2019

Wake Forest University

Graduate Business Analytics Case Competition

March 26-27
Winston-Salem, NC

Cheetah Running Shoes

Cheetah Running Shoes (CRS) specializes in high-end trail running shoes. CRS has two plants located in Camden, N.J. and Modesto, CA. and two distribution centers (DCs) in Denver, CO and Pittsburgh, PA.

As mud runs and trail races have increased in popularity in the United States, CRS has experienced dramatic growth over the last five years. Carrie Foster, the director of logistics has decided it is time to take a hard look at the CRS supply chain. In order to assess the supply chain, her team has gathered the following data:

- Forecasted annual demand for 505 customer zones (in pounds).
- Annual capacity for each plant (in pounds)
- Inbound freight cost in ($/pound) from each of its two plants to each of 15 candidate DC locations.
- Handling charges ($/pound) at each candidate DC location
- Outbound freight (ground) cost ($/pound) from each of the candidate DC locations to each customer zone.
- Transit time (days) from each of the candidate DC locations to each customer zone (ground).
- Next Day Air delivery ($/pound) from each of the candidate DC locations to each customer zone.

Ms. Foster would like a clean-sheet analysis of the DC locations, but the plant locations are to be considered fixed. She is interested in the following:

- Does CRS have the right number of DCs and are they in the best locations?
- Does it ever make sense to use Next Day Air?
- What is the tradeoff between customer service and cost?
- Any other insights you can glean from your analysis.