

Combining Proprietary, Public, and Government Data to Inform Policy and Improve Performance

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Challenge

How can DOT get access to **better data to inform policy decisions and improve transportation system performance?**



Challenge

| 3 |

How can DOT and industry collaborate to inform policy decisions and improve transportation system performance?

Safety Challenge

- Not everything can be inspected
- Inspection data can be limited
- Limited access to operational data



Could collaboration produce better results than compliance monitoring?

Create Win – Win – Win?

- ↓ Accidents & incidents
- ↑ Work environment
- ↑ Regulatory environment
- ↑ Performance insights
- ↑ Public perception
- ↑ Policy results
- ↓ Cost



Government



Labor



Industry

Aviation Example

A collaborative Government-Industry initiative on data sharing & analysis to proactively discover safety concerns before accidents or incidents occur, leading to timely mitigation and prevention



Aviation Example

A collaborative Government-Industry initiative on data sharing & analysis to proactively discover safety concerns before accidents or incidents occur, leading to timely mitigation and prevention

- **Air Carriers (44)**
- **General Aviation (12)**
- **Industry (11)**
- **Government (5)**
- **Maintenance Repair & Overhaul (2)**
- **Academic (1)**
- **FFRDC (1)**

Recent Results



U.S. Department
of Transportation
**Federal Aviation
Administration**



SAFO 14005
DATE: 11/25/14

Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO.

Subject: Title 14 of the Code of Federal Regulations (14 CFR) Part 121 Operators Flap Misconfiguration Events

Purpose: This SAFO serves to raise awareness of aircraft misconfigurations on takeoff with an emphasis on flap position.

Recent Results



SAFO
Safety Alert for Operators

SAFO 14005
DATE: 11/25/14

Flight Standards Service
Washington, DC

[/airline_safety/safo](#)

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ction may be as effective in addressing the safety*

Part 121 Operators Flap Misconfiguration

Purpose: This SAFO serves to raise awareness of aircraft misconfigurations on takeoff with an emphasis on flap position.

Recent Results



SAFO
Safety Alert for Operators

...while flap misconfiguration events on takeoff are rare, they do exist. Approximately half of the events for misconfiguration during the takeoff roll resulted in rejected takeoffs. The other takeoffs were continued with the flaps being moved during the takeoff roll.

Recent Results



SAFO
Safety Alert for Operators

...**should work together** to ensure that the content of this SAFO is **emphasized in their training programs to raise awareness among their flight crews of flap misconfiguration events**. This is especially important if procedures are being changed in light of the new Federal Aviation Administration (FAA) de-icing procedures.

Data Availability



Airline Safety Reports
233,000 reports



Digital Aircraft Data
15 Million Flights



Radar Data
95 Million Flights



ATC Safety Reports
77,500 reports

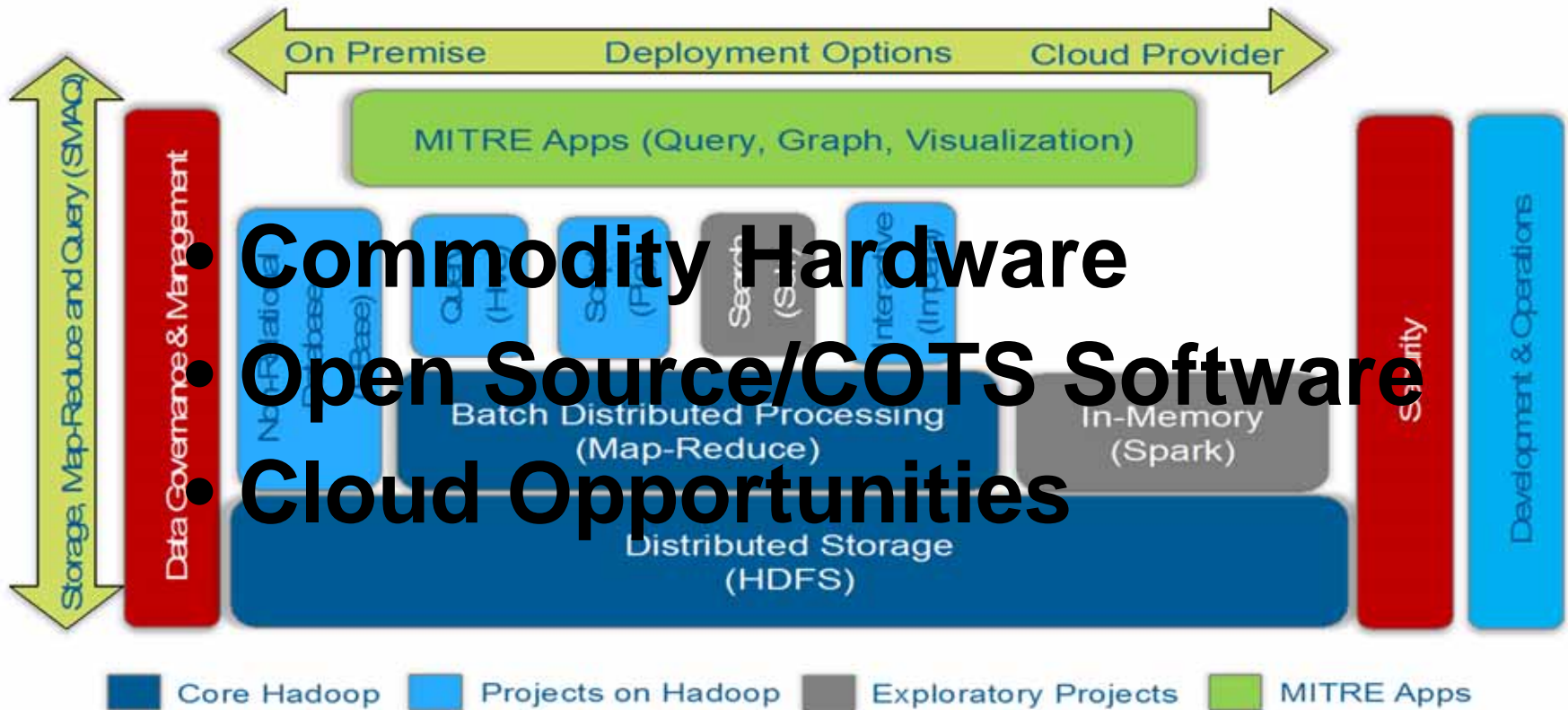


Weather Data



Infrastructure Data

Technology Can Be The Easy Part!



- Commodity Hardware
- Open Source/COTS Software
- Cloud Opportunities

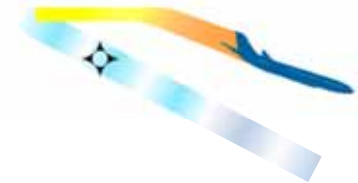
What's Possible?



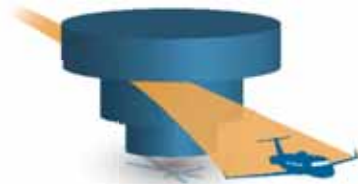
Terrain Awareness Warning System Alerts



Missed Approach



**Altitude Deviation
Missed Crossing Restriction**



Class B Excursion



Final Approach Overshoot



**High/Low Energy Approach
Unstable Approach**



**Traffic Alert and Collision Avoidance System
Resolution Advisories**

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What's Possible?



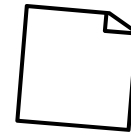
Lessons Learned



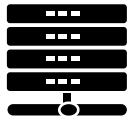
Collaborate with Industry



Give and Take



Operate Transparently



Property of ____

Respect Data Ownership



Safeguard Data



Serious Stewardship



Provide Insights

Conclusion