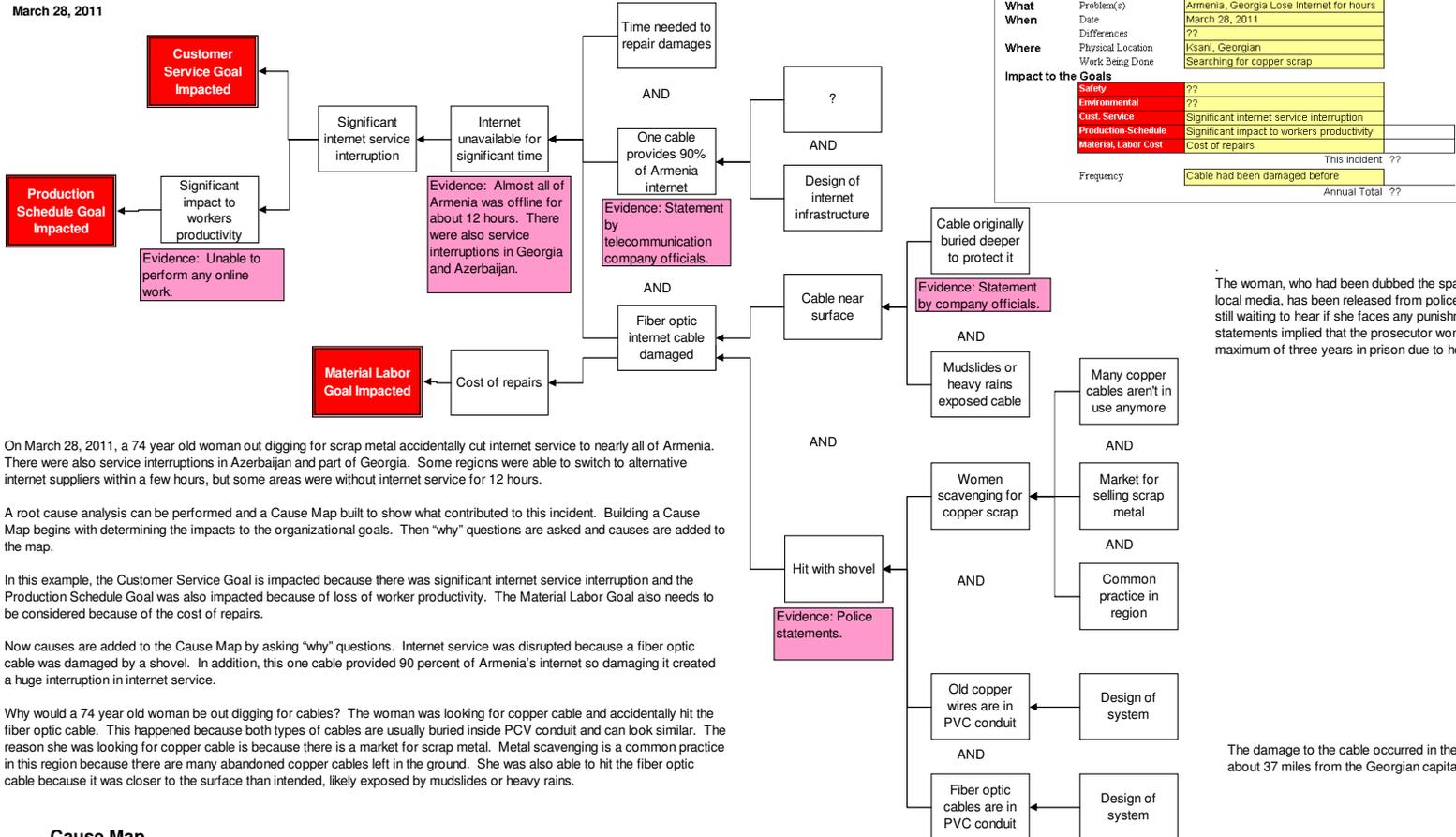


# Armenia Loses Internet for 12 Hours

Ksani, Georgian  
March 28, 2011



**Step 1. Outline the Problem**

<b>What</b>	Problem(s)	Armenia, Georgia Lose Internet for hours
<b>When</b>	Date	March 28, 2011
	Differences	??
<b>Where</b>	Physical Location	Ksani, Georgian
	Work Being Done	Searching for copper scrap
<b>Impact to the Goals</b>		
	Safety	??
	Environmental	??
	Cust. Service	Significant internet service interruption
	Production-Schedule	Significant impact to workers productivity
	Material, Labor Cost	Cost of repairs
	Frequency	Cable had been damaged before
		This incident ??
		Annual Total ??

The woman, who had been dubbed the spade-hacker by local media, has been released from police custody. She is still waiting to hear if she faces any punishment, but police statements implied that the prosecutor won't push for the maximum of three years in prison due to her age.

On March 28, 2011, a 74 year old woman out digging for scrap metal accidentally cut internet service to nearly all of Armenia. There were also service interruptions in Azerbaijan and part of Georgia. Some regions were able to switch to alternative internet suppliers within a few hours, but some areas were without internet service for 12 hours.

A root cause analysis can be performed and a Cause Map built to show what contributed to this incident. Building a Cause Map begins with determining the impacts to the organizational goals. Then "why" questions are asked and causes are added to the map.

In this example, the Customer Service Goal is impacted because there was significant internet service interruption and the Production Schedule Goal was also impacted because of loss of worker productivity. The Material Labor Goal also needs to be considered because of the cost of repairs.

Now causes are added to the Cause Map by asking "why" questions. Internet service was disrupted because a fiber optic cable was damaged by a shovel. In addition, this one cable provided 90 percent of Armenia's internet so damaging it created a huge interruption in internet service.

Why would a 74 year old woman be out digging for cables? The woman was looking for copper cable and accidentally hit the fiber optic cable. This happened because both types of cables are usually buried inside PCV conduit and can look similar. The reason she was looking for copper cable is because there is a market for scrap metal. Metal scavenging is a common practice in this region because there are many abandoned copper cables left in the ground. She was also able to hit the fiber optic cable because it was closer to the surface than intended, likely exposed by mudslides or heavy rains.

The damage to the cable occurred in the village of Ksani, about 37 miles from the Georgian capital, Tbilisi.

**Cause Map**  
High Level

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