CASE: Data Tech, Inc.

Data Tech, Inc. is a small but growing company started by Jeff Styles. Data Tech is a business that transfers hard copies of documents, such as invoices, bills, or mailing lists, onto CDs. As more companies move to a paperless environment, placing data on CDs is the wave of the future. Jeff had started the company in his two-car garage three years earlier by purchasing the necessary software and signing two large corporations as his first customers. Now he was about to sign on two additional corporate customers. Suddenly what was a small garage operation was turning into a major business.

The Business

The operations function of Data Tech seems deceptively simple. Every day Data Tech receives packages of mail from corporate customers containing documents they want transferred to disc. Data Tech usually receives anywhere from 10,000 to 30,000 pieces of mail per day that need to be processed. The first step requires workers to unpack and sort the mail received. Next, workers scan each item through one of two scanning machines that transfer content to disc. An accuracy check is then made to ensure that information was transferred correctly. This stage is particularly important as many of the documents contain important private information. Finally, the discs and the documents are packaged and sent back to the customer, with Data Tech keeping a backup disc for its records.

The Need for Capacity and Relocation

Running a full-time business out of his two-car garage is a challenge for Jeff Styles. Jeff has spent a great deal of time ensuring that the operation of Data Tech runs smoothly without any bottlenecks. He has been successful, and his two original customers have just signed long-term contracts with him. In addition, he has acquired two additional customers. This means that Data Tech needs to move to a larger facility that could accommodate the larger size of the business.

Jeff has narrowed his search to three potential locations. He has identified the factors that are important to him and rated each location considering a number of criteria. Some factors are especially important, such as proximity to the postal service that delivers the daily packages. Another is closeness to the airport, as Jeff frequently travels to customer locations.

A factor that is particularly troubling for Jeff is the issue of capacity. Two of the locations he is considering are larger than he currently needs and offer excess growth capacity. The third location would meet current capacity needs but would not offer ample room for expansion. He doesn't know which is a better strategy. In his list of factor weights Jeff has made spaces for both capacity options, giving himself some time to think about the issues.

The information that Jeff has compiled is shown in the table.

Factor	Factor Weight	Factor Score at Each Location #1	#2	#3
Proximity to airport	20	3	4	4
Proximity to postal service	30	4	2	5
Facility with excess capacity	?	4	5	0
Facility with potential for expansion	?	0	1	5
Close to business community	10	5	4	4
Pleasant environment	10	3	4	4

To Expand Large or Small

Jeff is not sure how to evaluate whether he should focus on moving into a larger facility now or moving into a smaller facility with potential for expansion. He has estimated the following chances for demand:

- The likelihood of demand being high is 0.70.
- The likelihood of demand being low is 0.30.

He also estimated profitability for each alternative:

- Moving into a large facility has a profitability of either $1,000,000 or $600,000, depending on whether demand turns out to be high or low.
- Moving into a small facility has a profitability of $500,000, assuming that demand is low.
- Moving into a small facility would require considering expanding if demand turned high. If Data Tech decided to expand at that point, profitability would be $800,000. If it did not expand further, the profitability would be $500,000.

Case Questions

1. Help Jeff decide whether he should give greater priority to a smaller facility with possibility for expansion or move into a larger facility immediately. Decide on which is the best alternative and choose weights for the two capacity factors based on your findings.
2. Once you have selected the factors for the two capacity alternatives, use factor rating to select a new location for Data Tech.
3. How would your factor analysis be different if you had selected a different capacity alternative?