

1 Problem

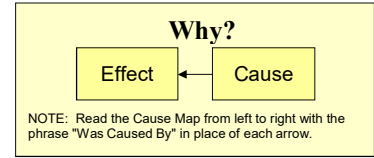
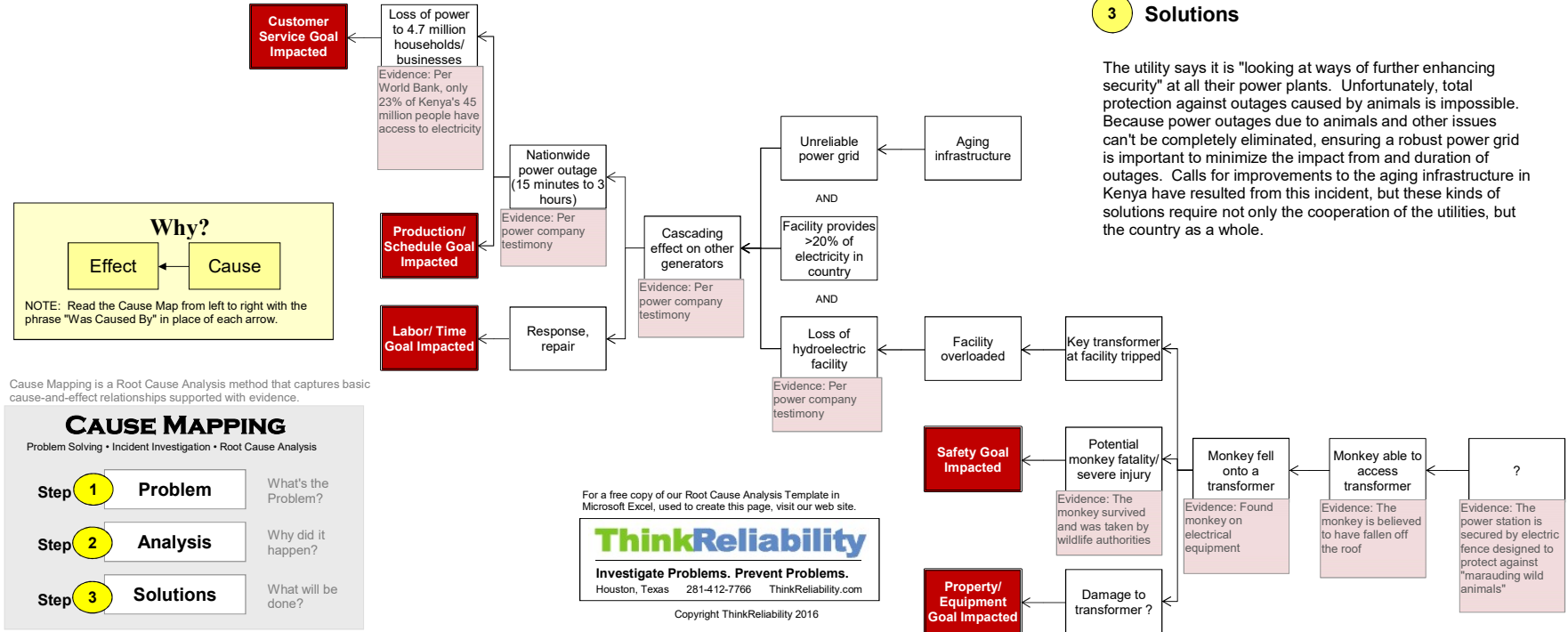
What	Problem(s)	Nationwide blackout
When	Date	June 7, 2016
	Time	11:30 AM
Where	Different, unusual, unique	Monkey fell onto transformer
	Facility, site	Kenya
	Unit, area, equipment	Gitaru hydroelectric power station
	Task being performed	Generating electrical power

Impact to the Goals

Animal Safety	Potential monkey fatality/ severe injury
Environmental	?
Customer Service	Loss of power to 4.7 million households/ businesses
Regulatory	?
Production/ Schedule	Nationwide power outage (15 minutes to 3 hours)
Property/ Equipment	Damage to transformer?
Labor/ Time	Response, repair

Frequency: 1st power outage to utility caused by monkey

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



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?

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

ThinkReliability
 Investigate Problems. Prevent Problems.
 Houston, Texas 281-412-7766 ThinkReliability.com
 Copyright ThinkReliability 2016

MONKEY CAUSES POWER OUTAGE Cause Map

Millions of households, businesses lose power

The power outage resulted from a cascading effect on the country's generators. This cascading effect was caused by the loss of a hydroelectric facility, which provides 20% of the Kenya's electricity, and the unreliability of the power grid, due to aging infrastructure. The loss of the hydroelectric facility was caused by a monkey falling onto the transformer.

"This monkey tripped a transformer. This triggered a cascading effect on the other generators which ended up disrupting power generation and distribution in the whole country . . . This is the first such disruption we've had by a monkey."

- Eric Katheriya, Kenya Power spokesman

2 Analysis

Basic Level Cause Map - Start with simple Why questions.

Basic Cause-and-Effect

One monkey managed to cause an electrical outage for all of Kenya - 4.7 million households and businesses - for 15 minutes to more than 3 hours.

3 Solutions

The utility says it is "looking at ways of further enhancing security" at all their power plants. Unfortunately, total protection against outages caused by animals is impossible. Because power outages due to animals and other issues can't be completely eliminated, ensuring a robust power grid is important to minimize the impact from and duration of outages. Calls for improvements to the aging infrastructure in Kenya have resulted from this incident, but these kinds of solutions require not only the cooperation of the utilities, but the country as a whole.