

1 Problem

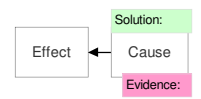
What	Problem(s)	Commuter ferry crash
When	Date	January 9, 2013
	Time	8:45 a.m.
	Different, unusual, unique	Commuters got up from seats, high rate of speed, recently underwent renovation
Where	State, city	Lower Manhattan, NY
	Facility, site	Pier 11, Hudson River
	Task being performed	Pulling into dock
Impact to the Goals		
	Safety	At least 85 people injured
	Environmental	?
	Customer Service	Ferry slammed into pier
	Production-Schedule	Loss of use of ferry?
	Property, Equip, Mtls	Damage to ferry
	Labor, Time	Repairs, recovery
	Frequency	Ferry crashes in 2003, 2009 & 2010
	Annualized Cost	?

COMMUTER FERRY CRASH

Cause Map

At least 85 people were injured - some critically - when a commuter ferry slammed into a pier in Lower Manhattan, NY.

"We know that they hit the pier at a relatively high rate of speed."
- US Coast Guard Capt. Gordon Loeb



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

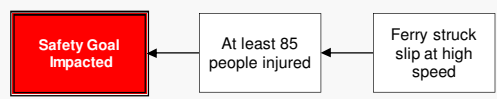
CAUSE MAPPING

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?

2 Analysis

Basic Level Cause Map - Start with simple Why questions.



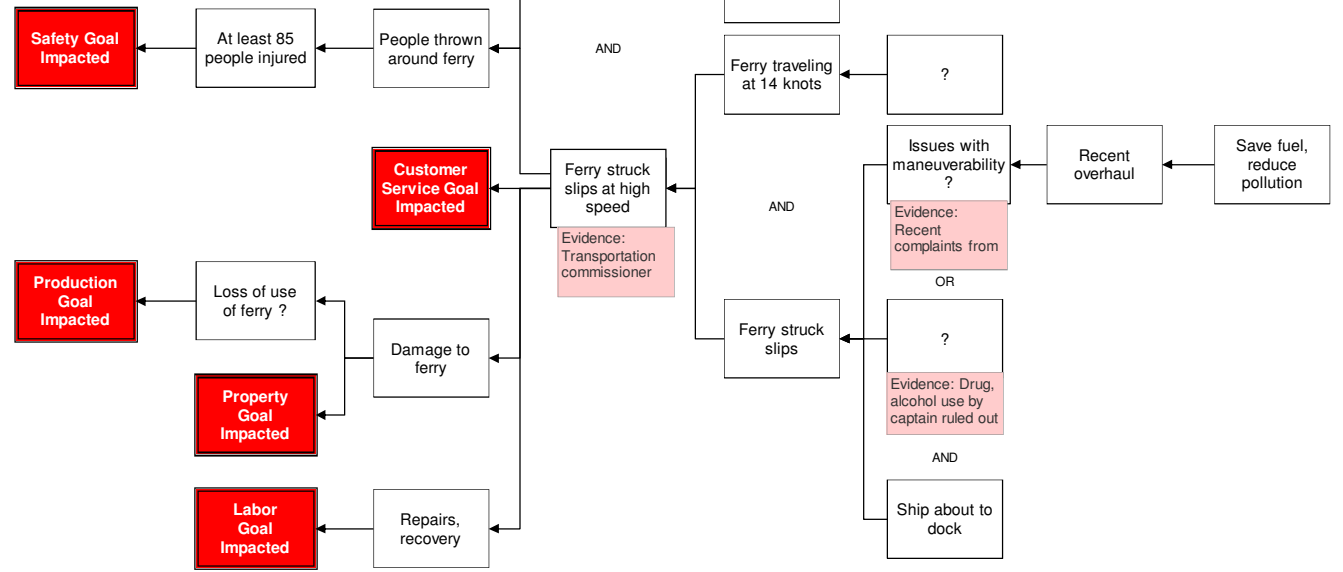
Basic Cause-and-Effect

A commuter ferry struck a pier during the morning commute on January 9, 2013, injuring a large number of commuters. The ferry was traveling at "a relatively high rate of speed", given its proximity to the dock, according to US Coast Guard Captain Gordon Loeb.

More Detailed Cause-and-Effect

In this case, it's not clear what caused the crash, though drug or alcohol use by the captain has been ruled out. There have been some recent complaints about maneuverability due to a recent overhaul replacing the engine and propulsion system but it's not clear if this played a role in the crash. It's also unclear why the ship was traveling at 14 knots when it was about to dock. Because the ship was about to dock, people had gotten up from their seats and were standing in hallways and on or near stairways, increasing the rate of injury. It does not appear that there are any regulations requiring commuters to remain seated until the ferry has stopped moving.

The ferry company, as well as the appropriate transportation authorities, will continue their investigations to determine the causes of the ferry incident. Once they do, they will provide recommendations or requirements to ensure a safer morning commute.



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

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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