

EASTERN UNIVERSITY, SRI LANKA

Faculty of Commerce and Management

Final Year Second Semester Examination in BBA 2011/2012 (June 2014)

(Proper/Repeat)

MGT 4043 – Operation and Quality Management

Answer all questions

Time: 03 Hours

01)

Case study - A business trip to Brussels

My flight to Stockholm would be late landing. The pilot told us that we were in a 'stack' of planes circling above the snow clouds that were giving Brussels its first taste of winter. Air traffic control had closed the runways for a short period at dawn, and the early morning flights from all around Europe were now being allocated new landing slots along with the long-haul jumbos from the Far East and the US. After a 20-minute delay, we descended bumpily through the clouds, and landed on a recently cleared runway. Even then there was a further 'hold' on a taxiway; we were told that the de-icing of the apron was being completed so that planes could proceed to their allocated stands and air bridges. All around the airport I could see the scurrying flashing beacons of the snow-clearing vehicles, the catering suppliers' vans, the aviation fuel trucks, the baggage trailers, buses transporting crews and passengers, security police cars, and an assortment of other vehicles all going purposefully about their work. Brussels airport always looks busy, with over 10 million passengers a year, but this morning the complexity and scale of the operations were particularly evident.

Finally, about an hour late, we pulled up to the gate, the engines were turned off, and we disembarked into an icy-cold air bridge, leaving behind a particularly untidy plane strewn with litter from a full cabin of restless passengers. We passed the team of cleaners and maintenance staff waiting just outside. 'They will have a hard time this morning; more mess to clear and probably less time than usual to do it, as the airline will want a quick turnaround to get back on to schedule,' I commented to my colleagues. We could just hear the sounds of frantic activities going on below the plane: baggage and cargo being unloaded, catering vehicles arriving, fuel being loaded, and technicians checking over the engines and control surfaces. Everyone trying to get their work completed quickly and correctly, not least so that they could get back indoors out of the biting cold wind!

From the air bridge we walked past the crowded seating areas, where plane-sized groups were gathering anxiously awaiting the signal from the gate staff to board their much delayed flights. Then on to the moving walkways, conveyed leisurely past other departure lounges, equally overfilled with passengers. Anxious to get ahead of the crowd, we took to a running pace past the rows of cafés, bars and shops, hoping to avoid the usual

morning queue for Passport Control. I should have remembered the old saying 'more haste, less speed' because my next journey was to the First Aid room! I had apparently slipped on some spilt coffee that had not been cleaned up in the haste of the morning, and had fallen awkwardly, straining my ankle and breaking my duty-free brandy. 'At least they would clean the floor after that,' I thought, sadly.

Suitably patched up, I hobbled with my colleagues and joined the long queue for Passport Control, and eventually through to Baggage Reclaim. Even with the excellent new baggage-handling systems in Brussels, the passengers usually get there first, but the accident had changed all that! Scanning the video screens, we found no reference to our flight arrival; the remaining bags from our flight had apparently already been removed from the carousel and were stored in an adjacent office. After a simple signing ceremony we were reunited with our belongings, and hastened (slowly in my case) to the taxi rank. Our hopes of a quick ride to the city were dispelled when we saw the long queue in the icy wind, so we made our way to the station below, where a dedicated 'City Express' train departs every 20 minutes for the *Gare de Nord* and *Gare Centrale*. We just missed one!

After a busy and successful day at our Brussels office, a taxi was called, and we were back at the airport in the thick of the evening rush hour. The departures check-in area is on the upper floor of a vast new terminal extension, and is very orderly and well equipped. Facing you on entry from the taxi drop-off point is a huge electronic display which lists all departures scheduled for the next few hours and showing the appropriate check-in desk number for each flight. The speed of the check-in systems has been improved dramatically, so there was no queue at our desk, and the three of us were issued with boarding passes in only a couple of minutes. Our baggage sped away on conveyors down to the new sorting hall two stories below. Brochures explain that the new terminal extension was designed to make it possible to go from check-in to final boarding in only 20 minutes, which has involved investment in a state-of-the-art automated baggage handling system. On my last visit, following traffic delays on the way to the airport, I found that this system works, but I doubt that it would if everyone arrived only 20 minutes before departure! It is no wonder that they advise checking in one hour before; it also gives passengers much more time to spend money in the duty-free shops, restaurants and bars!

By this time, my injured leg had swollen up and was throbbing painfully. This seems to be a routine situation for the check-in staff, who arranged for a wheelchair and attendant to take me through Border Control and security checks. While my colleagues travelled down to the departures hall by escalator, I took the slower route by lift, meeting them just outside the duty-free shops where the attendant left them to take care of me. We had some time to spare, so we replenished the brandy, bought some Belgian chocolates and headed for a café-bar. While Brussels is renowned for its excellent cuisine, we didn't expect to find high standards of food in the quick-service environment of an airport, but we were wrong! The delicious aromas of freshly prepared food attracted our custom, and

we weren't disappointed. After a welcome glass of speciality raspberry-flavoured beer to round off the meal, we headed for the airline's executive lounge.

The view across the airfield was not promising! After a bright, crisp day, more snow-laden clouds had arrived and a chill wind cut across the tarmac. De-icing crews were working on the parked aircraft and others were treating the runways, taking quick action between the aircraft movements. Concerned that we might be delayed and miss our connection at Oslo, we checked with the staff at the airline's flight information desk. After some phoning, they confirmed that, although there could be some delays, Oslo had arranged to hold connecting flights, as many passengers originated from Brussels. Their professional and friendly advice made us feel much more at ease, and they even offered to allow us to send fax or phone messages to our destination. They couldn't have been more helpful.

Announcements of the minor delays were made over the speaker system, but it wasn't long before we were directed to the departure lounge and were preparing to board. Outside, around the aircraft in the gloom, the baggage trucks were pulling away and the giant push-off tractor was being connected up to the nose-wheel. Ten minutes later, we were at the end of the runway, ready for take-off.

'Today must have been a very busy one for everyone involved in keeping the airport open,' I thought, 'but perhaps every day has its own challenges in such a complex operation.'

Questions

- a) Identify all the micro operations and their activities which are mentioned in the case.
(08 Marks)
- b) Which of these micro operations were most affected by the severe weather?
(06 Marks)
- c) Approximately how many different organizations are involved in delivering the goods and services described in this case? What are the implications of this?
(08 Marks)

(Total 22 Marks)

- 02) a) *"Research and development is one of the means by which businesses can experience future growth by developing new products or processes to improve and expand their operations".*
Based on the above statement describe the product development process.
(10 Marks)
- b) *"It is reported that companies spend a lot on their sales revenue for research and development process in order to survive in the competitive world as a product's life*

cycle becomes shortened due to competitors and new technology, but only a small percentage of new product ideas become commercial realities”.

Based on the above statement identify and explain the issues in research and development.

(08 Marks)

(Total 18 Marks)

- 03) a) *“The purchasing department is an organizational unit of a firm whose duties include some part or all of the purchasing function. These functions are varied and wide which are based upon different approaches”.*

List and explain the important functions which are necessary to be performed by the purchasing department.

(08 Marks)

- b) *“Observations of numerous companies and industries and institutions over many years have demonstrated that the purchasing process can be obstructed creating bottlenecks and other problems”.*

Based on the above statement, describe the major problems in the purchasing process and the techniques used during the purchasing process.

(10 Marks)

(Total 18 Marks)

- 04) a) *“Production planning and control is a tool available to the management to achieve the stated objectives”.*

Define and differentiate production planning and control, and explain the major steps of production planning and control in achieving the objective of an organization which operates process layout of equipments.

(08 Marks)

- b) *“Production planning and control helps to achieve uninterrupted flow of materials through production line by making available the materials at right time and required quantity”.*

Identify and explain the issues on production planning and control.

(10 Marks)

(Total 18 Marks)

- 05) a) *"The success in operations and quality management requires the development of supportive organizational culture with effective safety policy. Every organization should practice some kind of safety practices in their organization to avoid different type of injuries and losses".*

Based on the above statement explain the different types of safety mechanisms in organizations.

(06 Marks)

- b) Explain why safety policy is important to every organization.

(06 Marks)

- c) Define the term "work study" and explain its advantages to a manufacturing organization.

(06 Marks)

- d) Explain the use of "ABC Analysis" in inventory management with appropriate examples.

(06 Marks)

(Total 24 Marks)