

1 Problem

What	Problem(s)	Massive recall, reports of phones exploding while charging
When	Date	September 2, 2016
Where	Different, unusual, unique	New smartphone
	Facility, site	Phones worldwide with the exception of China (batteries were manufactured by a different company)
	Unit, area, equipment	Galaxy Note 7 smartphone
	Task being performed	Charging smartphone

~2.5M SMARTPHONES RECALLED

Cause Map

Fires reported while charging smartphones

On September 2, 2016, Samsung announced that it was recalling more than two million Galaxy Note 7 smartphones after dozens of reports of phones catching fire while charging. Analysts predict the massive recall will cost the company upwards of \$900 million. The negative publicity (including photos of half-melted phones posted online) certainly won't help the company's bottom line and the timing of the debacle is particularly unfortunate with rival Apple slated to announce a new iPhone shortly.

The recall "will cost us so much, it makes my heart ache. Nevertheless, the reason we made this decision is because what is most important is customer safety."

- Dongjin Koh, president of Samsung's mobile division

Impact to the Goals

Safety	Potential for injuries
Economic	Significant cost of recall
Customer Service	Negative publicity
	Customers inconvenienced
Production/Schedule	Design modifications needed
Property/Equipment	~2.5M smartphones recalled
Labor/ Time	Investigation/management of recall

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

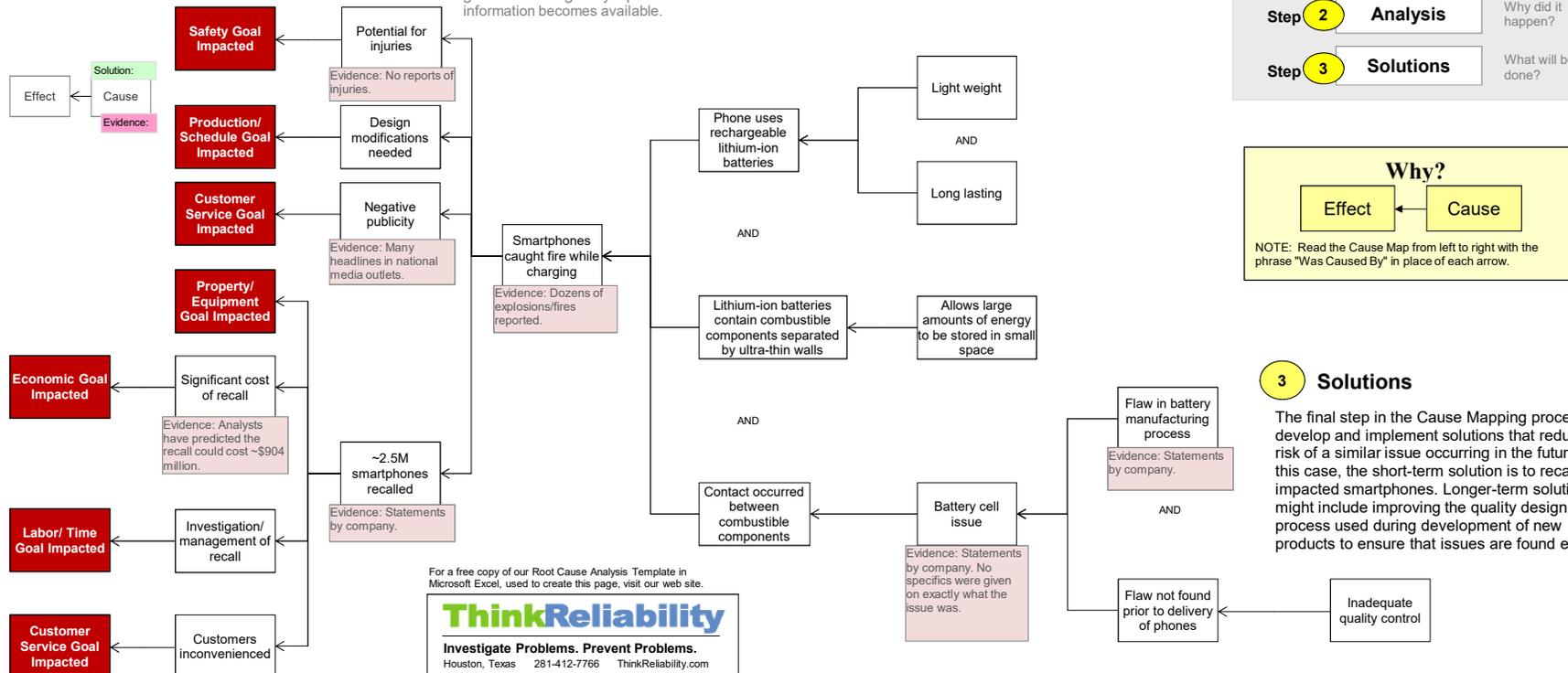
CAUSE MAPPING

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

Intermediate Cause Map -
Build the Cause Map by starting at one impacted goal and asking "why" questions. Add detail as information becomes available.



3 Solutions

The final step in the Cause Mapping process is to develop and implement solutions that reduce the risk of a similar issue occurring in the future. In this case, the short-term solution is to recall impacted smartphones. Longer-term solutions might include improving the quality design process used during development of new products to ensure that issues are found earlier.

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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