

Chapter 2

Case on Delivery Performance Improvement

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1 Introduction

The objective of this case study is to improve lead time delivery of spare parts from Distributor Center (DC) to TTT Sdn. Bhd. (TTT) warehouse which is located at Kemaman, Terengganu before deliver to end user within Kemaman area.

2 Case Study

TTT is a service provider company specializing in providing manpower services and spare parts for diesel engines maintenance. Its core business focus on oil & gas industry and cover for both onshore and offshore industrial applications such as diesel engine generator, pump and compressor packages. TTT is consist of 30 service technicians, 6 service engineers and 3 office supervisor to handle administration, finance and service parts.

TTT establishment in Kemaman as immediate support to local oil & gas industries as other branches for TTT Sdn. Bhd. is located at Miri, Labuan and Brunei. Its headquarters is located at Puchong, Selangor while DC for South East Asia region is located in Singapore.

Before TTT service team begin process of performing maintenance on client's diesel engine, they must ensure that all related spare parts for maintenance purpose is arrived, inspected and packed as client's requirement before deliver to work site. Normal order process started when Service Parts Supervisor key-in order through dealership system. From the system the supervisor able to get confirmation on parts availability either at Singapore or other location. In normal scenario majority of the spare parts are available at Singapore and once order process is completed, spare part are ready to be delivered.

One of limitation TTT's operation is duration for spare parts to arrive from DC to TTT warehouse will take up to 1-2 weeks even though Singapore is just a neighbor country. Author found out their current practice is bad for business as they will lose potential and existing client due to delay in spare parts delivery. Most of TTT competitors are able to source out the same product within one week. One critical

weakness to TTT's operation due to not implement keeping stock for common spare parts at their warehouse. Even if the clients need common spare parts such as lubricants, filters or gaskets, they need to wait for almost 2 weeks to receive the required parts.

The delivery to TTT warehouse is scheduled for twice a week which is on Tuesday and Thursday by truck or trailer, depending on the capacity of orders. Since TTT Kemaman branch is not working on Friday, most of the parts delivered on Thursday are only be processed on the following week. The schedule for truck arrival is irregular but frequently will arrive at TTT warehouse around 6-7 pm. Store-men need to standby to receive spare parts, manage handling to warehouse and complete necessary documentations. From author's point of view this is additional cost to TTT operation due to unnecessary cost incurred for staff's overtime on Tuesday and Thursday. If there is urgency that require store-man to process the received spare parts, they are needed to work during weekend too.

Another comment from author is Service Parts Supervisor is handling the critical task alone without assistance or support system. If the supervisor is on leave or absent due to medical issue, the ordering process is put on hold. For the time being there is no plan for TTT to hire support staff to assist Service Parts Supervisor.

According to Operation Manager of the company this process flow has been as it is since the company establishment at Kemaman. From author's observation there is room for improvement should be implemented in their business work flow. However this will involve a lot of approval process at higher management level considering annual company's budget on capital expenditure and operational expenditure.

Teaching Note
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This case study is suitable for Service Operation Management subject for (Management) diploma students. Learning outcome throughout this case will cover both comprehension and application of Bloom's taxonomy.

Lecturer may ask students to form in group of 2 or 3 person to read and discuss among themselves in 20 minutes. Then lecturer may ask their opinions, comments and share their findings among other groups. At the end of sharing session lecturer may conclude the answers and relate to below solutions of the case study.

Problem Solution

1. Supply Chain Management – Logistic Management.

As mentioned in the case study, delivery operation is limited by transportation arranged by Distributor Center twice a week. What TTT can implement is to outsource third-party logistic like DHL, FedEx, Nationwide and etc. They are specialized in delivery arrangement and the transportation can be trace via online tracking system at convenient. TTT can arrange them to pick-up spare parts from Singapore and right away to be delivered to Kemaman. This option will reduce current lead time for delivery from 14 days to 2 days. For this option Operation Manager needs to evaluate additional cost will incur as monthly expenses versus delivery efficiency to gain more sales to the company.

Lecturer may ask from group of students what is commonly used courier service / third-party logistic service provider available in Malaysia. To discuss further on mode of transportation available for this option like van, 3 tons lorry or trailer, depending on shipment sizing.

**2. Supply Chain Management
Supplier Selection Analysis.**

As mentioned above there are few third-party logistic provider available for Operation Manager to choose. One way to get the best selection among the service provider is to do evaluation probably base on criteria below.

- Vendor responsiveness on information requests or inquiries that arise in the course of pre-purchase of products or services.
- Vendor responsiveness /timeliness inquiries, problems or issues that arise in the course of post-purchase of products or services.
- Vendor attitude and professionalism when dealing with your request or problem.
- On time delivery of products or services.
- Price comparison with competitors or industry standard (on average).

From above mentioned criteria Operation Manager need to put weightage for each category and finally rate among service provider. Selection will be made from highest score.

Lecturer may ask students on how to allocate weightage to each criteria, discuss among themselves on prioritize and quality of service provided.

3. Inventory Management.

From the case study shows TTT does not implement inventory management as all spare parts needed unavailable on-shelve and need to be ordered directly from main distributor center. What can Operation Manager do to resolve this is to list down common spare parts which considered fast moving items, need to be available as minimal stock at TTT warehouse. From the list of client and history of service jobs done TTT should have a proper record of the spare parts and the accuracy of the list is very importance to avoid surplus and shortages of spare parts.

Lecturer may ask students to discuss on what is the effect of surplus and shortages of stocks, the importance of inventory and its relationship to operation cost.

4. Human Resources

One of the objective of Human Resource Strategy is to manage workers so that they are effective and efficient at work place. However in real situation a company can't avoid human factor of inefficiency such as illness and exhaustion during working period. Mentioned in the case study that the supervisor is working alone without assistance as back up. To resolve this, Operation Manager should think of hiring additional manpower to assist supervisor in handling the task. If the cost of new employment is an issue to

company's budget, the manager also can redesign each supervisor scope of work so that each person can at least be able to perform other task not designated to each person.

Case Practice

In real practice, the Operation Manager of TTT agreed and realize that there are few imperfections on how he managing the company. He agrees on the risk of supervisor is working alone without back-up. As short term solution TTT will hire a contract staff to assist Service Parts Supervisor. He also consider on the option to appoint third-party logistic to manage spare parts delivery. However he need to further discuss this proposal to higher management for vendor selection process, additional budget and impact to operational expenses. Regarding the suggestion on inventory management Operation Manager needs to discuss with headquarters before he can decide anything due to he is not familiar with warehouse management system, stock account and need in depth study for stock planning and forecast due to inconsistency of volume order per service jobs.

In this case study we discuss the outcome of implementation and practice of Operation Management, Lean Management, Total Quality Management and System Improvement Management.

To implement the possible solutions, the author is expecting a high magnitude of participation, teamwork and accountability between Operation Manager, higher management at headquarters and among supervisors at TTT to adapt with the changes in the future.