The Bureau of Meteorology

Hazard Weather Information Service (HWIS)

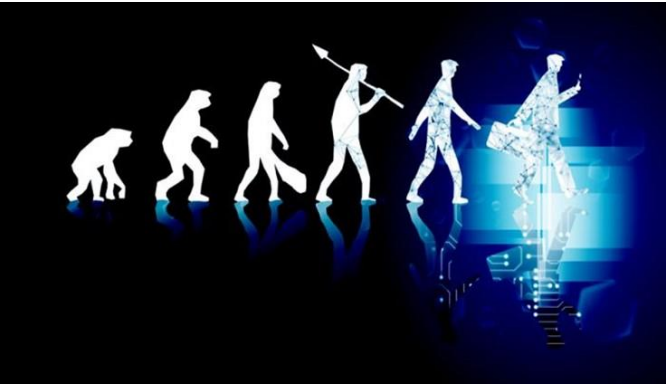
Joint Annual R&D Workshop and 6th Momentum®UK Partnership Convective Scale Workshop

Presented by:

Ashwin Naidu

Overview

1. Modernisation of aviation weather
2. Current service challenges
3. What is HWIS
4. Why HWIS is important for the Bureau and customers

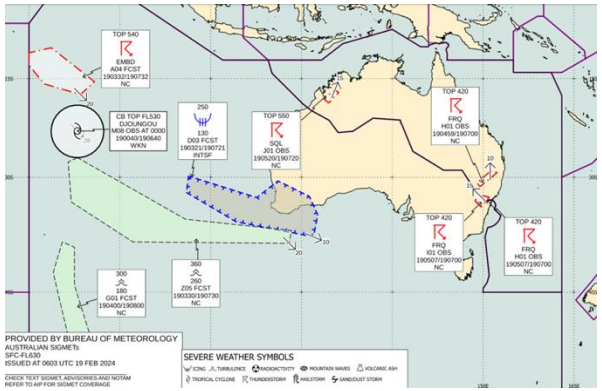


Modernisation of Aviation Weather Services

Transformation of aviation met services as per ICAO Global Air Navigation Plan

- Migration from text products to data-centric information services

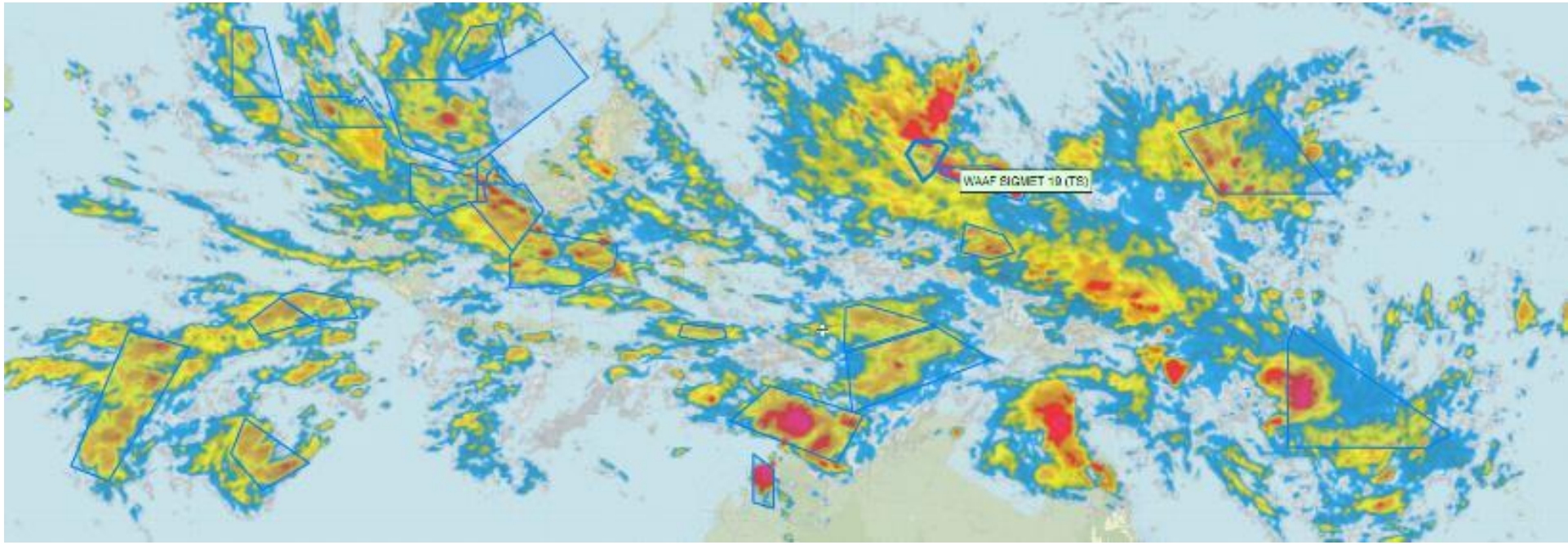
WSAU21 YBRF 190507 YBBB SIGMET I01 VALID 190507/190700 YBRF- YBBB BRISBANE FIR FRQ TS OBS WI S3230 E14920 - S3250 E15100 - S3410 E14940 - S3320 E14840 TOP FL420 MOV NW 15KT NC RMK: BS SEE ALSO YMMM H01=



Current service challenges

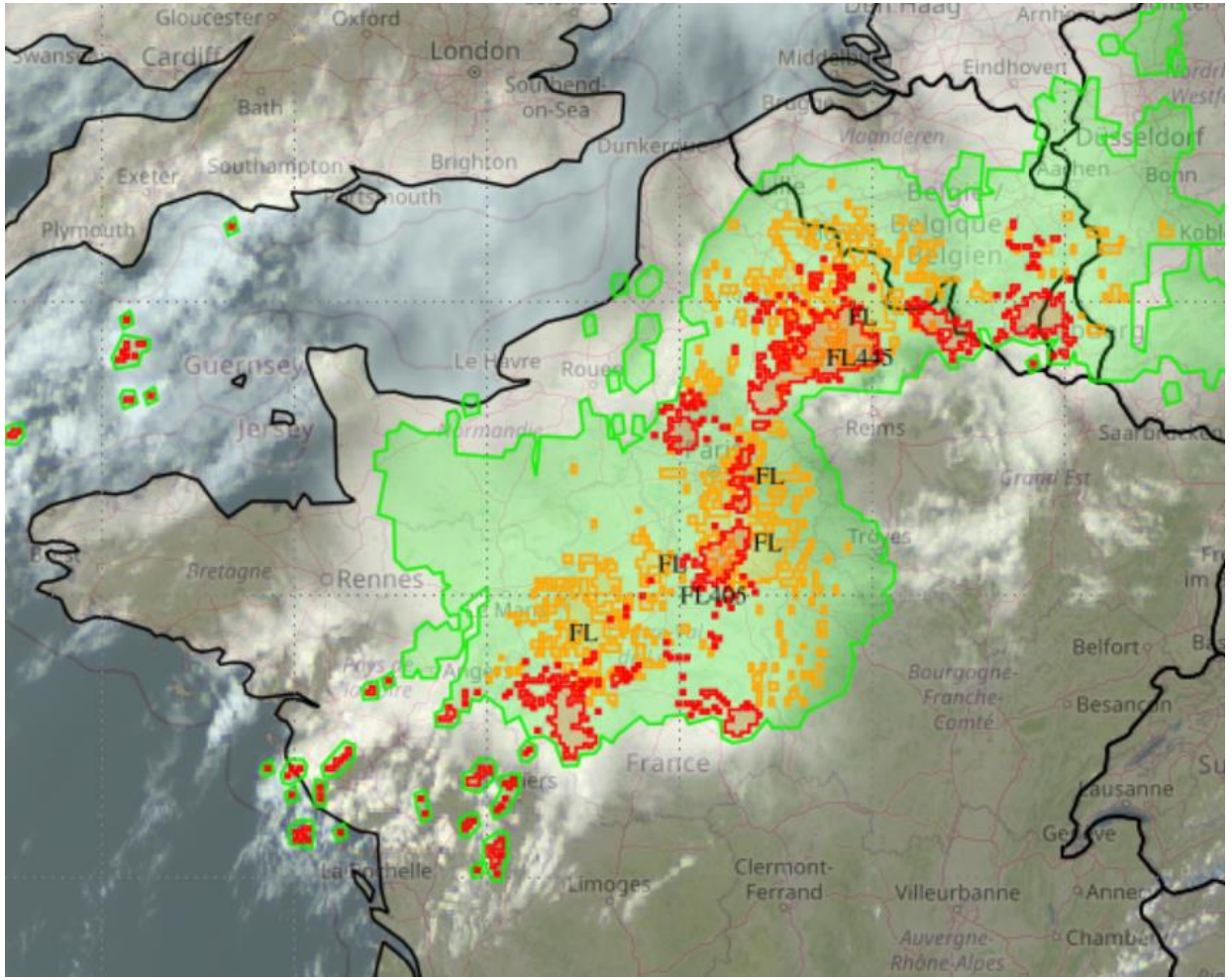
Aviation communities highlighted:

- Gaps in services
- Inconsistent data across service boundaries
- Lack of phenomenon based coverage
- Insufficient forecast granularity
- Excessive forecast latencies

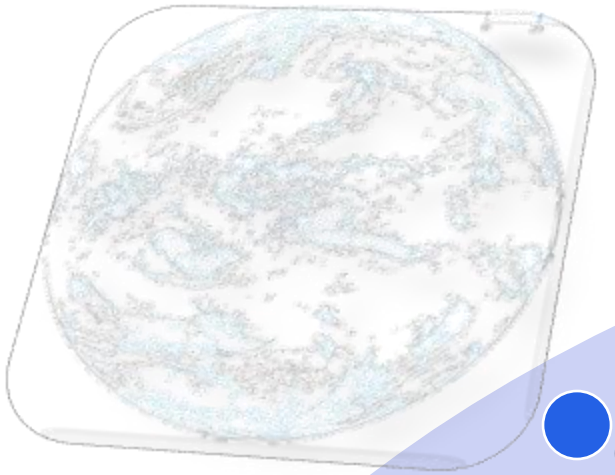


HWIS – what and why?

- The ICAO Hazardous Weather Information Service (HWIS) is a multi-provider system:
    - global, consistent, phenomenon-based hazardous en-route weather service
    - high temporal and spatial frequency hazard information provided by modern webservices
    - will replace our traditional products
    - initial services for CB, turbulence and icing
- The HWIS-CB specs include:
    - 15 min refresh rate
    - T+00, +15, +30, +45, +60, +90, +120, +180, +240
    - probabilistic forecast



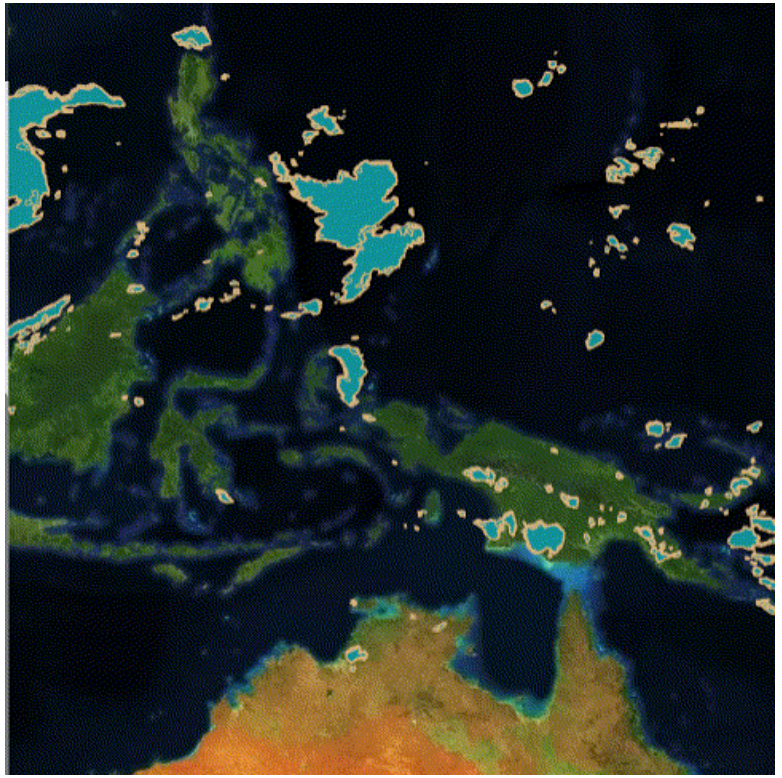
Ideas for CB HWIS implementation



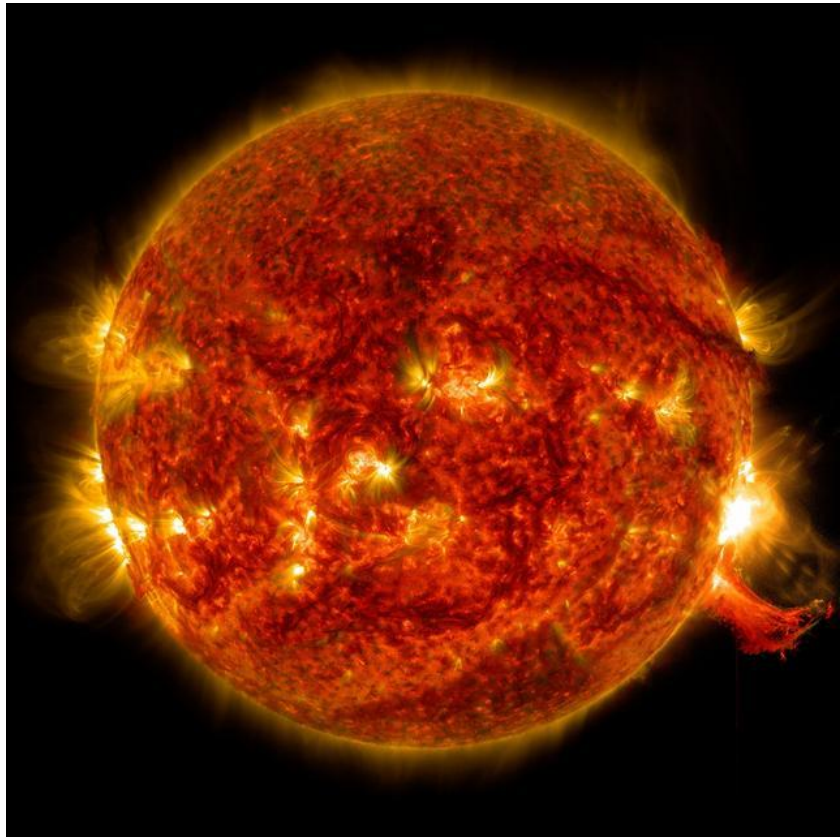
Realtime observations

Cloud detection algorithms

AI/ML merge observations and NWP to provide probabilistic information



Bureau as the HWIS provider



Benefits to other sectors

The Bureau of Meteorology

Thank you

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