RAND WATER INFRASTRUCTURE DEVELOPMENT PLAN

Sipho Mosai- Chief Executive

NCOP SITE VISIT 12 SEPTEMBER 2023

PRESENTATION OUTLINE

RAND WATER'S OPERATING MODEL 01

GOVERNANCE STRUCTURE 02

INFRASTRUCTURE DEVELOPMENT MODEL 03

RAND WATER STATION 5 (A) 04

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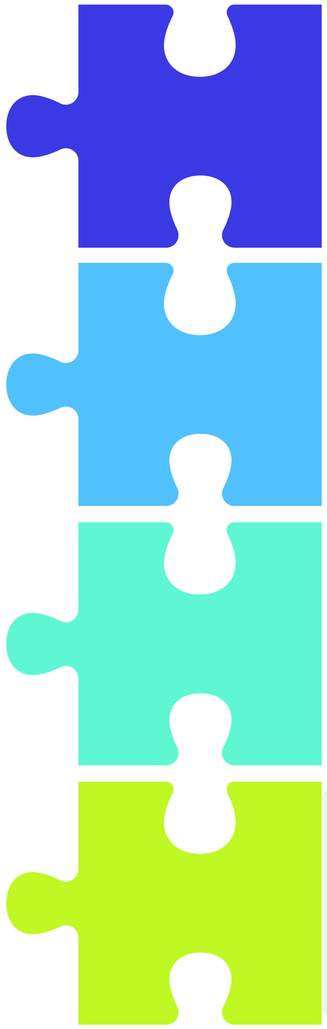
120 YEARS OF FINDING NEW WAYS

RAND WATER'S BUSINESS MODEL



Rand Water is a Water Board established i.t.o Chapter 6 of the WSA, Act 108 of 1997. Rand Water primary activity to provide water services to other water services institutions within its service area.

Rand Water is a 3B scheduling, as stipulated in the Classification of public entities in the Public Finance Management Act.

Schedule 3B and 3D entities are referred to as government business enterprises.

Rand Water is self-funded does not receive budget allocation from the National fiscus. Division of Revenue Act is not applicable to Rand Water

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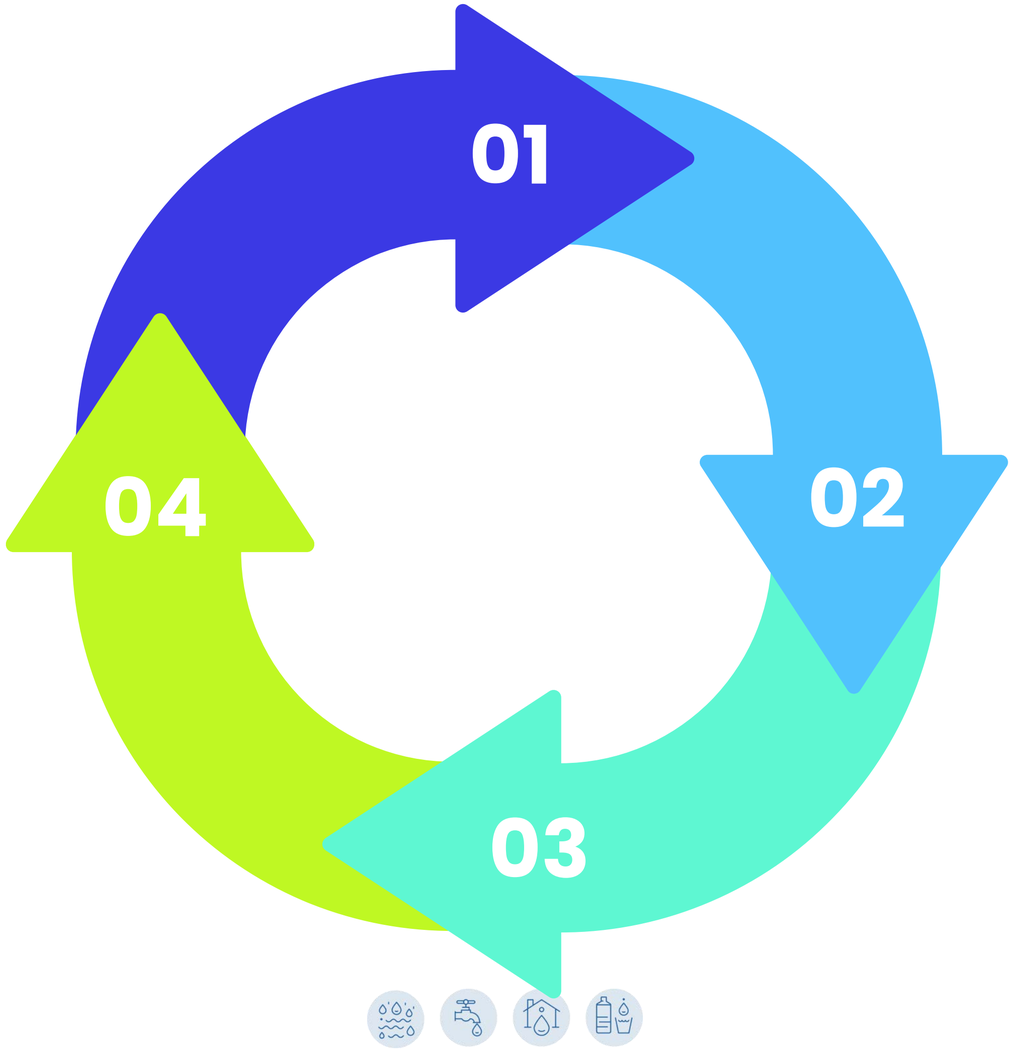
Rand Water Business Model

Financial Sustainability

1. Revenue

Our Revenue is a function of our tariffs and Water Volumes sold



2. Cost /Expenditure

Raw Water, Chemicals, Electricity, Maintenance, Labour Costs

3. Surplus

Bond Repayments and Refurbishment

4. Infrastructure Upgrade

Purification works, Pumpstation, Reservoir and Pipeline

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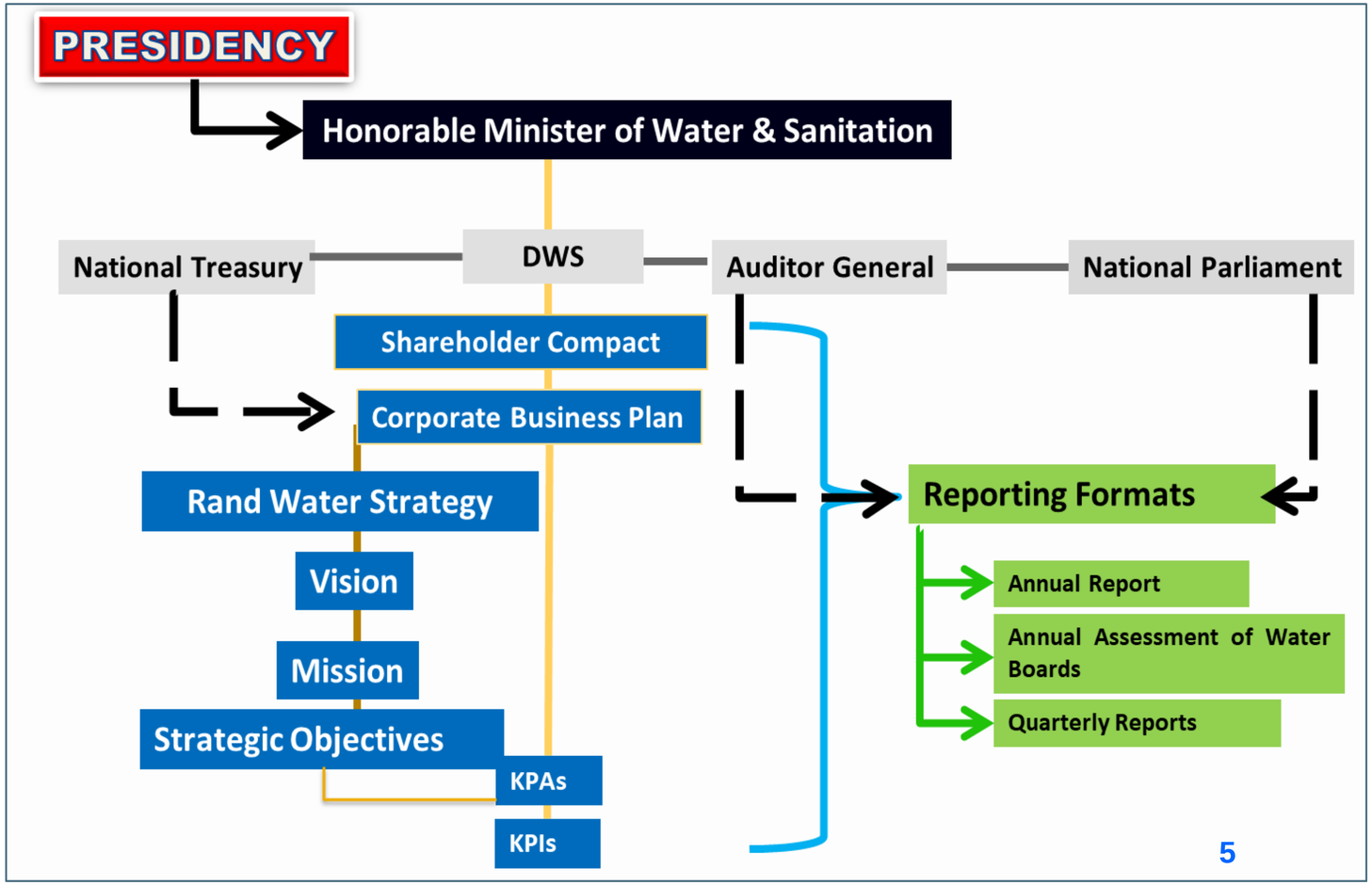
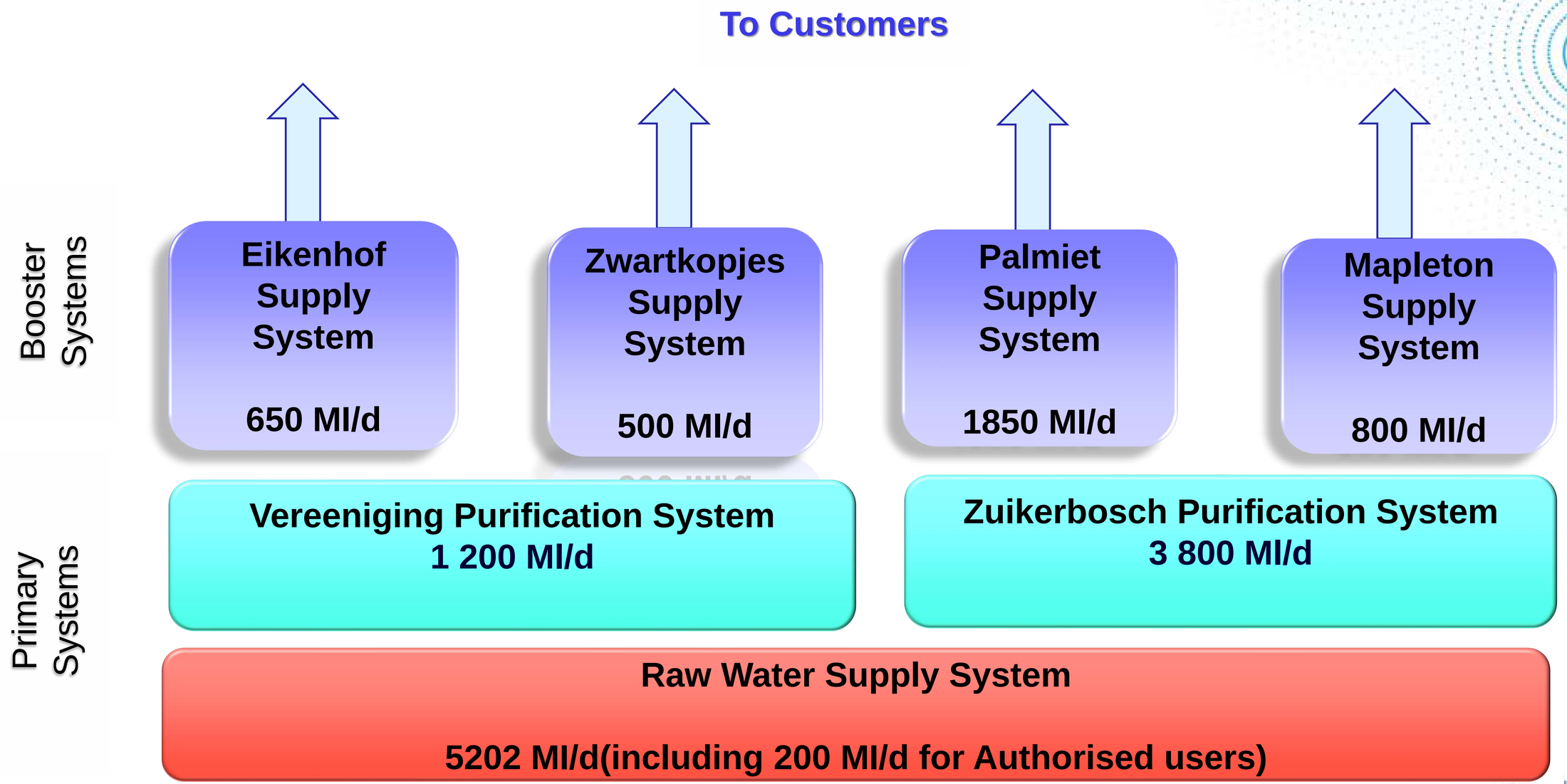
Finding New Ways



Rand Water Supply System

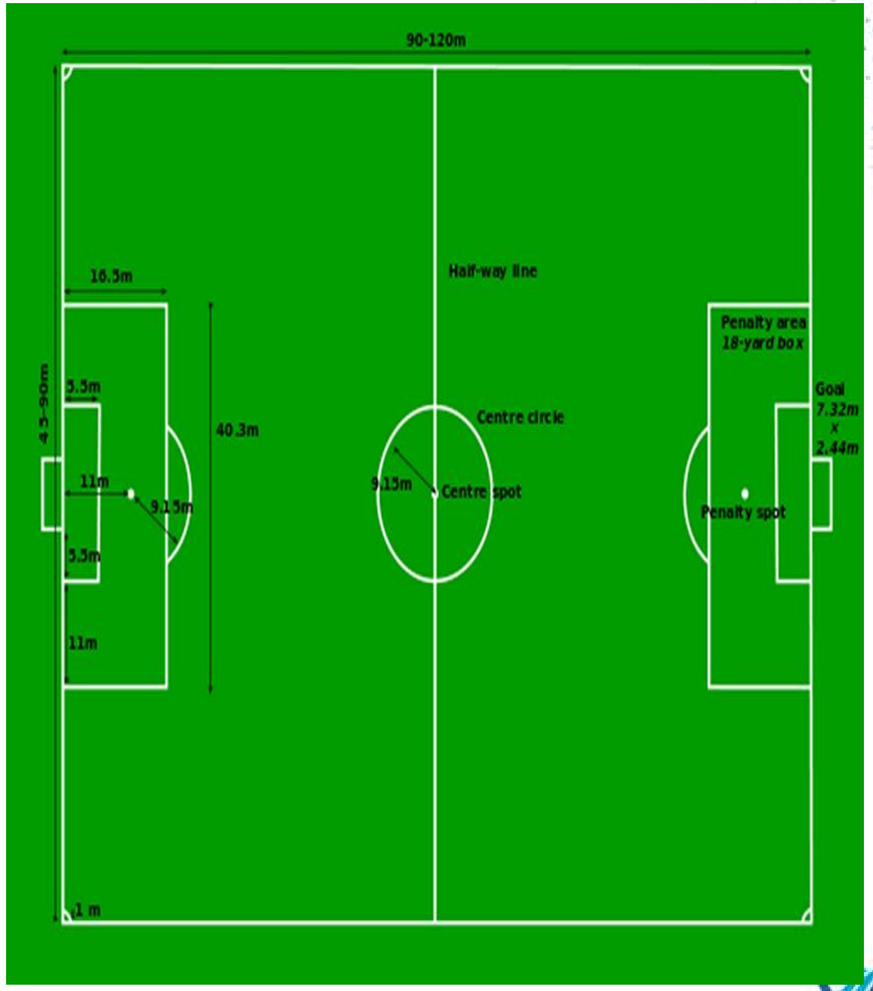
Overview – Corporate Supply Systems



At peak Rand Water can fill (per day):

2 000 Olympic Size Swimming pools

1 000 2m deep EPL Soccer field



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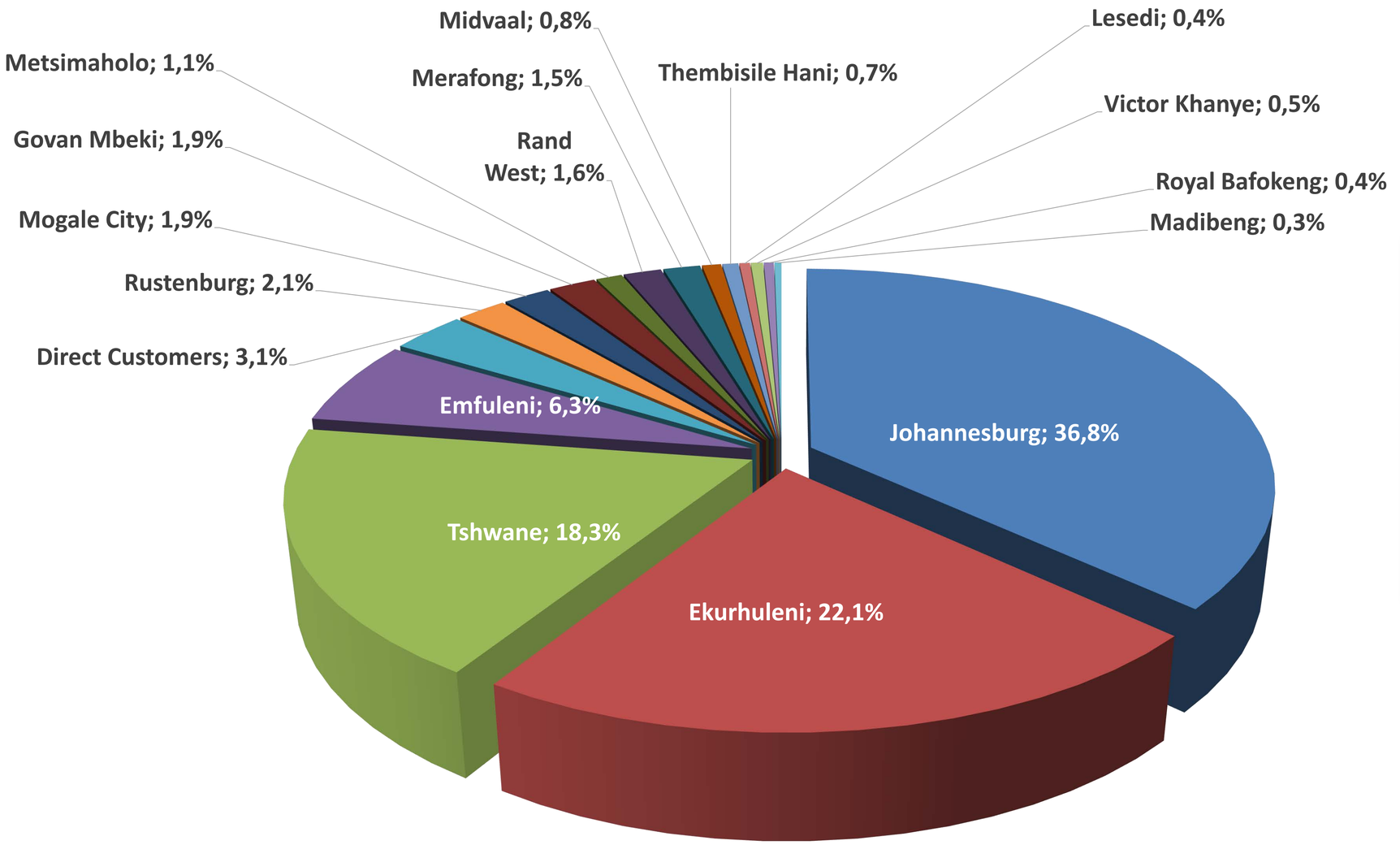
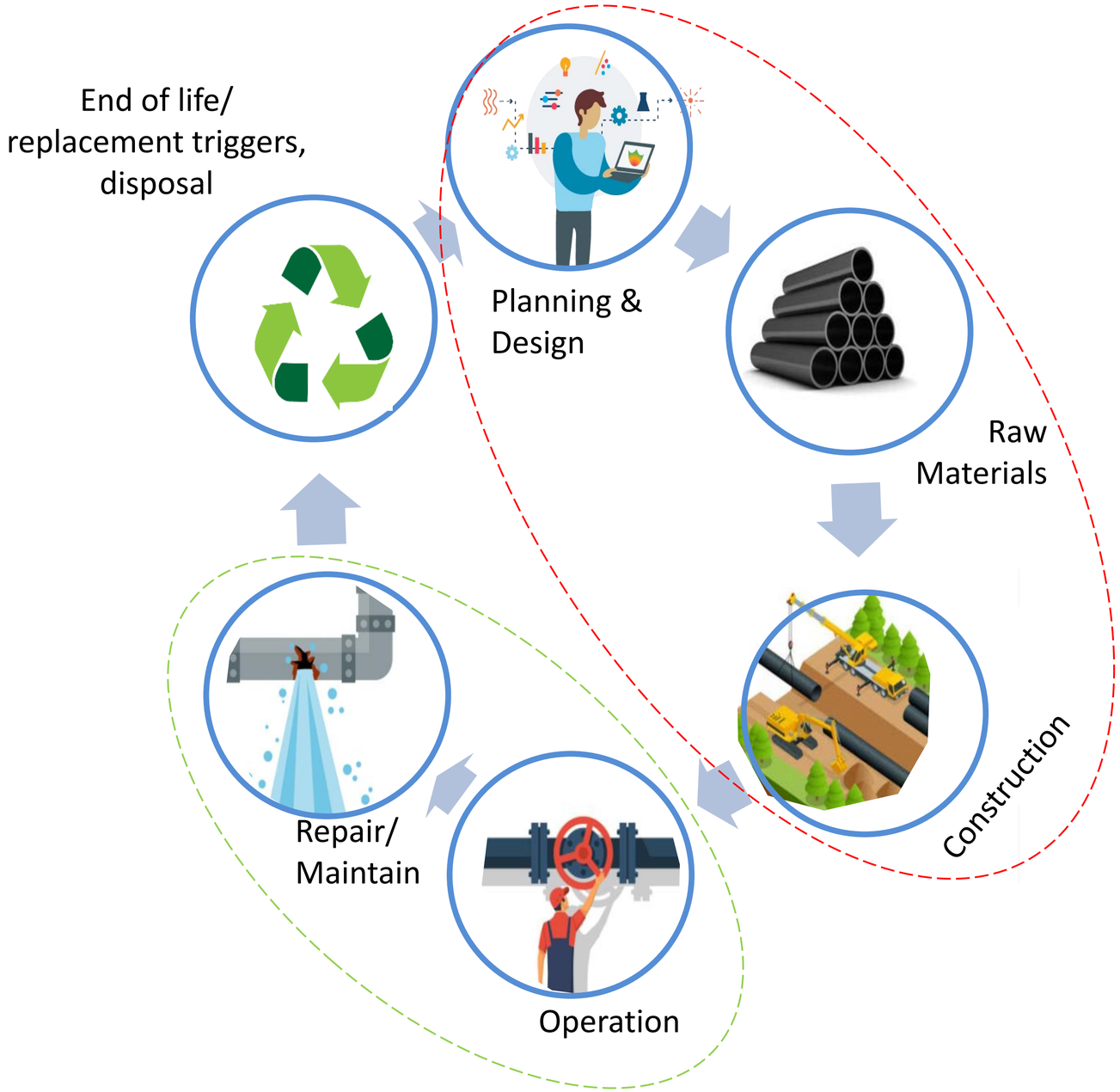
Portable Demand



3 metros comprise 77% of Rand Water potable demand

Asset life Cycle Management Model



The aim is to achieve the following objectives within the three areas:

BASELINE PHASE – Master Planning, Project Planning & Capital Execution

Overall lifecycle costs are minimized through correct design, trade-offs between different lifecycle cost components and appropriate timing of lifecycle actions

OPERATIONS AND MAINTENANCE PHASE – Operations, Maintenance and Reliability engineering

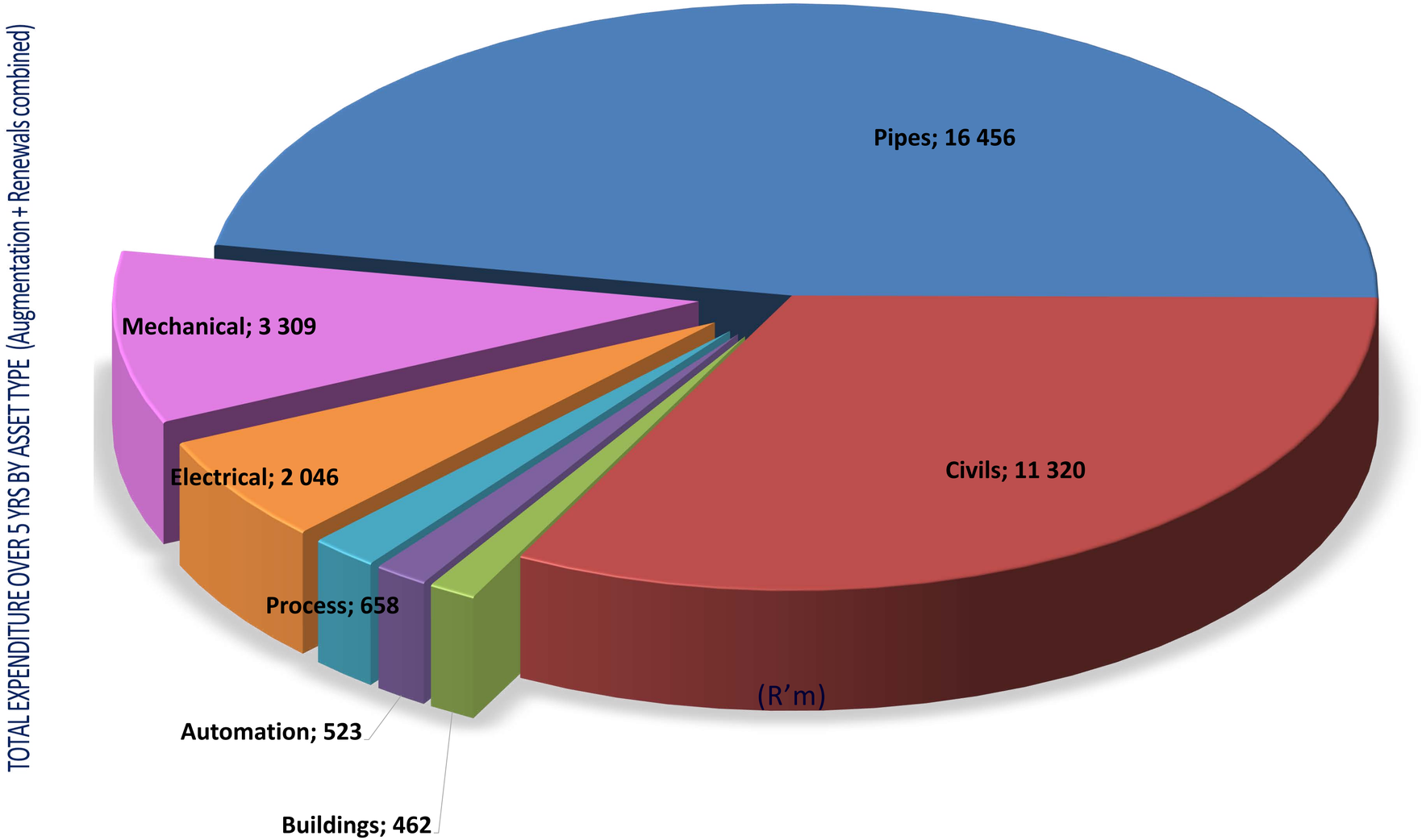
Ensure that the asset (at a minimum) achieves its original design or estimated useful life

END OF LIFE PHASE– Master Planning

Extend the life and/or capacity of the asset through selective Renewal or augmentation. Feasibilities. Could include asset disposal

Five-Year Capex Forecast (R'mil)

	FY2024	FY2025	FY2026	FY2027	FY2028
Total for Augmentation and Renewals: (millions)	1 046	4 586	9 812	9 805	9 524
				5 year total →	34 774



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Finding New Ways

Vlakfontein Reservoir Launched in February 2023

Zuikerbosch System 5(A)

Introduction to System/Station 5

- Through Rand Water's augmentation plans for ensuring sustainable water supply and meeting current and growing demands,

- Rand Water has embarked on building a completely new Water Purification Plant; Station 5 at the existing Zuikerbosch Station.

- Its main objective is to provide an additional 1 200 Million Litres/Day (ML/Day) of potable water to the current supply capacity of Rand Water.

- Construction of the scheme commenced in 2015, complete for the additional supply of 150 (ML/Day).

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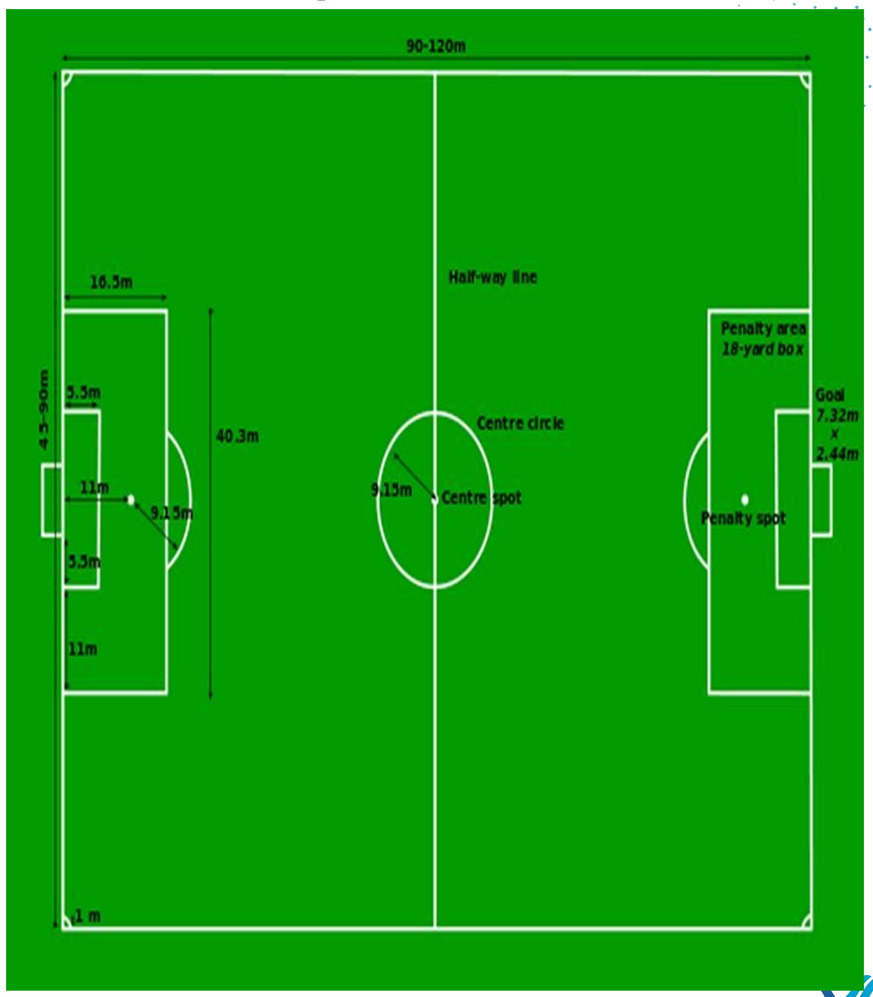
In essence we are adding :

480 Olympic Size Swimming pools

250 2m deep EPL Soccer field



2. Station 5: Scope of Work

The Entire scheme has been phased into Two Sections:

- **Station 5A** – with a water supply capacity of 600 Million Litres/Day (Megalitres- ML/Day). Currently in execution phase and to be commissioned in phases. First phase is adding 150 ML/d immediately via ZB-System 3 Engine Room Station. Second phase as it relates to the 450 ML/D balance capacity is projected to be commissioned over time.

- **Station 5B** – also meant to supply another 600 Million Litres/Day (Megalitres- ML/Day). This Project will be advertised in the market within the next six months and is planned to be commissioned by 2030.

Station 5A – Water Purification Plant consist of the following engineering elements that have been constructed:

- A Raw Water Abstraction Pipeline that feeds Station 5A from the Zuikerbosch Forebay / Intake Dam.
- An array of Chemical dosing plants (Lime, Poly, Silica and Organic for coagulation & flocculation).
- Horizontal flow sedimentation tanks with desludging bridges - for settling and removal of precipitates/dirty particles.
- A Carbonation Bay – pH Correction and or stabilisation with Carbon Dioxide
- A Filter Plant that consist of rapid gravity sand filters – for removal of suspended matter
- A Chlorine Disinfection Plant - for elimination of pathogenic organisms
- A Reservoir and Pump Engine room – for pumping potable water to consumers
- And the outgoing pipelines connecting to the distribution network

Zuikerbosch WTW Systems

System 5

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Chemical Dosing Plant

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Flocculation and Sedimentation

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Filtration Process

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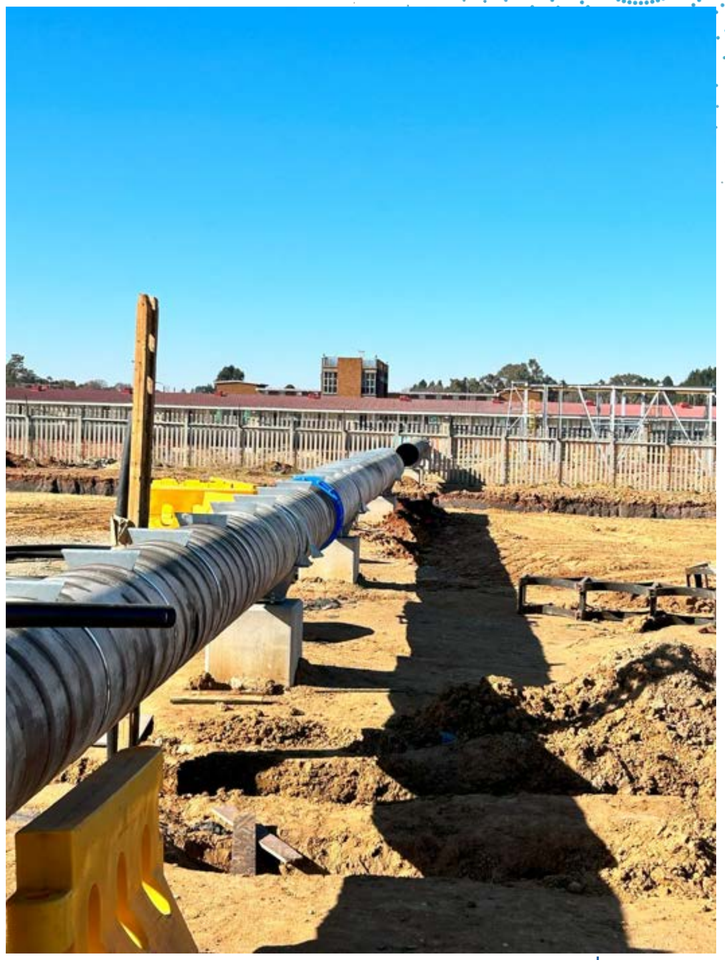
Filtration Process

Potable Water Transfer Line from ST5 to System 3



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Sludge Handling and Pumping Station

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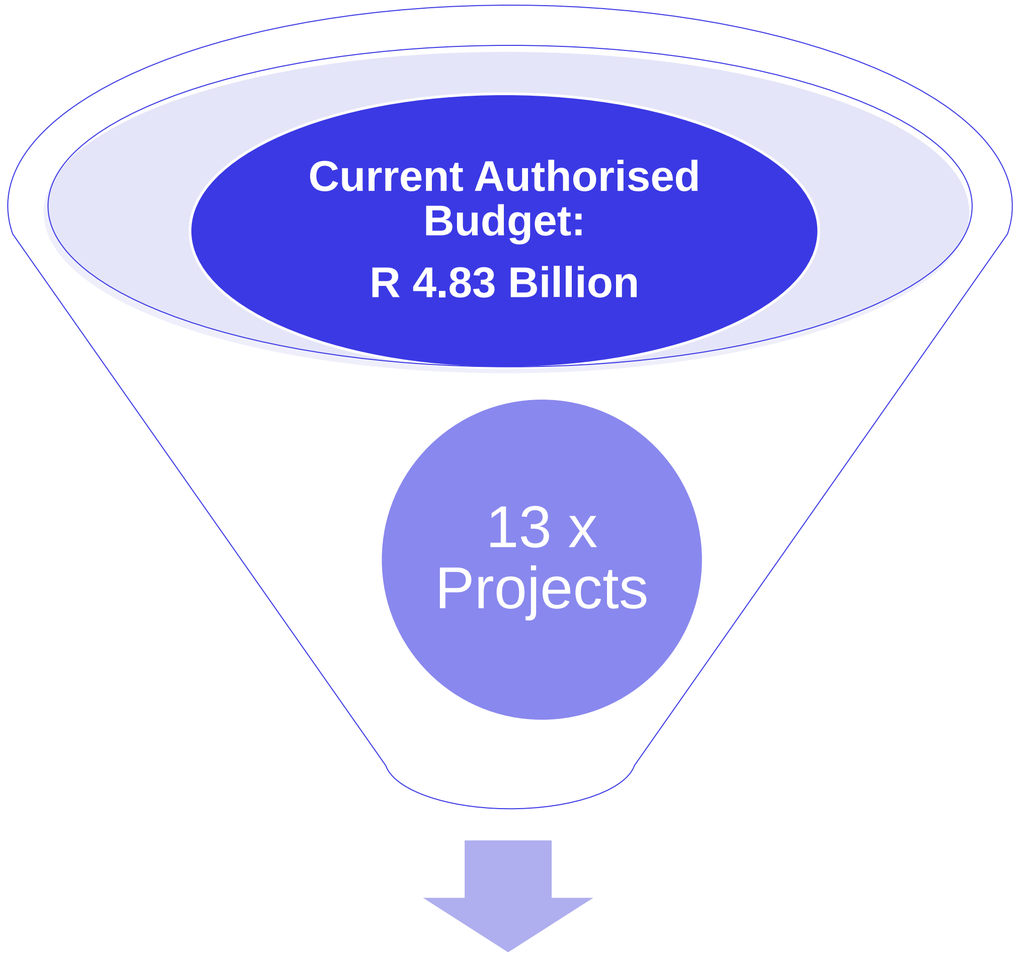
Station 5: Project Value



Overall Percentage Complete: 100%

Actual Expenditure To date: R 4.17 Billion

Thank you!

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