

Rio Olympic Triathlon Road Closure Control

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Abstract

This project is to manage the road closure time in the Rio Triathlon. A Closure Cost Index was derived by combining Closure Duration and Area. Minitab/AP descriptive Statistics were used to optimize the event schedule and sequence among three Sports (Swim, Run, Bike). To meet 5.5 hours of Road Closure time, team needed to adopt two rules: (1) not to invite certain players (worse records), and (2) disqualify slower players during the Run event. Team has managed the risks: Award Ceremony, Gender, Age, Category, Capacity, Safety, Health, Record Control, Weather, and Business. The objectives are to minimize the Closure Cost while securing the Safety as well as entertaining audience. Team has optimized the Zone Closure periods by splitting the Bike Zone into three smaller zones to minimize the waiting. Team utilized the road space from one –way to two-ways to arrange both Run and Bike events simultaneously. Team has improved the Closure Cost Index more than 75%. This project will treat stakeholders (invited player, uninvited player, visitors, city staff, nurses, safety guards, officers, business owners) as critical customers. The excellent customer service can attract more visitors to join next City event since they have good memory.

Keywords

Big Data, Data Mining, Statistics, SPSS, CRISP

Acknowledgements

Dr. Charles Chen

Biography

Mason Chen is currently a student in the Milpitas Christian Middle School. Mason has certified IASSC (International Associate of Six Sigma Certificate) Lean Six Sigma Yellow Belt, Green Belt, and Black Belt Certificates. He has also certified IBM SPSS Statistics Certificate. He also won the 1st Place Award on the Mental Math and Abacus Math contests in the North California Region. Mason Chen is familiar with Six Sigma DMAIC, DMADOV, Lean Production, Minitab, SPSS Statistics, SPSS Modeler CRISP Data Mining, AP Statistics, and JAVA tools. Mason got invited to present his five ASA team statistics projects for 90mins in the local ASQ Statistics and Reliability Group.

Zonghuan (Jason) Li is currently a student in San Mateo High School. Jason has certified SPSS statistics, SPSS Modeler data analyst and SPSS modeler data mining. Jason is familiar with Six Sigma DMAIC, SPSS Statistics,

SPSS modeler CRISP Data Mining, AP Statistics, JAVA Programming and ASQ Quality Engineering. Jason got invited to present his Warriors' 73 win predictions project over the summer. He has also been invited to ASA CSP next year in Florida. Recently, he is learning "Computational Biology" which integrates Biology, Chemistry, Physics, Mathematics, Statistics, and Computer Science fields. At school, Jason is involved in Renaissance Leadership and many clubs. He is also on the JV basketball team.