of parking lots, lighting, and amenities
- Cleaning and facilities management
- CCTV monitoring by external security company
- Reporting systems for incidents and user support

2.4 Institutional & Intergovernmental Work

- Negotiation and finalisation of:
 - **Intergovernmental Agreement (IGA)** with City of Cape Town
 - **Memorandum of Agreement (MoA)** with PRASA
 - **Lease/Right-of-Use Agreements** for station land
- Allocation of roles for land use approvals, upgrades, security, and maintenance

2.5 Regulatory & Compliance Requirements

- Zoning confirmation
- Building plan approvals
- Site Development Plans
- Environmental Impact Assessment (if applicable)
- Compliance with parking by-laws, heritage considerations (if needed)

2.6 Marketing & Public Engagement

- Public awareness campaigns (OASIS framework)

- Local media and employer outreach
- Continuous user education on availability, safety improvements, and costs

2.7 Monitoring & Evaluation (M&E)

- Tracking usage levels (vehicle counts)
- Surveys of P&R users and non-users
- Reporting operational and safety metrics
- Using pilot results to refine future rollouts

3. Scope of Work - Stellenbosch Pilot (Somerset Mall, Irene Circle, Koelenhof)

3.1 P&R Facility Development

Each site requires varying levels of development:

- **Somerset Mall:** Minor upgrades to existing parking
- **Irene Circle:** Fencing, lighting, signage, security installation
- **Koelenhof:** Major development (unpaved land, requires full construction)

Infrastructure may include:

- Paving, fencing, lighting
- Ablution facilities
- Covered waiting areas
- CCTV and access control systems
- Shuttle boarding areas

3.2 Shuttle Service Design & Deployment

- Procurement of **19 electric 32-seater buses** (11 on R44, 8 on R304)
- Development of detailed timetables, including peak/off-peak headways (10-25 min)
- Driver recruitment and training (PRDP requirements)
- Vehicle monitoring systems (GPS, performance tracking)

3.3 Technology Systems

- Online booking and payment (long-term)
- QR code access
- Real-time vehicle and shuttle tracking interface
- Integration with data systems (POPIA compliant)

3.4 Institutional & Stakeholder Management

- IGAs with Stellenbosch Municipality and City of Cape Town
- Lease agreements with private site owners
- Engagement and potential contracting of MBT industry to avoid conflict
- Tender processes for operators, security, maintenance, and construction

3.5 Regulatory Compliance

- Operating licences for shuttle fleet under NLTA
- Driver certifications (PRDP)
- Compliance with Road Traffic Act & data laws

3.6 Traffic, Safety & NMT Integration

- Traffic management at P&R sites
- Priority measures (e.g., signal priority, HOV lanes)
- Non-motorised transport improvements (walkways, cycle racks)

3.7 Monitoring & Evaluation

- Usage tracking
- Operational efficiency assessment
- Customer satisfaction surveys
- Ridership reports and cost-performance tracking

4. Cross-Cutting Scope Components (Both Cities)

4.1 Planning & Feasibility

- Demand modelling (EMME)
- Commuter surveys
- Layout and design of sites
- Costing models (CAPEX + OPEX)

4.2 Procurement

- Multi-stage tendering for:
 - Construction
 - Shuttle operations
 - Security
 - Technology systems
- Compliance with PPPF Act and provincial processes

4.3 Risk Management

- Rail reliability (Cape Town)
- MBT industry tensions (Stellenbosch)
- Funding uncertainties
- Regulatory and land approvals delays
- Security risks (vandalism, crime)

2. Objectives & Key Focus Areas

Objective	Key Focus Area
Reduce Traffic Congestion	
Promote Public Transport Uptake & Restore Rail	

Objective	Key Focus Area
Demonstrate Proof of Concept for Scalable P&R Programmes	
Improve Safety, Security, and User Experience	
Support Climate Resilience & Low-Carbon Transition	
Strengthen Intergovernmental & Stakeholder Collaboration	
Enhance Economic Efficiency and Reduce Transport Costs	
Improve Spatial Justice & Accessibility	

3. Project Timeline & Cost

Estimated Duration	3 Year(s) & 0 Month(s)
Estimated Start Date	01 Jan 2026
Estimated Cost	R 180M

4. Project Stage-0 Submission & Approval

Submitted By	
Submitted On	
Signed By	
Approved On	

5. Environmental & Social Considerations

5.1 Environmental Considerations

- Environmental Authorisation Requirements
- Greenhouse gas emissions and deforestation contributing to climate change
- Proper waste management to reduce pollution and health risks
- Sustainable water management to protect quality and prevent scarcity
- Preservation of ecosystem services like clean air, water, and climate regulation
- Land Use & Zoning Compliance

5.2 Social Considerations

- Respect for human rights including labor, land, and indigenous rights
- Impacts on Local Economic Activity
- Assessment of community impacts such as displacement and livelihood loss
- Protection of health and safety from environmental hazards
- Preservation of cultural heritage sites and artifacts
- Promotion of social equity and fair distribution of development benefits
- Engagement with stakeholders throughout the project lifecycle
- Fair labor practices including wages, hours, and working conditions
- Support and compensation for involuntary resettlement

6. Regulatory & Environmental Approvals

6.1 National Level

- South African National Biodiversity Institute (SANBI): Plays a leading role in biodiversity management and research
- Environmental Management Inspectors (EMIs): Responsible for compliance and enforcement of environmental regulations
- National Environmental Management Act (NEMA): Governs environmental management and authorization processes, including Environmental Authorizations (EAs)
- Environmental Management Frameworks (EMFs): Strategic planning tools for land-use and environmental management decisions

6.2 Provincial and Local Levels

- Provincial Environmental Departments: Implement and enforce environmental regulations within provinces
- Municipalities: Play a role in environmental management, especially in land-use planning and development applications

6.3 Other Relevant Entities

- Councils for the Built Environment Professions (CBEP): Regulates professions involved in the built environment

7. Identify Key Stakeholders

7.1 Government

- Department Of Infrastructure
- Provincial Treasury
- Local Government
- Department of Mobility
- Western Cape Government

7.2 State-Owned Entities

7.3 Private Sector

- Construction Companies
- Engineering Firms
- Financial Institutions

7.4 Civil Society

- Civil society organizations advocating for community needs

7.5 Other Stakeholders

8. WCG Sector Priorities

Outcomes	Social	Energy & Water	Economic	Technology	Ecological
Infrastructure investment drives spatial transformation and improves spatial resilience	Short Term 1-5 YRS				
Investment in social infrastructure improves access to health, education, social development, and recreation opportunities	Short Term 1-5 YRS				
Mobility systems and transportation corridors provide safe and efficient connectivity to opportunities, services, and facilities	Short Term 1-5 YRS				

9. Infrastructure Type

Infrastructure Type for the Park & Ride Pilots

The P&R pilots involve **two distinct infrastructure types**, depending on location and mode of public transport integration. These are summarised below.

1. Cape Town: Rail-Linked P&R Infrastructure

Cape Town's P&R facilities are located at **existing rail stations** (Heathfield and Fish Hoek) and therefore rely on **rail-linked, station-adjacent parking infrastructure**.

1.1 Type of Infrastructure

a) Upgraded Station-Adjunct Parking Facilities

- Existing parking lots at stations (e.g., Heathfield) upgraded with:
 - **Paving / repaving**
 - **Fencing and access control**
 - **Lighting**
 - **CCTV**
 - **Universal access (disability-friendly)**
 - **Signage and wayfinding**
 - **Basic toilets**

b) New Parking Infrastructure (Greenfield)

- A **new P&R facility** at Fish Hoek, on underutilised land near the station.
- The site requires complete development: paving, fencing, lighting, pedestrian access, security office, CCTV.

c) Digital Infrastructure

- Automated vehicle counting (remote microwave sensors)
- Live occupancy tracking webpage
- CCTV monitored by a security provider

d) Supportive Station Infrastructure

- Pedestrian walkways to platforms
- Integrated access to Metrorail services

2. Stellenbosch: Shuttle-Linked P&R Infrastructure

Because Stellenbosch lacks functional rail, its P&R design requires **multi-site parking paired with electric bus shuttle services**.

2.1 Type of Infrastructure

a) Large-Scale P&R Parking Facilities (Somerset Mall)

- Existing mall parking repurposed and upgraded.
- Includes:
 - Bay demarcation
 - Lighting
 - Security installations
 - Access control
 - Shuttle boarding areas

b) Moderate-Upgrade P&R Facilities (Irene Circle)

- Existing informal carpool site upgraded with fencing, lighting, signage, security, and shuttle loading areas.

c) Greenfield P&R Facility (Koelenhof)

- A new P&R site constructed on unpaved land requiring full development:
 - Paving

- Fencing
- Drainage
- Lighting
- Waiting areas
- Shuttle turnaround loops

d) Electric Shuttle Infrastructure

- **19 electric buses** (32-seater) require:
 - Charging stations (DC fast chargers)
 - Depot/parking (on-site or off-site)
 - Power system upgrades

e) Passenger Interface Infrastructure

- Shuttle stops in Stellenbosch CBD:
 - Eikestad Mall
 - University
 - School precinct
 - Merriman Road

f) Digital Systems

- Online booking (future)
- GPS vehicle tracking
- User feedback platforms
- QR code access (planned)

3. Cross-Cutting Infrastructure Across Both Pilots

3.1 Safety and Security Infrastructure

- CCTV networks
- Security offices / guard huts
- Fencing and gates
- Lighting towers

3.2 Universal Access Infrastructure

- Disabled bays
- Ramps and compliant walkways
- Accessible restroom facilities

3.3 Environmental/Sustainability Infrastructure (Planned Enhancements)

- Solar PV installations for site power
- Grey-water recycling systems
- EV charging stations

4. Summary Table

Region	Infrastructure Type
Cape Town	Upgraded station parking + Greenfield P&R site + rail integration + digital occupancy systems
Stellenbosch	Shuttle-linked P&R sites (mixed-use, upgraded & greenfield) + electric bus charging infrastructure + shuttle stops
Both	CCTV, lighting, fencing, access control, signage, universal access, maintenance & digital platforms

9.2 Soft

9.3 Critical

10. Project Stage-1 Submission & Approval

Submitted By	
Submitted On	
Signed By	
Approved On	

11. Geo Location

Geo Location	
Latitude	
Longitude	

12. Procurement Planning

- Decentralized Preference Criteria
- Designated Groups
- Local Content and Production
- Broad-Based Black Economic Empowerment (B-BBEE)

13. Procurement Action

- E-Procurement Solution (ePS)
- Western Cape Supplier Evidence Bank (WCSEB)
- Procurement Planning

PROCUREMENT PLANNING

Procurement planning for the P&R pilots involves **multiple contracting streams, institutional agreements, phased work packages**, and adherence to provincial and national procurement regulations. The scope covers **infrastructure works, technology systems, security and facility management**, and (for Stellenbosch) **shuttle operations**.

1. Governance & Institutional Procurement Foundations

1.1 Intergovernmental Agreements (IGAs)

Before procurement can begin, formal agreements must be concluded with:

- **City of Cape Town (CoCT)** – for site use, land management, and operational roles.
- **Stellenbosch Municipality** – for land, road access, and shuttle integration.
- **PRASA** – for rail-linked P&R facilities and shared security/operations.

These IGAs define:

- Roles & responsibilities
- Financial obligations
- Infrastructure ownership
- Regulatory compliance duties

No procurement may proceed until the IGAs and MoAs are in place.

2. Procurement Categories

The project requires procurement in **four major categories**:

2.1 Civil Works & Infrastructure Upgrades

Scope includes:

- Paving and civil engineering
- Fencing and access control gates
- Lighting and electrical reticulation
- Ablution facilities
- Drainage, stormwater, geotechnical works
- Construction of new P\&R sites (e.g., Fish Hoek, Koelenhof)

These works are procured via a **public tender** with:

- Detailed engineering designs included in tender documents
- Clear compliance requirements (zoning, building plans, EIAs)
- Pre-tender wayleaves, surveys, and service investigations

2.2 Technology & Digital Systems Procurement

Required systems include:

- Automated vehicle counting sensors
- Live parking availability dashboard & webpage
- CCTV systems
- Data management & monitoring integration (Mobility Dept's ITH)

Procurement considerations:

- Must include service-level agreements (SLAs) for uptime, maintenance, repairs
- Includes periodic upgrades and cybersecurity/data standards (POPIA compliance)

2.3 Security, Operations & Facility Management

For Cape Town P\&R sites:

- Contracted security (24-hour guards, CCTV monitoring)
- Cleaning and maintenance services
- Incident reporting & user support systems

For Stellenbosch:

- Security & access control at Somerset Mall, Irene Circle, Koelenhof
- Facility management contracts to maintain:
 - Lighting
 - Toilets
 - Signage
 - Fencing and gates

Procurement is **outsourced** through transparent tendering, with KPIs for reliability, safety, and customer satisfaction.

2.4 Shuttle Operations (Stellenbosch Only)

This is the **largest procurement component**:

Includes:

- Procurement of **19 electric buses** (32-seater)
- Charging infrastructure
- Vehicle fit-out, branding, GPS units
- Hiring or contracting of drivers
- Training programmes

Procurement model options:

- **Single operator contract** (end-to-end service)
- **Multiple contracts**
 - Vehicle supplier
 - Charging infrastructure provider
 - Operating company
 - Maintenance contractor

Additional considerations:

- MBT industry consultation to avoid conflict
- PRDP licensing for drivers
- Operating licence under the NLTA

3. Procurement Process (As Required by WCMD / PPPFA)

The documents outline a **standard public?sector procurement workflow:**

3.1 Bid Specification Committee (BSC)

- Defines technical requirements
- Sets evaluation criteria
- Approves tender documents

3.2 Public RFP (Request for Proposals)

- Advertised publicly
- Vendors submit technical and financial bids

3.3 Bid Evaluation Committee (BEC)

Evaluates based on:

- Price & Preferential Procurement Act scoring
- Technical quality
- Track record & experience
- Capacity & risk

3.4 Bid Adjudication Committee (BAC)

- Ensures compliance
- Confirms value-for-money
- Makes award recommendation

3.5 Contract Negotiation & SLA Finalisation

- No price increases allowed during negotiation
- Performance monitoring, penalties, incentives included

4. Procurement Packaging Strategy

The study recommends **splitting procurement into multiple work packages** to reduce complexity, ensure competition, and streamline delivery:

Work Package A – Civil Works

- Paving, fencing, lighting, drainage
- Suitable for large engineering contractors

Work Package B – Security & Technology Systems

- CCTV, electronic counters, digital systems
- Allows specialist technology firms to bid

Work Package C – Shuttle Operations (Stellenbosch)

- Bus procurement
- Bus operation services
- Vehicle maintenance

5. Procurement Dependencies & Risks

Procurement cannot proceed unless the following are completed:

5.1 Agreements Finalised

- PRASA MoA
- CoCT or Stellenbosch IGAs
- Private site lease agreements

5.2 Regulatory Requirements

- Zoning
- Building plans
- Environmental authorisation
- Traffic and parking by-law compliance

Main Risks

- Delays in IGAs/MoAs
- Environmental approval bottlenecks
- Resistance from MBT industry (Stellenbosch)
- Market readiness of suppliers (electric buses)
- Procurement market response for specialised systems

6. Procurement Timeline Overview

Cape Town

- Full design + procurement prep: ~6 months
- Tendering + evaluation + award: ~6 months
- Construction: 16 months (Heathfield) / 23 months (Fish Hoek)

Stellenbosch

- Procurement of electric buses: ~9 months
- Construction tender (Irene/Koelenhof): 21–26 months
- Systems procurement: 3 months per site

- **Preferential Procurement Regulations (2022)** - Aligned : Yes
- **Sustainable Public Procurement (SPP)** - Aligned : Yes

14. Social Impact

- **Inclusive Economic Participation**

The pilots will:

- Reduce the personal financial burden of long car commutes (fuel, parking fees, wear?and?tear)
- Improve productivity by reducing time lost in traffic
- Support local job creation (construction, operations, maintenance, security)
- Stimulate micro?enterprise opportunities at P&R sites (e.g., kiosks at Irene Circle)

These interventions produce positive social and economic ripple effects in surrounding communities.

- **Social Equity & Spatial Justice**

Both Cape Town and Stellenbosch suffer from spatial inequality and long commuting distances due to apartheid-era planning patterns. Social impact: Improved access to affordable, reliable transport for car-dependent low? and middle? income commuters Better connectivity for workers living far from economic centres Reduced transport burden (time, cost, and safety concerns) Supports provincial commitments to spatial justice and climate?resilient mobility By enhancing access to efficient mobility options, P&R becomes an equaliser for those who have limited public transport choices.

- **Reduced Commuter Stress & Better Wellbeing**

With more predictable, safer, and shorter commute times: Commuter stress levels drop Travel becomes more predictable Families benefit from improved work?life balance

- **Strengthened Community Trust in Public Transport**

Because rail services have historically suffered major declines, public trust must be rebuilt. Social benefits include: Clear communication and outreach (OASIS marketing strategy) More positive perceptions of rail and shuttles Increased public participation and feedback mechanisms Rebuilding trust is essential for long-term mode shift.

- **Environmental Sustainability**

- **Skills Development and Job Creation**

- **Community Empowerment**

- **Ethical and Transparent Governance**

- **Safety & Security**

Safety is the top concern expressed by commuters, with 33% identifying it as their biggest barrier to using rail or public transport. Social impact: Enhanced sense of personal security Protection of vulnerable users (women, students, those traveling early/late) Reduced crime and vandalism in station precincts Increased willingness to use public transport

- **Enhanced Accessibility & User Experience**

The project significantly improves the commuting experience for all users. Social impact: Universal access features improve mobility for people with disabilities. Clean, safe ablution facilities and covered waiting areas improve dignity and comfort. Signage and improved pedestrian routes reduce stress and confusion for first?time users. These upgrades make public transport more welcoming and inclusive.

15. Property Availability

Has the land for the site been identified?: Yes
Remarks:

16. Project Stage-2 Submission & Approval

Submitted By	
Submitted On	
Signed By	
Approved On	

17. Background & Justification

The Park and Ride (P&R) initiative is a strategic response to the Western Cape's escalating congestion crisis, focusing on two high-demand corridors: Cape Town and Stellenbosch. These pilots are designed as short-term, implementable solutions that can commence within the 2025/26 fiscal year, serving as proof-of-concept for future expansion. The Cape Town pilot leverages the Southern Line rail corridor to restore commuter rail as the backbone of public transport, while the Stellenbosch pilot introduces P&R facilities integrated with a dedicated electric shuttle service to compensate for limited rail connectivity. Both pilots aim to reduce congestion, encourage modal shift from private vehicles to public transport, and foster long-term collaboration among provincial and local governments, PRASA, and other stakeholders. Monitoring and evaluation systems will track usage, satisfaction, and operational efficiency to ensure scalability.

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The **justification** for the selection of Cape Town and Stellenbosch is driven by severe congestion and high private vehicle dependency undermining economic productivity and quality of life. Both areas suffer from spatial legacies of apartheid, urban sprawl, and inadequate public transport options. The collapse of rail services since 2019 exacerbated these issues, shifting demand to road-based modes. The pilots complement ongoing initiatives such as PRASA's rail recovery program and Stellenbosch Municipality's integrated mobility strategies, offering short-term feasibility and diverse learning opportunities for scaling P&R solutions across the province.

This aligns with WCIF's **spatial justice mandate**, addressing historical inequities by improving access to affordable, reliable transport. The panoptic principle of sustainable stakeholder value is reflected in the project's focus on reducing congestion costs, improving commuter safety, and enhancing environmental outcomes. The adaptive design of P&R facilities, which incorporate green infrastructure and allow for future expansion is evident in its commitment to the principle of resilience and regeneration.

18. Economic and Social Justification

- Poverty reduction
- Job creation
- Inclusive growth
- Reducing inequality
- Improving access

19. Geographic Coverage

19.1 Regions

- City of Cape Town
- Cape Wineland

19.2 Municipalities

District	Municipalities
Cape Winelands District Municipality	Stellenbosch

19.3 Communities

District	Communities
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20. Sector-specific analysis

- Inadequate transportation infrastructure

21. Approval Bodies

21.1 Provincial Government Departments

- Provincial Treasury
- Local Government
- Department of Mobility
- City of Cape Town – Local planning, building plan approval
- Taxi Industry Structures (SANTACO WC & Associations)
- Municipal Traffic Departments

21.2 Specialized Committees and Boards

- Provincial Policy Review Committee

22. Environmental Considerations

22.1 Projections of usage over time

- **traffic volumes**

The **market and demand analysis** for P&R facilities highlights a strong potential for uptake among “choice users” - commuters who currently drive private vehicles but would switch to rail or shuttle services if offered secure, convenient, and cost-effective alternatives. These individuals typically work in Cape Town’s CBD or Southern Line hubs, fall within the 20–50 age range, and face long, costly commutes due to congestion on major routes like the M3, M5, and Main Road. Rising fuel prices and high CBD parking fees further incentivise modal shift. Survey data reinforces this potential, with 64% of respondents willing to drive up to 10 minutes to access a P&R facility, provided security, reliability, and convenience are assured. Catchment analysis applied a five-minute drive-time buffer to intercept traffic before it enters congested corridors, while demand screening using EMME transport models and historical boarding data identified 15 high-potential stations from Kenilworth to Fish Hoek. For Stellenbosch, proposed shuttle headways of 10–25 minutes ensure competitive travel times. Overall, the analysis confirms substantial latent demand, indicating that strategically located, well-managed P&R facilities can significantly reduce congestion and boost public transport use.

This analysis supports WCIF’s mission of infrastructure-led growth and spatial justice by targeting high-congestion corridors and improving access to affordable, efficient transport. It reflects the panoptic principle of innovation in service design (e.g., electric shuttles and digital monitoring), and the principle of creating stakeholder value through cost savings and improved commuter experience. Embedding transversal governance in planning and implementation is evident. Additionally, the emphasis on reducing emissions and promoting modal shift aligns with WCIF’s climate resilience and sustainability objectives under Principle 2, ensuring that infrastructure solutions are adaptive, inclusive, and future-ready.

23. Social Considerations

23.1 Inclusive Economic Development

- Encourages job creation through public procurement and infrastructure projects
- Supports SMMEs, women- and youth-owned enterprises

23.2 Public Participation and Equity

- Ensures community involvement in planning and decision-making
- Promotes equitable access to services and opportunities

24. Investment Needs

24.1 Infrastructure Development

- Roads, bridges, and public transport systems.
- Digital and Operational Infrastructure

24.2 Human Settlements

- Transit-Oriented Support Functions (improving mobility access between residential areas and economic nodes)

24.3 Green Economy

- Low-Carbon and Resource-Efficient Mobility

24.4 SMME and Entrepreneurship Support

- Enterprise Participation through Inclusive Procurement

25. Policy Incentives

25.1 Sector-Focused Incentives

- Green Economy: Incentives for renewable energy, water efficiency, and waste-to-energy projects.
- Public-Private Partnerships (PPP)
- Economic Inclusion
- Inclusive Infrastructure Development

26. Scale And Complexity

26.1 Total Addressable Market (TAM)

- **Population served by a transport corridor**

The purpose of the project is to assess the viability of pilot P&R schemes in Cape Town and Stellenbosch as short-term interventions that encourage modal shift from private vehicles to public transport, reduce congestion, and inform future large-scale rollouts.

The Cape Town pilot will focus on the Southern Line rail corridor with identified sites being Heathfield (94 bays) and Fish Hoek (111 bays).

The Stellenbosch pilot will cover the routes of the R44 (Somerset Mall to Stellenbosch CBD) and R304 (Koelenhof to Stellenbosch CBD). Sites will include Somerset Mall, Irene Circle and Koelenhof. Currently 90% of commuters use private vehicles with minimal rail/bus services being available.

- **Data sources**

- Demographic
- Geographic
- Economic

26.2 Served Available Market (SAM)

26.3 Demand Forecasting

- **Projections of usage over time**

- **traffic volumes**

The **market and demand analysis** for P&R facilities highlights a strong potential for uptake among “choice users” - commuters who currently drive private vehicles but would switch to rail or shuttle services if offered secure, convenient, and cost-effective alternatives. These individuals typically work in Cape Town’s CBD or Southern Line hubs, fall within the 20–50 age range, and face long, costly commutes due to congestion on major routes like the M3, M5, and Main Road. Rising fuel prices and high CBD parking fees further incentivise modal shift. Survey data reinforces this potential, with 64% of respondents willing to drive up to 10 minutes to access a P&R facility, provided security, reliability, and convenience are assured. Catchment analysis applied a five-minute drive-time buffer to intercept traffic before it enters congested corridors, while demand screening using EMME transport models and historical boarding data identified 15 high-potential stations from Kenilworth to Fish Hoek. For Stellenbosch, proposed shuttle headways of 10–25 minutes ensure competitive travel times. Overall, the analysis confirms substantial latent demand, indicating that strategically located, well-managed P&R facilities can significantly reduce congestion and boost public transport use.

This analysis supports WCIF’s mission of infrastructure-led growth and spatial justice by targeting high-congestion corridors and improving access to affordable, efficient transport. It reflects the panoptic principle of innovation in service design (e.g., electric shuttles and digital monitoring), and the principle of creating stakeholder value through cost savings and improved commuter experience. Embedding transversal governance in planning and implementation is evident. Additionally, the emphasis on reducing emissions and promoting modal shift aligns with WCIF’s climate resilience and sustainability objectives under Principle 2, ensuring that infrastructure solutions are adaptive, inclusive, and future-ready.

26.4 Size

Project Type	Routine Project
Project Size	Large - Total of 30 Mill or more

27. Challenges

27.1 Financial Complexity

High Upfront Costs

- Cape Town: ±R15 million for two sites.
- Stellenbosch: ±R72 million in Year 1; ±R166 million over three years (due to EV fleet and infrastructure).

Funding Gaps

- Provincial budgets are limited; reliance on PPPs and developer contributions is essential.
- Risk of insufficient private sector interest without strong incentives.

Revenue Uncertainty

- Initial free parking phase delays cost recovery.
- Shuttle fares unlikely to cover full operational costs; subsidies required.

Cost Escalation Risks

- Inflation, supply chain delays, and EV technology costs could increase CAPEX and OPEX.

27.2 Operational Complexity

Service Reliability

- Rail-linked P&R depends on PRASA's train reliability; disruptions could undermine adoption.
- Electric shuttle operations require robust scheduling and contingency planning for breakdowns.

Safety & Security

- Crime and vandalism at stations and parking lots remain major deterrents; requires strong security presence and CCTV.

Stakeholder Resistance

- Minibus Taxi (MBT) industry may perceive shuttle services as competition; proactive engagement and partnership strategies are critical.

User Adoption

- Cultural preference for private cars and skepticism about public transport quality could limit uptake.
- Requires aggressive marketing and behavioral change campaigns.

Maintenance & Staffing

- Continuous upkeep of infrastructure, technology systems, and EV fleet.
- Skilled personnel for EV maintenance and digital systems management.

27.3 Technical challenges

Infrastructure Readiness

- Cape Town sites (Heathfield & Fish Hoek) require upgrades: paving, lighting, CCTV, fencing, and signage.
- Stellenbosch sites (Koelenhof, Irene Circle) are greenfield or poorly developed, requiring major construction and EV charging infrastructure.

Technology Integration

- Real-time occupancy tracking, online booking, and integrated ticketing systems need robust development and cybersecurity measures.
- GPS tracking and monitoring for electric shuttles require reliable connectivity and backend systems.

EV Charging & Power Supply

- Stellenbosch pilot depends on electric buses; charging infrastructure and grid capacity must be secured.
- Solar PV integration adds complexity in design and maintenance.

Regulatory Approvals

- Environmental Impact Assessments (EIAs), heritage clearances, and municipal zoning approvals can delay timelines.

28. Phases

29. Project Stage-3 Submission & Approval

Submitted By	
Submitted On	
Signed By	
Approved On	