

1 Problem

What	Problem(s)	Phone network outage
When	Date	January 15, 1990
	Time	2:25 PM
	Different, unusual, unique	Bug in newly released software
Where	Facility, site	New Jersey Network Operations Center
	Unit, area, equipment	Long distance switch
	Task being performed	Recovery from crash
Impact to the Goals		
	Safety	?
	Environmental	?
	Customer Service	~60,000 people without long distance service for 9 hours (cost for unconnected calls)
	Production/ Schedule	>50 million calls blocked \$60 M
	Property/ Equipment	?
	Labor/ Time	Troubleshooting, repairs
	Frequency	Problems that affect long distance service very rare

Massive Long Distance Outage East Coast U.S. January 15, 1990

On January 15, 1990, a cascading failure resulted in tens of thousands of people in the Northeast US without long distance service for up to 9 hours. This resulted in over 50 million calls being blocked at an estimated loss of \$60 M. (Remember, there weren't really any other ways to quickly connect outside of the immediate area at the time.)

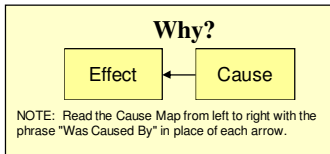
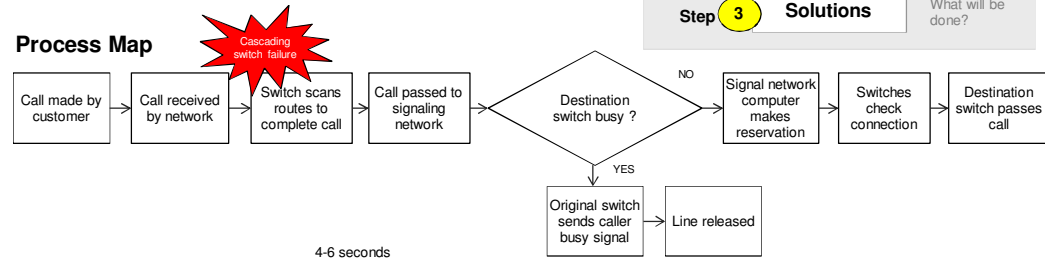
Cause Mapping is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

CAUSE MAPPING

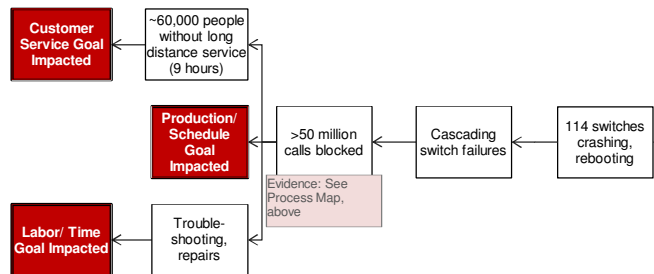
Problem Solving • Incident Investigation • Root Cause Analysis

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

Process Map



2 Analysis



3 Solutions

In this case, a solution needed to be found quickly. The upgraded software was pulled and replaced with the previous version. Better testing was surely used in the future because a problem of this magnitude has rarely been seen.

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