

Cost Effective Neural Technique for Alleviation of Urban Flood Risk

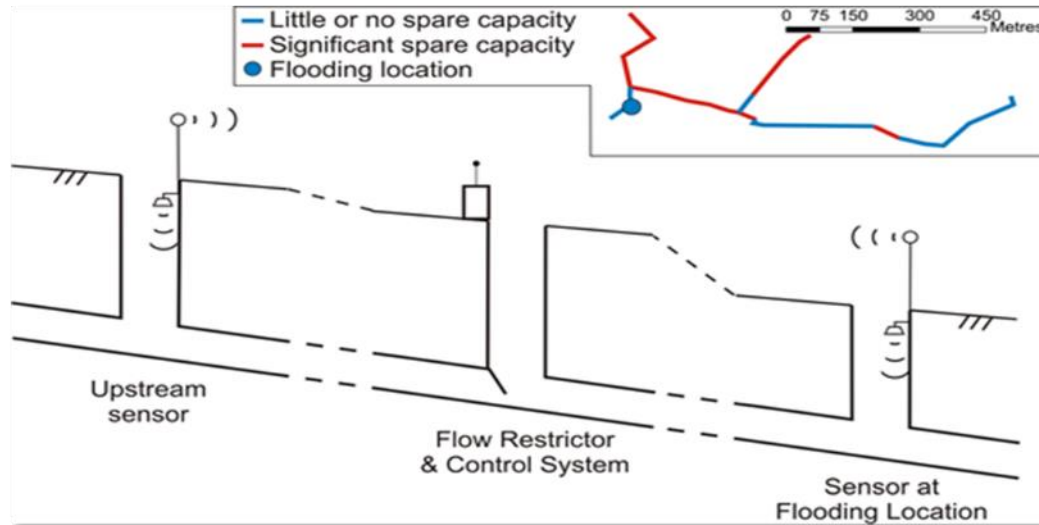
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Uses excess capacity in the sewer system

Data-driven: local sensor network

- Utilises existing in-network capacity to attenuate flow peaks
- Storage capacity mobilised by a motorised flow control system
- Controlled by Artificial Intelligence based local control system



- To adjust the balance of flood risk upstream and downstream of known flood locations
- Fuzzy Logic used to process local real-time in-sewer level information and reflect expert and local knowledge of network behaviour
- Installed in existing infrastructure

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MONITORING
SOLUTIONS



- **Low cost** RTC system, which drops in to existing infrastructure
- A **simple**, locally controlled system; where there is more than one gate they will work together
- **Adaptable** – deals with increases in impermeable area, climate change

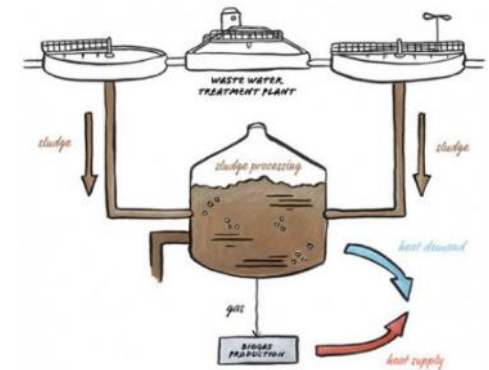
FUTURE PROJECTS:

Towards whole system approaches to wastewater

- Flow control
- Pollution reduction
- Blockage detection
- Heat recovery
- Carbon reduction
- Resource recovery
- Circular economy



<http://www.em-solutions.co.uk/innovation/smart-sewer>



<http://inners.eu/> :

Innovative
Energy Recovery
Strategies in the
urban water cycle