

## CASE STUDY

### Natural Designs Inc.

Natural Designs manufactures a variety of bird feeders, garden accessories, and other items intended to help people get in touch with and observe nature. Founded in 1995 by Jim McMaster in LaGrange, Illinois, the company started when he was working as a fourth-grade teacher. Presentations to students on birds and wildlife had a way of capturing their enthusiasm; thus, McMaster started offering presentations to other schools in the greater Chicago area. Within a few years, McMaster was so busy doing presentations at various schools, as well as running nature camps from his home, that he quit his full-time job as an elementary school teacher to form Natural Designs. At first, Natural Designs was mostly Jim and his wife giving presentations and running camps, but gradually the company expanded to sell some of the bird feeders and other nature devices featured in his class talks. Today, the company has sales of \$2 million per year, most of which comes from physical products sold to outdoor, nature, and bird stores such as Wild Birds Unlimited.

In the first few years of operation, Jim McMaster and his wife, Sheila, produced bird feeders and other products in their garage. In 1997, however, the operation became too large for their garage, so they rented a 4,000-square-foot facility for production and distribution purposes. They also hired two employees to manage these two functions so that the McMasters could continue giving school talks. Today, Natural Designs has 15 employees, 2 of which are focused solely on giving nature talks and selling the products to retailers interested in reselling Natural Designs products. The product range consists of 500 stock-keeping units (SKUs).

One of the challenges faced by Natural Designs involves its customized bird feeders. This operation allows customers to get one of the 10 made-to-stock bird feeders and have it customized with their name or address carved in the wood, plus painting in any of 10 color schemes. This portion of the business has been growing by 50 percent per year and now represents \$100,000 per year in sales. A customer order is taken over the Internet and promised for delivery within one week. Then the item is pulled from stock, carved with the appropriate name and address, and

painted. Finally, the item is shipped directly to the customer's home. While this product has been wildly popular with customers, Jim McMaster has two major concerns. First, he is not sure that the customization is profitable—he charges an additional \$10 per bird feeder, but he is not sure exactly how much extra labor is involved in fulfilling the customization portion of the order. Second, despite assigning an employee to the custom bird feeder operation full time, lead times on orders have gradually increased from an average of 4.5 business days to 9.2 business days. This prevents Natural Designs from meeting its promised lead time of one week or less. In addition, during peak periods (early spring and early fall), the lead time can stretch to three or four weeks.

As Jim McMaster reviews the current state of Natural Designs, he is pleased to note that sales are continuing to grow overall at a rate of 10 percent per year. Furthermore, his work force is generally happy, and the business is profitable. However, his accountants have been telling him that profits are declining as a percentage of sales and that the number of customer returns of items and complaints has increased by over 30 percent in the past year. The capacity of the existing facility is extremely tight, and Jim is considering either adding a second facility or moving to a larger 8,000-square-foot facility.

#### QUESTIONS

1. What types of decisions must Jim McMaster make on a daily basis for Natural Designs to run smoothly? What kind of decisions must he make on a long-term basis?
2. Describe the operations strategy for Natural Designs. Has this strategy changed as a result of the custom bird feeder operation? If yes, how?
3. What might have been done differently to facilitate the offering of custom bird feeders?
4. How should McMaster analyze the alternative expansion options? Which would you recommend: a second facility or a move to a single, larger facility?

**5. Characterize supply chain strategy within a single organization and across multiple organizations.**

- While there are some clear differences between manufacturing and services, on an organizational level, almost all businesses involve elements of each. The operations strategy process of matching competitive priorities with appropriate operational decisions is appropriate for either. Examining things at the individual process level rather than the more general organizational level helps identify an individual process as a manufacturing process or a service, thus making decision making clearer.
- Managing supply chain strategy within a single organization involves linking decisions by operations, purchasing, and logistics to maximize the effective productivity across multiple facilities within a single organization.
- Managing supply chain strategy across multiple organizations involves linking decisions by operations, purchasing, and logistics across numerous organizations. The linkage of multiple organizations is challenging because of the organizations' different goals, policies, and procedures. While information technology has greatly facilitated the ability to exchange information seamlessly and at low cost, developing trust and a culture of sharing across multiple organizations remains a fundamental barrier to successful supply chain strategy.

## QUESTIONS

1. Describe several structural decisions that a low-cost hotel such as a Days Inn would have to make. Describe infrastructural decisions that such a hotel would make. How would the decisions made in each of these areas compare to the decisions made by a high-quality hotel like a Four Seasons?
2. Describe several structural decisions that a low-cost manufacturer of computers would have to make. Describe infrastructural decisions that such a company would make. How would the decisions made in each of these areas compare to the decisions made by Dell Computer? Define Dell's operations strategy and its key competitive priorities.
3. EXERCISE: Choose two restaurants with substantially different operations strategies. For each restaurant, discuss its competitive priorities—what is *most* important to it. Allocate 100 points across each of the four competitive priorities (e.g., the most important might get 40 points, the next most important might get 25, and so on). For each restaurant, list four or five operational decisions/investments that the restaurant manager must make. These decisions should fit within one of the eight categories in Table 1.3. Compare decisions for the two restaurants—how do they differ?