BOTSWANA COLLEGE OF DISTANCE AND OPEN LEARNING

In collaboration with

THE COMMONWEALTH OF LEARNING

Commonwealth Executive Masters in Business Adminstration

Commonwealth Executive Masters in Public Adminstration

PROJECT MANAGEMENT

PM321

Sessional Examination

Marks: 100

Time allowed: 3 hours

Instructions

1. This paper comprises of Part A and Part B. Answer **ALL** questions in Part A and any **THREE** (3) questions in Part B.
2. Answer questions according to instructions given in each section
3. Write answers in the answer booklet provided
4. Answer **ALL** questions, in grammatical **English.**

Part A (40 marks)

Question 1

Read the case study given below and answer ALL the questions given at the end of the case.

Toyota's IMV Project

The year 2004 represents a landmark year for Toyota Motor Corporation. This is the year the Innovative International Multipurpose Vehicle (IMV) project bears its fruits; five new models of vehicles assembled and sold in South-East Asia. It is the new era of global production with launch of the Toyota Hilux in Thailand around July, and later on in Malaysia. The Hilux pick-up truck comes in three models; the single cab for two persons only, the extra cab which is an extension of the single cab and remains as a two-seater, and finally the twin cab for five persons. In September, the Kijang multipurpose van is launched in Indonesia. Also known as the Innova, it is later launched in Malaysia. In the November, Toyota launches the Fortuner four-wheel drive sports utility vehicle. In total five models are launched, heralding a new chapter in the history of Toyota, as described by a Toyota Motor Corporation Senior Marketing Director Takeo Fujimori. The five models are only just the beginning. Toyota's IMV Project which aims at creating an optimised global manufacturing and supply chain for multipurpose vans and pickup trucks for its global market.

The IMV project calls for the Toyota plant with the best efficiency to be awarded by Toyota Motor Corporation headquarters with the contract to produce the vehicle parts. The rational is that by creating an environment of internal competition between Toyota plants, higher efficiency can be achieved. This also promotes production optimisation as it leverages on the plant with the best competency in a particular vehicle part to make that part for global distribution eventually. Hence the diesel engine is made in the Thailand plant, with the petrol engine going to the Indonesian plant, and the transmission system and drive train being awarded to The Philippines.

The IMV Project is not without its problems. If we go back a little in time after the award for production of the diesel engine is given to Toyota Thailand; we will see that there are project problems which the project team in Thailand had to overcome. To their credit, Toyota Thailand wastes no time in starting on the diesel engine project as soon as the award is confirmed. Toyota Thailand starts a project management office (PMO) in the Thai factory itself. At the same time, Toyota Thailand and Toyota Motor Corporation headquarters jointly appoints a project manager, Mr. Tomio Ono, an experienced Chief Engineer from Japan to head the project team. Mr. Ono's approach to project team selection and formation is base on forming a core team and a supporting team. Firstly the core team comprises of experienced and senior staff from the key functional departments such as the manufacturing, engineering and quality control. These core team members will be stationed in the project team until the completion of the project. During that time, the core team members will report to Mr. Ono only, and not to their functional department heads. Selection of the team members is based on an agreement between Mr. Ono and the department heads, and moderated by the Toyota Thailand managing director if the need should arise.

The next step is the selection and formation of the supporting team members. The primary composition of these team members are from the other functional departments such as the information technology (IT), human resource, legal, safety and environment. The choice of the supporting team members is also a consensus among Mr. Ono and the functional department heads. All the supporting team members are appointed on an ad-hoc basis in that they are temporary, called upon only when needed. The supporting team members do not report to the project manager, and remain reporting to their functional department heads. Upon the completion of their contribution during the project meeting or project phase in which they are involved, they return to their functional departments and resume their daily functions in accordance to their job description. In fact, these supporting team members are usually involved in two responsibilities simultaneously; the project and the functional responsibilities. Other additional team members, who are not in the core or supporting teams, from the key functional departments may also be called to support the permanent members as and when necessary.

At the beginning, the core project meetings (CPM) are conducted regularly, at least twice a week, and attended by the core team members only. Attendance by the core team members is compulsory. Only a few of the supporting team members are needed for the CPM in the beginning. As the project is implemented, the frequency of the CPM increases, very often up to four times a week. Simultaneously, the participation of the supporting team members also increases. After each CPM, the core team members will brief their functional departments of the project progress and the latest decisions. This is to ensure that these latest developments are cascaded down to the functional departments to provide alignment with the IMV Project. The functional departments will then invite relevant suppliers to meet at the functional department level to ensure that there is supplier alignment with functional department. This communication channel structure is intended to ensure that all the stakeholders are synchronised to the project objectives. However when a particular functional department or supplier has a problem with the project decision or perhaps, a better suggestion to improve the project, then a consensus is reached at the supplier-functional department level. This is then communicated up to the core team members during the next CPM for further evaluation. Although the initial CPMs are conducted efficiently at the beginning, the continuous feedback from the supplier-functional department level is causing the CPMs to drag into longer hours. Instead of focusing on the current phase of the project, most of the time in the CPM is taken up by supplier-functional department objections and problems. Moreover the core team members have actually two meetings to attend for each issue; first the CPM, then the meeting with their respective functional departments to brief them. Not surprisingly, the IMV Project starts to run behind schedule, from days to weeks.

Without any warning, another problem drops right into the Thailand project. Toyota Motor Corporation headquarters has just received news that the existing diesel fuel standard, known as the Euro III, will be phased out in about two years time. Although the new Euro IV diesel standards will be implemented only two years into the future, it means a lot for Toyota's corporate image to be seen by the consumers as being ahead of the official requirements and as environmentally friendly. The non-negotiable decision by Toyota headquarters is to build

the Euro IV standard compatible engine. The appointed supplier is unable to handle the more stringent requirement. Another supplier with the capability to meet the Euro IV diesel standard has to be appointed. The result is that the actual setting up of main production line has to be stopped for two months. This is a major blow to Mr. Ono who is already bogged down by the delays caused by the CPM. On top of that, time is running out as there is still the need to provide training for the assembly line workers and the need to install the supporting attachments, such as the in-feed and cables, to the main production line.

After the completion of each project milestone, the up-to-date project status is reviewed for quality and conformance to specification by a joint committee; consisting of the core project team, the quality department and an audit team from Toyota Motor Corporation Tokyo. After the approval has been given by all the three parties, then only will Toyota Motor Corporation release the funds for the next phase of the project. Failure to secure the approval of all the three parties will require a re-work at the costs of Toyota Thailand, not Toyota Motor Corporation Tokyo who is the project sponsor. The reason is that the IMV Project funding is very tight, and budget overruns is not accepted.

The detailed planning for the next phase of the project begins with the detailed risk assessment of that next phase. This detailed risk assessment is base on the lessons learnt from the previous phases as well as the general risks identified during the initial project planning. This step-by-step approach is deemed necessary by Mr. Ono due to the tight funding which provides very leeway for errors. Mr. Ono prefers this cautious approach as he wants to ensure the success of the project. Success means that the new Euro IV diesel engine produced in Thailand will be exported to Toyota assembly plants all over the world. This represents a significant achievement not only for Toyota Thailand, but also for Mr. Ono who is eyeing a promotion and transfer to Toyota USA headquarters, based in Torrance, California. However the cumulative effect of the delays from the CPM meetings and the two months delay for main production line is proving to be a daunting challenge for Mr. Ono. Looking at the project activity network diagrams, Mr. Ono estimates that the diesel engine project in Toyota Thailand will be finished about three months behind schedule.

Questions

a) Assuming that you are an external consultant to the Thailand project, advise the project manager, Mr. Tomio Ono, a better project team structure and explain why.

[10 marks]

b) In the context of project communications management, advise Mr. Ono a better communications system. Justify your answer.

[10 marks]

c) Detailed risk assessment of the next project phase is only conducted after the previous phase has been approved. Suggest to Mr. Ono on how to improve the risk assessment in the context of project risk management.

[10 marks]

d) If the need to provide training for the assembly line workers and the need to install the supporting attachments to the main production line are independent of the setting up of the main production line, explain the project management techniques that Mr.Ono can apply to minimise the delay.

[10 marks]

Part B (60 marks)

Answer any THREE (3) of the following questions. Each question contributes 20 marks.

1. Project management has evolved from what is said to be an accidental profession to a highly respected profession.

(a) Discuss what is project management?

[5 marks]

(b) Select two project management planning tools and explain how they contribute to effective project management. **[15 marks]**

2. A critical part of project management is the costs management.

(a) There are several tools and techniques used in project costs estimation. Select one of these and explain how it is applied in a project.

[5 marks]

(b) The project costs management process consists of four main processes. Explain each of these processes, and illustrate with a suitable example.

[15 marks]

3. Two of the human resource structures of a project team are matrix and project.

(a) Explain the salient characteristics of these two structures.

[5 marks]

(b) Contrast the main differences between these two human resource structures, and explain which would be more suitable for a critically important project.

[15 marks]

4. Two types of contracts commonly used in project management are the lump sum contract and the cost reimbursable contract.

   (a) Explain the main characteristics of these two contracts. **[5 marks]**

   (b) In a large project, which of these contracts is preferred when purchasing:-
   (i) Assets only; **[5 marks]**
   (ii) Services only; **[5 marks]**
   (iii) Assets and services. **[5 marks]**

   Justify each of the your three answers.

5. Portfolio management is an important project management concept.

   (a) Explain what portfolio management is. **[5 marks]**
   (b) There are three types of project portfolios. Explain the three types and support each of your explanation with suitable example. **[15 marks]**

End of Exam.