

An aerial photograph of a large dam and reservoir. A tall crane stands in the foreground on the left side of the dam. The reservoir is filled with water, and the surrounding landscape is hilly and vegetated. The text "Water Sector v.s. Funding" is overlaid in large red letters across the middle of the image.

Water Sector v.s. Funding

Department of Water & Sanitation

Leonardo Manus
Chief Director: Infrastructure Operations and Maintenance

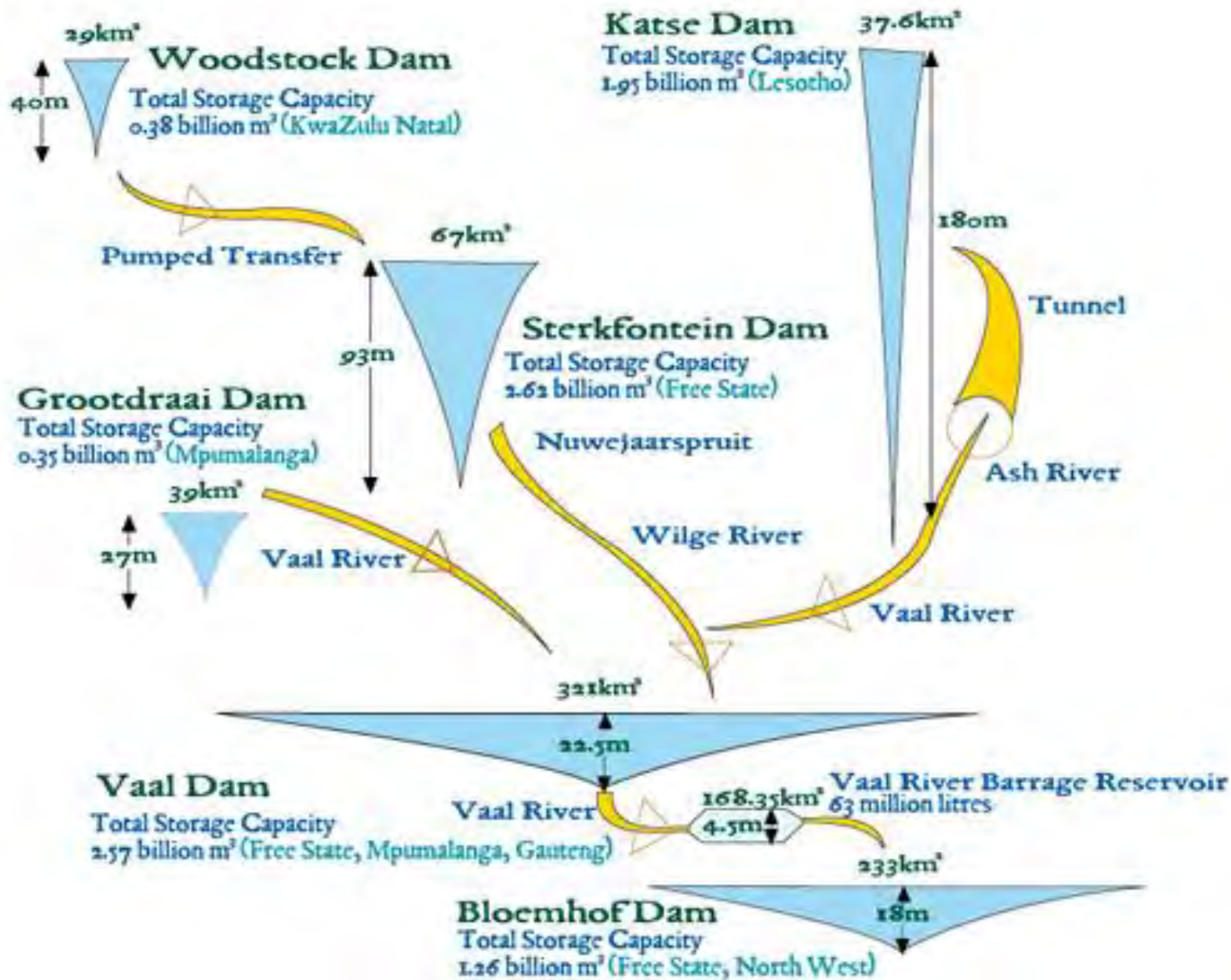
Preserve & Maintain



Preserve & Maintain

- Transform from the current funding culture; increase the focus on Maintenance.
- The primary focus of investment should be to secure and expand life-span of current (*where possible*).
- Asset Management should become a sector culture.





Water Resource Management

- Planning
- Regulation
- Control

Water Resource Operations

- Infrastructure Operations
- Maintenance
- Asset Management
- Rehabilitation

Revenue-based Operations

Applicable to Government Water Schemes

- Two charges applicable:
 - **Capital Cost**, comprising:
 - *Depreciation* component for the purposes of funding refurbishment cost
 - *Return on assets* component for the purposes of funding development and betterment of waterworks
 - **O&M cost** to sectors will be charged pro-rata on estimated annual water use.



WR Infrastructure Development

Capital Unit Cost (CUC) (Revenue Based Capital)

Tariff will be set to ensure that the debt is fully paid by the end user within a reasonable time period (not longer than the life of the asset), after considering affordability and future augmentation of the scheme.

- Debt will not overlap unreasonably to another project causing financial strain.
- The CUC may be phased in during the construction period and interest will generally not be capitalized after completion of the construction.
- Tariffs are based on water used from the scheme.

Water Services Funding Vehicles

1. Water Institutions (i.e. Water Boards, TCTA) facilitate infrastructure development through the **markets** and recover costs as part of **CUC in their tariffs**.
2. Water Services Authorities (Municipalities) primarily depend on **Grant Funding** for infrastructure development.
3. Operations and Maintenance is funded through tariff-based **revenue** and **Equitable Share**.

INPUTS

Water Resource

- Water Resource meeting the Demand and expected Growth of supply area
- Sustainability

Energy Supply

- Sustainable, Reliable and Affordable Energy Supply.

Human Resources

- Relevant Expertise per functional area
- Systems Knowledge management

Finance / Funding

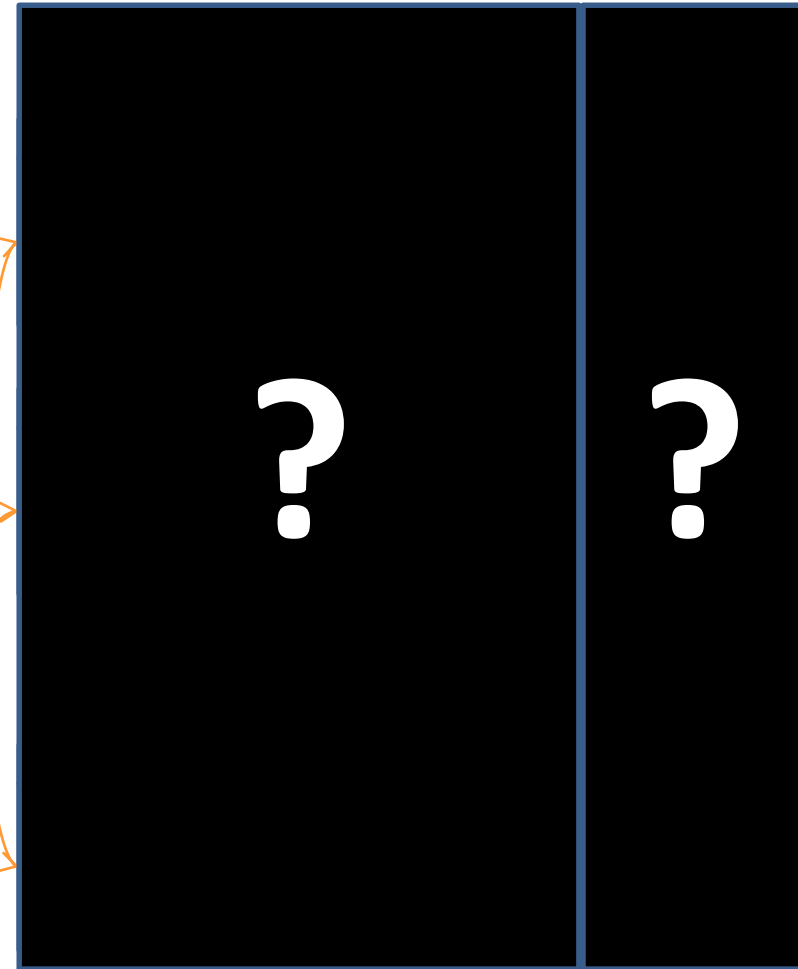
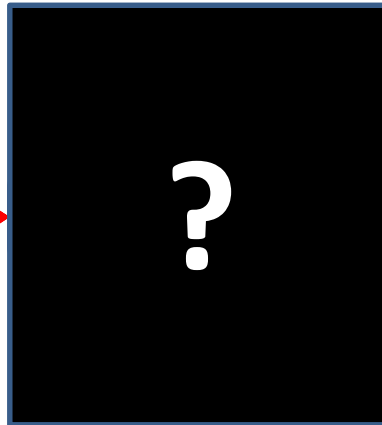
- Cost reflective Tariffs
- Budgeting as per Demand
- Billing vs. Revenue
- Credit Control Policy

Infrastructure

- Infrastructure in place and in acceptable condition to deliver reliable water & sanitation services.

Equipment

- To monitor and measure operations to be within design and according to demand parameters.



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Water Operations

Potable Water Supply

- Reliability of Service
- Complying with Quality Standards
- Affordable

Sanitation Services

- Dignified Service
- Complying with Resource Quality Requirements
- Affordable

Section 21 Water Use

- Assurance of Supply or Use
- Affordable Water Resource Management

OUTPUT

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OUTPUT

Operational Service Standards

Maintenance

Asset Management Principles

Problem Statement

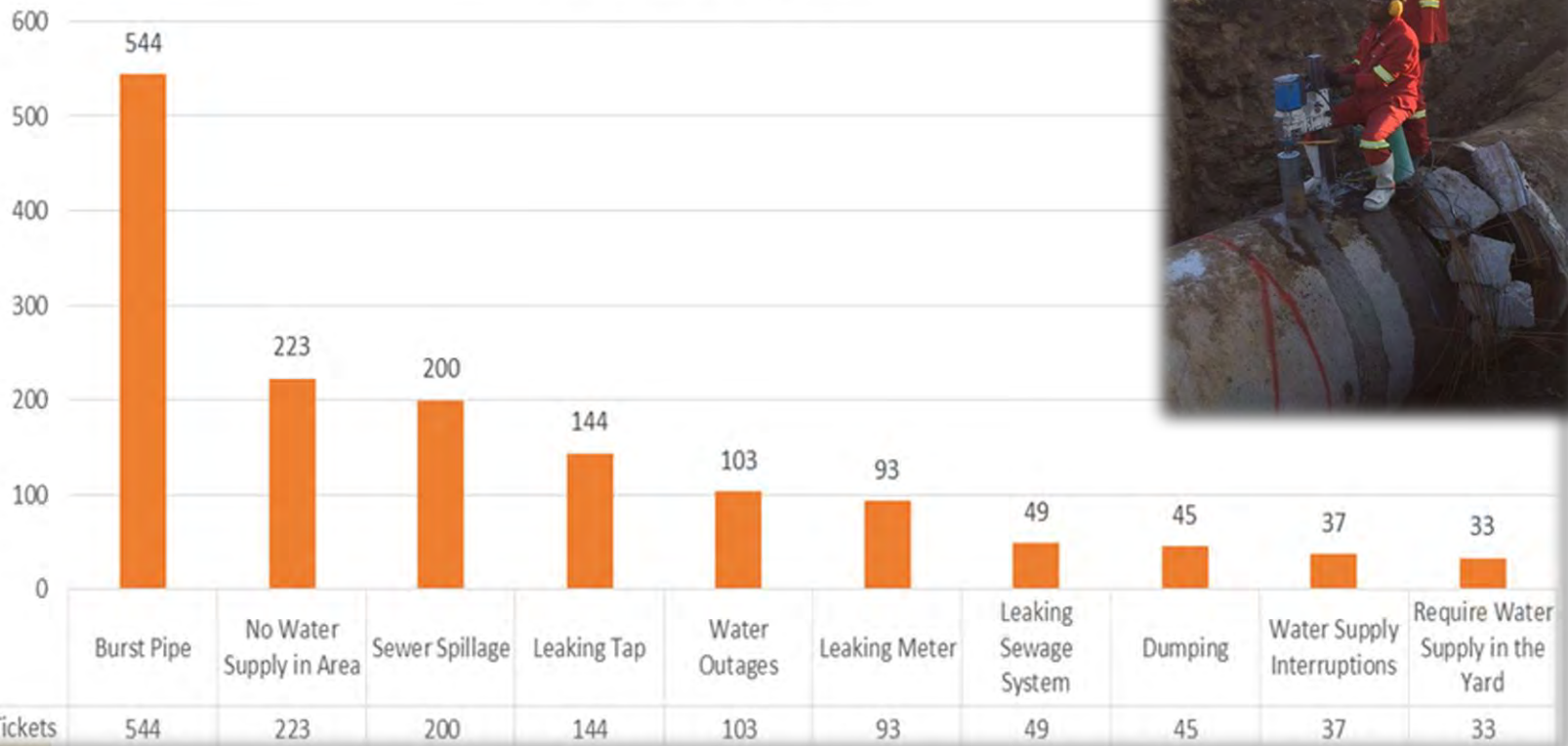
Water Resources

- The diverse nature (aging and highly advanced) infrastructure technology used to store and transfer bulk raw water, is rather challenging for the limited resources to effectively operate to meet the demand of users;
- Inability to attract adequate numbers of specialists technical staff required to operate government water schemes;
- The under-recovery in revenue prevents operational plans from being effectively implemented;
- Standard government procurement processes are not conducive for the implementation of effective operational philosophies.

DWS Customer Centre

Queries; June 2016 – June 2017

Water Services Queries



Problem Statement

Water Services

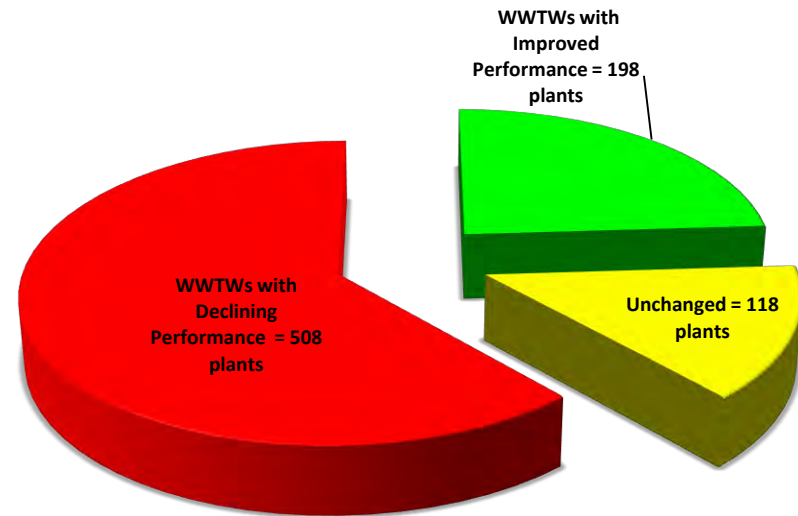
- **Interruption in water supply** is one of the key public frustrations. Water Services Legislation sets an acceptable standard of 48hours for interruption of supply; as per Regulation 4 under Section 9 of the Water Services Act.
 - Electrical and Mechanical failures are mostly accounted to inadequate routine maintenance which relates into unplanned outages, due to inability to lift water to reservoir levels.
 - Vandalism (especially when electricity cables get stolen) often leads to a disruption in supply for longer than the acceptable norm.
- The high levels of **water losses** could be linked to inadequate pressure management within the reticulation systems, which might be due to the need to supply according to an ever increasing water demand.
- The **deterioration of resource water quality** is often as a result of failing sewer collector mains and pump-sets, as well as dysfunctional wastewater treatment works. The Green Drop Regulation processes revealed that most of these failures are due wastewater treatment facilities being operated beyond its design capacity, or being operated by process controllers who lack the adequate skills.

Wastewater Business

Wastewater Treatment Facilities:

- Source of Re-used Water
- Source of Revenue

Cumulative Risk Rating (CRR)/CRRmax Trend Analysis



Questions to guide

(Private sector Involvement in the Water Sector)

- How will the consumer (especially the poor) be protected?
- How will democratic mandates be respected and honoured?
- How to influence towards acceptable service, without being perceived to be unduly influencing?
- How to develop incentives; e.g. packaging proposals towards:
 - *Reduced long term business overheads to the public sector?*
 - *Improving service delivery to receiving constituencies?*
 - *Reducing capital budget requirements?*
 - *Introducing higher level of budget certainty? Etc.*

Opportunities

- Is there an opportunity for PPPs to succeed?



Thank you

