

Using social networking to spread the word about flood risk

With one in six properties at risk, flooding is a sensitive issue for more than five million people in England and Wales. Warnings enable those who live and work in areas vulnerable to flooding to prepare before flood waters rise, so, ensuring the message is widely heard is vital.

Forecasting floods and issuing warnings is one of the Environment Agency's key roles. Whilst alerts are broadcast via local television and radio, the Agency's website and a dedicated telephone and information service, social media

is opening up new opportunities for communicating with the public.

By tapping into the popularity of social networking, the pioneering FloodAlerts app provides flooding updates every 15 minutes to more 16,000 Facebook® users. Created using cloud technology (together with open and licensed data by Shoothill, an Ordnance Survey partner), the award-winning interactive app is the first graphical representation of flood warnings on a social network. It uses raster data from the Ordnance Survey as well as Bing™ maps. The live flood warning feed is taken automatically



from the Environment Agency's data hub, which delivers information to multiple channels including its website.

The challenge

Identifying areas prone to flooding has far-reaching implications for residents and businesses, so it is important that the Environment Agency provides the best possible indication of areas at risk. Whilst the app uses aerial imagery from Bing maps as a base, it also requires an additional layer of data, for those who prefer to view information on traditional mapping, which provides further detail for the user.

The solution

The multi-layered mapping in both the FloodAlerts app and Environment Agency's live flood warning map provides an option to view flood-risk information for a specific location on 1:10 000 Scale Raster and 1:25 000 Scale Colour Raster data from Ordnance Survey. The data, which is familiar to many as the popular outdoor leisure map series was chosen because it is widely understood and trusted. It is supplied free at the point of use under the Public Sector Mapping Agreement (PSMA), a centrally-funded licensing agreement between government and Ordnance Survey, which also allows data sharing with contractors delivering services on behalf of members.

Users can register one location, such as a home, road or office, to receive a



notification on their Facebook wall and an email when a relevant warning or alert is issued. Traditionally, properties at risk have been located by postcode but by clicking or zooming to a specific point on the maps, warnings can also be accessed and received for non-addressable premises such as roads, depots or any feature on the map. Users can elect to receive alerts, warnings, severe flood warnings and warnings no longer in force.

The FloodAlerts app and Live Flood Warning Map have both been well received by the public – reaching a peak of 25,551 simultaneous users on 6 July 2012 at 9.00 pm. The FloodAlerts app has also won a number of awards including the Innovation in Enterprise Category in the Guardian and Virgin Media Business

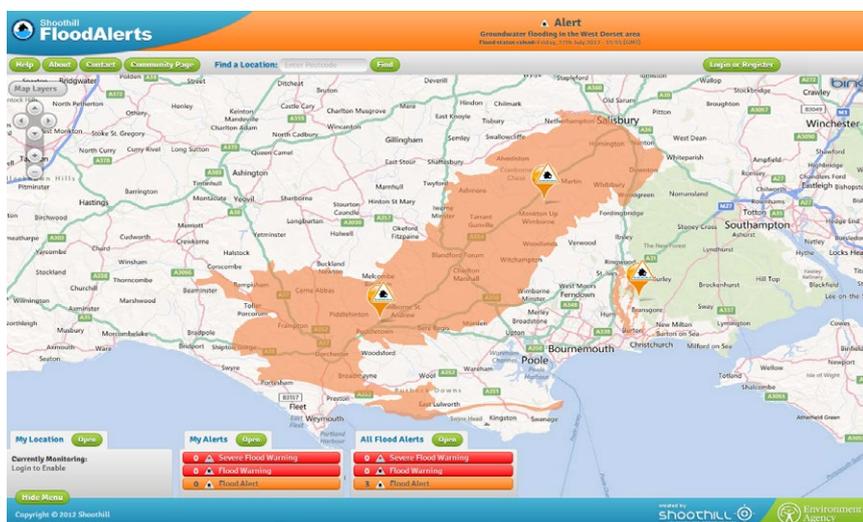
2012 Innovation Nation Awards. In addition, it was shortlisted as a finalist in the UK IT Industry Awards for Innovation and Entrepreneurship and The Institution of Engineering and Technology Innovation Awards for Information Technology.

Richard Benyon MP, Minister for Natural Environment and Fisheries at the Department for Environment, Food and Rural Affairs said: 'This is a fantastic example of private sector involvement in this important area and shows how social media tools can be used for wider real-world benefit.'

The benefits

- Fulfills the Environment Agency's objective to provide near real-time flood information, free of charge to citizens and business.

- Extends the reach of flood warnings so that more people can be warned of potential risks in advance and prepare accordingly.
- Delivers an easy-to-access, easy-to-understand and widely-trusted visual representation of flood data.
- Enables collaboration between the public and private sectors through PSMA licensing.
- Provides a blueprint for other organisations responsible for raising public awareness of environmental or other hazards.



Live flood warning polygons displayed in the Bing API



Live flood warning map polygons displayed on Ordnance Survey 1:50 000 Scale Colour Raster mapping

'Flood risk is a sensitive issue as drawing a line on the ground showing areas warned, or at risk of flooding has important implications for local residents and businesses. We therefore need to show our warnings on map data that people can instantly recognise as being reliable and accurate.'

'The use of Bing maps together with familiar Ordnance Survey outdoor leisure mapping, here used as 1: 10 000, 1: 25 000, and 1: 50 000 Scale Raster data, is trusted by people across England and Wales and provides the perfect balance between accessible, user-friendly maps and the high levels of detail we require.'

Frazer Rhodes, FCRM Senior Advisor, Environment Agency

Data products used:

- 1:10 000 Scale Raster
- 1:25 000 Scale Colour Raster
- 1:50 000 Scale Colour Raster

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