



Rezatec

Satellite Remote Sensing and AI Platform for Water Utilities Risk Management





Rezatec



Founded

2012



Team

50+



Industries

4





Rezatec



pwc

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'Future50' UK Company

PwC 2022 Climate Report





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Geospatial AI for Water

From source to tap, transform the way you manage water.

Use geospatial AI to remotely monitor and dynamically manage dams, water pipeline networks and water quality.

Dam Monitoring



Water Quality



Pipeline Risk



Water Utilities Challenges / Trends

The main challenges to water utilities worldwide identified in various studies are **growing population** to deliver water with the **right level of service and quality, water scarcity** and **climate change**, and **aging infrastructure**;

Water Utilities Challenges: A Bibliometric Analysis, Multidisciplinary Digital Publishing Institute (MDPI) (2021)

World Bank targets for **Non Revenue Water (NRW)** are at ~25%, but countries are slowly setting and enforcing tougher regulatory standards;

Philippines Water Supply and Sanitation Master Plan (2019-2030), NEDA

Smart technologies and **data analytics** tools implemented within the water utilities have emerged as an efficient alternative to address and reduce NRW levels;

Taking water efficiency to the next level: Digital tools to reduce non-revenue water.; J. Hydroinformatics (2021)

Rezatec can help Remotely, At scale, Cost effectively



Rezatec approach to Geospatial AI for networks



**Environmental
Data**

+



**Satellite-based
Insights**

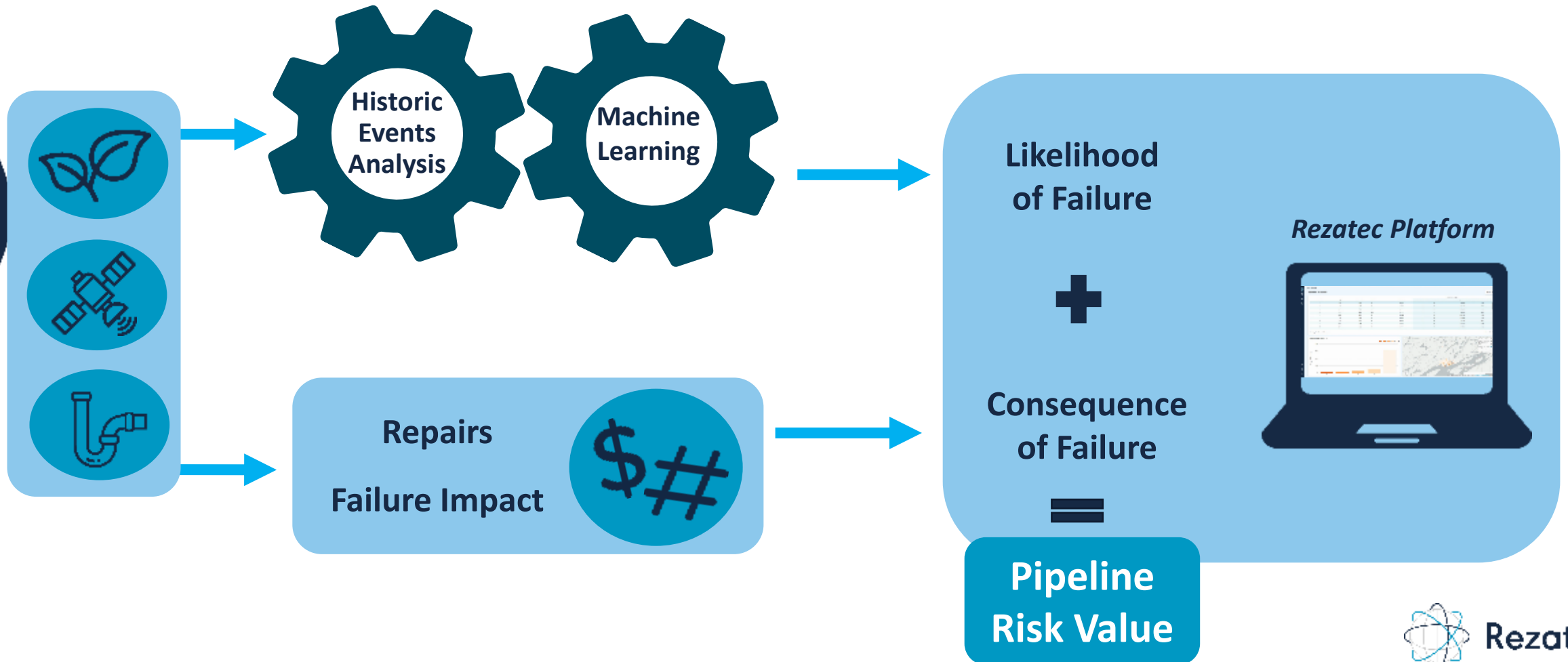
+



**Pipeline
Attributes**



Rezatec approach to Geospatial AI for networks



How Geospatial AI can help utilities in the face of increasingly extreme weather



Accurately predict
the top at-risk
sections of your
network



Implement
upgrade
programmes more
effectively

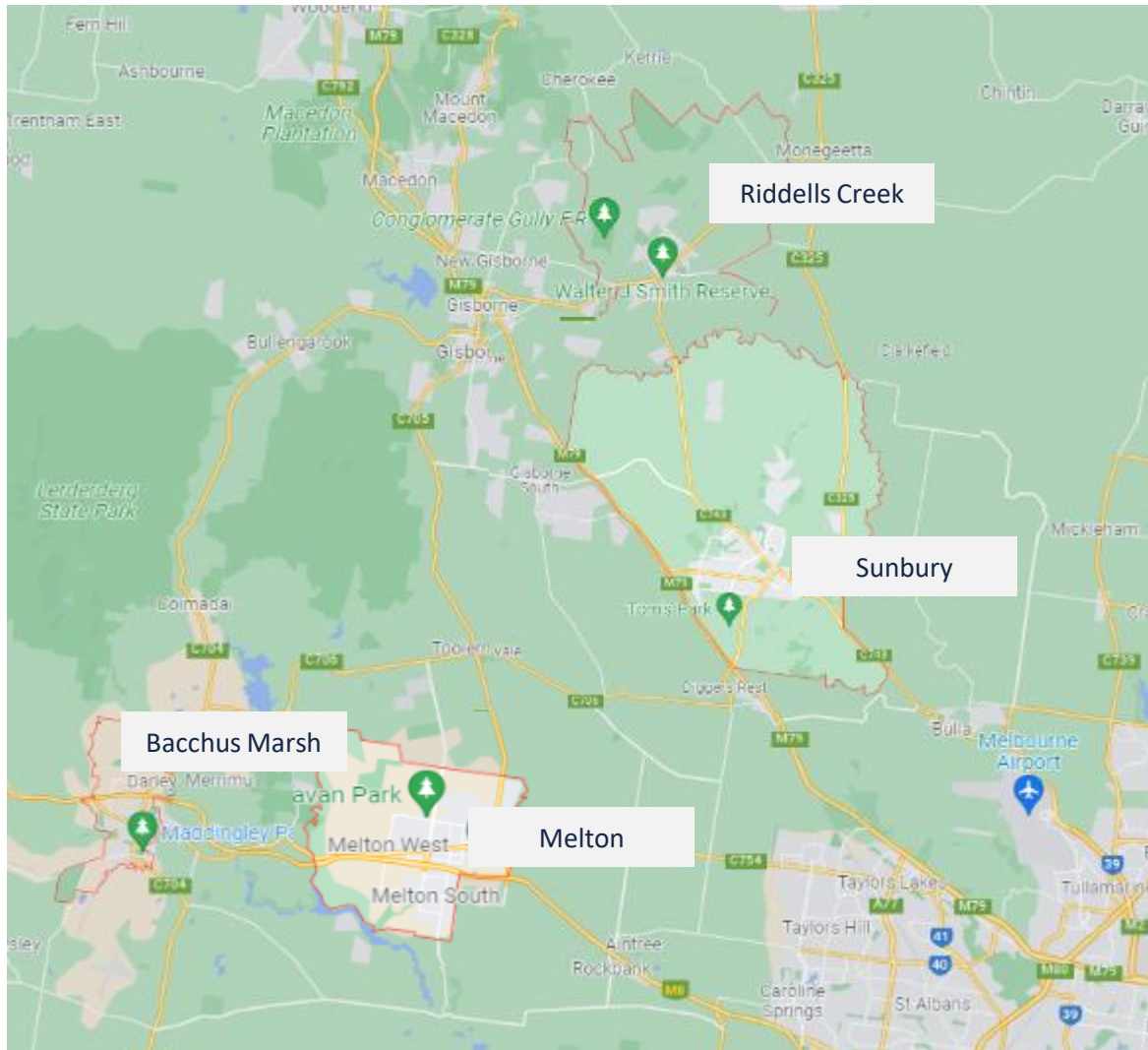


Gain savings in
CAPEX and OPEX



Supercharge your
digital
transformation

Pipeline Risk Validation



- Two separate models run - clean water network and sewer network
- Risk model run on 2 years of data able to predict half of most recent 6 months of incidents
- Rezatec risk model identified 20% highest risk pipeline segments

Validation of Ground Motion

Subsidence around Telstra cover –
Reservoir Rd, Blyton Cresa



Subsidence around drainage covers
- 65 Heysen Drive

- Site visits carried out in High-Risk-Priority zone
- Riddells creek showed subsidence
- Clearly visible undulating ground in Sunbury (shown on left)
 - Road & footpath repairs due to ground movement
 - Subsidence around drainage covers and other assets

Detection Services Validation – Sunbury Area

- Minor root intrusion and partial blockage in Melton area
- Bacchush Marsh area showed:
 - More extensive root intrusion
 - Undulating ground
 - Sewer blockages



Root intrusion
Cnr Elizabeth &
Menzies Drive



Elizabeth &
Menzies Drive,
partial blockage
due to root
intrusion

Customer Case Studies...



Rezatec's Pipeline Risk tool allowed the HERA engineering team to identify twice as many leaks compared to previous methods as 69% of all pipeline breaks occurred in segments of the network between 4.5 – 5 Likelihood of Failure (LoF)

— Hera, Italy

At TRC in Chicago, 2017 – 2019 historic incidents used to train the Rezatec model identified 60% of the failures in 30% of the network predicted to have the highest risk. When extended to include 2020 incidents, this improved to identifying 70% of failures in the 30% highest risk pipe segments of the network

— TRC, Chicago



Back to site overview

⚙️ Pipeline Risk - Dashboard View

⚙️ Pipeline Risk - Map View

Legend

Likelihood of Failure

- 1
- 2
- 3
- 4
- 5

Highest Risk Zones

Priority Zones by DMA

Pipeline Risk Value

14130

Legend

Likelihood of...

- 1
- 2
- 3
- 4
- 5

Highest Risk ...

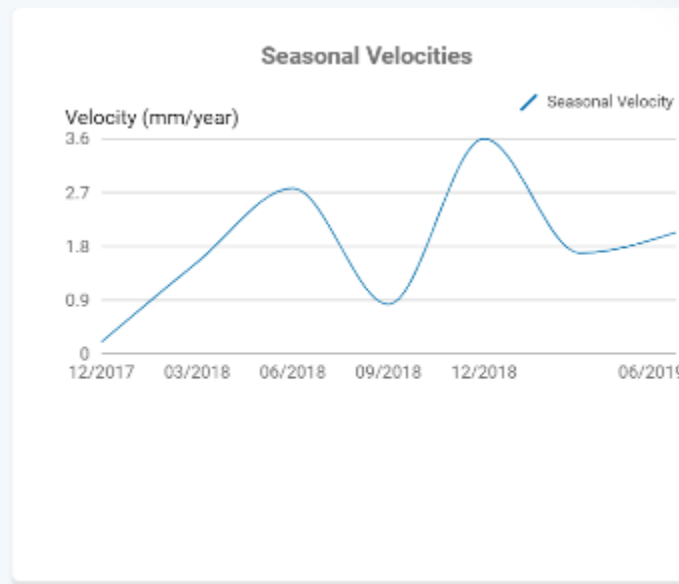
Priority Zone...

Pipeline Risk ...

5 m

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Segment ID	14130.00
Length (m)	21.0
Install Year	1978
Material	CI
Diameter (mm)	150
Pipeline Analysis	
Likelihood of Failure	5.00
Highest Risk Zones	No
Consequence of Failure	\$576563
Pipeline Risk Value	\$3707



Philippines Projects...

Water Quality Monitoring of Laguna Lake (2018) / **Metro Pacific Water - Maynilad**

Water Quality (2019) / **Apo Agua (Davao City)**

Dam Monitoring - Ambuklao (2022) / **SN Aboitiz Power (SNAP)**



Get in Touch !



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