

1 Problem

What	Problem(s)	Passengers injured after they were trapped on metro train filled with smoke, 1 fatality
When	Date	January 12, 2015
	Time	~3:30 pm
	Different, unusual, unique	?
Where	Facility, site	Near L'Enfant Plaza metro station, Washington DC
	Unit, area, equipment	Yellow line train
	Task being performed	Transporting passengers - normal route

Impact to the Goals

Safety	1 fatality, 84 treated for injuries
Environmental	N/A
Customer Service	Negative publicity
	Passengers endured scary, dangerous ordeal
Regulatory	?
Production/ Schedule	Major metro service delays
Property/ Equipment	?
Labor/ Time	Emergency response/ investigation required

DEADLY COMMUTE

Cause Map

Passengers trapped in smoke filled train

A standard commute quickly turned into a terrifying ordeal for passengers on a metro train in Washington, DC the afternoon of January 1, 2015. Shortly after leaving a station, the train abruptly stopped and then quickly filled with thick smoke. One passenger died as a result of the incident and 84 more were treated for injuries, predominantly smoke inhalation.

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

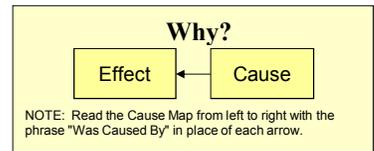
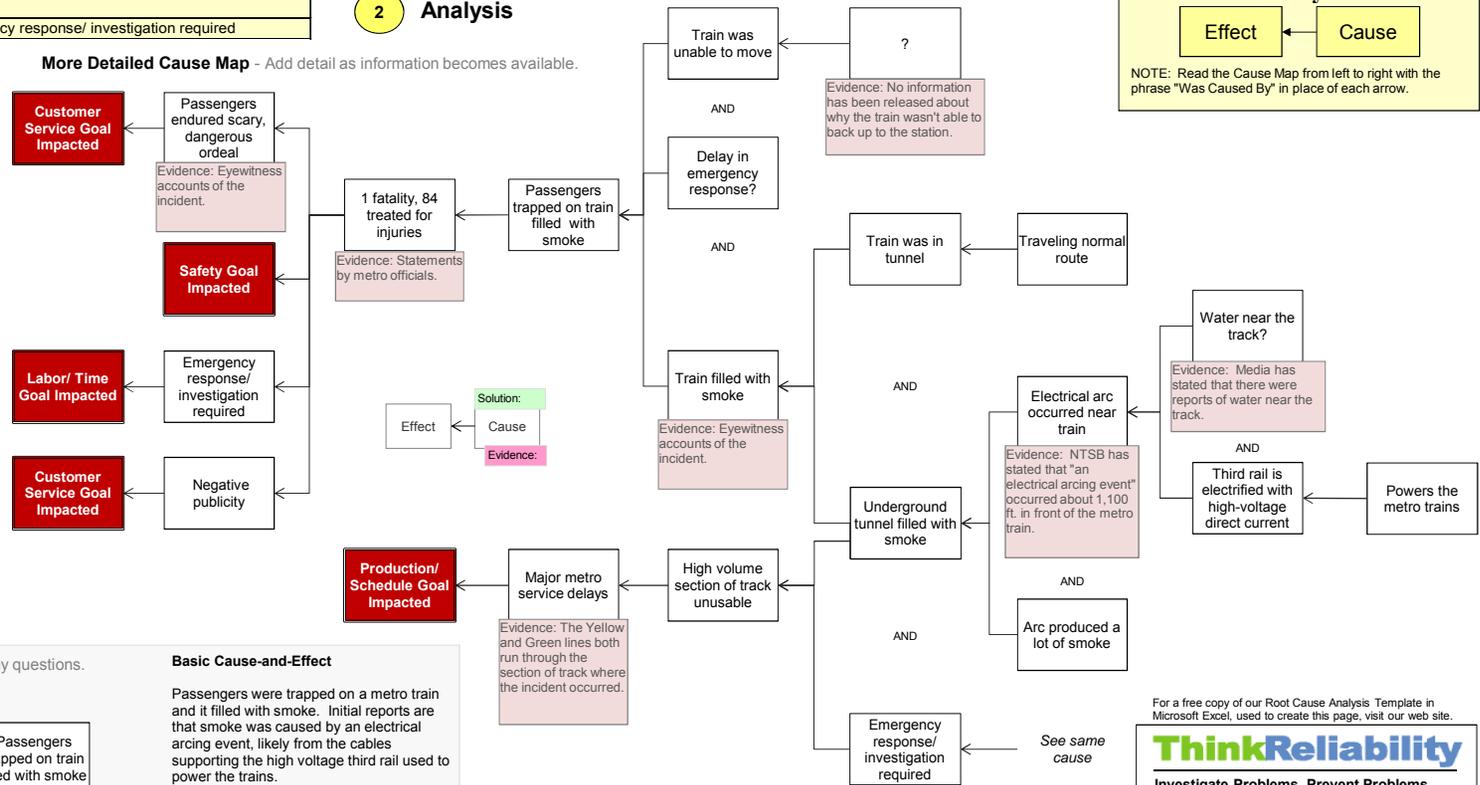
- Step 1 **Problem** What's the Problem?
- Step 2 **Analysis** Why did it happen?
- Step 3 **Solutions** What will be done?

2 Analysis

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

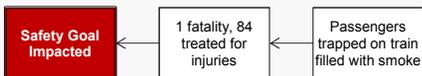
"The power went off. The train stopped. The lights went out. And the smoke appeared. It built up fast, man, until you couldn't see anything. Eventually it was like we were basically out of air."

- passenger Jason Hill, 31 (as quoted by the Washington Post, "1 dead, dozens hurt after Metro car fills with smoke")



Basic Level Cause Map - Start with simple Why questions.

Basic Cause-and-Effect



Passengers were trapped on a metro train and it filled with smoke. Initial reports are that smoke was caused by an electrical arcing event, likely from the cables supporting the high voltage third rail used to power the trains.

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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