



FLOODFORECASTINGCENTRE

a working partnership between



Monitoring and Forecasting Mechanism in UK

Charlie Pilling, Chief Hydrometeorologist & International Meteorologist



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What we will cover

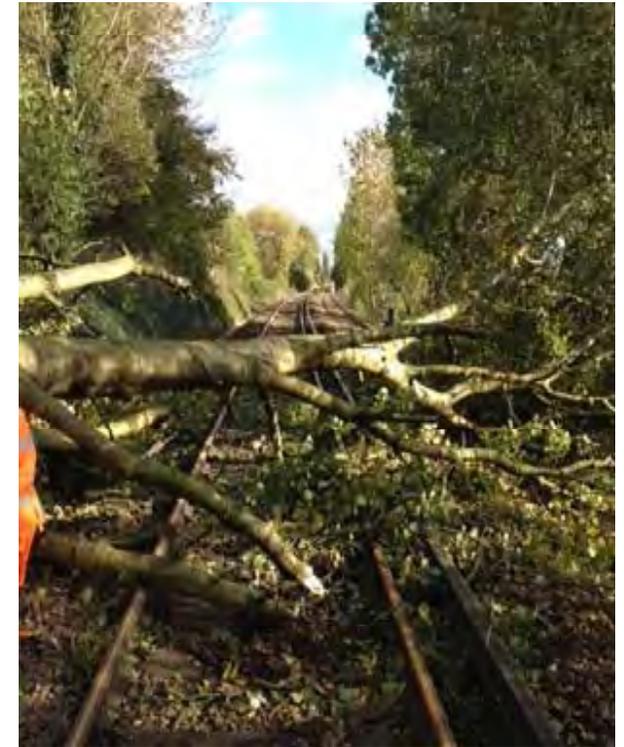
- 1) Met Office forecasting, warning and communication of severe weather (flavour)
- 2) Impact based forecasting and risk based warnings (intro)
- 3) The Flood Forecasting Centre, and how it works with the Met Office and the Environment Agency (value)
- 4) And, introduce a piece of scoping work – your help 15-30 minutes of your time please



Public Weather Service



The purpose of the Public Weather Service is to help protect lives, property and infrastructure from weather impacts, and to contribute to UK economic growth through the effective use of weather information





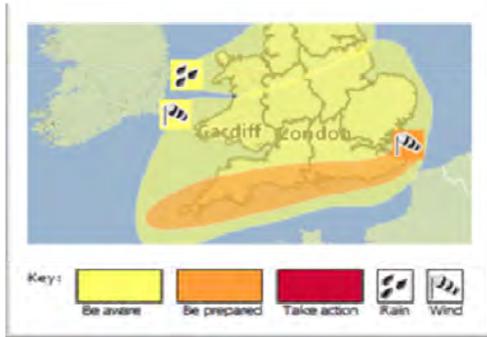
Civil Contingency Services



Public Services



Warning Service



Data Services



National Capability



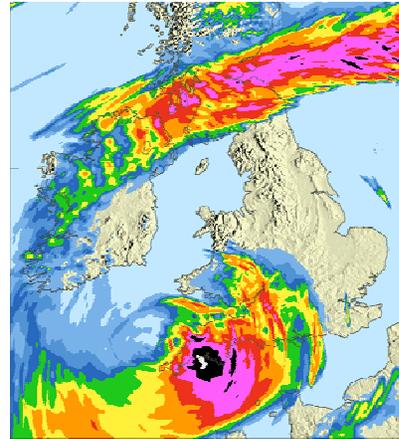
International Commitments



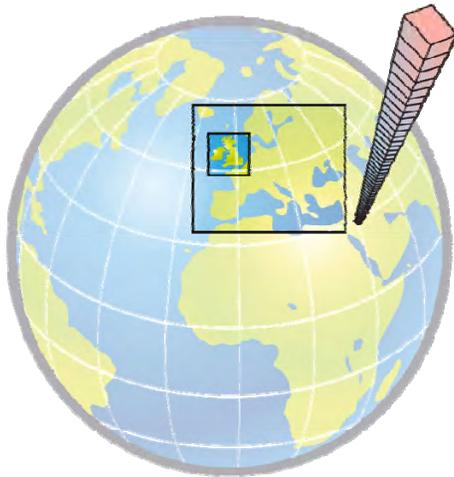
National Capability Underpins all Weather Services



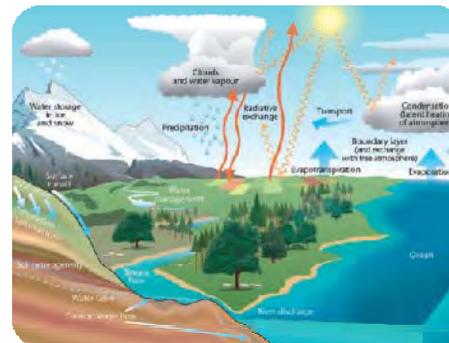
Observations



Meteorologists



Forecast Models

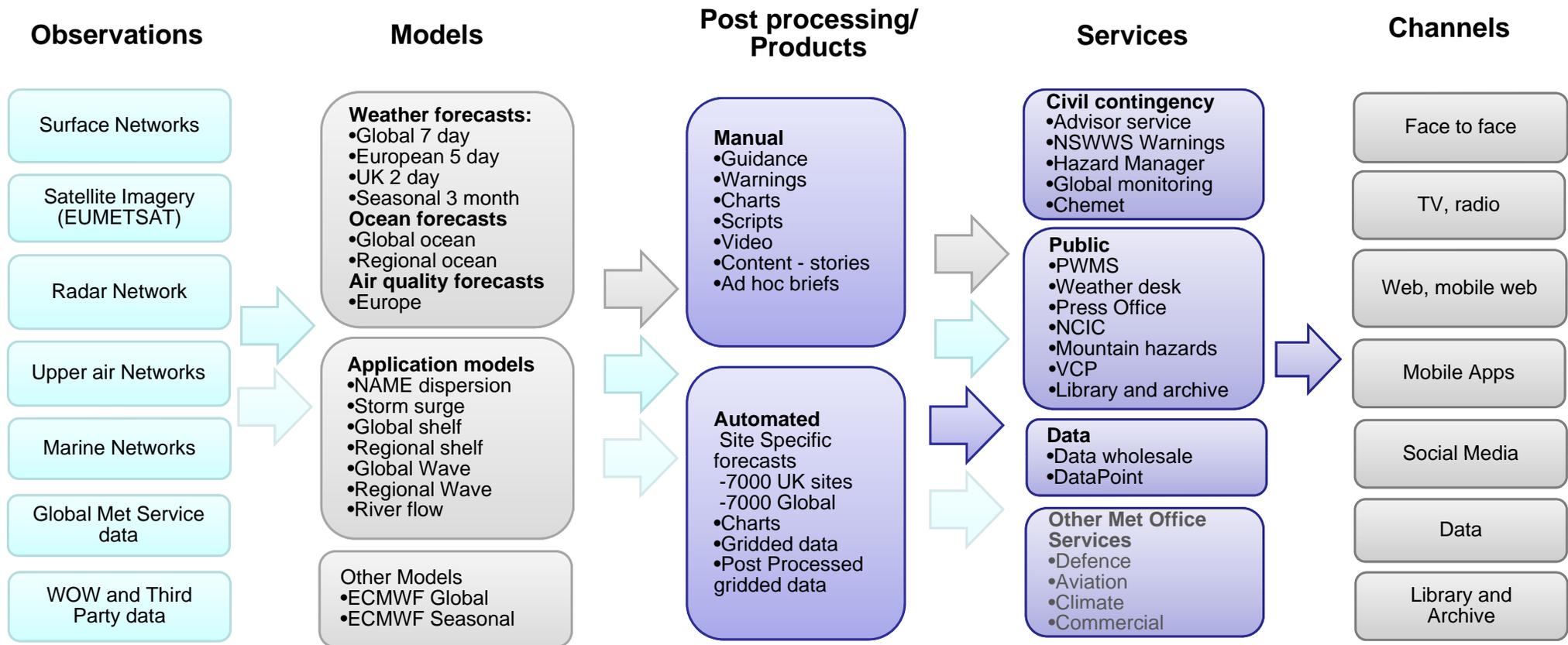


Science



Supercomputers

The Public Weather Service - Scope



Science

Model development and evaluation, atmospheric processes and parameterisations, dynamics research, observational research, data assimilation, ocean forecasting, IT, satellite applications, post processing and verification, dispersion and air quality, science partnerships, FAAM, Cardington

IT Infrastructure

Supercomputer , MASS storage, Mainframe, Networks, Server estate, Desktop, Product development, web hosting, security

Corporate Overheads (50%)

Exec & Board, HR, Plans and performance, stakeholder affairs, legal, procurement, finance, audit, comms



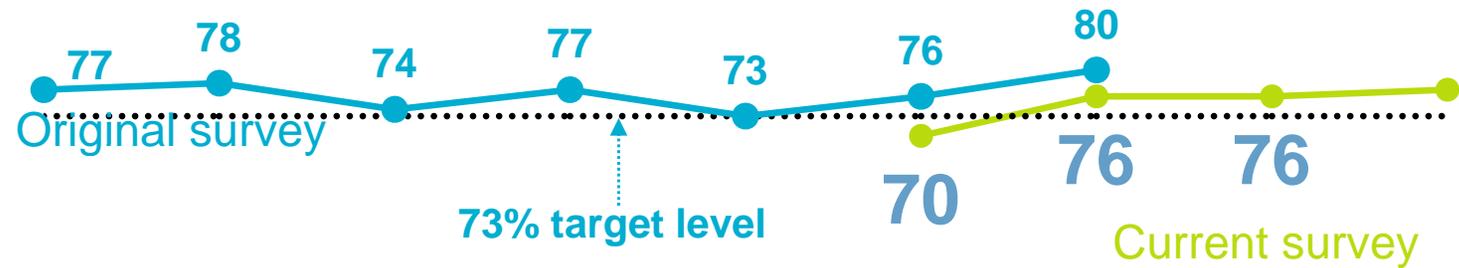
Met Office



Public Services

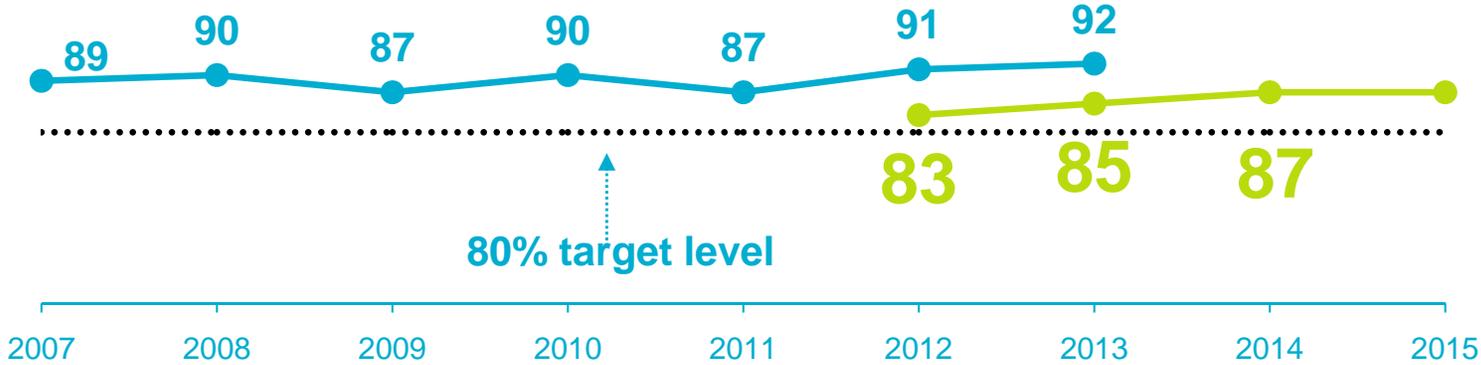
Generally, the public think that forecasts are useful and accurate

✓ Accuracy



77%
find very or fairly accurate

✓ Usefulness

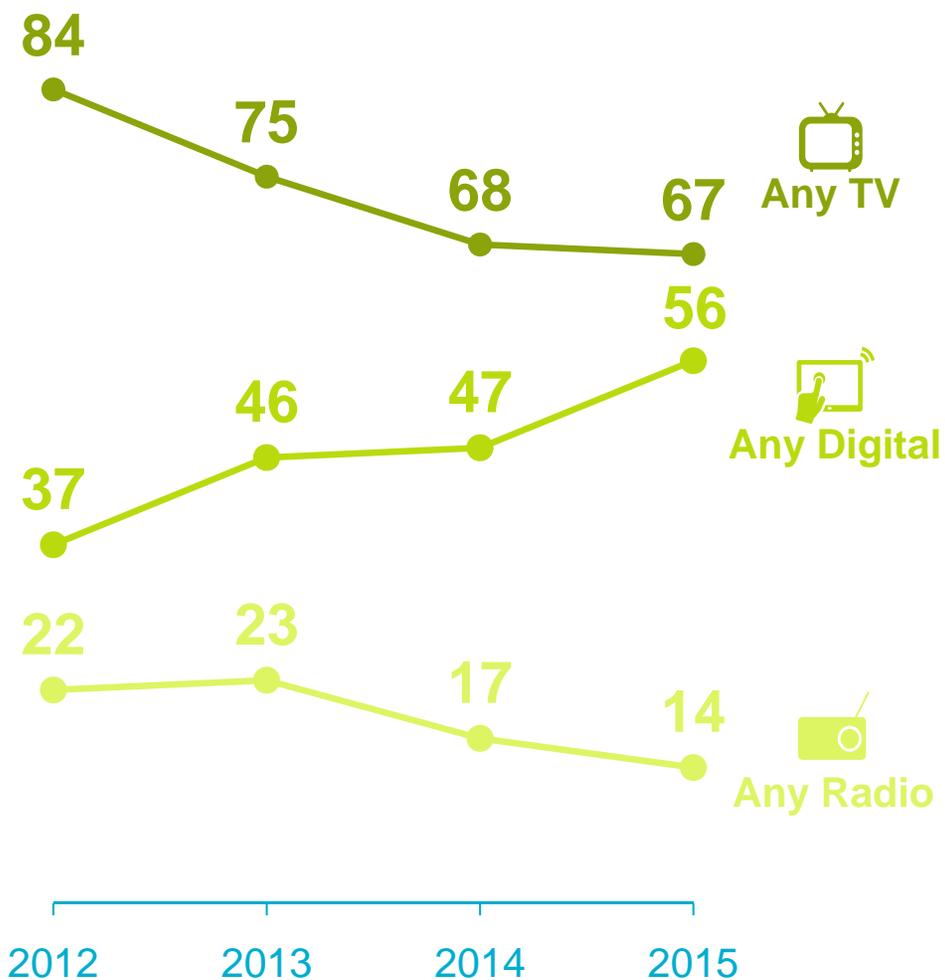


87%
find very or fairly useful

But efforts to improve the “strength” of approval would still be beneficial - just 9% consider forecasts **very** accurate and 32% **very** useful

TV remains the dominant source of weather information – despite growth in digital

% using media for forecasts and weather information



Under 45s are more likely to use digital media – but the gap is closing



Public Reach – Consistent Forecasts Through all Major Channels



TV and Radio



Desktop



Mobile Weather



Tablets - iPad, Kindle



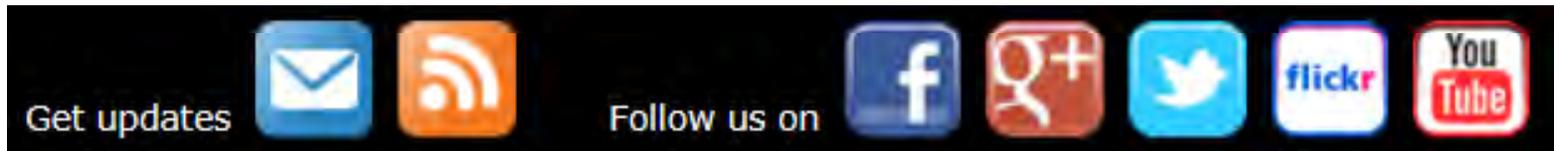
Android App



iPhone App

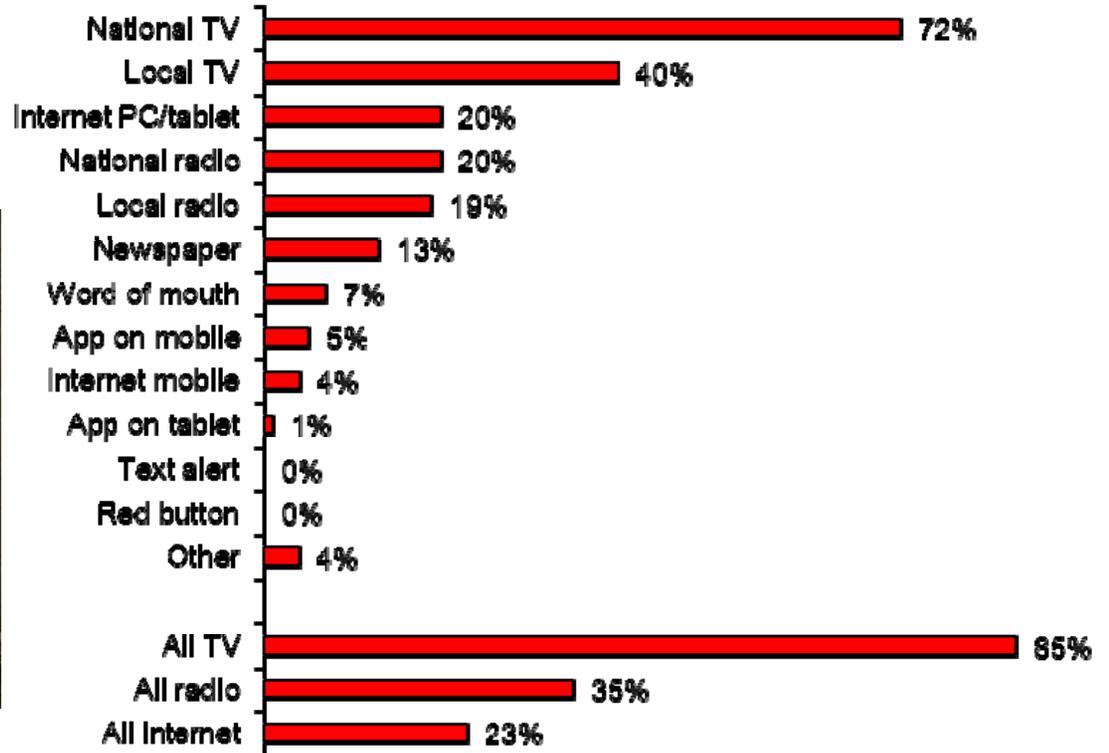
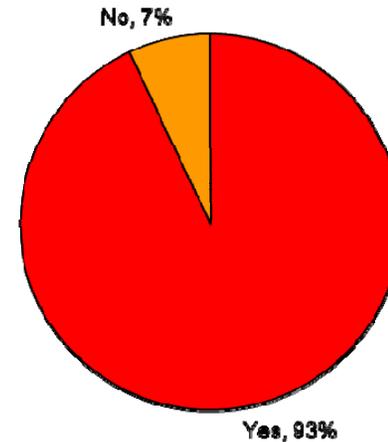


Windows 8 App



Public Reach

Q1. Have you seen or heard any severe weather warnings in the last few days?



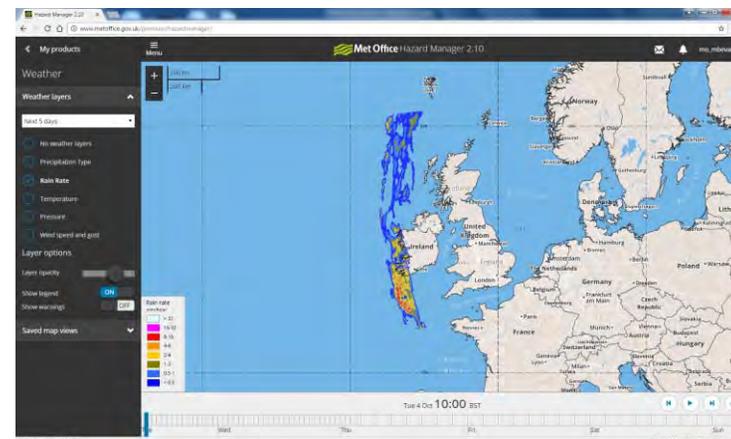
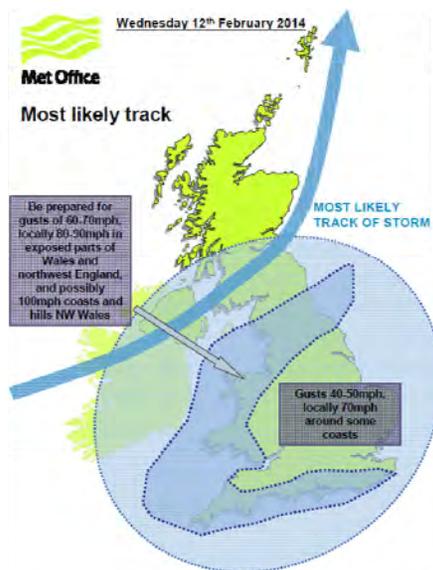


Civil Contingency Services



Civil Contingency Services

Briefings to
COBR, LRFs,
CGs



Hazard Manager

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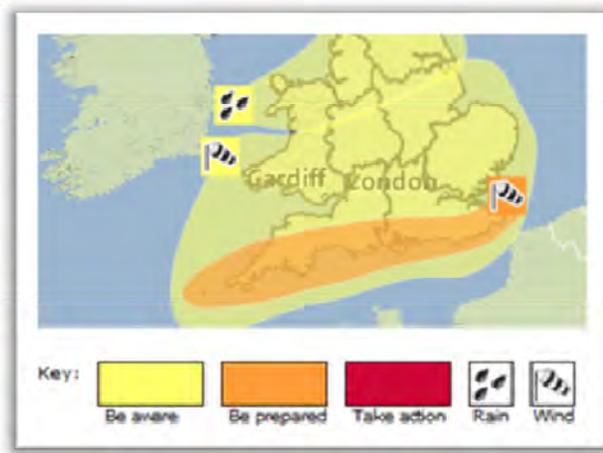
Flood Guidance Statement 10:30hrs 05 July 2012

Our assessment of daily flood risk for England and Wales is below.



10:30 - 23:59hrs	00:00 - 23:59hrs	00:00 - 23:59hrs	00:00 - 23:59hrs	00:00 - 23:59hrs
Thursday 06 July 2012	Friday 06 July 2012	Saturday 07 July 2012	Sunday 08 July 2012	Monday 09 July 2012

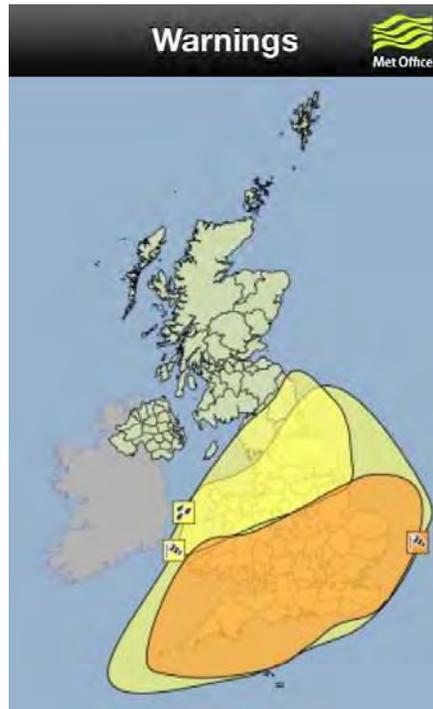
Headline
The river and surface water flood risk is **MEDIUM** (significant disruption) for eastern, central and northern England and northeast Wales on Friday and northern England on Saturday.
Potential to increase the flood risk for Friday / Saturday, with the possibility of severe disruption.
An updated FGS will be issued at 15:30 this afternoon.



Guidance & Warnings



Warnings



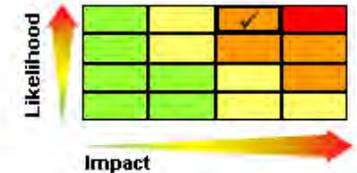
UK
Weather warnings
Met Office

Red warnings have been issued

Download a Weather App for your device
Guide to warnings © Met Office Crown Copyright



National Severe Weather Warning Service



Chief Forecasters Assessment
A slow-moving frontal system is bringing a prolonged spell of heavy rain and strong winds. For the rest of Saturday and the early hours of Sunday further rainfall totals of around 15 to 30 mm are expected, although greater amounts are expected within the area covered by the red warning. Given saturated conditions and high river levels from recent rainfall, further flooding is likely.

The Met Office have issued an Amber Warning of Rain

Valid from 22:05 on Sat, 05th Dec 2015 until 07:00 on Sun, 06th Dec 2015

Rain, heavy and persistent in some regions is expected to start to clear from the NW from midnight, finally clearing the south of the area by dawn Sunday. After the rain clears Sunday is then expected to be dry.

Be prepared for the likelihood of further flooding affecting properties and parts of communities. Watercourses may become dangerous, deep and fast-flowing, while further disruption to transport is expected. Note that river flooding may cause high impacts in small areas.

This is an update to the warning issued on Saturday morning to extend the area southwards as far as Preston.

For more details please go to:
<http://www.metoffice.gov.uk/public/weather/warnings>

Issued by the Met Office at 04:19 on Fri, 04th Dec 2015

Updated by the Met Office at 21:59 on Sat, 05th Dec 2015

For enquiries regarding this warning please contact the Met Office Weather Desk
Phone: 0370 900 0100 Fax: 0370 900 5050 E-mail: enquiries@metoffice.gov.uk
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Public Weather Service Customer Group PWSCG

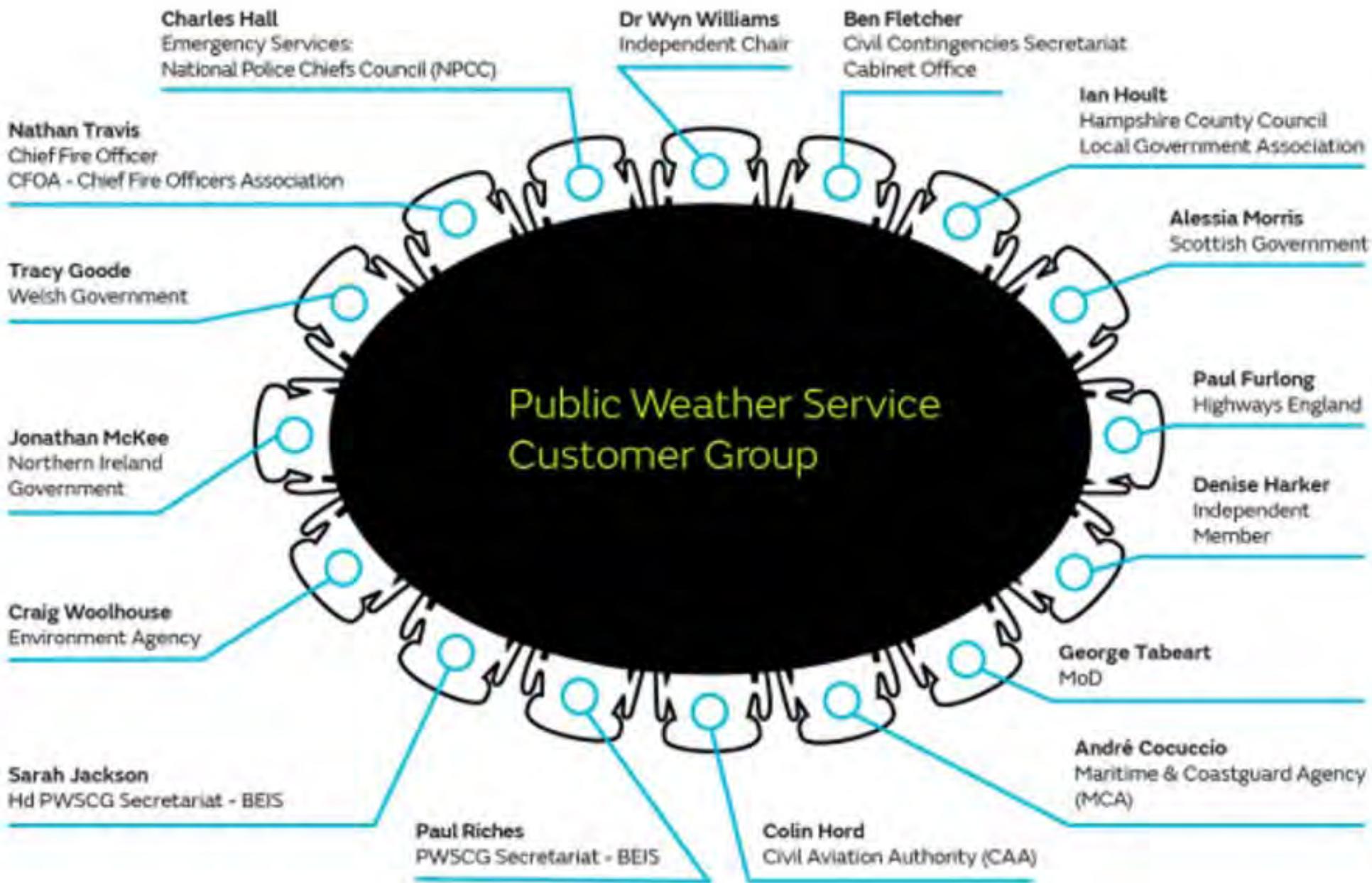


Public Weather Service Customer Group

Acts as the customer for the Public Weather Service - on behalf of the public and emergency response community

- Ensure value-for-money
- Define the Met Office public task
- Define outputs and targets
- Public consultation
- Ensuring international commitments are met

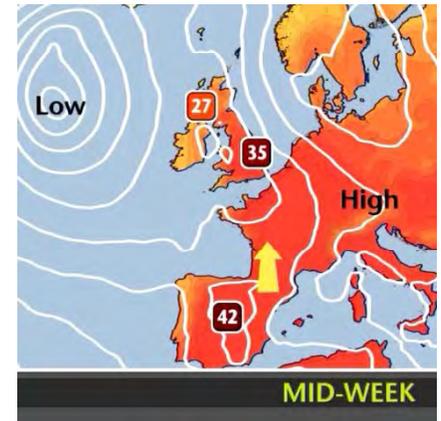






PWS Priorities (2016+)

- Accuracy
 - New HPC, satellites, Science
 - Guidance – the human element
 - Probabilistic/dual-symbol
- Reach
 - Public Weather Media Service for broadcasters
 - Update Apps
 - Content and Context
- Engagement
 - Driving 'Weather Decisions'
 - Advisor Service
 - Update National Severe Weather Warning Service





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End of part 1.....



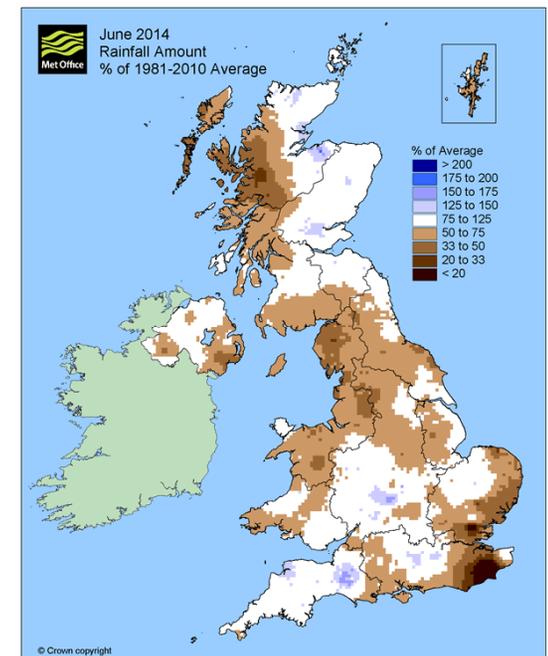
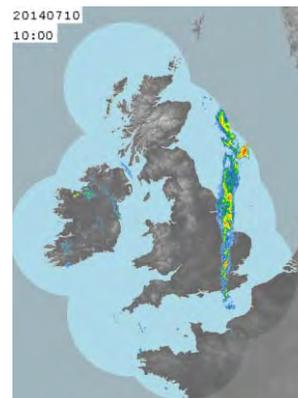
Met Office



Data Services

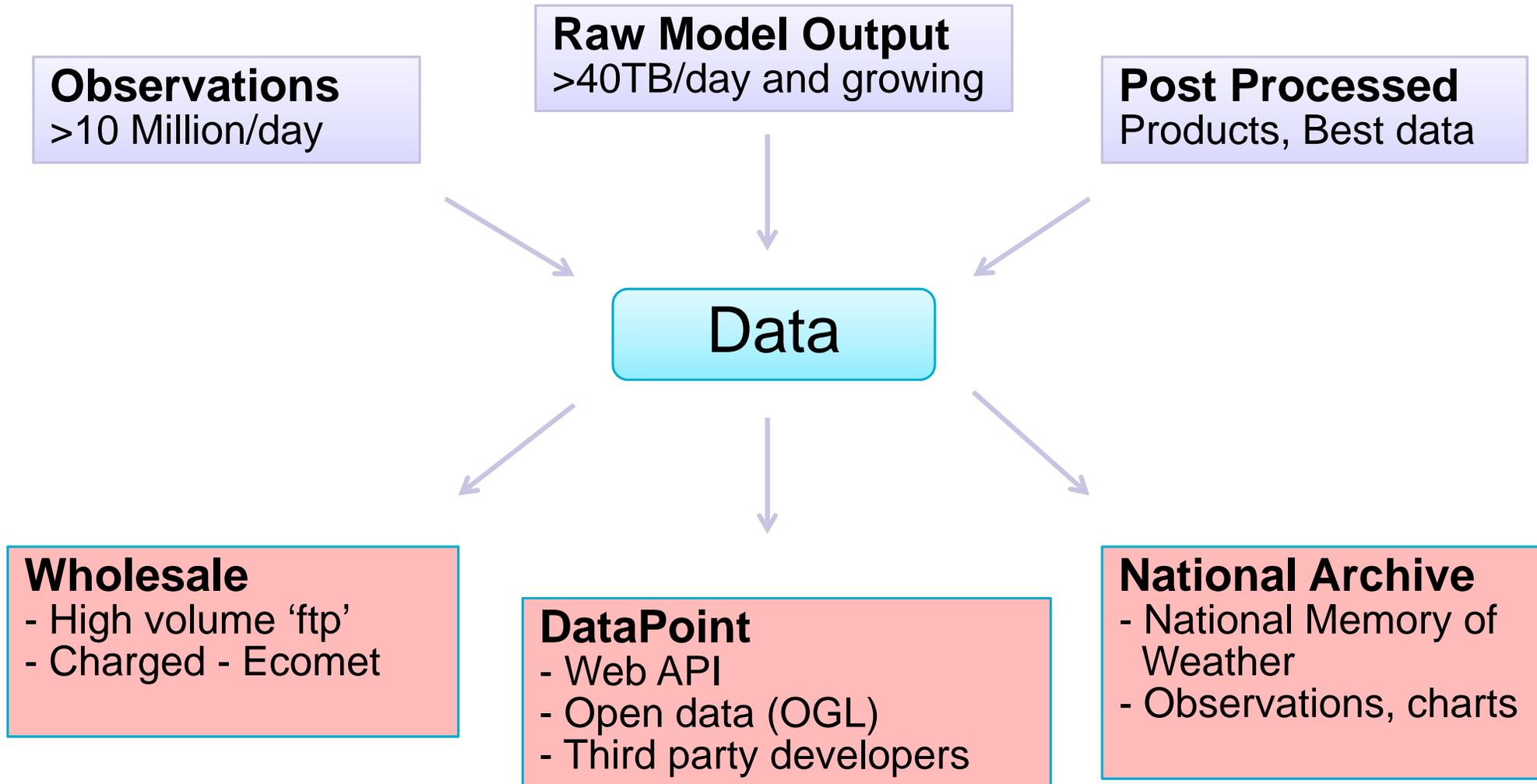
PWS data Services

- Why?
 - Compliance - level playing field and competition law
 - Global met data exchange
 - Collaboration
 - Open data agenda
 - Reach – enable third party re-use
- Elements of a data service
 - Discovery
 - View
 - Download
 - Support





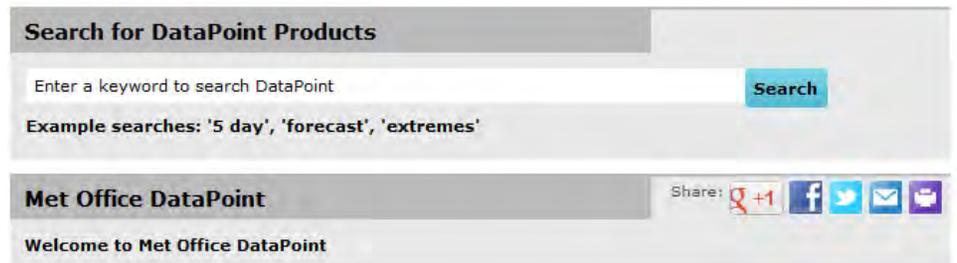
Data Sources and Services





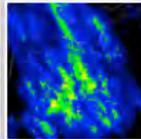
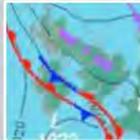
DataPoint

- Met Office web based 'API'
- Wide range of forecast data, map layers and scripts
 - 7000 sites
- >3000 Active Users
- Facilitate third party development of weather apps



DataPoint is a way of accessing freely available Met Office data feeds in a format that is suitable for application developers. It is aimed at professionals, the scientific community and student or amateur developers, in fact anyone looking to re-use Met Office data within their own innovative applications.

[Show all products >>](#)

 <p>Rainfall radar map layer Radar image showing observed rainfall rates provided as a map overlay</p>	 <p>Mountain weather forecasts Data and content used to provide Mountain weather forecasts</p>
 <p>Lightning strikes map layer Image showing lightning strike frequency provided as a map overlay</p>	 <p>Pressure forecast map layer Forecast map layer for the UK showing mean sea level pressure</p>
 <p>National Parks weather forecasts Data and content used to provide National Park weather forecasts</p>	 <p>UK 3-hourly site-specific forecast A quality controlled forecast datafeed out to 5 days</p>
 <p>Surface pressure charts Surface pressure charts showing pressure levels and weather fronts</p>	 <p>Regional extremes observations Observation extremes are provided by region for the</p>



Bike or Tube
Barometer

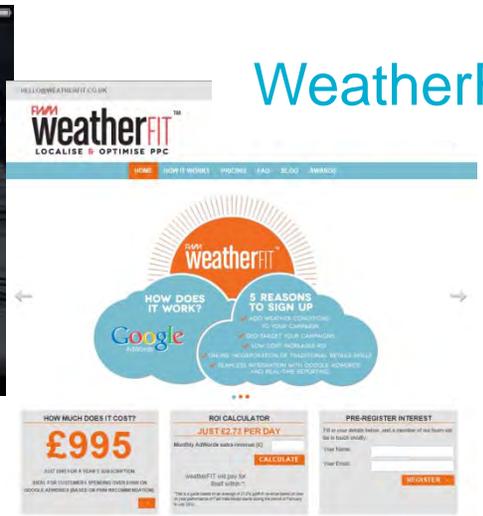


Heatmiser –
thermostat control

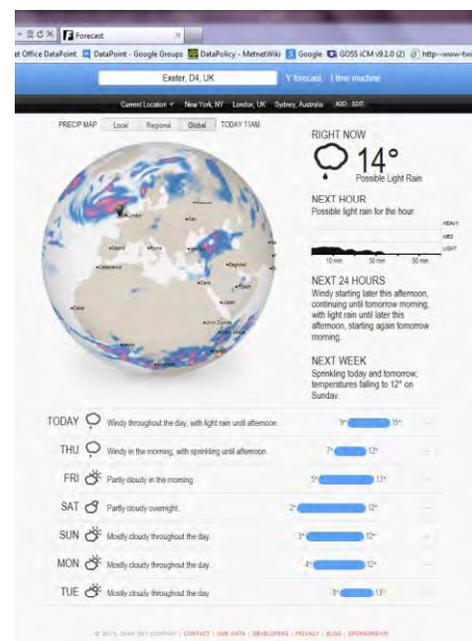
Scope Nights



OxBump
Up at the 02



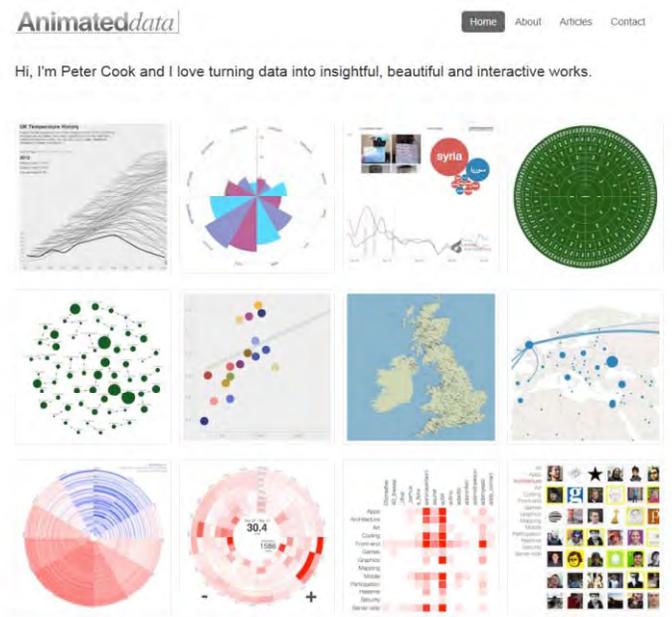
Forecast.io



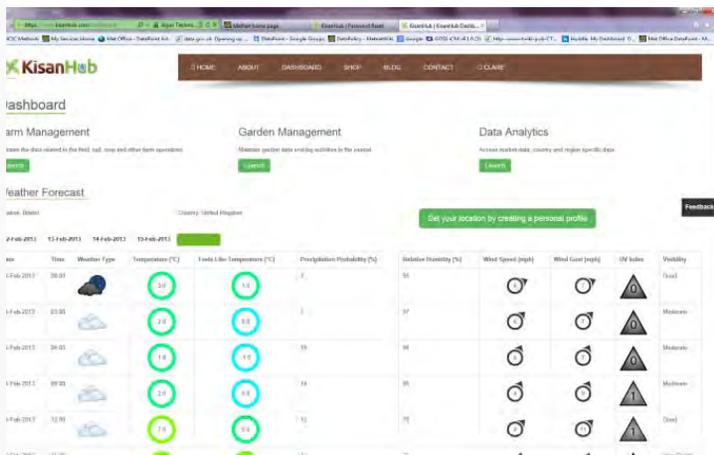
Winster website



WeatherFI



Animateddata



KisanHub