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**OPTIMIZED TRANSPORTATION MANAGEMENT
SYSTEM USING DIGITAL TRANSFORMATION
PLATFORM**

"Our most important collection is yours"

A Report for the Evolution 3 of Project 2

Submitted by

SUGAM KUMAR SINGH

(1713104118/17SCSE104120)

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GALGOTIAS
UNIVERSITY

**SCHOOL OF COMPUTING AND SCIENCE AND
ENGINEERING**

BONAFIDE CERTIFICATE

Certified that this project report **“OPTIMIZED
TRANSPORTATION MANAGEMEN SYSTEM USING
DIGITAL TTRANSFORMATION PLATFORM”**

“Our most important collection is yours”

is the bonafide work of **“SUGAM KUMAR SINGH (1713104118)”** who carried out the project work under my supervision.

SIGNATURE OF HEAD

Mr. PREM AGRAWAL

**School of Computing Science &
Engineering**

SIGNATURE OF SUPERVISOR

MR. SREENARAYANAM NM,
Assistant Professor,

**School of Computing Science &
Engineering**

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Abstract

OTMS also popularly known as transport management system is a kind of Supply Chain Management (SCM) in which logistics activities are key success factors in the organizations and create value throughout the entire supply chain. In the current economic environment, organizations utilize information systems to optimize operations by reducing costs and improving productivity. The purpose of this article is to investigate the impact of the own implementation of a Transport Management System (TMS) on the supply chain operations of a transport company. Primary data, obtained from questionnaires, as well as secondary data from the enterprise resource planning (ERP) system (before the TMS implementation) and TMS database (after implementation) were analyzed. The successful development and also the implementation of a TMS demonstrated a positive impact on the supply chain operations, with specific impact on volumes and number of loads handled, average tons per truck, average vehicle time at plant, production accuracy, reduced total transport costs and improved inventory accuracy.

INTRODUCTION OF OTMS:

A transportation management system (TMS) is specialized software for planning, executing and optimizing the shipment of goods. Users perform three main tasks on a TMS: Find and compare the rates (prices) and services of carriers available to ship a customer's order, book the shipment, then track its movement to delivery. The broader goals of using a TMS are to improve shipping efficiency, reduce costs, gain real-time supply chain visibility and ensure customer satisfaction.

TMSes are one of the core technologies used in supply chain management (SCM), a discipline sometimes divided into supply chain execution (SCE) and supply chain planning (SCP). They are available as stand-alone software or as modules within enterprise resource planning (ERP) and SCM suites. Typically, a TMS serves both shippers, carriers and other logistics providers. Manufacturers, distributors, e-commerce organizations, wholesalers, retailers and third-party logistics providers (3PLs) are major users of TMS software.

While some TMSes focus on a single mode of transportation, most support multimodal (where at least two of the various modes of transportation -- truck, rail, air and sea -- are used in a single contract) and intermodal (in which a cargo container is carried by at least two modes of transportation).

TMSes have gained traction over the past decade as an enabler of global trade and logistics. Gartner, in its March 2019 Magic Quadrant report, predicted the global TMS market will grow at an accelerated rate, reaching \$1.94 billion by 2022 and accounting for nearly a third of the SCE market.

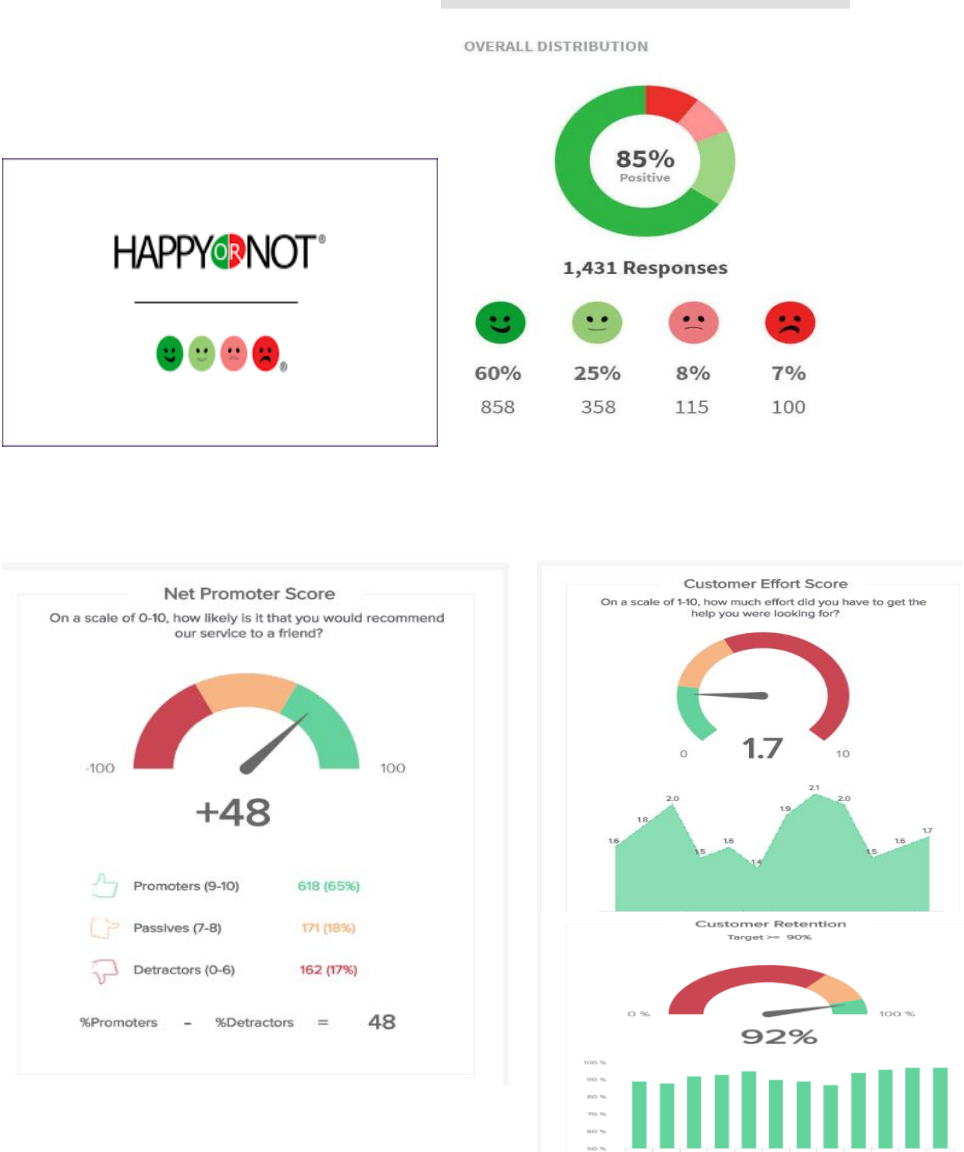
LITERATURE REVIEW:

Some of the following also prescribed us for the latest use of technology like AI which we are trying to take over.

After the idea of the company in the market we somehow wanted to take over research to new extent in order to check and develop the idea so that the sector reaches new heights and for this research we took two aspects of this methodology those were quantitative and qualitative methods where we organized surveys and also took interviews of our regular customers.

On the other hand, we referred our primary textbooks and some websites through internet to take over the research to new end.

Some of the reviews and ratings are shown in the figures below:



This was our research methods, though still we always rely to stick to our primary source to refer to the textbooks and websites on the internet.

IMPLEMENTATION:

Location-based services or LBS refer to 'a set of applications that exploit the knowledge of the geographical position of a mobile device in order to provide services based on that information. LBS can be classified in three categories: Public Safety / Emergency Services, Consumer Services and Preferred Location Search. There are two methodologies to implement LBS on android applications:

To process location data in a server and to forward the generated response to the clients.

To find location data for a mobile device-based application that can use it directly.

What I found:

The main purpose of this research was to assess the impact of the implementation of a TMS on the supply chain operations of a fertilizer company. This was achieved by varying focusing on various operational measures before and after implementation of the TMS.

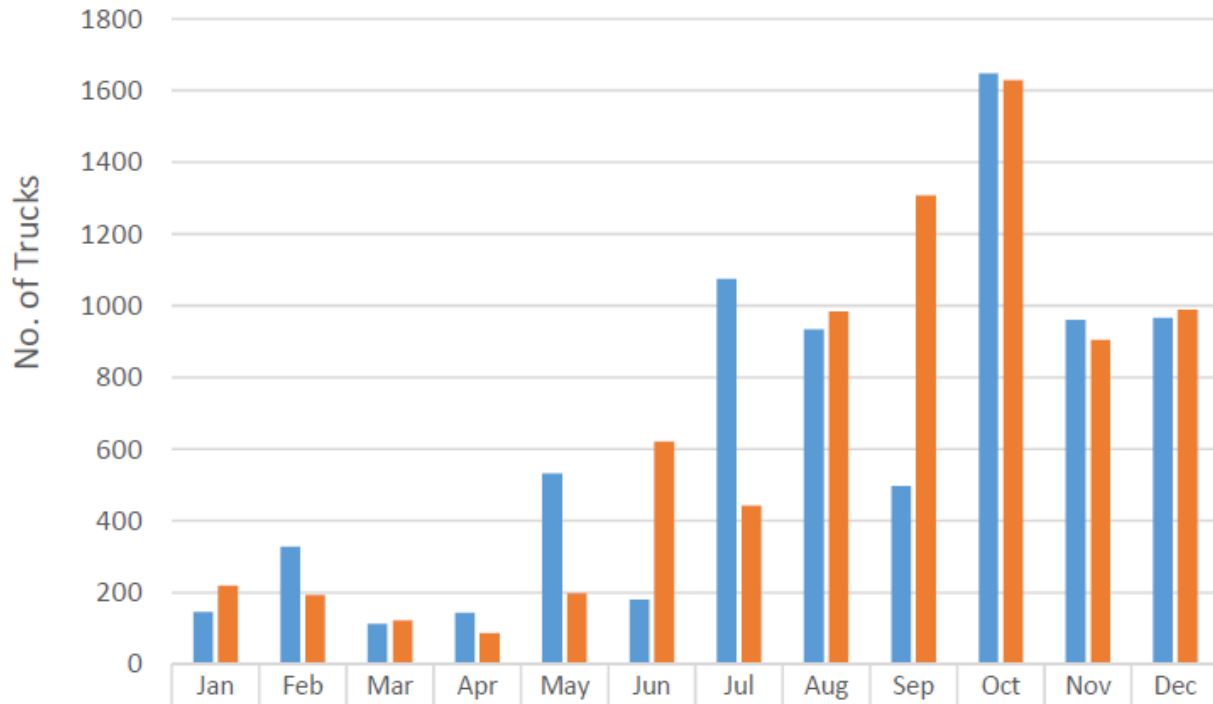
Some notable benefits are as follows:

1. quality and value
2. speed
3. reliability/dependability
4. flexibility and cost.

OUTCOME:

The operational process was controlled and managed by a Load Schedule Planner (LSP), which was an internet-based simplistic module, designed to control and confirmed orders in a loading plan that determined capacity requirements.

Previous data contains the number of inbound trucks offloaded in 2019 and 2020. The maximum number of inbound trucks offloaded for 2019 and 2020 were both in October, 1 647 and 1629 trucks respectively. The total number of inbound trucks offloaded in 2012 was 7 521 and 7 696 in 2019 indicating an increase of 2.33 per cent after (2020) onwards.



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