

PIPEBOT PATROL

Can we better manage assets that we can't see?

Chris Bolt – Innovation Portfolio Manager

PIPEBOT PATROL

We have better maps of Mars than we do of many of our sewer networks...

Imagine being responsible for one of the largest assets in your organisation, worth billions of pounds, and only being able to see tiny snapshots of it...

PIPEBOT PATROL **CHALLENGES**

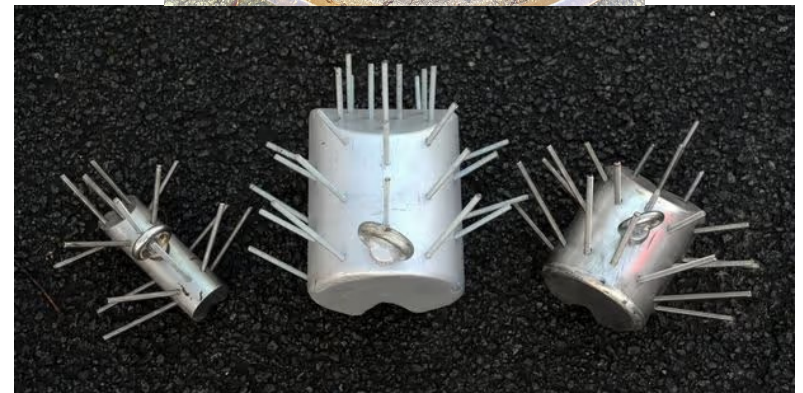


PIPEBOT PATROL CURRENT TECHNIQUES

PROACTIVE



REACTIVE



PIPEBOT PATROL

OVERVIEW

Pipebot Patrol is a £1.8m project funded by the Ofwat Water Breakthrough Challenge, that will develop, build and test an autonomous sewer robot that lives in the sewer, constantly inspecting and raising alerts to the precise location of blockages, as they are beginning to form. This proactive approach will allow water and sewerage company maintenance teams enough time to plan and then react before sewer flooding occurs – keeping sewage where it belongs.

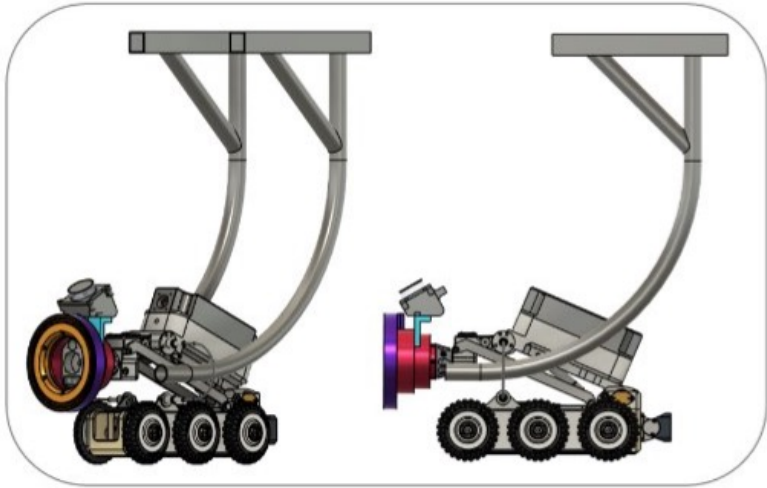
Pipebot Patrol aims to utilise an innovative robotic system with advanced automation to detect issues proactively and enhance efficiency and safety in sewer monitoring.

PIPEBOT PATROL INNOVATION



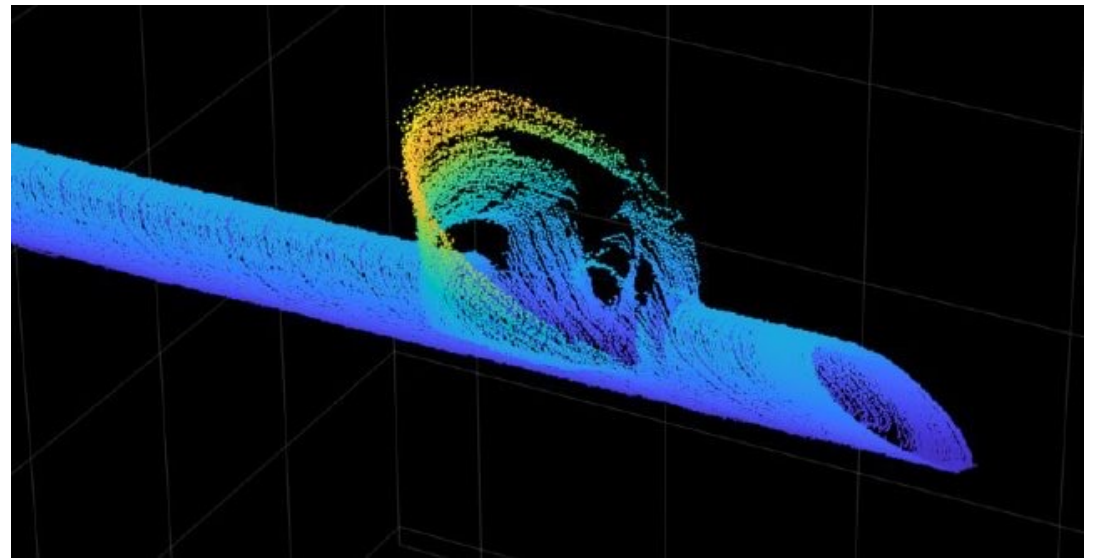
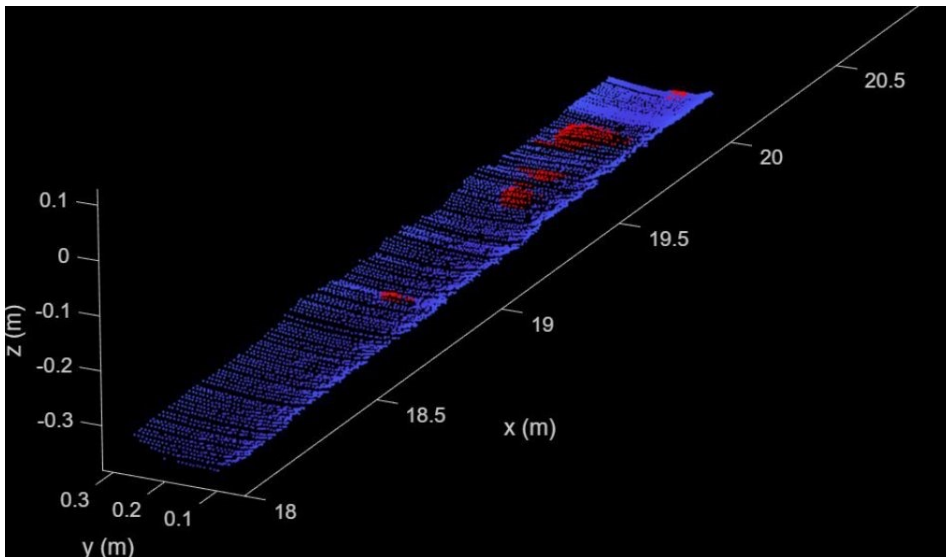
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WHAT WE HAVE ACHIEVED



PIPEBOT PATROL LEARNINGS

- Ability to deploy an Autonomous Robot; *First deployment in Live Sewer*
- Capturing of Blockage, Asset Health and Condition Data
- Ability to Function in all Sewers



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WHAT IT MEANS FOR LEAKAGE

- **Better understanding of asset conditions;** *could learnings be applied to water network?*
- **Improved identification of infiltration;** *applicable learnings to leakage*
- **Opportunities to deploy similar development and thinking**



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FUTURE VISION

***AIM:** Develop and deploy a fleet of autonomous sewer robots to assess sewer network asset health and condition using unique sensing capabilities and with automated reporting to existing asset databases. This will enhance efficiency and accuracy within sewer network asset monitoring and asset planning.*

- **Mobile multi deployment method;** deployment of multiple battery powered Pipebots to collect asset and operational data.
- **Asset Mapping;** collect data in a range of pipe sizes and automatically update
- **Condition Assessments carried out;** saving time and resource
- **Blockage Detection and initial diagnosis;** blockage location, indication of size and structure and history of development from previous patrols.

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FINAL THOUGHTS



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Any questions?

