



Increasing sewer inspection efficiency through AI: United Utilities Case Study

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VAPAR

Why increase sewer inspection efficiency?

- 78,000km of sewerage network (7 million customers)
- +30,000 Blockages and collapses each year, leading to flooding & pollution events.
- UK regulatory framework requires improved performance.
- Over 5 years, 30% of blockages are repeats.
- Proactive inspections can prevent repeat blockage events.
- Lowering the cost of inspection increases the length of the network inspected.









VAPAR

What was the historical approach to Sewer Inspections?

"I don't want to watch

Inspect 33,000 pipes each year.



Clean 20,000 pipes each year.



Proactive Sewer Inspections



Historic Monitoring Process "I can't see the defects"

pipe inspection footage

all day."

"We need the survey results quicker than 12 weeks"

"The inspection programme exceeds the budget"

Challenges

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How did we make sewer inspections efficient using VAPAR VAPAR?



Innovation Culture and Lab



20% financial saving

Investment decision in 2 to 5 days.

Improved contract management.

Consistent investment decision-making

No more watching pipe inspection footage

Outcomes

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VAPAR

How can we make sewer inspection more efficient?



Investment needs		Consequence				
		Not significant	Minor	Moderate	Major	Severe
Probability	Almost Certain	£7m				£10m
	Likely			£20m		
	Possible					
	Unlikely	£12m				
	Rare					









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- *"The definition of insanity is doing the same thing over and over and expecting different results"* Albert Einstein
- The Innovation Lab and VAPAR have provided United Utilities with a more efficient sewer inspection process.
- Further evolution of the inspection process will deliver additional efficiencies in the future.

