

Thursday 28 March

InterFlood 4: Innovations in Flood Mitigation, Management & Resilience

Digital transformation of flood warnings. Making critical information available at the right time to the right people in the right way

Frazer Rhodes, Service Owner, GOV.UK Flood Services, UK Environment Agency

Digital transformation of flood warnings:

Making critical information available at the right time, to the right people, in the right way.




Frazer Rhodes

Service Owner: Flood Information Service GOV.UK
(Environment Agency)

@FloodDigitalEA

28 March 2019





We manage the risk of flooding from **main rivers, reservoirs, estuaries** and the **sea**

13 million hectares of land, **35,000** km of river & **5,000** km of coastline.

2.3 million customers on our warning service, **5 million** messages sent in the last 12 months.

One in 6 properties in England is at risk of flooding

1950s - 1970s
 Dissemination
 between authorities
 via **telegram** &
**phone + limited
 public siren
 network**

Late 1990's
 Transition to
 automated, more
 targeted alerting with
**Opt-in warning
 service** via **phone,
 fax, & pager**

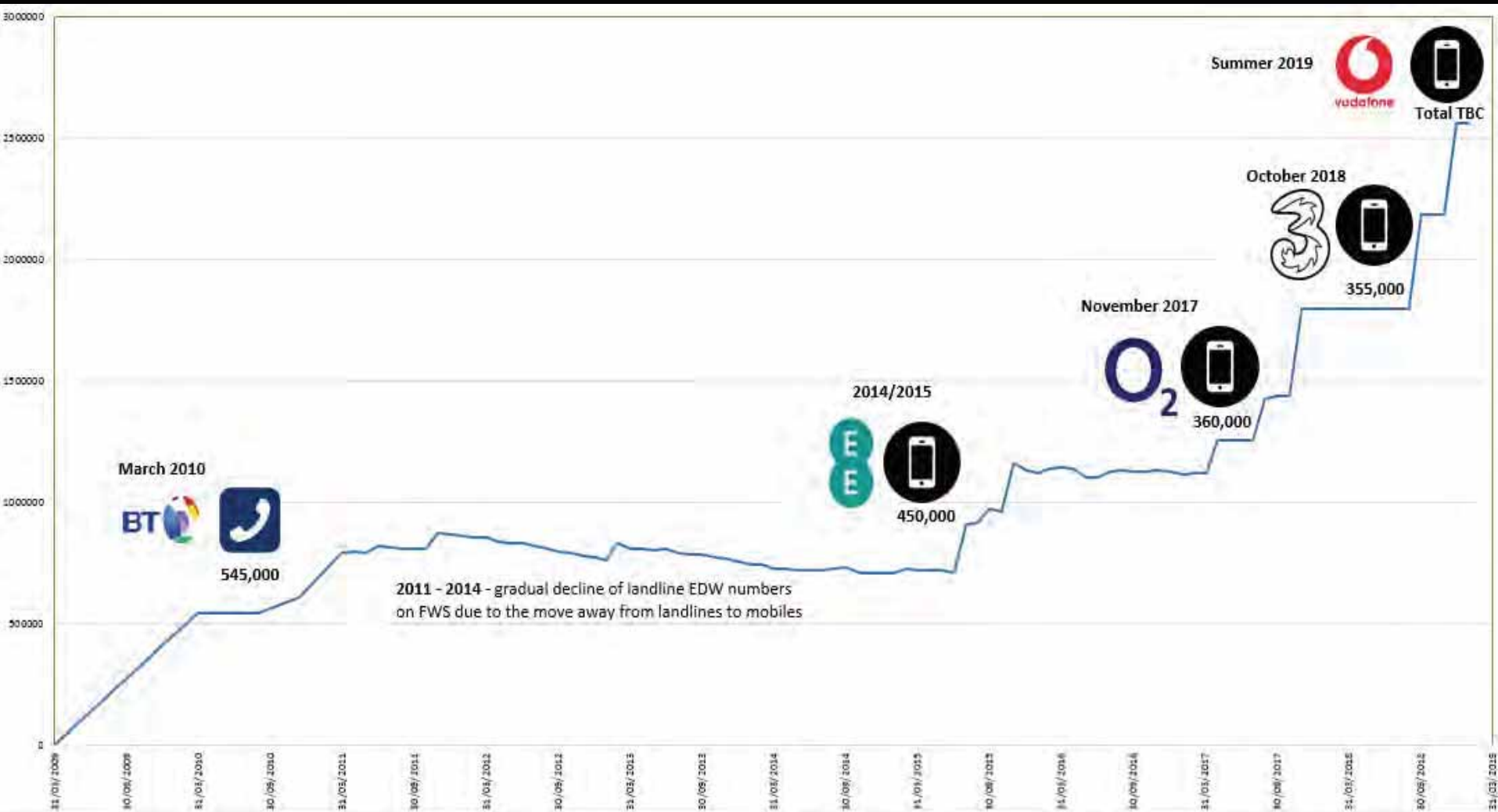
1980s - early 1990s
 Dissemination of
 public flood
 warnings via
Police and **Local
 Authorities.**

2000s +
 Single national flood
 warning system.
Multi-channel and
 introduction of '**Opt-
 out**' approach to
 warning registration.

Flood Warning in the UK has developed since the 1950s



Growth of 'Opt-Out' Warning Service in England & Wales



**We have been highly successful
in recruiting citizens to the flood
warning service**

A man in a dark jacket and yellow collar is standing next to a metal fence, looking towards a flooded area with debris. The water is murky and turbulent, with a large log and other debris floating in it. The man appears to be monitoring the situation.

**But what can we do to warn
those at highest risk?**

First authority in Europe to publish warnings with Google Public Alerts

The web is looking out for you

Being prepared is just as important as knowing what to do in a crisis. Public Alerts provide a warning before disasters cause damage, and the Crisis Response team is focused on providing alerts for the most significant disasters in each country.



Environment Agency

Critical information targeted to those who need it



Results in Google Search

If you search for a place where there is a relevant active alert, or from within an affected area where there's a relevant active alert, you'll see a warning, and a link to click through to find out more information.



Local updates on Google Maps

If you're searching Maps on desktop or mobile, you'll get relevant alerts for that area. The Google Maps for Mobile app can also display a warning notification if there is a relevant alert nearby.



Notifications on Google Now

If there's a relevant active alert for your local area, you'll receive a notification to let you know what's going on, and where.



Environment
Agency



Adopt the **Common Alerting Protocol (CAP)** for our Alerts and Warnings

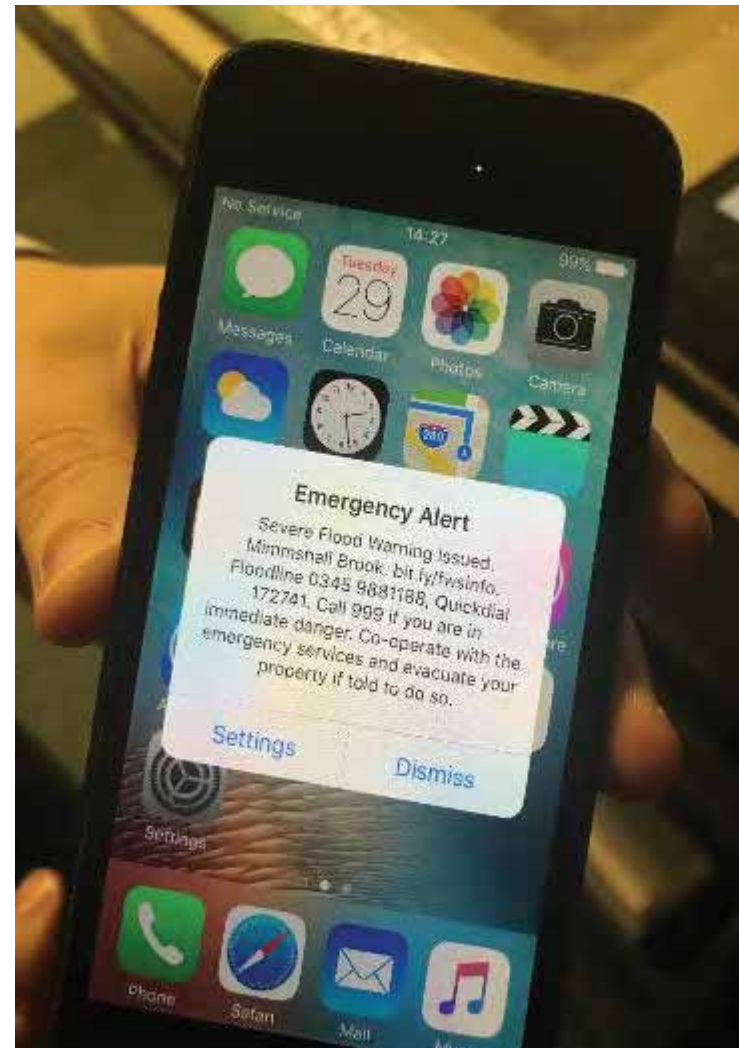
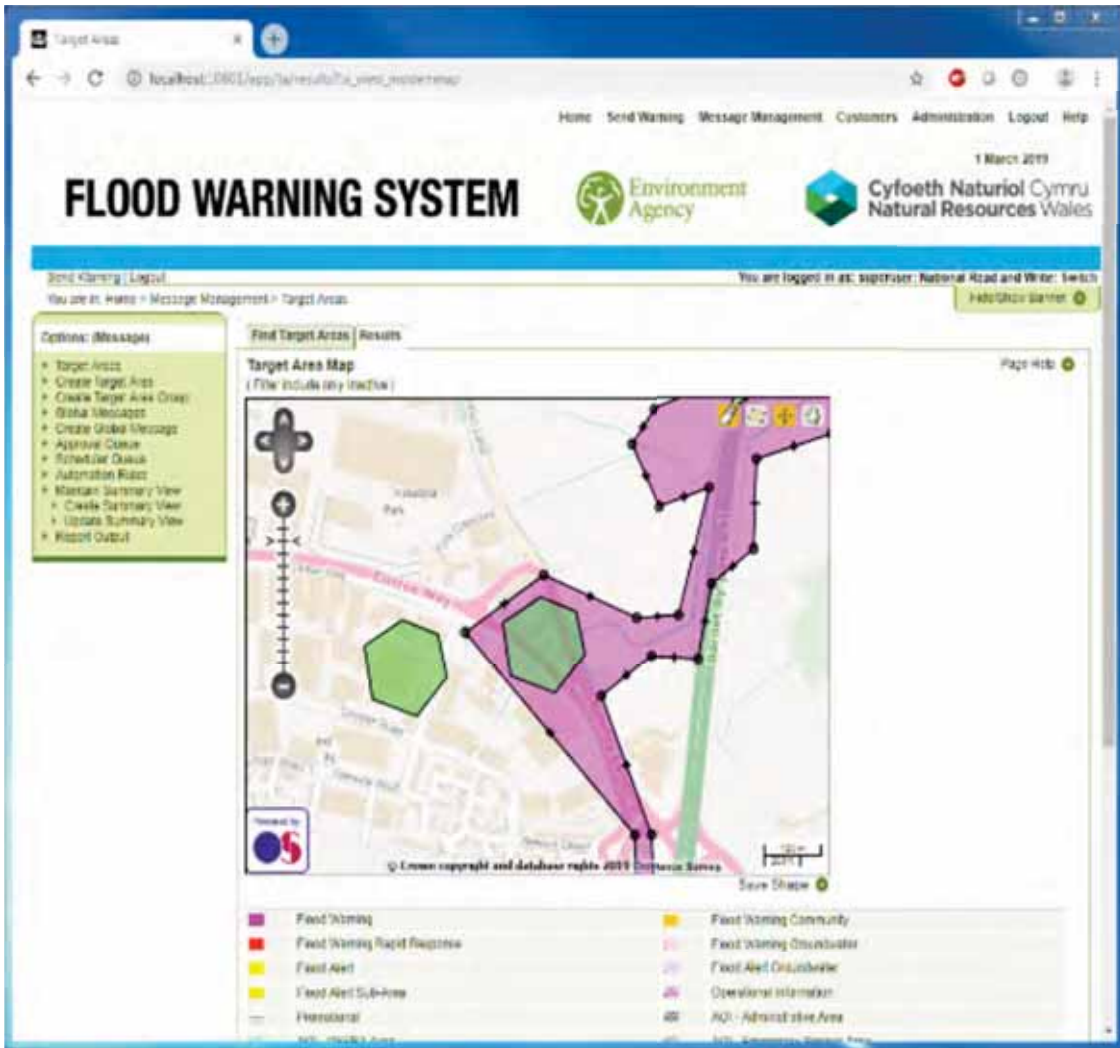
Ensure our data was available and accessible as **Open Data** (Open Government Licensing)

Develop a data hub to transmit the CAP messages, **test with Google**, finalise message content.

Three key stages.

A collage image. On the left, a person is seen from behind, wearing a white shirt and dark pants, with a large, crumpled blue tarp draped over their head and shoulders. On the right, a white SUV is stacked on top of a silver hatchback car. The background is a blurred outdoor scene with green foliage and a faint rainbow visible in the sky.

Can we increase the reach of warnings even further?



Cell Broadcast Trial



FUJITSU



Environment Agency

Right Time

Use of automation plus the ability to **respond to no-notice or short notice** incidents and integrate warnings with platforms and services familiar to citizens.

Right People

Substantial shift to 'mobile first', an increase in the use of location based services enabling alerts to be **targeted to those at highest risk.**

Right way

User behaviour shows a decrease in the success of opt in systems with users expecting authorities to **push alerts** to them, by text to their device.

Making critical information available at the right time, to the right people, in the right way

Thank you



@FloodDigitalEA

Frazer Rhodes
Flood Information Service GOV.UK

