

ASSET ADVANCED





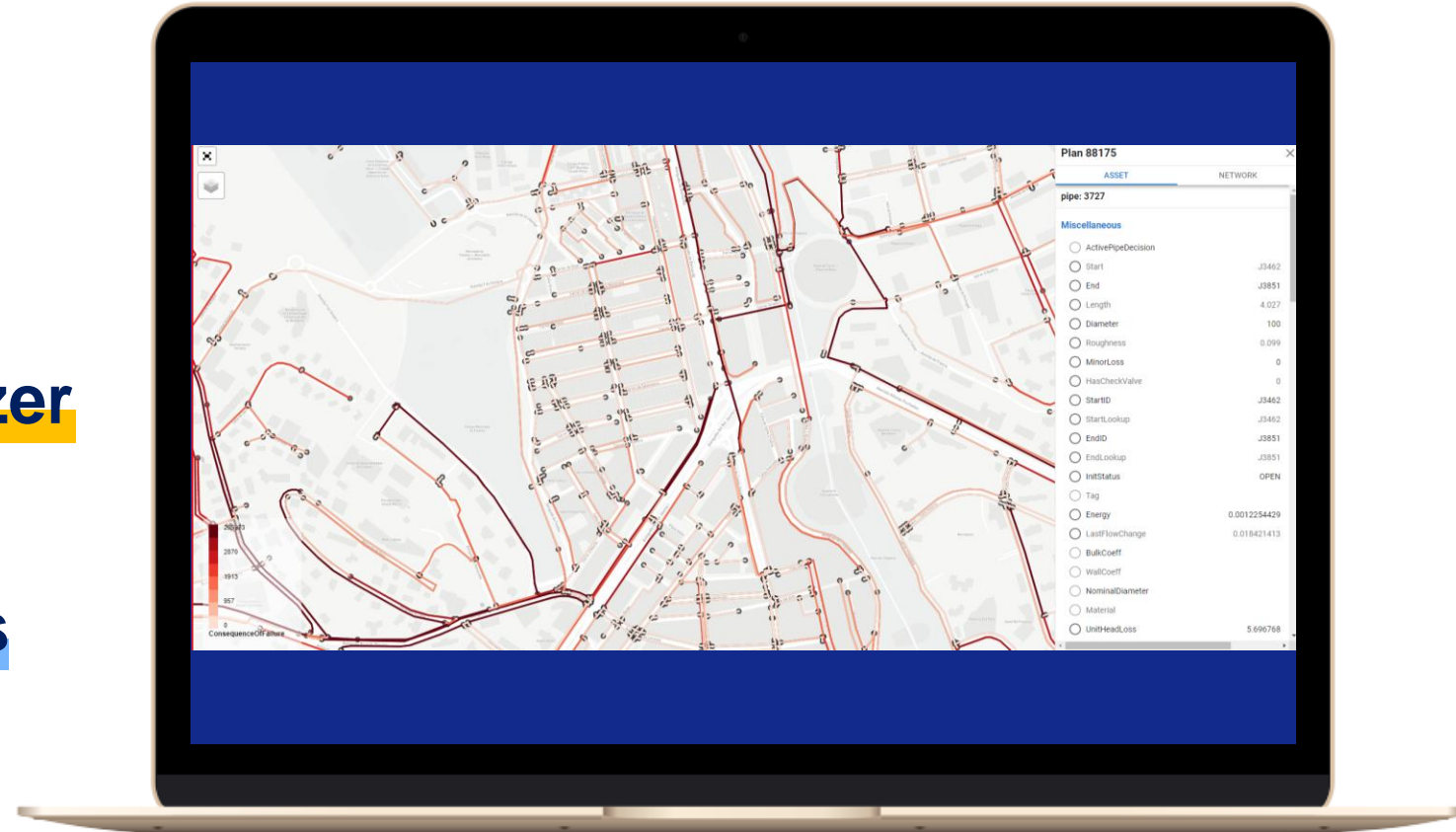
Your assets are *aging, under performing* and *expensive* to maintain?

You are not alone!

66% of utilities in all sectors of activities around the globe have the same concerns.⁽¹⁾

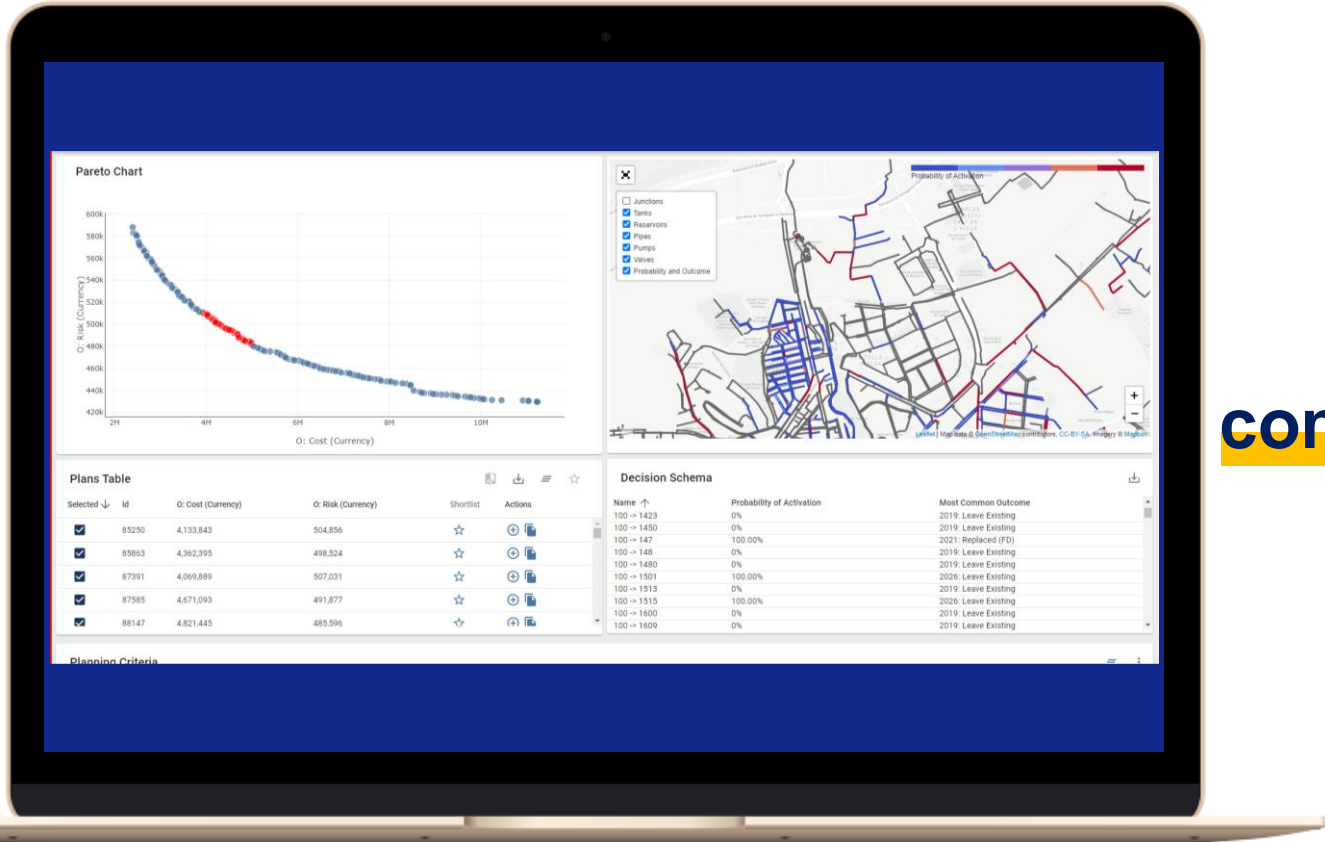
⁽¹⁾ Reliability Web - Research Report on Asset Management Practices, Investments and Challenges 2014-2019

Asset Advanced is an
Asset Management Optimizer
to help urban utilities
prevent service disruptions



The only asset management tool that puts
the community well-being &
the protection of the environment
at the forefront





Asset Advanced helps you
comply with industry best practices
 in asset management and
become ISO55.000 certified

Suez

Trust in 150 years of experience

500,000 km

of drinking water and sanitation networks

300

engineers and experts in the fields of **environment, real-time information systems and data processing**

€100 billion +

worth of physical assets managed by the group worldwide

Suez uses Asset Advanced, why wouldn't you?

Benefits

Your renovation and maintenance plan starts today

OPTIMIZE RESOURCES



Plan the replacement and maintenance of your assets depending on the risk of failure, the impact on the service and the evolution of your assets over time.

FINANCIAL PERFORMANCES



Plan major infrastructure replacement to improve your ROI. Find alternatives to replacement and make your assets last longer.

RELIABLE ASSETS



Anticipate asset failures and provide better service for end-users.

MULTI-ASSET SOLUTION



Manage your assets in one unique platform, take into account multiple specific degradation models and group the renovation of multiple assets at the same time.

Our solution

Plan your asset renovation in 6 steps



Data Engineering

Relevant data collected from different sources - GIS, CMMS, EAM, CRM, simulation models - is processed and **stored** in one **single database**, **processed**, and **accessible** from a **unique** platform



Condition assessment

Assess the current state of **asset degradation**. **Map your entire network** with minimal inspections.



Failure analysis

Predict the **evolution of asset degradation** according to multiple degradation factors. Get access to a library of **advanced models** for each asset according to your needs (multi-criteria, stochastic and machine-learning).



Risk analysis

Predict the evolution of risk, taking into account financial, social and environmental **consequences** of failure. Evaluate the impact of failure in service levels.



Prioritize

Define **renovation priorities** considering investment limitations, long term impact of cost of operations increase and risk exposure. Define **alternatives to renovation** to preserve your assets in the long-run.

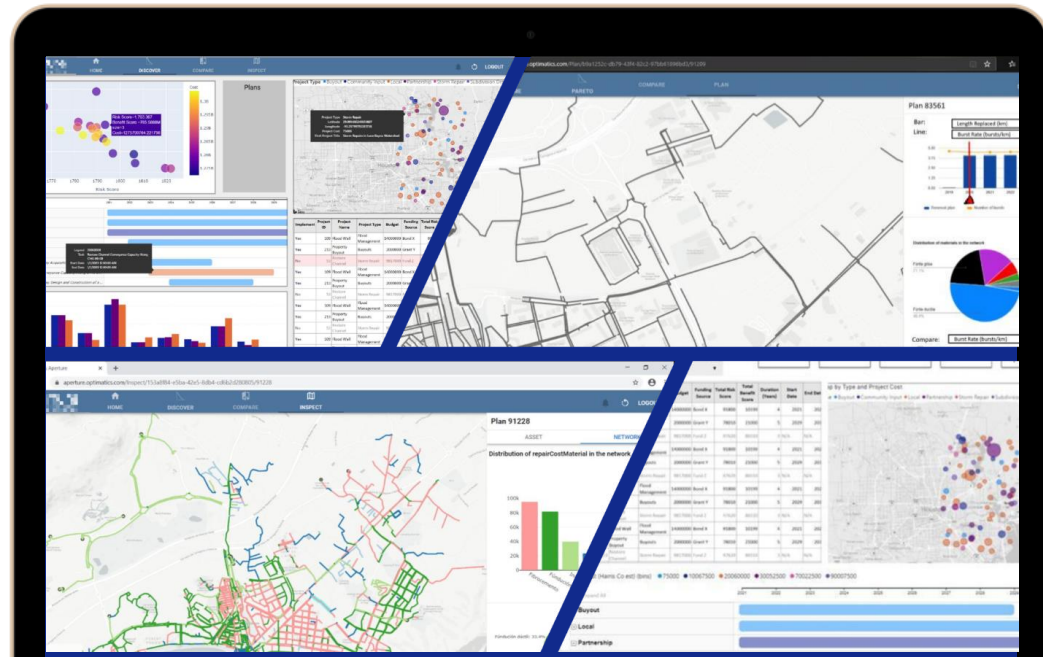


Geo-spatial grouping

Group and **rationalise tasks** for different assets in the same area and create a **practical renewal plan**.

Our solution

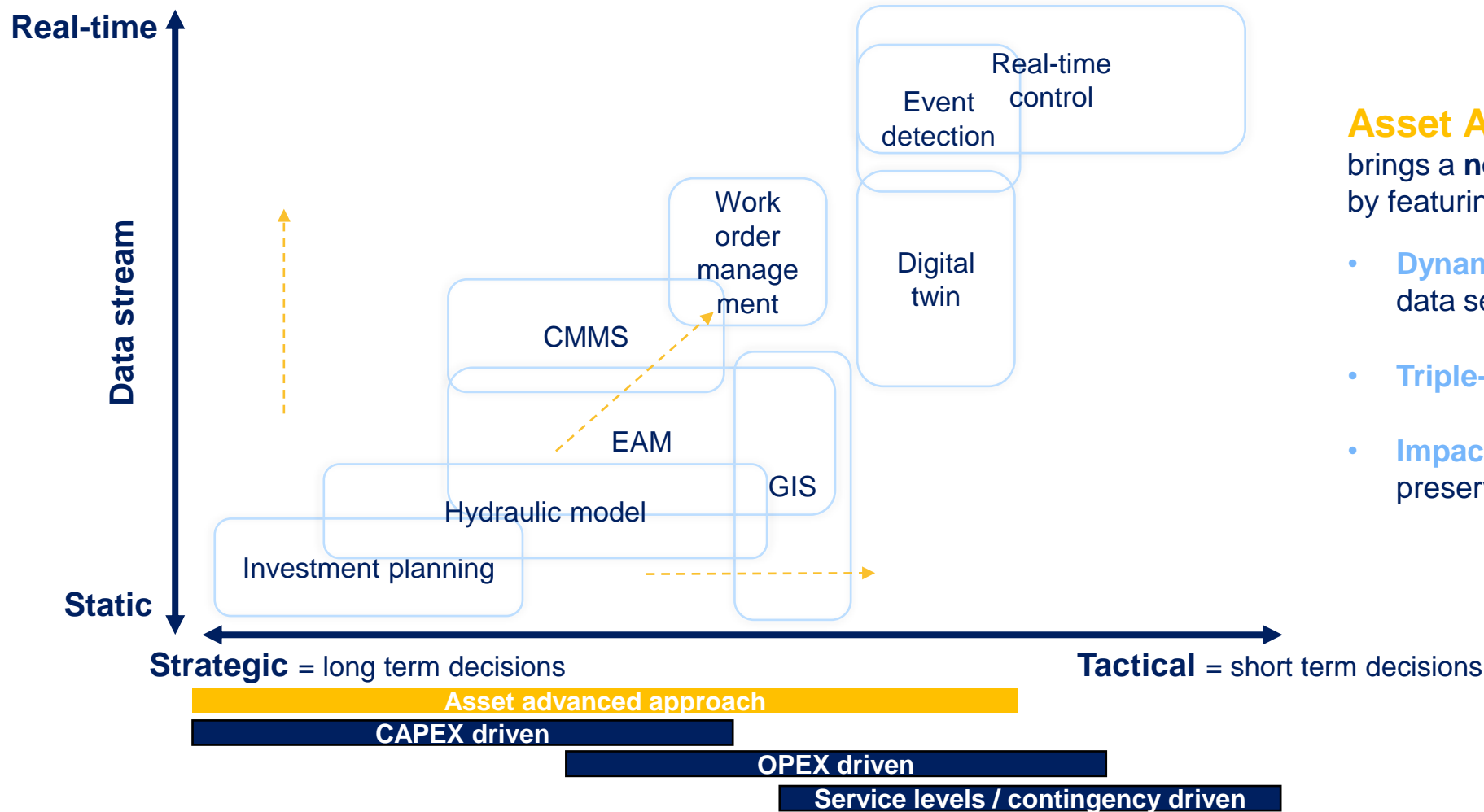
Visualise all your assets and their risk of failure in one single platform



- Visualise all your assets in one place
- Identify your assets at most risk in one glance
- Compare different scenarii in the dynamic dashboard depending on the budget allocated
- Anticipate impacts of asset failure, renovation and maintenance on the environment, your customers and your finances
- Platform software to fit your objectives, constraints and asset models
- Plan your renovation and maintenance rounds depending on the priority

Our solution

Asset Advanced moves from strategic to tactical investment planning



Asset Advanced

brings a **new dimension to Investment Planning** by featuring:

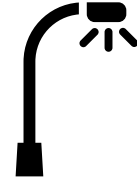
- **Dynamic data stream** by connecting with live data sets
- **Triple-bottom-line** impact of the investment
- **Impact of operations** practices in assets preservations

Our solution

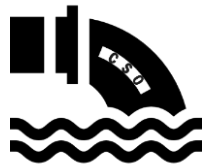
A truly multi-asset management platform



Water resources and
distribution systems



Public lighting and
tricolour light signalling



Sanitation and
Rainwater Networks



Urban heating and
cooling

Our services

Tailor-made software set up specifically for your needs





Success Story

The water network of Benidorm

Key figures

Volume delivered: 100.000.000 m³/year ○

Network length: 242 km ○

Population: 68.000 habitants ○

Estimated Population in summer: 300.000 ○

Hydraulic performance: 96% ○

Success story

Methodology for the Benidorm pilot



PREDICTIVE RISK MODEL

INPUTS

- Hydraulic model (EPANET)
- Pipe asset data
- Hydraulic criticality per pipe

MODELS

- LOF⁽¹⁾ – client regression curves
- COF⁽²⁾ – client multicriteria risk scoring model

		Impact				
		Negligible	Minor	Moderate	Significant	Severe
Likelihood	Very Likely	Low	Moderate	High	High	High
	Likely	Low	Moderate	Moderate	High	High
	Possible	Low	Low	Moderate	Moderate	High
	Unlikely	Low	Low	Moderate	Moderate	Moderate
	Very Unlikely	Low	Low	Low	Moderate	Moderate



DECISION MODEL

OBJECTIVES

- Reduce the cost of pipe replacement
- Minimize the likelihood of failure
- Enhance hydraulic performance

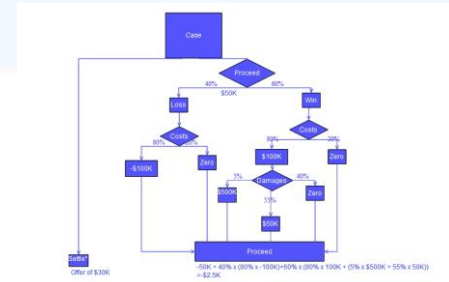
POTENTIAL DECISIONS

- Pipe replacement
- Resizing of pipes
- Any existing pipe below 100mm to be replaced by a 100mm pipes



ACTION PLAN

WHAT? | WHEN? | WHERE?



⁽¹⁾ Likelihood of Failure
⁽²⁾ Consequence of Failure

Success story

Results of the Benidorm pilot

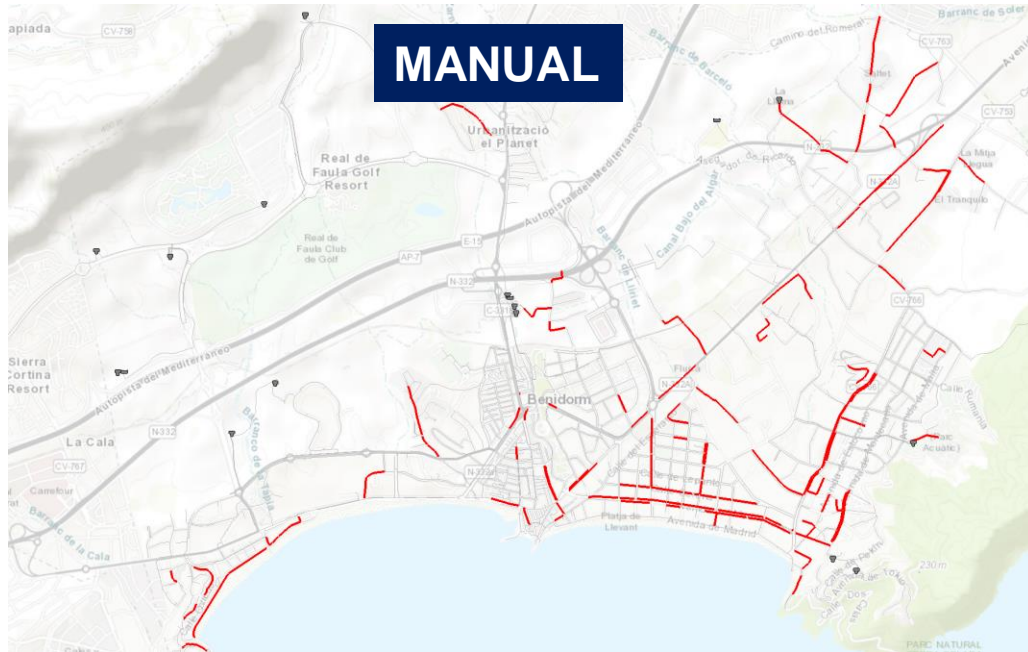


- Do nothing scenario is the starting point.
- The manual plan at €10m assumes €1m spend/year.
- The manual plan is beaten by the pareto curve in both cost and risk.

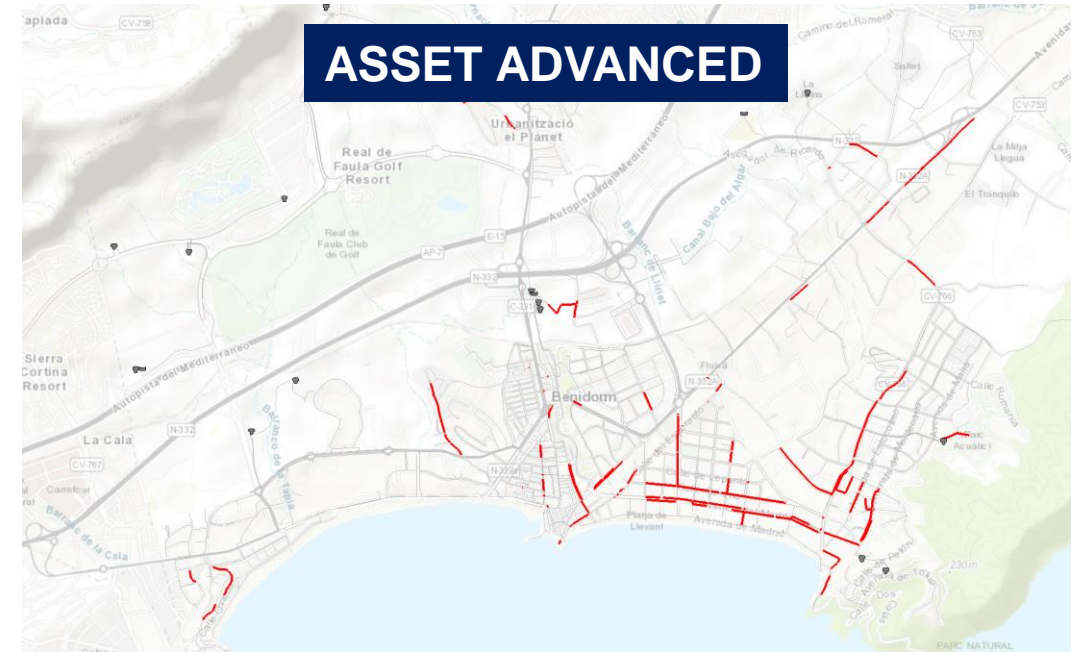
Asset Advanced reduced costs by 37% and risk by 19%

Success story

Results of the Benidorm pilot



26.3km Pipes Replaced



14.4km Pipes Replaced

For further enquiries, you can email to puranut.w@suez.com

