

Production and Operations Management Case Studies

Case 1: Product Development Risks

You have the opportunity to invest INR 100 billion for your company to develop a jet engine for commercial aircrafts. Development will span 5 years. The final product costing Rs. 500 million / unit could reach a sales potential, eventually of Rs. 2500 billion. The new engine can be placed in service 5 years from now, but only if it qualifies four years from now for certification clearing commercial use and only if it meets America's Federal Aviation Administration's (FAA) ever tightening standards for noise reduction. Certification also has to be obtained from India's Director General of Civil Aviation (DGCA). There is competition from world-class manufacturers like Pratt and Whitney and Rolls Royce who are developing competing engines. If you decide to proceed with the project, you must also determine where the new engines will be produced and develop the manufacturing facilities. If you decline to proceed, your company could invest its resources elsewhere and based on its track record, get attractive returns.

- (a) What would be your line of action?
- (b) In case of lengthy product design and development time, what kinds of risks are there?

Case 2: Conflict of Interests

The GM (Works) has problems with manufacturing budgets, meeting cost reduction targets, and dealing with new products manufacturing schedules. When an in-depth interview (non-directive type) was conducted between the GM (Works) and the Chairman of the Company, the GM (Works) explained that many things are happening in the Company about which he is ignorant, particularly the preparation, new product integration, etc. He agrees to the view that the Company is interested in high-growth and high-profit, but he has never been given an opportunity to review his own scheme of things and explain to the top management. The production culture of the company has never been assessed whereas the stringent rules are being directed by the finance and personnel departments. And sometimes, show cause notices are being served to supervisors and senior employees. The Company is introducing new products without assessing the capability of the manufacturing system and the resources.

- (a) Under the above situation, if you are asked to work as a consultant to show the perspectives to the Board of Management, what action plans would you suggest?
- (b) Does Business Process Re-engineering (BPR) help in situations like these?

Case 3: Project Delays

The Assam Gas Cracker Project conceived as part of the Assam Accord signed in 1985 is yet to see the light of the day. It has been plagued by a host of problems starting from location to economic viability. Originally planned at Tengakhat, it was later shifted to a place called Lepetkata. The project is now being implemented by GAIL (a Government of India enterprise) as the lead promoter (70% share) with another public enterprise OIL (20% share) and the Government of Assam as minor

partners. GAIL had to be brought in after India's largest private sector enterprise Reliance Industries backed out of the project saying that it was economically unviable. The land acquisition for the project (as of mid 2008) is yet to be completed and there is still a lot of uncertainty regarding the availability of raw materials for production. In the meantime, the project cost has spiraled many times over to INR 50 billion, which is likely to go up further.

- (a) Discuss the importance of Project Management in the light of the above situation.
- (b) As a project manager employed with GAIL, what would be your line of action to see to it that the project is not delayed any further?
- (c) Why do projects suffer from time and cost overruns?

Case 4: JIT in Action

A new phenomenon called 'Apparel on Demand' is slowly making its presence felt. It is an extension of JIT linking retailers and manufacturers for a just-in-time responsiveness. NaaR Clothing Inc., promoted by a young management graduate has recently ventured into the business of making reasonably priced custom jeans for women. It has partnered with many stores selling women garments. In the stores, women are electronically measured and information like colour, fabric, style, etc., are recorded. The information reaches the NaaR manufacturing facility at Ahmedabad almost immediately through a state-of-the-art information system. NaaR guarantees delivery of the custom jeans within 10 days. With the growing acceptance of jeans among the women in India, specially in the urban areas, the market for women's jeans is growing at a fast pace. NaaR with its unique business model hopes to garner a significant share of this market. The promoter of NaaR along with her top executives is confident that their concept of JIT jeans would work.

- (a) Do you think NaaR's strategy would work? Why or why not? What is the importance of retailers in its business strategy?
- (b) Will customers wait for 10 days to have the jeans delivered? What can NaaR do to compete on customer service if delivery takes this much time?
- (c) Comment on the necessity of a robust supply chain in the context of NaaR Clothing Inc.

Case 5: Service Blues!

Jyoti had given her branded laptop for servicing to an authorized service centre to repair a damaged USB port. The laptop was to be given the next day, but when she went to take it that day, she was told that it was not ready. Jyoti had to wait for four more days before she was finally given her laptop. Because she was in a hurry while receiving the repaired laptop, she did not check the workings of the laptop at that time. On reaching home and switching on the laptop, she noticed that that LCD display had become problematic. The next day, she again went to the service centre and reported the display problem. Jyoti was aghast when she was informed that as she had signed the delivery documents, the service centre cannot take responsibility for the display problem. She was asked to fill up a fresh service requisition form to get the problem rectified and further was told that all expenses incurred in rectifying the problem had to be paid by her.

- (a) Do you think that After Sales Service through a third party is a cause for concern? Justify.
- (b) There seems to be a breach of trust in the given caselet. How is *breach of trust* related to quality of service?
- (c) In the context of the given caselet, formulate a Quality Service Policy to ensure customer satisfaction.

References:

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2. Advanced Operations Management, R P Mohanty, S G Deshmukh, Pearson Education
3. Production and Operations Management – Concepts, Models and Behavior, Everette E Adam, Jr., Ronald J Ebert, PHI