

20th AfWA International Congress and Exhibition 2020 Breaking new grounds to accelerate access to water and sanitation for all

Assessing the impact of technology Lean strategy in minimizing real losses in a water utility. (Case of National water and sewerage corporation)

24th – 27th February 2020,
Kampala, Uganda

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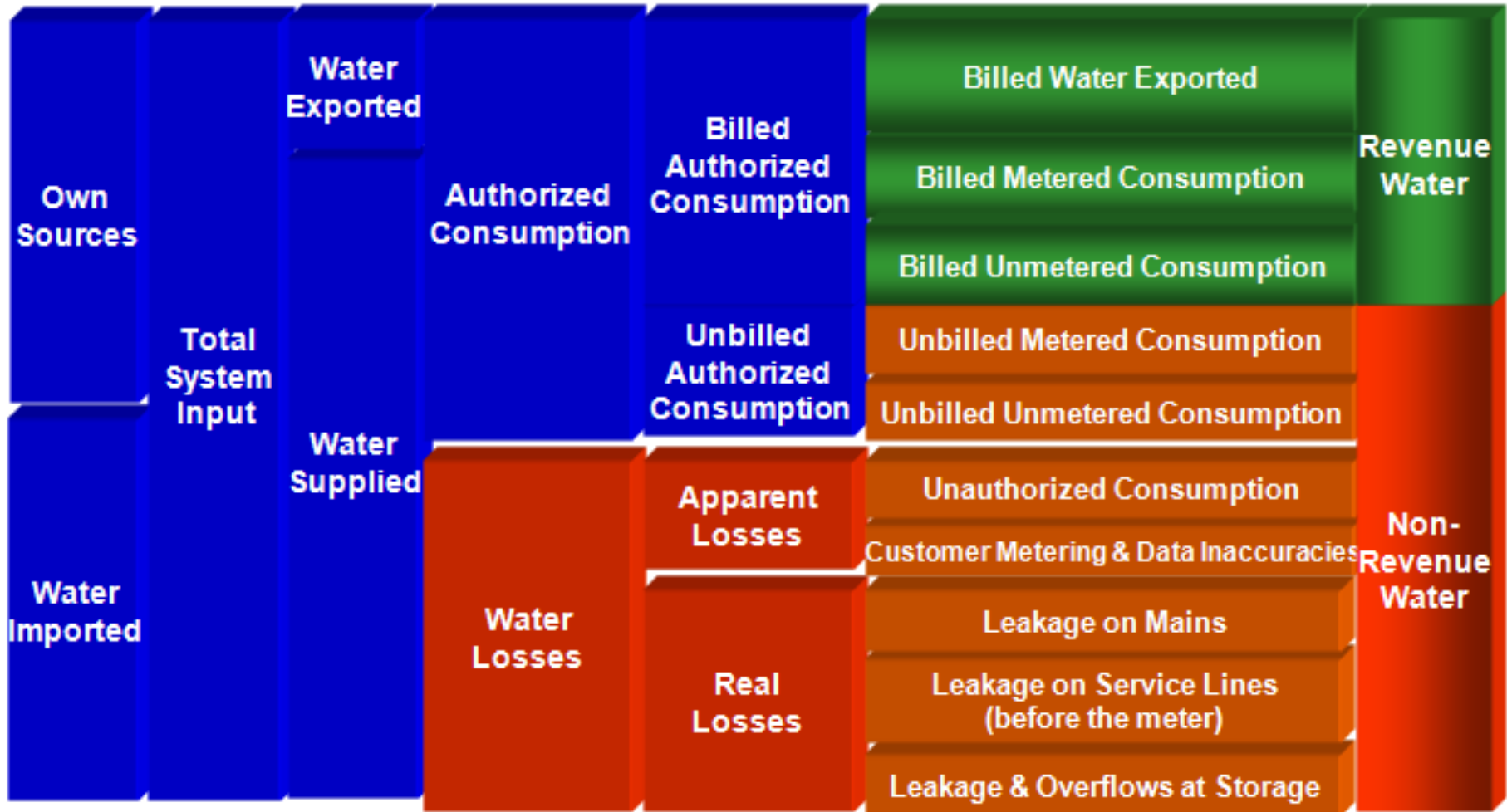


INTRODUCTION CONT'D



- Development of Non revenue water (NRW) strategy that can practically be implemented to minimise the losses.
- Appropriate leakage control policy.
- Impact of using strategies that are lean of sophisticated technology.

STANDARD WATER BALANCE

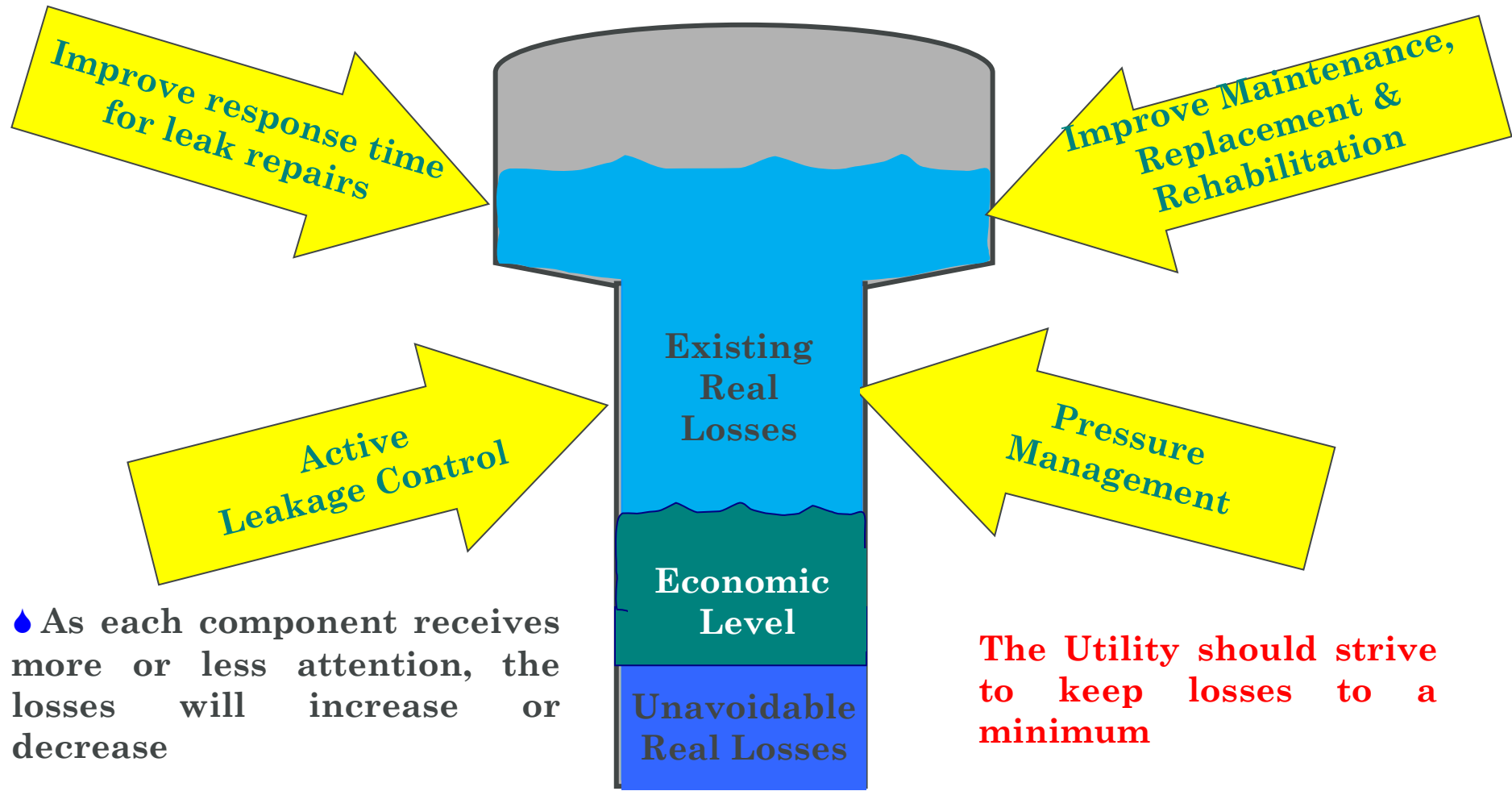


PRIORITISING REAL/PHYSICAL LOSSES



- Most leakage losses by volume over the course of the year occur on customer service connection piping – not water mains.
- Policies that place the burden on customers to repair leaks on their service connections are often inefficient.

COMPONENTS OF MANAGING REAL LOSSES

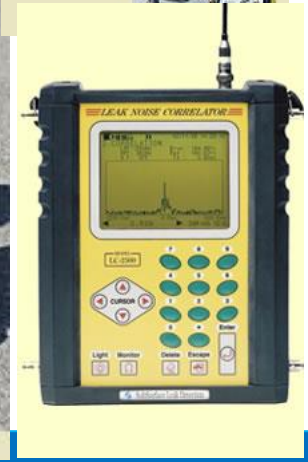
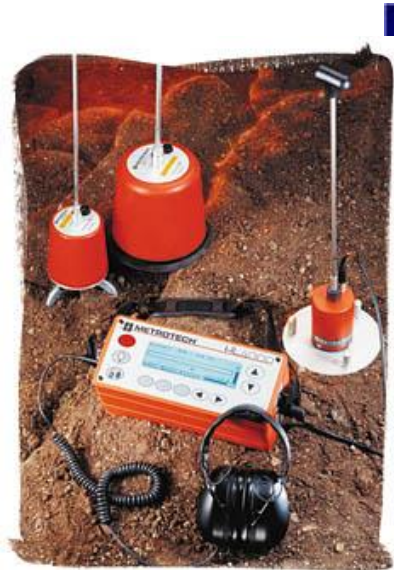


ADVANCED REAL/PHYSICAL LOSS CONTROL

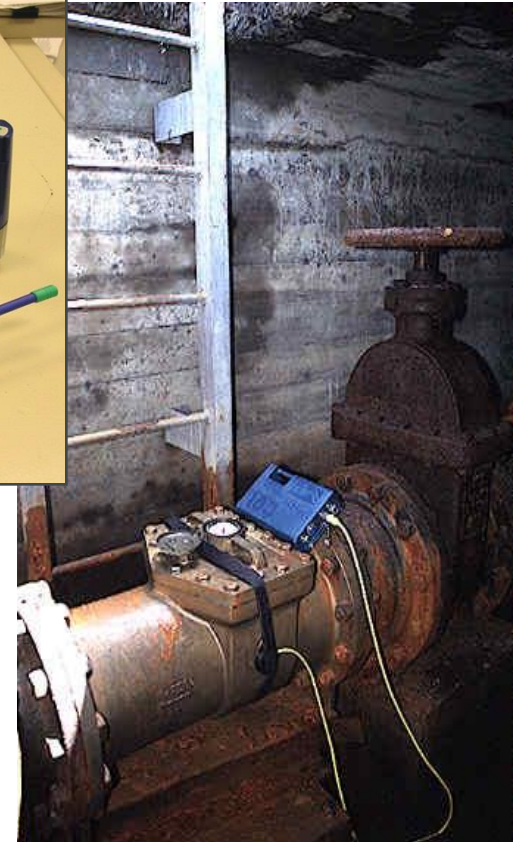


- District Metered Areas.
- Active Leakage control.
- Pressure management Controls.
- Precise leak detection equipment.
- Need to address:
 - ✓ Service line materials
 - ✓ Installation techniques
 - ✓ Condition assessment

NEED TO CONDUCT FIELDWORK



WATER LOSS REDUCTION STRATEGIES

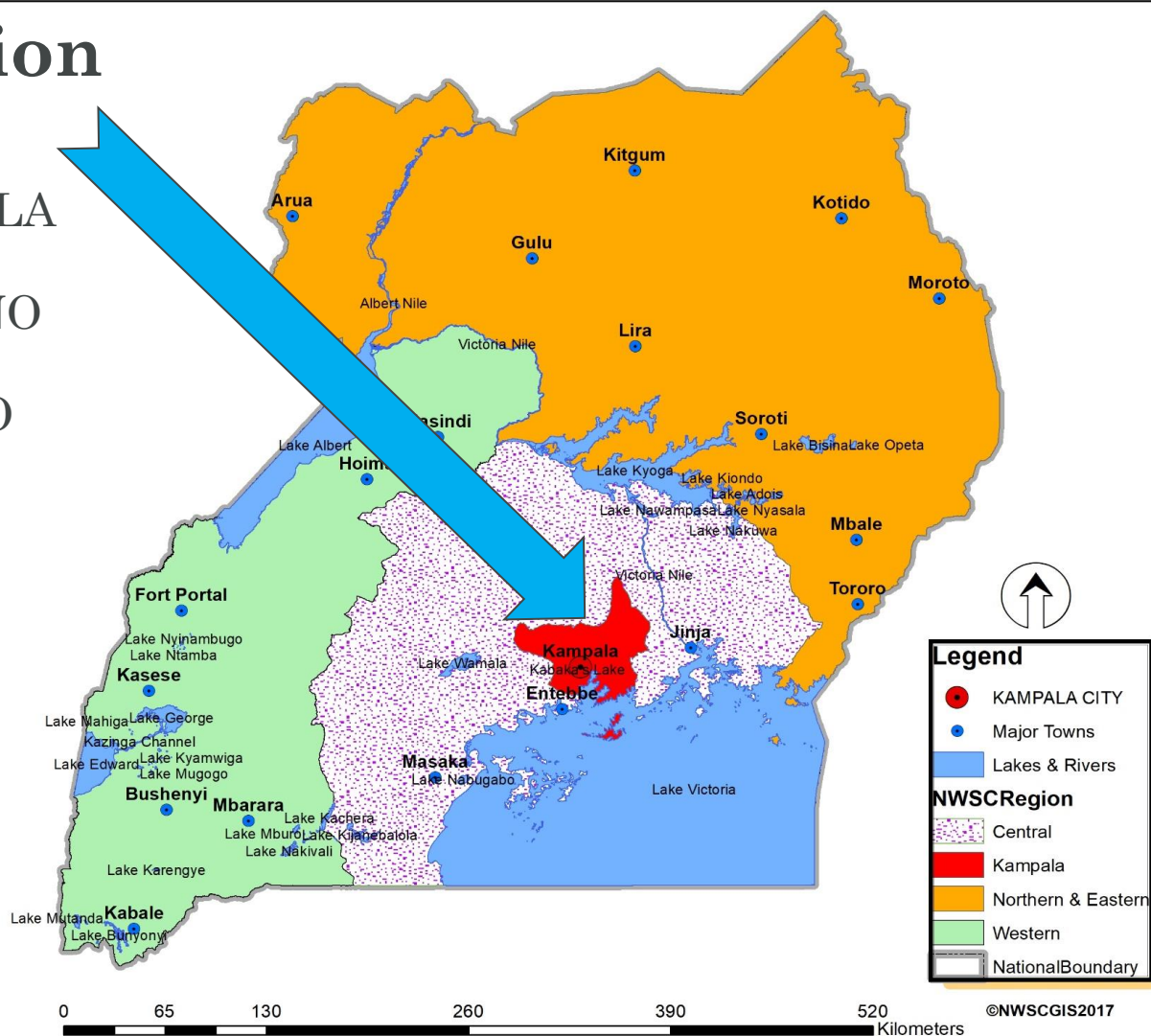


GEOGRAPHICAL LOCATION FOR KAMPALA WATER OPERATIONS



Location

- KAMPALA
- MUKONO
- WAKISO



CHALLENGES IN RELATION TO PHYSICAL LOSS CONTROL



- Intermittent water supply in some parts of the supply area.
- Minimum leak surveys initiatives.
- Reliance on well-wishers' to report leaking pipe network.
- Lean technological equipment for leak detection.

HOW TO MANAGE WITH LEAN TECHNOLOGY



RESOURCES AVAILABLE

- 1400 Established staff.
- 24 Branches operating in 57 offices.
- 131 Territories each managed by a three member field based staff.
- Updated block maps for water supply network and customer location.
- 24/7 Well equipped call center with toll free numbers.

IMPLEMENTATION AVAILABLE RESOURCES

WITH



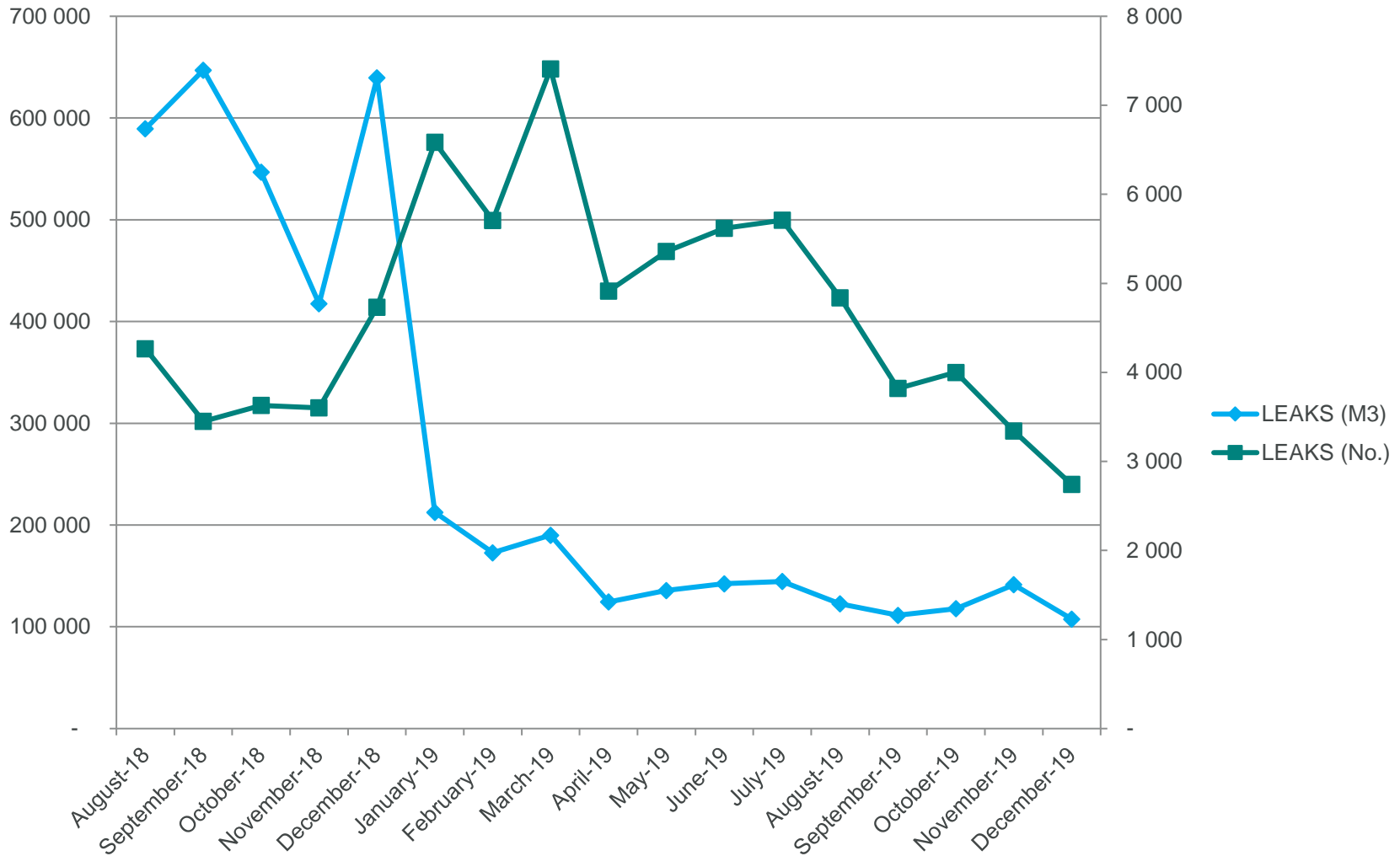
- Each territory carries out daily searching for anomalies between 7:30 to 9:30AM.
- All Anomalies are assigned for handling by various field teams attached to the branch.
- A report for each territory is shared through various communication tools with key stakeholders.
- They are captured in call center data base for proper management and monitoring.

IMPLEMENTATION CONT'D

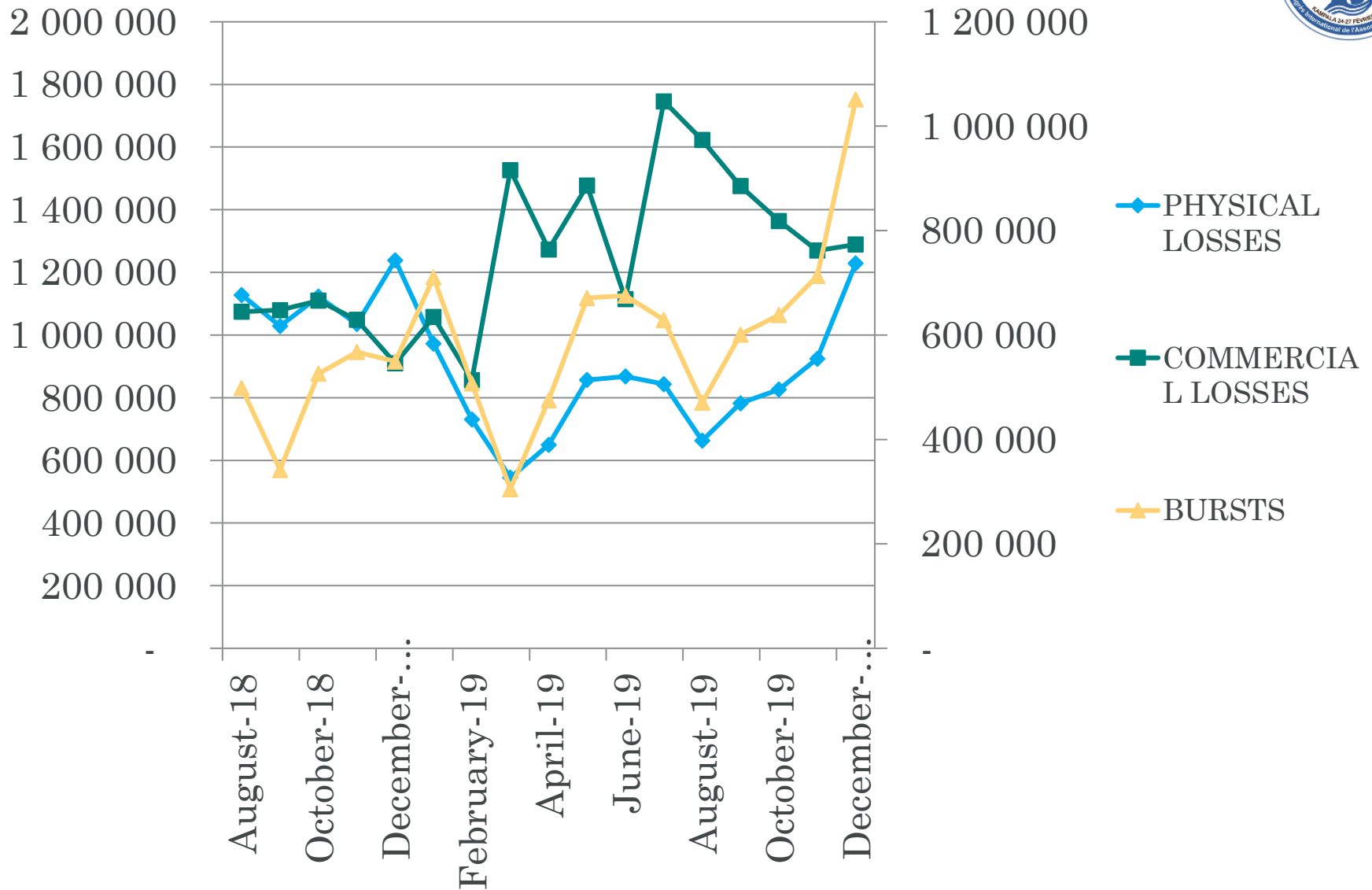


- An audit and monitoring team has also been created to verify the actions of the teams at the branches.
- Daily Monitoring of the call center anomalies and feed back is done to ensure that we check for response time to all anomalies.
- Ensure that all exposed pipes and problematic pipe networks are either deepened or replaced.

LEAK SURVEY ANALYSIS



LEAK SURVEY ANALYSIS



CONCLUSION



- Whereas Bursts can easily be reported by well wishers' the service lines' leakages require an extra effort within the utility company to reduce on the losses.
- The available resources can easily be redirected to carryout Daily anomalies search/surveys to minimise on the awareness and location time to these losses.
- The Volumes lost on customer service connection can easily be contained as opposed to Bursts.

RECOMMENDATION



- Water Utility companies should optimise available resources in the absence of advanced technologies to reduce on customer service lines' leaks through field staff individual accountability to report all field anomalies as opposed to relying on well wishers.
- Daily Territorial surveys should be institutionalised to minimise physical losses.

CHANGE IS HARD BUT THERE IS NOTHING WORSE THAN STAYING THE SAME!!!





20th AfWA CONGRESS

— YOU ARE WELCOME —