

APX10™

NoDig

a digital asset management tool for water utilities

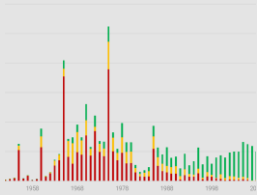
INTRODUCTION

- Originates from the engineering world of water
- Our business is reinvestment prioritization of water and sewer networks
- Software born global – located in Aarhus



Ulrich Hansen, APX10

CHALLENGES ARE PLENTY IN THE WATER SECTOR



Infrastructure investment gap

Up to 40% already in critical condition – need to be replaced within next 10-20 years causing a bottleneck compared to budgets.

Current reinvestment level only 1.5%

More than 50% of network in good condition when refurbished – decreasing the actual budgets value even more.

Lack of fact-based insights

Only known to key employees and a diverse set of tools including SCADA, GIS etc.

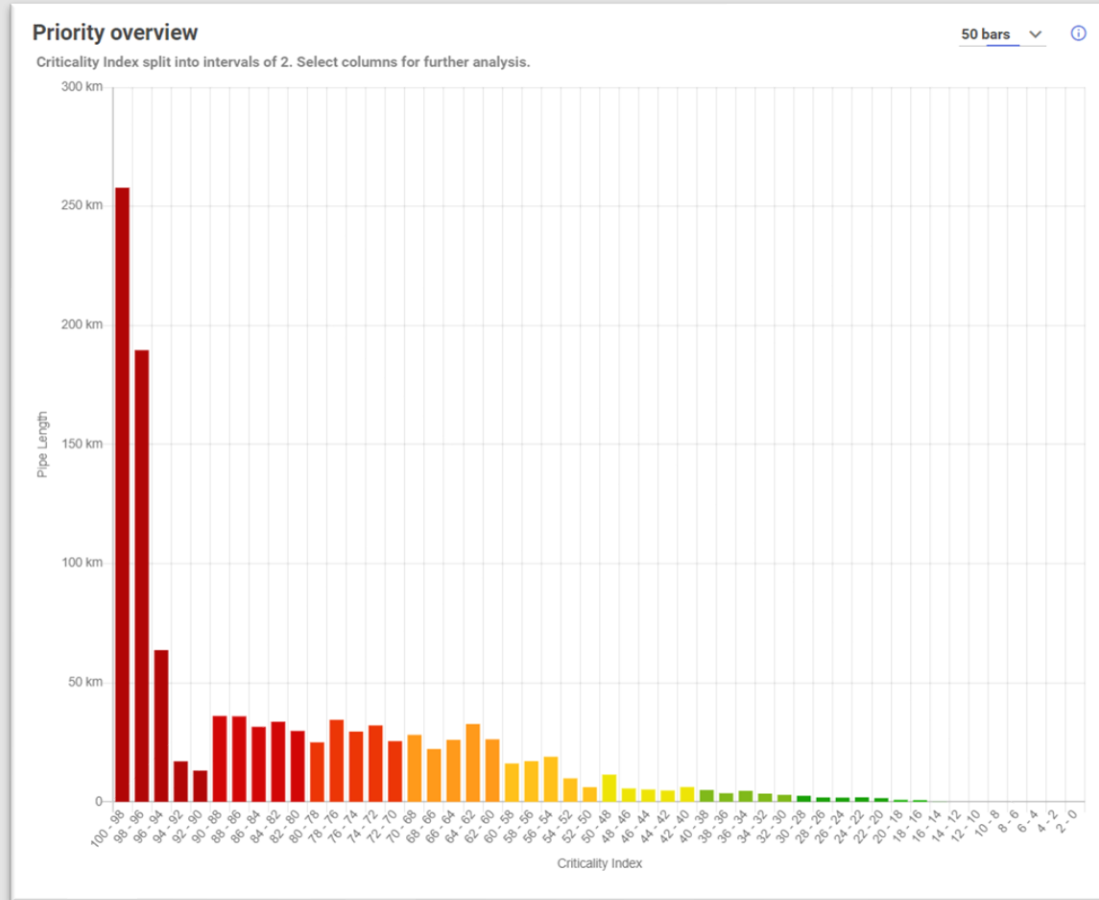


Challenges are in common for water and wastewater.
Utility mid-sized segment in need of solution “from the shelf”.

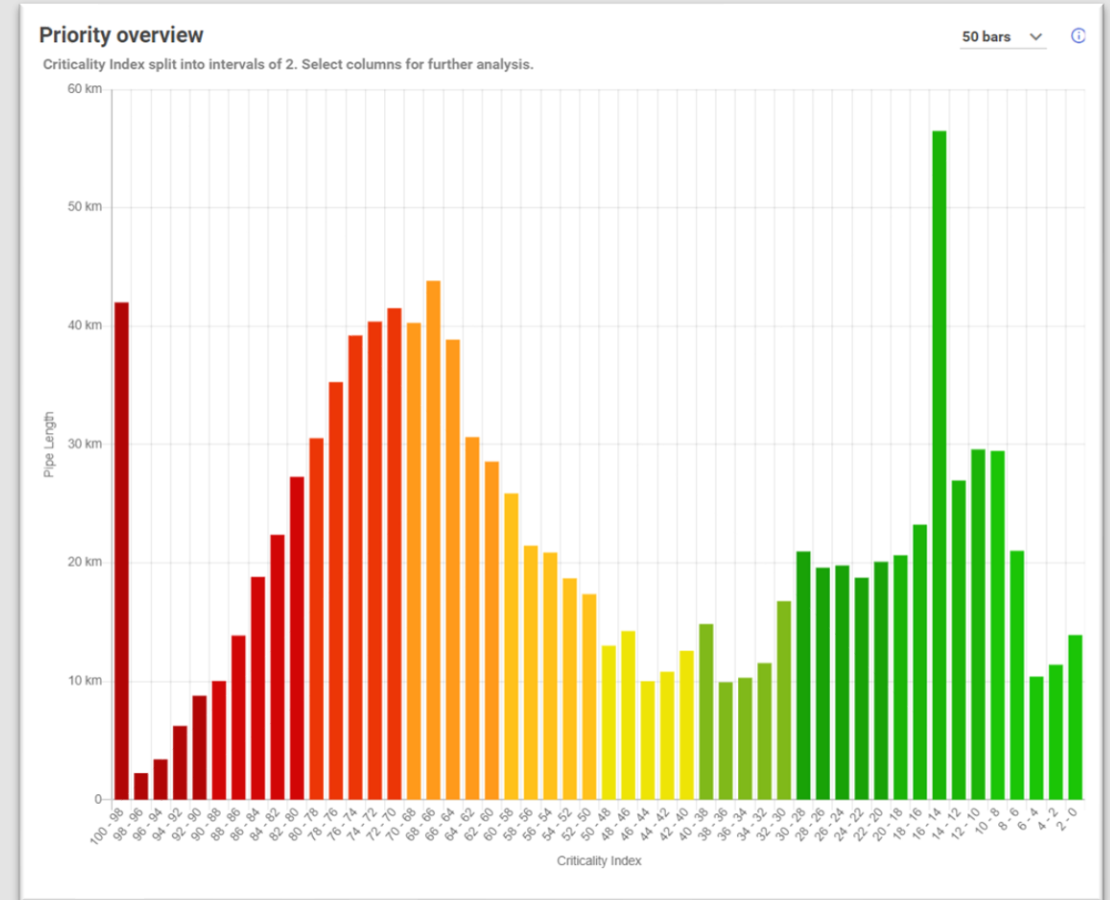


Same issues internationally.
Danish origin (strict, regulatory environment) is an advantage.

A NEW REINVESTMENT APPROACH



Age based criticality



Condition based criticality

WHAT WE DO

APX10 provides advanced data analytics through its proprietary platform - data|APX® - to facilitate the digital transformation of wastewater and water utility infrastructure and generate value out of existing data.

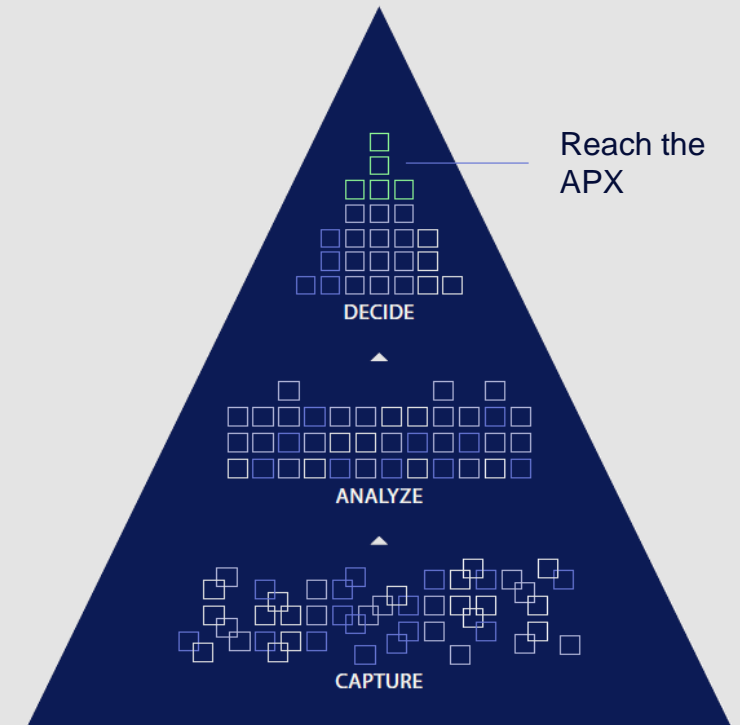
APX10 ensures utility management translate critical information into actionable insights for decision-makers aiming to expand efficiency, investment performance, reputation, and critical infrastructure services.

Our product – a smart SaaS platform

- Plug-and-play data sourcing and capture that compiles all data and analysis in an intuitive SaaS platform.
- Dynamic data all the way. This is a change of management paradigms – data will be ever changing.
- Maximized value through costs savings, investment optimization and optimized digital workforce.

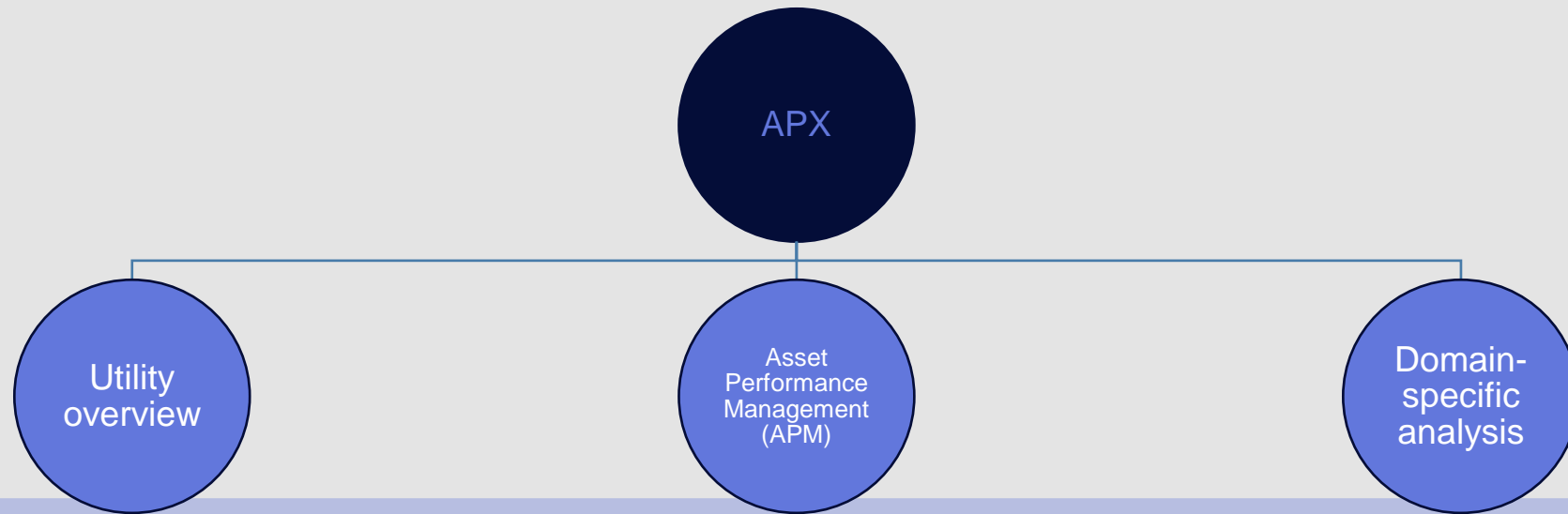
Our unique approach helps utilities reach the APX

- Our approach is to aggregate data by domain specific analyses, ultimately delivering insights and optimized management decisions.
- With our tool minded for data-driven decision support, we enable our customers to reach the APX of reinvestment decision making.



STRUCTURE OF data|APX ANALYSIS

- Our APX approach is also reflected in the way we have structured our product modules.
- Cloud-based, subscription software solution built for automated deployment, security, and new feature upgrades.
- Single platform for all data management from any IoT device, SCADA system, GIS, smart meter or public data source.



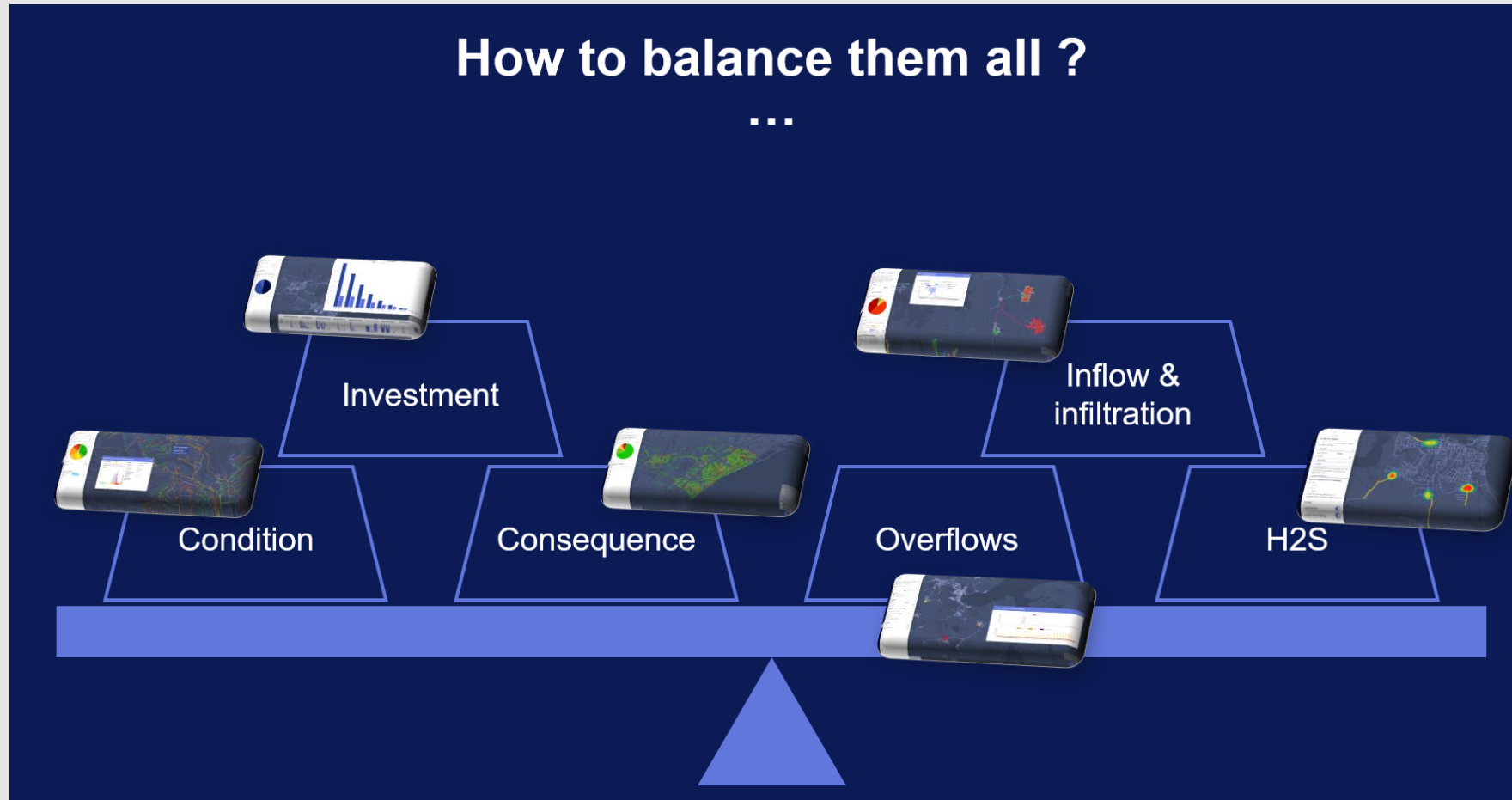
Included modules

- Economy
- IoT
- Data quality

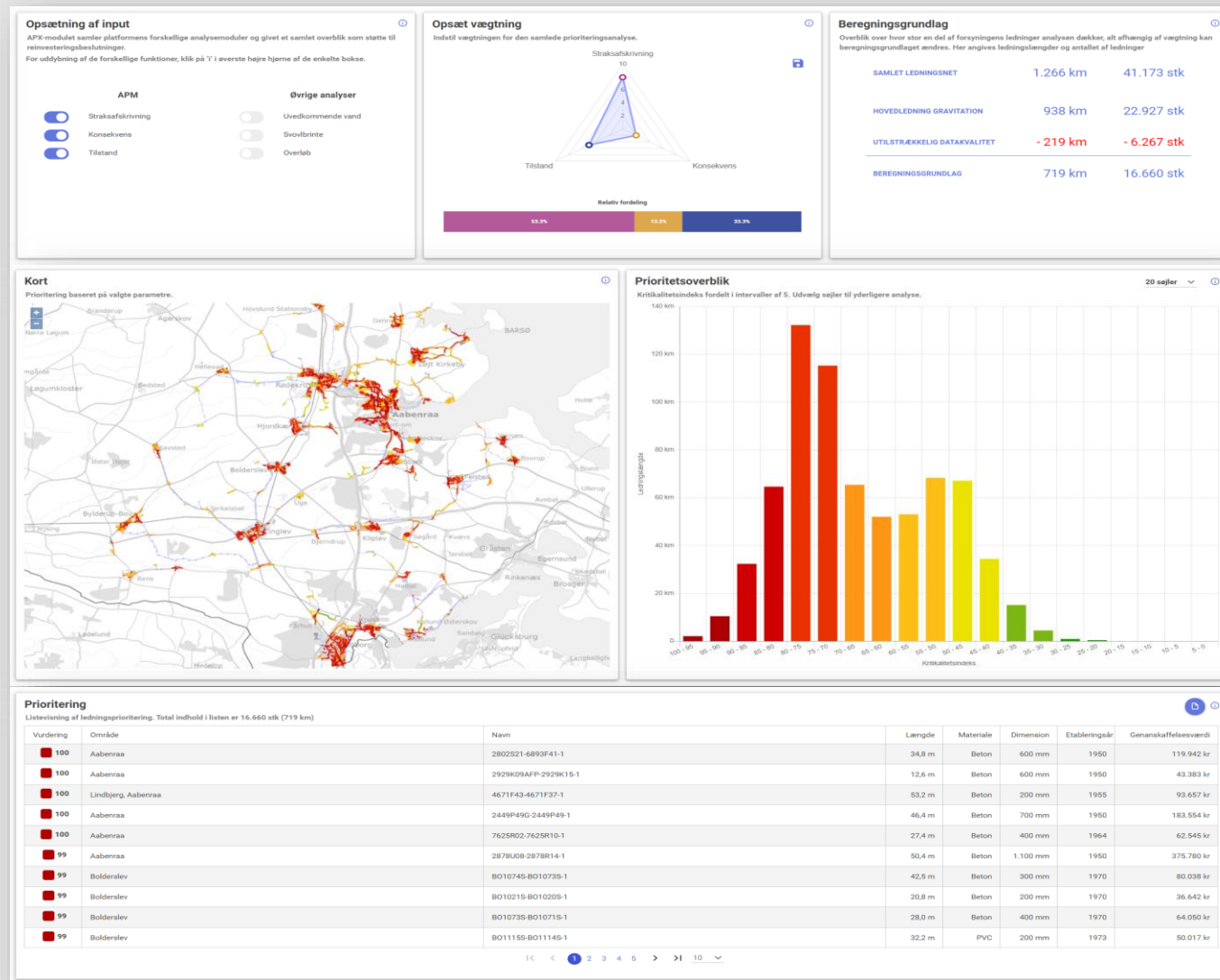
- Likelihood of Failure (LoF)
- Consequence of Failure (CoF)

- Sewage overflow
- Inflow and infiltration
- H2S

THE DILEMMA



MAKE IT SIMPLE



VIZUALISATION IS KEY

Item	Category	Stock	Price	Total Value
1. BREAD	BAKERY	100	1.50	150.00
2. BUTTER	DAIRY	50	2.00	100.00
3. EGGS	DAIRY	200	0.50	100.00
4. MILK	DAIRY	100	1.00	100.00
5. APPLES	PRODUCE	500	0.20	100.00
6. BANANAS	PRODUCE	300	0.33	100.00
7. CARROTS	PRODUCE	200	0.50	100.00
8. POTATOES	PRODUCE	100	1.00	100.00
9. TOMATOES	PRODUCE	50	2.00	100.00
10. ONIONS	PRODUCE	100	1.00	100.00
11. GARLIC	PRODUCE	50	2.00	100.00
12. PEPPERS	PRODUCE	50	2.00	100.00
13. CUCUMBERS	PRODUCE	50	2.00	100.00
14. ZUCCHINI	PRODUCE	50	2.00	100.00
15. SPINACH	PRODUCE	50	2.00	100.00
16. BROCCOLI	PRODUCE	50	2.00	100.00
17. CAULIFLOWER	PRODUCE	50	2.00	100.00
18. CABBAGE	PRODUCE	50	2.00	100.00
19. KALE	PRODUCE	50	2.00	100.00
20. HERBS	PRODUCE	50	2.00	100.00
21. CORIANDER	PRODUCE	50	2.00	100.00
22. MINT	PRODUCE	50	2.00	100.00
23. BASIL	PRODUCE	50	2.00	100.00
24. PARSLEY	PRODUCE	50	2.00	100.00
25. DILL	PRODUCE	50	2.00	100.00
26. CHIVES	PRODUCE	50	2.00	100.00



Likelihood of Failure

Physical index predicted using Machine Learning.

Total pipelength: 899 km
Estimated pipe length: 718 km (79%)

Selected: (100%) 718 km
Prediction interval: [Slider]

Model confidence:
Index 6 or above: 76%
Below index 6: 24%

Estimated physical index: 5782R30-5782R26-1

Estimated index: 6.5
Calculated from 2021 predictions using machine learning. Below is shown the prediction space and the model likely outcome.

Name:	5782R30-5782R26-1
System:	Stormwater
Category:	Main
Transport:	Gravitation
Material:	Concrete
Established year:	1972
Dimension:	600 mm
Length:	54.9 m
Renovation:	-
Renov. year:	-

data|APX®

Consequence of Failure

Accessibility: Showing the accessibility of the pipes. Showing the accessibility of the pipes. Showing the accessibility of the pipes.

Consequence: Total pipelength: 1,000 km

Selected: (100%) 1,000 km

Classification: Classification categories based on a range of all surface measurements.

Top-down criticality: Showing the criticality of the pipes. Showing the criticality of the pipes. Showing the criticality of the pipes.

Map layers: Showing area. Showing area. Showing area.

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ANALOG IS DEAD

Onward with digital.

- Organizational challenges
- Data challenges
- Strategic reinvestment planning for the future

