

ANALYZING INVENTORY MANAGEMENT AND VENDOR RELATIONSHIP OF ROBI

INTERNSHIP REPORT

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SUBMITTED TO

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Inspiring Excellence

LETTER OF TRANSMITTAL

17th August, 2016

To

Mr. Fairuz Chowdhury

Lecturer

BRAC Business School

BRAC University

Subject: Submission of Internship Report on “Analyzing Inventory Management and Vendor Relationship Management of Robi”

Dear Sir,

It is with great pleasure I present to you my internship report titled “Analyzing Inventory Management and Vendor Relationship Management of Robi”, prepared as part of requirement of BBA program of BRAC Business School, BRAC University.

This report is a summary and analysis of my involvement in a project lasted for 12 weeks in Collaboration Management team of Supply Chain Management of Robi Axiata Limited. The Project enlightened me on the complex variables involved in Inventory Management of a company in a service industry, which is starkly different from any manufacturing company.

This report has been prepared under the direct supervision of Mr. Mahbub Ahmed Chowdhury, General Manager. It would be a great pleasure if you find that report useful.

Sincerely,

Fahad Amin Quadery

ID: 12104116

ACKNOWLEDGEMENT

I am thankful to Almighty Allah for successfully completing twelve weeks' internship period in Robi Axiata limited. I would like to express my heartfelt gratitude to honorable faculty **Mr. Fairuz Chowdhury** for his continuous support and inspiration to pursue this report. His expert guidance and wisdom has been instrumental in presenting this report.

I am grateful to my internship supervisor Mr. Mahbub Ahmed Chowdhury for his guidance and instructions that helped in formulation of this report. I would like to acknowledge the contribution of my following team members who helped me with resources and insights throughout my internship period:

- Asif Mohaisin Sadri, Specialist, Collaboration Management, Supply Chain Management, Robi Axiata Limited
- Amjad Hossain, Specialist, Collaboration Management, Supply Chain Management, Robi Axiata Limited
- Abeer Hyder, Service Provider, Collaboration Management, Supply Chain Management, Robi Axiata Limited
- Fahad Mahmud, General Manager, Logistics & Warehouse, Supply Chain Management, Robi Axiata Limited
- Nafisa Afsana Taskia, Graduate Trainee YTP, Supply Chain Management, Robi Axiata Limited

LIST OF ABBREVIATIONS

SCM- Supply Chain Management

BTRC- Bangladesh Telecommunication Regulatory Commission

FY- Financial Year

GI- Goods Issue

CapEx- Capital Expenditure

Opex- Operating Expenditure

L/C- Letter of Credit

VAT- Value Added Tax

MOB- Market Operation Buying

RP-Reorder Point

PR -Purchase Requisition

LOA. -Limits of Authority

PO -Purchase Order

QC- Quality Check

GRN-Goods Receipt Note

WH- Warehouse

FAMR- Financial Accounting and Management Reporting

NOC- No Objection Certificate

PA - Procurement Approval

DOA- Delegation of Authority

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EXECUTIVE SUMMARY

According to March 2016 statistics (after biometric) in terms of subscriber Robi Axiata is now second largest mobile operators in Bangladesh. However, Robi is still officially third largest mobile operator in Bangladesh. Robi axiata Limited is a joint venture between Axiata Group berhad, Malaysia and NTT DoCoMO Inc, Japan holding shares 92% and 8% respectively. For reaching the consumers end and providing quality service is very much depended on Robi Supply Chain Management (SCM) because SCM department procures sophisticated telecommunication equipment which eventually helps Robi to achieve organizational goal.

For Inventory Management Robi maintains three warehouses. The central warehouse is in Tongi, Dhaka which has the highest capacity of 91,000sq.ft. Others are in Chittagong and Hemayetpur. Warehouses contain three types of inventories such as: Capital Inventory, Trading Inventory and spare Parts Inventory. Despite of increase in ageing inventory amount, the space occupied by them are on the downward trend due to efficient racking and stacking for last six months. A SWOT analysis is done on Inventory Management of Robi.

Vendor relationship Management is a vital part for Robi where contracts and documentation are involved with various vendors. A slight mistake in negotiation can cost a lot. Vendor Relationship is maintained based on the steps of bidding stage where a pool of vendors enlisted. In conclusion, the report recommends action plans to be taken in short-term and long-term basis

INTRODUCTION

BACKGROUND

The knife edge rivalry in telecommunication industry is creating the huge demand for quality service with economies scale pricing. Hence, Telecommunication companies need to operate efficiency for their supply chain management in order to perform the best performance. One of the key factors for smooth operation of the supply chain is the management of inventory management and vendor relationship. Inventory management is a major challenge for communications service providers worldwide. It is seldom carried out consistently across various telecommunication departments. Studies have shown that telecom operators of all sizes can benefit from proper management of inventories. Managing telecommunications is a herculean task for an individual or team to undertake. Everyday telecom groups are facing challenges with the management for frequent telecom equipment and service acquisitions and changing technology, and obsoleted contract and invoice systems.

According to Bodetti. M, the provisioning and management of telecommunications, network and wireless assets continue to be a challenge for companies. The expenses related to the assets are rarely managed centrally, or consistently, within companies and across departments. This validates the need to have control and visibility to those expenses. As such:

- Reduce time – and cost – of finding the necessary information for day-to-day operational Issues, such as service assurance, field maintenance and spare parts management.
- Increase efficiency with the automatic data updates and reporting functions, which combined help you maintain an accurate overview of the network.
- Achieve faster and more accurate service provisioning through integration with network and service provisioning processes and tools.
- Gain a clear overview of the network to support network planning and development.

At Robi, Supply Chain Management (SCM) under Finance division takes care all inventory and vendor related issues and prepares different types of report for management.

ORIGIN OF THE REPORT

This report on “Analyzing the Inventory Management and Vendor Relationship Management of Robi” has been prepared to fulfill the requirement of internship for the completion of the BBA Program of BRAC Business School, BRAC University. The report has been prepared under the supervision of Mr. Mahbub Ahmed Chowdhury. I have worked at Robi Axiata Limited as an Intern in their Supply Chain Management Department for the duration of 12 weeks and this report has been prepared in concordance with my responsibilities at the company.

RATIONALE

Robi Axiata Limited conducts an annual analysis of its inventory and vendor relationship management in order to find the gaps in the process and come up with improvement areas to maximize space utilization and cost minimization. This report is the by-product of one such project conducted in 2016. This report will be of interest to the management and stakeholders of Robi; as the findings will help them to provide better quality service while maintaining lower costs.

OBJECTIVES

Broad Objectives:

- To analyze the inventory management and vendor relationship management of ROBI Axiata Limited

Specific Objectives:

- To observe the management of inventory
- To identify gaps and key challenges of vendor relationship
- To test, if inventory turnover is correlated with ageing inventory

SCOPE

Robi Axiata Limited is a big multinational organization. It has many divisions and under every

divisions there are also sub-divisions. With Twelve weeks' time span this report has been based on the study of Inventory Management and Vendor relationship management which fall under Supply Chain Management (SCM) of Finance division.

FINDINGS OF THE STUDY

The findings of the study have been described elaborately on the later part of the report along with recommendations.

LIMITATIONS

- 12 weeks' time is the biggest constraint for this report.
- Due to highly confidentiality cost related data and their analysis could not be revealed in his report
- It is difficult to contact with some vendors.
- For personal interviews some employees are reluctant to provide information
- Due to hectic schedule the warehouse visit could not possible more than once.

I always see myself on the learning curve, any mistake from this report can be seen as beginner's attempt. Despite facing challenges, I tried my hard and soul to give the best out of it.

METHODOLOGY

DATA COLLECTION

Primary data Collection

- Casual interview with the employees on their free time
- Keen observation
- Physical visit to Tongi warehouse
- Internal server of Robi. For example: SAP database.

- Knowing by performing tasks with supervisor

Secondary Data Collection

- Robi's internal archive
- Reports
- Journal
- Newspaper
- Websites

DATA ANALYSIS

- Most part of the report is based on qualitative analysis of chief observation regarding Inventory management and Vendor relationship management of Robi.
- Trend analysis has been done using historic data.

INDUSTRY OVERVIEW

TELCO MOBILE OPERATORS LANDSCAPE IN BANGLADESH

There is hardly any rival to the dynamic nature of telecommunication industry. The fast-paced environment is dictated by a multitude of factors, the top three being:

- Rapid advancements in technology.
- Changing consumer preferences.
- Unpredictable and unfavorable government regulations in Bangladesh.

In Bangladesh, currently there are six telecommunication operators in the market. They are:

| Name of the company | Logo |
|---------------------|--|
| Grameen Phone |  |
| Robi |  |
| Banglalink |  |
| Airtel |  |
| Teltalk |  |
| Citycell |  |

The industry is heavily driven by “price wars” and the service rates are amongst some of the lowest in the world till date. If any competitor fails to adapt to the rapid changes in the industry, it will lose out on its market share overnight. So the competitors are always on their toes. Given below is the current position of different players in the industry in terms of revenue and investment.

Table 1 Revenue and Investment of Telecom Mobile Operators in 2014-15 (Source: The Daily Star)

| Operator | Revenue (In crores of taka) | INVESTMENT (in crores of taka) |
|----------------------|------------------------------------|---------------------------------------|
| Grameen Phone | 10,200.83 | 18881.43 |
| Robi | 5058.61 | 1823.64 |
| Banglalink | 4365.15 | 1384.77 |
| Airtel | 1397.65 | 377.25 |
| Teletalk | 753.69 | 197.48 |
| Citycell | 134.79 | Nil |

REGULATORY BODY

According to the Bangladesh Telecommunication Act 2001, BTRC was established as an independent regulator of the telecommunication industry in Bangladesh. However, in 2010, an amendment was made to the Bangladesh Telecommunication Act 2001. This amendment delegated certain powers of BTRC to the Ministry of Post and Telecommunications.

MARKET SHARE

The total number of Mobile Phone subscribers has reached 130.7 million at the end of March 2016. Grameen Phone is the market leader and Citycell is the lowest performing mobile operator. Post bio-metric re-registration, Robi has moved up to the 2nd position.

Table 2 Subscribers and Market Share in March 2016

(Source: BTRC)

| OPERATORS | SUBSCRIBERS | % MARKET SHARE |
|----------------------|--------------------|-----------------------|
| Airtel | 10.1 | 7.7% |
| Banglalink | 27.4 | 21.0% |
| Citycell | 0.8 | 0.6% |
| Grameen Phone | 56.30 | 43% |
| Robi | 31.90 | 24.4% |
| Teletalk | 4.2 | 3.2% |
| Total | 130.7 | 100% |

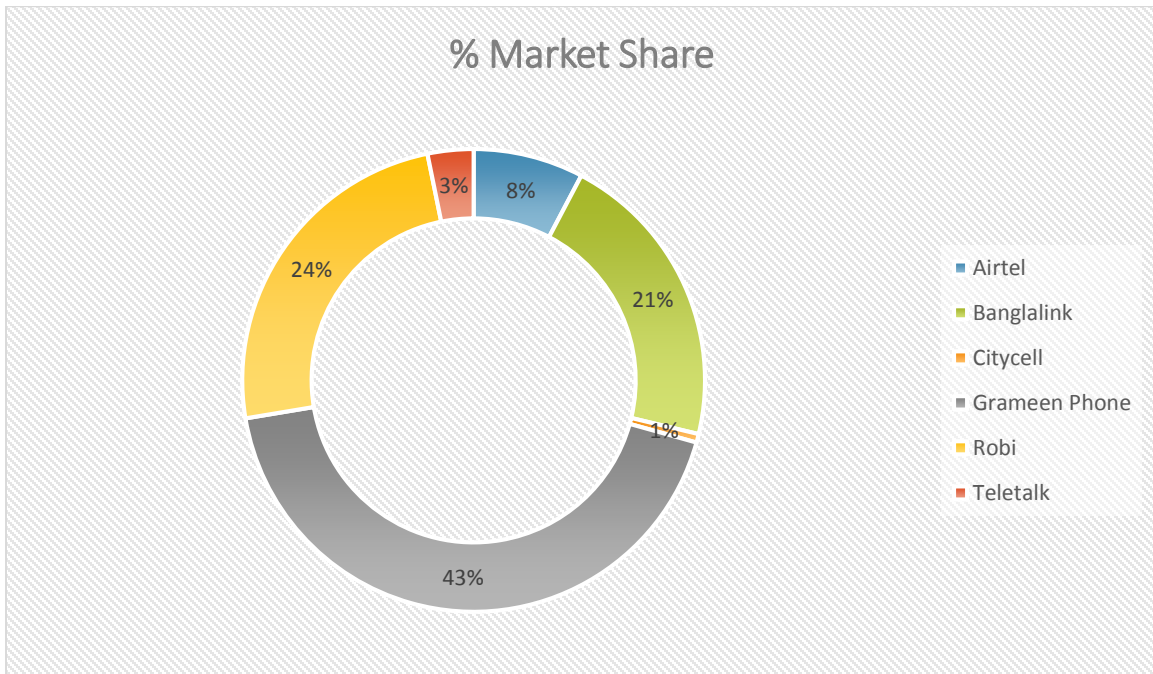


Figure 1: Illustrating Market share of Mobile operators in Bangladesh

POSSIBLE CHANGE IN MARKET SCENARIO AFTER ROBI-AIRTEL MERGER

If Robi and Airtel merger takes place, the scenario is expected to change by the end of this year. The combined entity will be known as Robi. Post-merger Robi is expected to move past Banglalink to become the 2nd largest telecom operator in the country.

| ROBI | | AIRTEL | | AFTER MERGER |
|-----------------|-------|-----------------|---------------|--------------|
| Subscriber base | 28.5M | Subscriber base | 9.4M | 37.5M |
| Market Share | 22% | Market Share | 7% | 29% |
| Profit | 43.9M | Profit | Incurred Loss | ??? |

Government, on the other hand, has sought Malaysian investment to strengthen the position of Teletalk in the market. With the merger of Robi and Airtel and the new strategy of Teletalk, the current number 2 operator, Banglalink, has to “do something new” to catch up with the change.

INDUSTRY TRENDS

Market Subscription trend

The as the degree of market penetration increases, the growth rate of subscriber base is decreasing. The lowest rate was in 2014- 5.8%, but is recovered significantly in 2015 is 11.2%.

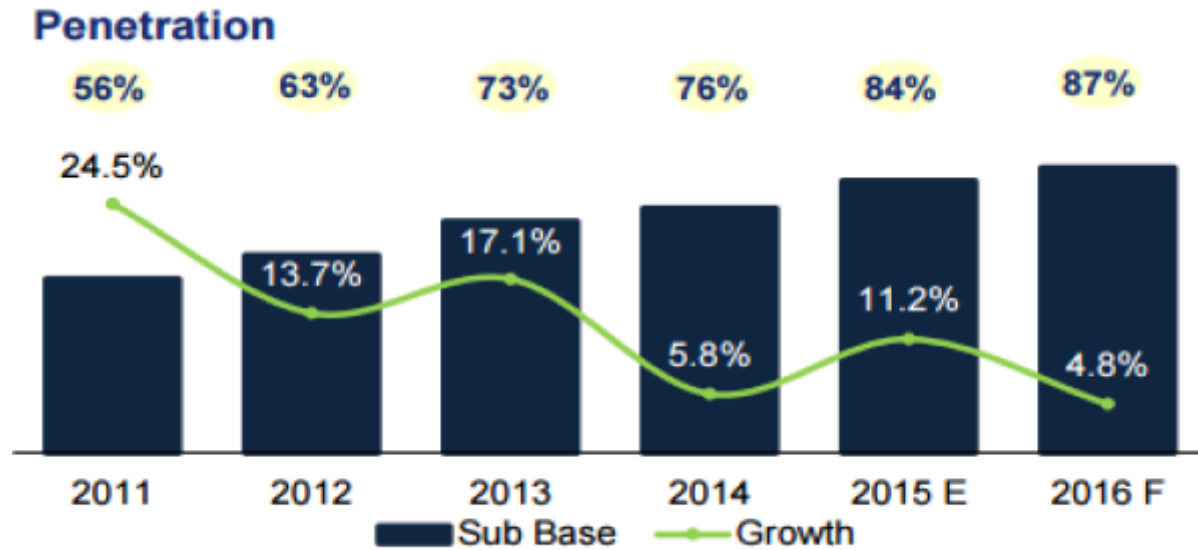


Figure 2: Market Subscriber Trend (Source: Frost & Sullivan, BTRC)

Market Revenue Trend

Price wars resulting from intense competition and decline in voice revenue due to competition from VoIP, the industry is seeing decline in revenue over the years.

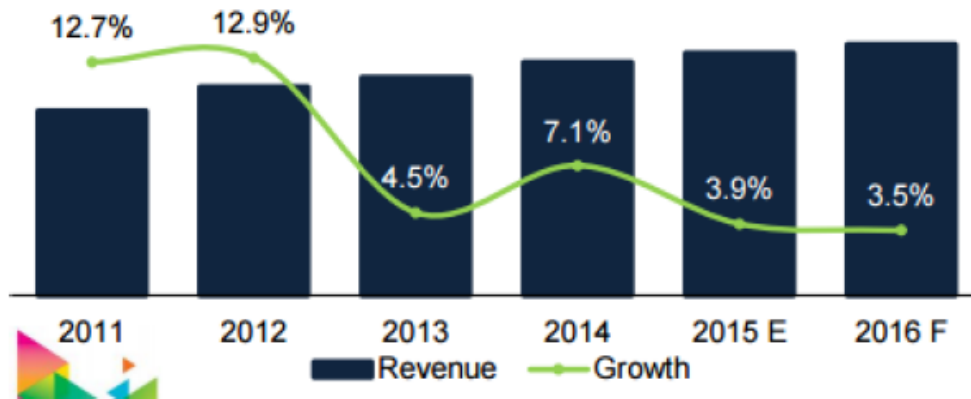


Figure 3: Market revenue Trend (Source: Frost & Sullivan, BTRC)

CURRENT CHALLENGES IN THE INDUSTRY

Biometric Sim Re-registration

The telecom sector, as a whole, is going through troubled times in 2016 as operators are losing customers after the government made the fingerprint re-registration for all SIMs mandatory. The biometric re-registration process started from December 16, 2015. The main aim of the regulation is to control crimes committed by using mobile phone connections under fake identity.

According to BTRC In 1st January 2016 there were 133.72 million active SIMs but during the number dropped to 130.88 million by end of March, a 2% drop. According to a report in BDNews24.com, as of May31, 2016, over 100 million mobile phone SIMs, i.e. 76% of active mobile phone connections, have been re-registered with the biometric details of subscribers.

During that time, all five mobile operators saw a drop in their customer base; only Teletalk's subscriber base increased. During this period, the sale of new SIMs was almost zero.

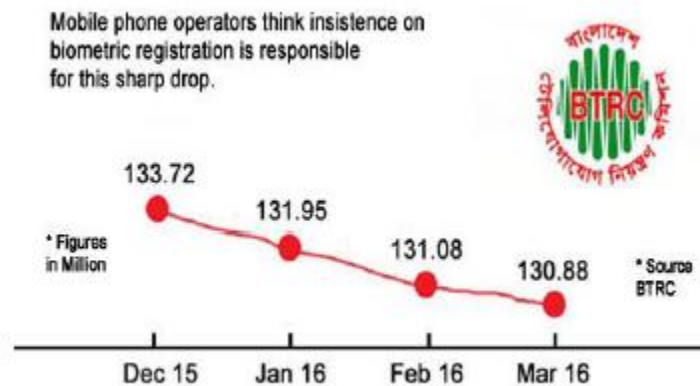


Figure 4: Drop in number of mobile subscribers due to Biometric Re-registration

| Mobile Operator | Subscribers as of 31 st December, 2015 | Subscribers as of 31 st March, 2016 | Loss |
|-----------------|---|--|-----------------------------|
| Grameen Phone | 56.6 Million | 56.3 Million | 0.4 Million |
| Robi | 32.8 Million | 31.9 Million | 0.9 Million |
| Banglalink | 28.3 Million | 27.4 Million | 0.9 Million |
| Airtel | 10.7 Million | 10.1 Million | 0.6 Million |
| CityCell | 1 Million | 0.8 Million | 0.2 Million |
| Teletalk | 4.1 Million | 4.2 Million | 0.1 Million Increase |
| Total | 133.5 Million | 130.7 Million | 2.8 Decrease |

Table 3: Loss in Subscribers due to Biometric Registration

However, it is to be noted that all SIMs which are registered are not active. Mobile operators believe only 80Million out of the 130 Million registered SIMs are active.

UNAVOIDABLE GOVERNMENT POLICIES

The government has decided to impose a 5% supplementary duty on services provided through mobile communication in the budget of FY 2015-16, even though tax reduction was proposed for SIM and RIM.

Raising the supplementary duty on SIM usage increase the financial burden of mobile users. As a result, from now on, for BDT 100 talk time BDT 121.75 has to be spent by the customer. This will discourage mobile usage, particularly of voice calls. The Telco operators are already struggling to maintain their voice revenue, which has been declining over the years. The imposition of 5% supplementary duty may further reduce their revenue from voice services as people will be more inclined towards using VoIP.

Due to the mobile industry of Bangladesh being highly taxed, experts fear that it will hinder the

progress of a Digital Bangladesh. Bangladesh has one of the lowest ARPU (average revenue per user) in the world but the sector still has to pay higher corporate tax than others. This would also discourage further foreign investment in the sector.

OVERVIEW OF THE ORGANIZATION

BACKGROUND OF ROBI AXIATA LIMITED

Robi Axiata Limited is a joint venture between Axiata Group Berhad, Malaysia and NTT DoCoMo Inc, Japan who hold 92% and 8% shares of the company respectively. It was formerly known as AKTEL (1997-2010).

Robi is officially the third largest mobile phone operator in Bangladesh with 27.553 million subscribers as of February 2016, however according to March 2016 statistics, it now has greater subscribers than Banglalink after bio-metric registration.

Robi strives to empower people with the basic need of communication and they cater to both urban and rural people. Robi wants to share its experience and expertise to aid the development of the telecom infrastructure as well as ensure that the people of Bangladesh remain connected to each other.

Robi has the international experience of Axiata and NTT DOCOMO INC to support its cutting-edge technological services- support 2G voice, CAMEL phase 2 and GPRS/EDGE service as well as high speed internet connectivity. Robi has the largest International Roaming coverage amongst telecom operators in Bangladesh. Robi connects 553 operators across 207 countries. Recently, Robi has launched its tremendous feature of 3G internet.

Table 4: Robi at a glance

| | |
|----------------------------|------------------------------------|
| Name of the Company | Robi Axiata Limited |
| Shareholders | Axiata Group Berhad and NTT DoCoMo |

| | |
|---------------------------------|--|
| Bangladesh Head Office | Robi Corporate Office, 53, Gulshan South Avenue, Gulshan-1, Dhaka-1212, Bangladesh |
| Year of Establishment | 1997 |
| Industry | Telecommunication |
| Technology Deployed | EDGE, GSM, GPRS, 3G |
| Subscriptions | 31.9 Million (March,2016) |
| Position in the Industry | 2 nd |
| Network Coverage | 90% pf the Population, 80% Geographical network |
| Major Competitors | Grameen Phone, Banglalink, Airtel |
| Market Share | 31.9% |
| Total Revenue | BDT 1,131 Million (2015) |

MISSION

“Robi aims to achieve its vision through being number ‘one’ not only in terms of market share, but also by being an employer of choice with up-to-date knowledge and products geared to address the ever changing needs of our budding nation.”

VISION

“Robi's vision is to continuously monitor its customer’s needs and to plan accordingly. It will monitor the development of technology and updated self to meet customer demand.”



Figure 5: Robi official Logo

Robi's official logo is the "Axiata Prism". The multicolor logo represents the coming together of different ideas and celebrates diversity. The open ended hexagon represents that it is open to new ideas and innovation. It also means that Axiata/Robi encourages thinking outside the box.



Figure 6: Robi Alpona

Robi also introduced the "Robi Alpona" as part of its brand logo exclusively for Bangladesh. It is inspired from the traditional ceremonial form of Alopona and renovated to give a contemporary, sleek look. Alpona represents a vibrant culture. It also represents a forward moving direction-hence denotes positivity and focus. The Alpona is designed to lack of sharp points and uses large curves, this in turn exuberates a sense of warmth and friendliness.

PRODUCT PORTFOLIO

Robi's Products can be broadly categorized into two-

- Pre-paid
- Post-paid

Pre-paid package

Robi offers a single Pre-paid package with different tariff plans for different segments of its target audience. The migration from one tariff plan to another is instant and easy. Multiple migrations from one tariff plan to another is also possible within a short span of time. Some of the popular tariff plans of Pre-paid package are as follows:

- Robi Club Tariff Plan
- Robi Prothom
- Muhurto Tariff
- Shoccho Tariff
- Shasroyee Tariff
- Shorol Tariff
- Uddokta & Easy Load Tariff (for entrepreneurs)

Post-paid package:

Some of the post-paid packages offered are:

- Normal plans
- Robi corporate

PARENT COMPANY

Axiata is one of the largest Asian telecommunications companies. Incorporated in Malaysia on 12 June 1992, Axiata is a private limited company. Its strategy of having footprints in the global market is through mergers and acquisitions with a primary focus on emerging markets. Axiata Group Berhad currently serves over 240 million customers across 10 countries. It is one of the largest

mobile players in Asia. Axiata is one of the leading telecommunications groups in Asia with approximately 290 million subscribers in ten countries. Axiata has six subsidiaries:

1. ‘Celcom’ in Malaysia
2. ‘XL’ in Indonesia
3. ‘Dialog’ in Sri Lanka
4. ‘Robi’ in Bangladesh
5. ‘Smart’ in Cambodia
6. ‘Ncell’ in Nepal

It also has strategic interests in ‘Idea’ in India and ‘M1’ in Singapore.

Axiata is not only invested in up-to-date network and technology, but is also heavily investing in data- which is predicted to be the driver of the telecommunication industry in this decade. In 2012, ‘Axiata Digital’ was established to keep pace with the rapid growth in Internet-based businesses and currently has 24 digital brands under its umbrella. Axiata is also a very socially responsible corporate citizen, undertaking CSR activities on a mammoth scale. Robi has been awarded as the World’s #1 Socially Devoted Brand for 2 years in a row.

| | |
|-------------------------------|--------------------------------|
| Group Revenue | USD5.1 Billion (2015) |
| Market Capitalization | USD 13.1 Billion (2015) |
| No. of Subscribers | Over 260 Million |
| No. of People Employed | Over 25,000 |

FINANCIAL PERFORMANCE

Robi’s revenue has been growing steadily over the past 10 years, however the profit has fluctuated significantly. Post its net loss in 2011, Robi’s profit is again gaining momentum. According to



Figure 7: Robi' revenue graph (source: Robi)

Robi registered 6% revenue growth in 2015 managing sustained profitability with an investment of US\$ 255.7 million. However, the profit after tax decreased by 8.9%, mainly due to continued investment in increasing network coverage. Robi contributed US\$ 220 Million to the National Exchequer in 2015.

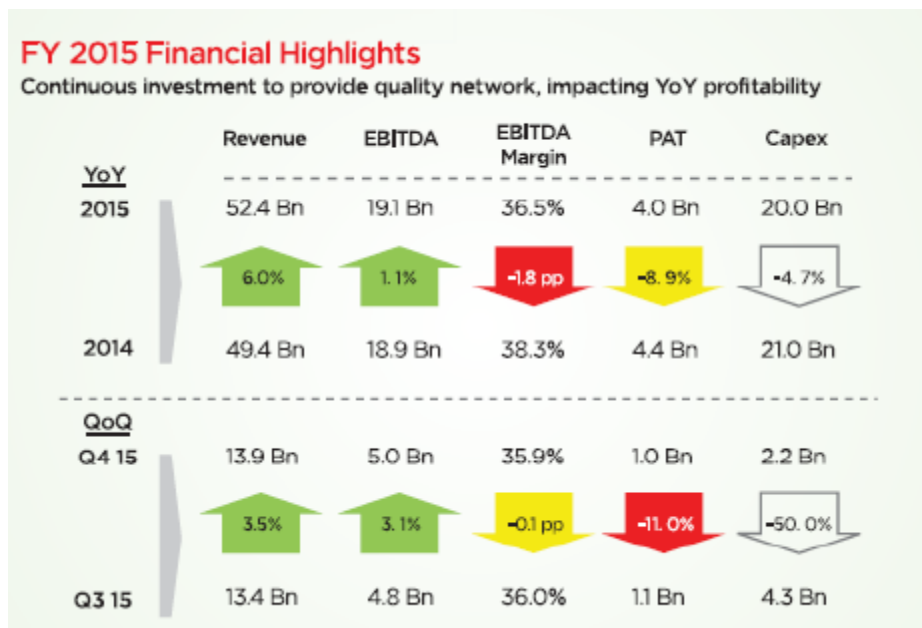


Figure 8: Financial Highlights of Robi FY 2015

CORPORATE RESPONSIBILITY

Robi has been awarded the World's #1 Socially Devoted Brand for 2 years in a row. It is committed towards working alongside the government to bring about socio economic and ecological improvements in the country through enriching people's lives and conserving the unique Heritage of the country. Robi's main areas of contribution has been in ICT, Education, Health and Environment. In its most recent efforts Robi has engaged in beautification of roads of Dhaka, became official sponsor of the National Cricket Team, supported 10 minutes' school and Internet4U, etc.

ORGANIZATIONAL STRUCTURE

The company is headed by the Chief Executive Officer (CEO) who is also assigned the role of a Managing Director- endowed with general obligations of business course of the association and entrusted with driving progressively towards the fulfillment of the company's motivation and standards. To assist him in his duties, the Chief Financial Officer, General Managers and Office Heads help the Managing Director. Robi has built up a solid and imposing deals channel, which comprises of direct merchants and its own business partners.

Divisions & Departments of Robi Axiata Limited

Robi has 7 divisions and 46 departments. The seven departments are as follows:

1. Market Operations
2. Finance
3. Corporate Strategy
4. Internal Audit
5. EPMO
6. Technology
7. People and Corporate
8. Digital Service

The detailed organogram is given in the Appendix.

PROPOSED MERGER WITH AIRTEL

In the proposed merger between Robi and Airtel, the ownership structure would be as follows:

| | Post- Merger % of Ownership |
|------------|-----------------------------|
| Axiata | 68.3% |
| Bharti | 25% |
| NTT Docomo | 6.7% |

Table 5: Post- merger percentage of ownership of Robi

The combined entity is expected to serve approximately 40 million customers and deliver the widest mobile network coverage across Bangladesh. It will also make Robi a strong number 2 player in the Bangladesh mobile operators market. The merger is also expected to strengthen long-term sustainability of Bangladesh telecom landscape and market structure and thus have a strong positive impact in the overall economy and revenue of the country. As for the customers, they are expected to reap greater benefits in terms of network quality and coverage and an improved offering of data products and services.

| | 2G Sites | 3G Sites |
|--------|----------|----------|
| Robi | 8850 | 3800 |
| Airtel | 5250 | 2700 |

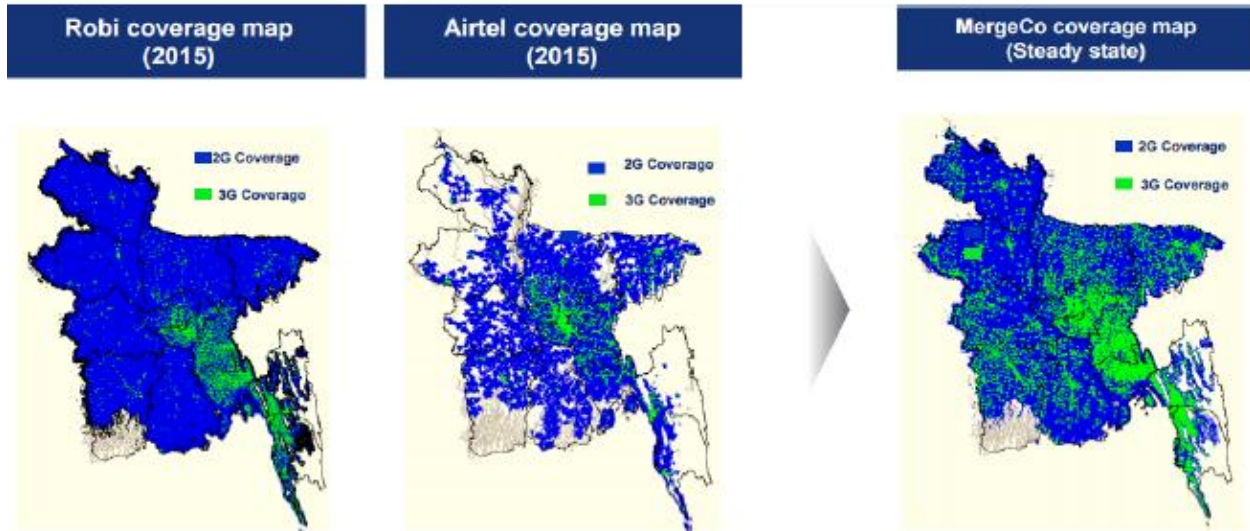


Figure 9: Network coverage Post-merger of Airtel and Robi

According to banglanews24 (2016), the merger was supposed to start in March of this year. However, government has decided to charge an additional US\$90 million for the merger and this turn of events has forced Axiata to rethink the merger decision. Regarding that Merger, Prime Minister gives approval to make it happen as of report from the daily samakal where BTRC fixes the merger fee 1Billion.

OVERVIEW OF SCM

The operational goal of Robi is to provide its customer with top notch network quality and to meet this goal it has to is constantly procure sensitive telecommunication equipment, accessories and services. This is the duty entrusted upon the Supply Chain Management Department of Robi. However, the role of this department is not only restricted to procuring network related equipment and accessories. Its range of duties varies from procuring items for promotional activities to general administrative items. The functional units under Supply Chain Management are illustrated below:

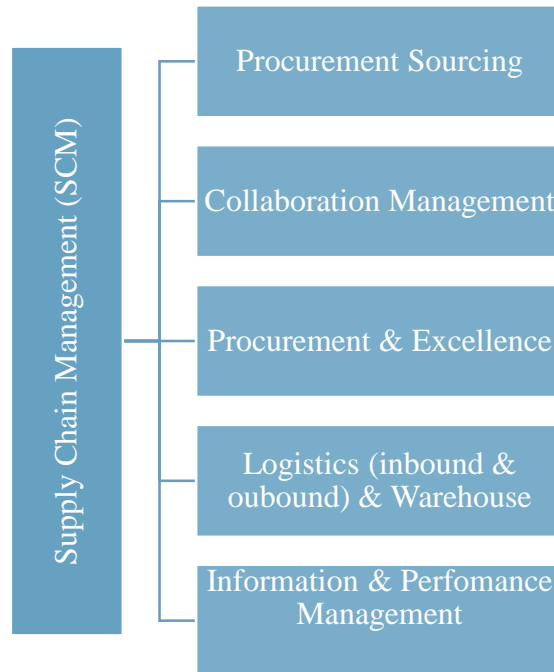


Figure 9: functional units of SCM department of Robi

Inventory Management and Vendor relationship management fall under Supply Chain Management (SCM) department of Robi. An efficient supply-chain management will not only minimize costs but also help eliminate redundant steps so that employees do not have to waste time on unnecessary procedures. The more efficient the supply chain management, the greater will be the negotiating power and hence the faster will be the procurement of the desired goods and services.

INVENTORY MANAGEMENT

Inventories are raw materials, work-in-progress goods and completely finished goods that are considered to be the portion of the business's assets that are ready or will be ready for sale (Investopedia.com, 2003).

Formulating a suitable inventory model is one of the major concerns for an industry. Inventory for Telecom are of 2 types –

- Physical Inventory

- Logical Inventory

Physical Inventory covers the equipment's such as routers, switches, cards etc. that comprises the network. Logical Inventory covers non-physical items such as IP Addresses, MAC addresses, sites etc. Inventory reduction is one of the main objectives of SCM (Pagel 1999). It is also the most commonly shared data among the supply chain partners (Lee & Whang 2000). Therefore, several researchers have explored the ways to reduce the inventory in a supply chain. Regarding order fulfillment, Sahay (2003) observed that it was the second most important supply chain issue in Indian companies. Companies were paying maximum time and attention to improve order fulfillment. The importance of efficient working capital management (WCM) is indisputable. Moreover, the adequate and timely flow of inventory is imperative for the success and growth of any company. The present paper is an attempt to study in depth the inventory management practices of Indian cement companies and its impact on working capital efficiency.

Ramachandran and Janakiraman (2009) analyzed the relationship between working capital management efficiency and earnings before interest and tax of the paper industry in India. The study revealed that cash conversion cycle and inventory days had negative correlation with earnings before interest and tax, while accounts payable days and accounts receivable days related positively with earnings before interest and tax. Most telecoms don't have a clear picture of their inventories and costs, not to mention the lack of control of the finance and IT departments on inventories. On top of this, frequent mergers and acquisitions in the telecom domain results in increased complexity of services, making inventory tracking very difficult. Hence, it's mandatory for telecom operators to gain complete control over their inventories by obtaining transparency across all departments.

CLASSIFICATION OF INVENTORY

I was fortunate enough to visit Robi warehouse which is situated in Tongi. Based on my warehouse visit and several interviews with Robi officials'. Robi's inventories can be classified into three types. As such:

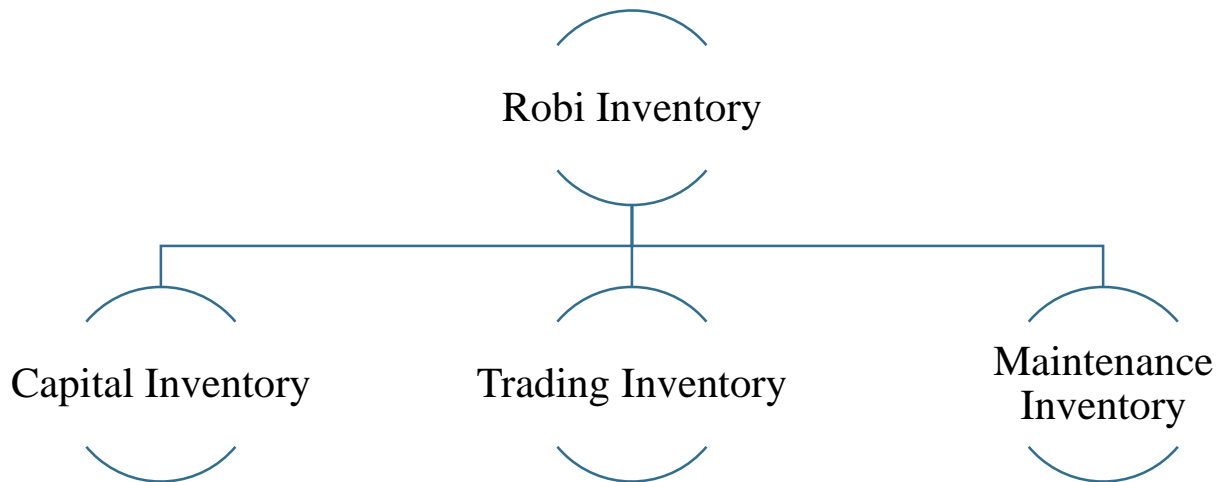


Figure 10: Inventory Classification

Capital or Telco Inventories:

Materials, equipment, parts, tools, etc. (prior to commissioning of the project), for which GR is done but yet to do Goods Issue (GI), mainly Networks material & Inventory in transit (CapEx).

Trading Inventories:

Items which are not yet converted into sales or VAT not paid

- a. Inventory in transit: Items for which L/C has been opened but yet to do GR
- b. SIM Card
- c. Scratch Card
- d. Starter Kit
- e. Point of Sales Materials (POSM): bunters, posters, etc.

Maintenance Inventories:

Network and IT consumables (cables and wares), which are not used yet and carried at “zero” value

ACQUISITION OF INVENTORY

SIM and Scratch Cards

- Sales team of Market Operation provides SIM/Scratch card requirement (forecast) to MO Buying team of Finance considering Reorder Point (RP), business need/demand/other variables as relevant.
- Based on the requirement, user creates Purchase Requisition (PR) and accordingly releases in SAP system as per LOA. Based on released PR, MO Buying team issues Purchase Order (PO).
- Logistics unit of SCM along with MO and Technology prepared detailed requirements as input for SIM/Scratch cards and informs vendor for commercial production
- In case of imported materials, Logistics unit makes necessary arrangement to clear the materials.
- In case of local materials, suppliers directly deliver the goods as per purchase order/understanding with Logistics team.
- Quality Check (QC) is done by concerned persons from Inventory Unit/Warehouse, vendor or vendor representative and user before doing GR in the system.
- Logistics unit prepares Goods Receipt Note (GRN) for each consignment.

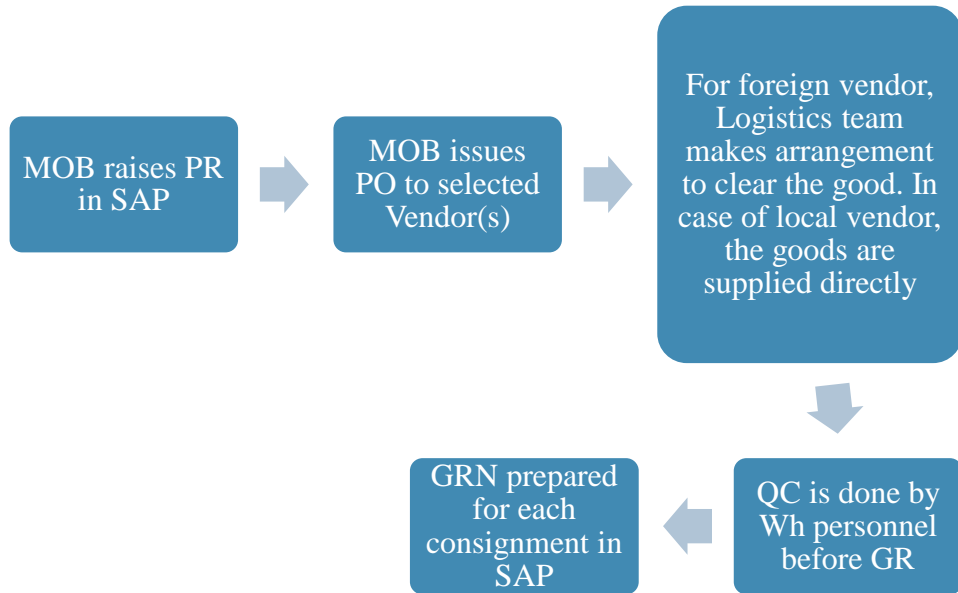


Figure 11: Process of flow of acquisition of SIM and Scratch Cards

CAPITAL INVENTORIES

As per Annual Business Plan, Robi has to maintain all materials/equipment for taking planned project to implementation. Therefore, sufficient materials need to be maintained through procurement process. This materials/equipment are received in SAP system (GR) after OBI and then based on roll out plan, GI takes place. This materials/ equipment are considered as “Capital Inventory” once GR is done and then shown as “Capital Work in Progress (CWIP)” once GI is done. At each quarter end, at minimum, Financial Accounting and Management Reporting (FAMR) should make accrual of all capital inventory in-transit but yet to GR.



Figure 12: Vendor wise Capital inventory

LEAD TIME AND SAFETY STOCK

TRADING INVENTORIES

Lead Times

| Inventory type | Local Supply | Foreign Supply |
|----------------|--|---|
| SIM Card | 4.4 Million for 6 months; Additional 1 day for each 30,000 in excess | 10 weeks from the date of PO placement, NOC and L/C documentation on time |
| Scratch Card | More than 100 Million :15 calendar days from PO Issuance; Addition 1 day for each 1.5 Million in excess | 10 weeks from the date of PO placement, NOC and L/C documentation on time |

Safety Stock

| Inventory Type | Local Supply | Foreign Supply |
|----------------|---|--|
| SIM Card | 20 days rolling stock of any future demand by the user | Safety stock = Lead time x 2 =70 x 2 =140 days' stock |
| Scratch Card | 20 days rolling stock of any future demand by the user | Safety stock = Lead time x 2 =20 days rolling stock of any future demand by the user |

Re-order point (RP)

It is defined as Average Usage during lead time + safety stock. Considering the business requirement / demand/ other variable as relevant, RP can be different.

CAPITAL INVENTORIES

Lead time

For Capital Inventory, Lead time will vary as per Project Roll-Out Plan. However, the standard lead time will vary from 100 days to 170 days. Time starts from preparation and approval of Business Case, Raising and Releasing of PR and PO, obtaining of BTRC NOC, L/C opening to product manufacturing, shipment, freight settlement and Store receive through GR.

Safety stock

Since Capital Inventories are project driven, maintaining safety stock may not be prudent rather arrangement or managing the vendor for supplying the required stock on time is more efficient.

NON USUABLE INVENTORY MANAGEMENT

Logistics unit extracts ageing Report and notify the concerned user department(s) along with respective compliance team regarding provisioning for writing off keeping FAMR in the loop within 07 (seven) days from the end of the quarter. The report mention:

- items for which inventory age exceeds 365 days or more
- items already used but doesn't have any plan for using them anymore
- items, which were bought for specific project but not used for that project while the project is completed
- returned items (cables and wires) from sites which are damaged and/or remnant quantity/volume which has no specific value but concerned user will share a detailed usage plan for them

User division/Department shall segregate the materials and inform Logistics unit regarding useable

and non-useable status (if any) of items within 15 working days from receipt of the report along with justification for both usability and non-usability of items. User division will also provide the usage plan in detail for usable items.

Upon reply from the respective department, FAMR reconciles the item's status and value for making provision. SCM will arrange for approval as per LOA or appropriate authority where applicable for considering the items obsolete and initiates to take provision. For damaged items, SCM will work with vendor for replacement or to initiate insurance claim process.

Upon confirmation from user department and with approval as per Limits of Authority (LOA) or appropriate authority where applicable, a provision will be made in every quarter (if applicable) and write-off will be done for obsolete inventories by year end, if appropriate. FAMR will pass necessary entry in SAP regarding Accounting for provision and subsequent write-off.

All the relevant documents required to comply the government regulation will be kept and well maintained at store.

AUCTION OF NON USUABLE INVENTORY

Disposal of e-waste requires strict procedures to be followed since national security is involved.

Permission is needed from Poribesh Odhidoptor, National Committee for Radio Equipment Disposal and BTRC, DGFI and NSI. There is a separate auction and disposal process that needs to be carried out. There is a list of preferred vendors for auction of these goods. These vendors later scraps and recycles the e-waste.

TREND ANALYSIS

INVENTORY TURNOVER

Compared to 2014, both the trading the telco inventory turnover has been significantly reduced.

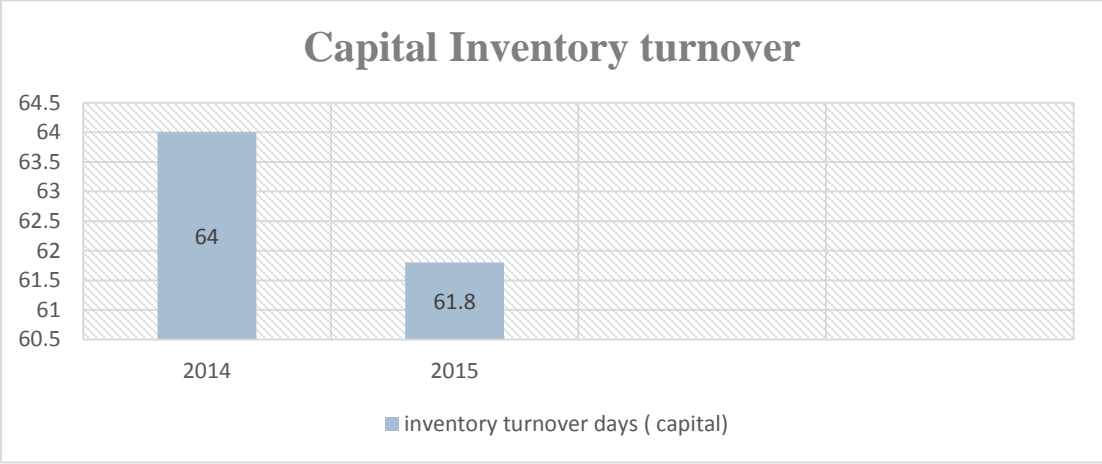
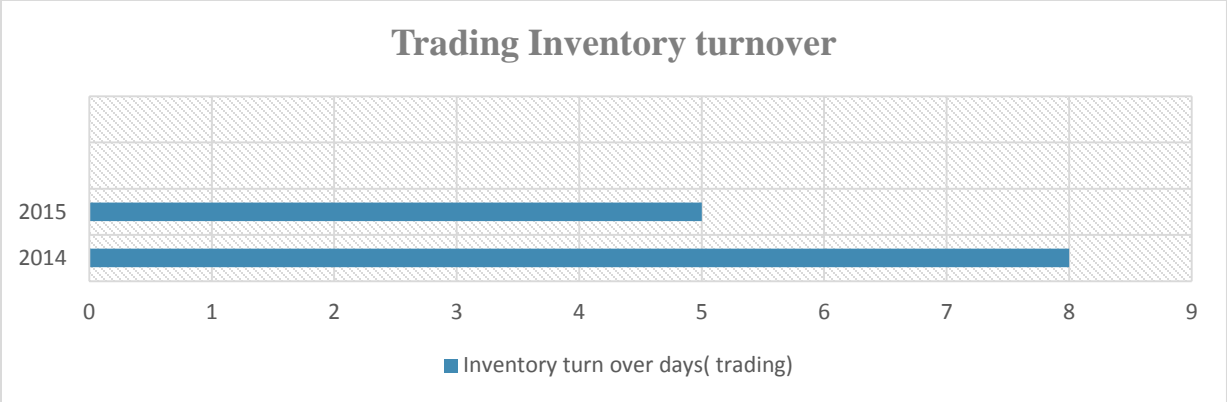


Figure 13: Inventory turnover in 2014 & 2015

During 2015, the inventory turnover has been kept low. However, in 2016, the highest inventory turnover was recorded in April 2016. Although the level has declined over the next two months, they levels are still higher than the previous year.

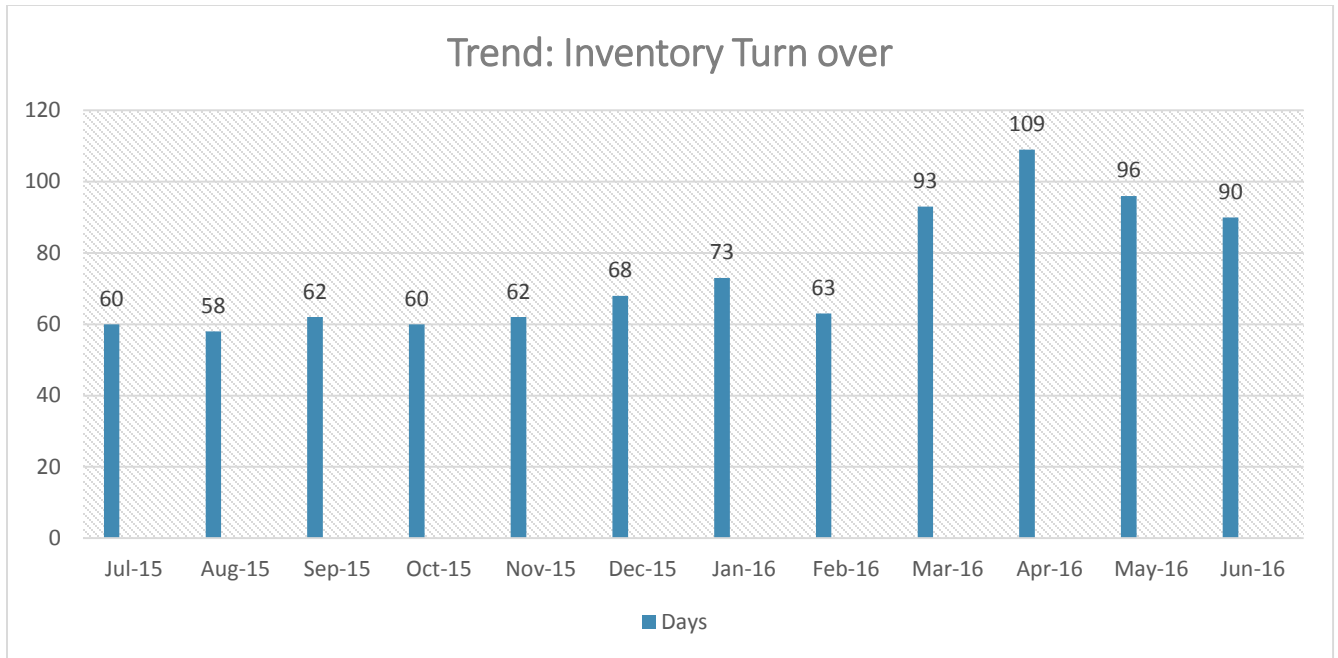


Figure 14: Trend in Inventory turnover

AGEING INVENTORY

Any inventory over one year is considered an ageing inventory and is usually an indication of poor planning by the user department due to overestimation or faulty forecast or due to delay or failure of implementation of a project.

In 2015, great success has been achieved in the reduction of ageing trading inventory from 0.38M BDT to 0.1M BDT. The success was also seen in reduction of ageing telco inventory.

However, in the first half of 2016 the amount of ageing inventory has been on the rise again as indicated in the next graph.

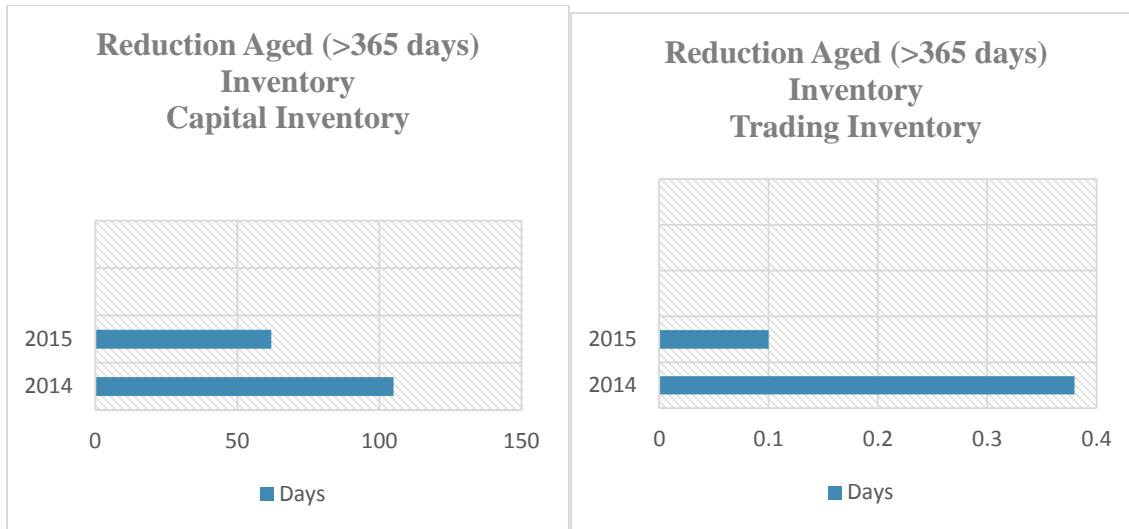


Figure 15: Capital and Trading Ageing Inventory Comparison between 2014 & 2015

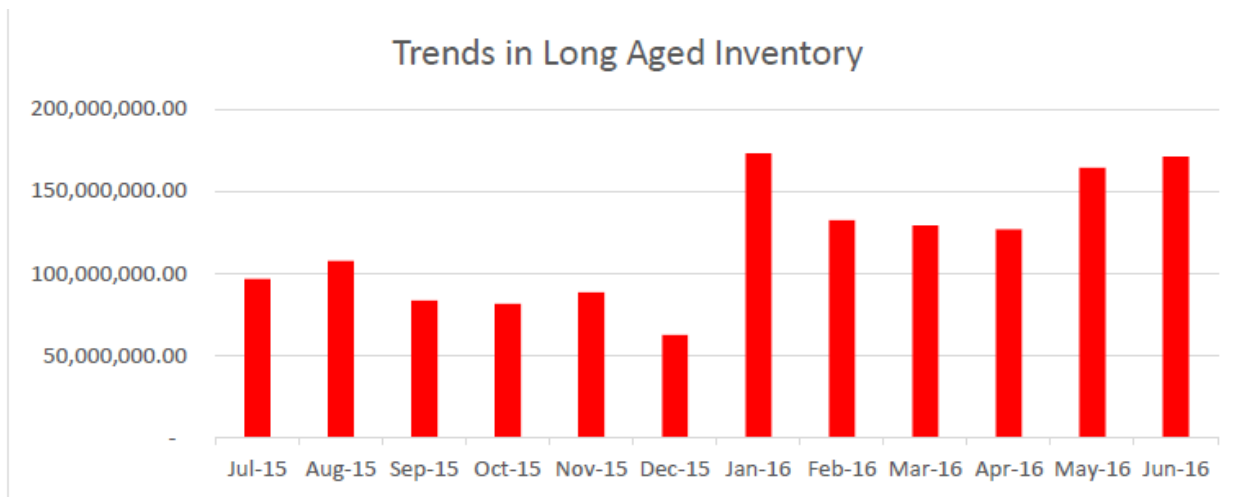


Figure 16: Ageing Inventory trend (Source: SAP Data base)

SPACE OCCUPIED BY DIFFERENT TYPES OF INVENTORY

In terms of space management, the warehouse has been doing a better job. Even though the amount of ageing inventory has been increasing in the last six months, the space occupied by them has been on the downward trend. This indicates that better racking and stacking of ageing inventory is being done. In terms of inventory less than a year old, the increase in amount of space occupied can indicate greater inflow of inventory due to increased investment.

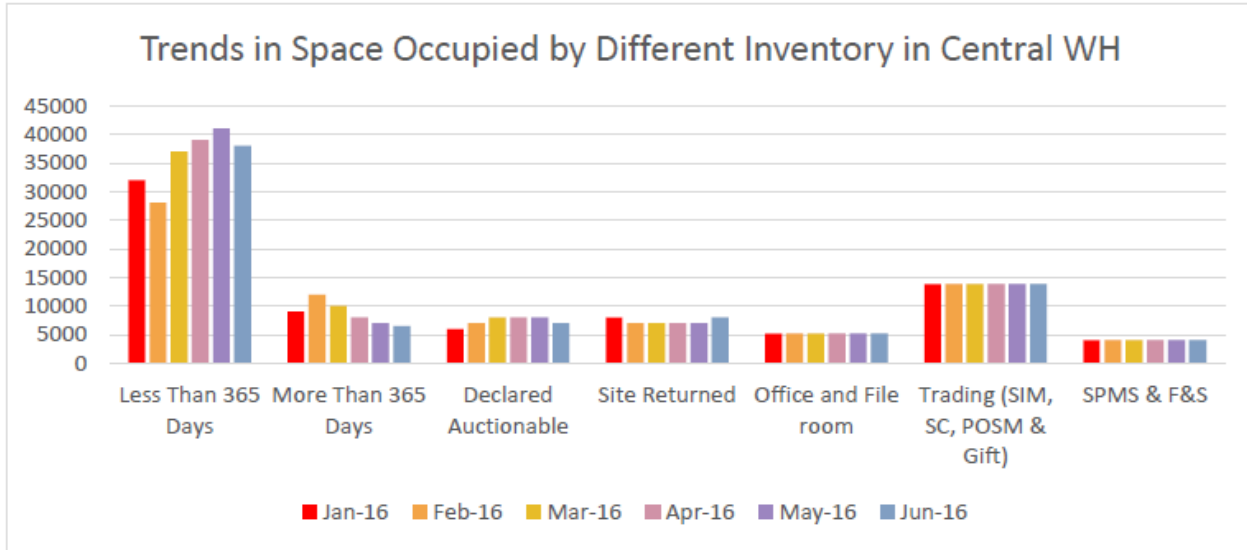


Figure 17: Trends in Space occupied by Different Inventory in Central Warehouse (Source: SAP)

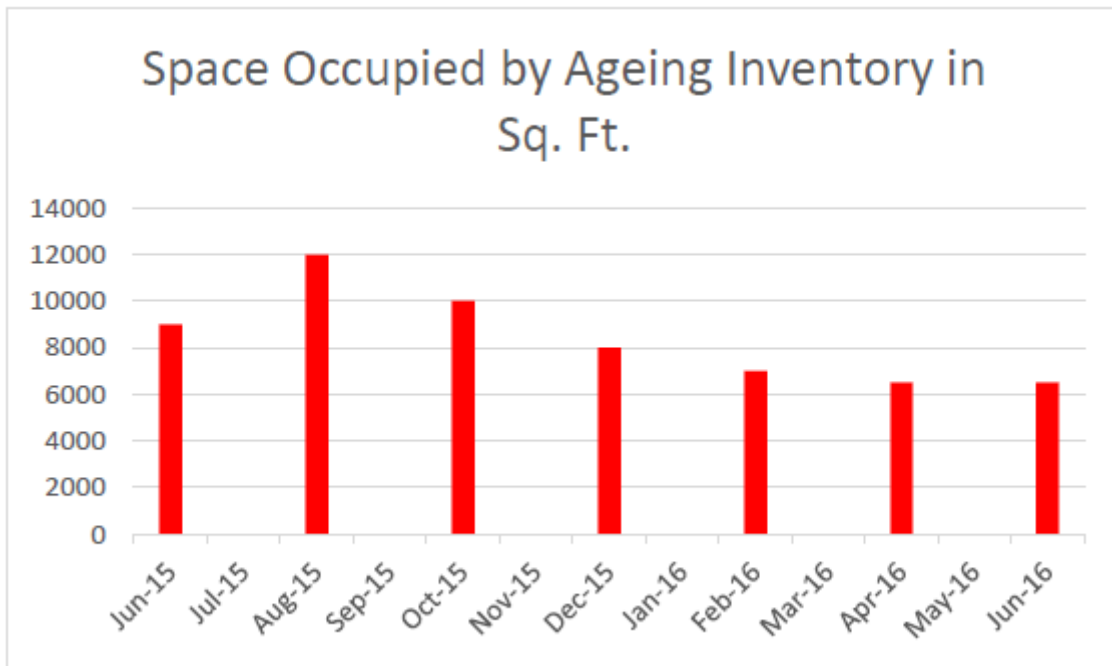


Figure 18: Trend in Space Occupied by Ageing Inventory in Central Warehouse (Source: SAP)

SWOT ANALYSIS

INVENTORY MANAGEMENT

Strength

Space Optimization: During the visit, it was discovered by officials that the antennae could be dismantled from the microwave dishes. This enabled the stacking of the dishes on top of one another. And the antennae were kept separately. This increased 2000 sq. feet of space.



Figure 19 Innovation in Microwave Dish Stacking freed up significant space

Walkway created between storage. However, at 8 feet height a bridge is created between two racks and top of which inventory can be stacked. This increased the area for storing inventory.

Cost Minimization: Last year, it was discovered by the warehouse labors that the racks that come with Ericsson Telco inventory can be used to build in-house racking. This saves an annual BDT 5-6 crore on racking. Equipment are fast moving. Scrap to be delivered. Kept at front and so that labor don't have to enter the secure area. Minimized risk of theft and increases efficiency.



WEAKNESSES

Inefficient Information System: Management Information System (MIS) is not used here properly as a result communication gap between warehouse and Robi Corporate Office (RCO) is

a common phenomenon. Due to lack of accurate information, the concerned people in the warehouse have to face challenges.

FIFO: While receiving goods in the warehouse First in First Out (FIFO) method is not followed for issuance.

OPPORTUNITIES

| Process Name | Process Gaps | Visual | Opportunity |
|---------------------------------|--|--|---|
| Goods received at warehouse | <ul style="list-style-type: none"> • Difficult to store material in absence of clear signage • System Vs Actual material gap while doing physical verification |  | Implementation of proper warehouse racks and stacker system |
| Goods received at warehouse | <ul style="list-style-type: none"> • Longer duration where material is in open area for inspection • Original packing gets damaged for import material |  | <ul style="list-style-type: none"> • Should only sample 10% for open box investigation • Total 3LP cost can be reduced up to 5% |
| Goods dispatched from warehouse | <ul style="list-style-type: none"> • Non-technical person is doing the kitting • Wrong material can be dispatched to a site | | To evade wrong material dispatch, technical person should be present in the warehouse as part of kitting. |

| | | | |
|-----------------------------|--|--|---|
| Material received from site | <ul style="list-style-type: none"> Warehouse team updates the W/O raised in SAP with manual updated sheet received with material Serial number dispatch because of manual inputs | | <ul style="list-style-type: none"> SAP W/O should be used to print delivery challan Serial number matching against printed challan by warehouse team. |
|-----------------------------|--|--|---|

THREATS

Inaccurate forecasting by user department

In the event of inaccurate forecasting by the user department, the chance of occurrence of obsolete inventory rises. This happens especially for POSM materials, which become useless after the end of a campaign. Also, campaign related SIM cards face similar problems. As a result, these inventory pile up and they are not easy to dispatch. Especially for the dispatch of SIM strict security and national protocols need to be maintained. This greatly increases warehouse management costs. Frequent changes of usage plan schedule also lead to build up of inventory. In the first six months of 2016, 10.83% of the total warehouse cost was attributed to wrong or delayed planning.

VENDOR RELATIONSHIP MANAGEMENT

Vendor relationship management has been part and parcel for telecom companies like Robi. It is getting essential because to compete in the ever changing market a company needs to provide optimum value out to the consumer's ends. In order to do that, company depends on outsourcing arrangements because of economies scale and deeper understanding with the industry. However, organizations like Robi depends on outsourcing arrangements so that Robi can remain focused on their core objectives. On the contrary, sometimes outsourcing backfires and gives scratches to company's reputation. To control all these activities vendor relationship is introduced.

ABOUT MY JOB

I was assigned in Supply Chain Management (SCM) under Finance Division. I was working with Collaboration Management team under the supervision of Mr. Mahbub Ahmed Chowdhury. Out of many activities, one of the task of my team was vendor relationship. In my entire internship period I worked according to my team's chain of command. From the very beginning, I was given time to understand the organizational culture, norms and ethical values. I was taught how to and when to approach on first hand. I was really amazed by the friendly atmosphere and way of handling pressures with an ease by the people of Robi. To be honest, I learned new things every day on my internship period which I believe will give me a boost for my future endeavor.

MY RESPONSIBILITIES

Based on my assigned Vendor relationship activities I can divide my responsibilities into two parts. Such as:

- Contract
- Documentation & Archeving

Aside from these, I visited Robi warehouse and I worked some cross functional activities with other teams.

PHASES OF VENDOR RELATIONSHIP

To uphold a win-win situation with respective vendors, there are certain steps to recognize before going for legal bindings. The phases are as follows:

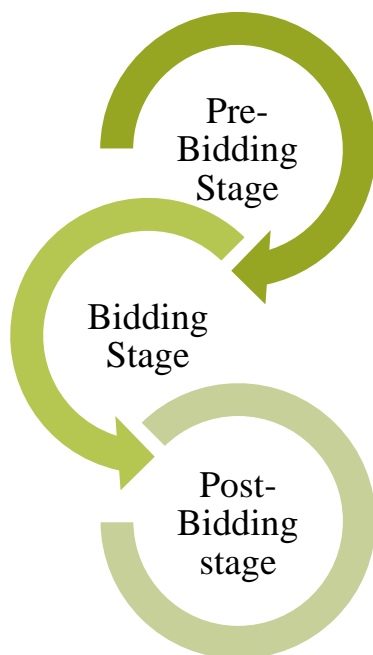


Figure 20: Phases of Vendor Relationship

PRE-BIDDING STAGE

To participate into any sort of bidding, vendors need to get enlisted in Robi's vendor pool. Vendor pool is created by listing interested organizations offering and details. From the vendor pool, short listing is done on the basis on requirement considering size, budgets, complexity of the projects. In addition, short listing is done in such a way that every vendor can avail equal opportunity. Each year vendor pool is getting updated. Aside from that, the main objective of pre-bidding stage is looking for a quality vendor by which economies of scale is achieved as well as company's profitability.

BIDDING STAGE

After shortlisting, Robi's respective procurement team sit together with the vendor(s) and vendors present their offerings with quotation. After quotation, if offerings are matched with each party's demands they negotiate. If negotiation is successful, vendor is awarded and goes for contract signing.

POST-BIDDING STAGE

This is the ideal stage for vendor relationship management. A successful contract is started with issuing or executing Procurement Order (PO). The user team continuously observing the performance and take a routine check. At the end of the contract period Robi officials will decide whether to extend or close the contract based on performance appraisal.

CONTRACT

A contract starts with a fruitful negotiation between Robi Axiata and vendors. Collaboration Management team of SCM carries out the contracting process and collaborate every issues among every parties involved. As I have mentioned earlier, I worked in Collaboration Management Team as an Intern. I was involved with each and every steps of contract related issues as it is also a part of Vendor Relationship Management. There are five steps of Contract procedure. Such as:



Figure 21: Steps of Contracts procedure

CONTRACT DRAFTING

Drafting is the heart of contract. Drafted contract includes all the agreed matters between two parties as well as each and every agreed terms and conditions Average time for any contract goes

from pen to paper is 26 days in Robi Axiata Limited. Drafting part is done by Robi’s Collaboration Management team. Once drafting is done it is sent to three parties. They are:

- Buyer
- User
- Vendor
- Robi’s Legal team

For Collaboration team, Robi has a dedicated legal team member who always oversees every contracts and vetted after checking the drafted contract. On an average it took minimum of 5 days per contract to get any contract vetted by legal team.

TYPES OF DRAFTS

Based on patterns there are four types of drafts. Such as:

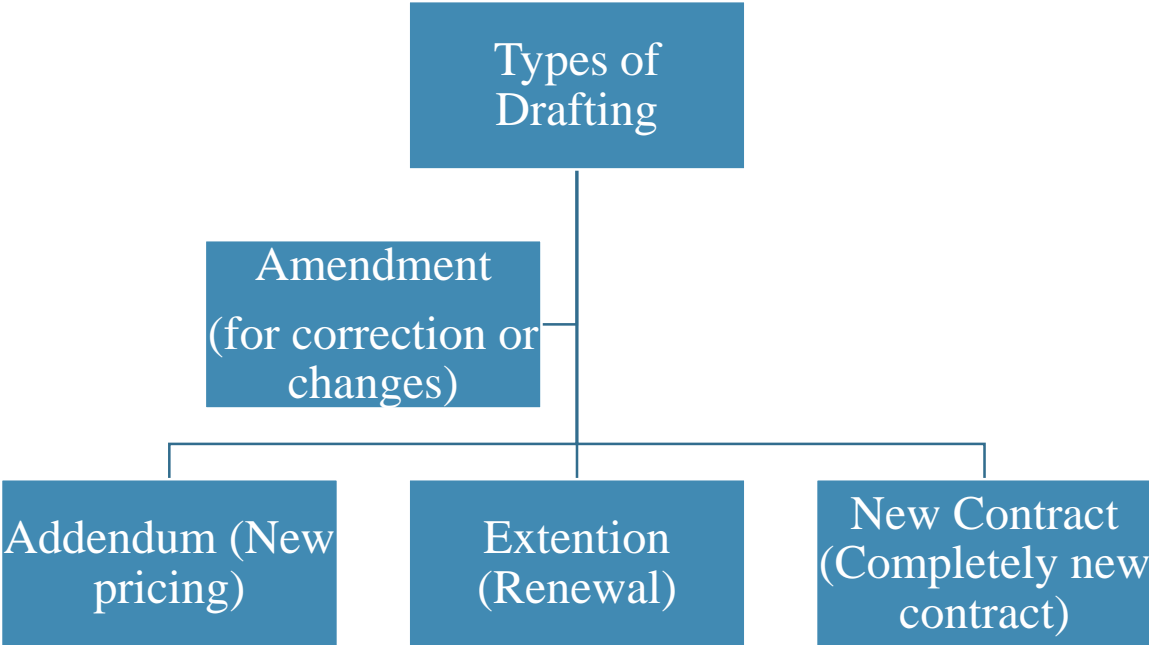


Figure 22: Types of drafting

VENDOR SIGNING

After getting green signal from vendor side regarding contract draft, a vendor representative is requested to take two printed copies of contract. I as a representative of Robi maintain liaison with vendor. I have to explain the signing procedure to the vendor representative. Required things are:

- Every page initials
- Every page company seal
- Signature of two witnesses
- Main Signatory of the organization's signature

CREATING CHECKLIST

A checklist is known summary of the agreement. It is prepared with the help of Procurement Approval (PA). Things included in checklist are:

- Serial No of the contract
- Name of vendor(s)
- Name of the service
- Time period
- Name of the User
- Name of the Buyer
- Post of the Main Signatory
- BDT amount of the contract
- Name of the person who drafts the agreement

MANAGEMENT SIGNING

For management signing, initial is given by the user and buyer team of respective agreement. Witnesses are also signed by user and buyer team. However, the person in the main signatory varies based on size of the BDT amount as per LOA. In case of absence of respective person Delegation of Authority (DOA) is given to other person for the specific period of time. LOA for Contract signing is given below:

| Amount in BDT | Main Signatory |
|---------------|------------------------|
| 0-5 Million | Head of the Department |
| 5-20 Million | Head of the Division |
| 20-75 Million | CFO |
| 75 Million+ | CEO |

FINISHING THE CONTRACT BY DATE

Date is a very vital thing in contract. Date determines the inception and ending of a contract. As a result, the moment management signing is finished, date is written manually on the provided blank space. Without a date, contract is next to zero.

DOCUMENTATION & ARCHIEVING

A big multinational like Robi Documentation and achieving is very important. Chunks of documents without a softcopy is like digging the data mine. After putting date on the contract, the documentation process starts-

SCANNING

Every complete contracts needs to be scanned. To keep the digital version of contract, scanning is done. Scanning is done in such a way that it can be accesses any given time.

INTERNAL DISTRIBUTION

The scanned copy of the contract is sent to the parties involved with the contract. The process is called internal distribution. The scanned copy is sent via- email. Interested parties are:

- User
- Buyer
- Vendor

- Robi Collaboration Team

FILING

Each contract has unique serial no. One copy of contract is kept under specific place for further reference inside a ring file which is also known as achieved copy. After contract validity period hardcopies of contract are taken to Robi warehouse.

SHREDDING

Due to unavoidable situation contract becomes void. To keep confidentiality contract copies are shredded into pieces.

VENDOR DISTRIBUTION

Successful completion of contract, vendor copy is given to the representative of the vendor as a evidence of contract.

OTHER ACTIVITIES

As an intern apart from vendor relationship I worked with various teams. Some of them are retrieving data and data validation from SAP, data validation of RFQ process.

RECOMMENDATION

Twelve weeks' time is a very short time to analyze an organization and give recommendation. The way I have seen Robi based on my observation, recommendations are given below:

SHORT TIME ACTION PLAN

- Impose stock checking before ordering/ Control on PR-PO: To prevent piling up of redundant inventory.
- Identify specific places to store scrap: So that it doesn't interfere with the storage of telco and trading inventory.
- Inventory Categorization (Age/ Usage etc.): Faster sorting out of usable and non-usable inventory and process to go for auction.

- Despite of sending updates to the buyer, user and vendor, sometimes they become reluctant to the facts and ignorant. They need to be pro-active and sincere.
- Each department should have a representative of vendor management for better communication
- Interns should have given more authority to delegate with clients and decision making

LONG TERM ACTION PLAN

- Impose JIT/ Partial Delivery Practice/ Stacking in Vendor WH (Bulk/ Volume Purchase): This would greatly reduce costs, and might lead to requirement of a much smaller warehouse thereby reducing warehouse rent costs.
- Optimally Locate Inventory to Reduce Travel Time: Sort fast-moving inventory nearest the picking point; trace out routes for the fastest movement of inventory in and out.
- Enforce Quality Checking for Trading Inventory
- Inventory Utilization: Reduce Inventory Carrying Costs, Reduce Inventory Obsolescence Automate Replenishment
- Focus on CapEx Investment: Robi focuses more on Opex gains than CapEx gains. Investing more in CapEx can help to lower its long term expenses. So in the long term, building own warehouse with a much higher height can significantly reduce cost per unit area and overall cost.
- Reduce Long Aged Inventory: Establish SoR contract with Scrape Buyer to make it faster from Robi's end. Process flexibility required to make it faster as well as maintaining compliance.
- Implement web-based reporting
- SAP Capability Enhancement
- For vendor relationship each contract takes 26 days on an average which is very time consuming. To reduce days' proper steps should be taken.
- In this modern age time has come to focus on less paper work for vendor relationship.
- Complexity arises when two multinationals are going for signing. Due to standard

procedure signing period becomes lengthy. Policy should be developed precisely

- In Robi, I noticed the employee's absenteeism rate is high. As a result, efficiency is hampered.

CONCLUSION

Every student has a dream to start a career with multinational organization. I was no different than them. Working in Robi for three months have broaden my mind in many aspects. Be it decision making or approaching I learned every day from different frame. Vendor relationship was one of my keynote branches of activities. I was lucky enough to visit to Robi warehouse in Tongi and I really liked the idea of writing a report on inventory management. The concerned people were very helpful and insightful for my report writing.

It goes without saying almost all organizations have particular culture, value and norms. In Robi, what I liked most was the "ownership" culture. The idea is you are working as if you were owner of the particular responsibility. That culture nurtured me a lot and it made me more approachable.

In fine, Robi Axiata is on the verge of a significant event "Robi-Airtel" merger. I was there to observe how they are preparing themselves and I have also witnessed how to prepare a CEO inside the organization and how to pass the leadership baton through succession planning. I believe that first-hand experience will be a boost for my future career journey.

APPENDIX

ROBI'S ORGANOGRAM

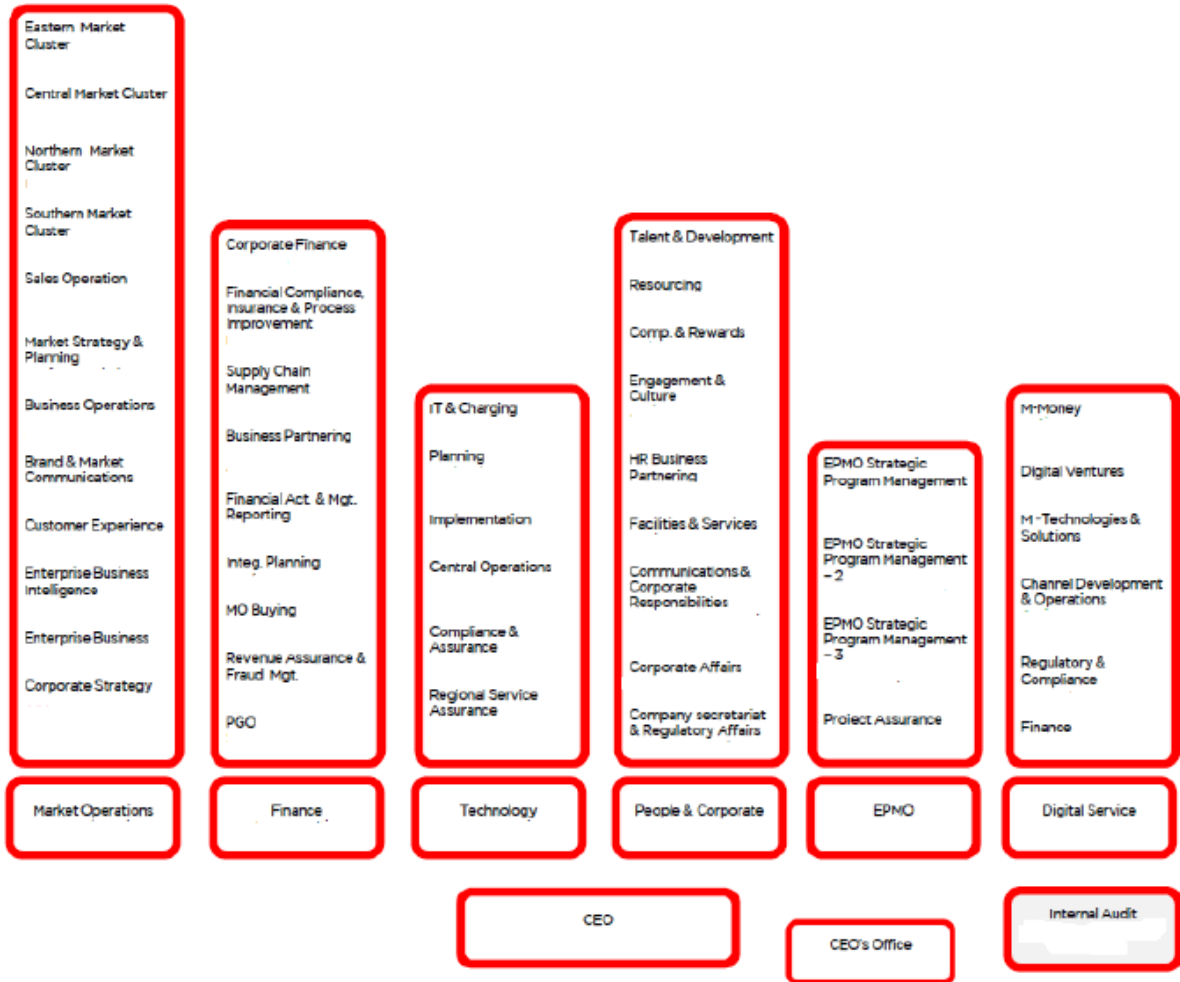


Figure 23: Organogram of Robi Axiata Limited

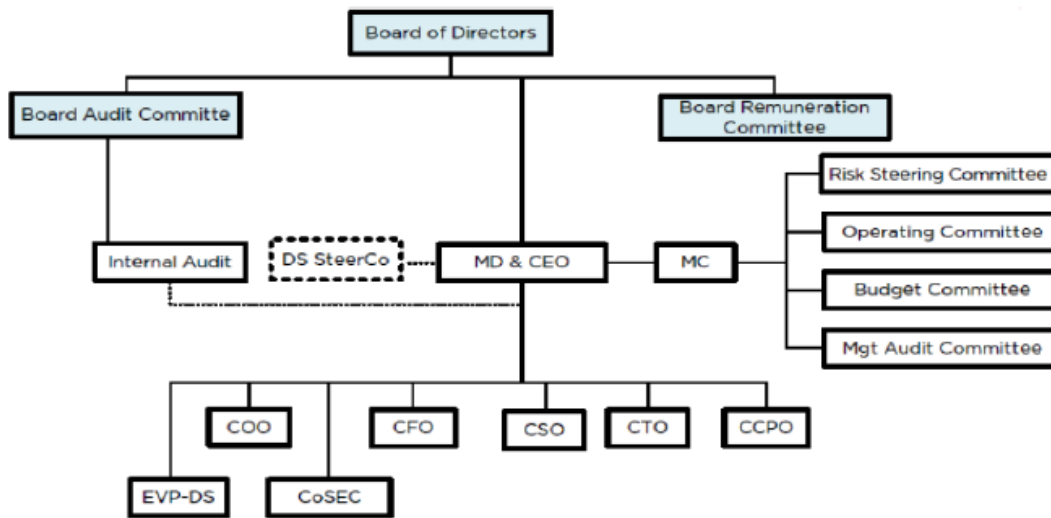


Figure 24: Governance body of Robi Axiata Limited

ROBI WAREHOUSE GALLERY



Figure 25: Capital Inventory



Figure 26: Trading inventory

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