OM Projects – Spring 2020

Project #1
Sponsoring company: Flexport Asia Limited

Topic: Optimal sea freight transportation mode modeling

Problem statement: Deciding the optimal sea freight transportation mode should have a structured calculation model to support, however it is now a very manual and unstructured process in Flexport. This project should develop an Excel model for decision making.

Description: Flexport offers three different sea freight services: Full-Container Load (FCL), Less-than-Container-Load (LCL) and OceanMatch (OM). Shipping as different modes will have different pricing, transit time, container utilization, etc. It is eventually up to client’s will to decide the transportation mode, but surely the responsible squads in Flexport can make suggestions based on their personal expertise. The proposed project is to create a structured calculation model and process for the squad to reference to when making the suggestions to client. Multiple factors, such as those mentioned above, should be taken into consideration in the calculation model.

Intended output: An Excel model for decision making

Project #2
Sponsoring company: Flexport Asia Limited

Topic: Improving JIT air freight planning process

Problem statement: Air planning is very time consuming and often requires last minute re-planning due to sudden short-fall, change in cargo dimensions, missing docs, etc. A better process is needed for Squads, Air Planners and Warehouse Team to improve the efficiency and productivity of work.

Description: Air freight is a fast-moving service. From door-to-door, it often takes only 5-7 days, and at the origin we only has 2-3 days to go from receiving the booking to the flight taking off. During that 2-3 days, Flexport need to collect all shipping documents, plan on a flight, and arrange the cargo in the real world as planned. But the real world is not ideal. Air cargo is often with very short production timeline. It is very common for the factories to discover production problems last minute, so the cargo eventually shipped out often can be very different in quantity and dimensions than the one stated in the booking received earlier. This is one common circumstance that requires Flexport’s air planners to re-plan the whole cargo plane (B747) at the very last minute. The proposed project is to investigate the current air freight planning process, and to suggest ways to improve the process for planning efficiency.

Intended output: Report on air freight planning process improvements with gap analysis and recommendations.
Project #3  
**Sponsoring company:** Gap Inc.  

**Topic:** A flexible model to support late or last minutes delivery shipment  

**Problem statement:** To review the process and system capability to create a model and capability at origin having multiple sailing and enable flexibility, subject to the order delivery status and urgency.  

**Description:** Gap Inc's global logistics team is supporting finished good transportation from vendor handover point at origin and transfer point to Gap destination markets globally. Gap Inc, has 80% of sourcing units shipped via ocean freight and have direct contract with the top ocean carrier like Maersk, One, APL, CMA, Hyundai, OOCL, Yang Ming, MSC... and have a small portion of units ship via NVOCC due to volume constrain. To enable consolidation and better utilize the container space, they offer only one sailing per week which push vendor delivery in one CFS cutoff date and cause operational constrain on the space/resource. The situation gets worse during the peak season due to the volume spike.  

**Intended output:** This project should help create a process, work model and system to enable the capability especially for late and last minutes delivery.