COMET ACCIDENTS

Cause Map

British aviation specialists finalized the Comet's design with much excitement in 1945 in hopes it would position their industry to establish a revolutionary service in commercial jet flight. Unfortunately, the Comet crashed on January 10th and April 8th in 1954.

"... the most exhaustively tested airplane in history."
-Expert opinion on the DeHavilland Comet

Cause Mapping is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

CAUSE MAPPING
Problem Solving • Incident Investigation • Root Cause Analysis

Step 1	Problem	What's the Problem?
Step 2	Analysis	Why did it happen?
Step 3	Solutions	What will be done?

1 Problem

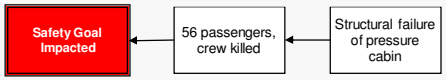
What	Problem(s)	De Havilland Comet Accidents
When	Date	January 10th and April 8th, 1954
	Differences	"most exhaustively tested airplane in history"; first commercial jet liner to reach production
Where	Physical Location	Near Elba (1/10) & near Naples (4/8), Italy
	Unit/Process/Equipment	Climbing
	Work/Task Being Done	Flights out of Rome

Impact to the Goals

Safety	56 passengers & crew killed	
Environmental	?	
Cust. Service	Lost prestige of British aviation	
Production-Schedule	?	?
Materials, Labor	Loss of 2 airplanes	?
	This incident	
Frequency	Two within 3 months	
	Annual Total	?

2 Analysis

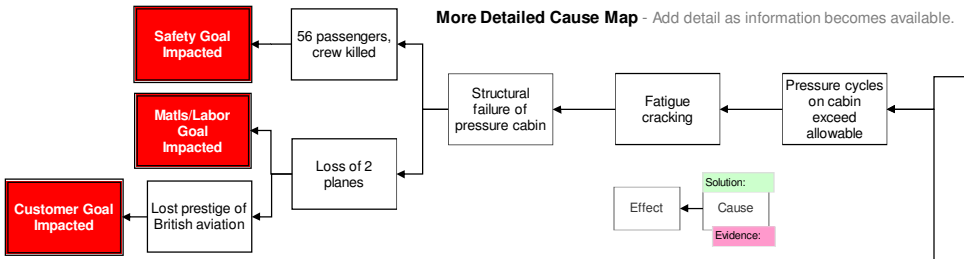
Basic Level Cause Map - Start with simple Why questions.

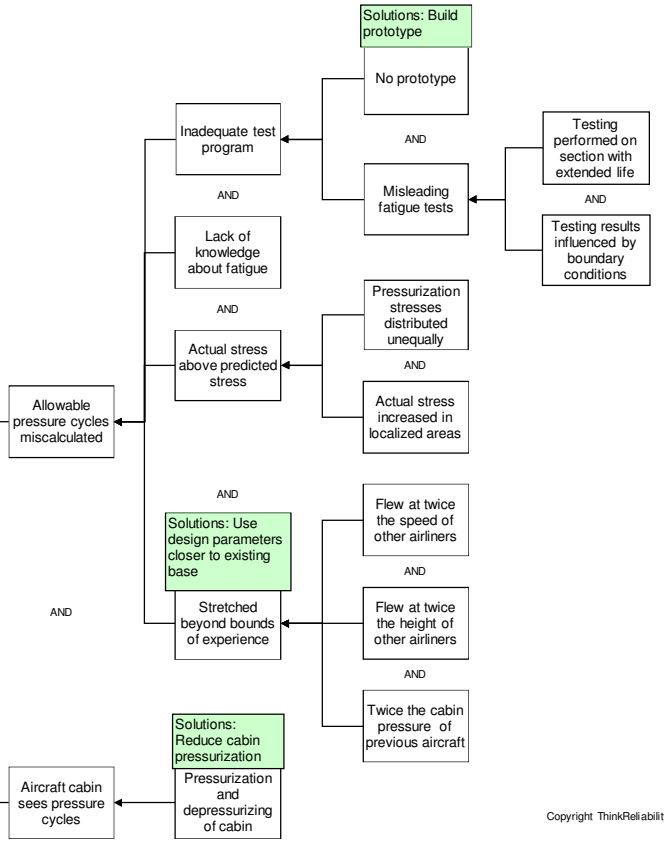


Basic Cause-and-Effect

The pressure cycle in the planes' cabins cracked the bodies of the planes. When the planes broke up, the lives of 56 passengers and crew members were lost.

More Detailed Cause Map - Add detail as information becomes available.





3 Solutions

No.	Cause	Action Item
1	No prototype	Build prototype
2	Stretched beyond bounds of experience	Use design parameters closer to existing base
3	Pressurization and depressurizing of cabin	Reduce cabin pressurization

For a free copy of our Root Cause Analysis Template in Microsoft Excel, used to create this page, visit our web site.

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