Case Study 3
Inventory management at Flame Electrical

Inventory management in some operations is more than just a part of their responsibility; it is their very reason for being in business. Flame Electrical, South Africa's largest independent supplier and distributor of lamps, is such a business. It stocks over 2900 different types of lamp, which are sourced from 14 countries and distributed to customers throughout the country.

'In effect our customers are using us to manage their stocks of lighting sources for them,' says Jeff Schaffer, the Managing Director of Flame Electrical. *'They could, if they wanted to, hold their own stock but might not want to devote the time, space, money or effort to doing so. Using us they get the widest range of products to choose from, and an accurate, fast and dependable service.'*

Central to the company's ability to provide the service its customers expect is its computerized stock management system. The system holds information on all of Flame's customers, the type of lamps they may order, the quality and brand of lamps they prefer, the price to be charged and the location of each item in the warehouse. When a customer phones in to order, the computer system immediately accesses all this information, which is confirmed to the customer. This leaves only the quantity of each lamp required by the customer to be keyed in. The system then generates an instruction to the warehouse to pick up and dispatch the order. This instruction includes the shelf location of each item. The system even calculates the location of each item in the warehouse which will minimize the movement of stock for warehouse staff.

Orders for the replenishment of stocks in the warehouse are triggered by a re-order point system. The re-order point is set for each stocked item depending on the likely demand for the product during the order lead time (forecast from the equivalent period's orders the previous year), the order lead time for the item (which varies from 24 hours to four months) and the variability of the lead time (from previous experience). The size of the replenishment order depends on the lamp being ordered. Flame prefers most orders to be for a whole number of container loads (the shipping costs for part-container loads being more expensive). However, lower order quantities of small or expensive lamps may be used. The order quantity for each lamp is based on its demand, its value and the cost of transportation from the suppliers. However, all this can be overridden in an emergency. If a customer, such as a hospital, urgently needs a particular lamp which is not in stock, the company will even use a fast courier to fly the item in from overseas – all for the sake of maintaining its reputation for high service levels.

'We have to get the balance right,' says Jeff Schaffer. *'Excellent service is the foundation of our success. But we could not survive if we did not control stocks tightly. After all we are carrying the cost of every lamp in our warehouse until the customer eventually pays for it. If stock levels were too high we just could not operate profitably. It is for that reason that we go as far as to pay incentives to the relevant staff based on how well they keep our working capital and stocks under control.'*

a) Discuss what seems to influence the stock replenishment policy of Flame Electrical
b) How does this differ from conventional economic order quantity theory?