Confluence 2019

iCASP Catchment Telemetry Integration

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The Opportunity

Data is collected across catchments on a daily basis

Every day information is collected which allows organisations to react. It is used to generate warnings, promote an operational response or to confirm normal activity.

Over time this data informs an organisations understanding of a system and can be used to improve performance

Data is collected and processed individually by organisations. These systems interact, by bringing together the data we believe we can collectively improve performance

The Opportunity

Existing research shows us that exploring relationships within data can challenge assumptions

The University Of Sheffield.

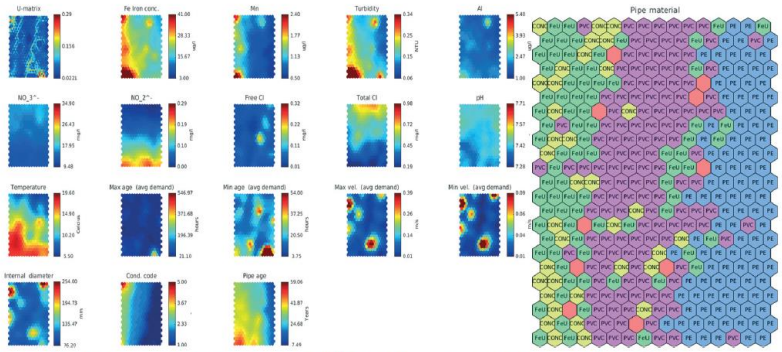


Fig. 4 SOM for WDS3 in Company B, labelled with pipe material (enlarged for visibility). See Table 1 for variable definitions.

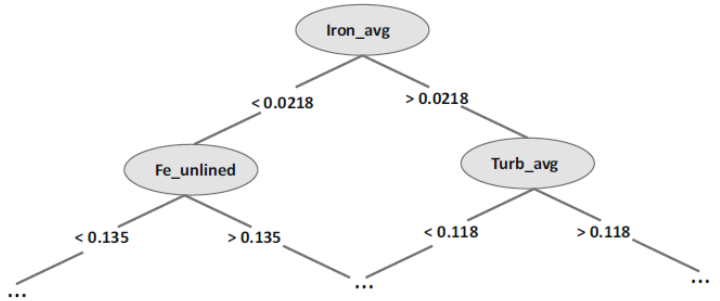
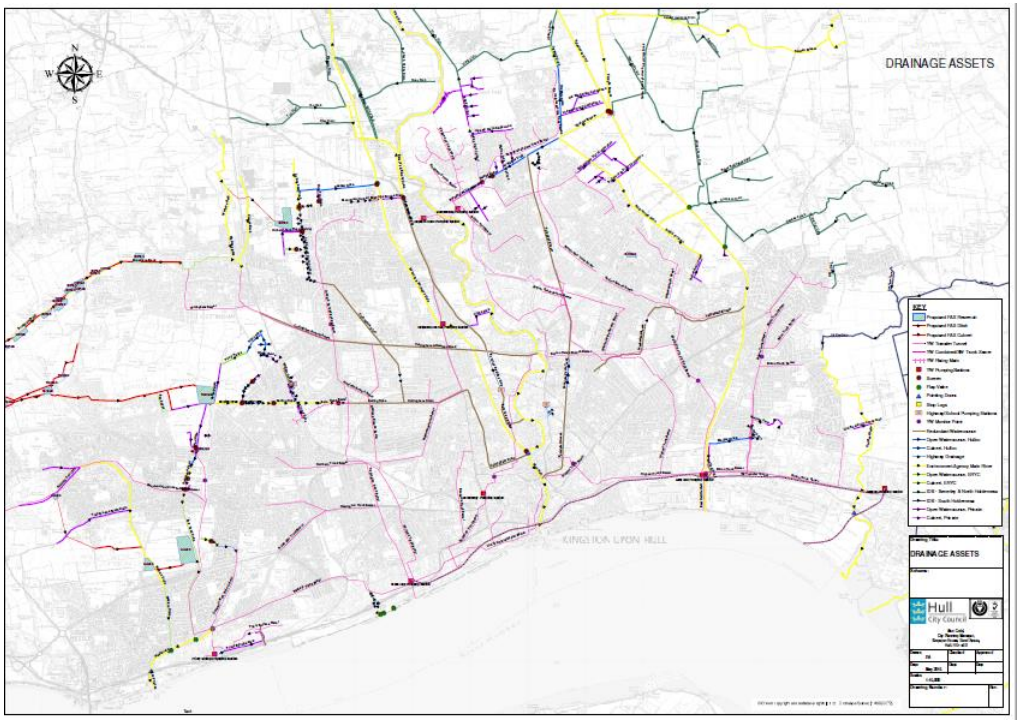


Fig. 1 Example decision tree (shown to depth 2 only) – acronyms from section 4.2

"Self-organising maps have been shown to be powerful for analysis of WDS water quality trends and relationships, in particular overcoming the challenges associated with sparse data and spatial scales ranging from DMA to region to country. The SOM was able to capture the strong correlation over large spatial and temporal scales" Mounce et al (2017)

Hull and East Riding – A case study

Systems are intrinsically linked, watercourse ownership changes throughout the catchment and often ultimately flows into the sewer network



- Environment Agency Main River
- YW Combined/SW Trunk Sewer
- Open Watercourse, Hullcc
- Culvert, Hullcc
- Highway Drainage
- Open Watercourse, ERYC
- Culvert, ERYC

Project aim

To utilise existing data in a new way to enhance its benefit by developing a tool which provides warnings to promote improved operational response and public information

Using existing data in a new way to create an early warning tool, this will help organisations to prepare a better operational response

Information could provide warnings to the public and businesses, improving awareness and resilience

Optimise and enhance existing system as well as identifying suitable locations for future investment

HULL AND EAST RIDING
LIVING with WATER

LIVING with WATER

YorkshireWater
EAST RIDING OF YORKSHIRE COUNCIL
Environment Agency
Hull City Council

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