



EPMAPS

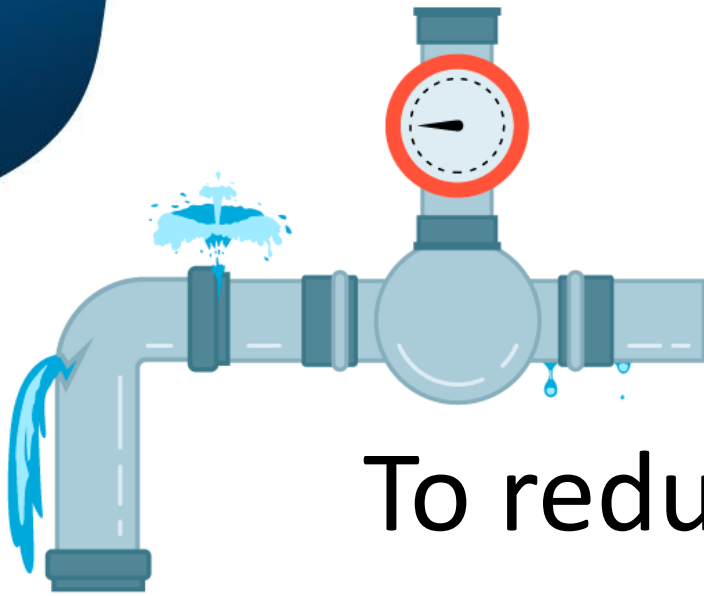
AGUA DE QUITO

grande otra vez

“ZERO LEAKS”

USING DISRUPTIVE INNOVATION
TO REDUCE LEAKAGE IN WATER
DISTRIBUTION NETWORK





OBJECTIVE:

To reduce leaks in water distribution network (pipe system)

GOALS:

- Reduce volume of water losses
- Improve nonrevenue water index
- Select the best leak test method
- Cost reduction of meeting the leaks.



BACKGROUND:

- In 2018 IDB contracted an consultancy to determine capacities in Ecuador to implement innovative Public Purchases
- As results, it was determined that EPMAPS has those capacities
- From 2019 EPMAPS began Project “ZERO LEAKS”

CHALLENGE:

To develop a solution to optimize resources in visible and non visible leaks detection in water distribution system in Quito Ecuador



ACTUAL SITUATION:

Systemic detection through acoustic methods

SPECTED SITUATION:

Innovative method with important time and human resource reduction

PERFORMED ACTIVITIES:

- Open consultancy to determine what is in the Ecuadorian market
- Technologic surveillance contract to determine what is in the world market nowadays



NEXT STEPS:

- Hire a satellite pre-detection of leaks with a Synthetic aperture radar (SAR) as a pilot project
- Hire a advance Pressure Control as a pilot project

NEXT STEPS: TRY NEW PROPOSALS

We are looking for new solutions that includes:

- Physical infrastructure timely supervision
- Advance techniques in data processing
- Efficient leaks detection

TRY NEW PROPOSALS

It may also include:

- Measure and diagnostic devices.
- Sensors, cameras, drones.
- Mathematic models, algorithms.
- Artificial intelligence (machine learning, data mining)



FINAL GOAL:

Develop an innovative product to detect and locate visible and no visible leaks in Quito to increase investigate pipeline length in a year (more than 20% base situation) and optimize hydric resources related with currently used techniques

SELECTION PROCESS:

Publish public procurement innovation

1. Select 4 partners to develop solutions with EPMAPS collaboration
2. Select 2 partners to develop prototype model
3. Select 1 partner to develop selected product.