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Samsung's Galaxy Note 7: How a New Product Launch Can Go Up in Smoke

Peter A. Stanwick
Associate Professor of Management
Auburn University
United States

Sarah D. Stanwick
Associate Professor of Accounting
Auburn University
United States

Abstract

On August 2, 2016, Samsung announced its new smartphone, the Galaxy Note 7. A month later, Samsung recalled 2.5 million Galaxy Note 7s due to the phone catching on fire. By October 2016, Samsung permanently discontinued the Galaxy Note 7 smartphone. The purpose of this paper is to examine how Samsung addressed the needs of its stakeholders in the introduction and subsequent recall of the Galaxy Note 7.

Keywords: Samsung, Product Recall, Stakeholders

Introduction and Case History

On August 2, 2016, Samsung announced its new smartphone, the Galaxy Note 7. Samsung highlighted the new features of the smartphone including an iris-scanner which identified users based on their eye patterns and a secret folder in which the owner could hide data when other people used the device (Rosenbush, 2016).

Since the Note 7 had a 5.7-inch screen, it was considered a cross between a phone and a tablet and, hence, was given the description of a "phablet". The Galaxy Note 7 also had a stylus, which was a new innovation in the smartphone market, and received very favorable reviews for its power and ease of use. The list price of the Galaxy Note 7 was $850 (Stern, 2016)

It was critical for Samsung to introduce its new smartphone in August 2016 since Apple was going to announce its new iPhone 7 on September 7, 2016. Samsung believed that it needed to "beat" Apple to the marketplace with its new generation of smartphones since Apple's previous iPhone 6S was the world's bestselling smartphone and Samsung needed to seize some of the market share away from Apple (BBC, 2016).

On August 31, 2016, Samsung announced that it had halted all shipments of the Galaxy Note 7 smartphone in South Korea. Samsung stated that the "Galaxy Note 7 shipments are being delayed as devices are undergoing additional quality inspection tests."(Jeong, 2016)

Samsung has started selling the Galaxy Note 7 smartphone in South Korea on August 19, 2016. The announcement to stop shipments resulted in the drop of $4 billion in market capitalization of Samsung's stock and concern as to why the shipments had only been stopped in South Korea. The Samsung representative, Ki-yung Nam, stated that he could not comment as to whether the delay would also occur outside South Korea. One of the Korean news agencies, Yonhap, had reported that there were five cases of the smartphones catching on fire while being charged. The Korean consumer-safety watchdog, Korean Agency for Technology and Standards, had requested more information from Samsung related to the incidents of the smartphone catching fire (Jeong, 2016a)
On September 2, 2016, Samsung announced that it would recall 2.5 million Galaxy Note 7s in 10 countries due to the smartphone catching on fire. Samsung had discovered a flaw in its lithium-ion batteries which could result in a chemical reaction with the smartphone catching on fire.

Samsung had predicted that the manufacturing of replacement phones would start shipping to customers in two weeks. At this point, 35 cases of the smartphone catching on fire and exploding had been reported. Social media was a valuable tool in posting photographs and videos of the charred remains of the phones after they had burst into flames usually as they were being recharged. The recall did not include phones sold in China since those phones used another supplier for the battery (Mozur and Lee, 2016). The initial estimate of the cost of the recall was $905 million, which includes the cost of battery replacements and lost sales (Wong, 2016).

A lithium-ion battery contains lithium-ion particles that move back and forth between a negative and positive electrode continuously. The key advantage of these type of batteries is that they can be compact in design and, therefore, do not take up a lot of valuable space inside an electronic device. Lithium-ion batteries also can quickly be recharged without wearing out the battery. The danger of lithium-ion batteries is that volatile and flammable chemical compounds are pressurized inside the battery cell in order for the lithium-ion particles to be able to move easily between the positive and negative electrodes (Fowler and Mozur, 2016).

On September 5, 2016, Samsung announced that its battery-making affiliate, Samsung SDI Co., was the supplier responsible for the defective batteries. An estimated 65 percent of the batteries of all of Samsung's smartphones are supplied by Samsung SDI Co. Samsung SDI Co. makes the battery cells in South Korea and China and packages them in Vietnam. The batteries are then shipped to Samsung's manufacturing facilities (Jeong, 2016b).

On September 8, 2016, the Federal Aviation Administration (FAA) strongly advised that passengers boarding airplanes not use Galaxy Note 7 smartphones. The FAA also recommended that the smartphones should not be charged onboard or stowed in any checked baggage (Mele, 2016). The following day the United States Consumer Product Safety Commission (CPSC) urged consumers to stop using the Galaxy Note 7 smartphones. The CPSC stated it was determining whether a replacement of the Galaxy Note 7 smartphone would be an acceptable remedy for Samsung. In addition, the president of Samsung Electronics America, Tim Baxter, stated, "We are asking users to power down their Galaxy Note 7s and exchange them now" (Kang, 2016). Samsung offered a $25 gift card to American consumers who exchanged their phones. (Jeong and Dou, 2016). On September 10, 2016, Samsung announced that all consumers, worldwide, should stop using the Galaxy Note 7 smartphones and exchange them as soon as possible (Associated Press, 2016).

On September 14, 2016, Samsung announced that it had developed a software update which would limit how much users can charge their Galaxy Note 7 smartphones. The software would limit the maximum battery charge to 60 percent (Kim and McKinnon, 2016). By the middle of September, Samsung had lost $14 billion of its market capitalization and customers were still confused on what actions would be taken by Samsung to solve the problem. In addition, government regulators had become very frustrated with the lack of a clear singular voice explaining what Samsung's course of action would be to resolve the issue. While the announcement by Samsung to recall the 2.5 million phones had stopped new sales of the phones, a majority of the consumers continued to use their Galaxy Note 7 smartphone. Jennifer Shecter, a spokesperson for Consumer Reports stated "Samsung made an announcement, but the government wasn't involved, there wasn't a clear message, there wasn't an approved remedy and there wasn't a clear fix."(Lee and Mozur, 2016).

On September 25, 2016, customers had started complaining that the replacement batteries in the replacement phones offered by Samsung were overheating and quickly losing batter power (Jeong, 2016c). By October 6, 2016, Samsung announced that it was permanently discontinuing the Galaxy Note 7 smartphone and stopped all sales and production of the smartphone. As a result, Samsung established a double corporate re-recall by not only recalling the original phones, but also the replacement phones (Fowler and Stern, 2016).

Doubts about the cause of the fires being the result of one battery supplier surfaced in early October. The worldwide recall of the Galaxy Note 7 highlighted the concerns that the fires were caused by factors more than just the battery cell. This concern was compounded when Samsung realized that there were problems with the replacement phones, which did not use the same batteries as the original phones. Battery experts and analysts stated that the problem may not only be the battery but, they suspected other factors such as the battery's voltage control system and the type of materials that are used within the battery cell itself (Cheng and Jeong, 2016). On October 13, 2016, Samsung announced that it would offer a $100 credit on customers' bills from "select retail or carrier outlets" for those customers exchanging the Galaxy Note 7 smartphone for another Samsung smartphone (Biersdorfer, 2016).

On January 20, 2017, the results of an internal investigation done by Samsung showed that there were multiple problems with the batteries for the Galaxy Note 7. Samsung found that some of the batteries were irregular in size while other batteries had manufacturing problems. The irregular shape resulted in the battery not fitting properly in the phone (Martin and McKinnon, 2017). The manufacturing problems were based on a fundamental design flaw of the Galaxy Note 7. The additional features and the rush to market resulted in the battery design to be thinner yet more powerful than previous designs. As a result, the battery had an exceptionally thin separator in the lithium battery. The separator is needed in order to separate the positive and negative electrodes in the battery. Due to the minuscule size of the separator, any microscopic flaw in the separator may result in the mixing of the positive and negative electrodes, which would result in the phone catching fire. The increased strength of the battery also was a problem since the high energy density of the battery could increase the severity of failures if they occurred in the phone (Sang-Hun and Mozur, 2017).

On March 28, 2017, Samsung announced that they were considering selling refurbished versions of the Galaxy Note 7 smartphones. Samsung stated that some of its existing Galaxy Note 7 smartphones would be "considered to be used as refurbished or rental phones" while other phones would be recycled in which precious metals such as copper, nickel gold and silver would be removed from the phones (Kwaak, 2017). On May 17, 2017, Samsung announced that it would sell the refurbished Galaxy Note 7 as Galaxy Note FE at a list price that was 30 percent less than the price of the Galaxy Note 7. FE stood for Fandom Edition and not Fire Edition as one critic joked (Liberatore, 2017).

Samsung's Culture

Samsung has a very centralized based culture. The decisions and orders come from senior level managers without any input from the lower level employees. Two former Samsung employees describe the culture at Samsung to be very militaristic in which it was expected that the employees would carry out all orders without question. As a result, senior managers were ordering engineering to correct the problems without understanding the potential complexity of resolving the problems (Chen and Sang-Hun, 2016). This hierarchical culture results in significant micromanaging, which results in the lack of incentive and opportunity to be creative and innovative. Furthermore, Samsung is a powerful South Korean family run business chaebol, which limits its accountability and scrutiny for various stakeholders (Sang-Hun and Mozur, 2017).

In addition, due to fear of lawsuits and potential subpoenas, Samsung's top-level managers told the engineers to keep all communications offline while they were testing solutions to the problems. This "ban" on official communications resulted in inconsistent information reaching engineering based on the results of other employees. As a result, the engineers were unable to replicate the problem in the lab. Since they were not able to produce a fire for the Galaxy Note 7 smartphone, they were unable to pinpoint the cause of the problem. The Galaxy Note 7 also had far more features and was much more complex than any previous Samsung smartphone, increasing the challenge for the engineers to solve the problem (Chen and Sang-Hun, 2016).

A Stakeholder's Perspective

From a stockholder's perspective, Samsung was under pressure to produce a phone to rival the iPhone and to have it to market before Apple's product hit the market. It succeeded with this goal since the iPhone 7 was introduced on September 7, 2016. From a customer's perspective, Samsung did not believe that there was a problem with the phone until customer protests forced Samsung to react. In addition, airlines, based on the recommendation by the Federal Aviation Administration, banned customers from carrying a Galaxy Note 7 on board airplanes. From an employee's perspective, there were fundamental flaws in the design of the smart phone, yet the quality issues were not resolved until after the recall occurred.

In addition, once the phones were recalled, the replacement batteries also generated overheating problems and had a shorter battery life. From a supplier perspective, Samsung concluded that the lithium-ion battery in the phone would overheat and create the fire, yet, one of the suppliers of the batteries was Samsung's subsidiary, Samsung SDI. From a global governmental regulatory perspective, Samsung was slow to react to the government regulations regarding the recall of a potential dangerous product. Furthermore, the United States Consumer Product Safety Commission recommended that consumers immediately stop using the Galaxy Note 7 once the information pertaining to the fires became public. As a result, this case study highlights the strengths and weakness of Samsung's attempt to address the needs of its stakeholders during this product crisis.

References

Associated Press. 2016. Samsung Urges Consumers to Stop Using Galaxy Note 7s After Battery Fires. *The New York Times*. September 10.

BBC. 2016. Apple Expected to Unveil New iPhone 7. BBC News. https://www.bbc.com/news/technology-37293474. September 7.

Biersdorfer, J.D.. 2016. Do You Have a Samsung Galaxy Note 7? Here's What to Do. *The New York Times*. October 11.

Chen, Brian X. and Choe Sang-Hun. 2016. Why Samsung Abandoned its Galaxy Note 7 Flagship Phone. *The New York Times.* October 11.

Cheng, Jonathan and Eun-Young Jeong. 2016. Samsung Faces New Questions Over Galaxy Note 7 Fires. *The Wall Street Journal.* October 10.

Fowler, Geoffrey A. and Joanna Stern. 2016. What Samsung Must Do to Win Back Our Trust. *The Wall Street Journal*. October 6.

Fowler, Susanne and Paul Mozur. 2016. Samsung's Recall: The Problem with Lithium-Ion Batteries. *The New York Times*. September 2.

Jeong, Eun-Young. 2016. Samsung Electronics Halts Galaxy Note 7 Phone Shipments for More Quality Testing. *The Wall Street Journal*. August 31.

Jeong, Eun-Young. 2016a. Samsung Stops Galaxy Note 7 Smartphone Shipments as Safety Suspicions Spread. *The Wall Street Journal.* September 1.

Jeong, Eun-Young. 2016b. Samsung's Massive Galaxy Note 7 recall Brings Battery-Maker into Focus. *The Wall Street Journal*. September 5.

Jeong, Eun-Young. 2016c. Complaints Arise Over Replacement Batteries for Samsung Galaxy Note 7. *The Wall Street Journal*. September 25.

Jeong, Eun-Young and Eva Dou. 2016. Samsung Shares Drop Over FAA Warning on Galaxy Note 7. *The Wall Street Journal*. September 9.

Kang, Cecilia. 2016. Galaxy Note 7 Owners Are Urged to Stop Using Their Phones. *The New York Times*. September 9.

Kim, Yun-Hee and John D. McKinnon. 2016. Samsung Plans Software Update to Cut Galaxy Note 7 Fire Risk. *The Wall Street Journal.* September 14.

Kwaak, Jeyup S. 2017. Samsung May Bring Back Its Fire-Plagued Galaxy Note 7. *The New York Times.* March 28.

Lee, Su-Hyun and Paul Mozur. 2016. Samsung Stumbles in Race to Recall Troubled Phones. *The New York Times*. September 15.

Liberatore, Stacy. 2017. Samsung to Call its Refurbished Galaxy Note 7 the "Galaxy Note FE" (buy say it stands for 'Fandom Edition' and not 'Fire Edition'). *The Daily Mail*. May 17.

Martin, Timothy W. and John D. McKinnon. 2017. Samsung Investigation Blames Battery Size for Galaxy Note 7 fire. *The Wall Street Journal*. January 20.

Mele, Christopher. 2016. F.A.A. 'Strongly Advises' Against Using Samsung Galaxy Note 7 Aboard Planes. *The New York Times*. September 8.

Mozur, Paul and Su-Hyun Lee. 2016. Samsung to Recall 2.5 Million Galaxy Note 7s over Battery Fires. *The New York Times.* September 2.

Rosenbush, Steve. 2016. Samsung Launches Galaxy Note 7 With Emphasis on Software, Services. *The Wall Street Journal*. August 2.

Sang-Hun, Choe and Paul Mozur. 2017. Samsung Galaxy Note 7 Crisis Signals Problems at Korea Inc. *The New York Times.* January 23.

Stern, Joanna. 2016. Samsung Galaxy Note 7 Review: Best New Android Phone. *The Wall Street Journal*. August 16.

Wong, Jacky. 2016. Samsung Battery Fires Shouldn't Leave Lasting Burn. *The Wall Street Journal*. September 5.