

# Problem Statement Worksheet (Hypothesis Formation)

**What opportunities exist for Big Mountain Resort (BMR) to recoup this year the operational costs (\$1,540.000) from the chair installed and maintain a profit margin of at least 9.2%? What is the estimation of the year's annual revenue be after these opportunities are exploited?**

## 1 Context

BMR, opened in 1947, is a Resort is located in NW Montana, it offers spectacular views of Glacier National Park and Flathead National Forest. BMR has an annual inflow of 350.000 skiers and has recently installed a new chair that has increased operational costs in \$ 1.540.000.

BMR has an annual profit margin of 9.2% and is interested in **identifying opportunities to recoup the operational costs of the new chair** to maintain this margin. Additionally, BMR is interested in understanding **what the annual revenue will be** after exploited the opportunities identified.

## 2 Criteria for success

To (i) **identify and implement opportunities** that allow BMR to **maintain a profit margin of 9,2%**, this is, to generate through cost reduction, new revenue or a combination of both, a minimum of \$1.540.000, and (ii) **estimate the annual revenue** after implementing these opportunities.

## 3 Scope of solution space

The focus is to **find and implement ways to increase revenue, reduce costs, or a combination of both, to maintain a profit margin of 9,2%**. To do this, we will analyse the data of potentially 330 ski resorts in the USA to find insights regarding relationships between the price of these ski resorts and other factors. These insights will allow us to understand what factors are more determining to the price, which could help business to find opportunities in reducing cost or increasing revenue.

## 4 Constraints within solution space

- The **estimations will be based on historical data**, and therefore, deviations of real data vs. projected data could affect the projections.
- It is necessary to ensure that there will be **access to the Database**.
- The opportunities need to be **identified and implemented in the current year**.
- The opportunities need to be **measurable**, in order to estimate the annual revenue after implementing them.
- Some ski resorts may have missing or wrong data. Therefore, we will need to either delete or impute the missing fields, which could impact negatively our assumptions and further conclusions.

## 5 Stakeholders to provide key insight

**Jimmy Balckburn** – Director of Operations

**Alesha Eisen** – Database Manager

## 6 Key data sources

CSV file – Metadata with information about 330 resorts in the US that can be considered as BMR competitors, the data provides information about different factors of ski resorts, for example:

- i) **Structural data** (annual inches of snow, n° of skiable acres, ..)
- ii) **Utilities data** (n° of chairs of different kinds, n° of ski tracks, ..)
- iii) **Operations data** (prices of chairlift tickets, n° of days opened last year, number of days projected to open next year, ...)

For our analysis, we will focus on price ticket as the variable to study based on the rest of the available variables in ski resorts.