**Critical Thinking & Quantitative Analysis**

Ski Bright Case Study

After retiring as a physician, Bill Gather became an avid downhill skier on the steep slopes of the Colorado Rocky Mountains. As an amateur inventory, Bill was always looking for something new. With the recent deaths of several celebrity skiers, Bill knew he could use his creative mind to make skiing safer and his bank account larger. He knew that many deaths on the slopes were caused by head injuries. Although ski helmets have been on the market for some time, most skiers considered them boring and basically ugly. As a physician, Bill knew that some type of new ski helmet was the answer.

Bill’s biggest challenge was to invent a helmet that was attractive, safe, and fun to wear. Multiple colors, using the latest fashion designs, would be a must. After years of skiing, Bill knew that many skiers believed that how you looked on the slopes was more important than how you skied. His helmets would have to look good and fit in with current fashion trends. He decided to name the helmet Ski Bright. Attractive helmets were not enough. Bill had to make the helmets fun and useful. If Bill could come up with a good idea, he believed that there was a 25% chance the market for the helmet would be excellent. The chance of a good market would be 45% and the chance of a poor market would be 30%.

The idea of how to make ski helmets fun and useful came to Bill on a gondola ride to the top of a mountain. A busy executive on the gondola ride was on his cell phone, trying to complete a complicated business deal. When he executive got off the gondola, he dropped the phone, and it was crushed by the gondola machinery. Bill decided that his new ski helmet would have a built-in cell phone and an AM/FM stereo radio. All the electronics could be operated by a control pad worn on a skier’s arm or leg.

Bill decided to try a small pilot project for Ski Bright. He enjoyed being retired and didn’t want failure to cause him to go back to work. After some research, Bill found Progressive Products (PP). The company was willing to be a partner in developing the Ski Bright and sharing any profits. If the market was excellent, Bill would net $5,000, with a good market Bill would net $2000 but in a poor market Bill would lose $5000.

Another option for Bill was to have Leadville Barts (LB) make the helmet. The company had extensive experience in making bicycle helmets. PP would then take the helmets made by LB and do the rest. Bill had a greater risk with this option. He estimated that he could lose $10,000 in a poor market but could net $6000 profit in a good market or $12,000 in an excellent market.

A third option for Bill was to use TalRad (TR), a radio company in Ft. Lauderdale. TR had extensive experience in making military radios. LB could make the helmets, TR could make the radios, and PP could do the rest. Again, Bill would be taking on greater risk. A poor market would mean a $15,000 loss but a good market would result in a net profit of $7,000 or in an excellent market, Bill could see a net profit of $13,000.

Bill could also have Celestial Cellular (CC) develop the cell phones. Thus another option was to have CC make the phones and have PP do the rest of the production and distribution. Because the cell phone was the most expensive component of the helmet, Bill could lose $30,000 in a poor market. However, in a good market, he stood to net $10,000 or in an excellent market he could net $30,000.

Bill’s final option was to forget about PP entirely. He could use LB to make the helmets, CC to make the phones, and TR to make the AM/FM stereo radios. Bob then could hire some friends to assemble everything and market the finished Ski Bright helmets. With this final alternative, Bill could realize a net profit of $55,000 in an excellent market. Even if the market were just good, Bill would net $15,000. A poor market would result in a loss of $60,000.

Using your knowledge of decision analysis, what do you recommend?

Complete all work in excel with correct cell addresses to support your work.

**Rubric for CBT ASSESSMENT BBA CORE COMPONENT**

**BADM 3963, Quantitative Methods**

**Ski Bright Case**

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| PROGRAM OUTCOME |  |  |  |
| Analytic and Critical Thinking Skills | Exceeds Expectations (3) | Meets Expectations (2) | Does Not Meet Expectations (1) |
| Student will analyze a decision situation, use an appropriate technique to evaluate alternatives and make the appropriate recommendation. | Uses a representation that clearly depicts the problem and uses all appropriate information correctly (payoff table).  Applies completely appropriate procedures (calculates EMVs).  Finds correct solution (EMV calculations are correct) and makes correct recommendation. | Uses a representation that gives some important information about the problem and some appropriate information correctly.  Applies some appropriate procedures.  Copying error, computational error, partially correct answer. | Uses a representation that gives little or no significant information about the problem and  uses inappropriate information.  Applies inappropriate procedures.  Incorrect answer given. |