Cases on Managing Operations & Quality

Case study 1 Boeing brings its customers on board

Arguably the most innovative new passenger aircraft to enter service over the last few years was the Boeing 777, a new twin-engined aircraft, in the 300-plus seats category, to compete with established models from McDonnell and Airbus. The existence of established competitor products is important. When Boeing developed the 747 'Jumbo' jet aircraft, it had no direct competitors. The company's customers either wanted the product or they didn't. Not so for the 777; Boeing knew that it must consider its customers' requirements. The company had to take a new course – to understand its customers' needs and then to transform that knowledge into an aircraft that could best meet those needs.

Boeing has always maintained close involvement with its customers, but this project called for a new depth of listening and understanding. Initially, eight large potential customers (including British Airways, Japan Airlines and Qantas) were invited to participate in creating the design concepts. It soon became clear that the customers did have important requirements, the most vital of which was that the aircraft should be around 25 per cent wider than the 767. In fact Boeing had originally hoped to lengthen the 767 fuselage to give the extra capacity, so avoiding some of the costs involved in a completely new fuselage. The customers also wanted much more flexibility in the configuration of the passenger space. Conventionally, cabin space had been divided up into sections, separated by fixed galleys and toilets at predetermined positions, fixing the ratio of passenger capacities of each class. However, the airlines all indicated that they wanted to be able to configure the cabin to their own requirements. Finally, the airlines insisted that the new design should be free of the usual level of minor, but irritating, faults which had bugged the early operations of some of the other aircraft.

Boeing did meet its customers' requirements and even improved upon them in some ways. They achieved this by using design/build teams, and by a particularly powerful computer-aided design (CAD) system. Customers were closely involved right from the start of the design. They even came up with some good suggestions. For example, one airline suggested a new layout for the rear galley which allowed an extra 12 seats to be included in the aircraft.

- a) What problems do you think might be associated with bringing customers together in the way that Boeing did?
- b) Why do you think that Boeing's customers wanted the flexibility to configure passenger space?