

Step 1. Define the Problem

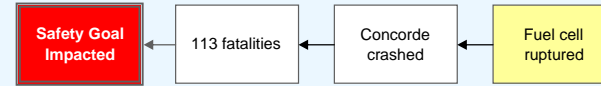
What	Problem(s)	Concorde crash, loss of life, ruptured tire
When	Date, Time	July 25, 2000, 16:45
Where	Location	Paris, France. Charles de Gaulle Airport, runway 26R Crashed into hotel near airport (Gonesse)

Impact to the Goals

Safety	113 Fatalities: all 100 passengers, all 9 crew, 4 people on ground
Property	Loss of aircraft \$125,000,000
Frequency	1st Concorde lost in 40,000 flights (900,000 hrs)

CONCORDE CAUSE MAP™

Cause Map - Basic cause-and-effect analysis (2-Why questions)



On July 25th, 2000 one of the Concorde supersonic jets crashed near Paris, France killing all 109 people onboard in addition to 4 on the ground. One of the aircraft tires disintegrated during take-off, rupturing a fuel cell. Fuel spilled into the intakes of engines 1 & 2, choking the air flow and shutting them down. The pilot was attempting to circle around and land, but the aircraft could not stay aloft with only two of four engines functioning

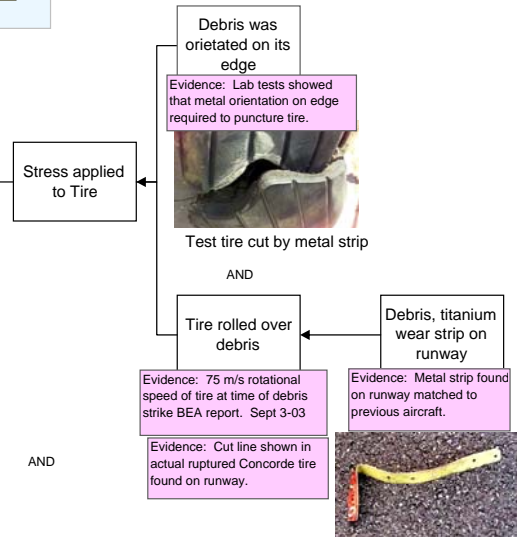
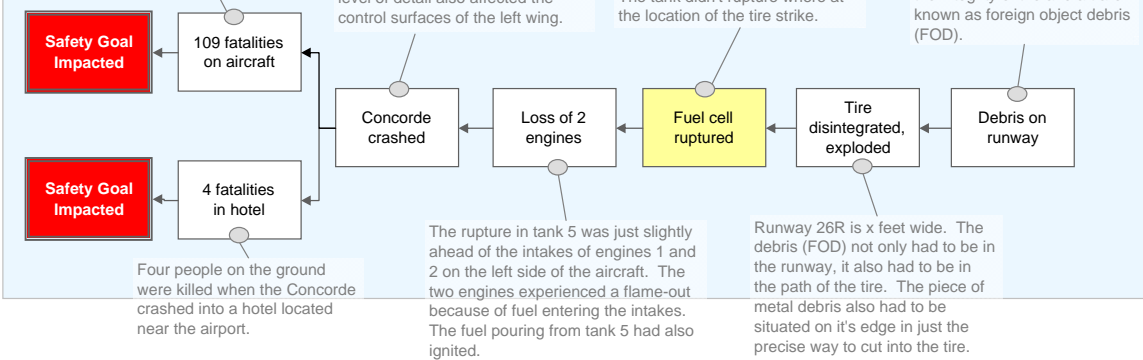
There were 100 passengers onboard the aircraft and nine crew members. It was a chartered flight that was heading to New York as part of a 16-day cruise to South America.

The Concorde crashed because there wasn't sufficient thrust to keep it aloft. The aircraft needed 3 of its 4 engines on take-off but only the two engines on the right side were functioning. The heat from the fire, which is not shown at this level of detail also affected the control surfaces of the left wing.

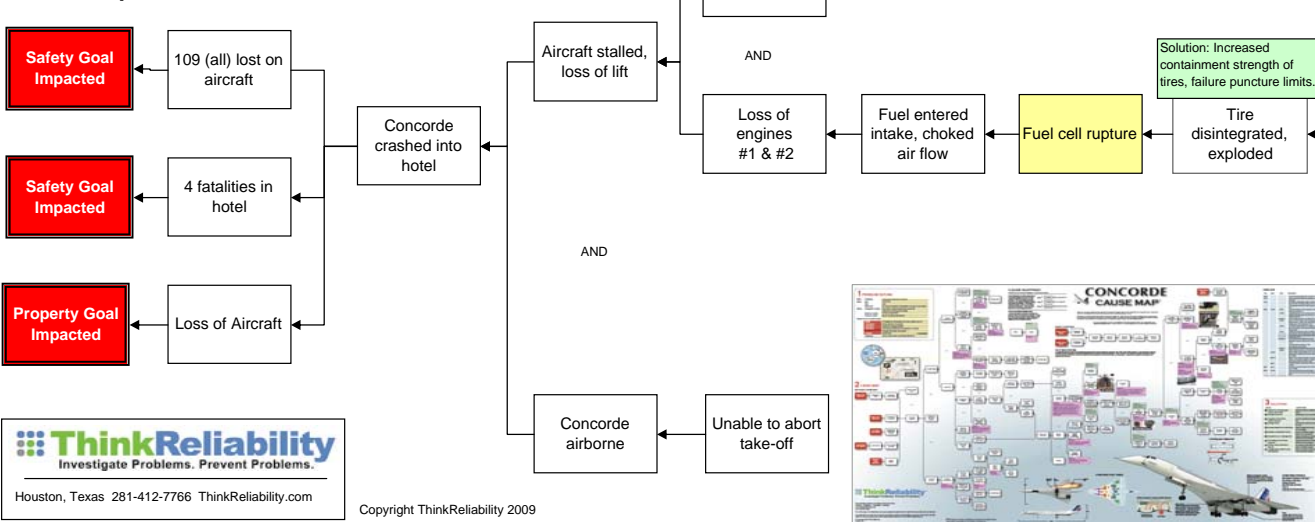
When the tire disintegrated a piece struck the underside of the wing on fuel cell 5. A shock wave inside the tank caused a rupture in a forward location on the tank. The tank didn't rupture where at the location of the tire strike.

A piece of debris found on the runway after the Concorde accident matched the cut line on a piece of the exploded tire. Any items that pose a threat to the integrity of the aircraft are known as foreign object debris (FOD).

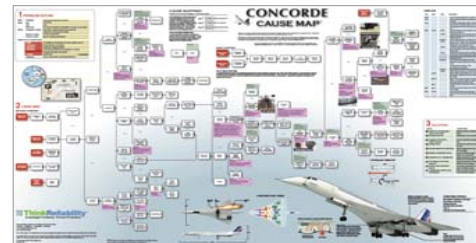
Cause Map 8-Why questions



Cause Map - 20-Why questions



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Concorde Cause Map Poster

A detailed analysis of the Concorde accident with 120-Why questions and the recommended solutions from the BEA report. A valuable case study for reviewing risks within your group. Order a poster at www.thinkreliability.com (20" x 36")