PREVISICO

Reducing risk for a flood-prone region

Working in partnership with LLR Prepared to mitigate flood risk across Leicester, Leicestershire, and Rutland

Challenge

LLR Prepared is a resilience forum set up to cover Leicester, Leicestershire and Rutland – a large region with a history of localised flooding. Leicester is ranked 16th out of 4215 UK settlements for risk of surface water flood with 36,900 properties occupying flood-prone areas (Defra, 2009).

Although LLR Prepared has access to the Environment Agency's early warning systems for river and coastal flooding, there has been no property-level surface water flood forecasting system to date which they can use. In response, LLR Prepared sought a solution to help plan for, and respond to surface water flooding.

Solutions

Previsico provides real-time, property-level surface water flood forecasts using proprietary live hydrodynamic modelling software and sensor technologies to help mitigate flood-related impacts and losses. Solutions cover surface water and ordinary watercourses – flood perils not covered by other forecasting systems.

- **Email notifications:** Automated email warnings when districts and properties are at risk of flood.
- **Flood dashboard:** Displays predicted time and depth of flooding up to 48 hours in advance and visualises data from sensors.
- **Water depth and flow sensors:** Located on and around critical infrastructures. Either stand alone or complementary to forecasting solutions, giving customers both the confidence and time to act in a flood event.
- **API feed:** Automated real-time forecast data and warnings that integrate with existing systems.

Benefits

- LLR Prepared are now able to continuously monitor and predict surface water flooding at an individual property level.
- Warnings: Live forecasts enable flood action plans to be implemented and local emergency teams to be warned up to 48 hours in advance.
- In June, 2019, Previsico's predictions were verified as accurate by emergency responders.

> **What began with an exploratory chat about flooding in Leicester, Leicestershire and Rutland is now a useful, lifesaving system. The team have worked hard to make this work and not been afraid to test it in real exercises with emergency services and partners here first. Applied worldwide, this can save lives and livelihoods.**

Simon Cole,
Leicestershire Police Chief Constable and LLR Prepared Chair

The growing flood problem...

- 1 in 5 properties affected by surface water flood risk.*

- Flood losses expect to increase five-fold by 2050.*

- Long-term mental health problems up to nine times more likely for flood victims.*

* References

Leading the way through technology and data

Previsico's algorithmic technology draws on several leading data sources, including best available weather nowcasts and forecasts, satellite imagery, ground sensors, LiDAR elevation data, land cover, drainage and geology.

Get in touch

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