

CENTAUR

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Cost Effective Neural Technique for Alleviation of Urban Flood Risk

From 2015-09-01 **to** 2018-09-01, ongoing project

Project details

Total cost: EUR 3 532 121,25	Topic(s): WATER-1a-2014 - First application and market replication
EU contribution: EUR 2 548 395,63	Call for proposal: H2020-WATER-2014-two-stage
Coordinated in: United Kingdom	Funding scheme: IA - Innovation action

Objective

The project will develop a radically new market ready approach to RTC of sewer networks with the aim of reducing local flood risk in urban areas. Existing RTC pilot projects (e.g. Vienna, Dresden, Aarhus) are characterised by complex sensor networks, linked to centralised control systems governed by calibrated hydrodynamic modelling tools and fed by radar rainfall technology. Such systems are expensive and complex to install and operate, requiring a high investment in new infrastructure, communication equipment and control systems. In contrast, this proposal will develop a novel low cost de-centralised, autonomous RTC system. It will be installed, tested and demonstrated in a number of pilot study catchments. This RTC system will utilise data driven distributed intelligence combined with local, low cost monitoring systems installed at key points within existing sewer infrastructure. The system will utilise mechanically simple, robust devices to control flow in order to reduce flood risk at vulnerable sites. This system will be informed and governed directly by sensors distributed within the local network, without the need for an expensive hydrodynamic model or real time rainfall measurements. This system will deliver many of the benefits of RTC systems, whilst avoiding the high costs and complex nature of extensive sensor networks, centralised control systems, communications systems and infrastructure modifications. It is anticipated that such a system will be of significant benefit to operators of small to medium sized sewer networks.

Coordinator

THE UNIVERSITY OF SHEFFIELD
United Kingdom

United Kingdom

EU contribution: EUR 601 165

Participants

ENVIRONMENTAL MONITORING SOLUTIONS LIMITED
United Kingdom

United Kingdom

EU contribution: EUR 813 793,75

VEOLIA WATER OUTSOURCING LIMITED
United Kingdom

United Kingdom

EU contribution: EUR 360 041,5

UNIVERSIDADE DE COIMBRA
Portugal

Portugal

EU contribution: EUR 351 847,5

AC AGUAS DE COIMBRA EM
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EU contribution: EUR 80 035,38

EIDGENOESSISCHE ANSTALT FUER WASSERVERSORGUNG ABWASSERREINIGUNG UND
GEWAESSERSCHUTZ
Switzerland

Switzerland

EU contribution: EUR 0

STEINHARDT GMBH
Germany

Germany

EU contribution: EUR 341 512,5

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