

**Service Market Logistics and Transportation Data Analysis at**

**Volvo Group Trucks North America**

Co-operative Experience Work Report submitted for the completion of Course Requirements for COP 500

by

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I was employed as a Data Analyst Intern in the Service Market Logistics Department in the Group Trucks Operations (GTO) division at Volvo Group North America for my co-operative experience during the Spring 2018 semester.

My work was associated with the Transport Parts – Export Team which dealt with the export shipping, transport and warehouse inventory control of the Truck parts orders for Volvo and Mack Trucks North America.

I was assigned the responsibility of generating KPI reports for the daily export parts shipments from Regional and Central Distribution centers for two major freight forwarding carriers- DHL Express and DHL Global Forwarding. I was also responsible for daily ad hoc report generation for the manager of the transport parts team for supporting day to day decision making process.

The daily reporting process involved the following tasks:

1. Data extraction and aggregation from daily carrier reports and internal warehouse reports for shipments of the carriers assigned.
2. Data cleaning and preparation for the purpose of analysis
3. Analysis of transport data, tracking of supplier operational KPI’s and lead time mapping
4. Automation of KPI and Invoice tracking process for ease of report generation
5. Preparation of Standard Operating Procedure Templates for reporting and automation processes

Description:

The objective of my project was to identify the causes and perform root cause analysis for the high lead times of emergency orders shipments of Volvo and Mack Truck parts from Reginal Warehouses and/or the Central Distribution Center at Byhalia and assist stakeholders in the development of a strategy to reduce the lead times to their acceptable limits.

I was required to generate a live report (rolling by week) of the transit times of Emergency and Stock parts order shipments and program the automation of the report.

The steps mentioned above were carried out in the respective order for the generation of the report. Data was extracted from two sources-

1. Service Parts Management (SPM) daily email reports of warehouse inventory
2. Freight Forwarding Carrier daily email reports – DHL Express and DHL Global Forwarding

The data from these two differently sourced reports was matched on case numbers of the parts orders and the shipments and their inbound and outbound transits to and from the regional and/or central distribution centers to their deliver locations with the freight forwarding carriers was tracked using Advanced Excel tools and data manipulation techniques.

Inbound and Outbound lead times were calculated from the extracted shipment transit data and a live lead time report (rolling by week) was generated using Excel Pivot charts.

The outliers in the transit time tracking were analyzed and root cause analysis was conducted on the same. Recommendations were provided to stakeholders based on the results of analysis for lead time reduction and transport process optimization.



