

Report On
Implementing Technology to benefit International Logistics &
Supply Chain Management of APS Logistics Intl Ltd.

By

Md. Imran Bin Faruque Bhuyan
ID: 18282014

An internship report submitted to the BRAC Institute of Governance & Development
(BIGD) in partial fulfillment of the requirements for the degree of
Masters in Procurement and Supply Management (MPSM)

BRAC Institute of Governance & Development
BRAC University
December 2022

© 2021. Brac University
All rights reserved.

Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at Brac University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

5. Student's Full Name & Signature:

Md. Imran Bin Faruque Bhuyan

18282014

Supervisor's Full Name & Signature:



Dr. Mohammed Abu Bakar Siddique
BRAC Institute of Governance & Development
Brac University

Letter of Transmittal

Dr. Abu Bakar Siddique
Faculty (Adjunct),
BRAC Institute of Governance & Development
BRAC University
66 Mohakhali, Dhaka-1212

Subject: Submission of practicum report on Implementing Technology to benefit International
Logistics & Supply Chain Management

Dear Sir,

I am pleased to submit my practicum report for kind approval.

I have attempted my best to finish the report with the essential data and recommended proposition in a significant compact and comprehensive manner as possible.

I trust that the report will meet the desires.

Sincerely yours,

Md. Imran Bin Faruque Bhuyan
Student ID: 1828282014
BRAC Business School
BRAC University
Date: March 19,2022

Non-Disclosure Agreement

[This page is for Non-Disclosure Agreement between the Company and The Student]

This agreement is made and entered into by and between APS Logistics International Ltd and the undersigned student at Brac University-

Name of Student:

Md. Imran Bin Faruque Bhuyan

ID: 18282014

MPSM, Brac University

Signature:

Name of Workplace Supervisor:

Name: Nahian Mustafa

Designation: Head of Sales & Marketing

APS Logistics International Ltd

Signature: *N. Mustafa*
15/10/2022

Acknowledgement

I would like to express my sincere gratitude to my practicum supervisor Dr Abu Bakar Siddique, BRAC Institute of Governance and Development (BIGD), Brac University for his valuable feedbacks, suggestion and support throughout the practicum.

I am extremely thankful to my mentor from studied organization Mr. Nahian Mustafa (Head of Sales & Marketing, APS Logistics Intl Ltd) for creating suitable learning environment for me and for his continuous guidance, supervision and encouragement throughout the year.

I am most grateful to our course Coordinator Rajmoni Singha, Sr. Manager - Academic and Training and Ms. Tanzina M Mizan for always standing behind us and guiding us directly and indirectly. I am equally thankful to all the faculties for their valuable support, suggestions and feedback and friends of BRAC Institute of Governance & Development, BRAC University for their kind support whenever needed

Md. Imran Bin Faruque Bhuyan

MPSM Student, Brac University

Executive Summary

The study has been done on the existing international logistics and supply chain operation of APS logistics. Organization and industry experts were interviewed and consulted about the ongoing scenario. It was found that RFID operations are happening in the logistics industry but on a very limited scale. ERP packages are also found operational and helpful in the industry system. But it has been identified that there are scopes to develop these processes for a better outcome from the operation.

Keywords: Automation, supply chain, Logistics Management, warehouse management, RFID Technology, HDS, WMS,

Abbreviation

AS2	Applicability Statement 2
AWB	Air Way Bill
CFS	Container Freight station
ERP	Enterprise Resource Planning
FTP	File Transfer Protocol
HAWB	House Air Way Bill
HDS	House Dara Surcharge
QC	Quality Check
RFID	Radio Frequency Identification
RPA	Robotics Process Automation
SFTP	Secured File Transfer Protocol
WMS	Warehouse Management System

Table of Contents

Declaration.....	ii
Letter of Transmittal	iii
Acknowledgement	iv
Executive Summary	vi
Table of Contents	viii
Chapter 1:	ix
Background of the practicum:.....	ix
Brief introduction of studied organization:	ix
Rationale behind selected topic for the practicum:	x
Objective of the practicum:.....	xi
Chapter 2:	xi
Overall supply chain flow:.....	xi
How the organization manages the supply chain flow?.....	xii
WMS and HDS Opportunity:.....	xiii
Implementation plan of RFID scanning, HDS and WMS:	xiv
Chapter 3	xv
Conclusion:	xv

Chapter 1:

Background of the practicum:

Every organization nowadays searches for the opportunities of cost savings in supply chain operation & automation is the best possible way to reduce some operational steps to gain some cost savings. Years after years, Logistics industry is practicing same traditional process in warehouse management, data entry management, where goods are received from suppliers into a warehouse, then plan for shipment and arrange handover to carrier. In this area, automation effect will be discussed where we will see how effectively and perfectly goods can be received, how data can be input through automated way, how info well processed and goods dispatched to final destination with more accurate and real time information. Throughout this report, we will discuss on how we can implement these automations in logistics and freight forwarding industry and increase profitability.

Brief introduction of studied organization:

Established in 2016, APS Logistics is one of the fastest growing organizations in Bangladesh's freight forwarding industry. Having its global presence in Bangladesh, India, Pakistan, Sri Lanka, Vietnam, Taiwan and South Africa- the organization is growing day to day and increasing team and capacity day to day. The organization is joint venture and country wise it is operating as a franchise/JV with multiple branches. The company is well known to all USA Fashion/retailers in this short period of time. From Bangladesh, the organization is mostly concerned on handling USA Fashion & retail sectors consignment (air/ocean) for outbound and multiple product verticals for Inbound shipment.

As a freight forwarding company, every organization design product. As we worked as an agent among buyer/seller; so we APS always works on developing new product which can add value to ultimate buyer and create a sustainable supply chain solution.

(© APS Logistics 2016 - 2020, 2016)

In this particular study, we have analyzed on APS Logistics Intl Ltd. APS Logistics is a freight forwarding company based in Dhaka, Bangladesh and founded in 2016, engaged in the International Logistics and Freight Forwarding Sector.

Rationale behind selected topic for the practicum:

Discuss on- - **Implementing RFID scanning in consolidation, Air Operation (Automated WMS); HDS Operation by RPA**

Supply chain cost is one of the major cost incurring portions of any company and every company tries to cut down the cost elements as much as possible. In service industry, supply chain smoothness/efficiency depends on collaborating IT, automation to perform error free operation in less time. Where people and time is main asset. There can be many ways to reduce the supply chain cost & automating the process is one of them. After studying the current practices of APS Logistics Intl Ltd, Bangladesh -we have identified a major time saving opportunity by implementing WMS (Warehouse Management System) – (Tracking the cargo receiving from suppliers, planning and dispatching to Airlines). Also the HDS (House Data surcharge) which involved all origin HAWB & producer's and final receiver's detail information input to carrier's system. Earlier these inputs were done by carriers and then by forwarders/shipping agents. But through RPA, these are done by Robots which can make huge savings in money, time and efforts. Also it reduced efficiency. We understand that the process

will eliminate manual step of supply chain operation which will make significant savings. Hence, we have tried to analyze more on this topic.

Objective of the practicum:

Main objective of the practicum is to analyze the possibility of implementing WMS (Warehouse Management System), HDS Automation (House Data surcharge), RFID Scanning at CFS

Chapter 2:

Overall supply chain flow:

APS Bangladesh generally perform then international freight forwarding for inbound and outbound logistics along with all required value added service/tailor made requirement of specific customers. The organization has own & rented (dedicated) warehouses located in Chittagong and Tongi, Dhaka. Beside traditional freight operation, APS designed it's supply chain end to end clear visibility.

For giving clear information to customer, APS Dhaka warehouse (For AIR Export), they are using automated WMS system which enables to track the receiving to processing outbound cargo in every stage.

Also APS Chittagong warehouse which is referred as CFS (Container Freight Station), these container freight station is a transit hub where cargo stays for some limited/minimum time.

Cargo unloaded here, counting and sorting take place, consolidation happen, value added service performed and loading finished to final container.

How the organization manages the supply chain flow?

End to end supply chain process of APS Bangladesh is fully automated. To accomplish this, the organization uses an ERP software which has different modules like Cargo booking, issuing shipping order (SO), House BL preparing from shipper end, House BL/AWB confirmation, Cargo planning, Tracking the cargo at warehouse (Whether in waiting line/planned), Pre –Alert to customer, Invoicing and accounting. . All these things are configured in the software and no manual intervention is required.

Total process is followed and locked from one step to another. So, once the booking is done, there is time for shipper/supplier to change the information until or unless its confirmed from APS end/booking remain “open”. Also the system is interlinked with company’s Accounting software, Warehouse Management System and Integrated with required AGENT/client system. Since in freight forwarding and international logistics, it’s a mandatory part to interlink with Agent in different countries, retailers/importers in different countries; so the system is flexible and maintained well to transfer data through SFTP (Secured file transfer Protocol), AS2 (Applicability Statement 2) and other integration for information/data exchange from customer server and processed data with high security as well.

WMS and HDS Opportunity:

Automated Warehouse Management System enable an exporter to know accurate information of their cargo. CRM can check the status with just a click on the portal which shows the waiting line of cavard van, when loading unloading take place, then it also shows, when unloading finished it also appear in the system. When cargo receiving done, then WMS system updated with actual weight, so CRM don't need to worry about weighting and any information. It reduces manual communication, wastage of time, clear visibility, removed exporter follow up, faster the process.

HDS consists around 12 major information which includes all the information of House Bill of Lading. Earlier carrier performed this operation and charged \$20/HAWB as they submitted this info on behalf of freight forwarder. Now, freight forwarder who have regular shipment with carriers, those are asked to perform this HDS by their own. This HDS is time consuming as every day we used to have submit 15-20 HDS (in one carrier) which took around two hours of manual time and also had severe risk to mistake. So, we appointed our in-house Robots to perform this HDS operation with giving them only a minimum payment (not more than \$2/House BL). So, automating HDS not only saved our time but also increased efficiency and performances.

RFID Scanning Opportunity: Barcode scanning was an advanced tool which we currently doing for some of our high value operation but RFID scanning is an advanced and high-end technology which is first time implemented in our CFS in Bangladesh Freight Forwarding Industry. Major difference between Barcode and RFID is- Barcode reads only the data preloaded or expected into a carton whereas RFID reads the physical presence of the desired

pieces/merchandise inside the box with more detailed info. Example- PO, color, size, styles, season, quantity and so on.

With doing an RFID scanning customer get to know the actual garments inside the box, if missing then they can rectify the cargo before shipping is performed. After scanning, there is a real time report option which shows carton wise pieces' details information. So, final customer get assured about their product and make payment accordingly. So, this RFID scanning benefit the final buyer as we APS as a forwarder console around 12-15 big/small vendors who export/manufacture for one ultimate buyer. As a buyer nominated forwarder, we console cargo at our CFS and perform this scanning operation with two RFID scanning tunnels at our CFS. If shipper/vendors performed this RFID operation at their QC, then it would have been most costly and tracking would be difficult. So, as a consolidator it became easier for us and also for buyer who is satisfied with getting their required reports, carton with actual merchandise inside it and paying for their desired cartons without any confusions.

Implementation plan of RFID scanning, HDS and WMS:

Implementing RFID scanning in logistics and supply chain management will be a great tool in future. While shipping goods in international logistics, a barcode level can only count no of package shipped. For checking number of quantities, actual items its very much important to check the goods inside merchandise. For setting up this facility, organization needs to set up proper infrastructure, set the frequency level, chip inside RFID tags and also proper information management. Since Radio frequency works in a certain distance, so without setting up proper infrastructure there might be stray reading, wrong reading appears.

Setting up HDS automation needs RPA subscription which is really cost involvement if organization wants to set up BOT from their own. However, there are third party IT vendors available who can provide RPA subscriptions. With taking such RPA automation is vastly used for handling PO management, order management in logistics and supply chain management.

Chapter 3

Conclusion:

By implementing HDS by RPA in air operation could save a lot of executive time and also assure error free data submission. It also eliminates an entire layer of operation which makes it more automated & brings more control. By implementing RFID technology, merchandise inside the box could be traced and tracked easily. It assures transparency and visibility of goods movement and remove confusion among buyer and seller.

Reference

- © APS Logistics 2016 - 2020, 2016. *http://www.aps-logistics.com/about/*. [Online] Available at: <http://www.aps-logistics.com/about/> [Accessed 19 March 2022].
- APS Logistics Intl Ltd, 2022. APS Overview. *APS Logistics LinkedIn Page*, n.a(n.a), p. 1.
- zhenhub, 2022. Achieving Maximum Efficiency with Automation in Logistics. *zhenhub*, 22 May, n/a(n/a), p. 1.