

# Emerging data and related issues

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World Meteorological Organization  
Organisation météorologique mondiale

# Emerging data and related issues

- Why? - external drivers
- What? - data challenges
- How? - delivering services



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Data sources

Information providers

Rate of change

# WHY?

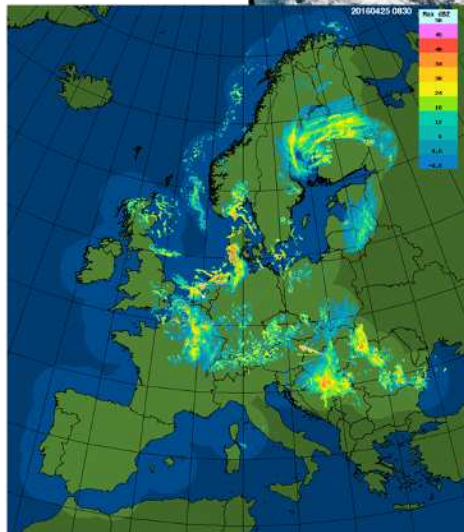
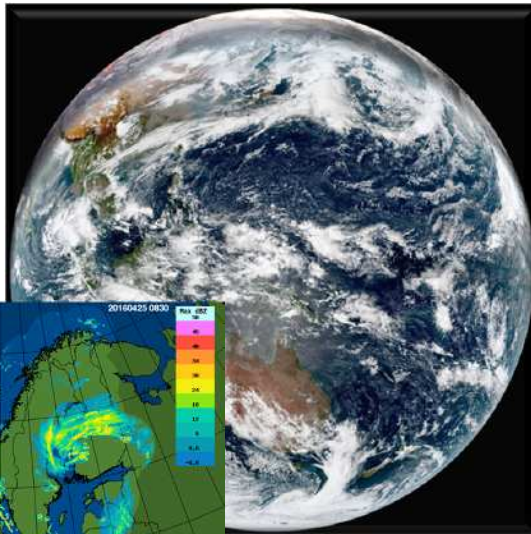


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# Data sources - NMHS

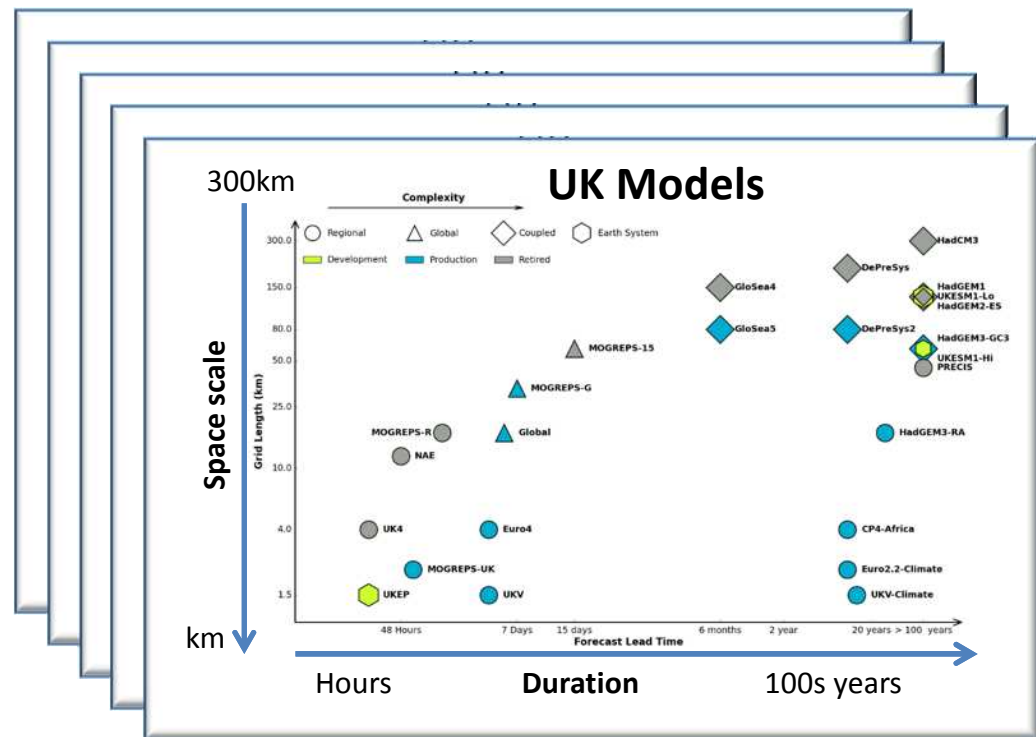
## Observations

Himawari 8



OPERA

## Models



# Data sources - external

Germany – surface, NMHS

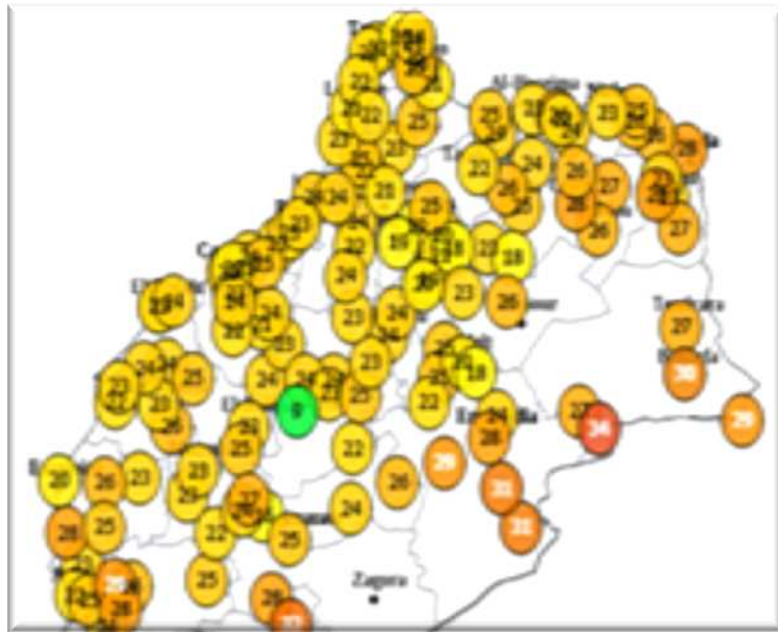


Germany – surface with partners

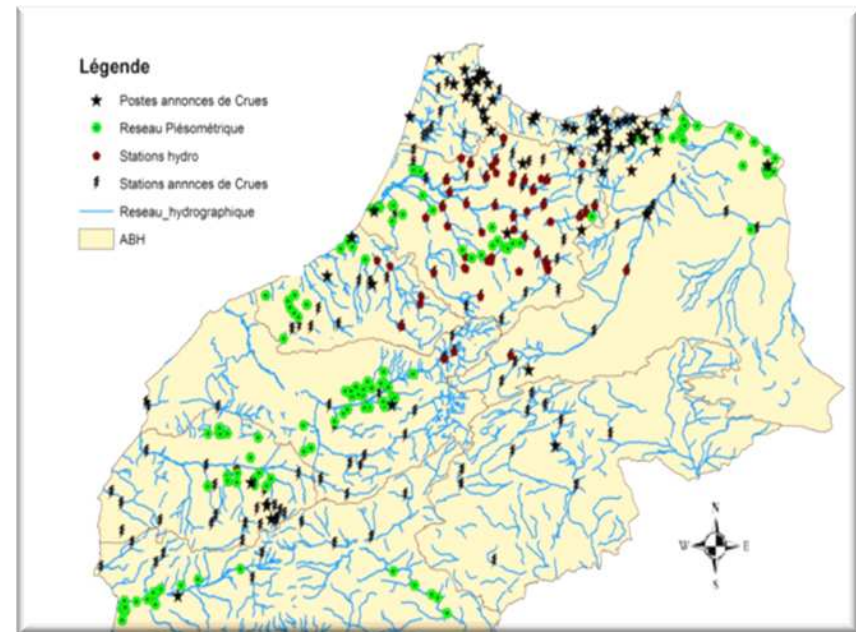


# Data sources - partner

## Morocco - NMHS

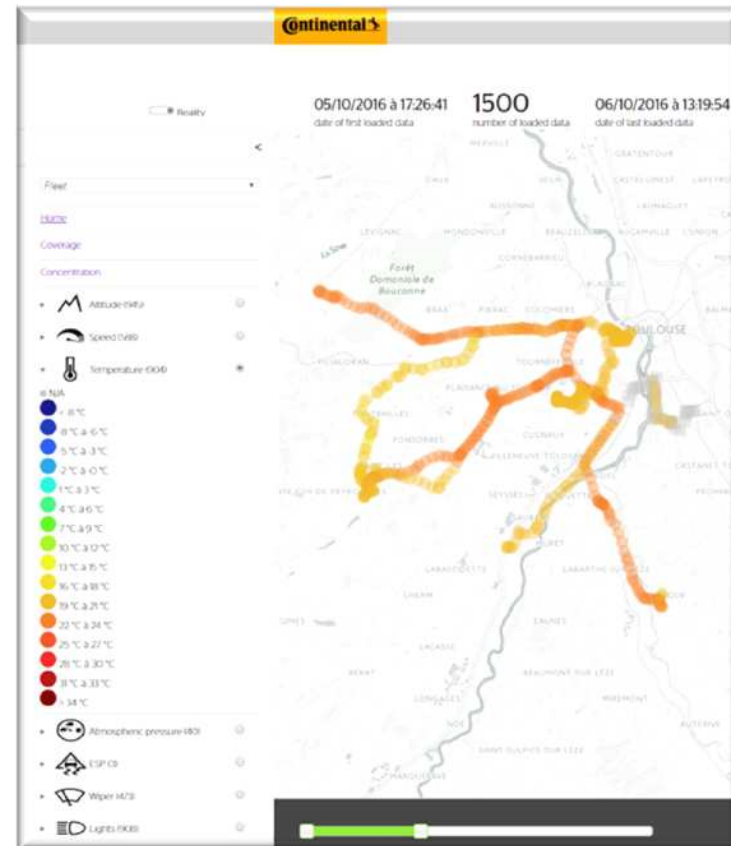


## Morocco – water agency



# New sources of data: Météo France)

- Weather conditions : temperature, pressure, precipitation (using windscreen wipers)
- Road surface status : ABS / ESP
- Visibility : lights, fog lamps



# Information providers

**Met Office** **Current Landscape**

British Airways IOS App – uses data from **AccuWeather** to deliver forecasts for arrival destination.

AccuWeather

www.metoffice.gov.uk

**Current Landscape**

Apple use The Weather Channel in bundled IOS weather App.

The Weather Channel

Google also receive data from TWC for integration with their ecosystem

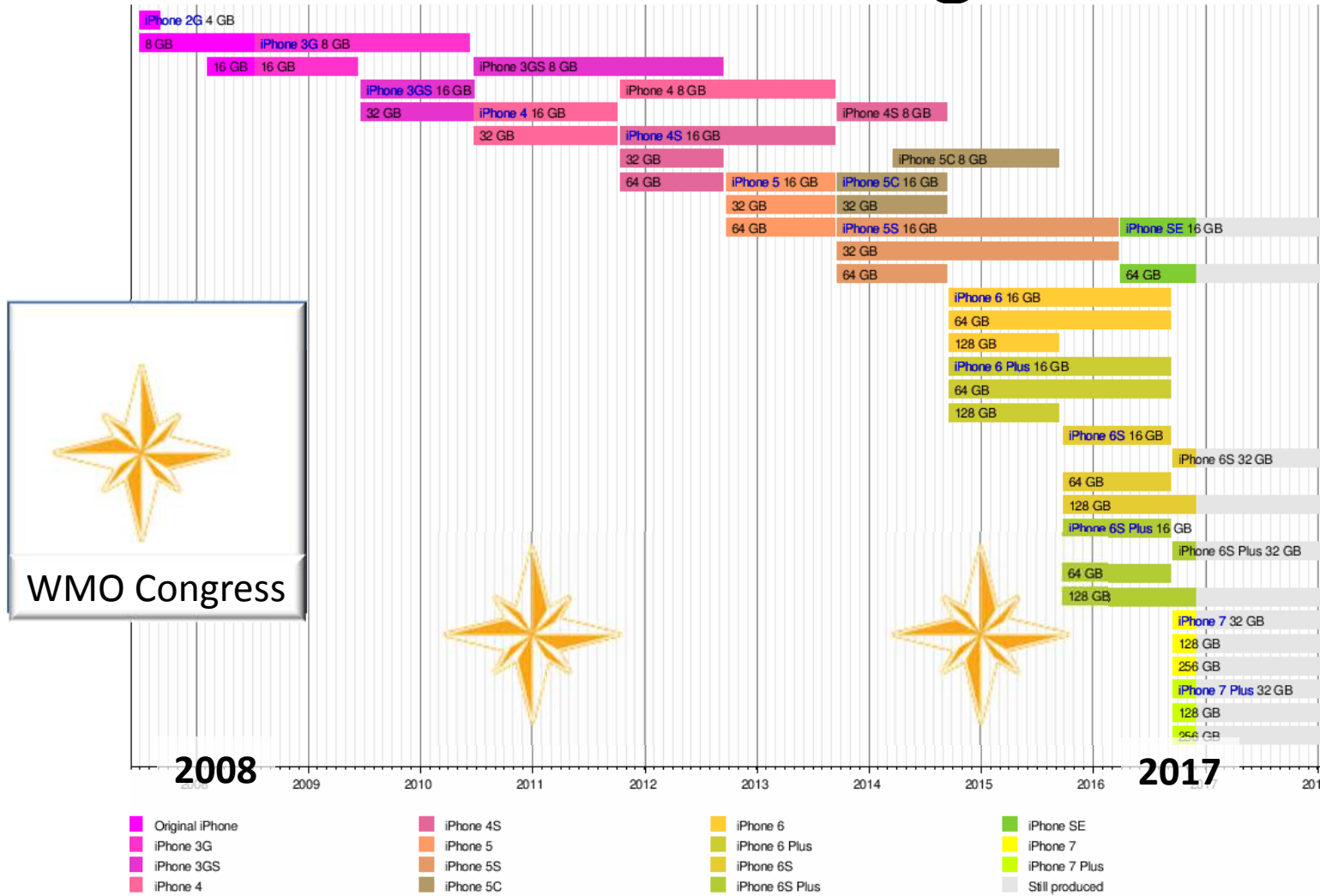
www.metoffice.gov.uk



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# Rate of change



Managing information  
Managing partnerships  
Managing Intellectual Property

# WHAT?



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# Managing information

**Information  
Life-cycle**



**WIS “Part C”**



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# Managing partnership data

- Who is responsible for what?
  - Clarity on production
- How are the data created?
  - Clarity on quality
- What can be done with the data?
  - Clarity on Intellectual Property Rights



# Managing Intellectual Property

## Different constraints ....



● A    ● B    ● C

## Need to know how to sue

	●	●	●
Product X	✓	✗	✗
Product Y		✓	✓
Product Z	✓	✗	✗

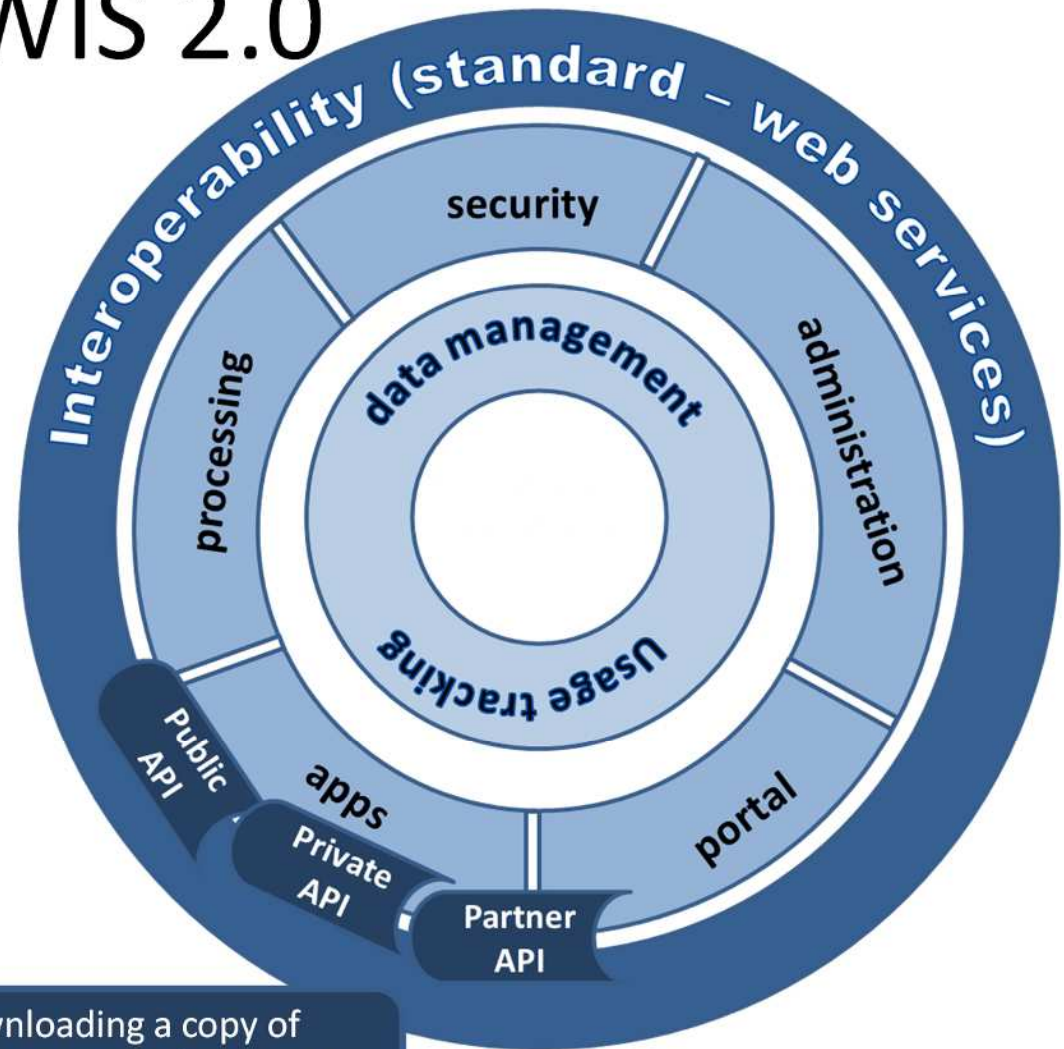


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# WIS 2.0

Acquisition  
Dissemination

Collaboration



Change in user behaviour from downloading a copy of information for local processing to using *services* that process the information at its source



Delivering value  
Delivering the right service  
Delivering in the right way

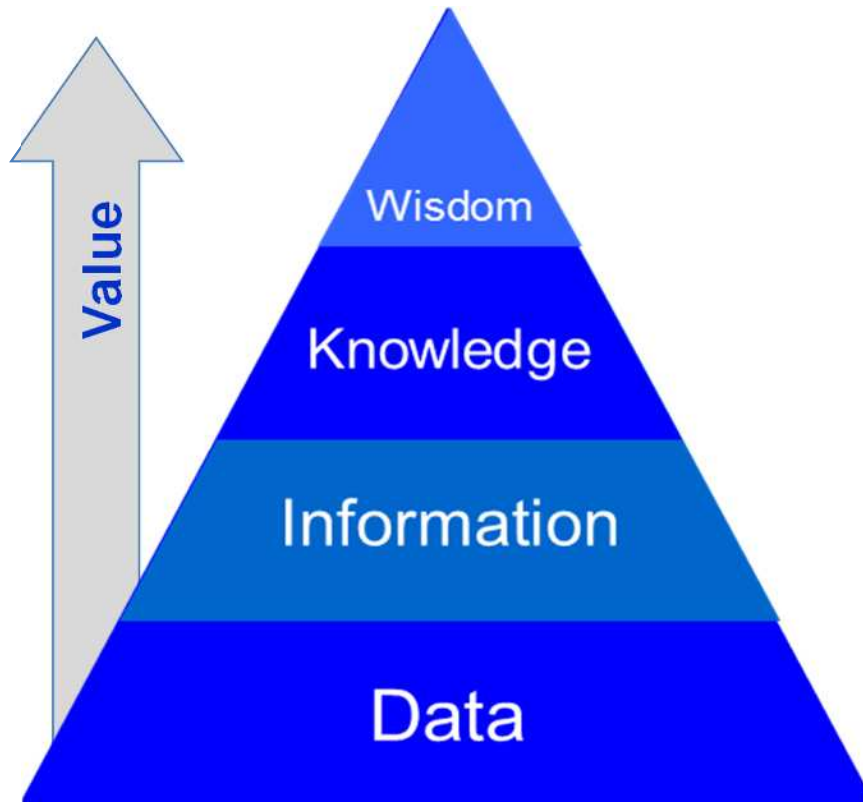
# HOW?



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# Creating value

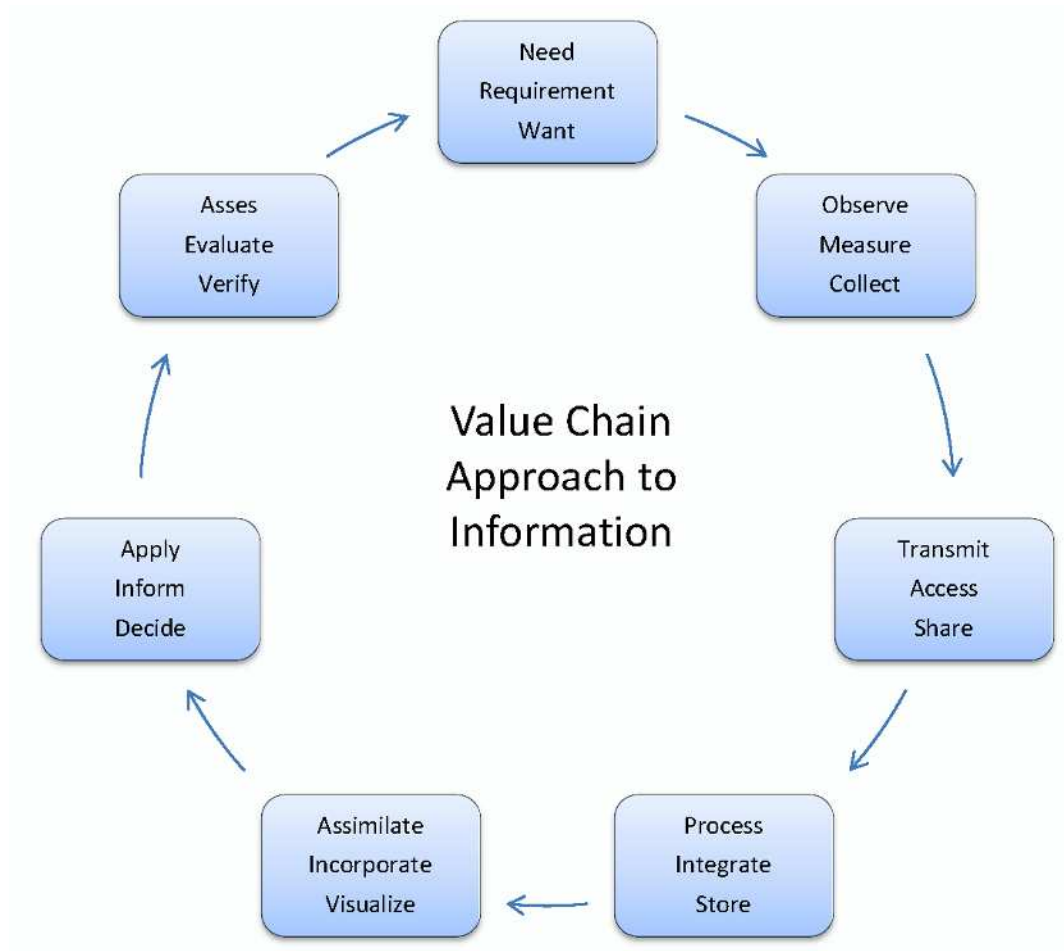
## From data to wisdom



- Applied wisdom → insight, environmental intelligence
- Science, numerical models, reports, national accounts, assessments, policies
- Analyses, forecasts, warnings, outlooks; climate record; discovery metadata
- Environmental measurements: land, oceans, water, atmosphere, space



# Delivering value



# Delivering the right service

Forecast	Impact based forecast
Winds will be 27 m s <sup>-1</sup> tomorrow	Tomorrow, some bridges are likely to be closed because of strong winds
Expect rainfall of 200mm during the next 24 hours	There will be flash flooding in some towns during the next 24h
Temperatures will reach 38 tomorrow afternoon	Expect transport delays tomorrow afternoon because of train rails buckling and road surfaces melting
The fog will clear at 9am.	You should start walking to your aircraft at 0850.

**Information**

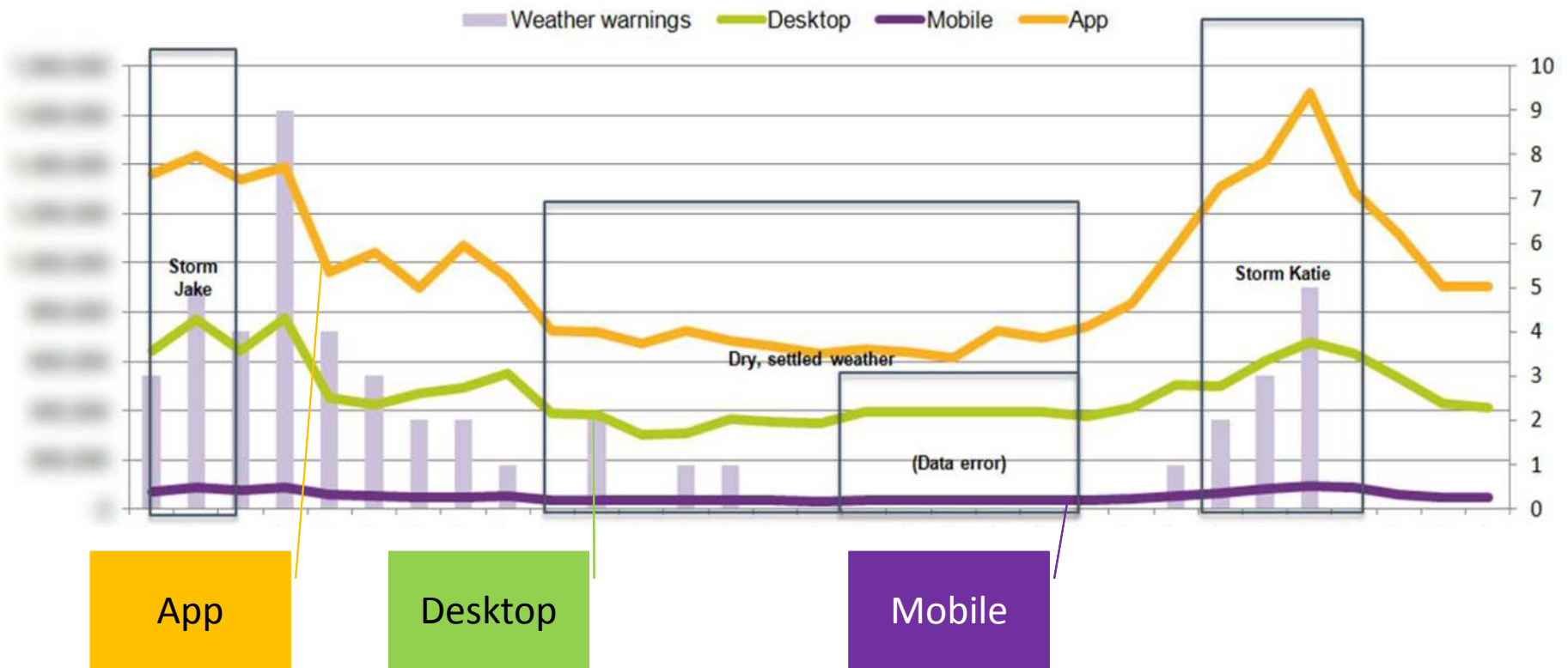
**Wisdom**

**Impact**

# Right service in the right way



At the start of March, the UK's weather was dominated by low pressure, bringing wet and fairly cold weather with some short-lived snowfalls, mainly on high ground. There were strong winds in the south-west on the 2nd, associated with Storm Jake, and it was very wet across England and Wales on the 8th. However, high pressure became established from the 13th to the 23rd, bringing dry, settled weather, often with plenty of sunshine for western areas. More unsettled weather then returned during the last week, and Storm Katie brought damaging winds on the 28th, particularly in the south-east.



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# Authoritative voice

... has to be earned

- NMHS have unique advantages
  - Global partnerships
  - Science base
  - Authority for warnings
  
- But people have to know about these
  - not just when a warning is issued



# In the UK it looks like this

Get Yahoo! on your phone

Web Images Video News Shopping More

Get Yahoo! on your phone

YAHOO!

Home Notifications Messages Outlook Search Twitter

BBC News (UK)

Met Office issues yellow "be aware" wind warning for much of UK. LATEST: [bbc.in/1vGjom5](http://bbc.in/1vGjom5) #HurricaneGonzalo

Google when does spring start

Web Images Videos News Shopping More

About 595,000,000 results (0.30 seconds)

20 March

The next astronomical spring begins on **20 March 2015** and runs until **21 June 2015**. The astronomical calendar determines the seasons due to the 23.5 degree tilt of the Earth's rotational axis in relation to its orbit around the sun. Both equinoxes and solstices are related to the Earth's orbit around the sun. 18 Dec 2014

When does spring start - the difference between ... - Met Office [www.metoffice.gov.uk/learning/learn-about-the.../when-does-spring-start](http://www.metoffice.gov.uk/learning/learn-about-the.../when-does-spring-start)

Feedback

Met Office

Met Office guide to Glastonbury weather

What's the weather got in store

Graphic in timeline

Expanded graphic

How much of the partial solar eclipse will you see?

90%

The first festival

Starting on the day after Jimi Hendrix died, the festival lasted two days. Approximately 1,500 people attended and the £1 entry included free milk from the farm.

It was a dry festival, with no rainfall recorded at any of the weather observation stations around the site.

# Emerging data and related issues

Technical challenges  
Focus on adding value  
Work at being relevant



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# Thank you

With thanks those whose slides from CBS-16 and CBS TECO 2016 have been used:

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