Case Notes

# Chapter 14: Lean Operations And Supply Chains

# Lean Global Supply Chains and Boeing’s Dreamliner

## Case Summary

*This case describes Boeing’s failed attempt in organizing and maintaining a lean global supply chain in the production of the 787, Dreamliner.*

Case Analysis *This case illustrates the challenges of making global supply chain lean. The high levels of coordination needed for Boeing to work with over 300 global suppliers makes it almost impossible to create and maintain a lean supply chain. As a result, Boeing was not able to deliver its 787 on time, hurting its profitability and customer relationships.*

## Sample Answers to Case Questions

1. The quote at the end of this case seems to suggest that the technology of getting this innovative aircraft to fly was the easy part. Discuss why Boeing’s real challenges lie in the future rather than in the engineering of a composite aircraft.

Boeing’s real challenge lies in the future rather than the engineering of a composite aircraft because at the current pace of production, it will take Boeing over ten years to clear its backlog of orders. Unless Boeing is able to coordinate its over 300 global suppliers in a more effective and efficient manner, it will repeat the same mistakes as before, further damaging its profitability and reputation

2. How does the use of over 300 critical global suppliers make Boeing’s commitment to lean production so difficult? If the coordination is done poorly, in what ways does Boeing end up seeing its costs skyrocket?

It is an expensive and a difficult task for Boeing to carefully coordinate the manufacture and shipping of aircraft components from supply chain partners at plants in Korea, Japan, Italy, South Carolina, and Kansas. Just-in-time practices are almost impossible to implement as a result of long shipping times, infrequent freight connections, unpredictable weather delays, and customs bureaucracies. The longer lead time required means it is hard to achieve low inventory which leads to a higher costs of inventory. The lack of face-to-face contact, time-zone differences, and cultural and language barriers further complicate global communication regarding coordination on design, quality, and scheduling. As a result, Boeing ends up seeing its costs skyrocket.

3. How do the philosophies of lean supply chains apply to Boeing’s 787 project? Discuss in turn the four keys: 1) transparent information, 2) performance monitoring, 3) lean logistics, and 4) full collaboration.

The philosophies of a lean supply chain can apply to Boeing’s 787 project. In terms of transparent information, technologies such as electronic Kanban can be used to generate computerized documents to be shared among supply chain partners. In terms of performance monitoring, a timeline chart can be used to track both value-added and non-value-added time the aircraft spends in various production stages. In terms of lean logistics, a supplier park can be built to have key suppliers locate near Boeing’s assembly plant. In terms of full collaboration, a selected few of the most critical suppliers can be identified to forge synergy and unity of purpose through the development of a close and trusting relationship with Boeing.