Jilltronics Home Security – A Vendor Selection Case Study

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Overview

The Jilltronics Corporation is a regional player in the home security market. Historically, the firm purchased all of its security alarms from Roberts Inc. However, because of increasing competition management wants to take a more analytical approach in developing a supply chain strategy, which includes expanding the number of suppliers. Management wishes to develop a vendor selection process based on five criteria: Delivery, Quality, Terms, Support and Price. In terms of the relative importance of the criteria both delivery and quality are viewed as three times as important as terms or support. Price is viewed as twice as important as terms or support. The following preference matrix was developed which included three new suppliers. Each potential supplier was ranked on a 1 to 100 scale for each of the decision criteria.

Criteria/Vendor	Roberts	Williams	S&G	Builtright
Delivery	90	80	85	50
Quality	80	75	75	70
Terms	50	70	60	50
Support	70	60	90	70
Price	70	65	65	75

Jilltronics' management has established a minimum threshold score of 70. Furthermore, they plan to allocate orders based on the sum of the digits formula. For example, if there are two qualified firms then the top firm would receive two-thirds of the order and the second firm would receive one-third.

Discussion Questions:

1. Provide an overview on the size of the home electronics industry including slants and trends.
2. What supplier policy should the manager adopt based on the preference matrix? Provide a rank order of the qualified suppliers and the amount of the order share.
3. What are the implications if each factor is given equal weight?
4. What is the minimum delivery score required for Builtright to be included in the suppler list? What order percentage would Builtright receive?
5. Develop a benefit-cost ratio analysis of the candidate suppliers. In this situation remove price from the preference matrix and rescale the remaining weights to sum to one. The corresponding unit prices from the suppliers are: $10, $12, $11 and $9, respectively. Does the supplier rank order change? Present a table that compares the supplier decisions based on the various decision criteria.
6. Develop a Radar plot based on the five criteria and vendor rankings.