Case Notes

# Chapter 7: Capacity Planning

# Kirwain’s Capacity Planning Challenge

## Case Summary

*This case describes Kirwain Sound Systems’ capacity planning challenges brought on by having to fulfill a substantial large order from Assumption Audio within six months.*

Case Analysis *This case illustrates the challenges of planning for capacity in supply chains. Kirwain Sound Systems needs to align capacity with increased demand on a global basis. The challenges facing Kirwain, therefore, include not only having to manage its own capacity but also that of its supply chain partner in India.*

## Sample Answers to Case Questions

1. How does seasonal demand affect the firm’s capacity planning and constraint management?

Seasonal demand causes a firm’s capacity to alternate between underuse and overuse. Such fluctuations in capacity requirements may require a firm to use a combination of different capacity plans to adjust to the changes in demand.

2. Identify the most critical issues in the case and develop a strategic capacity plan for Kirwain.

The most critical issues in the case is the supply uncertainty of Kirwain’s supply chain partner in India. The Indian gasket supplier may not be able to meet quality expectations, delivery dates, and quantities required by Assmption Audio. Therefore, Kirwain’s strategic capacity plan should focus on coordinating and integrating the Indian supply chain partner to better collaborate and synchronize their capacity planning.

3. What long-term issues should be considered? Medium-term? Short-term? Make sure that your analysis considers the implications for each of these planning horizons.

A long-term capacity planning issue is future demand uncertainty. In order for Kirwan to have sufficient capacity to meet future demand, it needs to forecast demand and growth trends as well as cyclical demand patterns so that capacity expansion and supplier relationship management decisions can be made. These decisions involve huge capital expenditures and cannot be undone so careful planning is necessary. A medium-term capacity planning issue is the gap between the capacity available in the system and the capacity that is required to meet demand. Such a gap leads to inefficiency, either in the form of idle or underused resources or unhappy customers whose demands were not met. Kirwan needs to analyze capacity with monthly production plans to minimize the gap. Managing bottlenecks is a short-term capacity planning issue. When bottlenecks are managed properly, the output rate of the systems can remain close to the bottleneck capacity. Kirwan needs to analyze weekly production schedules and bottlenecks to balance workload.