

# SPACESHIP TWO CRASHES

Cause Map

## 1 Problem

<b>What</b>	Problem(s)	SpaceShipTwo crashes, pilot killed
<b>When</b>	Date	October 31, 2014
	Time	~ 1 P.M.
	Different, unusual, unique	Testing new space craft, unique design
<b>Where</b>	Facility, site	High altitude flight near Los Angeles
	Unit, area, equipment	SpaceShipTwo
	Task being performed	Test flight
<b>Impact to the Goals</b>		
	<b>Safety</b>	1 fatality, 1 injury
	<b>Environmental</b>	N/A
	<b>Customer Service</b>	Negative publicity for space tourism
	<b>Regulatory</b>	FAA investigation
	<b>Production/ Schedule</b>	Delay in flight schedule
	<b>Property/ Equipment</b>	Space vehicle destroyed
	<b>Labor/ Time</b>	Emergency response and investigation required

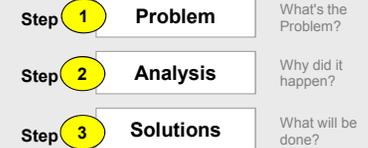
## Investigation into the fatal crash is underway

On October 31, 2014, Virgin Galactic's commercial space vehicle, SpaceShipTwo, tore apart over the Mojave Desert in California during its fourth rocket-powered test flight. One pilot was killed and the other seriously injured. An investigation is underway to determine exactly what caused the crash, but initial data indicates that the tail booms used to slow down the vehicle moved into the feathered position prematurely, increasing the aerodynamic force. This disaster has the potential to impact the emerging commercial space industry as regulators and potential passengers are reminded of the inherent dangers of space travel.

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

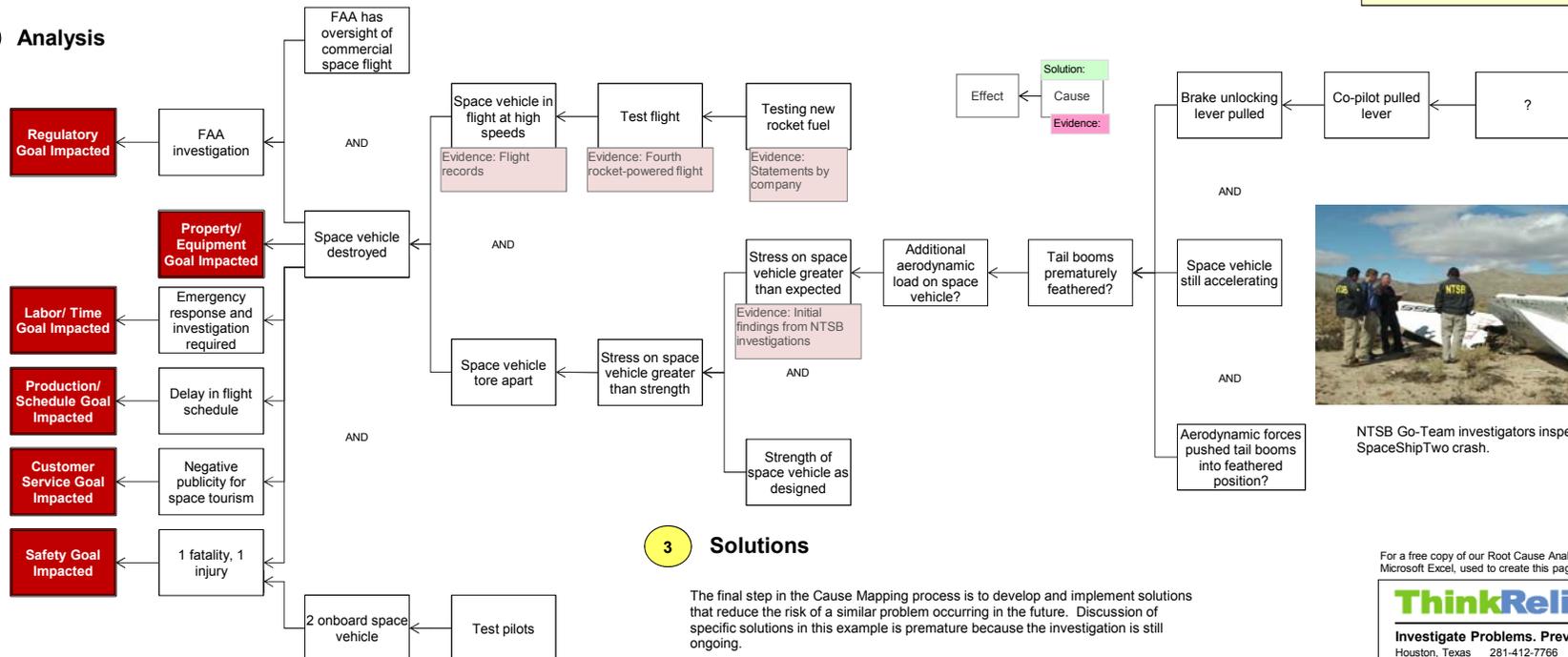


## Why?



NOTE: Read the Cause Map from left to right with the phrase "Was Caused By" in place of each arrow.

## 2 Analysis



NTSB Go-Team investigators inspecting the site of the SpaceShipTwo crash.

## 3 Solutions

The final step in the Cause Mapping process is to develop and implement solutions that reduce the risk of a similar problem occurring in the future. Discussion of specific solutions in this example is premature because the investigation is still ongoing.

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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