# PBC Mechanism applied to the Implementation of an Efficiency Intervention in the Water Sector

Arab Water Week

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Re-Solve Consulting (Pty) Ltd

# Overview

- Roles and Responsibilities
- Business Case
- Contractual Arrangements
- Baseline Determination
- Efficiency Gains and Calculations

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# Roles and Responsibilities

- Client
- Independent Technical Auditor
- Performance Contractor
- Funding Agent (if necessary)
- Customer

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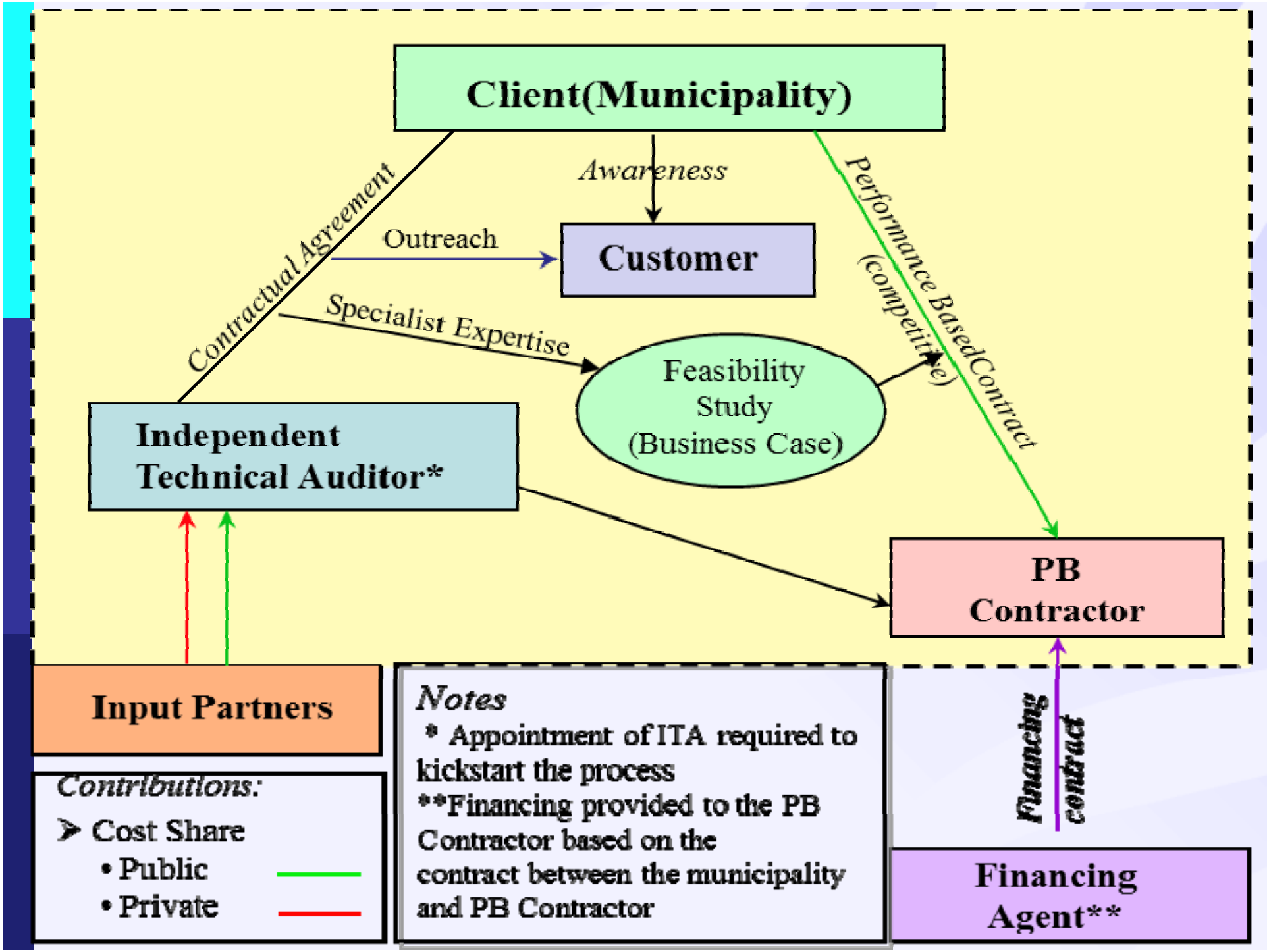
Client(Municipality)
Awareness
Contractual Agreement
Outreach
Customer
Specialist Expertise
Performance BasedContract (competitive)
Feasibility Study (Business Case)
Independent Technical Auditor*
PB Contractor
Input Partners
Financing contract
Financing Agent**
Contributions:
Cost Share
• Public
• Private
Notes
* Appointment of ITA required to kickstart the process
**Financing provided to the PB Contractor based on the contract between the municipality and PB Contractor

# Client

- Should initiate and understand the need
- Must benefit from the project
- Should be willing to enter into PBC's
- Should appoint the ITA
- Should own the competitive procurement process involved in the appointment of a PB Contractor
- Should not have to assume additional technical, financial or operational risk
- Should be willing to manage processes involved

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# Independent Technical Auditor

- Must possess necessary expertise/skill
- Must understand need and propose appropriate technical solution
- Must be compensated for services provided including prelim design, procurement, project management & audit functions
- Should undertake Feasibility Study
- Must establish measurement protocol to determine baseline and measure efficiency gains
- Must draft and complete the contractual documentation

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# Performance Contractor

- Must be able to design, build, own and operate the required infrastructure (BOOT)
- Must assume technical, financial and operational risk relating to installed infrastructure (or plant)
- Must provide own financing of infrastructure/plant
- Must enter into a PBC with client
- Should have good track record

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# Funding Agent

- Contractor should have access to a funding agent who provides a loan to same
- Should be willing to assume financial risk related to project
- Should be comfortable with project, contractor, client and ITA
- Should understand a BOOT or BOTT type contracting arrangement

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# Business Case

- ITA should undertake a **Feasibility Study** to establish ‘bankable’ project status
- Percentage of shared savings accruing to contractor should be established
- Should represent a ‘win-win-win’ business case
- Critical to establish baselines and measurement protocol as part of the feasibility study
- Should assess and assign risk

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# Contractual Arrangements

- PBC agreement critical to the process
- Should involve some level of negotiation with preferred bidder
- ITA should remain impartial and represent interests of both Client and Contractor
- Methodology relating to measuring and verifying efficiency gains should be included
- Agreement on baseline must be reached
- Some flexibility should be built into the contract to allow for unforeseen changes during the O&M period

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# Baseline Determination

- Determination of (projected) baseline can be tricky
- Historical data and measurement is essential
- The longer the history the better the projection
- Statistical analysis should be applied to data in order to determine most suitable projection
- External factors that affect baseline (such as economic and population growth) need to be identified and accounted for in calculation

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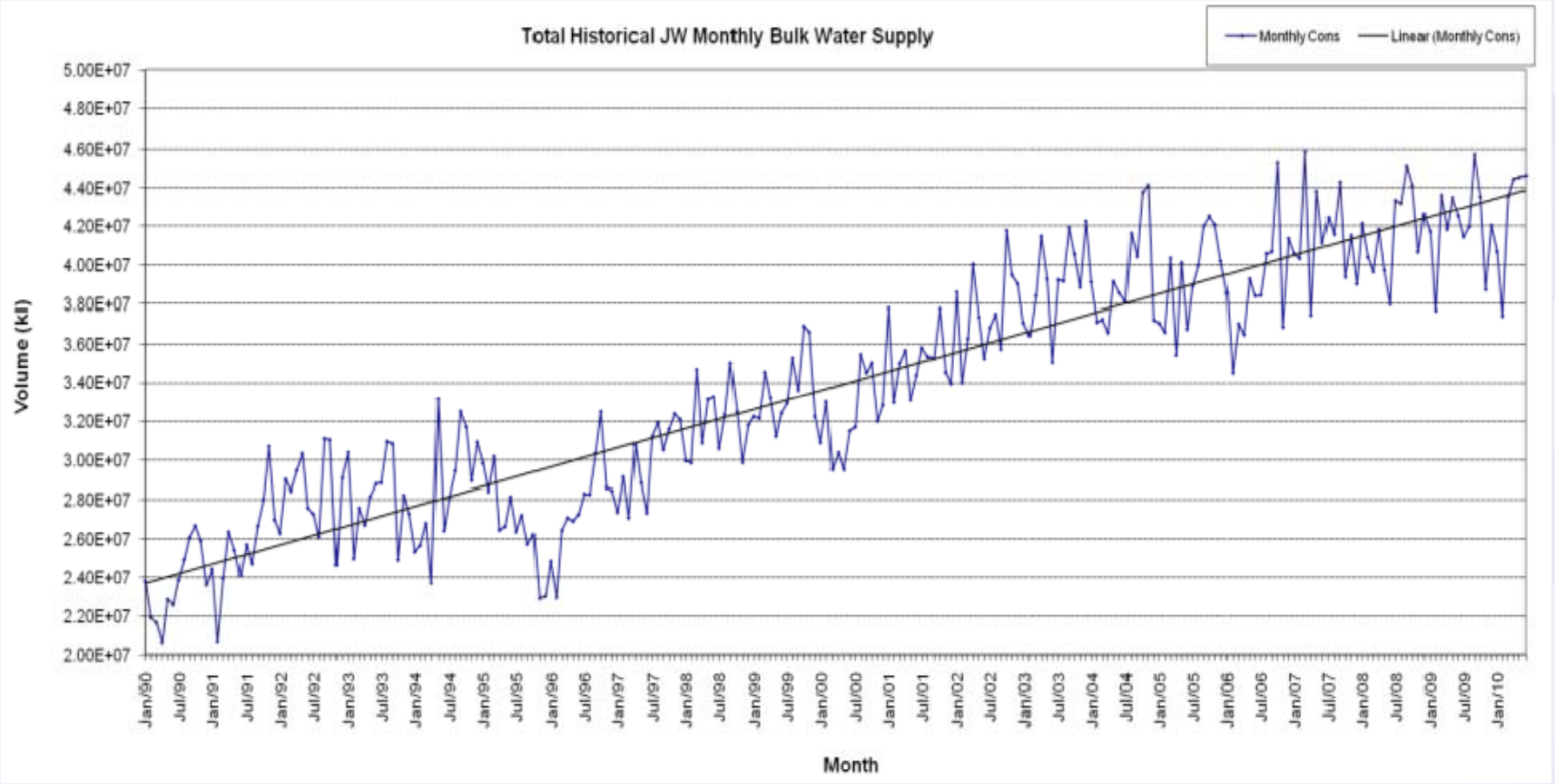
# Long term history - open to interpretation?




Courtesy: Johannesburg Water

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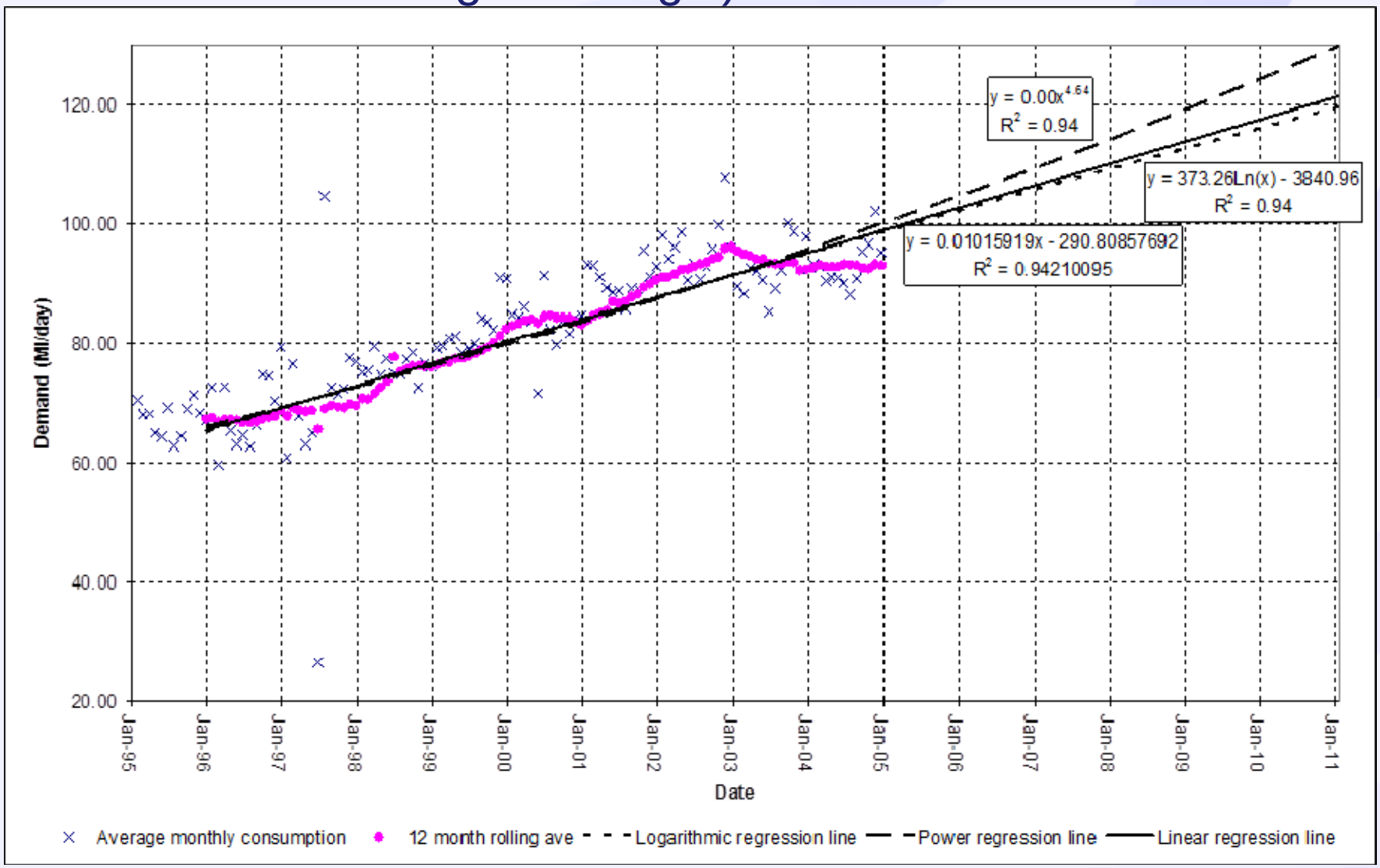
# Baseline Determination (Regression Analysis – 12 month moving average)

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# Efficiency Gains and Calculation

- An agreed to methodology should be used to calculate efficiency gains
- Inflationary increases need to be accounted for
- Approval/authorization/payment processes should be established upfront of O&M period
- Independency of ITA as a third party essential to ensuring credible calculations
- Payments to contractor may need to be guaranteed or secured through an ESCROW arrangement

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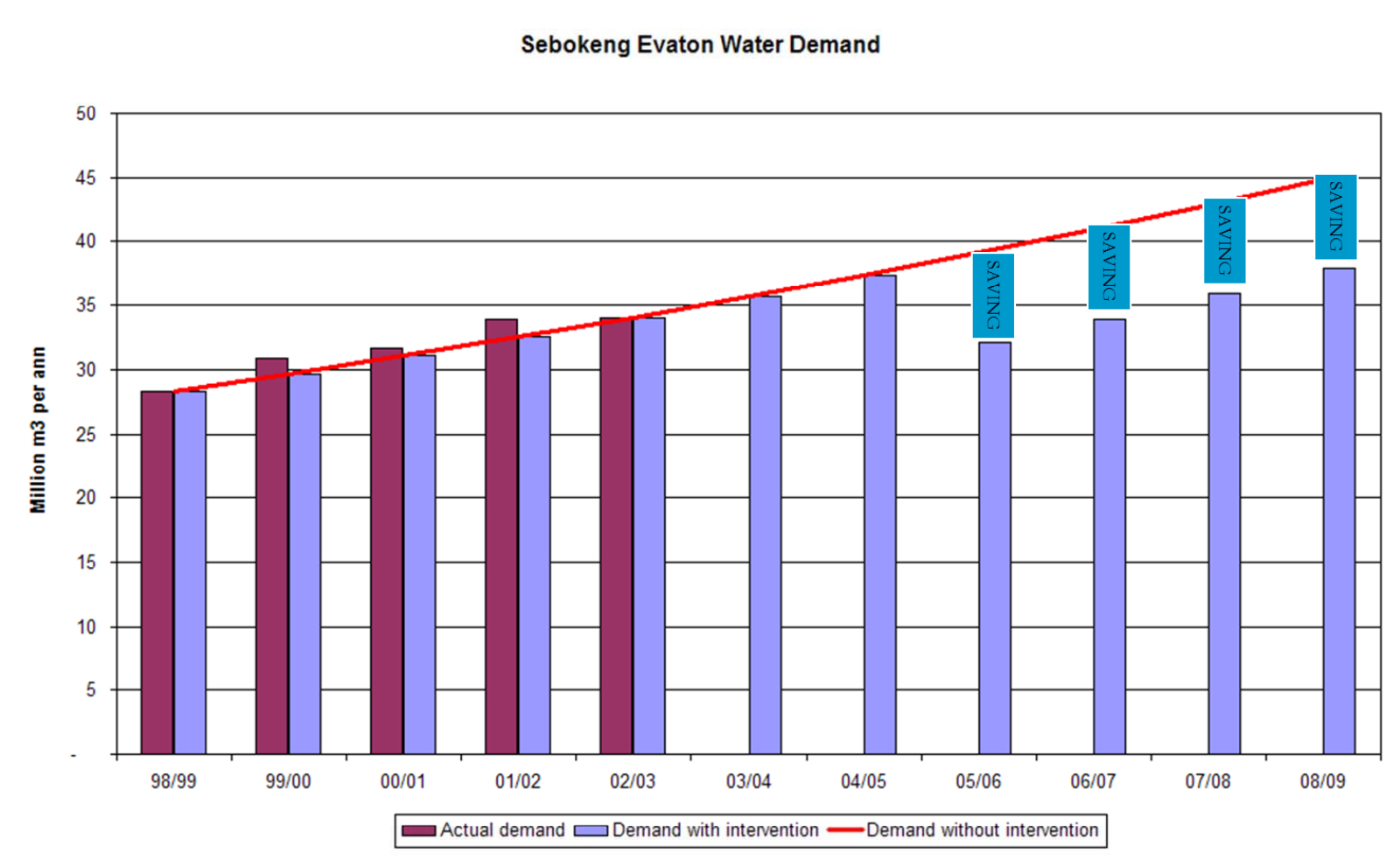
# Typical Savings resulting from intervention

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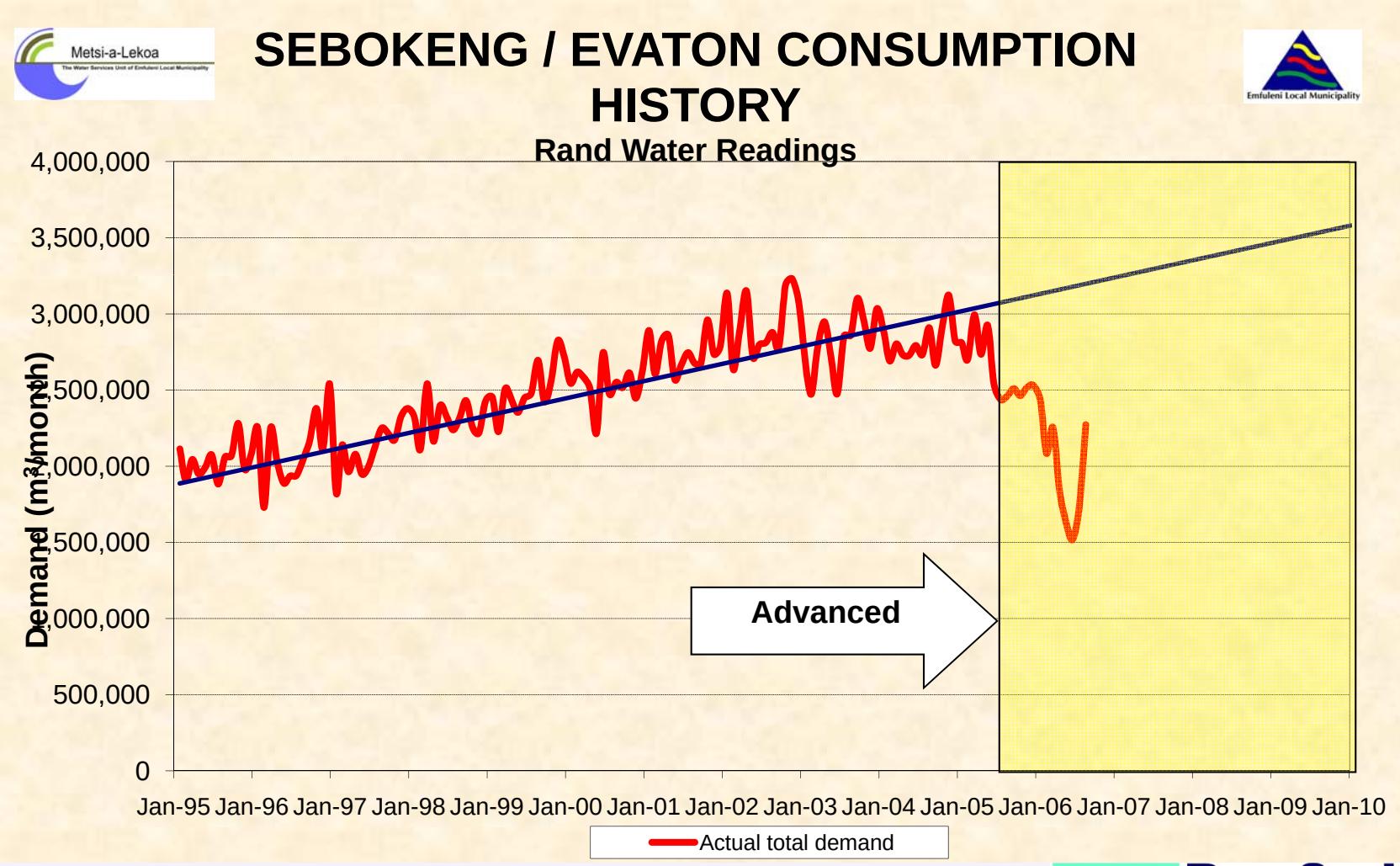
# Graphical Representation of Efficiency Gains



# Concluding Remarks

- Great application to improving operational efficiencies
- Delegate risk, hold PB Contractor accountable to produce savings
- Measurement protocol critical to process
- Manage the ITA and the PB Contractor!
- Undertake transparent competitive procurement process

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