Sales Force Automation (SFA) in a Fast Moving Consumer Goods (FMCG) Industry: New Zealand Dairy Products Bangladesh Ltd (NZDPBL)

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This thesis is submitted in partial fulfillment of the requirements for the Degree of Masters of Science in Management Information System - MS in MIS

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APPROVAL

This thesis titled **"Sales Force Automation (SFA) in a Fast Moving Consumer Goods (FMCG) Industry: New Zealand Dairy Products Bangladesh Ltd (NZDPBL)"**, submitted by Md Nurul Islam, ID No: 172-17-356 to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of M.Sc. in Management Information System and approved as to its style and contents. The presentation has been held on 8th December, 2019.

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DECLARATION

This is to certify that the work presented in this thesis is the outcome of the analysis and experiment carried out by me, Md Nurul Islam under the supervision of AKM Enamul Haque, Associate Professor, in the department of Computer Science and Engineering (CSE) Daffodil International University Dhaka, Bangladesh. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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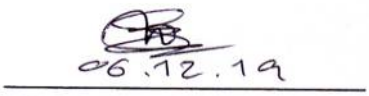

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After that I will be indebt forever to my supervisor **AKM Enamul Haque** Assistant Professor Department of CSE, Daffodil International University. From the beginning of this thesis he has help me in choosing Topic of theses. He also shows me how I should proceed to attain the appropriate knowledge involved in thesis. I also found him helpful in setting objectives, getting the appropriate information to meet objectives, in reporting the information both in writings, in graphs and in flow charts, suggesting the key recommendation.

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In addition I would be grateful to all the employees of NZDPBL for their altruistic contribution, for their cooperation and for their valuable effort and time that they have sacrifice to complete this report as well as to provide me the knowledge of corporate activity.

At the end, once again I would like to thanks all the noble person who are mentioned above and who are not mistakenly mentioned, for their invaluable contribution to this work.

ABSTRACT

This study has conducted on sales automation of the day-to-day activity taken by distinct departments such as Sales, Supply Chain, Warehouse, Accounts and Distributors/Dealers involved in selling Fast Moving Consumer Goods (FMCGs) of an organization. Sales Force refers to the field level Sales Representatives (SRs) and their supervisors. **Sales Force Automation** (SFA) is a system used by the sales force to facilitate the flow of information from the end customer to the company. Most of the SRs has identified that SFA has increased efficiency by saving time to take order per outlet, providing knowledge and accurate calculation on promotions, providing stock position and preparation of order summery. Supervisors also perceived the efficiency to prepare sales summary and monitor performance. SFA enables SRs to be smart with devices and get customer insights on-the- go. Change management is the main hurdle to overcome for successful implementation of SFA. Specially, SRs with age level 40 and above are less prone to accept change, because they have developed their own style of work. SFA has become a single point information source for the organization to accumulate reliable information on sales, inventory and collection.

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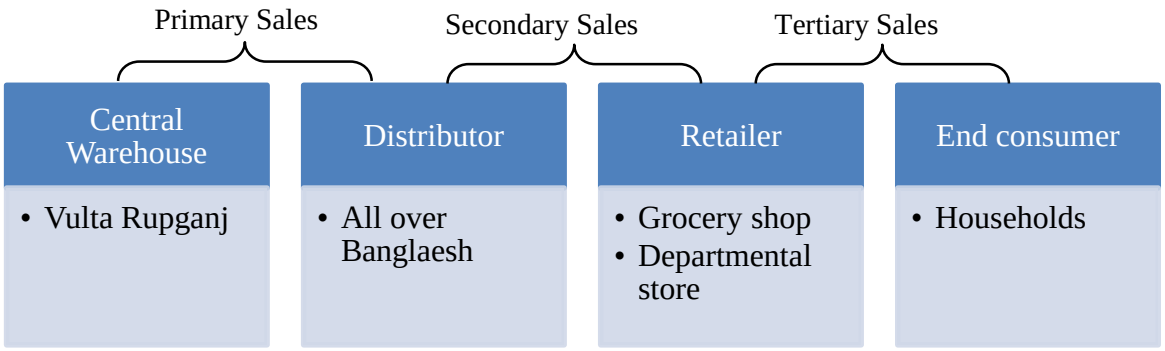
1. INTRODUCTION

1.1. Introduction

Sales force automation (SFA) is a strategy to use software to automate sales business tasks including order processing, communication management, information sharing, inventory monitoring and control, order tracking, customer management, sales forecast analysis and employee performance evaluation.

NZDPBL has comprehensive market coverage to furnish its valuable customers with uninterrupted supply of popular dairy products, noodles, crackers and biscuits. The primary sales are done from the central warehouses to the assigned Distributors. The primary sales also includes sales to super stores located at different places of country and Institutions which includes Hotels and Organizations. The secondary sales includes, delivery of product from distributor's warehouse to retail shop located near to our house. The tertiary sales includes purchasing of product by end consumer.

Figure 1.1: Types of Sale



This study has focused on sales automation to cater the day-to-day activity taken by distinct departments such as Sales, Supply Chain, warehouse and Distributor/Dealer in pertain to primary and secondary sales.

1.2. Objectives of the Study

The objectives of the study are,

- To examine whether implementation of SFA in NZDPBL has led to improvements in terms of effectiveness and efficiency in its sales operations.
- To identify the challenges NZDPBL has been facing in implementing SFA.
- To elaborate the perceived benefits of stakeholders from the distinct features of SFA.

1.3. Scope of the Study

The scope of this study covers implementation process of Sales Force Automation with-in NZDPBL. This study has also discussed the challenges to implement and suggest way-out. It has described the features of SFA and related stakeholder. It has covered the cost and benefit of the implementation of SFA. At the end it identified the contribution of SFA to improve sales operation. This study specially conducted with-in the sales people of NZDPBL and relevant departments with the system (i.e. Supply Chain, Marketing, Internal Control, Accounts and Warehouse). As NZDPBL has wide distribution channel and sales people are resided at different geographical location of Bangladesh. This study has covered almost all the areas of NZDPBL. It took three (3) years to complete to the entire project. This project is divided in two parts, one is Primary Sales automation referred to Primary Sales Information System (PSIS) and another is Secondary Sales Automation referred to Secondary Sales Information System (SSIS). Sales Force automation refers to the uses of software to automate the task of sales operation by any mean. Recent development in web technology and android application has fueled the entire process extensively.

1.4. Methodology of Study

This research paper has been prepared based on observations, one to one interview with users and questionnaire based survey. In addition, inputs from the vendor of sales force automation has also been incorporated in this study. The author of this paper has performed the role of **Project Manager** to develop and implement the entire SFA project in the organization of study. The experience gained throughout the project has fueled a great insight to prepare this report. An extensive literature review has been conducted to define the measures to develop questionnaire used in the survey.

1.5. Limitations of Study

The study is based on one organization engaged in food and beverage category in FMCG industry. An actual picture could be driven if the study would have been conduct on multiple organizations in different industrial sectors of Bangladesh. It has been found that few research works have been conducted in Bangladesh context on this topic.

In addition, collecting data from the respondents was not very easy. The education level of sales representatives is HSC to Graduate. There have been few initiatives inside the organization to conduct surveys and users are not comfortable in providing actual feedback for different reasons like losing the job. Finally, time constraint was also a barrier in preparing this report.

2. OVERVIEW OF FAST MOVING CONSUMER GOODS INDUSTRY AND THE ORGANIZATION UNDER STUDY

2.1. Fast Moving Consumer Goods (FMCG) Industry

The final goods and services that are consumed by the households and not used in the production process of other goods and service are called Consumer goods. Consumption of goods and services is referred to the private consumption or Household Consumption.

Products that are sold rapidly and at comparatively lower cost are called Fast moving consumer goods (FMCG). Such as packaged foods, beverages, toiletries, over the counter drugs and similar consumables.

Generally FMCGs have short shelf life. Some FMCGs are highly perishable such as meat, fruits, vegetables, dairy products and baked goods. Other products like toiletries, packaged foods, soft drinks, housework products have high turnover rates. Revenue generated from FMCGs is comparatively small and generally sold in bulk quantities to make considerable aggregate earnings. The business of FMCGs is considered as the most definite instance of low margin and high volume business.

One of the fastest growing segments of the market is FMCGs industry. The population of Bangladesh is 163.05 million on the year 2019. This large number of population of the country makes the FMCGs industry very prospective. With the considerable growth of GDP, the private consumption growth has also increased over the years.

2.2. Classification of FMCG in Bangladesh

The FMCG industry can be segregate in three major categories- Foods and Beverage, Personal Care, and Household care industry in Bangladesh. Foods and beverage industry includes all food products such as milk & dairy Products, biscuits and bakery products, frozen foods, ice cream, tea, coffee, baby foods, soft drinks, tobacco etc. Besides personal care industry includes perfume, cosmetics, toiletries product etc. Household products includes room scents or sprays, detergent powder, liquid detergent, soap etc. (Asaduzzaman, 2018). In this report we will discuss only foods and beverage industry.

Figure 2.1: Classification of FMCG

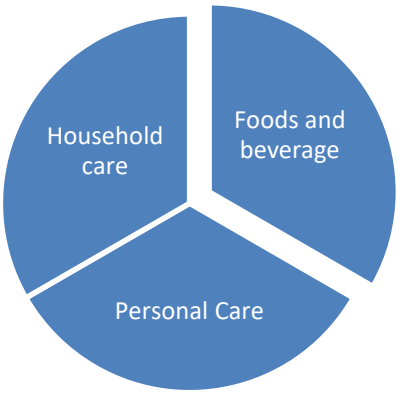


Figure 2.2: Overview of FMCG companies in Bangladesh

Table 2.1: Popular Powder Milk Brand & Prices in Bangladesh

No.	Brand Name	Country of Origin	Price/Kg	Marketing/Produced by
1	Dano	Denmark	600	Arla Foods & MMPL
2	Nido	New Zealand	690	Nestle Bangladesh
3	Aarong	Bangladesh	550	BRAC Dairy
4	Anchor	New Zealand	600	New Zealand Dairy Products Ltd
5	Diploma	Australia	560	New Zealand Dairy Products Ltd
6	Farmland	New Zealand	525	New Zealand Dairy Products Ltd
7	Pran	Bangladesh	480	Pran RFL
8	Marks	Australia	500	Abul Khair Group
9	Starship	China	400	Abul Khair Group
10	Fresh	China	460	Tanvir Foods (Megna Group)

2.3. About the dairy industry of Bangladesh

Dairy sector of Bangladesh is playing an important role in Bangladesh Economy. Country is producing milk well under the requirement and most of the demands are being met from import of dry milk from the international market. This country needs 7.227 million ton milk calculating 120ml per head. Out of which we produced only 2.686 million ton and met up our requirement by importing 52 thousand ton milk power from abroad. Still we have deficit of 3.91 million ton milk. At present, daily per capita milk consumption less than 60 ml. We are spending 10 billion Taka per annum for importing milk powder from abroad.

The total milk market in Bangladesh is estimated around 21000mt worth $ 72m of which Dano holds 22% Market Share (MS), Diploma 18%MS, Anchor 12%MS, Red cow 8%MS, Nido 4%MS and others rest local players. FCMP market reaching maturity and price competition is also increasing. Due to no/little product differentiation brands becoming very price elastic. Global Trend-Consumers moving

from generalized products to specialized products. Local Trend- Consumption of packed consumer goods going up. NZDPBL (New Zealand Dairy Product Bangladesh Ltd.) intents to enter the specialized product segment of milk market in Bangladesh.

2.4. Background of Organization

New Zealand Milk Products Bangladesh Limited (NZMPBL) has started its operation in Bangladesh from 1992. A fully owned subsidiary of Fonterra Co-operative group of New Zealand. Fonterra operates in more than 140 countries worldwide. Fonterra – World's Largest Milk Producer & Exporter. June 08, 1992 New Zealand Milk Products Bangladesh Ltd. was registered & incorporated.

In 2005 company changes its name to New Zealand Dairy Products Bangladesh Ltd (NZDPBL) & started operating under 100% local ownership. Today's one of the biggest milk powder importer & marketer of Bangladesh. Business worth's an average of US$ 59,550,561.00 per annum. NZDPBL employs around 1200 (approx.) people who are directly connected with the operations. Long-term potential is never sacrificed for short-time performance. The company's priority is to bring the best & most relevant products to people, wherever they are, whatever their needs, throughout their lives, in its terms- "Dairy for life"

Table 2.2: Product Details of Dairy Category

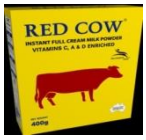
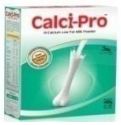
Product Name	Product Layout	Country of origin	Stock Keeping Unit (SKU)
RED COW		AUSTRALIA	1 kg BIB 400 gm BIB
RED COW BUTTER OIL		AUSTRALIA	450gm (Tin) 900gm – (Tin)
DIPLOMA		AUSTRALIA	1kg S 100 gm S 200 gm S 500 gm S 450 gm BIB
FARMLAND GOLD		NEW ZEALAND	500 gm S 250 gm S 25 gm S 400 gm BIB
CALCI-PRO		NEW ZEALAND	400 gm BIB
SHAPE-UP		NEW ZEALAND	400 gm BIB

Table 2.3: Product Details of Non-Dairy Category

Product Name	Variant	Product Layout	Stock Keeping Unit (SKU)
Doodles Instant	Masala Curry		62 gm 248 gm 496 gm 744 gm
Doodles Stick	Regular Chicken		300 gm 180 gm
Poppers	Corn Coco BBQ 25 Choco Ring Cheese Ring		25 gm 30 gm
Krackers King	Sheer Cheese Chicken Leg French Fry Crispy Angle		30 gm 25 gm 15 gm
Yokozona	Yokozona		60 gm
ToiMoi Barz Wafer	Vanilla Strawberry Chocolate Cheese		7 gm 12 gm 98 gm
ToiMoi Rock & Roll Wafer	Vanilla Chocolate Cheese		6 gm 23 gm 115 gm
Biscuit	Digestive Energy Go Cremo		145 gm 135 gm 90 gm

3. OVERVIEW OF SALES FORCE AUTOMATION

3.1. Background of Study

A sales representative (SRs) are the only person in a large organization that is able to collect data and spread more information about customers to organizations, because of their direct relationships with customers. So it is important to emphasize that communication and information gathering, storing and disseminating information within the company effectively take place necessary. One possible way to ensure this functionality is the so-called "sales force automation" in short sales automation. (Dita Hommerová and Katerina Vondrová, 2014).

3.2. The definition of the Sales Force Automation

The concept of "sales force automation" refers to any type of information technology used at the moment of sale, and it enables or helps to achieve the goal of selling a product (Hunter & Perreault, 2006).

Sales force automation software for SRs installed on a mobile computer. These software applications are created either by firms' own IT staff or by outsourcing relevant application development or packages created by software solutions already available in the market. Each of the above possibilities for software acquisition has its advantages and disadvantages. Often the system features the following functions:

- It handles information about customers
- It allows SRs to complete information as needed
- It organizes the work content of the SRs and ensures that the customers always visit their importance and it also assigns the work of the SRs.
- The system is connected to the CRM system, and it enables the sales force to connect to other sections of the company or it can provide information about the supply of stock (Dita Hommerová and Katerina Vondrová, 2014).

3.3. Frequent problems in the SFA implementation

The most frequent problem is that users do not accept the system and do not actively start using it. Robinson, Marshall & Stamps (2005), in their study, claimed that the more effective and easier the application was, the more attuned users were to the acquisition of a new technology. Other authors worked on the reasons why SRs were exposed, or closed, to the use of technology. A survey on this topic in the year 2006 found that, for example, people focused on performance and results and people who like to learn more easily adopt new technology (Jelinek et al., 2006). It looks like the technology can make the sale easier on its own. Managing changes, that is, adopting the transition to a new system, is a major problem here. The organization must provide sufficient time for system selection and pay more attention to the preparation and implementation of new technologies as these are phases that are not frequent. (Dita Hommerová and Katerina Vondrová, 2014).

3.4. User Perception of New Technology

User perceptions of new technologies may ultimately affect their acceptance of those technologies. Recent research has identified a clear connection between sales automation and the acceptance of their sales force automation technologies. Descriptive evidence suggests that more experienced salespeople have more negative perceptions of sales power automation than less experienced salespeople (Robert et al.).

3.5. Mobile Sales force effectiveness

Sales teams are constantly under pressure to meet customer expectations, while bringing in revenue for the company. Globalization brings the world together as these pressures increase. A recent Aberdeen survey revealed; Companies that implement mobile sales force automation solutions are 1.5 times more likely than not to have sales power productivity. Sales teams are turning to mobile sales force automation (SFA) technologies to market their field reports to handle growing customer demand worldwide (Aberdeen Group, 2007).

3.6. Strategic Sales Management

Sales Force Automation (SFA) has become a key priority for many sales executives. Driven by the need to stay ahead of competitive trends, Companies both large and small are spending an average of $10,000-$13,000 and up to $38,000 per sales representative to automate paper-based sales and service process. Sales executives justify these large investments with the promise of operational cost savings and increased sales force productivity. Indeed, successful implementation of SFA technology have realized productivity gains per sales representatives of up to 30% and reduction of up to 25% in the cost of selling (Brent Keltner, Brad Jensen, 1999)

Table 3.1: Comparative Analysis on SFA Solutions

SFA Solutions	Key Features	Clients
Selicon Developed by Bizmotion	• Attendance & Daily Task Manager • Retailer Module – Secondary Sales • Distributor Module – Primary Sales • Collect & Track Payment Records by the Customers • Manage Return Stock • Detailed Route Plan Creation • Team Performance Viewer • Expense & TA/DA Claims • Performance and Motivation • Leave Application • Notice Board • Product Directory • Training & Exam • Dashboard & Reporting • Location tracking • Integration with existing ERP	Radiant Pharma, Social Marketing Company, Beacon Pharma, Orion Pharma, General Pharma, Walton, Bashundhara Group, East Coast Group
Distribution Management System (DMS) Developed by Computer Ease Ltd	**Primary Sales** • Sales Management • Inventory Management (Finished Goods) • Customer Management • Product Management • Sales Promotion Management	Unilever, Nestle Bangladesh Ltd., GSK, Arla Food, Abul Khair, Transcom, Japan Tobacco Industry

SFA Solutions	Key Features	Clients
	• VAT management • Customer Payment-Collection • Reporting and Analytics **Secondary Sales** • Secondary sales capturing • Reaching the outlet level information • Inventory & Sales management at Distribution end • Claim Management • Control over Promotional expenditures • Increasing transparency and efficiency in retail ordering • MIS reporting	
Selliscope Developed by Humac Lab	• Employee Tracking • Outlet Inspection • Order, collection & Payment • Instant Reports • Collection Due • Product Pitching • Campaign Management • Market Feedback • Factory/Central warehouse • Distributor Warehouse • Order taking from POS • Product Delivery at POS	Zanala Bangladesh Ltd, Access Tel, Unilever, Tradesworth Ltd.
WINIT Mobile Sales Force Automation Solutions Developed by WINIT	• Integrated Sales & Distribution Planning • Route Optimization" & coverage Management • Target Driven & Prescriptive Sales Approach • User Experience & Engagement • Real Time collaboration & communication • Analytics Integrated SFA solution	P&G, Sadafco, Baskin Robbins, Bisleri, Bajaj Corp ltd.

SFA Solutions	Key Features	Clients
	• Better and Faster Decision Support system • Insightful Management Dashboards • Control & Compliance	
Distribution Management System (DMS) and e-Order Developed by Next Tel Communication	• Sales • Inventory • Accounts (Partial) • E-Order Reporting • Mobile Application	

4. SYSTEM DEVELOPMENT METHODOLOGY UNDER SALES FORCE AUTOMATION

From organizational perspective, system can be develop by the resources of the organization or procure from vendor. Initially NZDPBL had invited several vendor to demonstrate their solution on SFA. Among them management of NZDPBL has selected Computer Ease Limited (CEL) to procure the entire system. CEL has state of the art tool for sales and distribution process management and MIS generation. It is popularly known as **Distribution Management System (DMS)** in FMCG industry of Bangladesh. It has a rich client list such as Unilever Bangladesh Ltd, Nestle' Bangladesh Ltd and Glaxo Smith Client Bangladesh Ltd etc. In addition, NZDPBL has visited on of the site of CEL client prior to final the deal. On the other hand, NZDPBL had limited resources and time constraint to develop and deploy such system by itself.

Generic system development life cycle involves the following phases,

1. System Planning
2. Requirement Analysis
3. System Design
4. Implementation
5. Testing
6. Maintenance

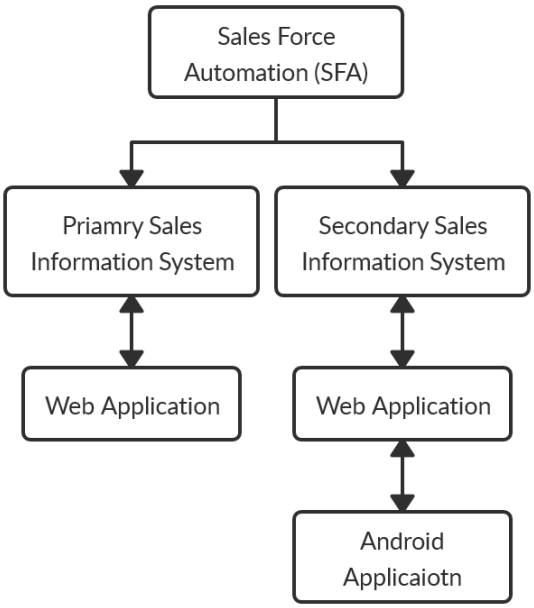
Commonly used lifecycle models are waterfall, spiral/iterative and agile methodology. The most popular system development methodology is waterfall models.

Waterfall model has followed in order to develop and implement SFA in NZDPBL. Because the requirement was well known and milestones are well understood. There are standard operating procedures (SOP) for sales operations of NZDPBL. Daily and monthly reporting of the system is well defined which follows standard format of most FMCG organization. Stating the requirements ahead of project implementation also provide good management control. An agreement was made with CEL where the major requirements and change management was stated clearly. The project cost, implementation cost and project duration was mentioned clearly on the agreement. NZDPBL and CEL both party signed of the document. It enforces good relationship with vendor to deliver the system on time and with-in budget.

User Acceptance Test (UAT) had conducted after implementation of the system. Users from different department like sales, supply chain, accounts, and warehouse had attended UAT. There feedback was recorded in details during UAT session. It has communicated with vendor to fix any bugs and include additional features identified by users. A sample UAT script has enclosed in Appendix E.

5. FEATURES OF SALES FORCE AUTOMATION

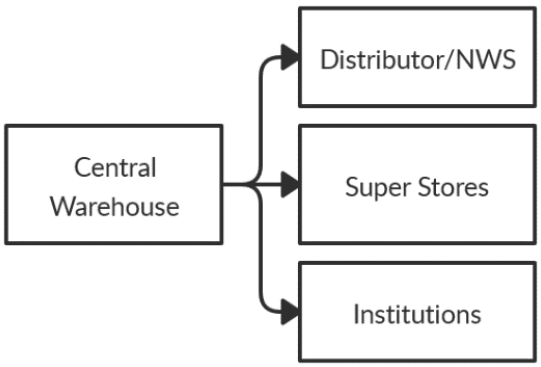
Figure 5.1: Block Diagram of SFA



5.1. Primary Sales Information System (PSIS)

In this report primary sales information system refers to the information system managing the primary sales operations of NZDPBL. Generally in primary sales goods deliver from central warehouse to nominated whole seller (NWS)/distributor, super stores, and institutions. On the other hand, customer make payment for goods received by depositing cash/Cheque in bank.

Figure 5.2: Block Diagram of Primary Sales



PSIS is a centralized web-based application developed on Microsoft .Net framwork 3.5. The back-end database is SQL Server 2017. Detail layout and description of user interface are enclose in Appendix B. The principal features of the system are,

a) Sales Management
b) Inventory Management (Finished Goods)
c) Customer Management
d) Product Management
e) Sales Promotion Management
f) VAT management
g) Customer Payment-Collection
h) Reporting and Analytics

Each feature has described below in brief.

a) Sales Management

It has two parts Sales Activities/Sales Process and Return Sales process. Sequence of Sales processes are,

1. Sales Order/Indent
2. Delivery Order (DO)
3. Goods Delivery Notes (GDN)
4. Sales Invoice and VAT Challan
5. Gate Pass

Each process are described below in brief

1. Sales Order/Indent from Distributor/Dealer/Customer

a. Indent can be generated in various ways:

i. Entry by customer: Distributor or dealer will log in the system and enter his sales order.

ii. Entry by TSO: TSO will enter sales order for this respective distributors or customers

iii. Entry by Supply Chain Officer: In few cases Delivery Officer himself may create sales order for customers.

b. Some points on Sales Order

i. Sales Order entered by distributor requires authorization from Territory Sales Officer (TSO).

ii. Image on payment information like Deposit, Cheque can be attached as reference.

iii. Sales Order can be modified /edited by TSO or authorized users at Head-office end, but original order quantity kept in the system for MIS.

iv. Sales Order can be cancelled by creator or authorized user if no Delivery Order is created against this order.

2. Delivery Order (DO)

a. DO is prepared from Sales Order/Indent. Multiple DO can be created from single Sales Order. System will show sales orders fully or partially pending.

b. DO is confirmed in two distinct activities:

i. confirmation of delivery quantity by Supply Chain Officer

ii. authorization from Accounts (financial authorization)

c. Confirmation of Delivery/Issue quantity against Sales Order

i. Supply Chain officer will decide from which warehouse products will be delivered.

ii. This is done considering the availability of stock at that warehouse.

iii. Supply Chain Officer may change the quantity to be issued.

iv. Promotional offers (i.e. discount/free product) will be applied at this point.

v. It is optional that Supply Chain Officer will attach transport and driver information with each Delivery Order.

d. Financial Authorization of Delivery Order.

i. First level Authorization:

1. Customer's current balance and credit limit will be checked here.

2. Balance for pending Delivery Order will be considered. Delivery Order not converted to Sales Invoice is pending Delivery Order.

3. If limit permits Delivery Order will be approved and issued to warehouse/factory.

e. Authorization process when credit limit is over:

i. Configure the number of level for authorization. This number can be one, two, three or more. Level number three will mean after if first level authorization fails, this will be passed to level 3 first. If required, this order may be passed to level 2. But this order can be authorized in level 3 if amount of authorization for this user permits.

ii. A user will be tagged to one of such level and how much amount he can authorize will be set before. If any order comes to him and amount to be authorized is within his limit he may authorize the order or cancel the order. If amount is not within his limit he may pass it to upper level or cancel the order. Generally such users are from Finance & Accounts Department.

iii. For example, if credit limit of a customer exceeds BDT 500,000/- and an authorizer has predefined authorization limit of BDT 400,000/- then he/she cannot authorize the DO. It will route to another authorizer with higher limit.

3. Goods Delivery Notes (GDN)

a. GDN will be issued for approved Delivery Orders. GDN is the confirmation of delivery of products according to Delivery Order. One GDN may include one or more Delivery Orders.

b. GDN is prepared by the following items

i. One or more Delivery Orders

ii. Transport/Vehicle Details

iii. Driver Details

c. Issuance of GDN is followed by the actions below:

i. Stock is deducted from warehouse inventory

ii. Customer’s current ledger is updated

iii. Sales Invoice is created

iv. VAT challan (Mushak 6.3) is ready for printing

4. **Sales Invoice and VAT Challan**
    a. These two documents are created and printed after issuance of GDN. Sales Invoice were generated by the software.
    b. One sales invoice is generated from one Delivery Order accompanied with one VAT Challan. There is facility to adjust payment with individual Invoices and generate bill-wise report. In the Invoice, the gross value, net value and free quantity & its value/discount value were shown.
5. **Gate Pass**
    a. Gate Pass is the accumulation of GDN to be transported by one particular vehicle. As vehicle information are attached with GDN is created, any Gate Pass will be generated by distinct vehicle and driver.

Return Sales Processes

Any return of sales make from a valid sales invoice. Impact of return of sales is as below:

1) Return of stock
    a) As sound goods
    b) As damage goods
2) Adjustment of customer balance
3) Partial or full invoiced quantity may be returned
4) Replenishment by replacement product

b) Inventory Management

1. Receive stock at Warehouses/Factory
    - System gives option to receive goods at different warehouses.
    - This transaction makes available of the stock for sales/GDN.
2. Other types of stock adjustment
    - Damage stock is maintained in the system
    - Adjustment of Stock: increase and decrease of stock

c) Customer Management

1. Customer is categorized by channel. Such as,
    - Distributor

- Super Stores
- Direct Sales etc.

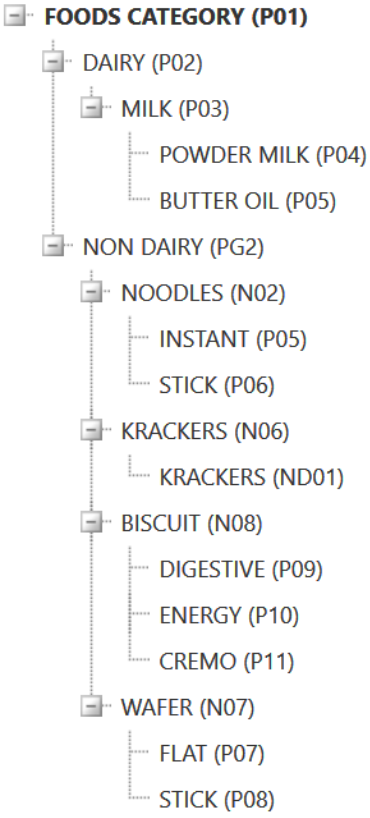
2. Customer is linked with Market hierarchy. Such as,
    - National
    - Region
    - Area
    - Territory
    - Distributor
    - Route
    - Outlet
3. Customer Ledger is updated by the following activities:
    - Payment Receive from customer
    - Payment is adjusted with individual Invoices
    - Adjustment done for claim and others. This adjustment will be done against sales invoices.
    - After issuing an invoice, customer balance update immediately with net invoice amount.
4. Credit Limit
    - Customer wise different set up for credit limit. It also records the effective date of credit.
5. Recording of Payment information
    - TSO enters payment details for the distributors. Transection Type, Instrument Type, Instrument date, Bank Name, Branch Name and Instrument number will capture during the process
    - Head Office users can do the same.
    - In both cases, this entry are authorized by Accounts user and customer balance updates depending on the following status of payment:
        - **Realized:** customer ledger is updated
        - **Pending:** Payment/Instrument not yet received and customer ledger is not updated
        - **Un-realized:** Instrument received by HO but not realized and customer ledger is not updated

- **Void:** Due to bounce; the instrument is returned to customer and customer ledger is not updated.

d) Product Management

1. Flexible product hierarchy. The end node is tag with product.

Figure 5.3: Product Hierarchy of PSIS



2. Brand Name is assigned with Product. Such as Diploma, Red Cow, Anchor etc.
3. Product can be assigned to different Unit of Measure (UoM). Such as Pieces, Carton, Tons, Bags etc.
4. Stock Keeping Unit (SKU) refers to weight of finished goods. Such as 1kg, 500 gm and 400 gm. In PSIS Product Name represents SKU. Product Hierarchy, Brand, UoM and other entities are tagged with SKUs.
5. Price set up with authorization
    - In FMCG industry price is one of the key factor which changes frequently. PSIS enables to keep record of prices with effective date. It also shows the history of price for 5 latest price of a SKU.
    - Different Price can be set for different channels and customers.

- Once price are update in system it requires further authentication and authorization to take effect.

e) Sales Promotion Management

1. Flexible promotion set up. The promotional offer is given on Invoices.
2. The offer may be availed by the customer based on cumulative sales in multiple invoices. Cumulative sales quantity is counted from the first day when promotion starts or from the day after when any bonus is given for this program.
3. If an offer is declared or altered on a back date, then PSIS will consider sales from the first date of the program.
4. PSIS keeps the lifting history of the customer to facilitate FOC quantity based on slab.

f) Consumer Promotional (CP) Items Management

1. A separate SKU list is maintained for promotional/gift/CP items.
2. CP items' stock will be received at warehouse.
3. Consumer Promotion (CP) Program is declared in PSIS. Such as, 1 pcs Ispahani Tea 200g free with each piece of Diploma 500gm.
4. CP item is applied during Delivery Order (DO) issue and shown in Goods Delivery Note (GDN) and Gate pass.
5. CP item is not shown in Sales Invoice and VAT Challan.
6. CP items is not shown in any reports.
7. There is no effect on customer ledger for CP items' transaction.
8. A separate report is furnished to view CP Item status (Stock).

g) VAT Management

1. PSIS enables to issue VAT challan (i.e. Mushak 6.3) at the moment when GDN is generated in system. It has furnished as per requirement of National Board of Revenue (NBR). NZDPBL has gone through a system audit from technical resources of NBR to issue such document from system.
2. A unique VAT challan number is generated and stored in system with the time and date of issue such challans.

h) Reporting and Analytics

1. List of reports available in PSIS are as follows,
    - SKU Wise Sales Report

- Customer Wise Sales Report
- Primary Sales Report
- Finished Goods Delivery Report
- Finished Goods Stock Status
- Customer wise payment status
- Distributor Wise Sales and Credit Status
- VAT Sales Statement
- Challan Wise VAT (Mushak 6.2)
- Mushak 6.10

2. All the above reports are exportable in MS Excel, Word and PDF format.
3. Customer wise sales report is used to prepare analytical reports.

Sample reports are enclosed in at the end of Appendix B.

5.2. Secondary Sales Information System (SSIS)

Figure 5.4: Flow Chart on Secondary Sales

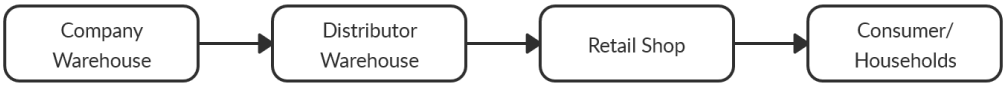
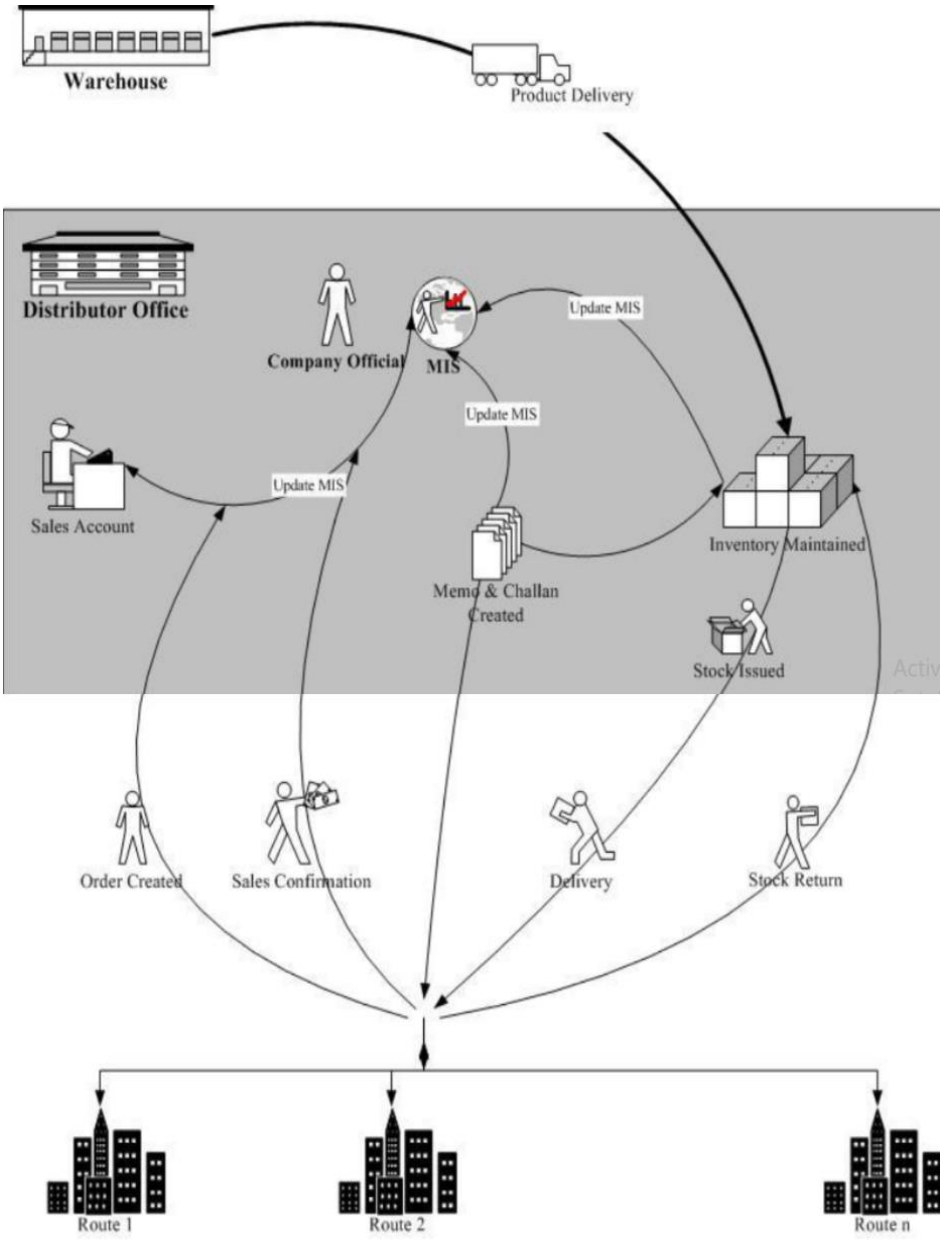


Figure 5.5: Work Flow Diagram of Distribution System



SSIS is a comprehensive Secondary Sales and Distribution Management System with HHT (Hand Held Terminal, Android OS)-based order capturing facility.

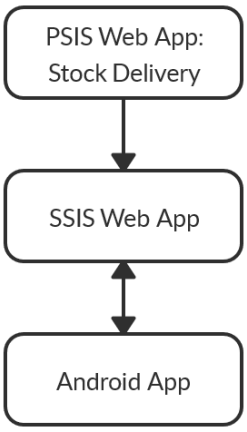
The system is a state of the art tool for sales and distribution process management and MIS generation. Considering the nature of operational activities, modules of the system functions in total integration. This section describes the identified modules with significant features for the total system. It is beyond the scope of this report to incorporate detailed Functional Specification and Features of the system.

The objectives of this system are as follows:

1. Secondary sales capturing
2. Reaching the outlet level information
3. Inventory & Sales management at Distribution end
4. Claim Management
5. Control over Promotional expenditures
6. Increasing transparency and efficiency in retail ordering
7. MIS reporting

There are three components of SSIS. First component is the integration with PSIS, which provide the information on stock delivery to the warehouse of distributor. Second component is the SSIS Web application which record and process the secondary sales operations during the work flow. Third components is the Android application “Spondon” which interface with order taker/Sales Representatives.

Figure 5.6: Components of SSIS



Description of major feature of SSIS Web Application:

1. **Creation and management of Master data**
    a. Market Hierarchy
    b. Product Hierarchy
    c. Price Change
    d. Channel Definitions (promotional activities differs by channel)
    e. Gift information
2. **Distributor Information**
    a. Basic Information such as Code, Name, Proprietor, contact no(s) etc.
    b. Geo Location such as Region, District.
    c. E-Mail Address
3. **Set up Market return reasons**
4. **System will facilitate users to introduce Trade Promotion Programs by various approaches as follows:**
    a. Channel Specific, Distributor specific Trade promotion
    b. Trade promotion for a specific period
    c. Trade promotion offer on basis of
        i. Invoice value
        ii. For one SKU
        iii. For a combination of SKU
        iv. For a bundle of SKU with specific ratio
    d. Offer on different unit of measurement
        i. Sold Value
        ii. Sold quantity in piece
        iii. Sold quantity in case
        iv. Sold quantity in weight(gram)
    e. Offered bonus Item:
        i. Taka Off/Discount
        ii. Free own product
        iii. Free gift Item, other than own product
    f. Slabs: offer for different slabs.
    g. Set Target
        i. Set target SKU by month

ii. Distributor-wise monthly target creation
iii. Target upload from Excel sheet

h. Management of Location specific Master data
    i. Route Master
    ii. Section Master
    iii. Outlet Master
    iv. Distribution Employee Master (Territory Manager, DSR, Driver etc.)
i. Intelligent Indent generation, indent confirmation at Head Office and indent file generation for Primary Sales Information System.
j. Product receipt of primary invoice from Primary Sales System invoice file.(Transit stock receipt)Product receipt and receipt of primary invoice electronically
k. Physical product receipt from transit
l. Inventory management of Sound, Damage goods. Batch-wise inventory of sound goods for price difference
m. Segregation of Target by DSR, by Month, by Day
n. Journey plan for DSR and Route Agent(creating section)
o. Outlet wise order capturing and correction of outlet order (if needed)
p. Delivery Challan creation and outlet-wise invoice printing against a challan
q. Delivery/Sales Confirmation
r. Outlet-wise credit/deposit management (customer ledger, customer register)
s. Damage/Shortage/Market Return Recording
t. Claim Generation against Market Promotion and Damage/Shortage/Market Return and due to fluctuation of Trade Price.
u. Transaction Data
v. Basic data created at Distribution house like Route, section etc.
w. VAT related NBR-required features and reports
x. KPI calculation for DSR, Territory Manager, Delivery man etc.(Target Vs Achievement, Strike Rate, Line Per Call (LPC), Brand Per Call (BPC) and Economic Coverage (ECO))
y. Incentive for Distributor, DSR

z. Merchandizing Material Management (inventory at outlet and route, distribution of material to route)

aa. Long Term Promotional Activities

5. Features of Incentive for Distributor and DSR

a. Incentive KPIs for DSR:

i. Value target

ii. Productivity (must achieve individually)

1. Effective Coverage, [average ECO will be given from HO; in DMS system will check whether it is maintaining the average or not]
2. Productive Call (Strike rate), [average will be given from HO; in DMS system will check whether it is maintaining the average or not]
3. LSD (Target entered at DMS end) [total will be given from HO, DSR wise split will be made in DMS ensuring distribution house's total target matches with the HO given target]

iii. Special Distribution Drive(for specific SKUs and/or Brand) for Volume or Distribution [option will be available for more than 1 SKU]

iv. New Product Innovation (for specific SKUs)

b. Incentive KPIs for Delivery Man:

i. Order Vs Delivery(delivery rate)

c. Incentive setup:

i. Incentive setup will be prepared for each month by performer (DSR, Deliveryman), by each KPI from the above list.

ii. Incentive will be calculated for each month and claim will also be processed for each month.

d. Incentive slab: Different slabs will be defined and under each slab field-force-wise (SO, SR) amount will be set.

e. Brand-wise slab: Brand-wise weight (in percentage) will be defined.

f. Incentive will be given for achievement of each brand. Incentive amount will be dependent on the weight given for each brand. For all

brand total incentive will be calculated but if failed for any brand then no incentive will be given.

6. **Features of Long term promotional activities:**
    a. Three types of program:
        i. QPDS (Quantity Purchase and Display Scheme)
        ii. Display Program
        iii. Purchase Scheme
    b. Characteristics of program:
        i. Periodic
        ii. Geographic Area-wise
        iii. Multiple slabs of a program
    c. Characteristic of slab:
        i. Eligibility criteria for enrollment
        ii. Each slab has multiple targets
        iii. Targets on purchase value: system impose it by calculating growth for previous period
        iv. Targets on purchase for specific products
        v. Targets are set for specific period within original program period
        vi. Gifts are offered each target achievement
        vii. Gifts options are cash, product or gift item
    d. Enrollment and Drop out:
        i. Outlets must be enrolled to avail any bonus from the program
        ii. One outlet can enroll in one slab of a program and can enroll multiple program running at a time
        iii. Outlets can be dropped out from the program at any time and re-enroll within the period
        iv. Enrollment and drop-out history is maintained
    e. Performance Tracking
        i. For QPDS type of program, manual entry is required if the display is okay or not
        ii. For purchase target system automatically gives achievement result
    f. Gift Process:

i. Based on target and display result entry system processes the eligible outlets for bonus.
ii. In next delivery process, this gift is automatically attached to the cash memo of the outlet if the outlet places any order
iii. This gift attached with cash memo must be confirmed in delivery confirmation process to close this gift.

g. Claim by distributor:
i. If the gift delivery is confirmed at delivery confirmation process then the gift will be claimable by distributor.

Detail reports are enclosed in Appendix C

5.3. Features of the Hand Held Terminal (HHT) Application

Android application used to capture secondary sales data in NZDPBL is known as "Spondon". It is developed on Java and SQL Light. Detail layout of user interface are enclosed in Appendix D. This part of report describe briefly the features of "Spondon".

1. **Home Page**
   a. At the home page of the app, following information is shown to the DSR:
      i. DSR and Section names
      ii. Amount of Today's collected order so far
      iii. Line Per Call (LPC)
      iv. Today's Target of DSR
      v. Remaining Target of DSR for today
      vi. Remaining Outlets to be visited for today
2. **Menu items:**
   a. At the home page of the app, following menu items are present:
      i. Order collection
      ii. DSR's Status till today
      iii. SKU-wise Order summary
      iv. List of Trade Promotions

The description of the each menu item is given below.

3. Order Collection

a. To collect outlet-wise Order, DSR click this menu.

i. At first, the outlets are shown according to Geo-Sequence.

ii. The outlets are filtered by: Section, Channel and Outlet Status (Yet to visit, Ordered, Not Ordered).

iii. DSR first selects an outlet (check-in). He has to visit each and every outlet.

iv. DSR selects SKU(s) and collects Orders. If there is any TP running on particular SKU(s) then it will be highlighted. If the DSR selects that SKU to take order, then the TP information is displayed and it will calculate achievable under that TP if purchased.

v. After collecting orders from the outlet, DSR can view the memo.

vi. If there is no order from an outlet, DSR has to justify the reason of not ordering before final check-out from the outlet.

vii. DSR can entry Market return information. While taking the information DSR has to select actual reason or the return.

viii. Outlet-wise Merchandizing materials information can be viewed.

ix. Last 3 orders' history of a particular outlet can be viewed.

x. Time stamping: check-in & out time is stored automatically.

4. DSR's Status till today

b. DSR can view his status by clicking this menu. Following information is shown:

i. Current month's target

ii. Achievement till date

iii. Today's achievement

iv. Remaining target of the month

v. No. of total outlets for visit today

vi. Remaining visit for today

vii. No. of visited outlets today

viii. Average target per visit

ix. Strike rate

5. **SKU-wise Order summary**
    c. Both in Quantity and Value are shown.
6. **List of Trade Promotions**
    d. Running Trade Promotions (Channel-wise) are shown.

6. UINIFED MODELLING LANGUAGE IN SALES FORCE AUTOMATION

Figure 6.1: Flow Chart on PSIS

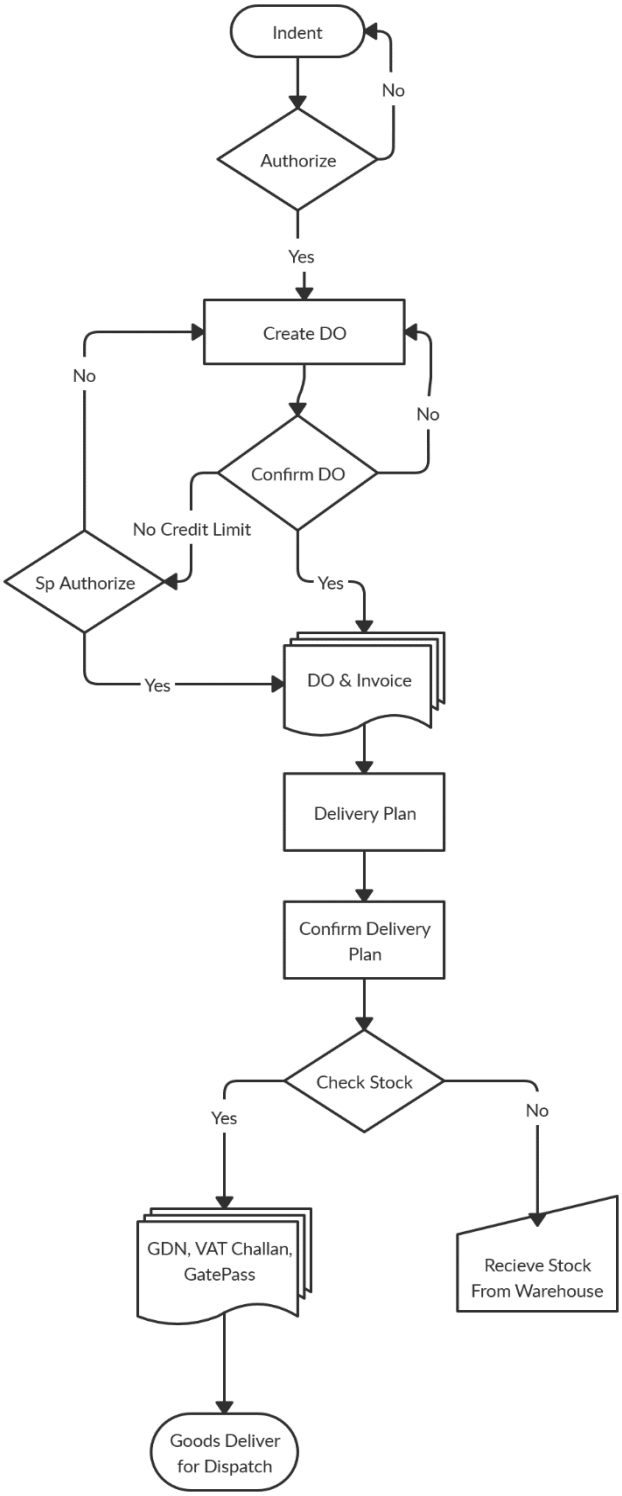


Figure 6.2: Flow Chart on SSIS

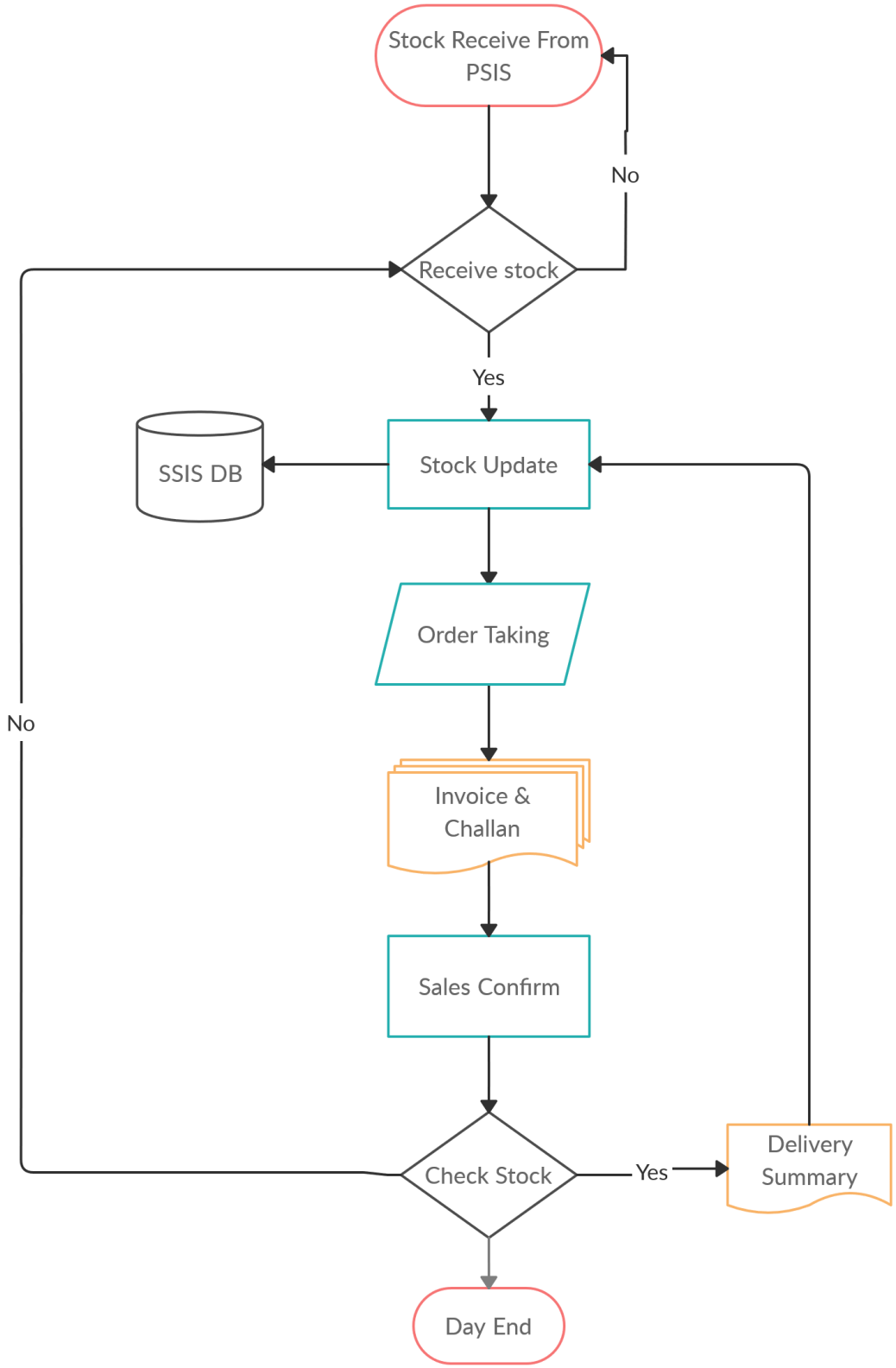


Figure 6.3: Class Diagram on SSIS

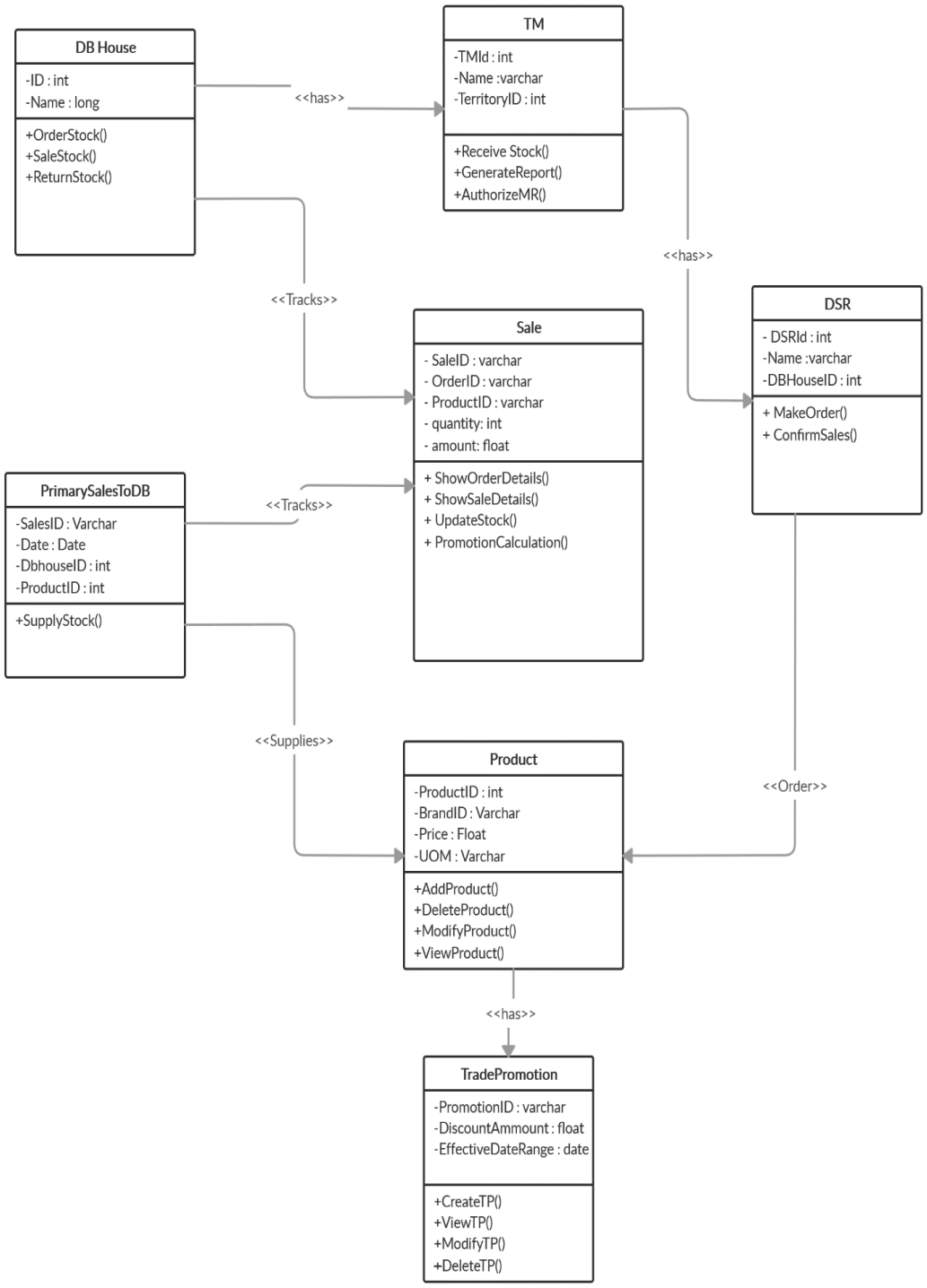
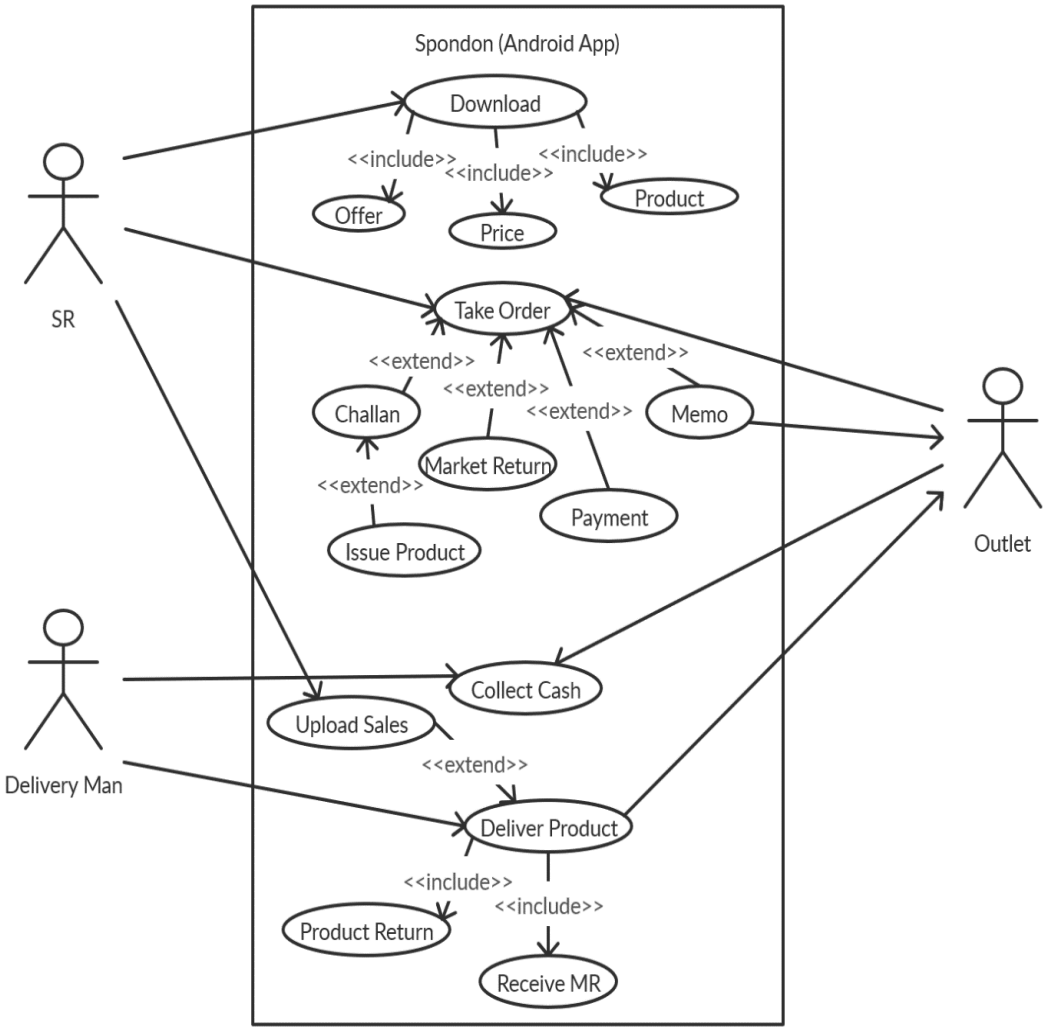


Figure 6.4: Use Case on Spondon Android Application



7. IMPLEMENTATION OF SALES FORCE AUTOMATION

7.1. Mode of SSIS Implementation

Table 7.1: Classification of Distributor

Business Slab	Nos of Distributors	Ratio of the Distributors	Slab Wise Business	Contribution	Average Business	Risk Factor
Less than 5 lacs	130	48%	28,088,768	7%	216,067	High Risky
> 5 lacs but less 10 lacs	47	17%	32,656,261	8%	694,814	Moderate
> 10 lacs but < 20 lacs	46	17%	67,303,379	16%	1,463,117	Risk Free
> 20 lacs but < 30 lacs	19	7%	47,742,677	11%	2,512,772	Risk Free
> 30 lacs	31	11%	255,452,430	59%	8,240,401	Risk Free
	273	100%	431,243,515	100%	1,579,647	

From the above table it is evident, 31 distributors with monthly turnover 30 lac and above had contributed 59% of national sales. Based on this analysis NZDPBL had started to implement in those distribution houses at first and gradually had covered other distribution houses.

The cost of implementation is high and fewer distributors are willing to share costs. The cost of SFA includes mobile device, desktop PC, data SIM for internet, salary of operator and memo.

NZDPBL had adopted two mode of implementation to make successful implementation of SFA and rapid changes of information technology. They are described below,

7.1.1. Offline SSIS

Offline SSIS was initiated on February 2016 followed by a successful pilot project and user acceptance test (UAT). It was based on offline distributed database system. It requires an operator, desktop PC and Dot Metrix printer. Desktop PC had to synchronize daily basis with central server to upload and download information. Sales representatives (SR) had to dock their android device with desktop PC in distributor houses to download and upload data. There were several limitations to this system. First of all distributor had to invest on desktop PC and had to bare 50% monthly salary of an operator and rest 50% is bare by NZDPBL. Secondly operator had to perform numerous task of multiple SR.

7.1.2. Online SSIS

NZDPBL could managed to implement in 31 distribution houses with-in Dhaka metro under offline SSIS. On the other hand NZDPBL had added big product

category such as Noodles, Crackers, Wafer and Biscuits. Altogether numbers of SKU has increased to 100 which will very tough to manage for a single sales representatives because most of the SKU/Brands are new and unknown to the customers and consumers. New business expansion has enforce NZDPBL to roll-out SFA nationally. With the rapid increase of internet, web application and android application, NZDPBL had migrated to online version of SSIS on December 2017. After that NZDPBL had adopted second mode of implementation which was specially designed for distributors with monthly turnover below 30 lac. This mode of implementation was viable for most distributor specially small and medium business enterprise and it is refer as SME.

SFA implementation work begin with incorporating the master data of following entities,

1. Route
2. Outlet
3. SR Profile
4. Delivery Man Profile
5. Permanent Journey Plan (PJP)
6. Initial Stock of Distributors
7. Beginning balance of outlet

Respective Territory Manager (TM) were shared a prescribed format to provide the above data to include them in SSIS. After that, NZDPBL had arranged training session for Sales Representatives (SR) and Territory Managers on SSIS web application and Android application. This process has rolled-out gradually all area of Bangladesh. Following tables shows the current coverage of SFA.

7.2. Online PSIS Implementation

The implementation of Online PSIS had initiated from July 2017. It continues till September 2017 to capture the national picture for order to delivery process. Users from Sales, Supply Chain, Finance & Accounts and warehouse department are involved in PSIS implementation. Area wise training session was organized for TM and distributor owners. The system was designed to capture order and payment information form distributor owner or manager. Respective TM will authorize order and payment entry. But due to lack of resources and willingness

distributors were not involved in PSIS and this task was assigned to TM. For the user of Supply Chain, Finance & Accounts and warehouse separate team was assigned to conduct on the job training.

Table 7.2: Area Coverage of SFA

SL	Area	Customer	TM	SR	Route	Outlet
1	Dhaka 1	16	7	42	226	14,632
2	Dhaka 2	14	6	40	184	11,177
3	Dhaka 3	18	6	42	243	15,628
4	Dhaka 4	15	6	35	207	13,319
5	Tangail	18	4	32	185	11,256
6	Mymensing	12	3	17	108	6,138
7	Comilla	24	5	38	220	13,369
8	Noakhali	17	5	35	200	11,757
9	Khulna	49	7	61	389	26,555
10	Barishal	24	4	30	185	14,002
11	Chittagong	29	7	44	259	15,808
12	Rajshahi	27	4	34	219	15,396
13	Rangpur	22	4	34	202	13,614
14	Sylhet	23	6	38	230	12,951
15	Modern Trade	166	3	9	-	-
16	Horeca	10	1	13	63	1,068
	Total	**484**	**78**	**544**	**3,120**	**196,670**

Table 7.3: SFA Project Schedule

SL	Module	Acitivity	2015						2016									2017							2018							2019				
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Jun	Jul	Aug	Sep	Oct	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mar	Apr	May	Jun	Jul	Aug	Oct	Mar	Apr	Oct	Nov	Dec
		Offline SSIS																																		
1	SSIS	Requirement Analysis																																		
2	SSIS	Reports and Formats																																		
3	SSIS	Final Proposal Submission																																		
4	SSIS	Issued Work Order																																		
5	SSIS	Customization																																		
6	SSIS	Pilot Project in VIP Store, Karwan Bazar																																		
7	SSIS	User Acceptance Test (UAT)																																		
8	SSIS	Mega 31 site in Dhaka Metro																																		
		Online PSIS																																		
9	PSIS	Final Proposal Submission																																		
10	PSIS	Issued Work Order																																		
11	PSIS	Customization																																		
12	PSIS	Test & Trial Run																																		
13	PSIS	Go Live: Order to Delivery National																																		
14	PSIS	Go Live: Payment to Collection																																		
		Online SSIS																																		
15	SSIS	Migration to Online Version																																		
16	SSIS	Mega 31 site in Dhaka Metro																																		
17	SSIS	Outer Dhaka Metro																																		
18	SSIS	Mymensing Area																																		
19	SSIS	Comilla & Noakhali Area																																		
20	SSIS	Tangail Area																																		
21	SSIS	Barishal & Khulna Area																																		
22	SSIS	Chittagong																																		
23	SSIS	Sylhet																																		
24	SSIS	Rajshahi & Rangpur Area																																		

8. BENEFITS DERIVED FROM SALES FORCE AUTOMATION

Based on observation and verbal discussion, NZDPBL has derived the following benefits after implementation of Primary Sales Information System (PSIS),

1. Managing distribution tasks effectively with same number of Manpower
    a. Increasing Number of SKU More Then 100
    b. Increasing Number of DO : 70-90 per day
    c. Increasing Number of Payment Entry : 1300+ per month
    d. Increasing Number of Customer,
        i. Distributors 308
        ii. Super Stores 166
        iii. Institutions 10
2. Distribution Team spends less time on attending Phone calls for Order Taking
3. They can concentrate more on ***collection*** and ***credit control***
4. Automated ***FOC*** and ***discount calculation***
5. Up-to-date ledger balance based on
    a. Sales
    b. Collection
    c. Claim Management
6. Alignment of Sales figure with Sales, Distribution, Warehouse and Accounts
7. Standard Report preparation
    a. SKU Wise Sales
    b. Customer Wise Sales
    c. Finished Goods Delivery
    d. Finished Goods Stock status
    e. Mushak 6.2
    f. Mushak 6.3
8. Full-fill Analytical report requirement of Sales and Marketing Department
9. General Ledger Integration with **Tally.ERP9** accounting software
    a. Account Receivable
    b. Cash at Bank (Debit)
    c. Net Sales

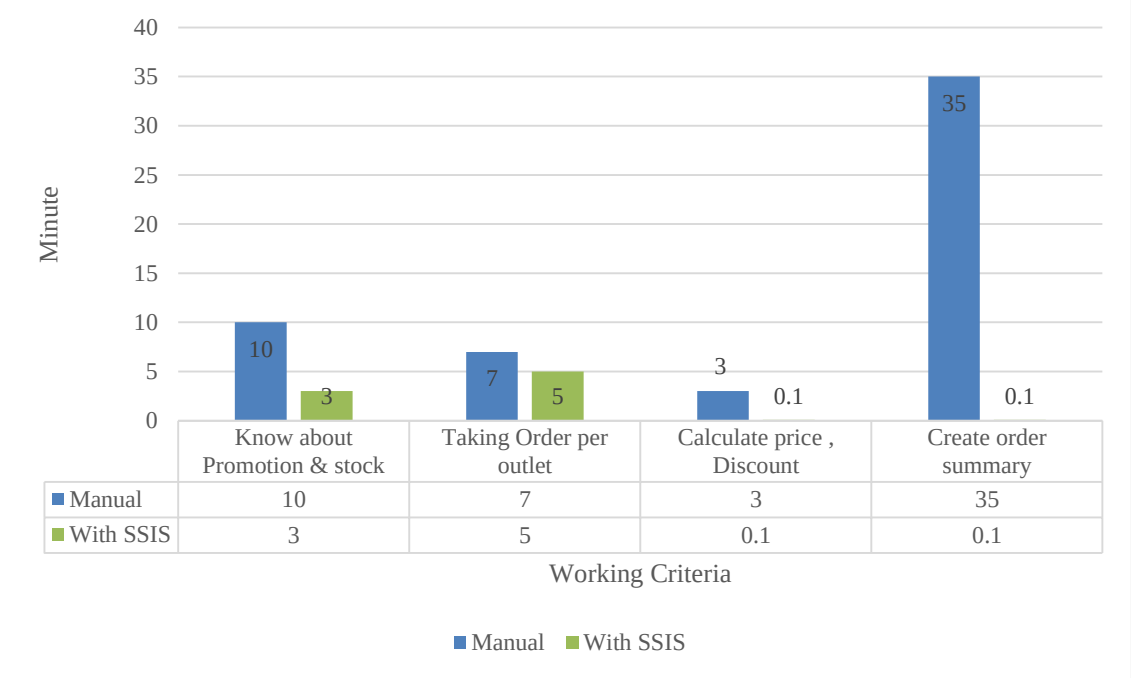
d. VAT on Sales

10. Primary and Secondary data integration
11. Up-to-date information on finished goods stock position.
12. Compare order quantity with available quantity
13. Block customer based on credit limit
14. Block any product based on scarce of stock
15. Prepare analytical report based on historical data on sales which act as a decision support system.
16. PSIS keeps all the record of data for audit trail purpose.
17. It enforces internal control and transparency

Based on observation and survey, NZDPBL has derived the following benefits after implementation of Secondary Sales Information System (SSIS),

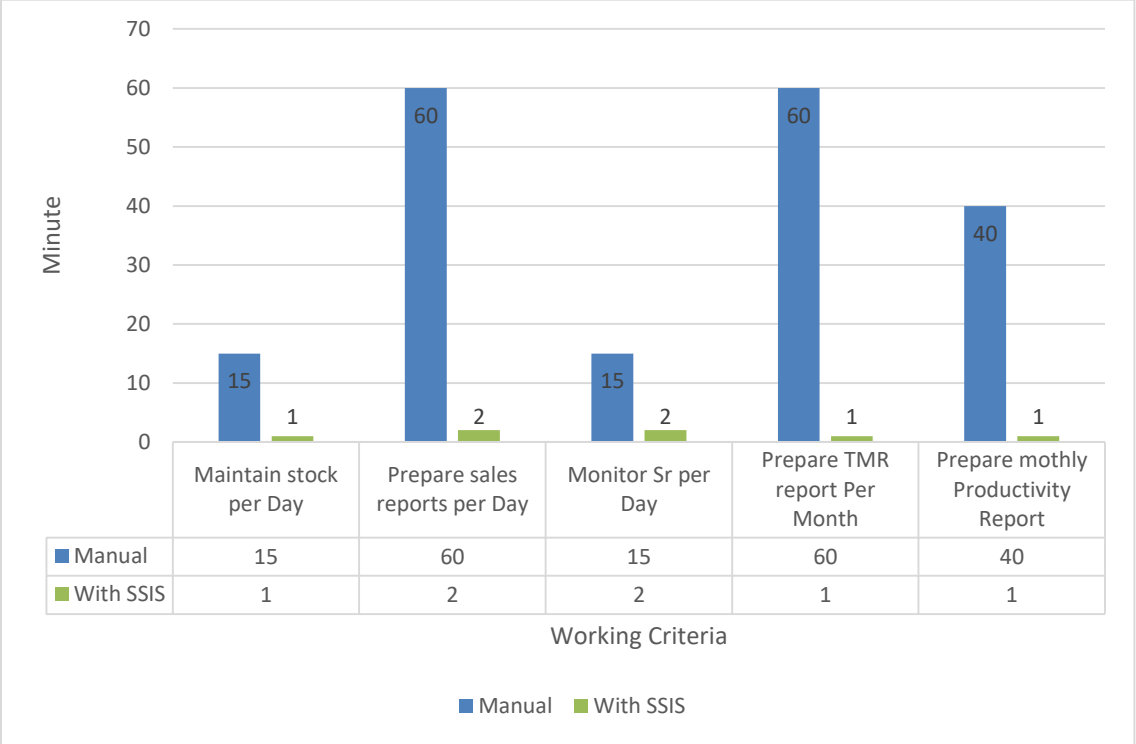
1. As per observation, it saves 2.42 hours per day of a Sales Representative (SR). It intern saves 62.84 hours in a month. If this time is converted to money it saves approximately BDT 3,142 per month. As some of the activities are completed by the SFA system so SRs men hour are saved which they can capitalized to invest in other development activities like market development, trade relation buildup, personal development etc.

Figure 8.1: Time difference on order taking process



2. To prepare summarize report of 5 sales representative it saves 1.5 hours of a Territory Manager (TM). It intern saves 45 hours in month. Territory manager can focus on other activity like trade relationship, credit recovery, team management and self-development.

Figure 8.2: Time Difference to Prepare Reports



3. Eliminate sales reporting task of sales representatives
4. Reduce data compilation error
5. Up-to-date information about Promotions and Stock
6. Track outlet level activity & performance
7. Track Outlet wise SR's activity
8. Track SR's performance like Strike Rate, LPC, Target Vs. Achievement
9. Track outlet performance for every SKU
10. Full sales information of outlet, SR, route, territory & area wise.
11. Automatic Month to Date (MTD) calculation of Target & Achievement
12. Automated Claim Management, QC Management, Display claim etc.

9. CHALLENGES TO IMPLEMENT SALES FORCE AUTOMATION

9.1. Change Management

Change management is the main hurdle to overcome for successful implementation of SFA. Human psychology are less prone to accept change. This is due to fear of losing freedom and monitoring. In addition they don't want to disclose their task in details. In addition, most of traditional reporting on sales usually prepared on MS Excel where one can generate report as they want. But SFA may not provide the exact format of reporting. A single report prepared in excel may divided in multiple report in software. Sales force should flexible enough to extract the required information from report rather showing rigidity with report format on which they are comfortable.

9.2. Cost of SFA

Most of the local entrepreneurs of Bangladesh views the cost of automation as an expenditures. Other than Banks and Multi-National Companies (MNC) of Bangladesh are using pirated version of operating system. In addition, they are less interested to invest in acquiring software and hardware required for automation. On top of that, the cost of implementation and maintenance (e.g. Annual Maintenance Contract) of SFA is too high to bear by local companies. Apart from software and hardware, the cost of SFA includes salary of system administrator and maintenance team, mobile device, desktop PC, data SIM for internet, salary of operator, printer and memo. In addition the rent of cloud server to host application and database of SFA. As per rough estimation it costs BDT 20-30 million to automate the sales operation of 500-600 employees of an organization.

9.3. Project Duration

Another due factor is the project duration. Initially none of the stakeholder of SFA was prepared to implement in NZDPBL. Top management realized the necessity of SFA, due to unauthentic reports on secondary sales, inventory position, quality complain (QC) stock position, claim management and incentive claim. But to roll-out a big automation like SFA sales force need to change their mindset. Due to adoption of new technology there is massive shift in task at each sales force. There is no paper work for reporting and no use of spread sheet like MS Excel. Which is a big hit on their regular task. As a result

the scope to manipulate data on inventory, sales and claim has reduced a lot. On other hand, data validation in software took a great deal of time to accept by sales forces.

NZDPBL has implement their mega distributor with dot matrix printer and operator. Later it has move to small and medium size distributor with only Wi-Fi enable laser jet printer and last mode of implementation will be thermal POS printer. Frequent change of mode of implementation also increase the duration.

Table 9.1: Comparative Analysis on SFA Project Duration

Company	Version	No. of Distributors	Duration in months
Arla Foods & MMPL	Online	61	6
Nestle Bangladesh	Offline	50	12
Glaxo Smith Klein	Offline	70	12
Abul Khair	Online	500	12
Japan Tobacco Industry	Online	400	12
New Zealand Dairy	Online	484	20

9.4. Quality of Software

There are very few quality software on SFA in Bangladesh. First of all, lack of domain knowledge on sales operation constraint the way to develop quality software. Secondly, to develop a dynamic solution which is fit-for-all requires time and good software architecture. Authentic sales and analytical reporting is core to a SFA. The solution should be flexible enough to generate such report easily.

9.5. Conflict of Interest

Management of NZDPBL views SFA as a tool to achieve efficiency. But sales representatives view it as a tool to monitor their activity. They are always in fear that they are being watch what they are doing. Some SR views it as a loss of freedom to work. So they view SFA a negative element to sales operation. Some SR resigned from their job also. Under the circumstance management need to adopt some measure to motivate SR to use SFA to boost performance such as, announcing incentive for best SFA user and get them promoted.

10. FINDINGS OF THE STUDY

10.1. Major Findings

Hypothesis 1: SFA enables effective and actual calculation of order value and trade promotions.

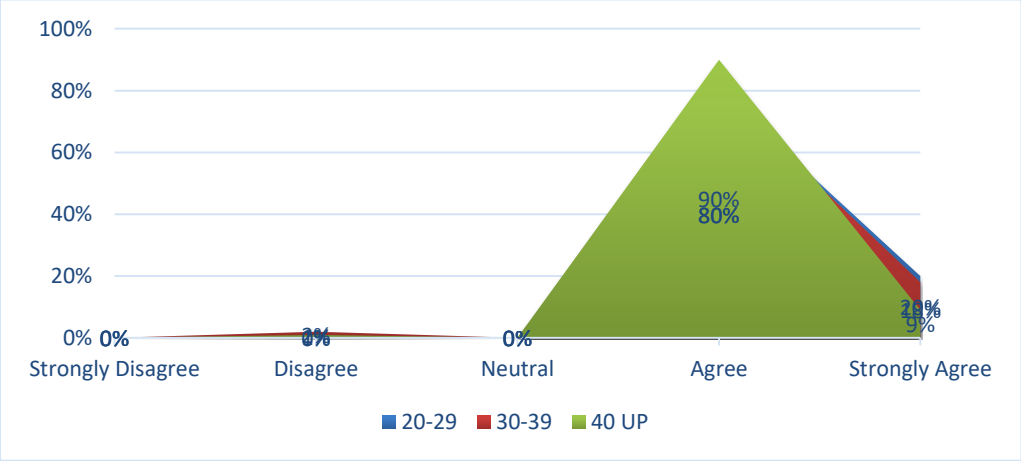
Survey results based on above hypothesis suggest that most of the sales representative found SFA as an effective tools to calculate order value and trade promotions regardless of age level. A tabular and graphical presentation has portrayed below for better understanding of the statement.

Table 10.1: Survey Result of Hypothesis 1

Age Level	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20-29	0%	0%	0%	80%	20%
30-39	0%	2%	0%	80%	18%
40 UP	0%	1%	0%	90%	9%
Average*	0%	1%	0%	83%	16%
Median*	0%	1%	0%	80%	18%
SD*	0.00	0.01	0.00	0.06	0.06

*Average and Median are calculated among different age group
*SD refers to Standard Deviation of feedback among different age group

Figure 10.1: Graphical Presentation of Hypothesis 1



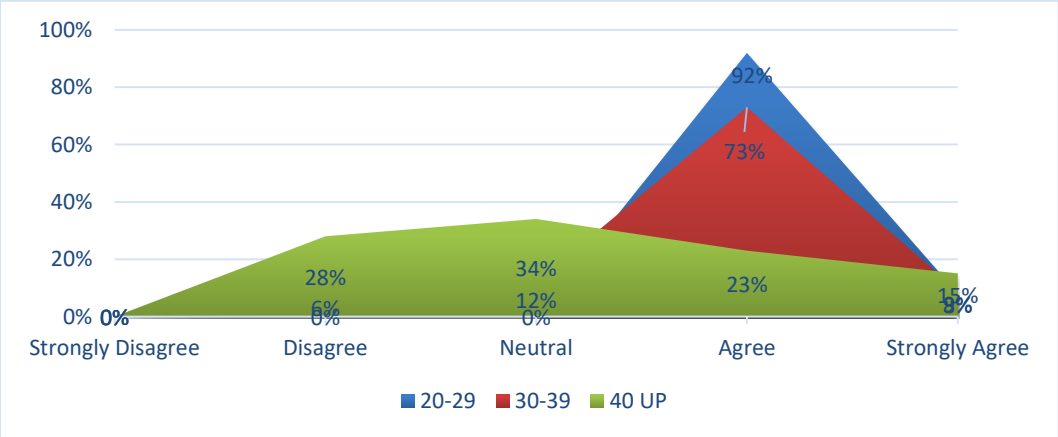
Hypothesis 2: Being smart with device is easy to call order

Survey result based on above hypothesis suggest a different response based on age level. A higher Standard deviation of 0.36 refers that respondent shows different opinion with this hypothesis. SR with age level 20-29 years are early learner, they are prone to test new experience and good challenge taker. So they have rated highest with the statement. Age level 30-39 also agrees with the statement. SR with age level 40 UP responded the lowest rating due to lack of adaptability with new technology. Some SR form this group also perceive SFA as a loss of their freedom to work, because they have developed their own style of work to take sales calls since they have started their job. But when they are trained to adhere with software based standard operating procedure they shows dissatisfaction.

Table 10.2: Survey Result on Hypothesis 2

Age Level	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20-29	0%	0%	0%	92%	8%
30-39	0%	6%	12%	73%	9%
40 UP	0%	28%	34%	23%	15%
Average	0%	11%	15%	63%	11%
Median	0%	6%	12%	73%	9%
SD	0.00	0.15	0.17	0.36	0.04

Figure 10.2: Graphical Presentation of Hypothesis 2



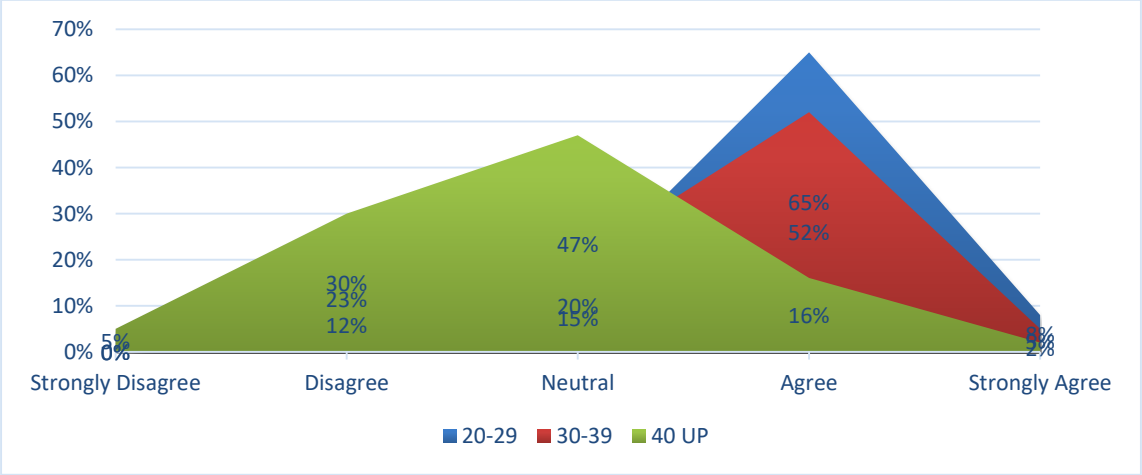
Hypothesis 3: Device help me to track outlets status such as ordered, not ordered, and not-visited.

Findings of this hypothesis reinforce the result of previous hypothesis. It suggest that SR with age level 40 and above does not perceive the benefit of SFA. This is due to fear of adopting new technology and loss of freedom of work. So most of them remain neutral to rate this statement. Age group 20-29 and 30-39 perceive positive outcome from the use of SFA enable devices. It has revealed from discussion with this group of SR that, SFA helps them to achieve higher **Strike Rate** which is calculated based on Number of total outlet divide by number of visited outlet.

Table 10.3: Survey Result on Hypothesis 3

Age Level	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20-29	0%	12%	15%	65%	8%
30-39	0%	23%	20%	52%	5%
40 UP	5%	30%	47%	16%	2%
Average	2%	22%	27%	44%	5%
Median	0%	23%	20%	52%	5%
SD	0.03	0.09	0.17	0.25	0.03

Figure 10.3: Graphical Presentation of Hypothesis 3



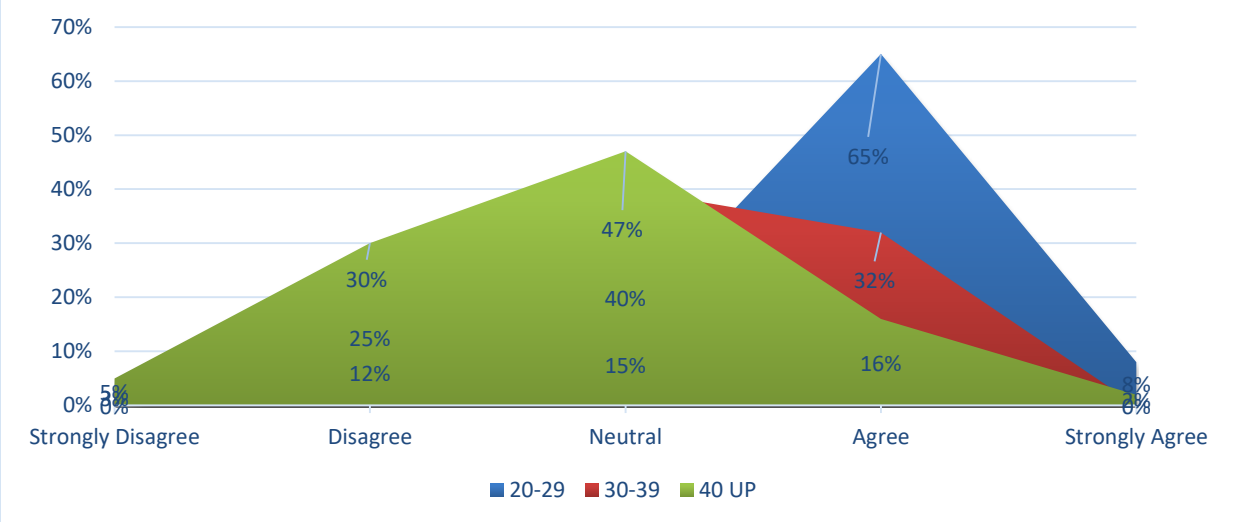
Hypothesis 4: Carrying device instead of memo is easier and comfortable

The result of this hypothesis suggest that most of the respondent of age group 20-29 years agree with this statement. Most of the young SRs does not want to carry manual memo and pen. They cannot take orders and communicate with retailer simultaneously. But mobile SFA enable them to take order faster and communicate with retailer regarding current promotions an offers.

Table 10.4: Survey Result on Hypothesis 4

Age Level	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20-29	0%	12%	15%	65%	8%
30-39	3%	25%	40%	32%	0%
40 UP	5%	30%	47%	16%	2%
Average	3%	22%	34%	38%	3%
Median	3%	25%	40%	32%	2%
SD	0.03	0.09	0.17	0.25	0.04

Figure 10.4: Graphical Presentation of Hypothesis 4



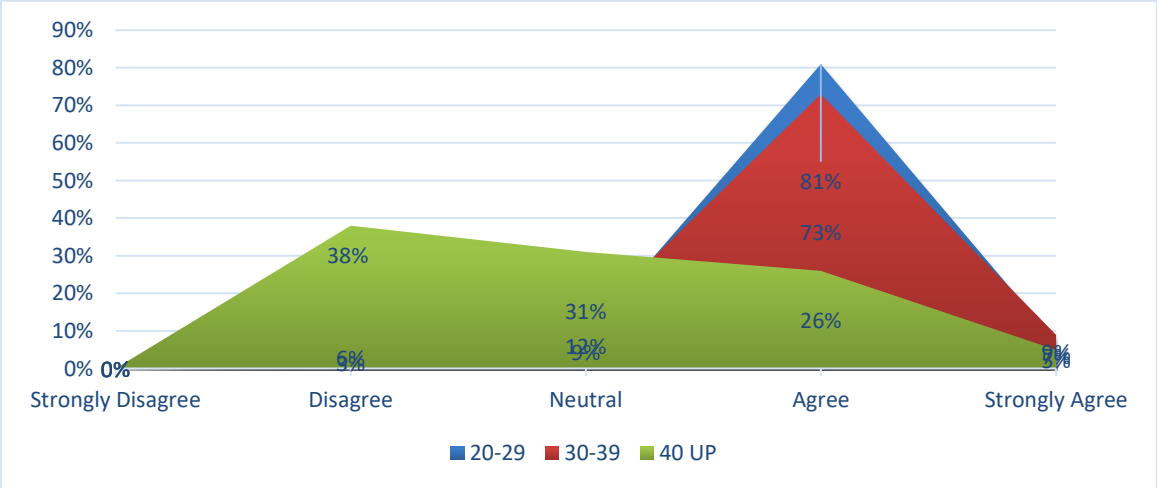
Hypothesis 5: The application is user friendly

Most of the age group of 40 up shows disagreement with the statement. It is indicating an important insight for further continuous development of SFA. The application should be easy and convenient to use for all age group. Age group 20-29 and 30-39 are agree with the statement.

Table 10.5: Survey Result on Hypothesis 5

Age Level	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20-29	0%	3%	9%	81%	7%
30-39	0%	6%	12%	73%	9%
40 UP	0%	38%	31%	26%	5%
Average	0%	16%	17%	60%	7%
Median	0%	6%	12%	73%	7%
SD	0.00	0.19	0.12	0.30	0.02

Figure 10.5: Graphical Presentation of Hypothesis 5



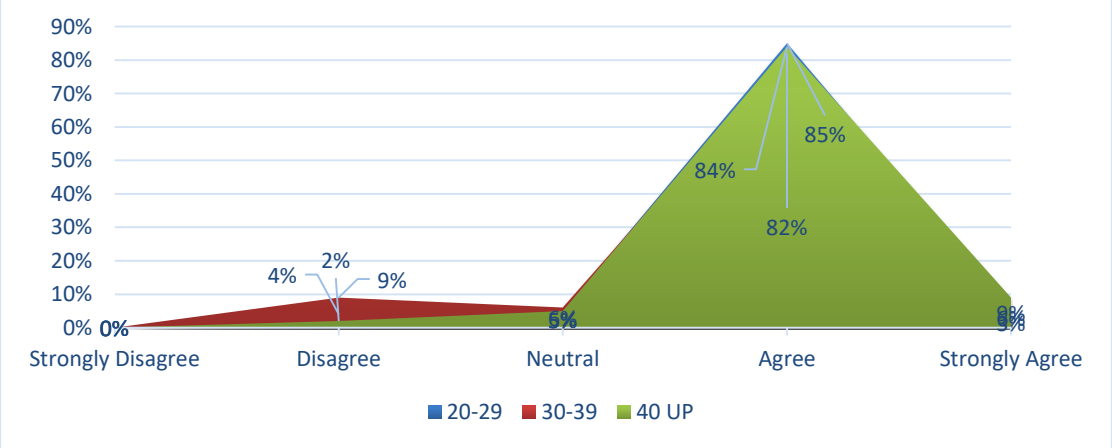
Hypothesis 6: With previous sales information it's easy to communicate with customer about credit or due amount

Most of the respondents agree with this statement regardless of age group. During taking orders SR can get an idea on purchasing history from his device. SRs can view last three calls of a retailer from his device. This enables him to emphasize on regular product a retailers used to purchase. On top of that he can pursue any related product. SRs can reduce the credit recovery time by viewing the credit status of the retailer. A widely used tools for credit recovery is to remind retailer and get a dateline for payment. In a competitive market of FMCG every organization giving credit to retailer. Likely NZDPBL had to offer credit to retailer but SFA can be an effective tools to control and recover credit.

Table 10.6: Survey Result on Hypothesis 6

Age Level	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20-29	0%	4%	5%	85%	6%
30-39	0%	9%	6%	82%	3%
40 UP	0%	2%	5%	84%	9%
Average	0%	5%	5%	84%	6%
Median	0%	4%	5%	84%	6%
SD	0.00	0.04	0.01	0.02	0.03

Figure 10.6: Graphical Presentation of Hypothesis 6



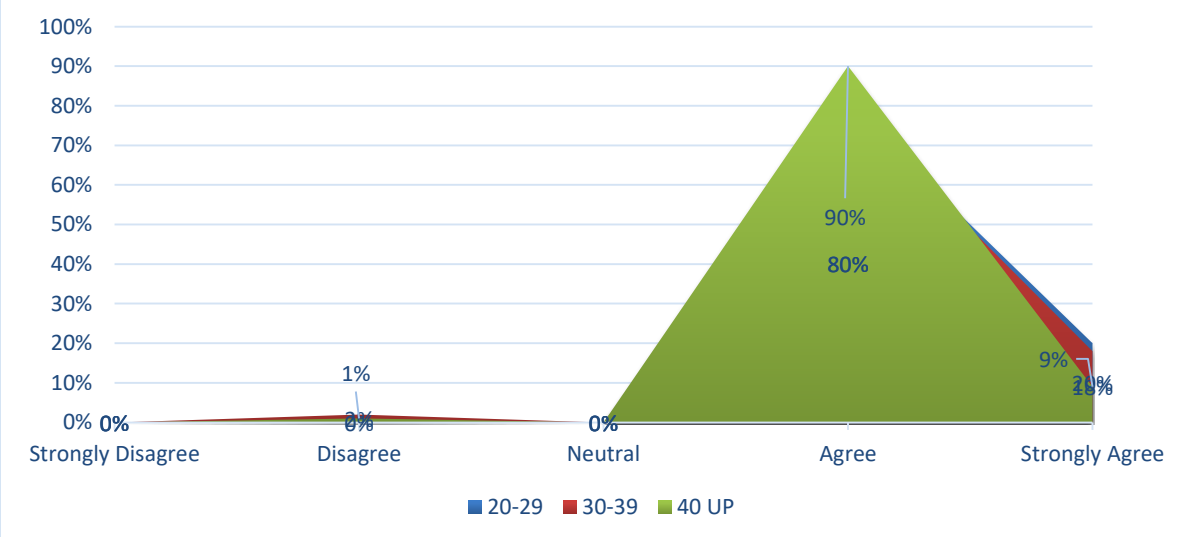
Hypothesis 7: Save much time for making order summary with device

Most of the respondent agrees with this hypothesis regardless of age group. SRs with age group 40 UP rated the highest though they have feared to adopt technology but in-terms of efficiency they are aligned with young SRs. I have discussed the means of time saving in the benefit derived from SFA part of this report.

Table 10.7: Survey Result on Hypothesis 7

Age Level	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20-29	0%	0%	0%	80%	20%
30-39	0%	2%	0%	80%	18%
40 UP	0%	1%	0%	90%	9%
Average	0%	1%	0%	83%	16%
Median	0%	1%	0%	80%	18%
SD	0.00	0.01	0.00	0.06	0.06

Figure 10.7: Graphical Presentation of Hypothesis 7



10.2. User Analysis

The survey has conducted based on 544 Sales Representatives (SR). They are the direct order taker. Sample questionnaire and result are enclosed in Appendix A. The main challenge is to educate the people as we have to cover different regions of the country and the user's point of view regarding technological change is the vital challenge.

Development and feedback tools like continuous training, communication, problem solving sessions, feedback checklist helps NZDPBL to cope up with this situation and improve the implementation process.

From the survey and analysis it is observed that experience and aged SRs are major factor of the system implementation process as most of the members of the age group 20-30 are fresher's who are primarily afraid of the changes which is possible to overcome by a number of training and discussion sessions. Age group 30-39 are the fast learners as most of them are in this job function for a long period of time and are more knowledgeable for which they are easily coping with the automation system easily relating to previous manual system. On the other hand the age group 40 up is the major challenge, as they are less flexible to adopt new technological changes and are always afraid of making mistake as well as in some cases they are slow learners.

We are positive enough as the 40 up group is really small in number (around 56 among 588) for which is not that much difficult to train them as much as required to turn them as potential users after a period of time.

11. CONCLUSION

SFA of NZDPBL involves automation of primary and secondary sales operations. Firstly, NZDPBL has automated primary sales successfully since Jul 2017 and it has gone through several upgradation as per business requirements. This system has integrated with Tally.ERP9 accounting software seamlessly. It has become a single point information source for NZDPBL to disseminate information on primary sales, finished goods inventory and collections. Secondly, the effectiveness and efficiency of secondary sales automation has measured based on feedback of SRs. Most of the SRs within age group 20-29 and 30-39 have rated SFA as an effective tools compared to manual sales operation. It has also improve the efficiency of sales force by saving time to take orders and generating summery reports crucial to measure performance of SRs. Change management has identified as the main hurdle for successful implementation of SFA. Human psychology are less prone to accept change. Age group 40 up is the major challenge, as they are less flexible to adopt new technology and are afraid of making mistake and they are slow learners compared to age group 20-29 and 30-39. We can conclude that even after facing numerous challenges during the implementation, NZDPBL has started to perceive benefits of system based order and sales recording process. It has started to generate a number of reports which are already in use as decision making tools. Few reports are enclosed in appendix C. Secondary Sales Automation is considered to be in implementation stage till now and NZDPBL confident enough that more dynamic outcomes are possible to bring through this system.

12. REFERENCES

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13. APPENDICES

Appendix A

Questionnaire on Survey of Sales Force Automation (SFA)

General Information

I. Name of Employee : .....

II. Age : (a) 20 - 29 (b) 30 - 39 (c) 40 and above

III. Duration of Employment : (a) below 1 Year (b) 1-2 Year (c) 2-4 Year (d) 5 and above

Questionnaire

Answer the following question by circling the most appropriate answer

1. The system helps me achieve my sales target
   (a) Strongly Agree (b) Agree (c) Neutral (d) Disagree (e) Strongly Disagree

2. The system has made me more productive as a sales person
   (a)Strongly Agree (b) Agree (c) Neutral (d) Disagree (e) Strongly Disagree

3. The system improves my productivity
   (a)Strongly Agree (b) Agree (c) Neutral (d) Disagree (e) Strongly Disagree

4. Overall the use of the system has improved the productivity of this sales office
   (a)Strongly Agree (b) Agree (c) Neutral (d) Disagree (e) Strongly Disagree

5. The Purpose of the system is to allow upper management to more closely manage sales personnel
   (a)Strongly Agree (b) Agree (c) Neutral (d) Disagree (e) Strongly Disagree

6. By using the system to more closely manage sales personnel, upper management can improve the productivity of individual sales offices
   (a)Strongly Agree (b) Agree (c) Neutral (d) Disagree (e) Strongly Disagree

7. The Information provided by the system is accurate
   (a)Strongly Agree (b) Agree (c) Neutral (d) Disagree (e) Strongly Disagree

8. The amount of time required is reasonable
(a)Strongly Agree (b) Agree (c) Neutral (d) Disagree (e) Strongly Disagree

9. The application is user friendly
(a)Strongly Agree (b) Agree (c) Neutral (d) Disagree (e) Strongly Disagree

10. The system provides flexibility
(a)Strongly Agree (b) Agree (c) Neutral (d) Disagree (e) Strongly Disagree

11. The system helps me more effectively perform my duties
(a)Strongly Agree (b) Agree (c) Neutral (d) Disagree (e) Strongly Disagree

12. Overall I am satisfied with the system
(a)Strongly Agree (b) Agree (c) Neutral (d) Disagree (e) Strongly Disagree

Survey Result

Statement	Age Level	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Effective and actual calculation of order value & discounts	20-29	0%	0%	0%	80%	20%
	30-39	0%	2%	0%	80%	18%
	40 UP	0%	1%	0%	90%	9%
Being smart with device its easy to call order	20-29	0%	0%	0%	92%	8%
	30-39	0%	6%	12%	73%	9%
	40 UP	0%	28%	34%	23%	15%
Device help me to track outlets status such as (ordered, not ordered, not visited)	20-29	0%	12%	15%	65%	8%
	30-39	0%	23%	20%	52%	5%
	40 UP	5%	30%	47%	16%	2%
Caring device instead of memo is easier and comfortable	20-29	0%	12%	15%	65%	8%
	30-39	3%	25%	40%	32%	0%
	40 UP	5%	30%	47%	16%	2%
The application is user friendly	20-29	0%	3%	9%	81%	7%
	30-39	0%	6%	12%	73%	9%
	40 UP	0%	38%	31%	26%	5%
With previous sales information its easy to communicate with customer about credit or due amount	20-29	0%	4%	5%	85%	6%
	30-39	0%	9%	6%	82%	3%
	40 UP	0%	2%	5%	84%	9%
Saves time to call all SKU in a short time with Device	20-29	0%	12%	15%	65%	8%
	30-39	3%	25%	40%	32%	0%
	40 UP	5%	30%	47%	16%	2%

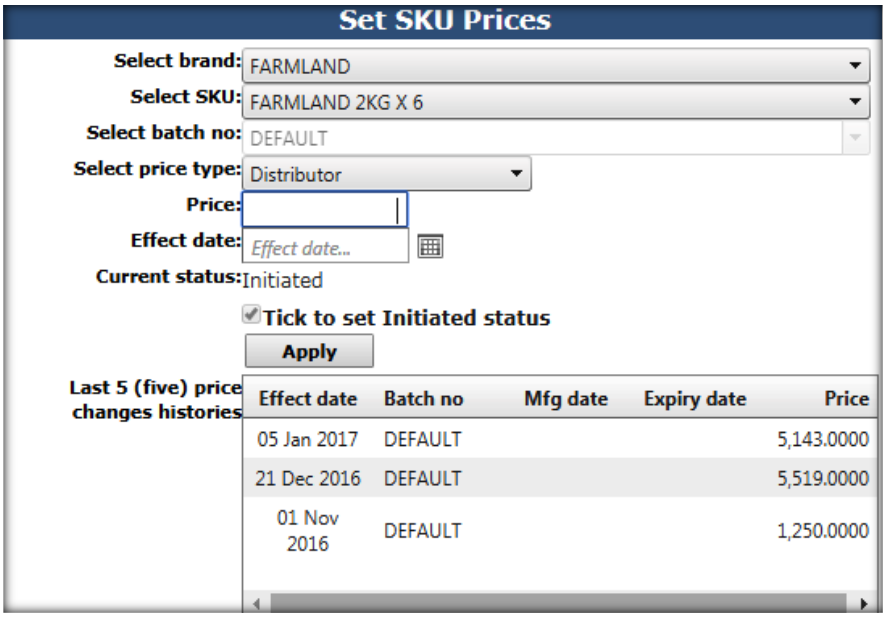
Save much time for making order summary with device	20-29	0%	0%	0%	80%	20%
	30-39	0%	2%	0%	80%	18%
	40 UP	0%	1%	0%	90%	9%
The system helps me achieve my sales target	20-29	0%	0%	0%	92%	8%
	30-39	0%	6%	12%	73%	9%
	40 UP	0%	38%	31%	26%	5%
The system has made me more productive as a sales person	20-29	0%	12%	15%	65%	8%
	30-39	0%	23%	20%	52%	5%
	40 UP	5%	30%	47%	16%	2%

Appendix B

Primary Sales Information System (PSIS) user interface and Reports

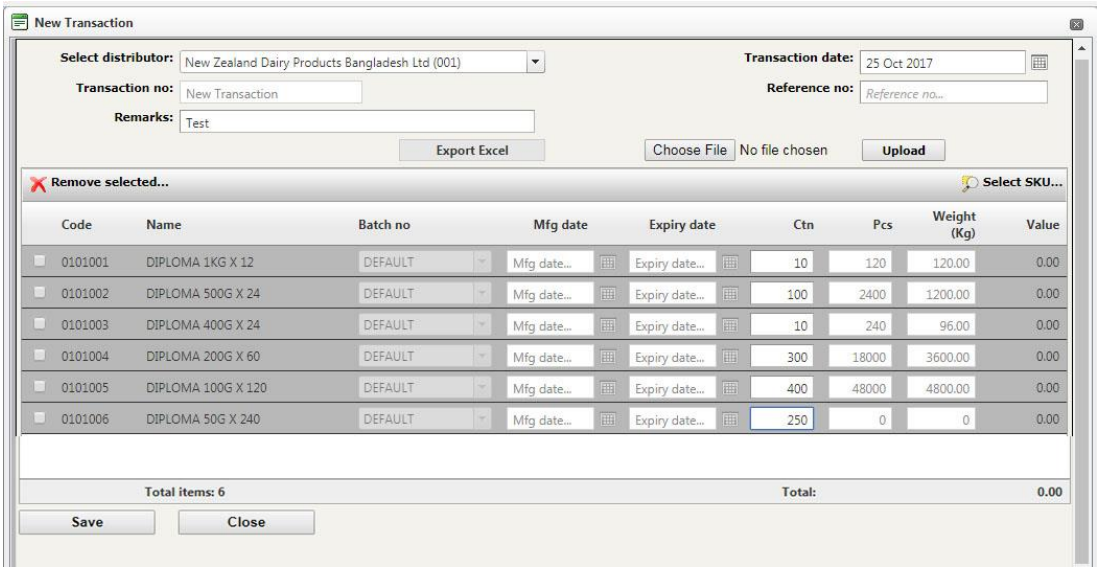
SKU Price Setup

VAT inclusive price are entered in to the system on this form. This price is entered for individual Stock Keeping Units (SKU) with an effective date of entry for the record.



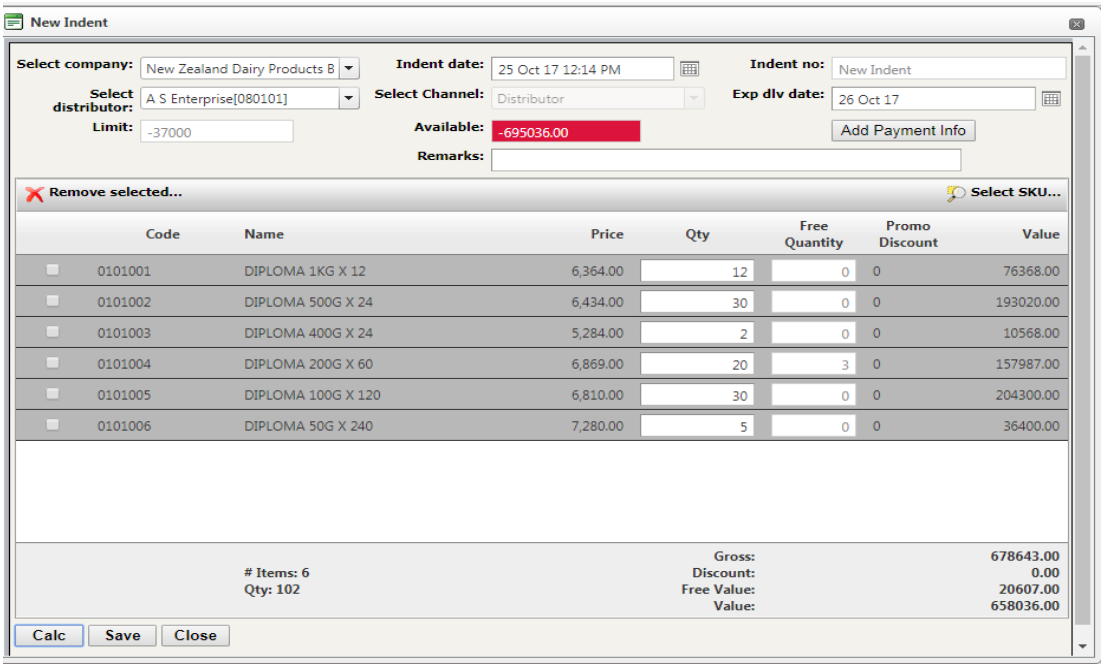
Received Stock

Based on Material Received Note (MRN) from production floor finished goods stock are entered in to the system. Finished Goods stocks are updated on daily basis



Indent/Sales Order

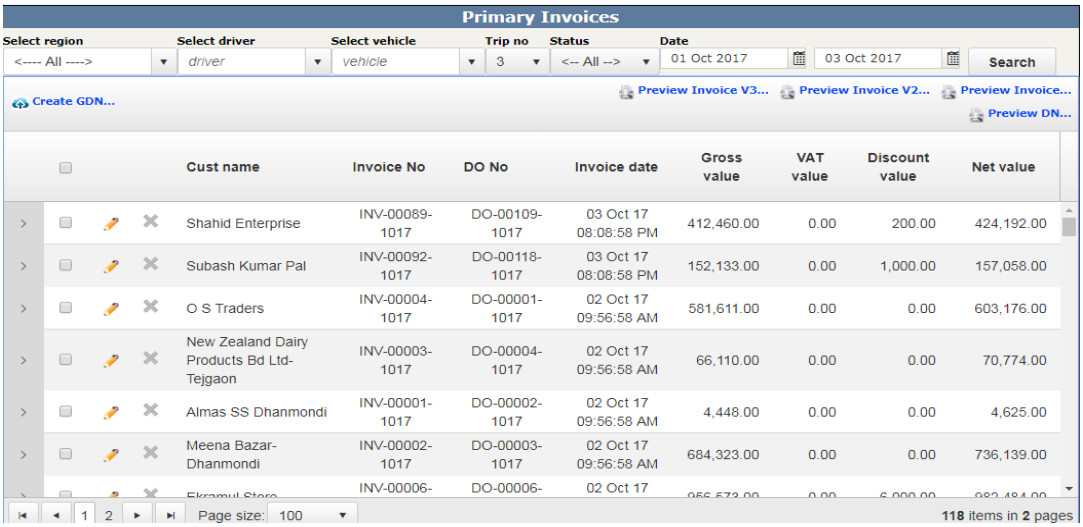
In this form all the Territory Managers around the country place order for individual distributor



Create Delivery Order

Distribution team generates Delivery Order against Indent on this form. Delivery Order creation follows an authorization process of following concerns:

1. Distribution Team
2. Finance & Accounts



Report Generates from PSIS

Indent/Sales Order

New Zealand Dairy Products Bangladesh Ltd
SHANTA WESTERN TOWER
Office Space # 801, Level # 8,
Contact no: +88-02-8878701-10

New Zealand Dairy

B S Enterprise-Mirzapur (Dhaka South)
Address: Ashkobor Biponi Bhaban-Mirzapur-Tangail
PH: 01976526137

Indent

Indent No	SO-00179-1219
Indent From	B S Enterprise-Mirzapur (Dhaka South)
Address	Ashkobor Biponi Bhaban-Mirzapur-Tangail
Indent To	New Zealand Dairy Products Bangladesh Ltd

Requested By	Faruk Hossain Chowdhury
Requested Date	04-December-2019 08:07:37 AM
Approved By	
Approved Date	

SL No.	Product	Unit	Indent Qty	Order Qty	Free Qty	Delivery Qty	Price/Unit	Discount	Amount
1	DIPLOMA 500G X 24	Ctn	10	10	0	10	6866.00	0.00	68,660.00
2	DIPLOMA 400G X 24	Ctn	2	2	0	2	5718.00	0.00	11,436.00
3	DIPLOMA 200G X 60	Ctn	4	4	0	4	7471.00	0.00	29,884.00
4	DIPLOMA 100G X 120	Ctn	3	3	0	3	7720.00	0.00	23,160.00
5	DIPLOMA 50G X 240	Ctn	1	1	0	1	8189.00	0.00	8,189.00
6	FARMLAND SUPER 20G X 240	Ctn	6	6	0	6	1990.00	0.00	11,940.00
7	DOODLES MASALA 8PCS 496G	Ctn	8	8	0	8	1263.00	0.00	10,104.00
8	DOODLES MASALA 12PCS 744G	Ctn	4	4	0	4	1274.00	0.00	5,096.00
9	BELLEAME DIGESTIVE 135G X 12	Ctn	10	10	0	10	294.00	0.00	2,940.00
	Total:		**48**	**48**	**0**	**48**		**0.00**	**171,409.00**

Gate Pass

New Zealand Dairy Products Bangladesh Ltd

SHANTA WESTERN TOWER
Office Spaoe # 801, Level # 8,

Contact no: +88-02-8878701-10

Delivery From:
Factory, Bhulta, Rupgonj,
Narayangonj, Dhaka, Bangladesh.

Gate Pass

Invoice No: INV-02663-1219
Gate Pass No: GP-03066-031219

Date :03-Dec-2019

Issued To	ACI Logistics Ltd-Tejgaon		
Transport	DM AU-11-4302 ,Yousuf Miah		
DO No.	DO-00058-1219, DO-00060-1219 Total:2	DN No.	DN-08120-1219, DN-08122-1219 Total:2

SL No.	Product Description	Total	Remarks
1	DIPLOMA 1KG X 12	80 Ctn	
2	DIPLOMA 500G X 24	40 Ctn	
3	DIPLOMA 400G X 24	6 Ctn	
4	DIPLOMA 200G X 60	5 Ctn	
5	RED COW NUTRIFIED 1KG X 12	1 Ctn	
6	FARMLAND 1KG X 12	6 Ctn	
7	FARMLAND 500G X 24	4 Ctn	
8	SHAPE-UP 400G X 24	4 Ctn	
9	DOODLES MASALA 4PCS 248G	8 Ctn	
10	DOODLES MASALA 8PCS 496G	13 Ctn	
11	DOODLES CURRY 4PCS 248G	3 Ctn	
12	DOODLES CURRY 8PCS 496G	11 Ctn	
13	RC BUTTER OIL 400G X 24	3 Ctn	
14	DOODLES STICK 180G X 24	16 Ctn	
15	DOODLES STICK 300G X 24	16 Ctn	
16	STICK CHICKEN MASALA 300G X 24	19 Ctn	
17	POPPERS COCONUT 25G X 88	11 Ctn	
18	POPPERS CHOCO RING 30G X 88	1 Ctn	
19	DETOS CHICKEN WING 30G X 88	9 Ctn	
20	KRACKERS KINGFRENCH FRY 15GX88	1 Ctn	
	Page Total:	**257 Ctn**	

Remarks:CP; Soup B 5.5 Ctn,Lid B 6 Ctn

PREPARED BY	CHECKED BY
BEARER SIGN	SECURITY SIGN

AUTHORISED BY

Prepare By: nurul | Page 1 of 1 | Print time:04-Dec-2019 3:51:48 PM

Finished Goods Stock Status

New Zealand Dairy Products Bangladesh Ltd

Address SHANTA WESTERN TOWER
Office Spaoe # 801, Level # 8,
Contact no: +88-02-8878701-10

Print time: 04-12-2019 3:55:09 PM

Date: 01 Dec 2019 to 01 Dec 2019

Finished Goods Stock Status

S.L No.	SKU	Pcs / Carton	Opening Stock	M/T	Production	M/T	Delivery	M/T	ADJUSTMENT		Closing Stock	Closing Stock (M/T)	Floor Stock	Total Stock	Remarks
									Adjust (+)	Adjust (-)					
1	DIPLOMA 1KG X 12	12	2,283.00	27.3960	284.00	3.4080	147.00	1.7640	0.00	0.00	2,420.00	29.0400		2,420.00	
2	DIPLOMA 500G X 24	24	5,627.00	67.5240	652.00	7.8240	427.00	5.1240	0.00	0.00	5,852.00	70.2240		5,852.00	
3	DIPLOMA 400G X 24	24	225.00	2.1600	0.00	0.0000	13.00	0.1248	0.00	0.00	212.00	2.0352		212.00	
4	DIPLOMA 200G X 60	60	563.00	6.7560	0.00	0.0000	29.00	0.3480	0.00	0.00	534.00	6.4080		534.00	
5	DIPLOMA 100G X 120	120	92.00	1.1040	168.00	2.0160	11.00	0.1320	0.00	0.00	249.00	2.9880		249.00	
6	DIPLOMA 50G X 240	240	54.00	0.6480	0.00	0.0000	6.00	0.0720	0.00	0.00	48.00	0.5760		48.00	
7	DIPLOMA 1KG X 12 NON-CP	12	2,545.00	30.5400	0.00	0.0000	0.00	0.0000	0.00	0.00	2,545.00	30.5400		2,545.00	
8	FARMLAND 2KG X 6	6	452.00	5.4240	0.00	0.0000	0.00	0.0000	0.00	0.00	452.00	5.4240		452.00	
9	FARMLAND 1KG X 12	12	1,014.00	12.1680	0.00	0.0000	110.00	1.3200	0.00	0.00	904.00	10.8480		904.00	
10	FARMLAND 500G X 24	24	394.00	4.7280	0.00	0.0000	4.00	0.0480	0.00	0.00	390.00	4.6800		390.00	
11	FARMLAND GOLD 25G X 240	240	1.00	0.0060	0.00	0.0000	0.00	0.0000	0.00	0.00	1.00	0.0060		1.00	
12	ANCHOR 1KG X 12	12	2.00	0.0240	1,250.00	15.0000	0.00	0.0000	0.00	0.00	1,252.00	15.0240		1,252.00	
13	ANCHOR 500G X 24	24	1,026.00	12.3120	121.00	1.4520	800.00	9.6000	0.00	0.00	347.00	4.1640		347.00	
14	RED COW NUTRIFIED 350G X 24	24	47.00	0.3948	0.00	0.0000	25.00	0.2100	0.00	0.00	22.00	0.1848		22.00	
15	RED COW NUTRIFIED 1KG X 12	12	156.00	1.8720	0.00	0.0000	2.00	0.0240	0.00	0.00	154.00	1.8480		154.00	
16	RC BUTTER OIL 900G X 18	18	110.00	1.7820	0.00	0.0000	4.00	0.0648	0.00	0.00	106.00	1.7172		106.00	
17	RC BUTTER OIL 210KG Drum	1	3.00	0.6300	0.00	0.0000	0.00	0.0000	0.00	0.00	3.00	0.6300		3.00	
18	RC BUTTER OIL 400G X 24	24	85.00	0.8160	0.00	0.0000	3.00	0.0288	0.00	0.00	82.00	0.7872		82.00	
19	RC BUTTER OIL 200 X 48	48	42.00	0.4032	0.00	0.0000	1.00	0.0096	0.00	0.00	41.00	0.3936		41.00	
20	SHAPE-UP 400G X 24	24	69.00	0.6624	0.00	0.0000	1.00	0.0096	0.00	0.00	68.00	0.6528		68.00	
21	SHAPE-UP 200G X 36	36	42.00	0.3024	0.00	0.0000	0.00	0.0000	0.00	0.00	42.00	0.3024		42.00	

Printed by: nurul | Page 1 of 5

Appendix C

Report Generates from SSIS

Closing & Stock Report

Print time: 6/12/19 10:13:03 AM

New Zealand Dairy Products Bangladesh Ltd.

SKU Wise TMR Report

Distributor Name	Islam Brothers
Territory Name	Moulovibazar
Area Name	Chaka South
Region Name	Chaka 3
Month Name	Nov.19

Market Credit Amount			
Pending Clam Amount			
Company Credit Amount			
Distributor Investment			

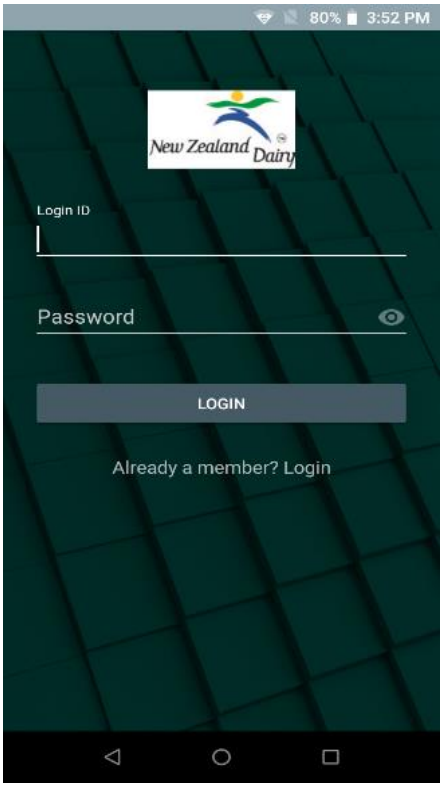
SKUName	GM	Size	Price	In Pcs					In Ctn				In Value				
				Opening Stock	Lifting Stock	Secondary	Brunt QC	Closing Stock	Opening Stock	Lifting Stock	Secondary	Brunt QC	Closing Stock	Opening Stock	Lifting Stock	Secondary	Brunt QC	Closing Stock
DIPLOMA 1KG X 12(N)	1,000	12	566.25	14,387	7,800	8,739	0	13,448	1,198.92	650.00	728.25	0.00	1,120.67	8,146,838.30	4,416,750.00	4,946,458.75	0.00	7,614,929.55
DIPLOMA 500G X 24(N)	500	24	286.08	23,226	16,288	19,544	0	21,970	967.75	762.00	814.33	0.00	915.42	6,644,494.08	5,231,831.04	5,591,147.29	0.00	6,285,177.83
DIPLOMA 400G X 24(N)	400	24	238.25	318	240	360	0	198	13.25	10.00	15.00	0.00	8.25	75,763.50	57,180.00	85,770.00	0.00	47,173.50
DIPLOMA 200G X 60(N)	200	60	124.52	3,771	5,700	5,171	0	4,300	62.85	95.00	86.18	0.00	71.67	469,564.92	709,764.00	643,892.67	0.00	535,438.25
DIPLOMA 100G X 120(N)	100	120	64.33	6,484	4,200	5,984	0	4,700	54.03	35.00	49.87	0.00	39.17	417,115.46	270,186.00	384,950.21	0.00	302,351.26
DIPLOMA 50G X 240(N)	50	240	34.12	576	2,400	1,742	0	1,234	2.40	10.00	7.26	0.00	5.14	19,653.12	81,888.00	59,436.77	0.00	42,104.35
FARMLAND 2KG X 6	2,000	6	895.00	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FARMLAND 1KG X 12	1,000	12	447.58	687	960	948	0	699	57.28	80.00	79.00	0.00	58.28	307,670.61	429,676.80	424,305.84	0.00	313,041.57
FARMLAND 500G X 24	500	24	238.54	26	48	20	0	54	1.09	2.00	0.83	0.00	2.26	6,247.08	11,449.92	4,770.61	0.00	12,928.39
FARMLAND GOLD 500G X 24	500	24	223.92	1	0	0	0	1	0.04	0.00	0.00	0.00	0.04	223.56	0.00	0.00	0.00	223.56
FARMLAND GOLD 400G X 24	400	24	177.21	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FARMLAND GOLD 250G X 48	250	48	115.90	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FARMLAND GOLD 25G X 240	25	240	9.78	118	480	490	0	108	0.49	2.00	2.04	0.00	0.45	1,154.59	4,694.40	4,792.04	0.00	1,056.94
RED COW NUTRIFIED 350G X 24(N)	350	24	227.54	364	456	259	0	561	15.17	19.00	10.79	0.00	23.38	82,824.20	103,758.24	58,932.50	0.00	127,649.94
SHAPE-UP 400G X 24	400	24	322.83	141	120	131	0	130	5.89	5.00	5.46	0.00	5.43	45,654.62	38,739.60	42,290.47	0.00	42,103.75
RC BUTTER OIL 900G X 18	900	18	1,012.72	1,016	1,638	1,396	0	1,258	56.44	91.00	77.56	0.00	69.89	1,028,871.67	1,658,835.36	1,413,756.11	0.00	1,273,950.92

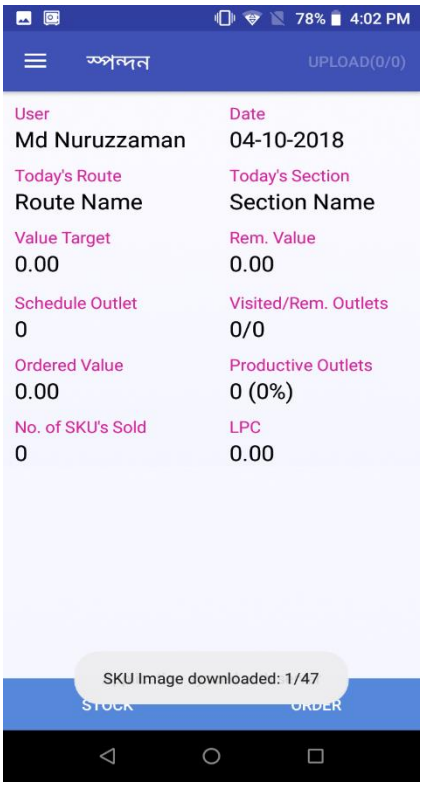
Outlet wise Sales Report

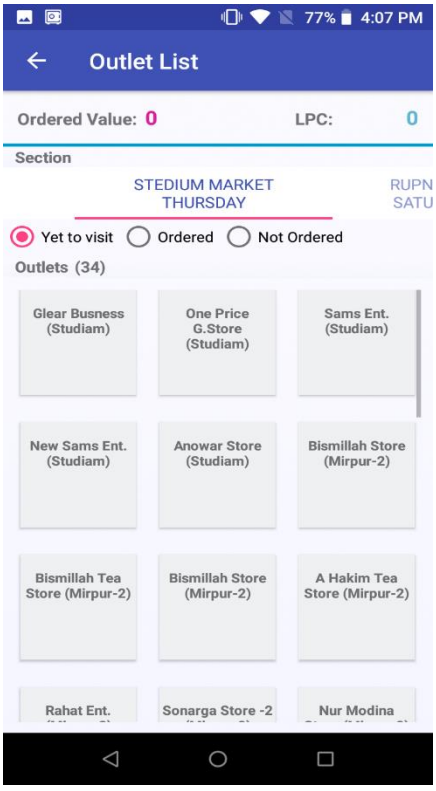
Route	SR	Outlet	Outlet Address	Memo Date	Check In Time	Check Out Time	Spent Time	Invoice No	LPC	Memo Value (Gross)	DIPLOMA							
											DIPLOMA 1KG X 12(N)		DIPLOMA 500G X 24(N)		DIPLOMA 400G X 24(N)		DIPLOMA 200G X 60(N)	
											Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Amligola	Md.Babul Hossain	Al-Modina Store	2/7,Nawabganj Dhal Rd					020-191202-0180	1.00	272.00								
		Allardhan Store	322/1,J.N Shah Road					020-191202-0163	2.00	220.86								
		Anik store	236,J.N.Saha road					020-191202-0158	2.00	398.40								
		Babul Store	7,Nawabganj Road					020-191202-0189	1.00	132.00							1	132.00
		Bismillah Store-2	16,J.N shaha Road					020-191202-0160	1.00	608.00			2	608.00				
		Bismillha Store	18, J N Sha Road					020-191202-0181	1.00	133.65								
		Habib Store	3,Nawabganj Road					020-191202-0192	1.00	375.30								
		Jamal Store	8, J N Sha Road					020-191202-0155	1.00	133.65								
		Ma Genarael Store	11, J N Sha Road					020-191202-0166	1.00	267.30								
		Maibub Store	229/1,J.N Shaha Road					020-191202-0162	2.00	224.46								
		Mayerdoya Store	64,J.N Shaha Road					020-191202-0174	3.00	522.45								
		Mokka-Madina store	216,J.N.Saha road					020-191202-0167	3.00	1,194.06			3	912.00				
		Ramjan Store	111,Amligola Road					020-191202-0186	1.00	602.00	1	602.00						
		Rhidhoy-Rubel Enterprise	35,J.N Shaha Road					020-191202-0185	1.00	102.00								
		Riaj Store-2	266,J.N.Saha Road					020-191202-0173	1.00	360.00								
		Sad Confectionary	1,Nawabganj Road					020-191202-0179	2.00	2,189.20			6	1,824.00				
		Shawon Store	257,J.N Shaha Road					020-191202-0153	3.00	1,580.00			3	912.00			3	396.00
		Shohota Confectionary	109,Amligola Road					020-191202-0187	1.00	2,128.00			7	2,128.00				
		Tamim General Store	19/1,Hermotbanshill Street					020-191202-0165	2.00	1,106.40			3	912.00				
		Yousuf Store	29,Amligoal Road					020-191202-0169	2.00	437.65			1	304.00				
		Sumon Variety Store	5,Nawabganj Road					020-191202-0184	1.00	267.30								
		Sheikh Forid-uddin store	236/1,J.N.saha Road					020-191202-0159	3.00	1,064.00			1	304.00				
		Shahanaj Departmental St	192,Amligola Road					020-191202-0178	4.00	1,361.02								
		Saba store	275,J.N.saha Road Lalbagh					020-191202-0156	2.00	1,045.65			3	912.00				
		Riaj Store	107,Amligola Road					020-191202-0172	4.00	9,264.00			24	7,296.00			6	792.00
		Rhidhoy Confectionary	7,Nawabganj Road					020-191202-0191	1.00	216.00								
		Nanna Store	92,J.N Shaha Road					020-191202-0176	3.00	1,848.30			4	1,216.00				
		Mayerdoya Store(Fruits)	8,Nawabganj Road					020-191202-0182	2.00	445.50								

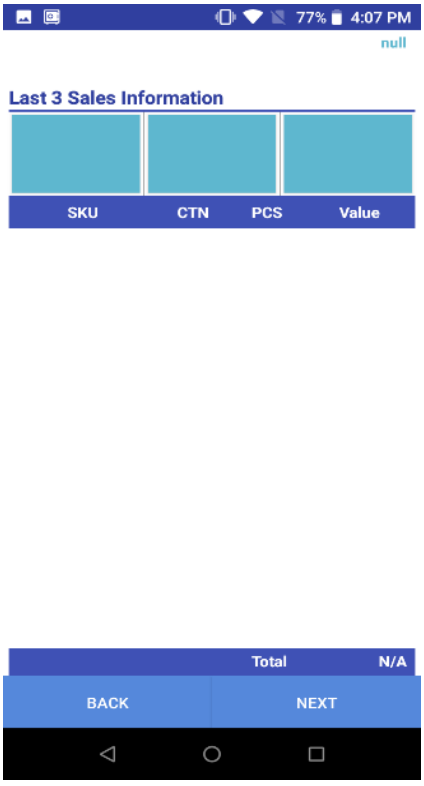
Appendix D

Layout of SSIS mobile Application









Memo

OL:Rumi Store
School Road
1613137430
Owner Name:
Deliveryman Name:

Dist:Nahar Enterprise
Makhol Road, Hathazari, Chittagonj.-01822405474
01822405474
CheckInTm:17:22:52
SR:Samad Khan
Route: Gohira

INVO
Order Date:23-10-2
Delivery Date:24-10-2
CheckOutTm: 17:23

SL	Item Name	Unit Price	Order Ctn	Order Pcs	Free Pcs	MR Pcs	Gross	Discount	
1	BELLEAME DIGESTIVE 135G X 12	25.75	0.00	1.00	0.00	0.00	25.75	0.00	25
2	BELLEAME CREMO 90G X 12	25.75	0.00	2.00	0.00	0.00	51.50	0.00	51
3	KRACKERS KING SHEER CHEESE 25G X 88	12.15	0.00	2.00	0.00	0.00	24.30	0.00	24
4	DETOS TOMATINA 30G X 88	16.60	0.00	2.00	0.00	0.00	33.20	0.00	33
	BELLEAME DIGESTIVE 135G X 12					***1.00***			***(25.***
	BELLEAME CREMO 90G X 12					***1.00***			

Total Number of Items : 4

134.75 0.00 109
Special Discount: 0
Cash to be paid: 109
Net Payable: 0

Taka in word:One hundred nine taka only

Prepared By:Samad Khan

Receiver's S

Order Summary

New Zealand Dairy Products Bangladesh Ltd.
City Marketing International
117,Shantinagar, Dhaka
Route:Gulbag
User:Md Rezaul Karim 01951454660
Date:22 Oct 2019

SL.	Description	Price	Carton	Piece	Value
1	DIPLOMA 1KG X 12	562.0	0	2	1,124.00
2	DIPLOMA 400G X 24	235.0	0	2	470.00
3	DIPLOMA 200G X 60	122.0	0	2	244.00
4	DIPLOMA 100G X 120	63.0	0	2	126.00
5	FARMLAND 2KG X 6	940.0	0	1	940.00
6	FARMLAND GOLD 400G X 24	197.0	0	8	1,576.00
7	RED COW NUTRIFIED 400G X 24	234.0	0	9	2,106.00
8	DOODLES MASALA 4PCS 248G	58.5	0	7	409.50
	DIPLOMA 1KG X 12			***1.00***	***(562.00)***
	FARMLAND GOLD 400G X 24			***1.00***	***(197.00)***
Total: Six thousand two hundred thirty six taka & fifty paisa only			0	35	6,236.50

Store keeper: Delivery Man:

New Zealand Dairy Products Bangladesh Ltd.
City Marketing International
117,Shantinagar, Dhaka
Route:Gulbag
User:Md Rezaul Karim 01951454660
Date:22 Oct 2019

SL.	Description	Price	Carton	Piece	Value
1	DIPLOMA 1KG X 12	562.0	0	2	1,124.00
2	DIPLOMA 400G X 24	235.0	0	2	470.00
3	DIPLOMA 200G X 60	122.0	0	2	244.00
4	DIPLOMA 100G X 120	63.0	0	2	126.00
5	FARMLAND 2KG X 6	940.0	0	1	940.00
6	FARMLAND GOLD 400G X 24	197.0	0	8	1,576.00
7	RED COW NUTRIFIED 400G X 24	234.0	0	9	2,106.00
8	DOODLES MASALA 4PCS 248G	58.5	0	7	409.50
	DIPLOMA 1KG X 12			***1.00***	***(562.00)***
	FARMLAND GOLD 400G X 24			***1.00***	***(197.00)***
Total: Six thousand two hundred thirty six taka & fifty paisa only			0	35	6,236.50

Store keeper: Delivery Man:

Appendix E

User Acceptance Test (UAT) Feedback

Day 2 & 3

1. Delivery Man Code Auto Generate
2. Driver Code Auto Generate
3. Replace "Beat" with "Route"
4. Sales asked for New Route Type as follows
   a. Metro
   b. Urban
   c. Semi Urban
   d. Rural
5. Upload Data to PDA ---> Andriod Option selection by default
6. A report to check stock available against order quantity. CEL any standard report to meet this need.
7. Name of Delivery Man in Memo

Day 4

1. CLP Budget Grid view should contain Distributor Name.
2. Display outlet agreement Number will be entered by Operator during Outlet Enrollment.
3. Value Column should show difference amount in View Shout Dated SKU sales form.
4. Stock Send to Factory due to micro-leak and factory declared it damaged will be claimable under market return claim process from Distribution House.
5. Cash Discount and Free Product Gift offer will continue in a single program.

Day 5

1. Clarification on damaged stock reporting
    1. QC Stock will report to Defective Stock
    2. Micro Leak will report to Defective Stock
    3. In-house Damaged will report to Damaged Stock
    4. Logistic Damage will report to Damaged Stock
2. Short Date SKU Sales Grid Replace the following
    1. Current Price with DD Price
    2. Sales Price with Actual Sales
    3. Value with Claim Amount
3. Micro-leak product return to factory and declared damaged by factory will generate separate claim report
4. SR profile Creation attached herewith
5. MIS Report before roll-out
    1. Sales Statement Report. Annexure II - Report No. 25
    2. Stock Regi. Report. Annexure II - Report No. 28
    3. Claim Report. Annexure II - Report No. 31, 32, 33, 33(b), 34(b), 35
    4. Numeric Coverage Report
    5. Productivity Report. Annexure II - Report No. 19, 20