

Problem Statement Worksheet (Hypothesis Formation)

<What is the business problem you are investigating? (Use SMART principles)>



1 Context

<Why are you working on this problem?>To determine the optimal cost of a ski-lift ticket for Big Mountain Resort so that the resort can increase revenue.

2 Criteria for success

<What is the key criteria that will deem this work successful?>To create a primary optimized model in which the outcome or dependent variable is ticket cost. Some of the independent variables are total ski-able terrain, total chairs, days open last year, total area covered by snow making machines, and average snowfall. The dependent variables are cost of adult tickets during the weekday and during the weekend.

3 Scope of solution space

<What is the focus of this business initiative? I.e. What are your specific items will you focus on exclusively?>A second optimized model will be the total chairs as the dependent variable and the independent variables will be type of lift, such as fastEight, fastSixes, fastQuads, quad, triple, double, surface, longest run, and summit elevation. The data will be divided into large resorts and small resorts measured by total skiable area.

4 Constraints within solution space

<What constraints exist that may prevent this business initiative from succeeding?>Ideally, there would exist variables that indicate the date so that the date and the weather could be part of the optimized model. Incomplete data could provide faulty analysis, so metrics will be needed to test the data for accuracy and precision.

5 Stakeholders to provide key insight

<Who are the key stakeholders that need to be involved in this project? Where will you source your data from and who will you present your recommendation to once you have identified a solution?>The key stakeholders are chief of operations, Jimmy Blackburn and Alesha Eisen, the database manager.

6 Key data sources

<What are the key pieces of data you need to answer the questions related to the problem you are trying to solve?>The minimal data required is ticket cost, total ski-able terrain, total chairs, days open last year.