

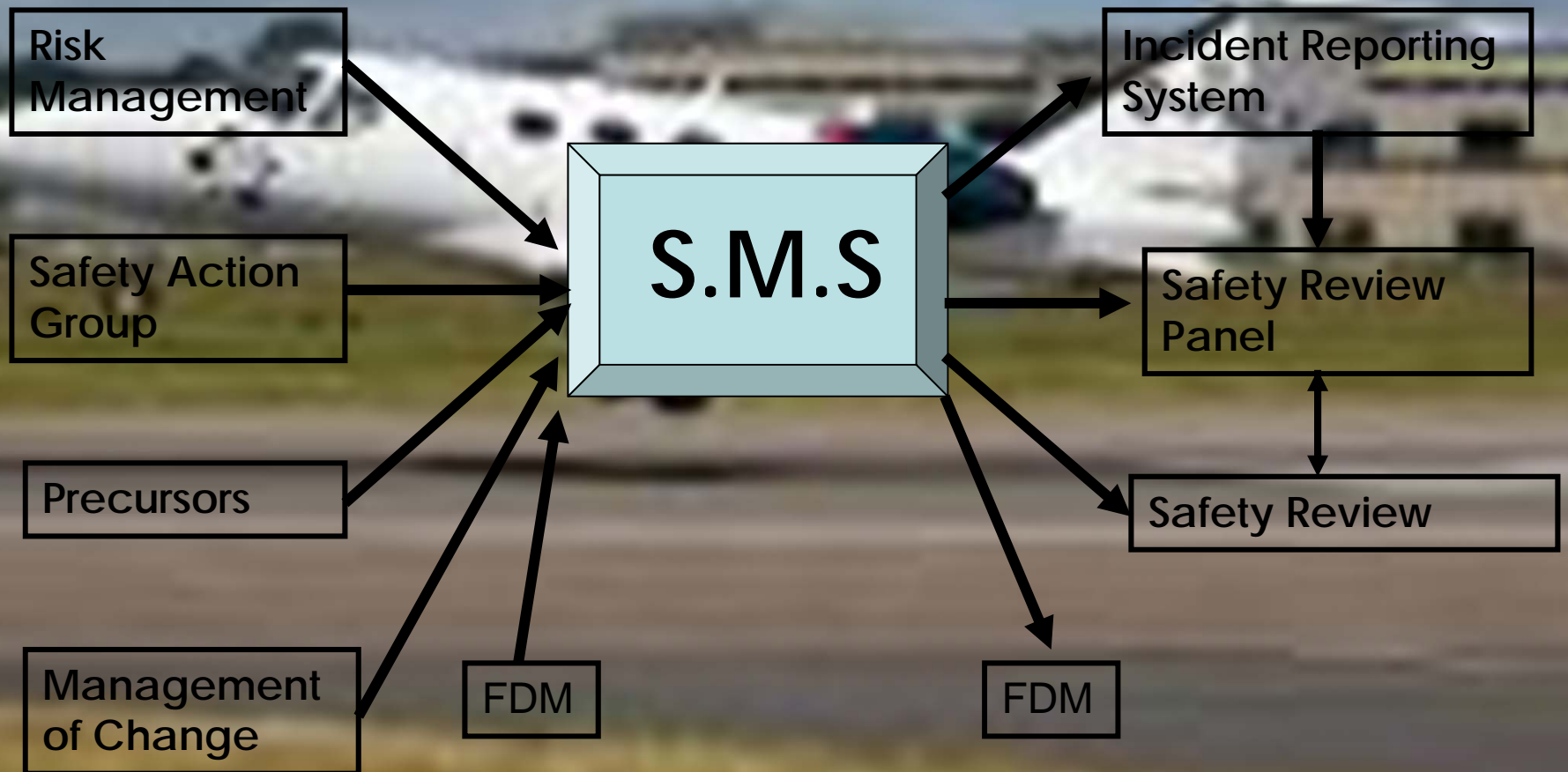
FDM Overview A Smaller Operators Approach

Jan 2012

*Malcolm Rusby
European Safety Director
TAG Aviation*

Aviation

Proactive + Reactive





Current Fleet

→ ***130 Aircraft***

→ ***18 Different types***

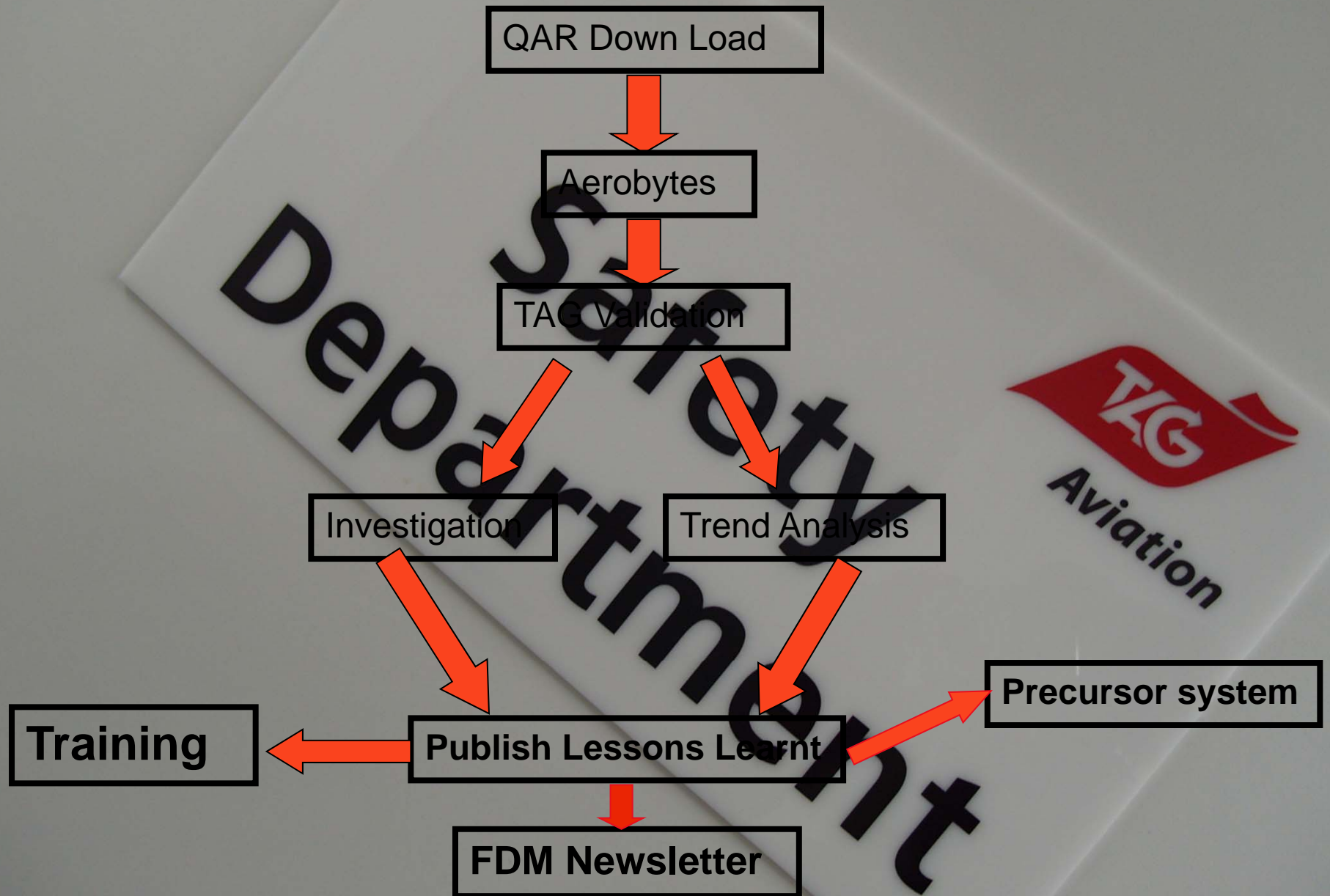
Aircraft Types in our System

→ *Gulfstream 450/550*

→ *Dassault 7X*

→ *Bombardier Globals*

FDM Process

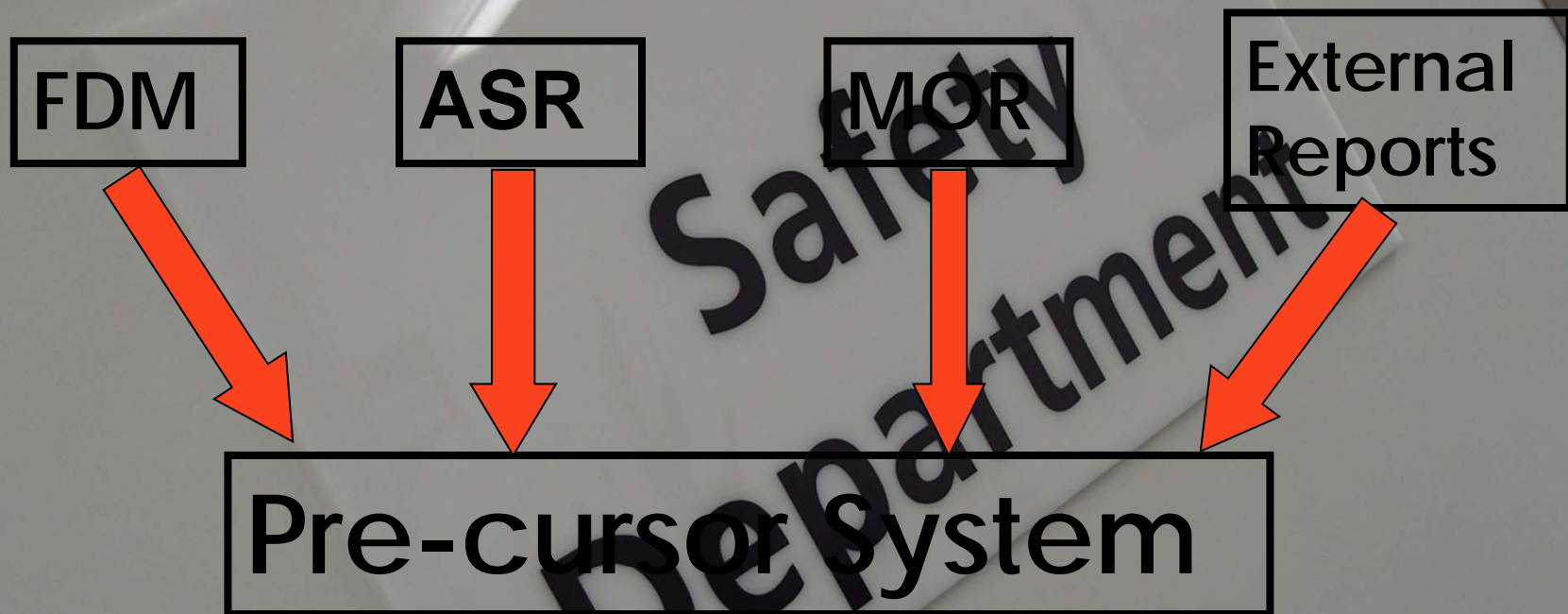


Pre-cursor System

Department of Safety



Inputs to Pre-Cursor System



TAG Aviation

Pre-cursor System

TAG Crystal Ball Menu

Location: Mode:

Input

Date: Cause:

Severity and Probability

Severity	1 Extremely Improbable	2 Improbable	3 Remote	4 Occasional	5 Frequent
Catastrophic 5	<input type="radio"/> 5: Review	<input type="radio"/> 10: Unacceptable	<input type="radio"/> 15: Unacceptable	<input type="radio"/> 20: Unacceptable	<input type="radio"/> 25: Unacceptable
Hazardous 4	<input type="radio"/> 4: Acceptable	<input type="radio"/> 8: Review	<input type="radio"/> 12: Unacceptable	<input type="radio"/> 16: Unacceptable	<input type="radio"/> 20: Unacceptable
Major 3	<input type="radio"/> 3: Acceptable	<input type="radio"/> 6: Review	<input type="radio"/> 9: Review	<input type="radio"/> 12: Unacceptable	<input type="radio"/> 15: Unacceptable
Minor 2	<input type="radio"/> 2: Acceptable	<input type="radio"/> 4: Acceptable	<input type="radio"/> 6: Review	<input type="radio"/> 8: Review	<input type="radio"/> 10: Unacceptable
Negligible 1	<input type="radio"/> 1: Acceptable	<input type="radio"/> 2: Acceptable	<input type="radio"/> 3: Acceptable	<input type="radio"/> 4: Acceptable	<input type="radio"/> 5: Review

Probability

Precursors

<input type="checkbox"/> Loss of control in flight	<input type="checkbox"/> Rwy over run excursions	<input type="checkbox"/> Ground collision rwy incursion	<input type="checkbox"/> Ramp incident
<input type="checkbox"/> C.F.I.T	<input type="checkbox"/> Airborne conflict	<input type="checkbox"/> Airborne post crash fire	<input type="checkbox"/> Maintenance

Enter Exit

Pre-Cursors Dashboard

CFIT	Loss of Control in Flight	Runway Overrun/ Excursions	Airborne Conflict	Ground Collision / Runway Incursion	Airborne / Post Crash Fire	Ramp Incident	Maintenance
1	2	3	4	5	6	7	8

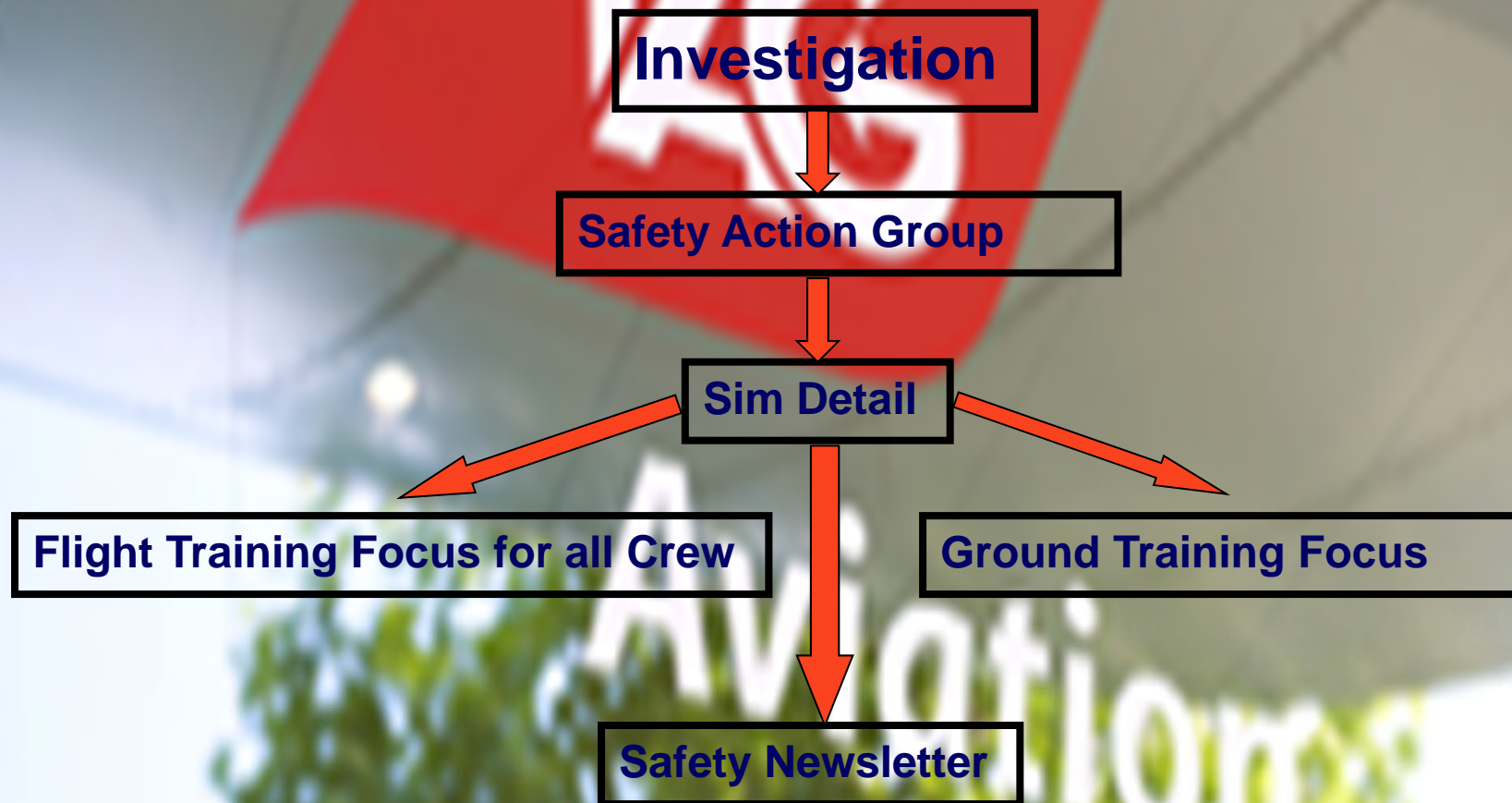
Case Study

- Global departs Hong Kong cleared to FL 410
- Aircraft Performance checked OK
- Passing FL 180 ATC asked the Crew to expedite the Climb!
- The Crew responded by bringing back the speed using the speed bug to increase climb rate. The speed came back and the aircraft got on the back of the drag curve.
- The Crew noticed and stopped the climb allowing the speed to build again.

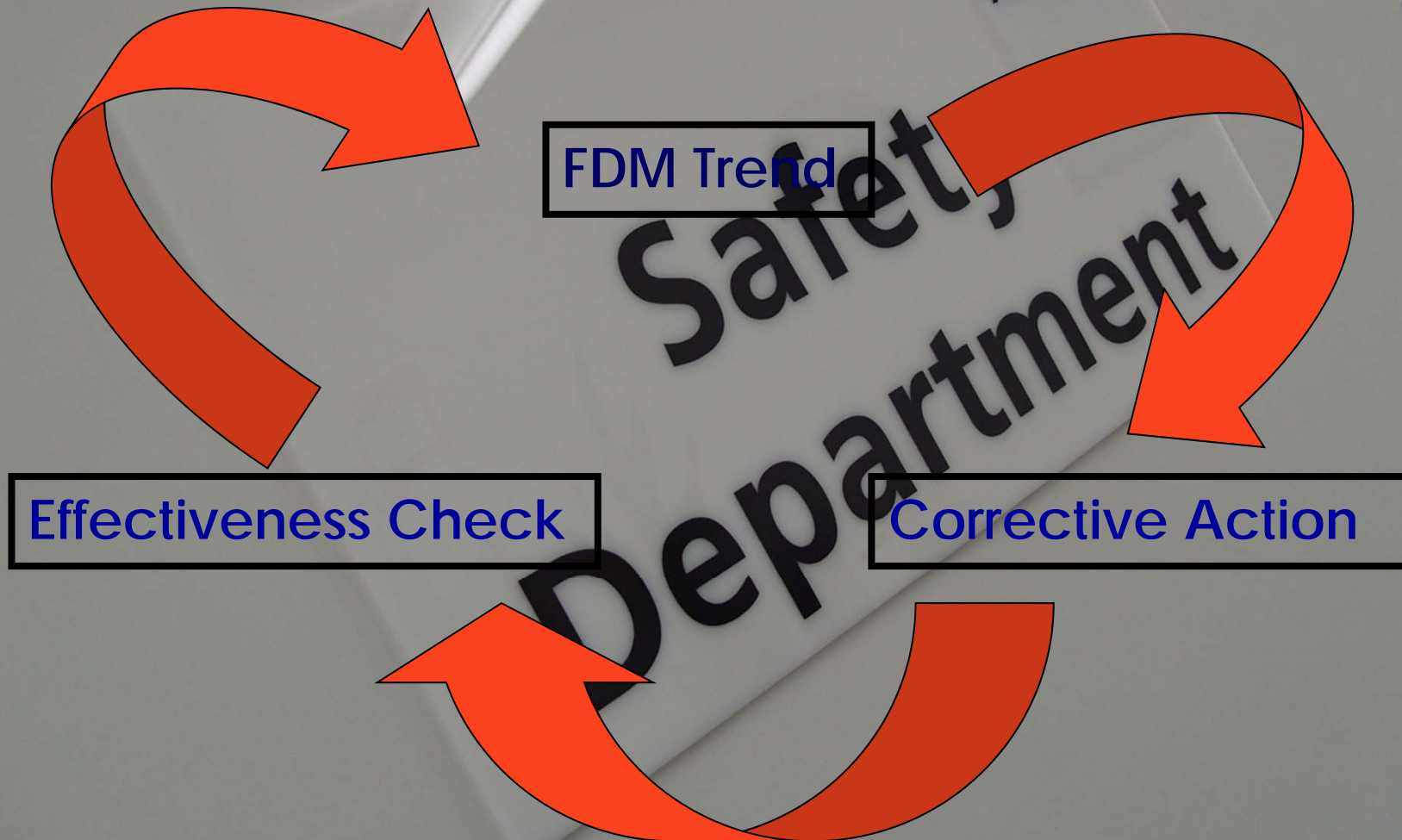
Case Study

- *No stick shake or stall warning was observed (this was substantiated by FDM data)*
- *With out the Crew report we would have never known.*
- *FDM data taken to Simulator to establish how far from the stick shake had they been.*
- *15 degrees of bank and or turbulence produced stick shake and stall warning.*

Corrective action



Effectiveness Check



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Questions

