Panel on
Weather in the Connected Cockpit

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Friends and Partners in Aviation Weather FPAW
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Topics

- The challenges with today's weather in the cockpit
- The advent of bandwidth to the cockpit
- Weather intelligence in the connected cockpit
- Summary

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The Challenges for Weather in the Cockpit

- Connectivity
- Cost / Value
- Workload / Human factors
- Common operating picture
- Latency
- Innovation

Weather in the Connected Cockpit
WITCC

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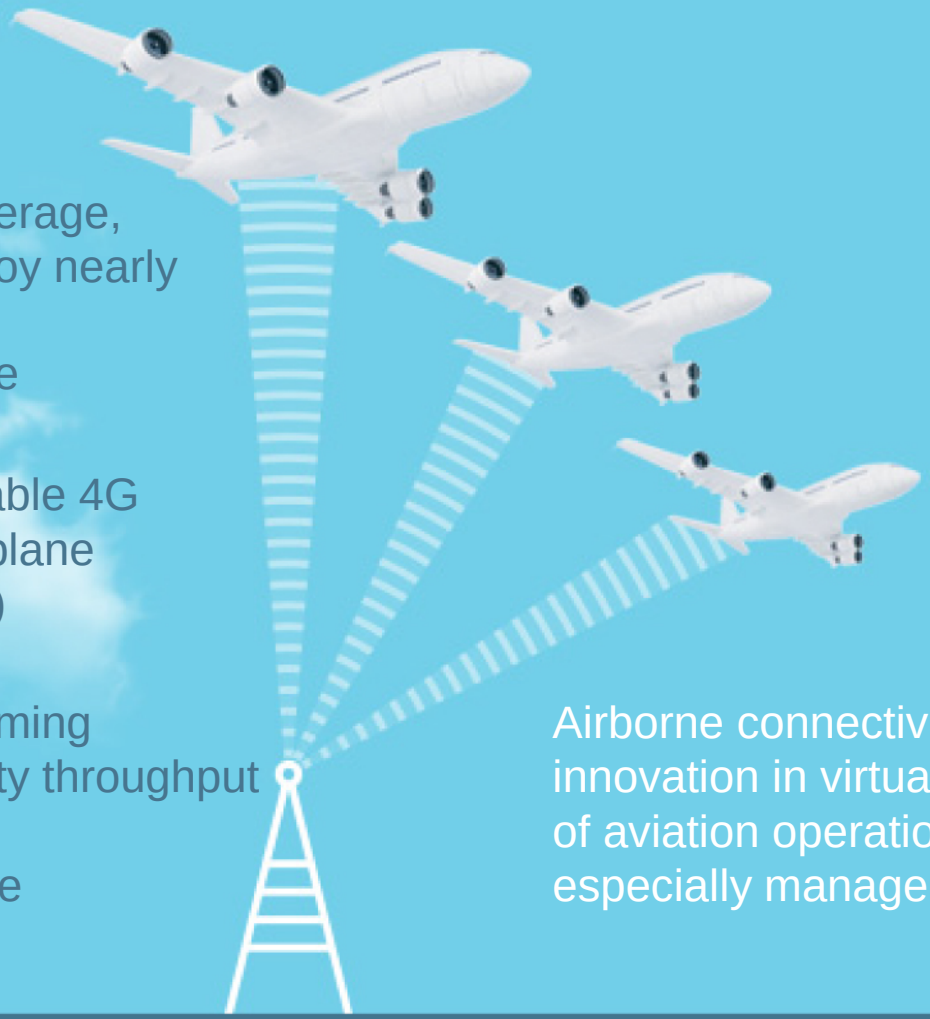
The Advent of Airborne Bandwidth



With full CONUS coverage, the network will employ nearly 20,000 beams and is incrementally scalable

SmartSky beams enable 4G experience for each plane (one beam per plane)

Proprietary beamforming enables high capacity throughput with low latency to and from the plane

Airborne connectivity enables innovation in virtually all aspects of aviation operations, especially management of weather.

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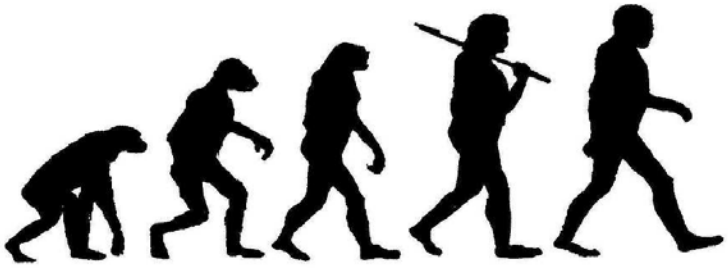
The Ascent of Weather



Data

Information

Knowledge

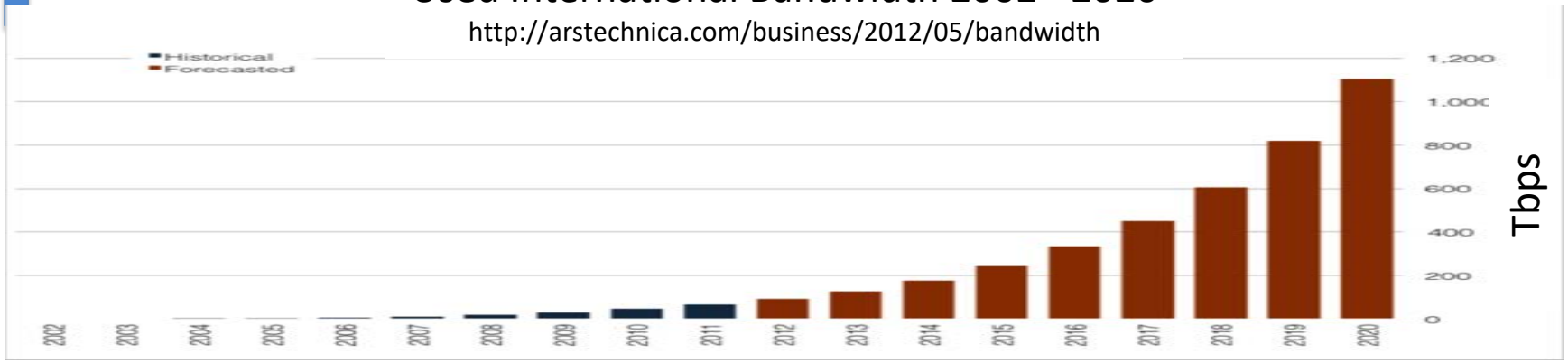
Intelligence

Wisdom

Autonomy

Used International Bandwidth 2002 - 2020

http://arstechnica.com/business/2012/05/bandwidth



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WITCC Innovation Topics

1. What leading weather-related safety issue can be improved through increased bandwidth to the cockpit, for CA, BA, GA, or UAS?
2. Can UAS-hosted weather sensors help with WITCC for CA, BA, or UAS?
3. What human factors issues might WITCC innovations mitigate?
4. Looking into the ODM crystal ball for Urban VTOL or Thin-Haul commuters, what weather limitations on those operations will benefit the most from WITCC and how?
5. What changes in AWOS, ASOS, ATIS, TAFs, or Area Forecasts (GFAs) would be needed to take full advantage of WITCC?
6. Will WISXM protocols be affected by or affect WITCC innovations?
7. What aviation weather management function, enabled by WITCC, will be the first to be improved through automation?
8. What aviation weather information management function will always best be handled by the human?

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Summary

The advent of affordable and secure bandwidth enables innovation in managing flight trajectories and airspace with improved safety, efficiency, and economics.

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Thank You!

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