



## **Sensor and Video Monitoring of Water Quality at Bristol Floating Harbour**

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Water system is an essential component in a smart city for its sustainability and resilience. The harbourside is a focal area of Bristol with new buildings and features redeveloped in the last ten years, attracting numerous visitors by the diversity of attractions and beautiful views. There is a strong relationship between the satisfactory of the visitors and local people with the water quality in the Harbour. The freshness and beauty of the water body would please people as well as benefit the aquatic ecosystems.

As we are entering a data-rich era, this pilot project aims to explore the concept of using video cameras and smart sensors to collect and monitor water quality condition at the Bristol harbourside. The video cameras and smart sensors are connected to the Bristol Is Open network, an open programmable city platform. This will be the first attempt to collect water quality data in real time in the Bristol urban area with the wireless network. The videos and images of the water body collected by the cameras will be correlated with the in-situ water quality parameters for research purposes. The successful implementation of the sensors can attract more academic researchers and industrial partners to expand the sensor network to multiple locations around the city covering the other parts of the Harbour and River Avon, leading to a new generation of urban system infrastructure model.