# Non-Revenue Water:
# Ensuring sustainability of drinking water supply by reducing water losses and increasing revenue.

François FIGUERES

General

# About

Suez operates water networks in 1000 municipalities around the world: in Europe, Africa, China, India, Middle East, Central Asia.

- 140 000 km of pipelines
- 9 Millions meters
- 30 Millions people served
- 120 000 leaks repaired per year

# Background

## Stress

Worldwide water resources are subject to significant stress, leading in some region to water scarcity.

## Sustainability

reducing water losses is a major requirement regarding sustainability of the drinking water supply.

## Understanding

A detailed understanding of the losses is the key first step to define a proper action plan

## Cost effective

Limited budget requires to compose the more cost-effective combination of actions.



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# Main actions

## Leak Management

Predict, detect & locate leaks combining advanced inspection technologies with data analytics

## Pressure management

Optimize the pressure of your network to prevent bursts and reduce leakage, extending asset lifespan

## Asset Management

Inspect and invest at the right place, at the right time, thanks to data driven assessment of your network

## Revenue management

Reduce commercial losses, optimize the meter renewal based on machine learning algorithms



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# Bordeaux, France

KPI to achieve:
to reduce the existing NRW from 20% to 16%, in the frame of the concession contract.

682 000 inhabitants

3 100 km of network

233 200 meters

103 production sites

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# Leak Management

Study and execution of the sectorization:

- Level I (14 sectors)
- Level II (25 sectors)

Advanced Leak Detection activities:

- over 8,600 km between 2007 and 2011,
- improving leakage detection efficiency in 45% in terms of km/leakage.

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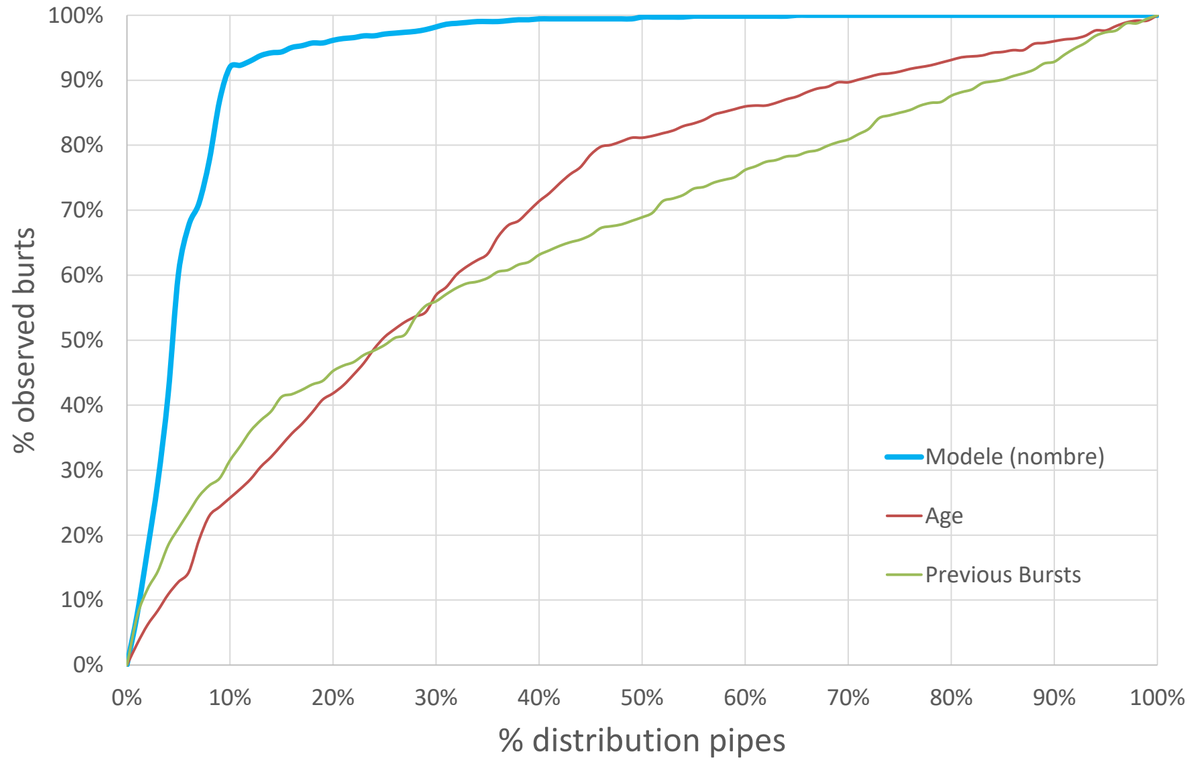
# Asset Management




Degradation model to target the right pipe in the renewal plan

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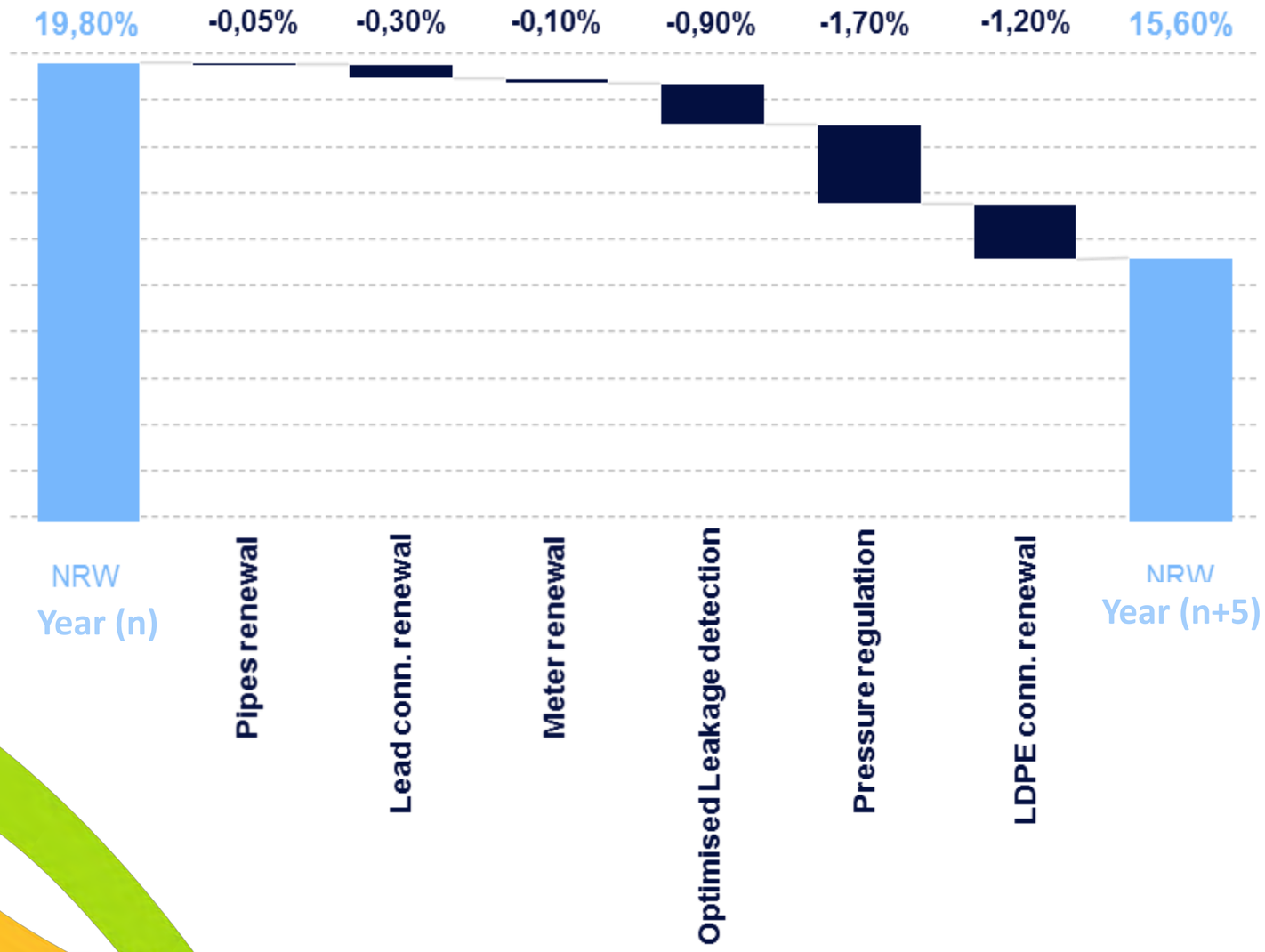
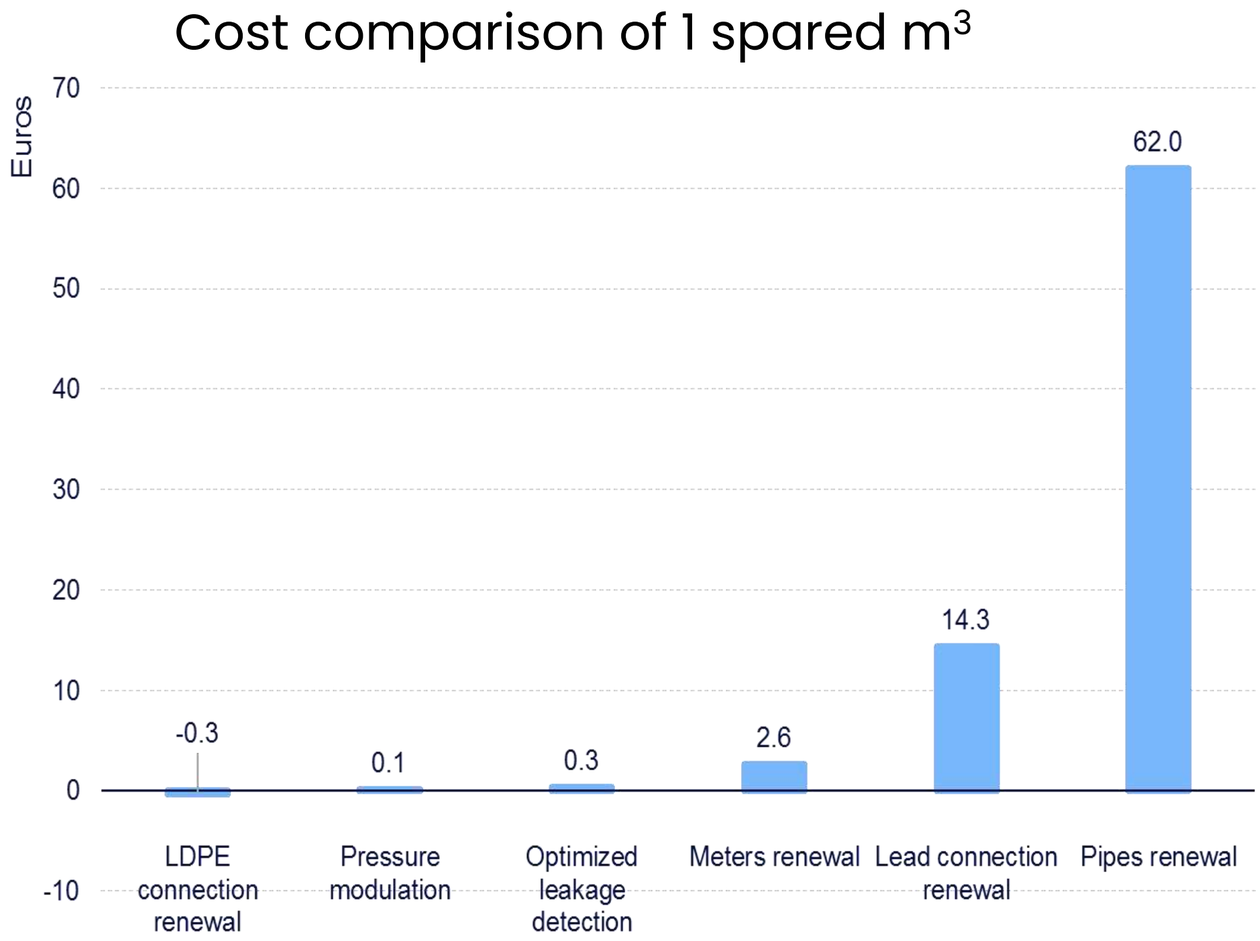
# Bordeaux, France



# Bordeaux, France



# Grajaú district, São Paulo, Brazil

Performance Based Contract for NRW reduction

- 340 000 inhabitants
- 660 km of network
- 162 000 meters
- Initial NRW rate : 44%

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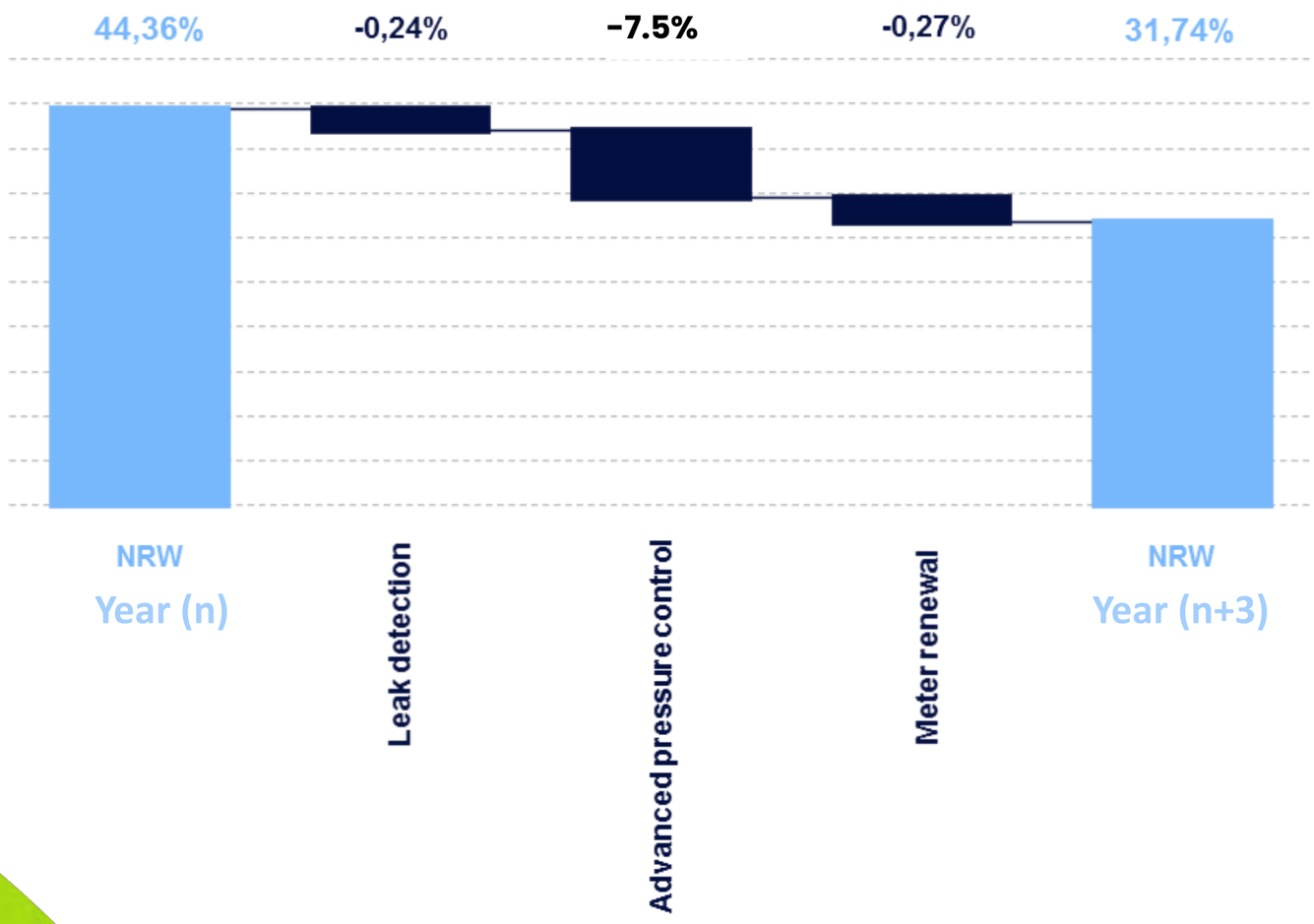
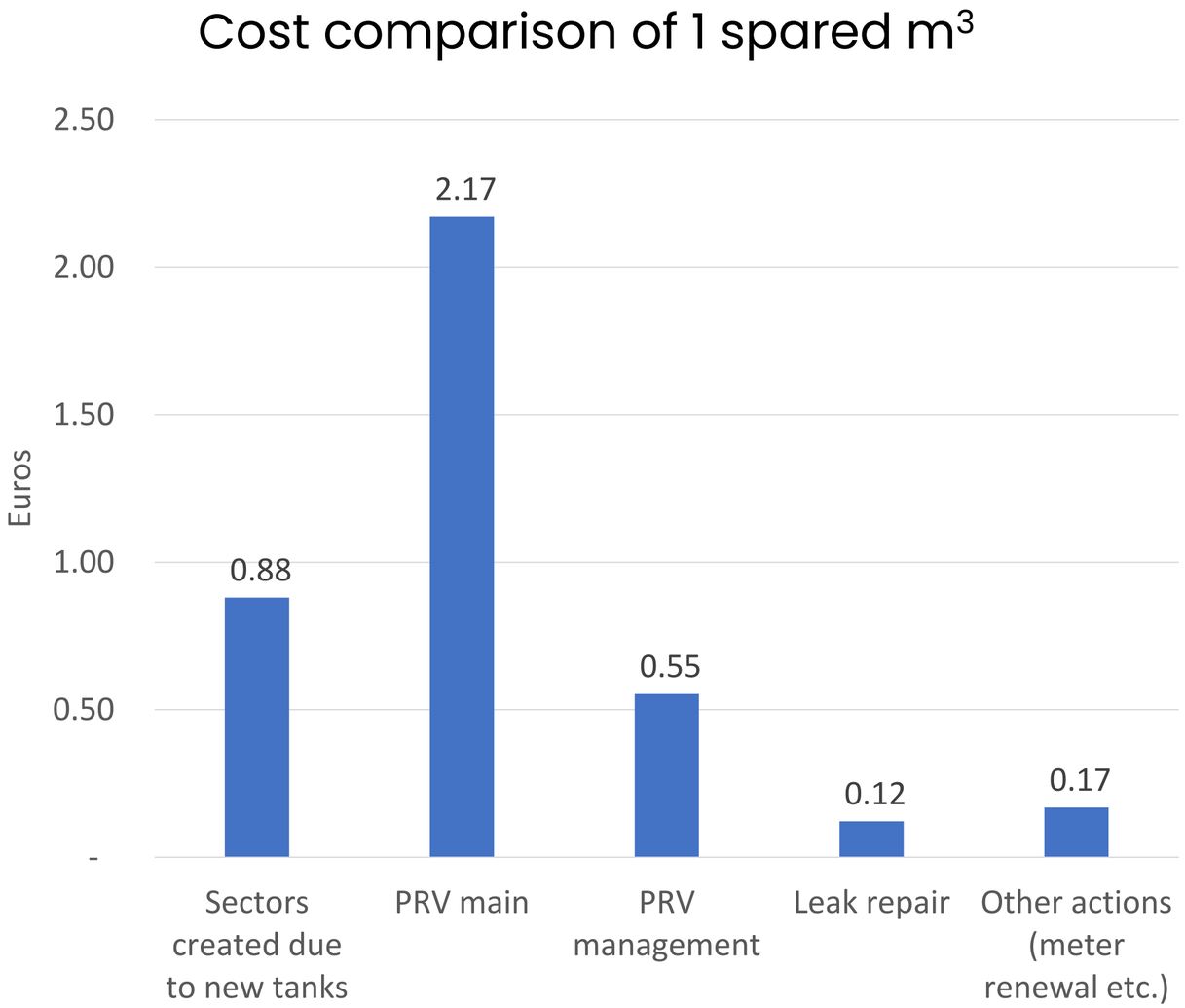
# Grajaú district, São Paulo, Brazil



# Grajaú district, São Paulo, Brazil



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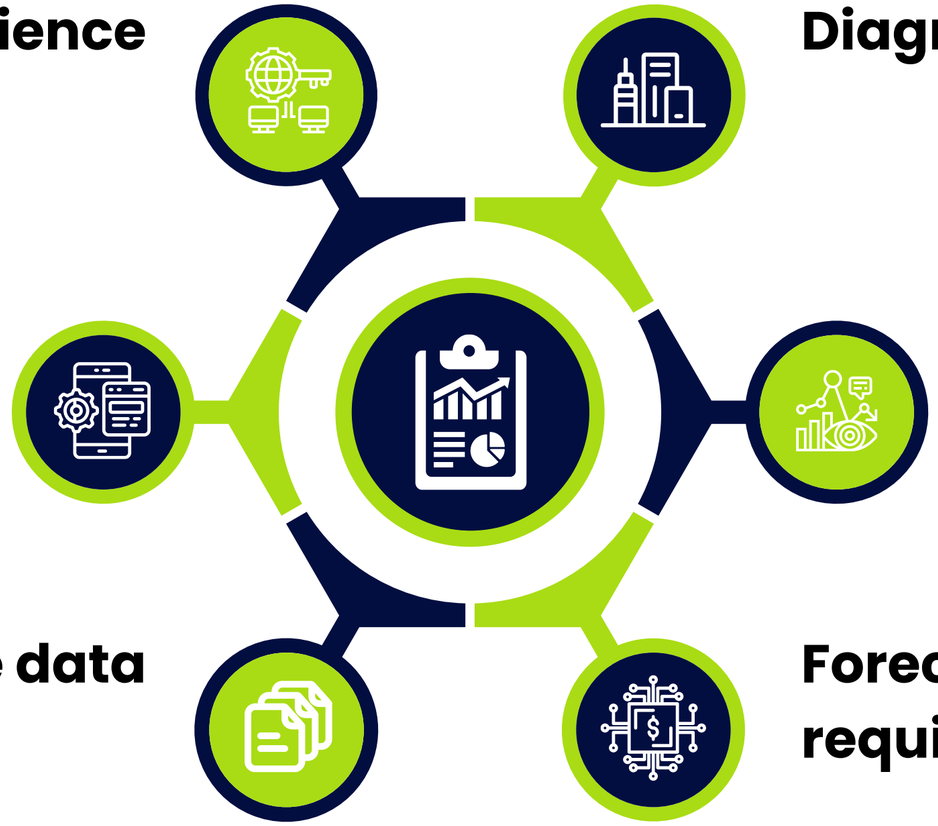
# Assessment tool



**Operational Experience**

**Diagnostic and baseline**

**Expertise**

**Loss type breakdown**

**Reliable data**

**Forecast on performance, required capex & opex**



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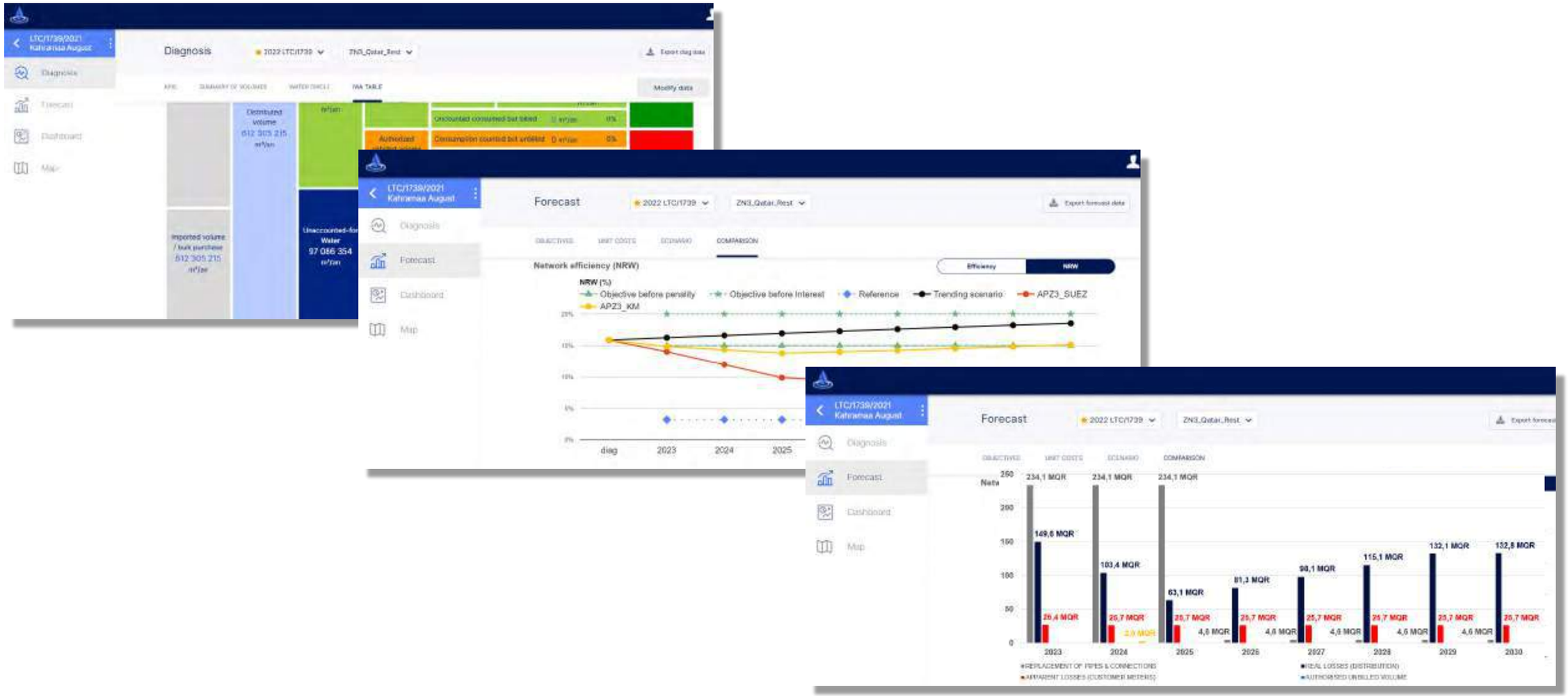
# Assessment tool



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# Thank You

## For Your Attention

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