What We Did: Established a segmentation framework to identify homogenous segment of stations/airports based on their operational characteristics, to effectively implement business strategy.

The Impact We Made: Newly identified station segments were able to set appropriate benchmarks and learn from each other, which led to 2% increment in operational performance in the first quarter of 2014.

Summary - Airport Segmentation to drive consolidated strategy

The operations team of a leading airline company always devised common operational strategies for a group/segment of airports. Success of a consolidated strategy was dependent on exclusivity of these groups. The existing framework did not result in homogenous segments. Mu Sigma developed a framework to segment airports/stations of the client according to their operational characteristics, benchmarking the performance of each station.

About The Client - Leading US airline

The client is a major US airline and one of the leading low cost carriers. The airline serves more than 90 destinations in the United States.

The Challenge - Gauging station performance

The existing framework segmented the stations based on the passenger traffic and the revenue each station generated. Over the years, this segmentation exercise failed to achieve proper implementation of operational strategy, resulting in poor performance of these stations. The client was looking for a process capable of segmenting the stations and to be able to measure overall performance of these stations.

The Approach - Building a station segmentation framework

Mu Sigma took a structured approach to build a station segmentation framework:

- The team first identified metrics to measure operational performance such as turn time, turn delay, and compliance etc.
The next step was to identify operational characteristics (such as practical hourly capacity, gate departure delays, Baggage delivery time, passenger per employee, aircraft per employee, mix of local v/s transfer passengers, and location type) affecting operational performance.

Important inherent operational characteristics of stations were prioritized based on business significance. Multiple variable reduction techniques were used to avoid complexities while segmenting.

As a last step, these reduced variables were fed into clustering algorithm and clusters/segments were identified after running multiple iterations. This resulted in 18 highly calibrated port segments

The Outcome - Informed decision making and operational performance made more efficient

- 18 segments were formed for 85 stations based on similar operational characteristics.
- This segmentation helped the business make informed decisions by effectively enforcing common strategies. The operational performance showed a rapid improvement of 2% in first quarter of 2014.
- Identified segments are being leveraged by other functions across the client ecosystem for performance assessment.