

Case study: London Fire Brigade becomes an early adopter of Accessibility Now tool

Introduction

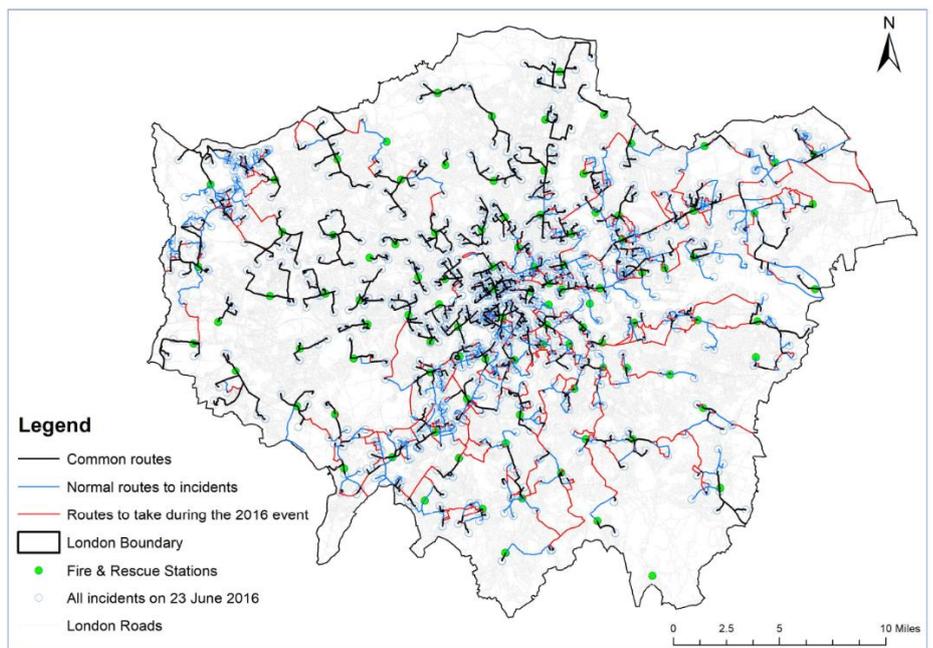
An estimated 680,000 properties in London are at risk from surface water flooding. This risk is rising by 0.5% annually and is expected to cost £171 million, every year by 2030 (Jenkins et al., 2018). The London Fire Brigade are inundated with calls during major flood events, to which they have committed target response times of 6 minutes. However, these are often missed during flood events where vehicles will encounter blocked roads and inaccessible vulnerable areas.



London Fire Brigade rescuing residents from flooding in June 23rd, 2016. Image credit: Paul Wood

Why change?

Due to their low resolution and poor accuracy, existing flood forecasting systems are not integrated with vehicle routing tools. As a result, they have been insufficient to support the London Fire Brigade's response to major flood events. The London Fire Brigade currently only have access to the Environment Agency's 2nd generation flood forecasting solution which has no localised surface water capacity. In response, they have been looking for a solution that can support their emergency response with actionable intelligence to help plan for and respond to flooding. By working together with Loughborough University, they helped develop our Accessibility Now tool which uses Previsico's 3rd generation flood forecasting system and traffic routing tools to identify the best routes to take during a flood event and help plan on locations to position vehicles prior to a flood.



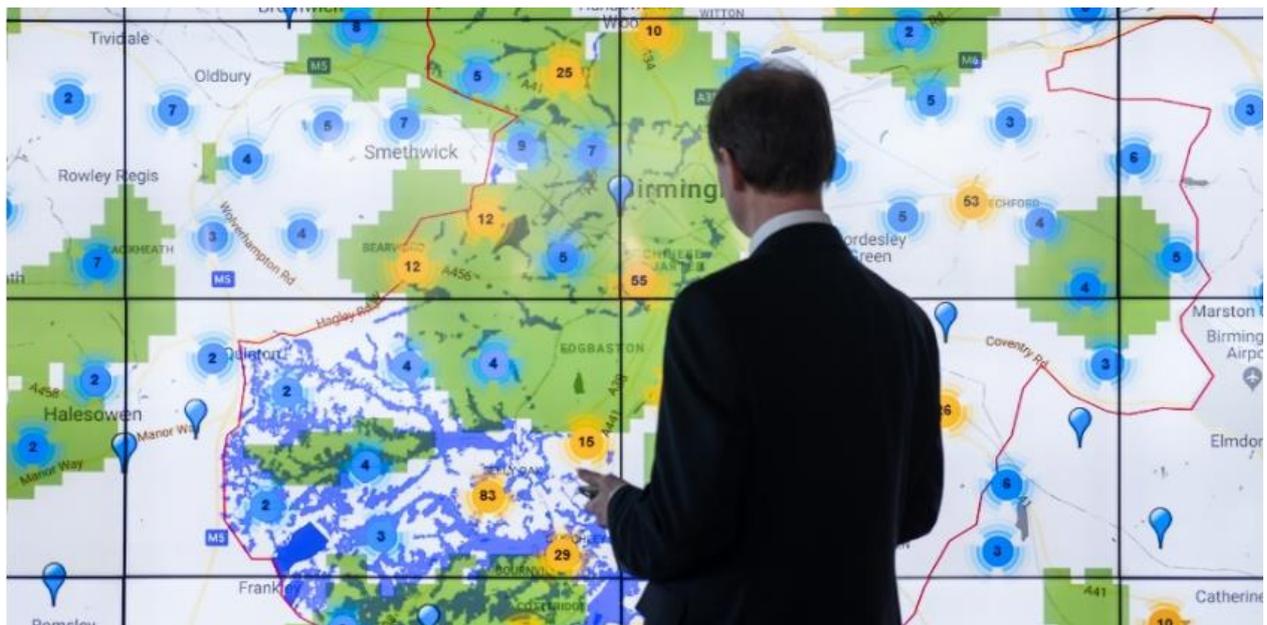
Map of fastest routes to travel from London Fire stations to emergency incidents, during normal conditions and the 23rd June 2016 flood event.

Why Previsico?

Following successful pilots of FloodMap Live as a Loughborough University research project, the London Fire Brigade supported a £300,000 research grant to develop Accessibility Now as an operation tool for event response. They have become a pioneer of its surface water flood forecasts, using the system to support responders in 2019.

Delivering results

- **Real-time updates:** Every three hours FloodMap delivers the latest freshly modelled flood forecasts. These feed into the Accessibility Now tool to provide a real time map of where vehicles are likely to be able to reach within 6 minutes at present and in the following 48 hours. In addition, users of the system can drag and drop a location pin to discover how their accessibility would change if vehicles were positioned at different parts of the city.
- **Integration:** No need to log into any other portals or look at old maps. FloodMap Live forecasts are viewable in real-time. As soon as a fresh forecast is made, it is integrated through an API into the ResilienceDirect platform (the British government's crisis management platform for civil protection practitioners).
- **Customer support:** With two researchers working specifically on user testing, we have carried out workshops with the London Fire Brigade to co-develop the tool to work for the Fire and Rescue teams.



Accessibility Now visualising accessibility (in green) of emergency responders and the impacts of flooding (in blue).

The future

As early adopters of the technology, the London Fire Brigade has grasped the opportunity to make the most of the Accessibility Now technology and are looking to use it across further teams involved in flood response including the use of accessibility mapping by fire and rescue services.

Further information available at www.previsico.com. To arrange a demonstration of FloodMap Live and find out how it can benefit your organisation, contact us on 03300883712, or email info@previsico.com.