Internship Report on "Logistics & Supply Chain Management Practices, Prospects & Challenges of Bangladesh Steel Manufacturing Industry – A Study on BSRM"

Submitted to:

BSRM Group of Companies
Ali Mansion, 1207/1099, Sadarghat Road,
Chittagong, Bangladesh

Supervised by:

MR. MD. NAYEEMUL ISLAM BHUIYAN
Supply Chain Analyst
Supply Chain Management

Submitted by:

MR. MOHAMMED SANJIDUL ANWAR
ID No.: 11304039
MBA Examination 2015
Session: 2014-2015
Department of Marketing
University of Chittagong

Date: January 17, 2018

Letter of Transmittal

January 17, 2018.

Mr. Md. Nayeemul Islam Bhuiyan
Supply Chain Analyst
Supply Chain Management
BSRM Group of Companies
Ali Mansion, 1207/1099, Sadarghat Road, Chittagong, Bangladesh

Subject: **Submission of Internship Report.**

Dear Sir,

With due respect, it is to inform you that I have completed my internship program for a period of **02 months (November 19, 2017 to January 17, 2018)**. The paper titled **"Logistics & Supply Chain Management Practices, Prospects & Challenges of Bangladesh Steel Manufacturing Industry – A Study on BSRM"** has been prepared as per the requirement for the partial fulfillment of my MBA Program at Department of Marketing, University of Chittagong.

In scripting this paper, I have tried my best to apply the concepts learnt in my academic courses along with the vigorous brain storming, discussion, and summarization while working for this project in the corporate environment of BSRM. I hope this paper will entice your kind appreciation.

Sincerely,

Mr. Mohammed Sanjidul Anwar
ID No: 11304039
MBA Examination 2015
Session: 2014 – 2015
Department of Marketing
University of Chittagong

Acknowledgement

In the Name of Allah, the Most Gracious and the Most Merciful.

When I started my **MBA Program** at the Department of Marketing in University of Chittagong, I realized that it's a big responsibility to bridge between my academics and the corporate world. As a part of this journey, I got a chance to do my internship at **Supply Chain Management Department** of **BSRM Group of Companies**. The journey, however, was not accomplished on my own. I wish to express my sincere gratitude and appreciation to all the people who helped me throughout my journey to achieve this goal.

My deepest appreciation goes to my supervisor **Mr. Mohammed Shahedul Quader**, Associate Professor, Department of Marketing. Thanks for opening my view to the corporate world. I would like to convey my gratitude to **Mr. Md. Nayeemul Islam Bhuiyan**, Supply Chain Analyst, Supply Chain Management, BSRM Group of Companies for his continuous guidance on the internship and to cope with the corporate environment.

I would also like to express my heartiest gratitude to **Mr. M. Imtiaz Uddin Chowdhury**, Head of Supply Chain Management, BSRM Group of Companies for his amazing inspiration to do something great in the supply chain management field; and to **Murtaza Hussain**, In-Charge Project, BSRM Group of Companies for his endless care and support to do my internship.

Acknowledgement is also made for all the Leads, In-Charges, and Team Members of the Supply Chain Management Department of BSRM Group of Companies who gave their valuable time in understanding the process, policy, and people of the department. Also, to Department of Marketing, Faculty of Business Administration, University of Chittagong, and their staffs for providing support and facilities. I would like to express my deep appreciation to all of them. Without their steady support and encouragement, this process would not have been materialized.

Preface

BUILDING A SAFER NATION

A name that grows incessantly in the map of the world - Bangladesh. Today, our economy is growing at a consistent, intense rate of more than 6 percent. This makes us one of the fastest growing economies in the world. In fact, we are slated to become one of the largest economies in the 21st century.

For an instance, we have a population of 26.4 million female agricultural workers. That's 3 times greater than the total population of Switzerland. On the other hand, Bangladeshis now have a life expectancy of 3.4 years longer than the people of India, despite the Indians being, on average, twice as rich. The most remarkable growth is achieved by our RMG sector. From a ragged nation, we have grown into a country that clothes the world's population. We are the second largest apparel exporter in the world. Moreover, our workers build economies across the world today.

Since the country is moving to the point of a higher development phase, the basic needs of the people have to be met first. One of them is the need of Safety. For Bangladeshis to have a better life, it is vital for them to have a safer Bangladesh. This is why BSRM exists. This is the purpose of BSRM - to build a safer nation, to build a better nation. Because BSRM believes that only when people are safe, they can live a better life.

True development cannot sustain without being people and environment friendly. Bangladesh caters to numerous sustainable initiatives in different sectors of development widely appreciated and acknowledged by everyone. BSRM, being the leading steel producer of Bangladesh, believes in sustainable development which will be resilient in its outcome. Taking all these initiatives into consideration, the future of Bangladesh looks brighter and safer than ever before.

Table of Contents

Executive Summary

With a vision of being in the row of developed nations, Bangladesh is progressing with enormous and sustainable economic growth. As one of the emerging nations of Asia, the need for steel products have increased due to huge infrastructure development. Eventually, the country has adopted few of the very good steelmaking technologies.

Bangladesh Steel Re-Rolling Mills (BSRM) with 65 years of experience in steelmaking is leading the industry beside few other major players like AKS, RSRM, KSRM, GPH Ispat etc. The company has contributed in major infrastructures of the country like Bridges, Flyovers etc. Following core vision and values, BSRM has grown drastically and continued its progression for increasing its capacity due to the increasing consumption. The company follows high eminence of organizational culture, is active in CSR and sustainable growth.

Empirical study shows that Supply Chain Management can increase the efficiency and responsiveness of an organization. With a core concern of smooth operation and management, BSRM supply chain dynamically works to ensure on time delivery of needed items effectively and efficiently. The local and foreign raw material purchase is crucial which is handled by the top management. Consumables, machineries & spares etc. need quality assurance and cost consideration. The import section is responsible for proper documentation and formalities with regulatory bodies to import the goods from overseas. The export section trades the finished steel products and by products outside the country. Unbroken operations are run by the inbound logistics team to deliver the product from port to the plants, while outbound logistics is responsible to deliver the product to the customers.

Within the frame of work, purchase of raw materials is challenged by price fluctuation, while it is important to ensure on time delivery, quality, and optimum cost in case of other items. Import section is challenged by the documentation, duty and HS code related problem. On the other hand, logistics has to bear the headache of high demurrage and loss. Despite the adverse situation due to macro infrastructural and bureaucratic issue, BSRM SCM is highly potential to reach a height that becomes a benchmark in the whole industry.

Keywords: Bangladesh Steel Manufacturing Industry; Logistics; Supply Chain Management (SCM); Bangladesh Steel Re-Rolling Mill; BSRM.

Chapter 01

Introduction and Background of the Study

BUILDING A SAFER NATION

BSRM

CHAPTER 01

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 Introduction

Steel industry is one of the heavy manufacturing sectors of Bangladesh; and Bangladesh Steel Re-Rerolling Mills (BSRM) is the leader in this industry. To manage the proper flow of products, finance, and information in this industry, a streamlined supply chain management is mandatory. Supply chain management extents all attempts and procurements of raw materials like scraps, sponge iron, and consumables, work-in process inventory, and completed products from source of origin to source of consumption to and from the steel industry. Supply chain management systems help in reducing inventories, operational costs, compress order cycle time, enhance asset productivity as well as increase the companies' responsiveness to the market.

After entering into the 21st Century, Bangladeshi steel industry begun to rise with a great extent and faced increasingly serious challenges with offering high-quality, low-cost products with the aim of continuous production flow; and to meet health, social, and environmental compliances in the face of increasingly rigid completion. Because of enormous economic growth and infrastructure development of Bangladesh, steel industry growth is to be sustained by improving SCM.

1.2 Objective of the Study

The study on steel industry demands examination and evaluation of multidimensional aspects of steel sector and its resulting impact on the economic growth and development of Bangladesh. The objectives of the internship study are:

- ☑ To get an overview over the Market Leader of Steel Manufacturing Industry of Bangladesh – Bangladesh Steel Re-Rolling Mills (BSRM).
- ☑ To examine, evaluate and analyze the techniques and practices of logistics & supply chain management of BSRM.
- ☑ To bring out the challenges and prospects of BSRM logistics and supply chain.

1.3 Logistics and Supply Chain Management

1.3.1 Logistics:

Logistics is a recent addition in the jargon of integrated business management, formerly with the traditional fields of marketing, finance, production and personnel, although it has been an integral part of these sectors since the Industrial Revolution. Business logistics, physical distribution, materials management, out-bound logistics, in-bound logistics, logistics management, supply chain management are only some of the terms being used to define and describe the concept of approximately the same subject—logistics, perhaps due to a rapid change in the scope and wide use of the subject matter.

The term "Logistics" stems from the Greek word "Logisticos", meaning "the science of computing and calculating." Since ancient times, logistics has been performed but earlier, it was used first within the facet of military science. In the military sense, Webster defines Logistics as "the procurement, maintenance and transportation of military materials, facilities and personnel" (Webster's Dictionary, 1963). Today, in the industrial and commercial world, logistics has acquired wider meaning. Essentially, it covers activities for the material flow from the source to the processing facilities, and subsequent distribution of finished goods from there to the ultimate users. Previously, the term physical distribution was commonly used, which refers to *"manufacturing and commerce to describe the broad range of activities concerned with efficient movement of finished products from the end of production line to the consumers"*.

In 1961, in broader sense, this same term has been defined as *"that area of business management responsible for the movement of raw materials and finished products and the development of material system."* (Smykay, et al., 1961)

In 1991, the Council of Logistics Management (CLM), a prestigious professional organization, modified its 1976 definition of Physical Distribution Management by first changing the term to Logistics and then changing the definition as follows:

"Logistics is the process of planning, implementing and controlling of efficient, effective flow and storage of goods, services and related information from the point of origin to the point of consumption for the purpose of conforming to customer expectations."

On the basis of above facet of logistics management, a more comprehensive definition is:

Logistics management refers to designing, developing, producing and operating an integrated system which responds to customer expectations by making available the required quantity of required quality products as and when required to offer best customer service at the least possible costs.

It is an internal integration of interrelated managerial functions to ensure a smooth flow of raw materials from the point of inception to the first production point, semi-finished goods within production process, and finished goods from the last production point to the point of consumption. Hence, a set of activities which are involved in the gamut of logistics include procurement, materials handling, storage and warehousing, protective packaging, order processing, forecasting, inventory management, transportation, and related information system. The major features of logistics management may be drawn as:

i) It ensures a smooth flow of all types of goods such as raw materials, work-in-process and finished goods.
ii) It has the ability to meet customer expectations and requirements of goods.
iii) It ensures the delivery of quality product.
iv) It offers the best possible customer service at the least possible cost.
v) It is an integration of various managerial functions for optimization of resources.
vi) It deals with movement and storage of goods in appropriate quantity.
vii) It enhances productivity and profitability.

1.3.2 Supply Chain Management:

The phase from 1990s onward is recognized as the era of Supply Chain Management, which has been defined by the Global Supply Chain Forum of 1994 as: *"The integration of key business processes from the end user through original suppliers that provides products, services and information that add value for customers"* (Acharya, 1999).

American Production and Inventory Control Society (APICS) defines SCM as: *"Organizations that successively transform raw materials into intermediate goods, then to final goods and deliver them to customers."* (Deshmukh and Mohanty, 1999).

On the basis of various definitions, Supply Chain Management can be defined as:

"An external integration of interrelated functions of the firm with its channel members, vendors, and all third-party logistics service providers who contribute in the flow of goods

(raw materials, semi-finished and finished products) and related information from the point of inception to the point of consumption with efficiency." (Agrawal, 2001).

In other words, SCM is an integrated management of various functions in the areas of materials, operations, distributions, marketing and services after sales with a customer focus in perspective so as to synergize various processes in the organization with a view of optimizing the total cost, i.e. it refers to a managerial process of a joint approach of all supply chain participants to design, develop and operate a system which responds to customer expectations by making available the right quantity of right quality products at the right time and place in the right physical form at a right cost. Hence, SCM facilitates to offer best customer service in a cost-efficient manner. Following are the prevalent features of SCM to meet the challenges ahead.

1. **Single Entity** - For a variety of planning and control functions across the supply chain, the responsibility is made to rest with a single entity.
2. **Inventory Perspective -** While traditionally, inventories have been viewed as a buffer to reduce coordination requirements across activities, the current concept is that inventory is a buffer to be used as a last (as opposed) to first resort after ensuring proper information sharing and coordination.
3. **Strategic Decision-Making -** The decisions in the supply chain are viewed as having strategic implications rather than just operational ones.
4. **Systems Approach -** The supply chain from vendor to customer is viewed as a single integrated system rather than many subsystems interfacing with each other.
5. **Doing the Best One can -** In the various activities of the supply chain, it is important to focus on doing what one can do best. This has implications on outsourcing or even insourcing, and building effective partnerships.
6. **Supply Chain Relationships -** The supply chain concept emphasizes more of harmonious relationships among all the members such as vendors, channel participants, and all third-party logistics service providers.
7. **Flexible Approach -** Today's supply chain is designed for flexibility in all the processes of company's supply chain system, starting from manufacturing to warehousing, which plays a very important part in improving the customer service. Since business conditions are changing, the supply chain configuration should be a flexible one.

1.4 Value Chain Model for Steel Manufacturing Industry

Value chain is defined as "a chain of value added activities; products pass through the activities in a chain, gaining value at each stage". Michael E Porter (1985) first introduced the value chain concept in his book "Competitive Advantage: Creating and Sustaining Superior Performance". The concept of value chain is used to an individual organization's supply chain networks. It needs addition of value for each and every activity through which the product/service moves through the product life cycle.

In integrated steel plants steel is manufactured from the basic raw materials like iron ore, coking coal and fluxes like lime stone and dolomite. The main production units are raw material handling plant, coke ovens, sinter plant, refractory material plant, furnace, steel melt shops, light and medium merchant mills, wire rod mills, medium merchant and structural mills, special bar & structural mills. In addition to these main production units, there are several auxiliary units like power plant, engineering shops, oxygen plant, etc. Hot metal produced at furnaces is converted into steel through the process of removing impurities in the metal by oxidation. This steel is further refined in the secondary refining facilities provided in the steel melt shop. Blooms are produced at steel melt shop, which are converted into various finished products like wire rod coils, re-bars, rounds, structural, squares etc. in various rolling mills. These products are called as long products used in construction and infrastructure building and manufacturing sectors.

The value chain model developed by Porter with five primary activities and four supporting activities can be used as a generic one. Due to the nature of the activities, a different version of the value chain for steel manufacturing industry can be developed with five primary activities and six supporting activities. The shape of the value chain for steel manufacturing industry will be the same as that of Porter but the difference is in some of the activities and their application. The figure and a brief discussion on each activity are given as follows:

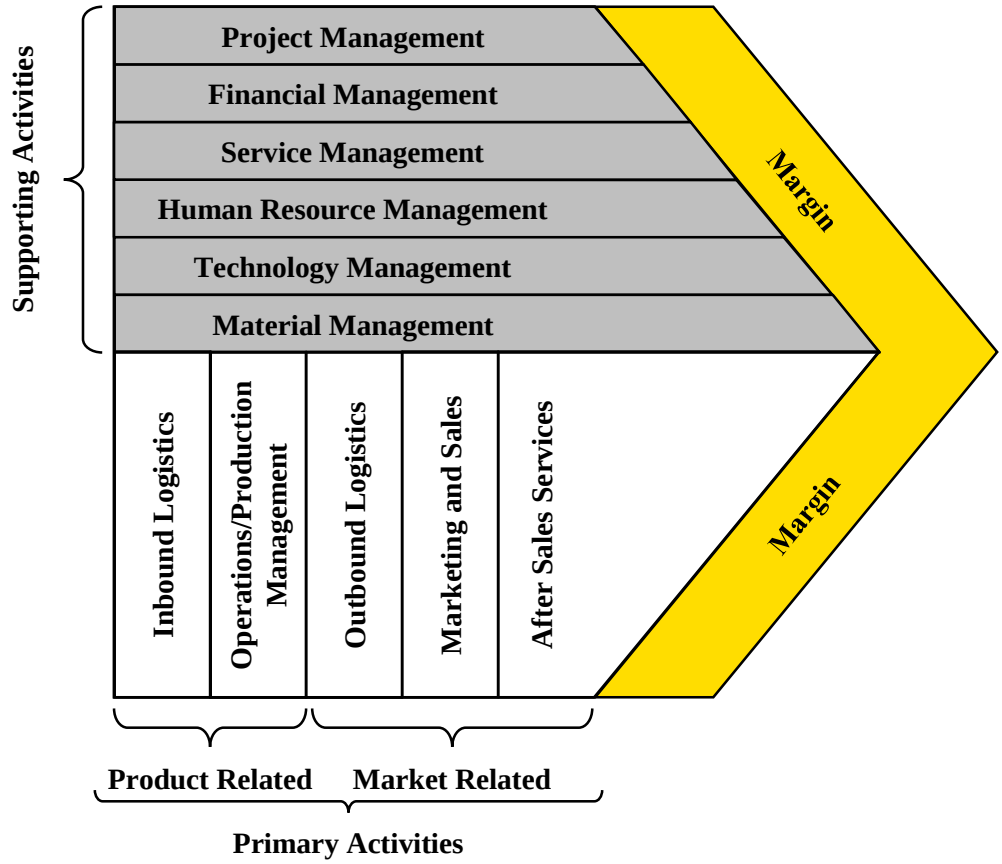


Figure: Value Chain Model for Steel Manufacturing Industry

1.4.1 Value Chain - Primary Activities:

Primary activities are those activities, directly involved in the conversion process of basic raw materials into final output/products including the receipt of basic raw materials from suppliers and marketing of output/ products to customers. They are grouped into two types of activities related to product and market. Product related activities are the activities, performed by the organization to add value to the product and services itself. Market related activities are the activities, performed by the organization to transfer the finished product or services to the customers.

1. **Inbound Logistics:** These include receiving the basic raw materials required for the steel making process, stacking and reclaiming the materials, and distribution of materials to various departments etc.
2. **Operations/Production Management:** These include raw material handling and processing (receiving and handling of major raw materials like scraps, coking coal, iron ore, fluxes, boiler coal etc., crushing, lump ore crushing and screening); making of coke, sinter, lime and calcined dolomite, pitch bonded magnesia bricks; production of iron, steel, wire rods, TMT bars, rounds, squares, structural (angles, channels and beams); blooms, billets etc. and preparation and repair of rolls.

- ☑ Manufacturing or buying of spares and components to meet the plant requirements; carrying out the major repairs of equipment in plant units; vibration and condition monitoring of equipment; repair of electrical and electronics equipment (control panels, electrical meters, PLCs etc.) etc.
- ☑ Planning and monitoring production, equipment design support by plant design.

3. **Outbound Logistics:** These include planning and dispatch, distribution management, transportation, warehousing, and order fulfilment.
4. **Marketing and Sales:** These include product-price-place-promotion management; domestic sales (project sales, actual user sales, retail sales); export sales; sale of special steels; by products sales; pricing and policy; contracts; CRM etc.
5. **After Sales Service:** These include commercial terms; quality aspects; delivery aspects; pre/post sales contact; complaint settlement procedure.

1.4.2 Value Chain - Supporting Activities:

Supporting activities are those activities, not directly involved in the conversion process but support the primary activities in their functions. These activities are classified as:

1. **Material Management**
   - ☑ **Vendor Development** - These include registration; categorization; performance rating & continuous monitoring; encouraging and interaction with suppliers etc.
   - ☑ **Purchase** - These include identifying sources for various materials; selection of suppliers; taking requests from plant units (indents); processing of indents; procurement of raw materials, components and parts, machinery and spares, consumables, stationery, servicing; ensure supply of materials etc.
   - ☑ **Logistics** - These include utilization of port facilities; handling vessels at ports etc.
   - ☑ **Stores** - These include receipt of raw materials at ports and spares & consumables; custody of spares and consumables; stock control; issue of spares & consumables to various departments; disposal of non-moving spares & consumables; transport contract; discrepancy receipt & inventory control etc.
2. **Technology Development:** These include quality assurance and technology development (QA&TD); research and development (R&D); processes automation etc.
3. **Human Resource Management:** These include corporate coordination (manpower planning, recruitment, executive establishment, rules & policies, welfare, parliament cell); Human resources - non works (human resource development, non-works personnel, mines, industrial relations, sports); Human resources - plant (plant

personnel); Management services **(**quality circles, suggestion schemes, awards, incentive schemes); CSR; Medical; Town administration; Administration (general administration, law, hospitality, Liaison Office); Human Resources Development (training, management development, HR information systems).

4. **Service Management:** These include corporate offices (CMD and Directors' offices), corporate strategic management, corporate communications, company affairs, information technology (process control, materials management system, marketing system, payroll system and financial accounting system).
5. **Financial Management:** These include budgeting, costing, corporate accounts, raw material accounts, sales finance, operations & general accounts and works accounts, central excise and insurance, pay sections, stores accounts, purchase bills, project accounts, mines accounts, internal audit and stock verification.
6. **Project Management:** These include the activities of Design & Engineering for the existing plant and the activities of Design & Engineering, Project Contracts, Construction and Project Monitoring for plant expansion.

   i) Existing plant

   ☑ **Design & Engineering -** These include conceptual planning, basic engineering and detailed engineering, implementation of automation to improve production, implementation of major Additions, Modifications, Replacements (AMR) & Non-AMR schemes in the plant, Modifications/alterations for debottlenecking, improvements during operation of the plant.

   ii) Plant expansion

   ☑ **Design & Engineering -** These include consultation/preparation/scrutiny of project reports; obtaining various clearances/approvals; executing the expansion from concept to commissioning (preparation & scrutiny of basic engineering; technical specifications; receipt of bids; techno-commercial & techno-economic discussions & recommendations; active involvement in order placement and finalizing contract specifications; design supervision; liaison with statutory bodies; storage-retrieval of technical documents).

   ☑ **Project Contracts -** These include preparation of special conditions of contract (SCC), general conditions of contract (GCC), payment terms of contract; issue of notice inviting tenders (NIT); enlistment of contractors; preparation & issue of tender documents to tenderers; scrutiny & evaluation of commercial offers; preparation of contract documents; handling arbitration cases.

- ☑ **Construction -** These include executing the contract; construction supervision to ensure quality; accounting of materials & processing bills of contractors for payment; implementing statutory obligations; ensure adherence of safety practices; processing gate passes, work permits, shut downs etc.
- ☑ **Project Monitoring -** These include **s**ubmission of timely feedback information to management on progress, critical activities of project; preparation of various reports to the management related to status of approval of various projects, erection, testing & commissioning by indicating critical areas over progress of project; periodical reports on actual expenditure with respect to estimates.

1.4.3 Value Chain – Margin:

The organization incurs certain costs for creating value for its final products/services. The Margin is the difference between the sum of all the values created at the activities in the value chain and the total cost incurred by the organization to create such values.

1.5 The Steelmaking Process

The steel manufacturing industry is a very complex sector which is intrinsically linked with the world economy as a whole. Steel products are needed by many industries, such as automotive, construction, and other manufacturing sectors. The steel industry uses significant amounts of raw materials (mainly iron ores, coal and scrap) and energy, and is also a major source of environmental releases such as (among others) emissions of dust, heavy metals, Sulphur dioxide, hydrochloric acid, hydrofluoric acid, polycyclic aromatic hydrocarbons and persistent organic pollutants from sinter plants and coke ovens; waste water from palletization; dust and waste water from blast and basic oxygen furnaces; or emissions of filter dust, slag dust, and inorganic and organic compounds from electric arc furnaces (European Commission. 2011). Most raw materials are located remote from the areas of highest steel demand, and so both steel products and inputs are traded internationally and in large quantities. This trade is carried out mostly by sea-going vessels, with raw materials flowing from coal and ore-rich producing countries in South America, Africa and Oceania to major producing areas in Europe, North America, and the Far East, followed by shipments through rail and inland waterways, and semi-finished and finished steel products moving in the opposite direction. That has a particular impact on supply and demand patterns, and consequently on prices.

Steelmaking Technologies:

Steel is a class of malleable alloys made up of iron and carbon (less than 2%), plus some other additives in small amounts (with proportions ranging widely from less than 1% for low alloy steels to more than 10% in the case of stainless steel or special steels for tools). Thus, there are many grades of steel differing in composition and physical and chemical properties (Fenton 2005). Steel is produced by melting iron (in form of pellets, sinter, or DRI) and reducing its content of carbon down to the desired level. Modern steelmaking processes can be divided into two categories: Primary and Secondary steelmaking.

1. Primary steelmaking involves converting liquid iron from a blast furnace and steel scrap into steel via basic oxygen steelmaking, or melting scrap steel or direct reduced iron (DRI) in an electric arc furnace.
2. Secondary steelmaking involves refining of the crude steel before casting and the various operations are normally carried out in ladles. In secondary metallurgy, alloying agents are added, dissolved gases in the steel are lowered, and inclusions are removed or altered chemically to ensure that high-quality steel is produced after casting.

The entire process involves up to four major steps which require large facilities:

1. Mining and Preparation of Raw Materials
2. Iron Production
3. Steel Production
4. Casting, Rolling and Finishing

1. **Mining and Preparation of Raw Materials:** The first step of steelmaking process consists of the mining and preparation of raw materials. The most important raw materials are iron ore, coke, limestone, and ferrous scrap.
   - ☑ Iron ore is mostly obtained from open cast mines, then crushed and concentrated into pellets (small iron ore balls) or sinter (iron ore lumps baked with coke or coal). Iron ore is mined in about 50 countries, the majority originating from Brazil, Australia, China, India, the US and Russia.
   - ☑ Coking coal is mined from open cast or underground mines, washed, and converted into coke (almost pure carbon resulting from conversion of coal without oxygen at high temperatures). In Asia, China is the biggest coke producer; Poland and Germany are the main EU coke producing countries.

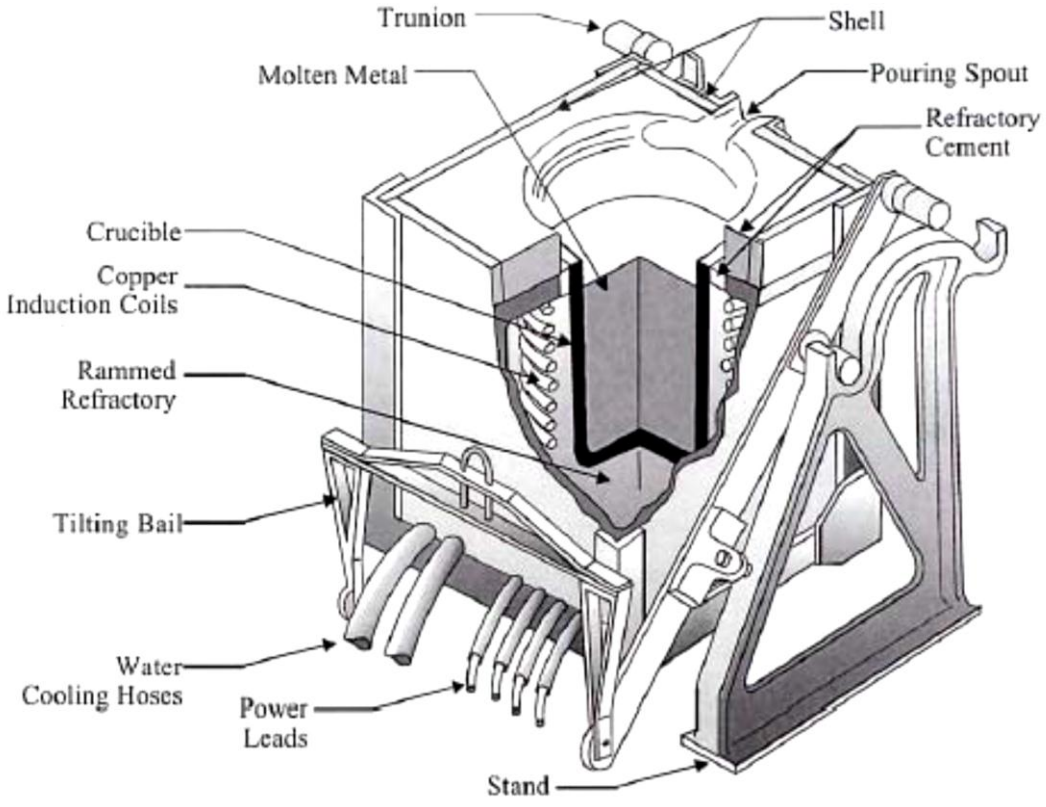
- ☑ Scrap iron consists of steel and ferrous products at the end of their lifetime (obsolete scrap), steel discarded during the manufacturing processes, or any scrap generated within the steel industry and immediately fed back into the steelmaking process (home scrap). The availability of home and prompt scrap is related to current production levels, while the levels of obsolete scrap depend on past steel production, average product lifetimes, and recycling rates.
- ☑ Limestone is used in the furnaces to form slag (a by-product resulting from impurities and non-metallic inclusions into the steelmaking processes, which may be used in the production of concrete in combination with cement). Other additives like metals, plastics and heavy oil may be used in the different production phases.

2. **Iron Production:** In the second step, hot metal (or molten iron, also known as pig iron when solidified) may be produced by these means:
   i) Charging ferrous scrap steels to an induction furnace
   ii) Charging iron ore and coke to a blast furnace
   iii) Reducing iron ore with natural gas or low-quality coke (this can be done in direct reduction units, which may be shaft furnaces, rotary kiln furnaces, or fluidized beds)

   The furnace-based process uses sinter, pellets, lump ore and coke. All the inputs are charged to the top of the furnace, and heated to remove oxygen from the iron ore and produce the hot metal. The direct reduction process uses pellets, lump ore, and natural gas (or low-quality coke) to reduce the iron ore. Pellets and lump ore are heated under pressure in the presence of natural gas and reduced to DRI (direct reduced iron: pelletized iron).
3. **Steel Production:** In the third phase the steel is produced by oxidizing the hot metal (or direct-reduced iron (DRI)). There are three possible furnaces to produce the steel.
   i) Open Hearth Furnace (OHF)
   ii) Basic Oxygen Furnace (BOF)
   iii) Electric Arc Furnace (EAF)

   The BOF is a vessel where oxygen is injected into the hot metal to remove carbon and other impurities. The BOF can take amixture of hot metal, scrap and DRI. The OHF is similar to the BOF, but much slower and with a higher energy input, and therefore is not competitive with the BOF and has become obsolete. In these two furnaces, the energy that drives the steelmaking process comes from the heat of the hot metal charge and from the combustion of the contained carbon. The EAF can take a full charge of scrap or DRI (mixtures are also possible), requires electricity to melt the cold charge.

4. **<u>Casting, Rolling, and Finishing:</u>** During the fourth step, once the crude steel is produced by any of the processes described above, it is transferred to an ingot casting shop (where ingots are produced in batches by pouring steel into moulds) or to a continuous casting shop (where liquid steel is poured continuously and then cut into the desired shapes). The semi-finished products obtained from the casting processes are ingots (blocks), slabs (a length of metal with rectangular cross-section), billets (a length of metal with round or square cross-section), or blooms (similar to billets, with greater cross-sectional area). These semi-finished products are later rolled into different shapes. Slabs are converted into thinner steel plates (flat products) in plate mills or hot strip mills. Other finished shapes (long products) are rolled from blooms and billets into beams, reinforcing bars, and wire rods through different types of mills. Finishing treatments (coating, annealing, galvanizing, tinning, etc.) are also provided in mills.



Induction Furnace


OVERVIEW OF THE STEELMAKING PROCESS
worldsteel
ASSOCIATION
Blast Furnace Steelmaking
Iron Ore
Pellets
Sinter
Limestone
Coke
Coal
Blast furnace (ironmaking)
Scrap
Converter (Steelmaking)
Ladle (Refining)
Electric Arc Furnace Steelmaking
Iron Ore
Coal/Natural Gas
Pellets
Direct reduction
Scrap
Electric arc furnace (Steelmaking)
Ladle (Refining)
Continuous casting
Slab
Billet
Bloom
Plate
Hot-rolled and cold-rolled strip (Coils)
Hot-rolled bars
Rods
Tube rounds
Structural shapes
Rails
worldsteel.org

Chapter 02

An Overview of Bangladesh Steel Re-Rolling Mills

BUILDING A SAFER NATION

BSRM

CHAPTER 02

AN OVERVIEW OF BANGLADESH STEEL RE-ROLLING MILLS

BSRM is the leading steel manufacturing company and one of the prominent corporate houses in Bangladesh. Over the years BSRM steel products have been chosen solely for building major National landmarks and infrastructures. To name a few, the Hatirjheel Project, Zillur Rahman Flyover, Mayor Hanif Flyover and Shah Amanat Bridge were made with BSRM Xtreme. BSRM Xtreme is a product that was introduced when there were no graded steels. It was a major change in the steel industry. The core driver was the belief in evolution in steel products, which resulted in bringing the first EMF tested rod, the first steel brand that passed 5 million cyclic loading Fatigue testing in the U.K. and conformed to 10 global standards. With the largest steel producing factory in the country and employing the best technology from Europe, the company maintains volume with uncompromising quality. BSRM is dedicated to providing the best solution for the construction industry. The first ever 50mm rod was specially designed and rolled for the deep pilling requirements of Padma Bridge. Its recently introduced brands are also designed to meet special needs for the construction industry. (BSRM Website, 2018)

The Trinity of Strength, Safety, and Sustainability

When we think of the effect of steel, we think of the pillars of strength, the roofs over our heads, of metal that binds together the progress of humanity and its dreams. When we think of the steel, we think of the ultimate symbol of strength, of endurance and of safety.

The three corners of the Trinity logo represent the three core essences of our products – Strength, Safety, and Sustainability. The number 3 itself is a symbol of totality, of being a 'whole'. The color is the representation of steel in both real and graphic form. The interlocked structure of the logo symbolizes unbreakable strength and infinite sustainability.

We call it "The Trinity of Strength, Safety, and Sustainability". (BSRM Website, 2018)

2.1 BSRM Group of Companies - At a Glance

Established on: 1952

Corporate Office: Ali Mansion, 1207/1099 Sadarghat Road, Chittagong, Bangladesh.

BSRM Group of Companies is fragmented with the following concerns:

Concern	Current Area of Operation
BSRM Steels Limited Fouzdarhat, Chittagong	Re-Rolling (1)
Bangladesh Steel Re-Rolling Mills Limited Nasirabad, Chittagong **(Mother Concern)**	Billet Manufacturing (1): **Steel Melting Works (SMW)** Re-Rolling (2): **BSRM Mills Limited**
BSRM Iron & Steel Company Limited (BISCO) – Steel Melting Unit Nasirabad, Chittagong	Billet Manufacturing (2)
BSRM Steel Mills Limited (SML) Mirashrai, Chittagong	Billet Manufacturing (3) Scrap Processing
BSRM Recycling Industries Limited Baroaulia, Chittagong	Scrap Processing
BSRM Wires Limited	Binding Wires Manufacturing
BSRM Logistics Limited	Logistics Support
BSRM Ispat Limited	Ispat Manufacturing
BSRM Real Estates Limited	Real Estate
Bangladesh Steel Limited	Used as Shed
Karnafully Engineering Works Limited	Wires Production
Chittagong Power Company Limited	Used as Shed
H. Akberali & Company Limited	

2.2 A Brief History of BSRM

BSRM Group of Companies is the largest and leading industrial conglomerate in the steel sector of Bangladesh. BSRM Group of Companies established its first concern in 1952 and since then serving the nation with an exception. The founder of this group is Late H. Akberali Alibhai Africawali, the father of Mr. Alihussain. Also, 4 other brothers of late Mr. Akberali contributed to the setting up of such a vast empire. The BSRM saga started by setting up of four manual rolling mills, the first of its kind, to produce plain bars for construction purposes.

Then in 1987, a milestone was achieved. The four old manual mills were scrapped and an automatic billet based rolling mill was installed under the name of Bangladesh Steel Re-Rolling Mills Limited. The two highway bridges over the rivers of Meghna and Gumti, the Chittagong Airport, KAFCO Fertilizer plant and most of the country's largest prestigious projects and many high-rise buildings were built using the BSRM bars.

In 1996 the company saw the commissioning of a captive billet making plant under the name of Meghna Engineering Works Limited. In 2006, the first and the only ribbed wire cold rolling plant in the country using European Technology to make 500 mpa yield strength wire reinforcements in sizes 4.5mm, 5.7mm and 7.1mm was introduced by BSRM helping to bring down the cost of construction.

In 2008, with the commissioning by DANIELI, Italy, BSRM has built a state-of-the-art rolling mill at Fouzderhat, Chittagong under the name of BSRM Steels Limited with the capacity of producing 375,000 MT bars of 500mpa strength at the brand name of "Xtreme 500W". It is a crowning glory not only for the company but also for the nation. Then, BSRM took a step to increase the capacity of the mill to 600,000 MT per annum. Simultaneously, it also planned to increase the capacity of its oldest mill, Bangladesh Steel Re-Rolling Mills Limited up to 400,000 tons to meet the demand for quality sections for the re-bars of the country. Currently, with all the expansion of new capacities, BSRM alone is being able to meet around 30% market share of the country with over 1 million tons steel capacity.

The group concerns are ISO-9001: 2000 certified. The products are also tested and certified by BUET, BDS etc. and the group always maintains international standard in its production for the best quality products with guaranteed customer satisfaction.

BSRM Group of Companies is a very transparent and well managed industrial house in Bangladesh. The group has a clear vision to be the number one leader of the sector on every count, viz. market share, cost-effectiveness, quality, and innovation. Capital is being continuously injected into the plants to improve efficiency in line with the capacity and the company conducts product and market research to match the needs of the time. The products of BSRM are Deformed Bars with a yield strength of 72,500psi (min), deformed bars of Grade 300 & 400, Grade-75 wires, Angles, Channels, Spring Steel Flats, Low Carbon Wire Rods, etc. This group has a wide marketing and distribution network across the country for the fastest and smooth delivery of its products to the end-user.

(ReflectionNews.com, 2011).

2.3 Vision of BSRM

BSRM Group of Companies aspires to:

- ☑ Maintain leadership position in the steel industry by producing the best quality steel products, continuously enhancing customer satisfaction, and becoming a reliable business partner of customers and suppliers.
- ☑ Be an employer of choice, with focus on nurturing talent and developing future leaders of the organization.
- ☑ Protect the interest of the shareholders through sustainable growth and value creation.
- ☑ Preserve the trust of all the stakeholders by adopting ethical business practices.
- ☑ Support the society through Corporate Social Responsibility initiatives.

(Annual Report 2016-17, BSRM Limited)

2.4 Values of BSRM

1. **Sustainable Growth:** Consistent improvement in the quality of products and services, efficiency of processes and profitability of business; continuously anticipating and responding to the changing business and environmental needs using innovation; sharing knowledge and experience within the organization.
2. **Quality:** Create products and services valued by the customers; constantly improving processes through innovation and adopting best practices; reducing wastage; minimizing costs; investing in systems and technology & developing people to build a highly capable workforce.
3. **Reliability:** Be the preferred business partner for the customers and suppliers by offering quality products; providing best and timely service before, during and after the business transactions and honoring all the commitments despite challenges.
4. **Trust:** Preserve the faith and goodwill of all the stakeholders – customers, shareholders, suppliers, employees, regulatory bodies, and society by adopting ethical and transparent business practices, being fair and honest in all the dealings and building robust governance and risk management processes.
5. **Leadership:** Be a role model, setting benchmarks through the products, processes, and people; constantly moving ahead of the competition by differentiating the products, innovating the processes, increasing the market-share and nurturing talent to develop leaders within the organization.
6. **Social Responsibility:** Acknowledge and fulfill the obligations towards the society by undertaking initiatives for the general uplifting of the society, building capability and making facilities available to the underprivileged.
7. **Customer Satisfaction:** Delight the external and internal customers at every stage of interaction with them by truly understanding their needs, offering them the best products and services, treating them with respect and actively seeking and acting on their feedback.

(Annual Report 2016-17, BSRM Limited)

2.5 A Number of Distinctive Milestones

1952	The BSRM saga began with the first steel re-rolling mills to emerge in the then East Bengal.
1984	Introduced high strength cold twisted steel bars (TORSTEEL) to the construction industry.
1987	Introduced high strength Deformed reinforcing steel bars conforming to ASTM 615 Grade 60 for the construction industry.
1996	Commissioned the then largest billet making plant in the country - Meghna Engineering Works Limited, now known as Steel Melting Works (SMW) unit of Bangladesh Steel Re-Rolling Mills Ltd.
2006	Introduced micro reinforcement wires, below 8mm, for low-cost rural construction.
2008	BSRM Steels Limited commenced production of internationally recognized Grade 500 steel bars branded as "Xtreme500W" conforming to ISO 6935-2.
2009	Entrance in the Capital Market - Shares of BSRM Steels Limited, the flagship company of BSRM Group was listed with the country's premier bourses Dhaka Stock Exchange (DSE) Ltd. and Chittagong Stock Exchange (CSE) Ltd. on 18 January 2009. Market Capitalization as on 30 June 2017 is Tk. 29,974 million. The public shareholding including institutional investors is 29.13%.
2010	BSRM Iron and Steel Co. Ltd. largest billet making plant in the country started commercial production on June 01, 2010.
2012	The production capacity of BSRM Steels Limited enhanced to 600,000 MT per year.
2013	A syndicated term loan of US$ 40 million and BDT 5,908 million, raised by a consortium of 25 banks and financial institutions for BSRM Steel Mills Limited. It is the largest ever syndicated loan facility arranged for a private company in Bangladesh. The Plant produces high-quality MS Billets.
2014	Oracle e-BS -12 went GO LIVE on 1ST March 2014. Oracle Financials, Costing, Purchasing, Manufacturing, EAM, Inventory & order management are now integrated into a single platform which ensures the accuracy, accountability, and reliability of the Group.
2015	1. Enhanced capacity of BSRM Steels Limited from 600,000 MT to 700,000 MT per annum. 2. Announced a new product namely "**BSRM Maxima**" 3. Increased capacity of Bangladesh Steel Re-Rolling Mills from 120,000 MT to 450,000 MT per annum which will be the first and largest merchant mill in Bangladesh. 4. Listing of Bangladesh Steel Re-Rolling Mills Limited with the stock exchanges (DSE & CSE). 5. Start of trial production of world's largest induction furnace based billet casting project –"BSRM Steel Mills Limited".

2016-17	1. BSRM Steel Mills Limited, the largest billet making plant in the country started commercial production in June 2016. 2. **Ultima** & **EPOXY coated bars - CENTURA** are introduced. 3. Start to set up a new melting plant at Sonapahar, Mirsarai, Chittagong under BSRM Steels Limited with a capacity of 430,000 MT. 4. For first time sales of BSRM has crossed **ONE MILLION** M. ton.
WHAT'S NEXT?	Another melting unit with a capacity of 430,000 M. Ton for producing billets is under construction at Sonapahar, Mirsharai, Chittagong.

(Annual Report 2016-17, BSRM Limited)

2.6 Awards & Recognitions

- ☑ Best Brand of Bangladesh in Steel Category (2011, 2013, 2014, 2015, 2016, and 2017)
- ☑ Certificate of Merit from South Asian Federation of Accountants (SAFA) in 2012, 2013 & 2015.
- ☑ ICAB National Awards for Best Presented Annual Reports for the year 2012, 2013 & 2015 & Certificate of Merit for the year 2014, 2015.
- ☑ ICSB National Gold Award for best Corporate Governance Excellence 2015 for Bangladesh Steel Re-Rolling Mills Limited
- ☑ 16th ICAB National Award for Best Presented Annual Report 2015
- ☑ Achieved Tax Card from NBR for highest tax payment in AY-2015-16 for BSRM Steels Limited (under Manufacturing Category)
- ☑ Best Electricity Consumer (Industry) award for the year 2015.
- ☑ Mercantile Bank Excellence Award 2015
- ☑ ICSB National Award (Silver Award) for Corporate Governance Excellence 2014
- ☑ 5th Standard Chartered-Financial Express CSR Award 2014
- ☑ President's Award for Industrial Development (Category: Large Scale Industry 2014)
- ☑ International Islamic University Chittagong (IIUC) Business Awards 2014
- ☑ Japan Bangladesh Chamber of Commerce & Industry (JBCCI) Award 2014
- ☑ Divisional Environment Award 2013
- ☑ Pride of Chittagong (Chattagramer Ahonkar) 2012
- ☑ D & B Corporate Awards 2010 & 2012
- ☑ Best Enterprise of the year 2010
- ☑ Export Award from Honorable Prime Minister
- ☑ National Export Trophy

(Annual Report 2016-17, BSRM Limited)

2.7 Various Branded Products of BSRM

- **BSRM Xtreme (Feel Safe with Xtreme Inside):** Xtreme is a high strength reinforcing steel for general purpose construction of low and medium rise commercial and residential buildings and bridges. It is the steel of choice among home builders.

- **BSRM Maxima (The Steel for Mega-Structures):** Steel is a ubiquitous and versatile construction material. It is the backbone of a nation's infrastructure and used in the tens of millions of tons to build cities, bridges, and factories. It is either used as a structural material or as a composite in reinforced concrete (RC). BSRM Maxima is exactly the material for construction of projects which needs extra strength combined with an extra dose of safety.

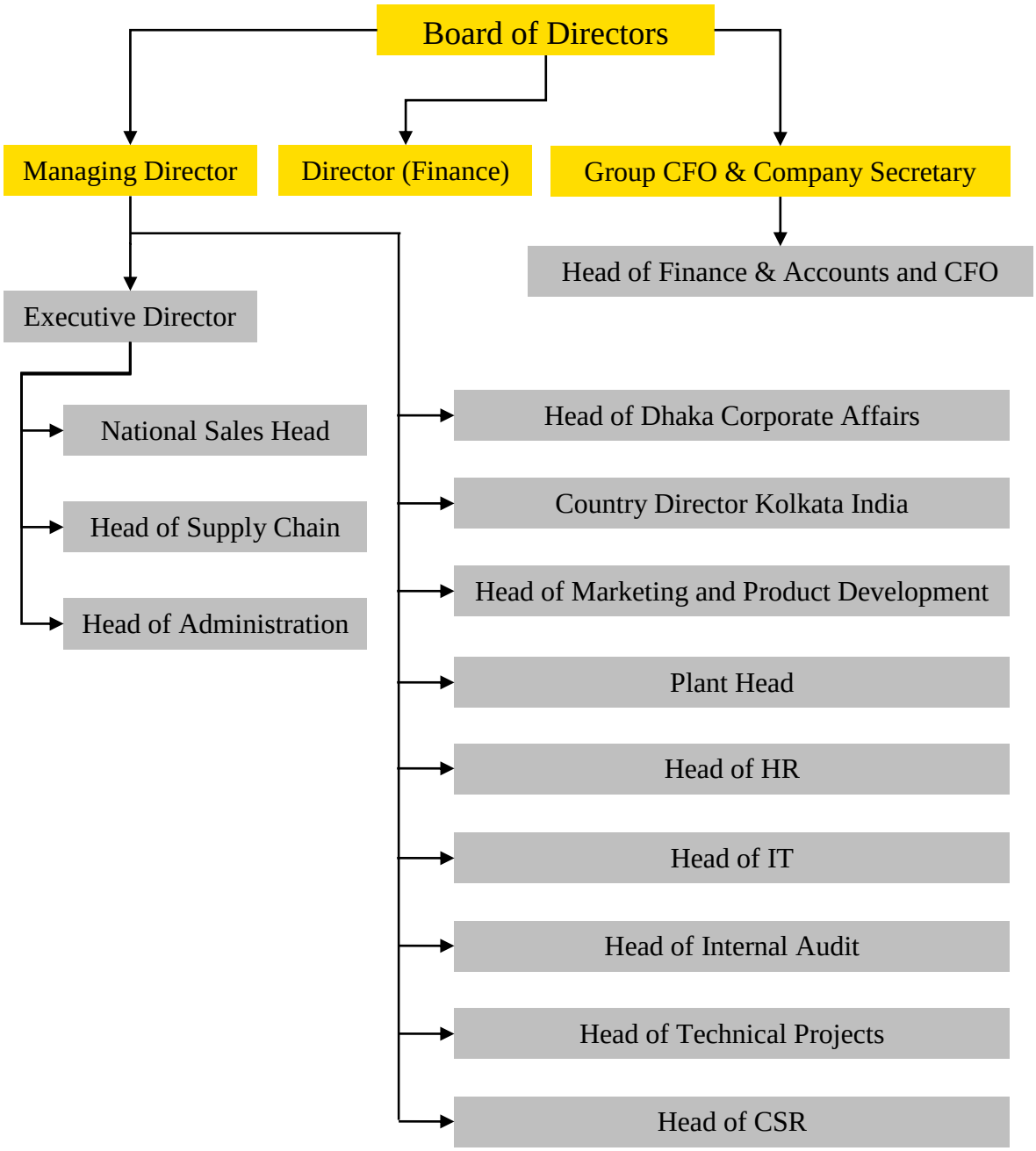
- **BSRM Ultima (Designed for Superior Safety):** All vital installations anywhere in the country like hospitals, schools, airports, railway stations, and bridges cannot be allowed to fail in an earthquake. In a landmark innovation, BSRM brings forth BSRM ULTIMA the reinforcing steel with the unique 'strain hardening' property for the first time in the country with superior safety in the time of earthquake.

- **BSRM Xtrong (Strength in Every Angle):** Xtrong is a high strength structural steel conforming to standards and grades. Channels and Angles section rolled out of this high strength steel provides an economic alternative to steel fabricated structures. BSRM makes Angles, conforming to Grade 50 in different sizes.

- **BSRM Centura (Assured for a Century) - Epoxy Coated Rebar for Corrosion Free Structures:** Corrosion-induced failures cause severe distress to concrete structures is most common in any chemically aggressive environments. Repair and rehabilitation of the affected structures not only cost the exchequer with direct and indirect costs but also cause a lot of inconvenience to the public. Hence, it is essential to plan proper corrosion protection strategy to combat corrosion for the durability of structures, particularly in marine, coastal or industrially polluted areas. Fusion Bonded Epoxy Coating is provides protection against corrosion for the design life of the structures.

(BSRM Website, 2018)

2.8 Schematic View of Organizational Structure



(Annual Report 2016-17, BSRM Limited)

2.9 The Story of BSRM: How a Brand Changed an Industry

In 2008, BSRM became the first steel manufacturer in Bangladesh to launch their flagship product 'BSRM Xtreme', the first 500W-grade rebar in the country. This bold move was seen by many as foolhardy because steel was an extremely low involvement product back at that time. This was a market dominated by retailers, where consumers relied on them.

But BSRM went against the tide by advertising to consumers. In 2008, BSRM launched the iconic 360-degree campaign of BSRM Xtreme involving all media vehicles, where press advertisements showed an elephant standing on a steel rod to exemplify the strength of BSRM rods. Through this campaign, BSRM becomes the first manufacturer to talk about the true purpose of rebar, which is safety.

After 2008, BSRM kept BSRM Xtreme on the forefront of technological innovations by becoming the first rebar to conform to 10 global standards, the first rebar to be EMF tested and the first one to pass the fatigue test at 5 million cyclic loading. This effort was noticed and BSRM enjoyed a pull market effect while the competition was still languishing in the push market. This loyalty helped ward off increased competition in the form of players in the category, even charging a premium price.

Over the period of time, BSRM went miles ahead of their competition by conducting research and using insights to design campaigns to address the decision-making aspect of consumers and educating consumers on what features of steel rods kept a structure safe. That's how the stakeholder campaign was born, where consumers were educated on just how much steel is needed, and why it was important to choose the best steel because one can't change the steel inside once the building is made.

The result of the consistent series of communication resulted in a brand that was not just well known within the steel category, but among all categories of products. The concerted effort of the communication campaign as well as a strong distribution network ensured BSRM's leadership in the market and turned the table around in terms of buyers as the "Individual Home Builder" buyers became the majority of BSRM sales.

BSRM later ventured outside Bangladesh to enter foreign markets, mainly India, because BSRM is the only steel manufacturer in the country to have achieved Indian certification, where BSRM is planning to compete with eminent steel manufacturers in India.

Today, BSRM has become a household name, and more importantly, is synonymous with safety with the slogan of **"BUILDING A SAFER NATION"**. BSRM achieved the Best Brand Award of Bangladesh for 2011, 2013, 2014, 2015, 2016, and 2017; also, has been recognized as the no. 1 brand in Reinforced Steel Category.

(Bangladesh Brand Forum, 2015).

2.10 Organizational Culture of BSRM

BSRM is one of the prominent corporate houses in Bangladesh leading the steel industry of this country with professional excellence and sociable culture.

BSRM always adopts best ethical and transparent business practices to be fair and honest in all its dealings. BSRM always acknowledge and fulfill the obligations of the society and offer the best services to the customers and treat them with respect and honor. Major important aspects of BSRM culture are:

- ☑ Different world class consultancy firms like PricewaterhouseCoopers (PwC), Deloitte brought changes in the culture of BSRM through structural changes, process improvements, and personal developments.
- ☑ The attire of the employees is decent and they are quite friendly. Employees are very much keen on one another.
- ☑ The authority and responsibility are very much clear and the hierarchical organogram is fairly maintained. This gives them the courage to become achievement oriented and bring professional excellence.
- ☑ Employees are prone to changes because they know that change is inevitable and changes bring improvement. To support such intention, different workshops, training, and development programs are very frequent here.
- ☑ The corporate culture is immensely great. The top management keeps a high commitment for an honest and corruption free corporate culture and practice across the organization.

2.11 Corporate Social Responsibilities

BSRM CSR Vision

To integrate social responsibility into BSRM core business decisions, BSRM wants to have CSR at every step of the heart of our Business process. BSRM envision CSR strategy that demonstrates BSRM intent for Caring, Supporting, and Returning to a society where they anchored their business decades ago – this is how they define CSR and search and support interventions encompassing this scope.

BSRM CSR Principles

BSRM commits resources to the extent that it can reasonably afford, not in one-off philanthropic project, rather in a set of strategically planned efforts consistent with BSRM's own corporate strengths and complementary to Programs offered by the Government, to sustain and improve a healthy and prosperous environment, and improve the quality of life of the people living in poverty.

BSRM Group of Companies is involved with the CSR activities over the years. Some major project, undertaken are as follows:

- ☑ SUPPORTING FREE EDUCATION, BURHANI BSRM SCHOOL, CHITTAGONG (APRIL 2006)
- ☑ LIVELIHOOD PROGRAM FOR WOMEN, SHITAKUNDA, CHITTAGONG (JUNE 2013)
- ☑ SHAHEED MINAR, CHITTAGONG (SEPTEMBER 2013)
- ☑ BSRM TRAINING CENTER FOR WOMEN, DURGAPUR, JESSORE (SEPTEMBER 2013)
- ☑ PREVENT DEFORESTATION, SHITAKUNDA (SEPTEMBER 2013)
- ☑ SOLAR HOUSE SYSTEM (SHS), JAINTAPUR, SYLHET (JUNE 2014)
- ☑ THE DAILY STAR SPELLING BEE CHAMPS 21 (APRIL 2014)
- ☑ POVERTY REDUCTION PROGRAM IN URBAN AREA, CHITTAGONG (JULY 2014)
- ☑ PROMOTE HIGHER EDUCATION (AUGUST 2014)
- ☑ CONSERVATION OF ENVIRONMENT, KEPZ CHITTAGONG (OCTOBER 2014)
- ☑ LIVELIHOOD PROJECT IN SALINE WATER AREA MONGLA, KHULNA (NOVEMBER 2014)

- ☑ WATER TREATMENT PLANT DACOBE, KHULNA (MARCH 2015)
- ☑ SAVE FOREST, BANSHKHALI CHITTAGONG (MARCH 2015)
- ☑ INFANT CARE PROGRAM FOR RMG WORKERS (APRIL 2015)
- ☑ WATER FOR COASTAL AREA, SOUTH, BANGLADESH (MAY 2015)
- ☑ SOLAR POWER WATER PUMP, JAINTAPUR, SYLHET (MAY 2015)
- ☑ BSRM-ZCF CLUBFOOT CURE, CHITTAGONG DIVISION (SEPTEMBER, 2015)
- ☑ ENHANCE READING HABIT AND KNOWLEDGE (NOVEMBER 1, 2015)
- ☑ AUTISM TREATMENT & LIVELIHOOD SUPPORT (NOVEMBER 2015)
- ☑ BSRM-CRP VOCATIONAL TRAINING FOR PERSONS WITH DISABILITY (PWD), SAVAR (DECEMBER 2015)
- ☑ BSRM-NDP LIVELIHOOD PROGRAMS IN CHARS OF SIRAJGONJ (DECEMBER 2015).

The program undertaken during the year 2016 are as follows:

- ☑ Vocational Training Center, Chittagong
- ☑ Strengthening Women's Ability for Productive New Opportunities (SWAPNO) – Kurigram and Satkhira
- ☑ BSRM Foundation Medical Center, Mirsarai
- ☑ Supporting Handicapped Sitakunda and Kurigram
- ☑ Conservation of Nature Mirsherai, Chittagong
- ☑ Keep smile cleft lip/palate kids – Sylhet
- ☑ Forest Conservation, Fatikchari, Chittagong
- ☑ Financial support for renovation work of the existing CMH complex, Chittagong
- ☑ Bangladesh Institute of Governance & Management (formerly The Civil Service College), Dhaka

(Annual Report 2016-17, BSRM Limited).

2.12 Moving Towards Eventual Sustainable Growth

To keep human resources safe and sound and the environment clean, BSRM has taken a number of measures. It always gives priority to maintain workplace safe, secure and ensure the green environment for all of the employees as well as for the country.

Green Environment

BSRM Steels Limited uses world-class Water Treatment Plant (WTP) for recycling the water for reusing and to keep the environment free from pollution. The Company has also commissioned Air Pollution Control (APC) system in BSRM Iron & Steel Co Ltd. (BISCO) to keep the air free from Pollution. In the same way, they are going to implement a rainwater harvesting project for their new billet casting plant at Mirershorai. It will have a marvelous positive impact on the environment. As recognition of the effort to keep the environment clean and greener, BSRM was awarded the "Divisional Environmental Award" by Poribesh Odhidaptar.

Human Resources Function

Success isn't possible without a great team. At BSRM Group of Companies, nurturing and supporting human talent is the utmost priority. They believe sustainable growth is only possible if they foster teamwork, develop talent, enhance leadership capability, and maximize the potential of the human capital. BSRM focuses on valued people to optimize their creativity and performance by ensuring a safe and congenial working environment, cohesive corporate culture, appropriate training, reward and recognition, and various employee benefits schemes. Hiring the right person for the right job is the first step in the efforts to maintain a strong, capable, and independent workforce.

Being an **Employer of choice**, BSRM aspires to align the people with their Vision and Values and make them a key factor for success in business transformation and change process. **Talent Acquisition** is a stringent process of recruitment, selection, and strategy to attract qualified potential candidates who are committed to achieving the organizational goals. BSRM **Training and Development** activities are systematic, organized, and ensure that individual training needs are well defined, understood, and catered to. The safety of the people is of paramount importance, and **Health, Safety, and Environment (HSE)** policies are created and implemented to maintain a safe working environment for every

stakeholder. **A well-designed Succession Planning policy** is used to assess, develop, and retain a talent pool in order to ensure a continuity of leadership for all critical/significant positions. BSRM people deserve the best, and hence they focus on their **Benefit Policy** to ensure that the talent receives benefits and allowances beyond the basics. **Rewards and Recognitions** are given to recognize employees for their excellence in service, loyalty, ideas, dedication to the vision and values of the group, and their contribution to change management. The achievements are communicated through **"Xtreme Talk"**, corporate newsletter so that they can all rejoice in the success of the people.

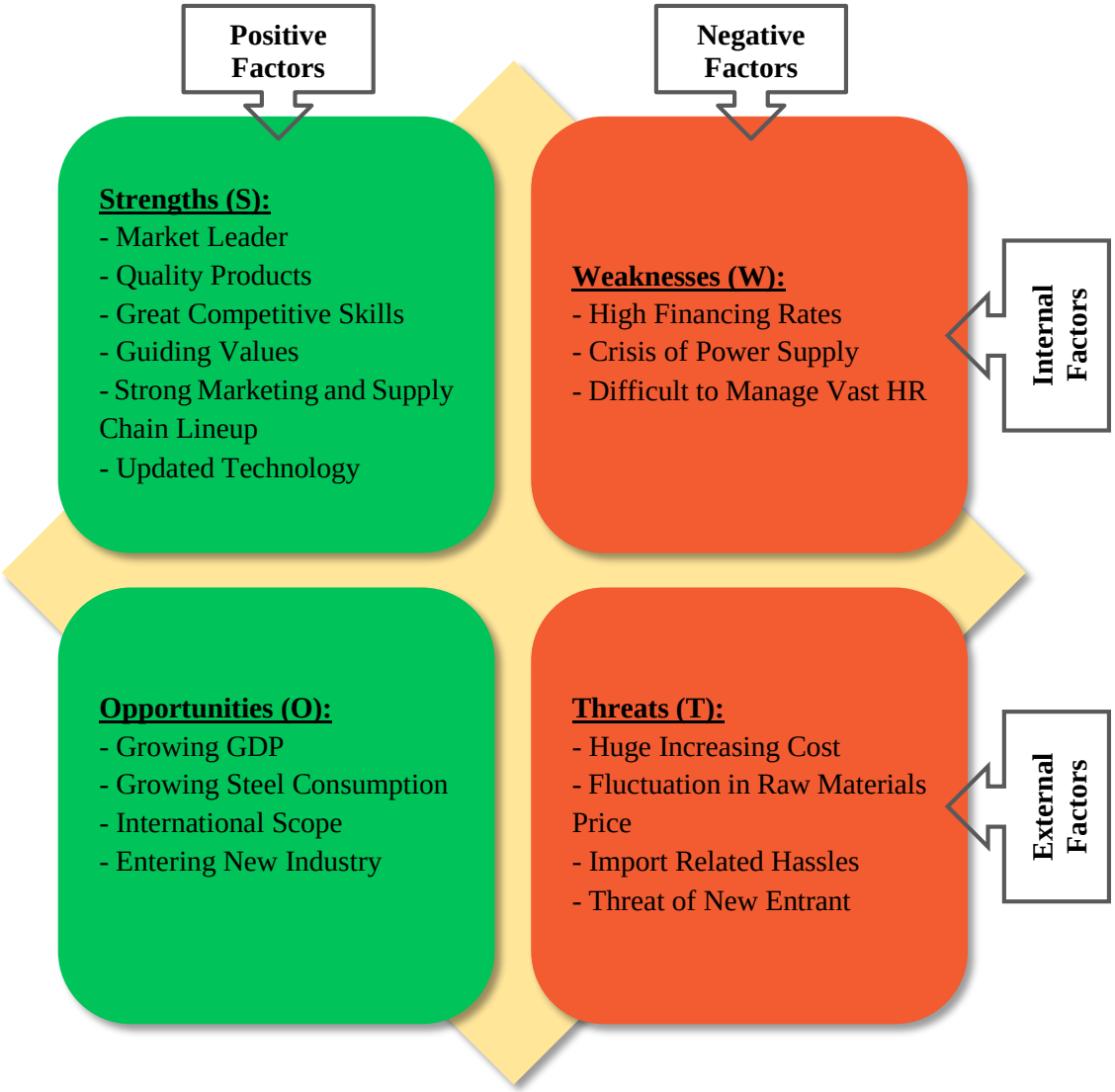
Information Technology

BSRM Group was founded more than 60 years before and continuing its rapid growth more so in the past decade. In such complex rapid growing scenario, the IT-based business-friendly solution is the only way to handle all the data. BSRM IT through Management foresight managed to keep up with this fast & complex growth as an organized entity and began to systematically address the challenges. Today IT as a strategic partner in business enablement plans, controls, and manages all IT-based business issues in a very constructive, productive & controlled manner with periodic reporting & monitoring.

BSRM IT is managing the total network of BSRM Group including server management, managing and upgrading Oracle eBS, developing in-house software integrating with Oracle eBS and providing several levels of support to end user. Last year BSRM IT has focused on ERP up-gradation by modifying and creating various customizations, personalization, reports etc. Last year BSRM IT also provided almost in-house maintenance of ERP, took several initiatives to expand technology, enabled services for the external and internal customers, sales promoter and provide a business solution to the internal department. The key objective of these initiatives was to make the information more available, fast & easily accessible to the stakeholders. Next year BSRM IT will focus on the implementation of Business Intelligence (BI) as well as support. BSRM IT also planned to increase employee efficiency by developing various Android Apps and Software System.

(Annual Report 2016-17, BSRM Limited)

2.13 A Constructive SWOT Analysis of BSRM



Strengths (S):

- ☑ BSRM is the market leader in the steel industry by serving around 30% of the total market.
- ☑ The quality of BSRM products conforms to a great standard and different tests.
- ☑ It has strong competitive skills to fight with the major challenges in the industry.
- ☑ It has 7 core guiding values that give a sense of work and progress.
- ☑ It has strong marketing and supply chain capabilities to dominate the market with ethics and quality products.
- ☑ It has amalgamated with updated technologies from time to time both in production and management to bring accuracy and ease the process.

Weaknesses (W):

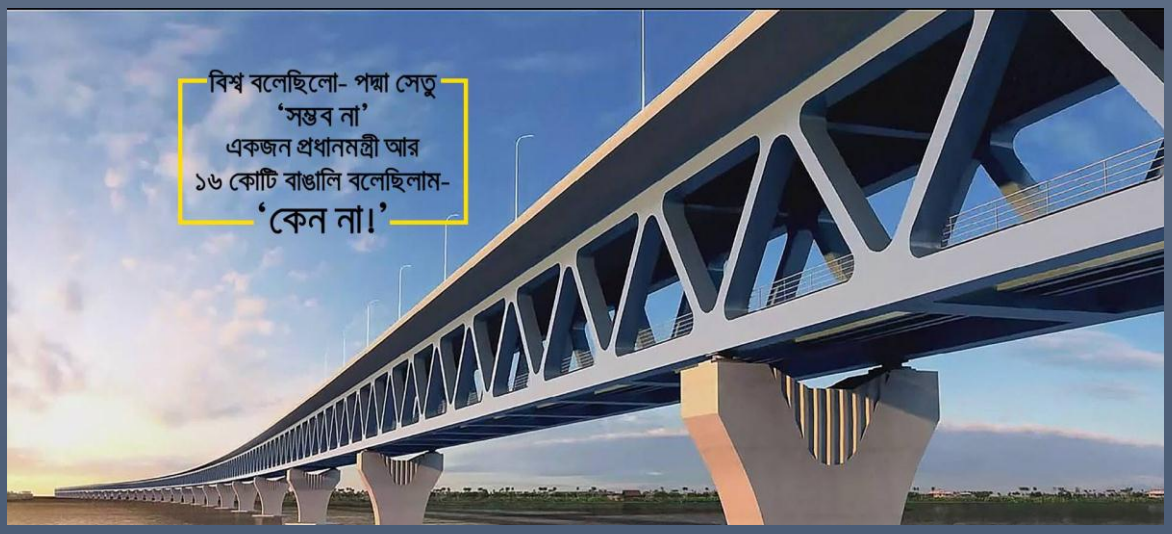
- ☑ BSRM is exposed to high market risks due to the high financing rates. The internal capital management face difficulties in managing projected financial income.
- ☑ Power is one of the major utility services a steel manufacturing firm needs. The crisis of power supply is immense in this country. The company is aware of such risks although self-sufficiency is quite difficult.
- ☑ A lot of employees are working around in different factories, distribution, and corporates. Managing this vast human resource is really challenging.

Opportunities (O):

- ☑ Bangladesh is an emerging growth market for infrastructure development. Different private & governmental projects need a huge amount of steel.
- ☑ According to the projection of numerous steel industry expert, the average steel consumption in Bangladesh is going to be double in 2022 (Current: 25 Kg).
- ☑ Now, BSRM serves the Indian market in a very tiny portion. Huge foreign feasible investment can widen the scope.
- ☑ BSRM has taken a vow to create a safer nation with its quality steel products. Still, in the near future, there is an immense scope to explore other industries with related diversification such as safety products for roads/building/security service, construction, real estate etc.; also, with another unrelated diversification.

Threats (T):

- ☑ The steel industry is a heavy industry which needs a huge investment in different aspects. The increasing costs of these aspects are a great threat to keep a reasonable price of the finished products.
- ☑ BSRM is highly dependent on the international market to import raw materials (about 90%). The price fluctuation of raw materials impacts the overall cost.
- ☑ The congestion in the port and commercial wing related problems create a huge impact on the cost and overall production system because the lead time of different materials and products.
- ☑ Since the industry attractiveness is very much high for the last few years, new companies are trying to harness the cream from the market. Though BSRM is constantly trying to maintain its market position through quality and innovation.



Chapter 03

Supply Chain Management (SCM) of BSRM

BUILDING A SAFER NATION

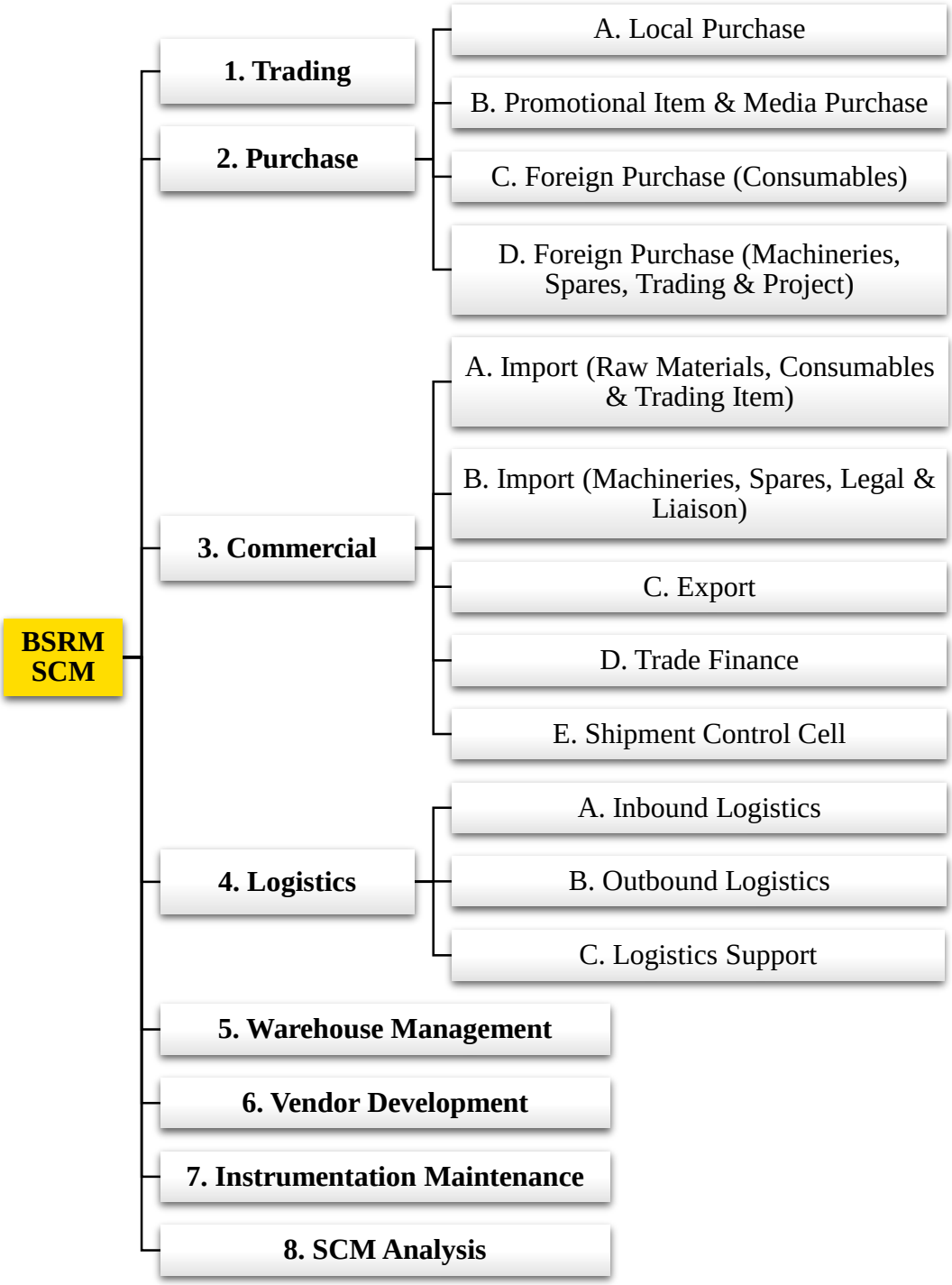
BSRM

Chapter 03

SUPPLY CHAIN MANAGEMENT (SCM) OF BSRM

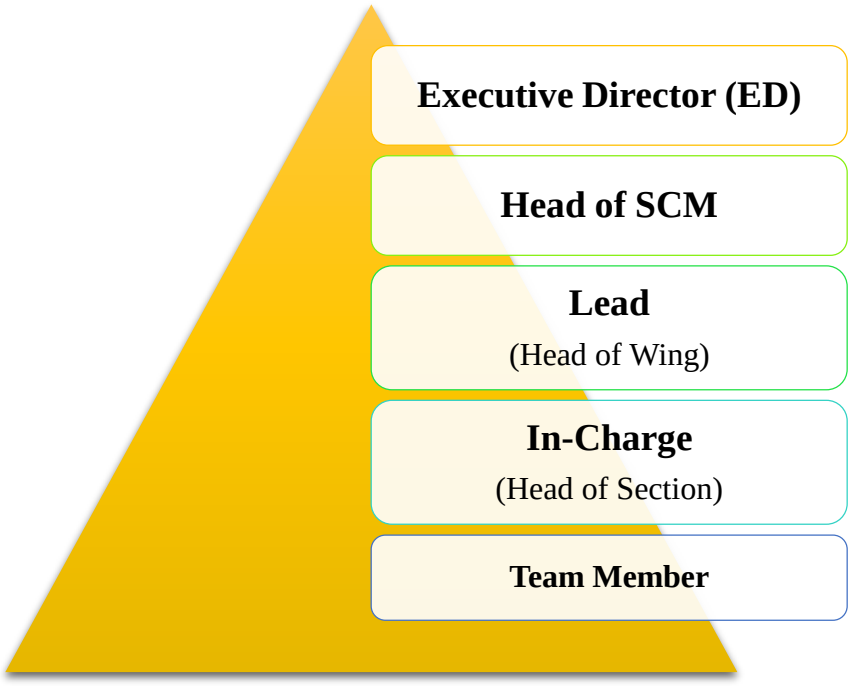
3.1 Structure of BSRM Supply Chain Management (SCM)

The structure of BSRM Supply Chain comprises the following wings:



3.2 Schematic Organogram of BSRM SCM Department

BSRM SCM is one of the biggest supply chain management of Bangladeshi companies. The scope and people working in this department are involved in the huge amount of activities on organizing the overall flow of products, information, and funds.



- The authority flows from the Top to Bottom.
- The Executive Director (ED) supervise the SCM Department through the Head of SCM, who in turn supervise and manages all the activities of SCM.
- Leads are responsible for a particular wing of the SCM Department. Ex- Trading, Purchase, Commercial, Logistics, and Warehouse Management etc.
- In-Charges are responsible for a particular section under the wing. Ex- Local Purchase, Foreign Purchase, Import, Export, Inbound Logistics, and Outbound Logistics etc.
- Team Members are supervised under the In-Charges. The team members are responsible for particular tasks assigned to them as such someone is working for SMW/BISCO/SML/BSRM Mills/BSRM Steels. They are also divided into different teams based on the nature of the tasks assigned to them.
- Around 150 people are working in the management level, and in total around 250 people are working under this whole department.

3.3 Breaking Down of Each Wing

3.3.1 Trading

The primary activity of the wing is to buy scrap according to the requirement of the company from local sources, and assist in selling required materials to different internal and external customers.

The main source of this local scrap is from the ship breaking scrap purchase. There is a requirement of 4,000 Tons/Day of scrap, out of which only around 400 Tons/Day are fulfilled from the local sources i.e. 10%. Because of using the ship breaking scraps, the quality of the steel made out of BSRM is so high and passes different tests. There are 40-45 enlisted scrap suppliers of BSRM, out of which 15-20 supply scraps regularly.

The trading wing also purchases some structural trading items needed by the local demand and sells them through the sales department. Also, at times, the trading department assists the sales department in selling to the external foreign companies who are involved in different major projects of the country. While purchasing regular products from BSRM, they put conditions for managing other types of materials and products required for the projects because they don't know the local companies well. They will buy the steels from BSRM provided that BSRM manages and sells those products to those foreign companies. Provisions such as Tariffs, VAT, and Profits are adjusted to the sales price.

❖ **Subject Matters:**

1. Scrap Purchase/Receiving Procedure
2. Purchase of Structural Trading Items
3. Assisting the Sales Department in Selling to Foreign External Companies

❖ **What do they buy?**

The main items that are bought by this wing are:

- ☑ Local Scrap – HMS, LMS, Fresh Light etc.
- ☑ Structural Trading Items – MS Channel, MS Angle, MS Plate, SS Plate, H-Beam, I-Beam, Girder etc.
- ☑ Materials and supplies as per the requirement of external foreign companies involved in different major projects of the country.

❖ **What do they sell?**

The trading wing is not directly related to selling products to any external party. But it assists the sales department of the company to sell structural trading items required by the local demand; and requirement of extra materials and supplies by foreign companies involved in different major landmark infrastructures of the country who may not have a proper introduction or knowledge about the local market.

❖ **Major Receiving Sites of the Scrap Items:**

These are the internal customers of the BSRM Company.

Name	Accepts	Scrap Processing	Billet Production
1. Bangladesh Steel Re-Rolling Mills (SMW), Nasirabad.	Only Processed Scrap	-	YES
2. BSRM Steel Melting Unit (Former BISCO), Nasirabad.	Only Processed Scrap	-	YES
3. BSRM Steel Mills Ltd. (SML), Mirashrai.	Both Processed & Unprocessed Scrap	YES	YES
4. BSRM Recycling Industries Ltd., Baroawlia.	Only Unprocessed Scrap	YES	-

❖ **Major Buyers of the Sold Items:**

These are the external customers of the BSRM Company. The companies are involved in the implementation of landmark infrastructure projects of the country who are the major buyers of extra materials and supplies.

- ☑ Multipurpose Bridge
- ☑ Flyover
- ☑ Power Plant
- ☑ Water Treatment Plant
- ☑ Railway
- ☑ Elevated Express Way Project etc.

❖ **Classification of Melting Scraps**

1. **Heavy Melting Scrap (HMS):**

☑ **Grade – A:** These scraps are sent directly to the production plants because they are processed. These are small in size and ready to be used in the production input process.

Plate Cut Piece Anchor, Anchor Chain Cutting Piece, Shaft of Anchor Chain, Rod End, Shaft End, Angle End, Billet End, Pipe Flange Plate, Corner Cutting Anchor Piece, Sheared Plate End of Re-Bar End, Oval Cutting Nut & Bolts, Gas Cutting Piece with Minimum Thickness ¼" (6.35 MM), and Length Maximum 16" (400 MM) Clean and Free of Dust and Corrosion of Mild Steel.

☑ **Grade – B:** These scraps cannot be sent directly to the production plants because they are not processed. These are large in size and need to be cut & processed before being ready to be used in the production input process.

Plate Girder, Angle, Shaft, Rod, Pipe, Flange, Joist, Beam etc. of Mild Steel Free of Excessive Rust & Corrosion and Dust with Minimum Thickness ¼" (6.33 MM) as above with Length over 16" (400 MM) with Maximum Weight of Individual Piece Should Not Exceed 500 Kgs.

2. **Light Melting Scrap (LMS):**

☑ **Grade – C:** Scrap Consisting of Tin Plate Cutting, Milk Pot Cutting, Printed Sheet Cutting, (C = 0%), Stamps from Loose or Bundle.

☑ **Grade – D:** Light Scrap of Ship Breaking Yard Having Thickness Less Than ¼" (6.35 MM) with Length as per Grade – B, Hoops, Steel Strips etc.

3. **Trimming Coil – Fresh Light:**

Fresh lights scraps are not the direct & actual material for steel production. But these scraps are used in the production process to control the amount of carbon in the steel because the excess amount of carbon in the steel can raise the issue of the quality of the steel. These work as medicine material in the production of steel.

☑ **Grade – E:** C.R. Coil Trimmings (C = 0%)

☑ **Grade – F:** Washer Cutting

☑ **Grade – G:** Local Light Consisting of Used Tin Pots, Sheets etc.

☑ **Grade – H:** Local Scraps Heavy, Ship Yard Heavy Scrap.

❖ **Input and Output in the Process:**

Subject Matters	Input	Output
Scrap Purchase/ Receiving Procedure	Un-Order Receive	Sending Bill to the A/C Department
Purchase of Structural Trading Items	Pro-forma Invoice (PI)	Send PI to the Commercial Wing
Selling to Foreign External Companies	Purchase Requisition (PR)	Shipment

❖ **Process Steps:**

Scrap Purchase/Receiving Procedure:

1. Receiving of Un-Order Receive of scrap materials from the scrap supplier in different receiving site.
2. Preparing Truck Gate Entry – by checking Party Challan / VAT Challan.
3. Preparing Inward Gate Pass (IGP) – by inputting Party Name, Driver Name, and Truck No.
4. Weighting the received truck and scraps.

   1st Weight: In the 1st weight, both the truck and scraps are weighted. Steps:

   ☑ Input IGP No. – Truck No. & Party Name Automatically Shown in Weight Slip.

   ☑ Party Qty. & Weight Qty. Check.

   2nd Weight: In the 2nd weight, only the truck weight is weighted, so that the weight of the actual scrap can be inferred from here. Steps:

   ☑ Input 1st Weight No.

   ☑ Take Weight.
5. Preparing Provisional Goods Received Note (GRN) by the receiving site authority. Steps:

   ☑ Issue Provisional GRN

   ☑ Input Qty.

   ☑ Create Number Automatically
6. Preparing Purchase Order (PO) by the trading wing. Steps:

   ☑ Make PO from the received bills of suppliers through the use of internal ERP system

   ☑ Send PO for Approval to Head of SCM; if needed, to the Executive Director (ED) of the company depending on the amount.

   ☑ PO Approve

- ☑ Match with Provisional GRN by considering different rates and dates of the bill through the internal ERP system
- ☑ After Matching with PO, Inform PO Number to Receiving Site for Making Final GRN

7. Preparation of Final GRN by the receiving site.
8. Check Final GRN, then the Bill is sent to the Accounts Department for payment. According to the policy, after the initial receiving of the bill, afterward, it takes 3 days to clear the bill.

Purchase of Structural Trading Items:

1. Receiving of Pro-Forma Invoice (PI) from the foreign supplier.
2. Preparing Purchase Order (PO) according to the requirement.
3. Send the PI to the Commercial Wing (Import) for further actions.

Selling to Foreign External Companies:

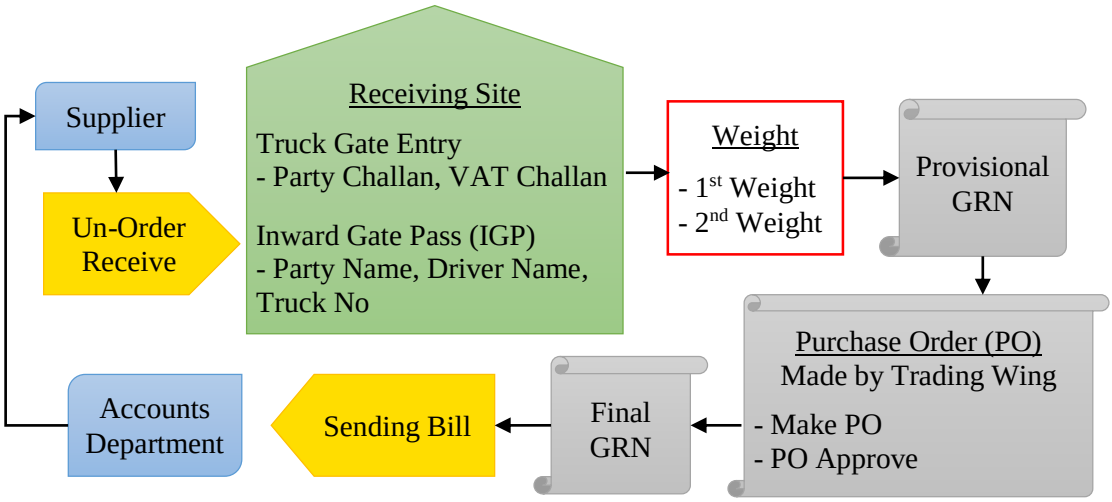
1. Receiving the Purchase Order (PO) from the buyer (foreign external company) by the sales department.
2. Receiving of Purchase Requisition (PR) from the sales department by the trading wing.
3. Preparation of another PO by the trading wing.
4. Shipment of the products to the destination site.

❖ **Involving Parties and Their Tasks:**

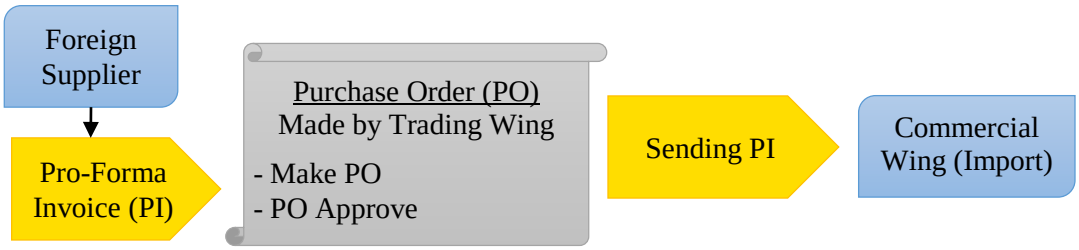
1. Suppliers – they supply scraps.
2. Scrap Receiving Site – different plants of the BSRM Company.
3. Trading Wing – the wing of the SCM department that coordinate the functions.
4. Sales Department – who sells the structural trading items to the local companies, and required materials to the foreign companies.
5. Local Companies – buyer of structural trading items.
6. Foreign Companies – buyer of required extra materials along with regular products of BSRM.
7. Accounts Department – who pays the bills of the suppliers.

❖ Flow Chart:

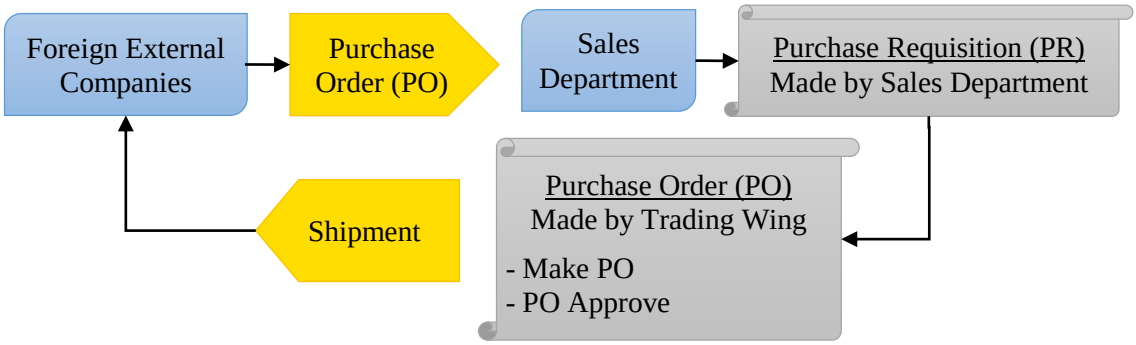
Scrap Purchase/Receiving Procedure:



Purchase of Structural Trading Items:



Selling to Foreign External Companies:



❖ Involving Documents:

Scrap Purchase/Receiving Procedure	Purchase of Structural Trading Items	Selling to Foreign External Companies
1. VAT Challan 2. Inward Gate Pass (IGP) 3. Weight Slip 4. Provisional Goods Receiving Notes (GRN) in ERP 5. Bill from Supplier 6. Purchase Order (PO) in ERP 7. Final GRN in the ERP	1. Pro-forma Invoice (PI) 2. Purchase Order (PO)	1. Purchase Order (PO) 2. Purchase Requisition (PR)

3.3.2 Purchase

Purchase, a wing of supply chain management that works for inputs of any things/materials/supplies/products required by the organization. It is one of the vital wings of the organization because the execution of many other functions is highly dependent on the purchase wing. Different person/s determine the business requirements for each category spend using the AQSCIR Model:

A - Assurance of Supply
Factors directly associated with the availability of goods/services. The deadline is of high priority irrespective of any other issue.
Q - Quality
Key features which ensure the performance of goods or services to a consistent, specified standard.
S - Service
Factors which facilitate the delivery of category objectives. For Example, Warehousing and Transportation Facility.
C - Cost/Economic Values/"Value for Money"
All cost factors associated with the purchase, utilization, and management of category. Ensuring "value for money" – measuring the average unit cost of each alternative and choosing the one that best satisfies our need.
I - Innovation
Continuous improvement of all parts of customer experience intended to reduce costs or create competitive advantage.
R - Regulatory Compliance
Acting in accordance with stipulated laws, regulations, policies, and procedures.

In addition to that, the purchase wing works for creating alternative sources to handle future contingencies and gain additional bargain/negotiation power. It handles and manages the risk of overstock or out-of-stock issue. It also manages financial demurrage created due to port congestion and other problems, ensures the smooth flow of production at any cost.

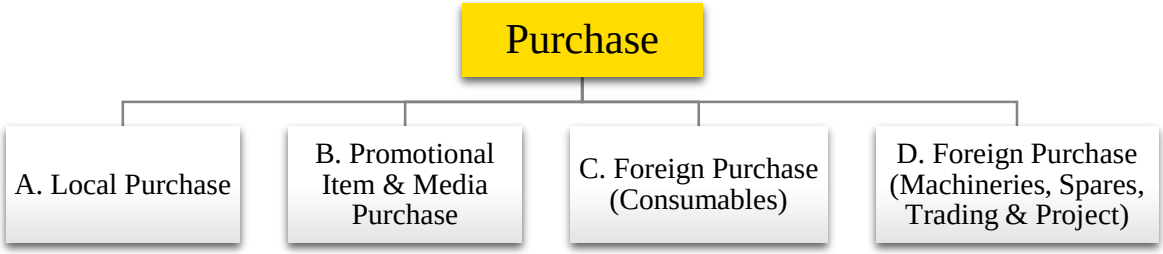
❖ **Traits That a Purchase Executive/Officer Must Have:**

1. Communication skill – the single most important thing in supply chain management
2. Co-ordination skill – the ability to align and merge between parties and activities
3. Dedicated – being enthusiastic and committed to the assigned task
4. Responsible – being responsive to handling the assigned task
5. Accountable – being liable for the assigned task
6. Decision maker – prompt and precise on taking decision
7. Honest – be authentic on the assigned task

❖ **The Need to Search for New Suppliers/Vendors Over the Existing Ones:**

1. Creating alternative sources to tackle future contingencies.
2. To have better negotiation power with the current vendors.
3. New vendors mean new ideas about the new technology. So continuous development and improvement program can be executed.

There are 4 major sections under the Purchase wing of BSRM Supply Chain Management. Each section entails different functions.



A. Local Purchase

The primary activity of the section is to purchase materials and supplies from local sources according to the requirement of the company (both factory & office).

The main source of local purchase of factory and office items are local sources. Sometimes, the local purchase needs to purchase from the foreign sources but they don't purchase directly from foreign sources. Instead, they use the agents who are expert in purchasing those items from the foreign sources. There are around 450 suppliers of BSRM local purchase, out of which 5% are such suppliers who directly supply product based on a yearly rate agreement without any negotiation of prices.

❖ **What do they purchase?**

The main items that are bought by local purchase are:

Factory Items	Office Items
☑ Consumable Items	☑ Stationery Items
☑ Electrical Items	☑ Toiletries Items
☑ Mechanical Items	☑ Cleaning Items
☑ Construction Items	☑ Printing Items
☑ Spare Parts Items	☑ IT Items
☑ Lubricants	☑ Hardware/Software Items

❖ **Subject Matters:**

1. Purchase of Materials and Supplies

❖ **Input and Output in the Process:**

Subject Matters	Input	Output
Purchase of Materials and Supplies	Purchase Requisition (PR)	Sending Bill to the A/C Department

❖ **Process Steps:**

1. Receiving of Purchase Requisition (PR) from the related production department (factory), and administration (office).
2. Collecting Quotations from different suppliers according to the materials and supplies requirement quoting product description, rates etc.
3. Preparing a Comparative Statement (CS) mentioning product descriptions, qty., unit price, amount, discounts, and other terms & conditions. Then CS has to be prepared and approved by the respective higher authority.
4. In this stage, the buyer (local purchase) tries to convince the supplier and end user about the specification of the products, because sometimes, the specifications according to the PR and Quotation don't match. Here, the buyer even arranges a meeting between the supplier/s and end users. Then they both decide about the final specification of those products. A pre-delivery inspection is made at this time so that the products don't get rejected.
5. Negotiate with the suppliers on prices. Selection of supplier/s based on their reliability, past history, relationship, and other factors when the rates, product specification, qty. etc. become identical. Then, CS is Finalized and Approved.
6. Purchase Order (PO) is prepared. There are two types of PO: i) Standard PO (For purchasing once, and short-term items – ex: Toiletries); ii) Blanket PO (Long-term agreement items where partial payment will be made periodically – ex: Catering service for a year, but payment will be made weekly/monthly).
   - ☑ Make PO from the final negotiation price through the use of internal ERP
   - ☑ Send PO for Approval to respective In-Charge, Lead, Head of SCM; if needed, to the Executive Director (ED) of the company depending on the amount
   - ☑ PO Approve
   - ☑ PO is sent to the supplier/s

7. Shipment of the products to the destination site. It can be done by BSRM logistics, or supplier's logistics depending on the condition. If supplier's logistics is used, then the price includes the carrying cost.
8. A Provisional Goods Receiving Note (PGRN) is made before the quality inspection.
9. The goods are Accepted in the gate, then Received by the store, then Delivered to the end user after the quality inspection. Final Goods Receiving Note (GRN) is prepared at this stage.
10. Then the Bill and Challan are received by the buyer (local purchase).
11. The Bill is sent to the Accounts Department for payment. According to the policy, after the initial receiving of the bill by the buyer, it takes 4-5 days to clear the bill.

The average lead time (PR to Product Delivery) for different products are:

- ☑ On an average, a provision of 15 days is kept.
- ☑ For Normal/Common Items (Toiletries): 3 days.
- ☑ For Fabrication Service (Machine Shutdown and Repair Service): 15 days – 1.5 months.
- ☑ For Manufacturing Items (If any item needs to be made according to a particular design or specification): 7 – 10 days.

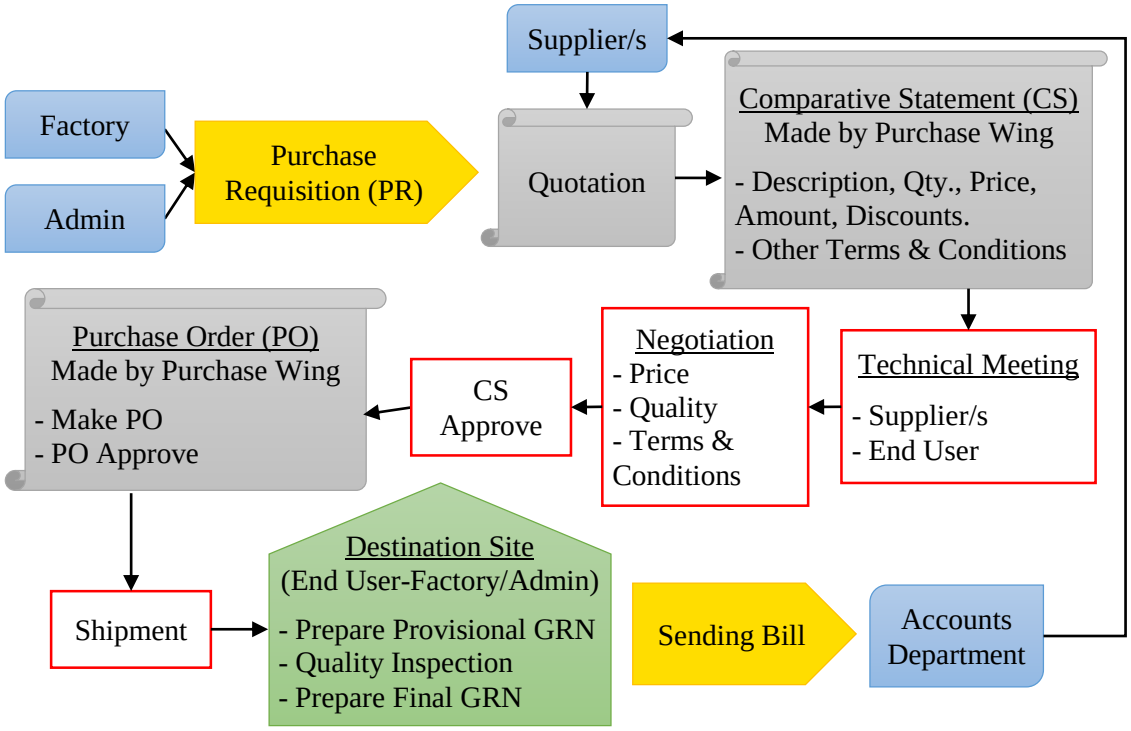
❖ **Involving Parties and Their Tasks:**

1. End Users – they use the material and supplies. They can be the factory, office, or store where the goods are kept.
2. Buyer – the local purchase officer of the purchase wing.
3. Suppliers – they supply the materials and supplies.
4. Agent – assists in purchasing the materials and supplies from the foreign countries.
5. Accounts Department – who pays the bills of suppliers.

❖ **Involving Documents:**

1. Purchase Requisition (PR) at ERP
2. Quotations
3. Comparative Statement (CS)
4. Purchase Order (PO) in ERP
5. Delivery Challan
6. Goods Receiving Notes (GRN) in ERP
7. Bill from Supplier

❖ **Flow Chart:**



B. Promotional Item & Media Purchase

The primary activity of the section is to purchase and manage promotional items and media according to the requirement of the end user from suppliers, vendors, and agencies.

☑ The marketing department, sales department, legal department, corporate affairs department, human resource department, accounts department, and the like are the major sources who provide requisitions for different items in this section.

☑ Marketing and sales are the 90% end user of this section.

☑ As the process goes through, the section checks and analyzes the Production Schedule Chart, Process Flow Chart, Purchase Price Cost Analysis (PPCA), Bill of Quantity (BOQ), Annual Rate Contract (ARC) etc. to proceed on this process.

Basically, the marketing department, and sales department jointly with the creative agency, and media buying agency decides about the design and planning of the media content.

☑ The agency provides a whole plan and the marketing department approves that plan.

☑ The agency works based on a fair percentage of commission. After that, this Media Purchase section mediates the negotiation and coordination of the whole process.

☑ BSRM is engaged with 12-15 TV Channels and numerous national Newspapers of the country on the monthly and yearly basis for a promotional campaign.

☑ It is also engaged in Program Branding/Program Sponsorship in different channels, publishing Magazine Ads and regular Newspaper Panel Ads.

☑ There are 25-30 vendors/suppliers who supply the promotional items to this company.

❖ **What do they purchase and manage?**

1. Promotional Items:
   i. General Promotion: Gift Items – Mug, Pen Drive, Key Ring, Gel Pen, Money Bag, Gift Box, Umbrella etc.
   ii. Performing Gift: Marriage Gift, Suit Piece, Shari, Panjabi, Wrist Watch, Cell Phone, Gold, and Diamond etc.
   iii. Corporate Gift: BSRM purchases instantly for High Officials, Guests, and Visitors for future relation and better performance.
   iv. Festival Gift: English New Year, Pahela Boishakh, Chinese New Year.
2. Printing Items: All types of Leaflet, Brochure, Calendar, Annual Report etc.
3. Event Management: AGM, Golf, Sales Conference, Dealers' Night, Seminar, Stall.
4. Media Buying – TV
5. Media Buying – Print
6. TVC/CG/AV Production
7. Outdoor Branding: Billboard, LED Display TV, Dealer Shop Branding, Wall Paint, Shop Sign, High Pole etc.
8. Social Media Purchase: Facebook, YouTube, Google etc.
9. Business Expense: donations, charities etc.

❖ **Subject Matters:**

1. Promotional Item Purchase
2. Media Purchase

❖ **Input and Output in the Process:**

Subject Matters	Input	Output
Promotional Item Purchase	Purchase Requisition (PR)	Bill to the A/C Department
Media Purchase		
Printing Item; Event Management; Media Buying – TV and Print; TVC/CG/AV Production		
Billboard	Location List	
Dealer Shop Branding	Dealer List	

❖ **Process Steps:**

The items purchased by the Promotional Item and Media Purchase are of various types resulting in different inputs-outputs, and Process Steps.

Promotional Item and Printing Item / Event Management:

1. Receiving of Purchase Requisition (PR) from end user
2. Prepare Request for Quotation (RFQ)/ Request for Proposal (RFP) sheet
3. Collect quotations from the vendors
4. Demonstration of project proposal with financial aspects (Event Management)
5. Prepare a Comparative Statement (CS) and Purchase Price Cost Analysis (PPCA) based on the quotation
6. Negotiate with the vendors on the price of the service
7. Approving vendor/s and CS
8. Preparing Purchase Order (PO)
   - ☑ Make PO
   - ☑ Send PO for approval to respective In-Charge, Lead, Head of SCM
9. Check the sample before going for bulk production
10. Final production
11. Shipment and delivery to the destination site (Promotional Item and Printing Item)
12. Bill is received by the Media Purchase section
13. A Goods Receiving Note (GRN) is prepared by the end user
14. The Bill is sent to the Accounts Department for payment. According to the policy, it takes 15-30 days to clear the bill.

Media Buying – TV:

PR is received from marketing department with monthly airing plan for each channel developed by the agency. After the approval of PO, the proposed campaign – TVC goes on air. After one-month airing agency shares a monitoring report for all channels. The monitoring report is generated by an inspection agency called Media Source. Marketing check monitoring report deviations (planned vs. actual) and share with the section. A final feedback is given to the agency after reviewing the monitoring report. Based on the facts, the agency prepares the bill and send it to the Media Purchase section. GRN is prepared and Bill is sent to the Accounts Department.

Media Buying – Print:

PR is received with detail E-mail for booking. A Bill of Quantity (BOQ) is made with detail specification and booking is ensured accordingly. In case of the campaign launch, the agency does all the booking. In other cases, BSRM directly books with the authority. After publishing, the Bill is received by the Media Buying section. PO is prepared based on BOQ and approved. GRN is prepared and Bill is sent to the Accounts Department.

TVC/CG/AV Production:

Marketing department shares story with proposed directors through email and PR. Media Purchase section float Request for Proposal (RFP) to those directors with a Bill of Quantity (BOQ) format. CS is prepared. Director is selected after an internal meeting between Media Purchase section and Marketing department. Negotiation, CS, and PO is prepared and approved. A triangular meeting (Marketing, Director, and Production House) is done. Shooting and post-production task is done. Bill is received by the Media Purchase section. GRN is prepared and Bill is sent to the Accounts Department.

Billboard:

Marketing department provides location list of billboards for hiring yearly. Request for Proposal (RFP) is then send to the vendors. The vendors give the proposal and with image of respective billboard location which is submitted to the marketing for review. Marketing department decides and approves the best locations and send it to the Media Purchase section. They prepares Purchase Price Cost Analysis (PPCA) and negotiates with the vendors on price, and approves CS. After the final execution of the billboard campaign, PR is received, PO is prepared and approved. Then Bill is received by the Media Purchase section. Final inspection of the dealer shop branding service. GRN is prepared and Bill is sent to the Accounts Department.

Dealer Shop Branding:

It is almost similar to Billboard campaign. Here, marketing department provides list of dealers for dealer shop branding. The Media Purchase section contacts different vendors for branding all over the country. Vendors provide quotations according to the specification. CS is prepared by collecting quotations from vendors, negotiation is done with the vendors on prices of the service and approve CS. After the final execution of

the dealer shop branding, PR is received, PO is prepared and approved. Bill is received by the Media Purchase section. Final inspection of the dealer shop branding service. GRN is prepared and Bill is sent to the Accounts Department.

❖ **Involving Parties and Their Tasks:**

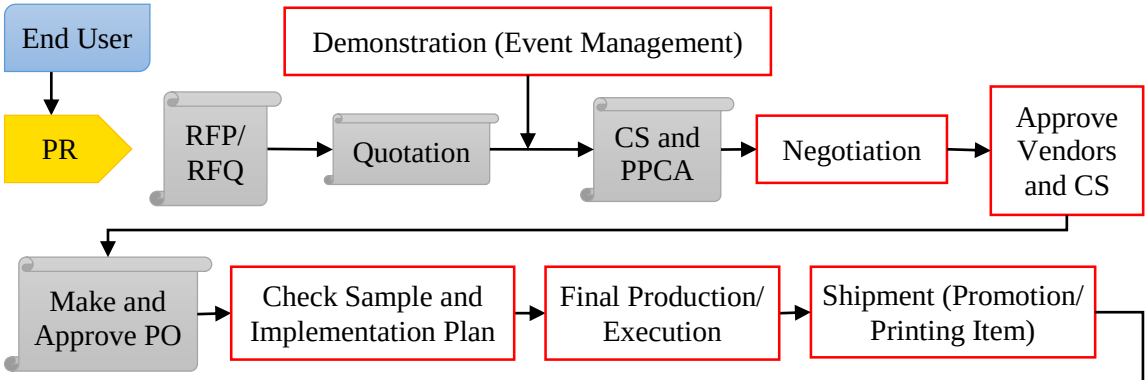
1. End Users – These are different departments of the company - Sales, Marketing, HR, Legal, Corporate Affairs etc. They give the products/services to different stakeholders such as customers, dealers, VIPs, Industry Key Persons, charities etc.
2. Promotional Item & Media Purchase Section – they mediate the whole process.
3. Agency – the media buying agency.
4. Media Source – the provide monitoring/analytics report about the media.
5. Vendors – they serve us with different products or services.
6. TVC Production House – they produce TVC according to the requirement.
7. Accounts Department – which pays the bills of agency, vendors, and other parties.

❖ **Involving Documents:**

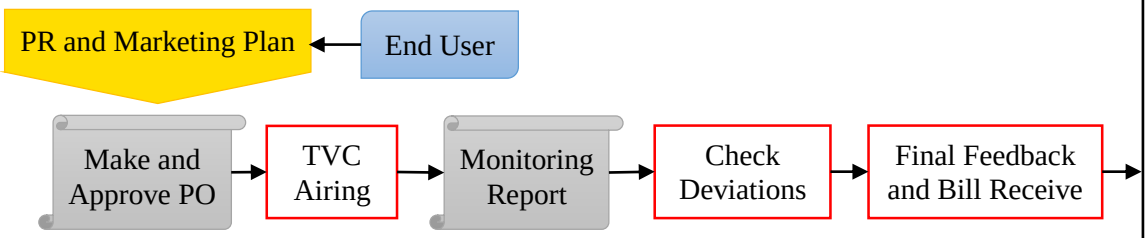
1. Purchase Requisition (PR) at ERP
2. Production Schedule Chart
3. Process Flow Chart
4. Purchase Price Cost Analysis (PPCA)
5. Bill of Quantity (BOQ)
6. Request for Quotation (RFQ) or Request for Proposal (RFP)
7. Quotations
8. Comparative Statement (CS)
9. Purchase Order (PO) in ERP
10. Goods Receiving Notes (GRN)
11. Bill from Supplier

❖ Flow Chart:

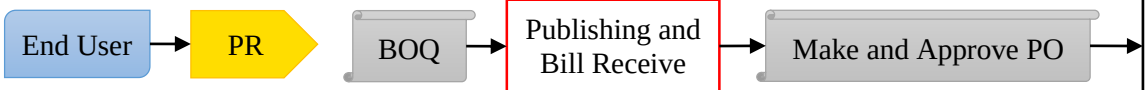
Promotional Item & Printing Item / Event Management:



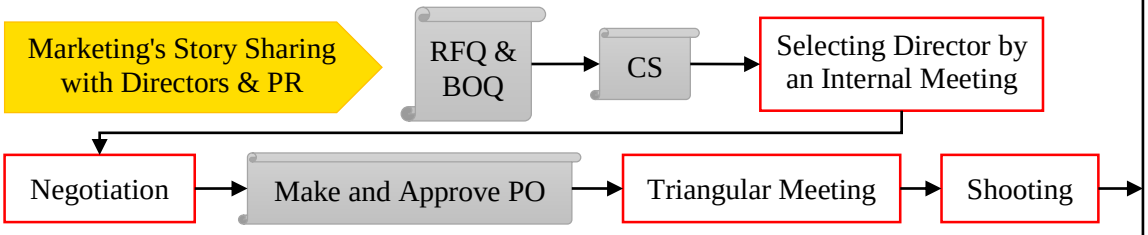
Media Buying – TV:



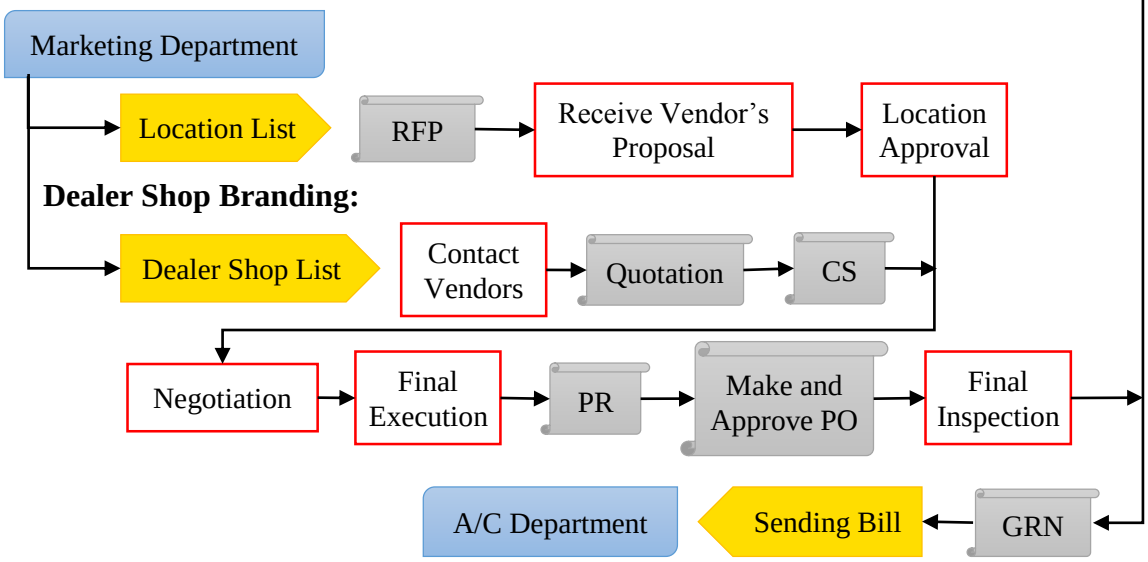
Media Buying – Print:



TVC/CG/AV Production:



Billboard:



C. Foreign Purchase (Consumables)

The primary activity of the section is to purchase consumables from foreign sources according to the requirement of the billet manufacturing plants (SMW, BISCO, and SML).

The main source of consumable items is the foreign sources. Maximum 3%-4% consumable items are collected from the local sources at times. India is the major supplier of these items. Besides, the consumables are also collected from China, Germany, Italy, and Japan. There are around 40-45 suppliers of these items. Some suppliers are a monopoly on a particular item. Though this section basically sources from established suppliers, it works for creating alternative sources with new vendors on a trial basis. The lead time for the purchase of consumables is usually considered for 3 months. Unreasonable overstock of the consumables is not encouraged.

❖ **What are Consumables?**

Consumables are the supporting inputs in production which are consumed in a fixed manner. These are different from i) Raw Materials - which are the main ingredients and are visible in the finished product, and ii) Machinery or Spares – equipment and parts that are used in the production. Since the amount of consumable is fixed in consumption, there is no specific purchase requisition for these inputs, and this wing follows auto procurement procedure rather than an indent procurement procedure. The stock of consumables is checked every single week and the purchase process starts with the inquiry.

❖ **What Do They Purchase?**

There are more than 200 consumables items for billet manufacturing plant ranging from Quartzite Powder, Ferromanganese, Ferrosilicon, Silicomanganese, Pet Coke, Met Coke, Calcium Carbide, Graphite Electrode, Copper Mould Tube, Silicon "O" Ring, Nozzle, Mould Powder, Ladle Well Block, Refractory Castables, Safety Bricks, Metal Zone Bricks, and a lot more.

❖ **Subject Matters:**

1. Purchase of Consumables from Foreign Sources

❖ **Input and Output in the Process:**

Subject Matters	Input	Output
Purchase of Consumables from Foreign Sources	Weekly Stock Report	Quality Feedback

D. Foreign Purchase (Machineries, Spares, Trading & Project)

The primary activity of the section is to purchase machinery & spares from foreign sources according to the requirement of the manufacturing plants.

Machinery and spares are very much vital for any kind of industry, especially if it is a manufacturing one. A heavy production process like BSRM steel manufacturing requires a huge initial investment for purchasing heavy capital machinery. Also, subsequently, the spares get obsolete over time. So regular additional investment and purchase are necessary.

The purchase of machinery and spares is a very much complex and lengthy process, unlike consumables. Since the specifications and parameters are very much sophisticated in machinery and spares, the manufacturer of those must match to the exact point. There are manufacturers, traders, and suppliers who supply machinery and spares. But due to a lot of sophistication of the equipment, Foreign Purchase (Machineries, Spares, Trading & Project) usually contacts to the Original Equipment Manufacturer (OEM) because they are the genuine designers. OEMs of BSRM Billet Manufacturing are Electrotherm and Inductotherm (India based), and BSRM Re-rolling are Danieli and Bendotti (Italy based); they provided the core mechanical, electrical, and other design aspects for the plants.

One of the very vital issues in purchasing machinery is that every OEM used in the designing impacts the subsequent purchase of spares for it as they are very much unique and custom designed. Since the designing companies are very much reputed for what they do, their design guides us from where we should source our machinery and spares. For example, the Re-Rolling Mill design is sourced from Danieli and Bendotti – Italy, they use the OEMs around based on their neighboring European countries. So, while we decide to purchase spares for machinery for those OEMs, we must also consider the country origin of those spares otherwise the specifications and parameters will not match exactly which will hamper the output of the production. In such cases, the alternative options for sourcing are very few, even sometimes confined to only one.

Some important aspects of Foreign Purchase (Machineries, Spares, Trading & Project) are:

- ☑ The OEMs used in initial plant design are likely to affect the subsequent purchase.
- ☑ Periodic inspection in the plant raises the need for machinery and spares according to their life and other aspects.
- ☑ The purchase process continues for minimum 2-3 months; or 6-12 months; even more than a year. So proper requisition projection is necessary.
- ☑ The price fluctuation is less in case of machinery and spares, unlike consumables. It usually stays valid for around 30 days at least.
- ☑ The alternative options for sourcing are very few and preparing Comparative Statement (CS) is difficult. But there are other grounds to negotiate with the vendor.
- ☑ There is a standard warranty period for machinery and spares of 18 months.
- ☑ Replacements, fixing or other measures are taken in terms of quality issue or warranty.

❖ **What do they purchase?**

1. **Capital Machinery** – one-time purchase for a very long time till the life goes. A very much high-value item which needs a very much careful decision. These machines are purchased for plants, warehouse, and logistics.
2. **Regular Spares** – these requirements arise from the Regular Inspection and Full Inspection in the plant, then the Purchase Requisition (PR) is given. On a periodic basis, the plant authority inspects everything. Some machinery and spares seem to be less performing, some are going to be obsolete, some may disturb suddenly, and some are needed for smaller expansion and the like.

❖ **Subject Matters:**

1. Purchase of Machinery and Spares from Foreign Sources

❖ **Input and Output in the Process:**

Subject Matters	Input	Output
Purchase of Machinery and Spares from Foreign Sources	Purchase Requisition (PR)	Quality Feedback

❖ **Process Steps of Foreign Purchase:**

Purchase of Consumables from Foreign Sources:

1. The process starts with the receiving of Weekly Stock Report from the three billet manufacturing plants namely SMW, BISCO, and SML.
2. Then the Stock Report is analyzed to check the stock level of different items of the consumables. The 3-6 months' requirement, stock in hand, pipeline quantity, and to be procured are checked at this stage. The pipeline quantity items are analyzed from the system with the previous purchase order report and shipment report etc.
3. If the "To Be Procured" is determined, then an inquiry is sent to the respective supplier with detail specification.
4. Collecting quotation from different suppliers according to the specification with the description, rates etc.
5. Preparing a Comparative Statement (CS) mentioning product descriptions, qty., unit price, amount, discounts, landing cost, stock analysis report for each plant, the recommendation of stock, and other terms & conditions.
6. Negotiate with the supplier on price and other conditions based on a ground of calculation of the materials cost, shipment charges, and profit of the seller, and finalize the CS. The relationship, proper communication, and honesty are the vital aspects of negotiation. Then, the CS is Finalized and Approved.
7. Preparation of Purchase Order (PO).
   - ☑ Make PO
   - ☑ Send PO for Approval to respective In-Charge, Lead, Head of SCM; if needed, to the Executive Director (ED) of the company depending on the amount
8. The foreign supplier sends a Pro-Forma Invoice (PI) with the confirmed specification.
9. Then the PO & PI is handed over to the Commercial Wing for LC opening, and the LC is confirmed by the bank and commercial wing.
10. The "Follow Up" stage is started here. First, the shipment schedule is checked by contacting the supplier.
11. When the supplier does the shipment, then a confirmation is given by him.
12. Collection of copy documents from the supplier. These documents are Invoice, Packing List, Consignment Note / Airway Bill / Bill of Lading, Certificate of Origin, SAFTA Document, Quality Report, and Declaration etc.
13. Handing over the documents to the Commercial Wing.

14. The commercial wing with the help of C&F agent tracks the consignment by using copy documents – where the product is now, how many days it will take to clear the products etc. C&F agent sends the tracking report to commercial wing and foreign purchase consumables section.
15. In the meantime, the supplier sends the original documents to the issuer's bank by beneficiary bank. Payment is made bank-to-bank according to the condition after getting the original documents. The original documents are collected and handed over to the C&F agent for clearing the products/materials from the port.
16. Delivery of the product to the plant site by the inbound logistics team.
17. Preparation of Goods Receiving Note (GRN).
18. Quality inspection and collecting quality feedback from the plant. If the quality is satisfactory then the foreign purchase is ended here. If the consignment is not as per PO, then the monetary value of the products is calculated. Depending on the situation, the supplier is then contacted to adjust the value with the next shipment or such needed measures are taken.

Purchase of Machinery and Spares from Foreign Sources:

The foreign purchase process of machinery and spares items is almost same as the foreign purchase process of consumables except some initial differences. Here instead of Weekly Stock Report of Consumables, Purchase Requisition (PR) is received from end user in case of Foreign Purchase (Machinery and Spares).

1. Receiving of Purchase Requisition (PR) of machinery and spares with detail particulars, specifications, and parameters from the end user - basically from Plants and Project Management Office (PMO).
2. An inquiry is sent to the respective manufacturer, trader, or supplier. Here they are very few due to the uniqueness of the machinery and spares. Then offers are collected from them regarding the total specifications, and parameters.
3. Then the specifications are confirmed. It is one of the very complex and lengthy procedures. Because they don't match exactly most of the time. The purchaser and the supplier continuously communicate each other to come to a common ground of specification. The technical specifications are discussed with the plant technical team, then decided how much changes can be made to the specifications and parameters. A final confirmed specification is then made.

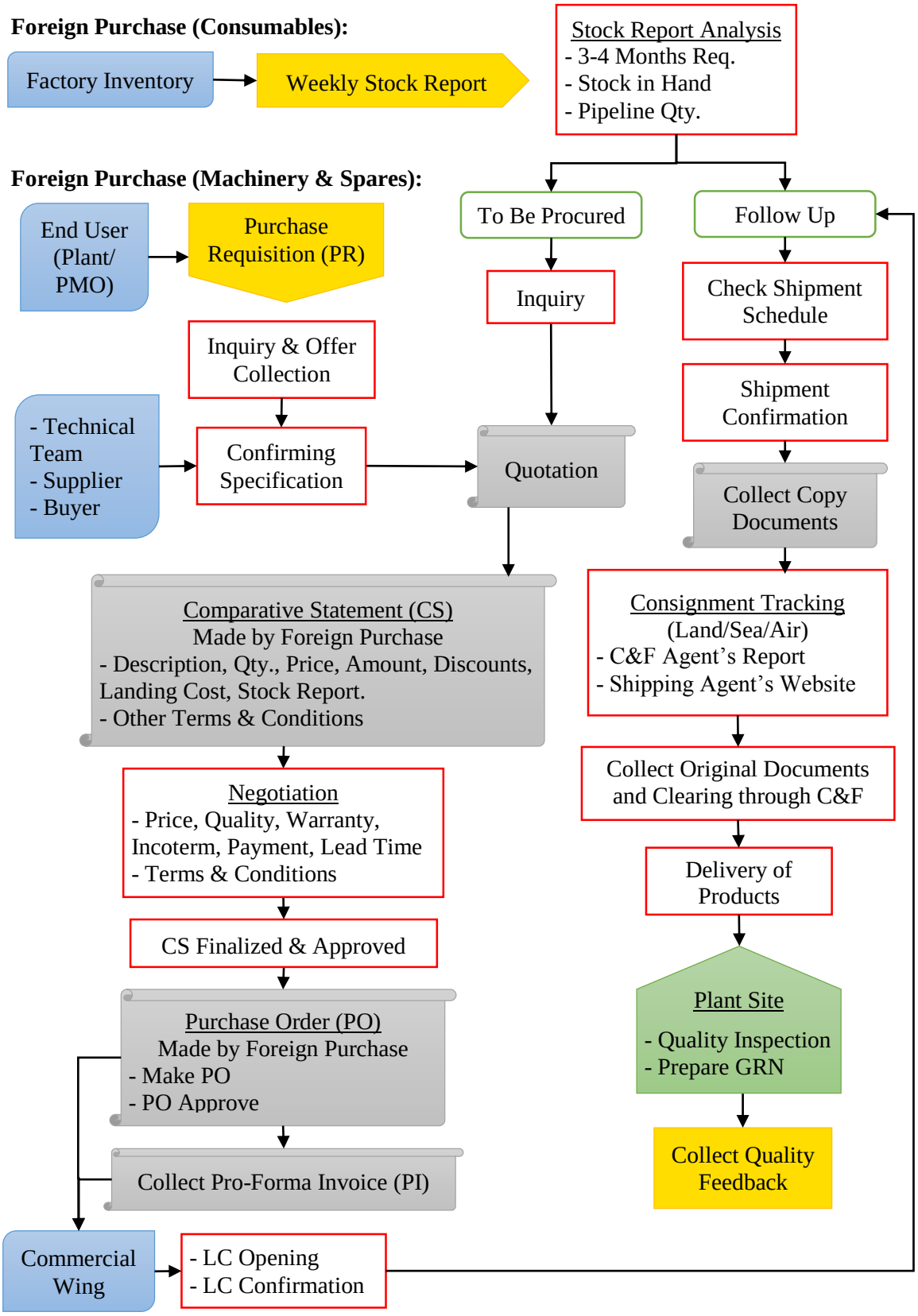
4. Collecting quotation from the manufacturer, or trader, or supplier according to the specification with the description, rates etc.
5. Preparing a Comparative Statement (CS) mentioning product descriptions, qty., unit price, amount, discounts, landing cost, and other terms & conditions. Mostly, there are very few manufacturers/traders/suppliers, sometimes confined to only one. Then CS is made on other grounds like previous price or rate.
6. Since the specifications and parameters are very much sophisticated, and manufacturers/traders/suppliers are limited, the negotiation can never be done based only on price. Other grounds are then used such as warranty period extension, transport term/incoterm, payment method, lead time, terms of LC, cost of a manufacturer, and the like. Then the CS is Finalized and Approved.
7. Preparation of Purchase Order (PO).
   - ☑ Make PO
   - ☑ Send PO for Approval to respective In-Charge, Lead, Head of SCM; if needed, to the Executive Director (ED) of the company depending on the amount

Then the rest of the process is same as Foreign Purchase (Consumables) Section.

❖ **Involving Parties and Their Tasks:**

1. Consumables' End User (Plant) – the three billet manufacturing plants namely SMW, BISCO, and SML are the end users of consumables. They create a weekly stock report and send it to the Foreign Purchase (Consumables) for the purchase of the consumables.
2. Machinery & Spares' End-user – all the Plants are the end users of machinery and spares and Project Management Office (PMO) gives purchase request required by different big and small projects.
3. Supplier/vendor of consumables – they supply the consumables.
4. Manufacturer/Trader/Supplier of Machinery & Spares – they either manufacture, mediate or supply the machinery and spares.
5. Buyer – Foreign Purchase Team.
6. Commercial Wing – they process everything related to the import of the consumables.
7. C&F Agent – they help in clearing the goods from the port.
8. Inbound Logistics – they deliver the product from the port to the destination plant.

❖ Flow Chart of Foreign Purchase:

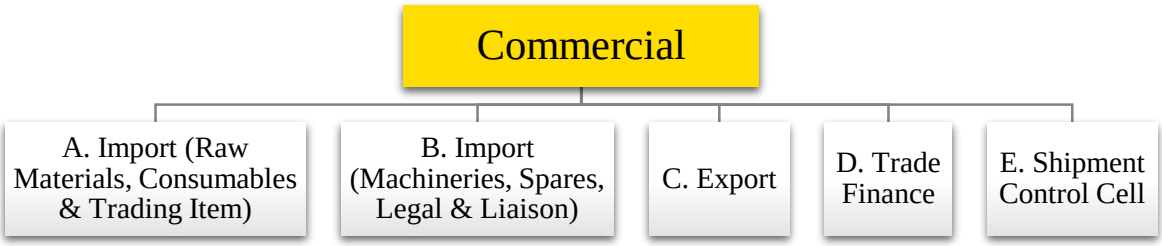


❖ **Involving Documents:**

1. Weekly Stock Report
2. Analyzed Stock Report
3. Purchase Requisition (PR) at ERP
4. Quotation
5. Comparative Statement (CS)
6. Purchase Order (PO) in ERP
7. Pro-Forma Invoice (PI)
8. Letter of Credit (LC)
9. Shipment Confirmation Report
10. Consignment Tracking Report from the C&F Agent
11. Essential Shipping Documents:
    i) Invoice
    ii) Packing List
    iii) Consignment Note / Airway Bill / Bill of Lading
    iv) Certificate of Origin
12. Goods Receiving Note (GRN) in ERP
13. Quality Inspection Report

3.3.3 Commercial

There are 3 major and 2 minor sections under the Commercial wing. Each section entails different functions.



A. Import (Raw Materials, Consumables & Trading Items)

The primary activity of the section is to facilitate the import of raw materials, consumables, and trading items according to the requirement of the end users - the manufacturing plants.

Raw materials are the ferrous metal items/things that are used as inputs in the production process of the steel industry and are generally visible in the finished products. Raw materials in the steel industry i.e. different types of scraps are very much crucial to handle in Bangladesh because the lion-share of raw material in this industry comes from the foreign countries due to the scarcity of raw materials from the local sources.

- ☑ BSRM needs around 4,000 Tons/Day (1,440,000 Tons/year) of scraps, out of which 90% scraps come from the foreign sources.
- ☑ Since the amount is almost fixed for every plant, an auto requisition is made periodically considering the current stock, pipeline quantity etc. Any decision related to the purchase of raw material from foreign sources is solely taken by the Head of SCM and the Executive Director (ED) of the company. Basically, the top management handles the raw materials purchase because of the huge volume and cost, supplier relation, price fluctuation and other issues that are very critical to handle.

Raw materials are purchased in two forms depending on the planning of top management:

1. Container – containers are used as a carriage to import the raw materials. There are different sizes of containers as such 20 Feet, 40 Feet, and 45 Feet etc. which are used based on raw material requirement. The containers are directly shipped to the plant.
2. Bulk – bulk purchase is also done frequently according to the requirement. Large bulk vessels are used to import the raw materials in a huge amount. Then they are transshipped to the plant by inbound logistics after clearing from the port.

Direct-Reduced Iron (DRI), also called Sponge Iron is another very important raw material used in the steelmaking production. It is produced from the direct reduction of iron ore (in the form of lumps, pellets, or fines) to iron by a reducing gas or elementary carbon produced from natural gas or coal.

- ☑ Sponge Iron is used in steelmaking to keep the amount of carbon low to a minimum level (below 2%).
- ☑ BSRM needs around 16,000 Tons/Month of Sponge Iron ranging from 15%-22% in different units.
- ☑ India is the largest manufacturer of Sponge Iron, and 100% of the sponge iron of BSRM comes from this country. Tata Sponge Iron Ltd. is the biggest supplier.
- ☑ The Foreign Purchase Section decides about how much sponge iron is to be purchased by analyzing the stock, and about the selection of the suppliers. They make a Purchase Order (PO), collect Pro-Forma Invoice and send it to the Import (Raw Material) section.

Consumables are the supportive items/things used in the steelmaking production. The Foreign Purchase (Consumables) Section facilitate the purchase of consumables and Import (Consumables) Section facilitate the import of those consumables.

Trading Items are purchased now and then. The Trading Wing facilitate the purchase of trading items and Import section facilitate the import of those trading items.

There are around 40 Banks and 20 C&F Agents who facilitate the transaction and clearance of the raw materials/goods/equipment. Different criteria are used to select a particular bank or C&F agent as such reputation, charges, exporter's preference, and the like.

- ☑ Generally, Deferred LC is used to import Raw Materials and Consumable Items.

❖ **Subject Matters:**

1. Import of Raw Materials
2. Import of Consumables
3. Import of Trading Items

❖ **Imported Ferrous Metal Scrap Items:**

1. **Plate and Structural Steel (PNS):**

- ☑ Clean, Bonus Grade Scrap, Cut Down to Foundry Size
- ☑ Electronic Furnace Casting and Foundry Grades
- ☑ ISRI – 231, 232, 236, 237, 238
- ☑ Cut structural and plate scrap, 5 feet and under. Clean open-hearth steel plates, structural shapes, crop ends, shearings, or broken steel tires. Dimensions not less than 1/4-inch thickness, not over 5 feet in length and 18/24 inches in width. Phosphorus or sulfur not over 0.05 percent. (CastleConsultants.in)

2. **Heavy Melting Steel Scrap (HMS):**

- ☑ HMS 1&2 are prepared as per ISRI specifications 200-206, in 80:20 composition.
- ☑ **HMS 1 (No. 1 Heavy Melting Steel):** HMS 1 are prepared as per ISRI specifications 200-202.
  - ISRI - 200, 201, 202: Wrought iron and/or steel scrap 1/4 inch and over in thickness. Individual pieces not over 60 x 24 inches/ 36 x 18 inches/ 60 x 18 inches/ (charging box size) prepared in a manner to insure compact charging.
- ☑ **HMS 2 (No. 2 Heavy Melting Steel):** HMS 2 are prepared as per ISRI specifications 203-206.
  - ISRI – 203: Wrought iron and steel scrap, black and galvanized, 1/8 inch and over in thickness, charging box size to include material not suitable as No. 1 heavy melting steel. Prepared in a manner to ensure compact charging.
  - ISRI - 204, 205, 206: Wrought iron and steel scrap, black and galvanized, maximum size 36 x 18 inches. May include all automobile scrap properly prepared. (CastleConsultants.in)

3. **Bundle Scrap (Busheling):**

- ☑ ISRI – 208: No. 1 Bundles
- ☑ New black steel sheet scrap, clippings or skeleton scrap, compressed or hand bundled, to charging box size, and weighing not less than 75 pounds per cubic foot. (Hand bundles are tightly secured for handling with a magnet.)
- ☑ May include Stanley balls or mandrel wound bundles or skeleton reels, tightly secured. May include chemically detinned material. May not include an old auto body or fender stock. Free of metal coated, limed, vitreous enameled, and an electrical sheet containing over 0.5 percent silicon. (CastleConsultants.in)

4. **Shredded Steel Scrap:**

- ☑ ISRI – 210, 211
- ☑ Homogeneous iron and steel scrap, magnetically separated, originating from automobiles, unprepared No. 1 and No. 2 steel, miscellaneous baling and sheet scrap. Average density 50/70 pounds per cubic foot. (CastleConsultants.in)

❖ **Harmonized System (HS) Code:**

PNS and HMS	7204.49.00
Bundle and Shredded	7204.41.00
Sponge Iron	7203.10.00
Consumables; Trading Items	Different codes for different items

❖ **Input and Output in the Process:**

Subject Matters	Input	Output
Import of Raw Materials	1. Sales Contract 2. Pro-Forma Invoice (PI)	C&F Bill to the A/C Department
Import of Consumables	Pro-Forma Invoice (PI)	C&F Bill to the A/C Department
Import of Trading Items	Pro-Forma Invoice (PI)	C&F Bill to the A/C Department

B. Import (Machineries, Spares, Legal & Liaison)

The primary activity of the section is to facilitate the import of machinery and spares according to the requirement of the end users mainly the manufacturing plants.

Machinery and spares are very vital to the manufacturing industry like BSRM steelmaking.

- ☑ The import of machinery and spares start with the receiving of Pro-Forma Invoice (PI), from the Foreign Purchase (Machineries; Spares; Trading & Project).
- ☑ The requirement of machinery and spares arise from the inspection of the machinery.
- ☑ The import of raw materials uses all the 3 modes of transport depending on the country from which it is coming.
- ☑ The machineries and spares come both in containers and packages.
- ☑ The initial challenge of machinery and spares import is the definition of HS Code.
- ☑ Generally, At Sight LC is used to import Machinery and Spares, but new import policy is giving the facility to import machinery & spares on deferred LC beyond certain limit.

❖ Subject Matters:

1. Import of Machinery and Spares

❖ Structure of Harmonized System (HS):

The HS is organized logically by economic activity or component material. For example, animals and animal products are found in one section of the HS, while machinery and mechanical appliances are found in another. The HS is organized into 21 sections, which are subdivided into 96 chapters. The 96 HS chapters are further subdivided into approximately 5,000 headings and subheadings. The HS code mainly consists of 6-digits. In some cases, 8-digits.

	SECTION XVI	MACHINERY AND MECHANICAL APPLIANCES; ELECTRICAL EQUIPMENT; PARTS THEREOF; SOUND RECORDERS AND REPRODUCERS, TELEVISION IMAGE AND SOUND RECORDERS AND REPRODUCERS; AND PARTS AND ACCESSORIES OF SUCH ARTICLE
First Two Digits	**HS Chapter 84**	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof
Second Two Digits	**HS Heading 84.17**	Industrial or laboratory furnaces and ovens, including incinerators, non-electric
Third Two Digits	**HS Subheading 8417.10**	Furnaces and ovens for the roasting, melting or other heat-treatment of ores, pyrites or of metals
Fourth Two Digits	**8417.10.00**	The fourth two digits differ from country to country based on situations and facts

The Procedure of Finding a HS Code:

1. **Gather as much knowledge as possible on the product or item:** This can be done by discussing with the purchaser/buyer, end user, inventory team, or searching on the internet. The specification, use, and technology of the product.
2. **Know the classification of the product/item:** What category it belongs to as such Mechanical, Electrical, Plastic, or Other.
3. **Materials Used:** What the product is made of, what ingredients were used etc.
4. **Search in the Alphabetical Index:** To find out as much as references of desired item's HS Code based on the main keywords of the product/item dealt with.
5. **Screen through First Schedule:** Screening the HS codes found in the Alphabetical Index – keep the relevant ones, and drop out the irrelevant ones.
6. **Use the Explanatory Note for further clarification:** Finding or deciding about the final HS Code with the help of Explanatory Note.

❖ **Input and Output in the Process:**

Subject Matters	Input	Output
Import of Machinery and Spares	Pro-Forma Invoice (PI)	C&F Bill to the A/C Department

❖ **Process Steps of Import:**

Import of Raw Materials:

1. Receiving of Sales Contract and Pro-Forma Invoice (PI) after the decision of Top Management - Head of SCM and Executive Director (ED). A sales contract is an agreement between the seller and the buyers of the merchandise as described in the quantities and as per the terms and conditions.
2. After checking different aspects of the sales contract and PI, a Purchase Order (PO) is made in the system by Foreign Purchase Section to record the transaction.
3. Then the Import (Raw Materials) section selects the bank on which the LC will be opened and applies to the bank for opening a Letter of Credit (LC).
   - ☑ First, an LC Draft is created by the Import (Raw Material) section by analyzing the sales contract and Pro-Forma Invoice (PI). It is provided to the bank.
   - ☑ Then, the bank creates their own Bank LC Draft according to the Import (Raw Material) section LC Draft and give it to them. Import (Raw Material) section checks different aspects of the Bank LC Draft as such the Latest Date of Shipment (LDS), Date of Expiry (DOE), Bill of Lading (B/L) Free Time Clause, Amounts and the like. Also, the Import (Raw Material) section gives this Bank LC Draft to the supplier to cross-check the term and conditions, and corrections are made (if any).
   - ☑ Then an LC Set (set of documents) is submitted to the bank for opening the LC:
     i) LC Opening Letter
     ii) Pro-Forma Invoice (PI)
     iii) Letter of Credit Authorization Form (LCAF)
     iv) LC Application
     v) LC Draft
     vi) Marine Insurance Cover Note
   - ☑ The bank opens the LC by following the rules of UCPDC, and Import (Raw Material) section collects & checks the Final Acknowledgement Copy/Transmitted Copy before transmitting the LC through SWIFT.
   - ☑ Import (Raw Material) section forwards the Transmitted Copy to the supplier with an LC Advice.
   - ☑ Usually, the LC for Scrap Purchase is opened for the first quarter (90 days) and can be extended at most for the 3rd quarter (270 days) according to the Import Policy. For every extension, LC Amendment has to be made.
4. Shipment of raw materials by the supplier. According to the condition of LC, the supplier can ship the raw materials partially from different ports at a different time.

5. Then the supplier prepares and submits the full set of commercial documents to the LC Confirming Bank/Negotiating Bank. There are 5 essential documents in case of raw materials purchase namely:
   i) Bill of Lading
   ii) Invoice
   iii) Packing List
   iv) Certificate of Origin
   v) Inspection Certificate
6. In the meantime, the supplier sends the Copy Documents to the Import (Raw Material) section through E-mail. After getting the Copy Documents, the Import (Raw Material) section takes the following actions:
   ☑ Take a Marine Insurance Policy against the raw materials for safety issue by submitting the following documents:
      i) Invoice
      ii) Bill of Lading (B/L)
   ☑ Track Shipment through C&F Agent about where the ship is, when the ship will come to the port, how much time it will take to clear from the port etc.
7. The confirming bank checks the original commercial documents, and if everything is okay, then sends the original documents to the LC Opening Bank through international courier.
8. When LC opening bank receives the original documents, they give an E-mail to the Import (Raw Material) section. Import (Raw Material) section collects the following original documents from the LC opening bank by giving an Acceptance:
   i) Bill of Lading
   ii) Invoice
   iii) Packing List
   iv) Certificate of Origin
   v) Inspection Certificate
   vi) LCA Copy Endorsed by Bank
   vii) LC Set Endorsed by Bank
   viii) Pro-Forma Invoice Endorsed by Bank

   In the meantime, after getting the original documents, the Applicant's Bank gives payment to the Beneficiary's Bank according to the LC condition.
9. After getting the original documents, C&F Agent is selected based on different criteria. The original documents are then given to the selected C&F Agent for clearing the raw materials from the port. At times, the raw materials/goods can be cleared from the port with the Copy Documents when the Original Documents are yet to be received at a later date through the following two methods:

i) Letter of Indemnity: In such case, Loading Port Shipping Line gives a clear instruction to the Destination Port Shipping Line that the goods can be cleared without the original documents by using copy documents.

ii) No Objection Certificate (NOC): In such case, the Bank gives a no objection certificate (NOC) to the Commissioner of Customs & Shipping Line that if the goods are cleared from the port without the original documents, then the bank will not have any problem to honor the payment.

10. When the ship arrives at the Outer, then the Shipping Line Company does a primary inspection and declares that the ship has arrived at the outer through an Import General Manifest (IGM) by C&F agent. Then it waits for Berthing.
11. While Berthing, the C&F collects the Bill of Entry prepared by the Customs Authority. Bill of Entry is issued by the customs presenting the total assigned value and the corresponding duty charged on the cargo. It is a value assessment notice for customs duty calculation. The customs duties are calculated based on the guidelines of National Board of Revenue (NBR) for every fiscal year. The duty, port charges, shipping line charges, depot charges, and other charges are paid by the C&F agent. Without paying the duties and charges, the goods cannot be cleared.
12. When all the containers are unloaded from the carriage/ship, then a Common Landing (CL) is declared. This CL is the time limit (4 days) declared by the port authority within which the containers must be discharged from the yard. Otherwise, demurrage will have to be paid to the port authority as to the size of the container.
13. For taking the delivery of the raw materials, a Delivery Order (D/O) has to be collected from the Shipping Line Company. This also nominates where and when the Empty Container will be delivered if it is an on-chassis delivery. In that case, an Undertaking has to be given to the Shipping Line and a Risk Bond has to be given to the Customs Authority against the value of the containers.
14. After getting the D/O, C&F gives an Intend to the port authority 1 day before it is going to clear the raw materials. It is a declaration that the raw materials will be cleared 1 day after the declaration so that the port authority can take necessary actions. If the consignment is an urgent one and has to be taken within a very short time, then a Special Delivery request can be made by providing extra charges.
15. Then the raw materials are cleared and delivered to the destination scrap yard/plant through inbound logistics team.

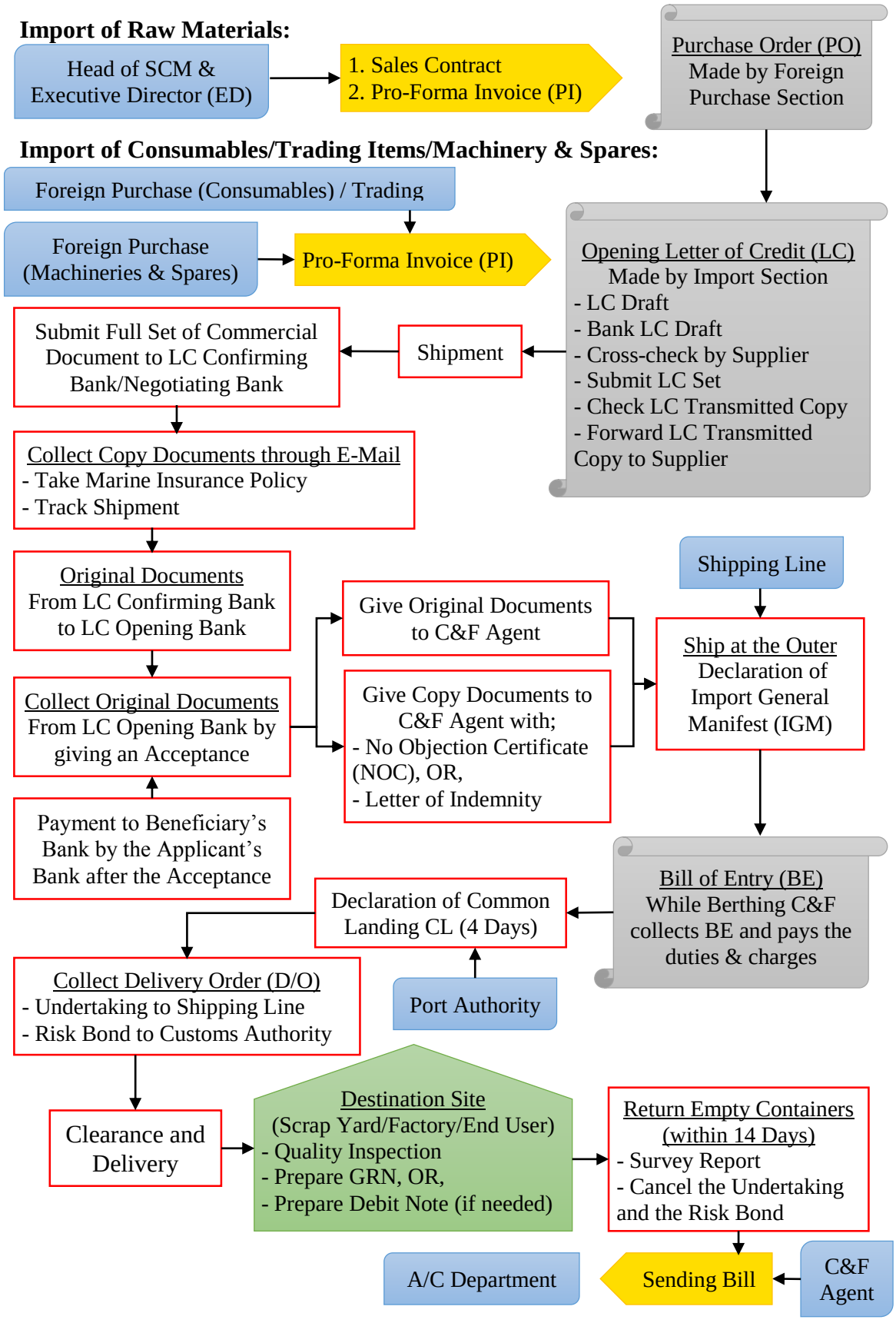
- ☑ Receiving of the raw materials scrap by the scrap yard/plan authority by inspecting them whether these are okay in terms of quantity, quality, raw material type consistency etc.
- ☑ A Goods Receiving Note (GRN) is made in the system.
- ☑ If the raw materials are not okay in accordance with the clauses, then a Debit Note is issued to claim compensation. The Import (Raw Materials) section prepares this and sends it to the supplier. The compensation amount includes:
  - Non-conformed raw materials/goods value
  - Custom and other duties paid for those goods
  - Other expenses incurred by them
  - Reimbursement charges ($50) etc.

16. Empty containers are returned/delivered to the depot nominated by the shipping line. The following steps are followed:
    i) A Survey Report is made by a surveyor and given to the Shipping Line Authority. They review the report whether there are any damages to the containers and whether the containers are returned within the stipulated time (10/14 days from the date of berthing). If the report is not okay, then charges and demurrages have to be paid to the shipping line authority.
    ii) The Undertaking of the Shipping Line and the Risk Bond of the Customs have to be canceled by providing certain charges. Also, Legal Stamp Papers for Shipping Line and Customs have to be added based on the value of the invoice.
17. After completing all these, the C&F Agent prepares and sends the Bill to the Import (Raw Materials) section with all the related documents. It is then reviewed and sent to the Accounts Department for payment.

Import of Consumables & Trading Items; and Machinery and Spares:

The import process of consumables & trading; machinery and spares items is almost same as the import process of raw materials except some initial differences. Here instead of Sales Contract and PI, only PI is received from Foreign Purchase (Consumables)/Trading Wing in case of import of consumables and trading item. On the other hand, PI is received from Foreign Purchase (Machineries, Spares, Trading & Project) in case of import of machinery and spares. Then the rest of the tasks are same.

❖ Flow Chart of Import:



❖ **Involving Parties of Import and Their Tasks:**

1. Importer – the company is the importer. The Top Management takes the decision of raw material purchase from a foreign source and agrees on the sales contract, generally the Head of SCM and ED.
2. Exporter – they supply the raw materials; consumables, trading item, and machinery & spares.
3. Foreign Purchase – they prepare the Purchase Order (PO) for raw material.
4. Foreign Purchase (Consumables) Section – they facilitate the purchase of consumables.
5. Foreign Purchase (Machineries, Spares, Trading & Project) Section – they facilitate the purchase of machinery and spares.
6. Trading Wing – they facilitate the purchase of trading items.
7. Import (Raw Material; Consumables & Trading Item) Section – they facilitate the import process.
8. Import (Machineries, Spares, Legal & Liaison) Section – they facilitate the import process.
9. LC Opening Bank – it is the importer's bank/issuing bank/applicant's bank which gives payment guaranty to the beneficiary's bank.
10. LC Beneficiary's Bank – it is the exporter's bank/advising bank by which the exporter will be paid.
11. Insurance Company – it gives protection against any losses/damages happened to the raw materials in the marine period.
12. Customs Authority – authority that is responsible for collecting tariffs and duties.
13. Shipping Line Company – the shipping line service that is used for the carriage of the raw materials in time of import.
14. C&F Agent – it facilitates the clearing of the raw materials; consumables; and machinery & spares from the port.
15. Inbound Logistics – they deliver the product from the port to the destination plant.
16. Scrap Yard Authority – scrap yard is a place where the raw materials will be stored. The authority receives & inspects the raw materials, and prepares inspection reports about the raw materials.
17. Accounts Department – which pays the bills for the Raw Materials; consumables, trading items, and machinery & spares, Insurance Policy, C&F Agent etc.

❖ **Involving Documents of Import:**

1. Sales Contract
2. Pro-Forma Invoice (PI)
3. Purchase Order (PO)
4. Letter of Credit LC – Acknowledgement Copy/ Transmitted Copy
5. LC Draft
6. LC Opening Letter
7. Letter of Credit Authorization Form (LCAF)
8. Letter of Agreement Copy
9. Marine Insurance Cover Note
10. Bill of Lading (B/L) / Airway Bill / Consignment Note
11. Invoice
12. Packing List
13. Certificate of Origin
14. Inspection Certificate
15. SAFTA Document
16. Warranty Certificate
17. Import Registration Certificate (IRC)
18. Import Permit (IP) for Warranty Issue
19. Letter of Indemnity
20. No Objection Certificate (NOC)
21. Insurance Policy
22. Consignment Tracking Report from the C&F Agent
23. Import General Manifest (IGM)
24. Bill of Entry
25. Delivery Order (D/O)
26. Goods Receiving Note (GRN)
27. Debit Note
28. Survey Report for Containers
29. Undertaking of the Shipping Line
30. Risk Bond of the Custom Authority
31. Bills from C&F Agent

❖ **Warranty Issue for the Machinery and Spares:**

When the machinery and spares are imported and arrive at the destination plant, the end user authority makes an inspection of the machinery and spares before preparing the Final Goods Receiving Note (GRN). If any quality or non-compliance issue is observed, then the following steps are taken:

☑ The End User informs the Foreign Purchase (Machineries, Spares, Trading & Project) about the non-compliance issue that the machine or spares doesn't match with the specification and cannot be used for the production.

☑ Then the Foreign Purchase (Machineries, Spares, Trading & Project) section contacts with the foreign supplier about the issue. They demand a remedy from the supplier's end. The Foreign Purchase (Machineries, Spares, Trading & Project) section then contacts with the Import (Machineries, Spares, Legal & Liaison) who also contacts with the foreign supplier.

☑ As the machine and spares are subject to a standard warranty period of 18 months or so, the remedy can take two forms. In such case, a Warranty Certificate is a must to be agreed upon by the supplier.

1. Replacement of the machine or spares: When it is finalized that the supplier is going to replace, then another shipment of the machinery or spare part is done by the supplier with the replaced one. In such case, the supplier gives a simple "Nominal Value" for the invoice of the machinery or spare. "Nominal Value Only for Customs Purpose" must be written in the Invoice". The customs authority will assess the value and duties of the machinery or spare on that value. Now, all the original documents will come directly to the BSRM instead of LC Opening Bank. These are:
    i) Bill of Lading/ Airway Bill/ Consignment Note
    ii) Invoice - "Nominal Value Only for Customs Purpose" written.
    iii) Packing List
    iv) Certificate of Origin
    v) Warranty Certificate
    vi) Import Permit – for the warranty item import, collected from the Chief Controller of Imports and Exports (CCI&E)

    No Insurance Cover Note is required for warranty item. All these documents must need to be endorsed by the LC Opening Bank and given to C&F Agent for clearing the machinery and spare.
2. Repairing of the machine or spares: This is a very complex process and needs much time. In this case, the foreign supplier can come directly to this country to repair the machine or spare, OR, the machine or spare can be sent to the foreign country to be repaired with an "Export Cum Import" policy. Here, the defective machine or spares are exported to the supplier's country who repairs them, and again they are imported to our country. Permission is needed from the Imports and Exports Authority. Here, the invoice value consists the costs incurred to repair the machine or spare.

❖ **Legal Issues and Settlement of Disputes in Import:**

The Commercial – Import Section faces legal issues generally in two cases:

1. **Harmonized System (HS) Code Related Issues** – the customs authority doesn't want to agree on the HS code mentioned by the company and charges more customs duty by assigning another HS code which has a higher rate.
2. **Value Load Related Issues** – the customs authority feels that the invoice value of the good is written as under-value by analyzing other recent values, and assign more assessment value to the goods imported which results in higher customs duty. BSRM can import goods at lower price for various reasons as such higher volume, high value, good relations with supplier, long-term benefits etc. But the customs authority sees this low price differently and create value load related problems.

The company accepts the complaints if it is not a major one or the duty increased is not much. But in case of a serious issue, the company goes for further legal actions. In such case, the company does "Assessment through Under Protest" to clear the goods when it is urgent to clear, and later file a case against the customs authority.

To settle down these disputes, the Commercial – Import Section writes letters to the authority of customs. The hierarchy of the customs authority is as follows:

1. Commissioner
2. Additional Commissioner
3. Joint Commissioner
4. Deputy Commissioner
5. Assistant Commissioner
6. Revenue Officer
7. Assistant Revenue Officer

In most cases, the dispute is settled by the Commissioner. Otherwise, customs law provides for an administrative appeal to a higher-level official, with ultimate recourse to the courts. There are 4 higher authorities who settles the disputes related to customs:

1. **Alternative Dispute Resolution (ADR):** It is an alternative dispute resolution method where the company/firm applies for the dispute resolution by giving a pay order. The National Board of Revenue (NBR) has 25 assigned facilitators, out of which one facilitator is assigned to settle the dispute. The facilitator gives a proposal against the dispute. If both parties mutually accept this, then the case is closed. ADR is open in all cases when the protested decision or order was passed by the any rank of officer in customs. If the appellant is not satisfied with the decision of the Facilitator, he may take recourse to the Commissioner (Appeal).

2. **Commissioner (Appeal):** The Commissioner (Appeal) settles the dispute. When the decision or order is made by a customs officer below the rank of Commissioner, the appeal must be made first to the Commissioner (Appeal). If the appellant is not satisfied with the decision of the Commissioner (Appeal), he may take recourse to the Appellate Tribunal.
3. **Appellate Tribunal:** There has to be at least two people involved in settling this dispute: i) The Judge ii) One of the two at least (President and Technical Member). If the protested decision or order was passed by the Commissioner, the appeal will be made directly to the Appellate Tribunal.
4. **High Court Division:** Persons not satisfied with the decision of the Appellate Tribunal have the right to appeal to the High Court Division of the Supreme Court. Again, where the decision by the Appellate Tribunal goes against Customs, the Act allows the respective Commissioner to appeal to the High Court Division.

Every time, there are maximum 90 days of provision to apply for the next appeal when a protested decision by the previous authority is not accepted by the appellant. And, if the verdict goes in favor of the company, and if the case is such that the company had to pay more duty than that usual, then the amount must have to be claimed within 6 months from the customs.

❖ **Liaison with Different Authorities:**

The Commercial Wing needs to maintain liaison with the following authorities:

1. **Bangladesh Investment Development Authority (BIDA):**
   - ☑ In case of opening a new industrial firm, the license has to be taken from the BIDA. The Admin Department facilitates the process but the commercial Department supports in this issue.
   - ☑ Initially, capital machineries have to be imported. Collecting Import Registration Certificate (IRC) is generally essential in opening LC. But if the machineries are listed in the registration from BIDA, they can be imported without the IRC.
   - ☑ In case of Commercial Firm, the IRC can be collected from CCI&E directly. But in case of Industrial Firm, BIDA has to refer to CCI&E for giving IRC. Here, BIDA gives condition to import at least 70%-80% raw materials within the Ad-Hoc period of 6 months. At most 3-ad hoc period can be extended. If the

firm fails to import that amount of raw material, then the IRC regularization will be canceled and vice-versa.

2. **Chief Controller of Imports & Exports (CCI&E):**
   - ☑ Collecting Import Registration Certificate (IRC)
   - ☑ Collecting different import and export permits
3. **National Board of Revenue (NBR):**
   - ☑ For taking further clarification about any disputes with the customs.
4. **Bangladesh Bank (BB):**
   - ☑ Taking permission in different issues through the listed banks as such money transfer of a huge amount to the foreign country.
   - ☑ Collecting NOCs.

C. Export

The primary activity of the section is to facilitate the export of finished steel products as such deformed bars, wires, and different by-products as such compounds of zinc oxide etc. The export is basically done in different ways:

1. Export Processing Zone (EPZ) – the plants/projects made in the EPZs need steel products which are exported by BSRM, and the payment is made in US Dollar.
2. Foreign Companies through International Tender – different government projects are done by the foreign international organizations. These projects need huge steel products which are exported by BSRM, and the payment is made in US Dollar.
3. Deemed Export – it is done to those 100% Export Oriented Companies out of EPZ which need steel products, and the payment is made in US Dollar.
4. Local Export through LC – different companies purchase through Letter of Credit (LC), and the payment is made in BD Taka.
5. Export to Foreign Country – steel products specifically in India's different states in the Seven Sister Zone; and by-products to China and other countries. The payment is made in US Dollar.

The export section is highly engaged with the Sales team for getting the sales contract, and with the outbound logistics section for the transportation of the products. Since the export is mainly being done within the country a single bank can be used as the LC Opening Bank/Advising Bank/Negotiating Bank; or, multiple banks can be used.

❖ **Subject Matters:**

1. Export of Steel Products and Others – Deformed Bars, Wires, Zinc Oxide etc.

❖ **Input and Output in the Process:**

Subject Matters	Input	Output
Export of Steel Products and Others	Sales Contract or Pro-Forma Invoice (PI)	Duty Drawback Adjustment

❖ **Process Steps:**

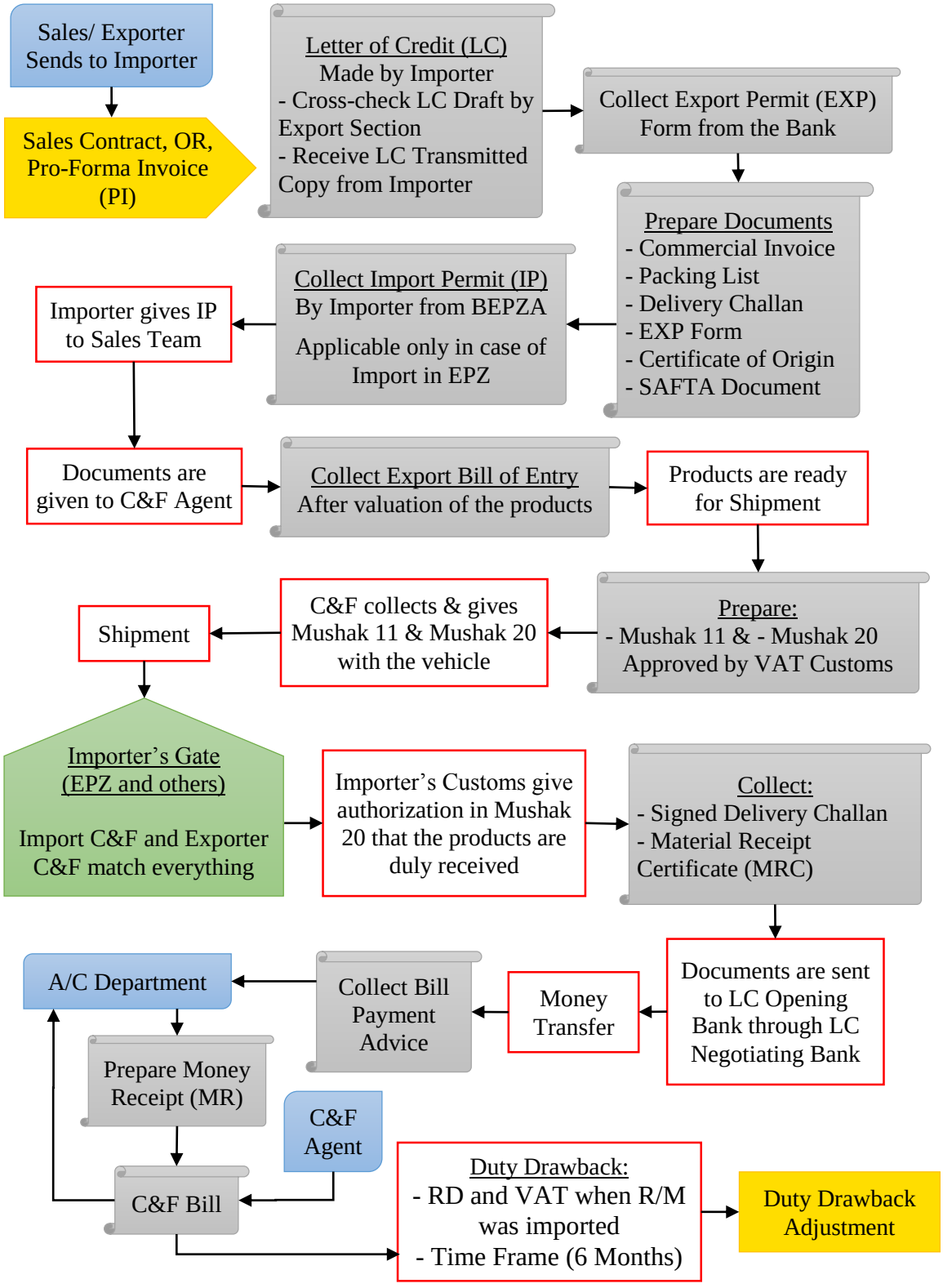
1. The process starts with the sending of the Sales Contract or Pro-Forma Invoice (PI) from the sales team to the importer.
2. The importer prepares LC Draft and sends it to BSRM Export team to check it. If everything is okay, then LC is prepared and transmitted, or, amendment is made.
3. Then EXP Form (Export Permit) is collected from a Bank (Advising Bank, or any other bank) that offers higher exchange rate for the US Dollar.
4. Preparation of documents:
   - i) Commercial Invoice
   - ii) Packing List
   - iii) Delivery Challan
   - iv) EXP Form

   In case of export to foreign country, additional documents may be needed such as:
   - ☑ Certificate of Origin
   - ☑ SAFTA Document
5. The documents are given to the importer for collecting Import Permit (IP) from BEPZA in case of EPZ Import ONLY. In case of International Tender or Deemed Export, it is not necessary.
6. Importer gives IP to Sales Team which will be required to be shown in the EPZ gate at the time of export, because if the IP cannot be shown at that time, then demurrages have to be borne by the BSRM Company.
7. Export section gives all the original documents to C&F Agent for valuation/value assessment by the Exporter's Customs and collects Exporter Bill of Entry.
8. When the Outbound Logistics team is ready to ship the products from the Warehouse, then they inform the C&F agent for the inspection by VAT Customs.
9. VAT Customs gives authorization after inspection according to Mushak 11 (VAT Invoice - approval of 0% Statutory Rate of Export Duty), and Mushak 20 (Removal of Goods for Export - approval of Inspection of Products 24 hours before shipment).

10. C&F agent collects those Mushak 11 and Mushak 20 from VAT Customs and gives these with the vehicles for avoiding any legal occurrences in the time of transport.
11. Shipment of the Products.
12. When the products reach the gate of EPZ, then both the Exporter C&F and Importer C&F stay present. They match everything and the importer takes the products. If everything is okay, then the Importer's Custom gives an acceptance by signature in the Mushak 20 that the products are duly imported and received.
13. Then the Sales Team is assigned to collect two important documents from the importer within 21 days of product receiving:
    i) Delivery Challan duly signed and authorized
    ii) Material Receipt Certificate (MRC)
14. All the documents are then submitted to the LC Negotiating Bank.
15. LC Negotiating Bank sends these documents to LC Opening Bank.
16. The LC Opening Bank then transfers the money to LC Advising Bank.
17. The Bank provides a Bill Payment Advice (detail statement of money transfer) to the Export section. It is then forwarded to the Accounts Department.
18. Accounts department prepares a Money Receipt (MR), and then the Delivery Order (DO) which was prepared by the Sales Person becomes nil against the MR.
19. The C&F and other agents send bills to the Export section, they review the bills and forward this to the Accounts department for clearing.
20. The Export Section then applies for Duty Drawback – Regulatory Duty (RD) and Value Added Tax (VAT) paid at the time of import of billets by submitting the following documents. This duty has to be drawn within 6 months from the time of export of the finished products, otherwise, the provision will be null and void.
    i) Material Receipt Certificate (MRC)
    ii) Proceed Realization Certificate (PRC)
    iii) Commercial Invoice duly attested by customs
    iv) Packing List attested by customs
    v) Mushak 11
    vi) Mushak 20
    vii) EXP Form
    viii) Export Bill of Entry
    ix) LC Copy or Sales Contract

    All these documents with a Forwarding Letter has to be submitted to the customs.
21. With duly continued, if everything is okay, the custom returns the Duty which is adjusted through the Current Account.

❖ **Flow Chart:**


Sales/ Exporter Sends to Importer
Sales Contract, OR, Pro-Forma Invoice (PI)
Letter of Credit (LC) Made by Importer
- Cross-check LC Draft by Export Section
- Receive LC Transmitted Copy from Importer
Collect Export Permit (EXP) Form from the Bank
Prepare Documents
- Commercial Invoice
- Packing List
- Delivery Challan
- EXP Form
- Certificate of Origin
- SAFTA Document
Collect Import Permit (IP) By Importer from BEPZA
Applicable only in case of Import in EPZ
Importer gives IP to Sales Team
Documents are given to C&F Agent
Collect Export Bill of Entry After valuation of the products
Products are ready for Shipment
Prepare:
- Mushak 11 & - Mushak 20 Approved by VAT Customs
C&F collects & gives Mushak 11 & Mushak 20 with the vehicle
Shipment
Importer's Gate (EPZ and others)
Import C&F and Exporter C&F match everything
Importer's Customs give authorization in Mushak 20 that the products are duly received
Collect:
- Signed Delivery Challan
- Material Receipt Certificate (MRC)
Documents are sent to LC Opening Bank through LC Negotiating Bank
Money Transfer
Collect Bill Payment Advice
A/C Department
Prepare Money Receipt (MR)
C&F Agent
C&F Bill
Duty Drawback:
- RD and VAT when R/M was imported
- Time Frame (6 Months)
Duty Drawback Adjustment

❖ **Involving Parties and Their Tasks:**

1. Sales Team – they arrange the sales contract from different parties.
2. Importer – the EPZ, International Tender, Deemed Export Organizations, Local Importers, Foreign Importers etc.
3. Exporter – BSRM, which exports different steel and by-products.
4. Export Section – they facilitate the export of steel and other products.
5. Banks – single or multiple banks can be used as LC Opening/Advising/Negotiating bank etc.
6. Importer's Customs – they assess the imported product's value and provide clearance authorization that the products have been imported successfully.
7. Exporter's Customs – they assess the exported product's value.
8. VAT Customs – they provide authorization through Mushak 11 (VAT Invoice), and inspection clearance through Mushak 20 (Removal of Goods for Export).
9. C&F Agent – they make arrangements about the value assessment, VAT clearance, inspection clearance, and export supervision.
10. Warehouse – they discharge the steel products from the warehouse premise and prepares the Delivery Challan.
11. Outbound Logistics – they ship the products to the destination.
12. Accounts Department – which pays the bills of C&F agent, Freight Forwarder Agent, and records the Money Transfer from the importer.

❖ **Involving Documents:**

1. Sales Contract
2. Pro-Forma Invoice (PI)
3. LC Draft
4. LC Transmitted Copy
5. EXP Form
6. Commercial Invoice
7. Packing List
8. Delivery Challan
9. Certificate of Origin
10. SAFTA Document
11. Import Permit
12. Export Bill of Entry
13. Import Bill of Entry
14. Mushak 11
15. Mushak 20
16. Material Receipt Certificate (MRC)
17. Bill Payment Advice
18. Bill from C&F Agents

D. Trade Finance

Trade finance signifies financing for trade, and it concerns both domestic and international trade transactions. A trade transaction requires a seller (exporter) of goods and services as well as a buyer (importer). Various intermediaries such as banks and financial institutions can facilitate these transactions by financing the trade. The importer's bank may provide a letter of credit to the exporter (or the exporter's bank) providing for payment upon presentation of certain documents, such as a bill of lading. The Trade Finance Section of BSRM does the following activities:

- ☑ Bank selection for LC based on certain criteria for a particular import/export
- ☑ Negotiation with foreign and local banks – deciding about the confirmation and discounting charges of trade finance
- ☑ Offshore Banking negotiation with the OBU of the bank
- ☑ Deciding about the (LIBOR + Margin) Rate for inter-bank money borrowing
- ☑ Building and maintaining good relationship with the old and new banks
- ☑ Making correspondence with the Bangladesh Bank (BB) regarding:
  - Money transfer to a private account more than the limit defined by BB
  - Advance payment beyond a certain limit defined by BB
  - Time Extension for Letter of Credit Authorization Form (LCAF) etc.

E. Shipment Control Cell

Coordination among different parties involved in import is very much vital. Because the lack of proper synchronization can create greater cost and impact. The involve parties are:

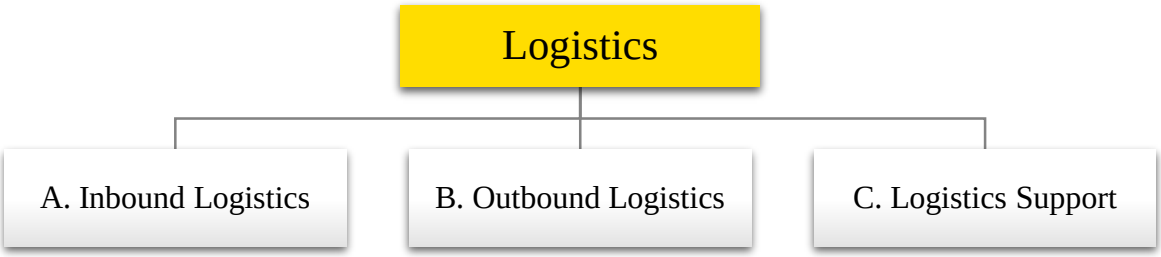
1. Import Section
2. C&F Agent
3. Inbound Logistics
4. Factory/Yard/Warehouse

In the time of shipment and transportation, different gaps and complains are encountered among these parties in terms of document submission delay, delay in loading & unloading, projection gap etc. So, to minimize these gaps, this cell has been created to coordinate among these parties. Also, to identify the problems and providing solution proposals to the concerned entity.

Another important issue of this cell is to make short & long-term projections about the current and future imported volume (containers/packages/bulk), the impacting time and involving cost behind all these.

3.3.4 Logistics

There are 3 major sections under the Logistics wing. Each section entails different functions.



A. Inbound Logistics

The primary activity of the section is to facilitate the flow of imported raw materials, consumables, machineries & spares, project items, and internal shifting of different items at the right time, at the right place, at a minimum cost according to the requirement of the different units.

The inbound logistics team is solely responsible for handling and ensuring the delivery of the items on the desired destination by encountering the challenges in the operation and keeping the demurrages as low as possible. There are 4 major operations/subject matters:

- ☑ First, it is responsible for the delivery of all the imported items from port to the plant/yard/warehouse. The bulk vessel operation of the imported scrap materials is one of the complex functions. Also, container delivery and large capital machinery handling are included here. Container delivery consists of the Inland Transport Delivery, Delivery from All Sea Ports/ Land Ports/ Air Ports etc.
- ☑ Second, it is responsible for the delivery of raw materials for internal shifting from the scrap yard to the plant, or plant to plant, or from warehouse to plant etc.
- ☑ Third, it is responsible for the management of own company vehicles. The company vehicles are in the ownership of the BSRM, but these are managed by a 3rd party. The inbound logistics team supervises the whole operation.
- ☑ Fourth, it is responsible for the equipment contract management and engagement. Equipment for different project operations are outsourced and managed by this section.

The inbound logistics team continuously make follow up with the commercial (import) section, C&F agent, shipping companies, and other parties about where the ship is, when it will arrive, predict how much time it will take to clear from the port etc.

❖ **Subject Matters:**

1. All Imported Item Delivery from Port to Plant/Yard/Warehouse
2. All Types of Raw Material Internal Shifting
3. Own Vehicle Management
4. Equipment Contract Management and Engagement

❖ **Input and Output in the Process:**

Subject Matters	Input	Output
All Imported Item Delivery from Port to Plant/Yard/Warehouse		
Bulk Vessel Operation	Notice of Readiness (NOR)	Bill to the A/C Department
Container Delivery	Declaration of Common Landing (CL)	Bill to the A/C Department
All Types of Raw Material Internal Shifting	Requirement from the Scrap Yard/ Plant/ Warehouse	Delivery

❖ **Process Steps:**

All Imported Item Delivery from Port to Plant/Yard/WH - Bulk Vessel Operation

All the bulk vessels come through the Chittagong Port from different countries, and the operation is conducted as follows:

1. When the ship arrives at the outer, the shipping line company gives a Notice of Readiness (NOR) of the raw materials. The Local Shipping Agent forwards this document to the Inbound Logistics Section, and then they start preparing for the clearing of the raw materials.
2. The shipping line company gives a measurement about the Draft of the vessel. If the draft of the ship is above the limit that the Chittagong Port (8.5 Meters) can take, then the raw materials have to be lightered.
3. According to the lightering requirement, lightering vessels have to be hired. The Ship Handling Operator helps in shifting the raw materials from mother vessel to the lighter vessel, and Lighter Agent helps in arranging the vessels and clearing the raw materials from the lighter vessels in the jetty.
4. When the draft of the bulk vessel decreases (below 8.5 meters) after lightering, then the vessel starts berthing.
5. After berthing, the raw materials are cleared from the vessel in the port. The Berth Operator helps in arranging and clearing the raw material from the vessel.

6. The vehicles of inbound logistics carry those raw materials to the scrap yard/plant/warehouse. In this stage, Carrying Management Team is appointed who handles the carrying of the raw materials and manages any unwanted occurrences.
7. After inspection, Goods Receiving Note (GRN) is prepared at the Scrap Yard/Plant.
8. Different bills are received from different agents/parties:
   i) Transportation Bill
   ii) Freight Bill
   iii) Berth Operator Bill
   iv) Ship Handling Bill
   v) Vessel Repair Bill
   vi) Demurrage Bill
   vii) Lighter Agent Bill
   viii) Ghat Discharge Bill
   ix) Escort/Security Management Bill
9. Bills are then reviewed and sent to the A/C department for the payment.

Rate of Demurrage for Mother Vessel and Lighter Vessel in Chittagong Port: The detention charge or demurrage for the mother vessel occurs after the free time allowed by the shipping line company nominated by the exporter. The rate depends on the Sales Contract. In case of lighter vessel, the rate is fixed by the lighter ship authority.

All Imported Item Delivery from Port to Plant/Yard/WH – Container Delivery

There are 4 ports through which different containers or packages are imported in BSRM. The inbound logistics delivers those products from those ports to different destinations.

i) Chittagong Port: Raw Materials, Consumables, Machinery & Spares, and Chemicals are imported through this port. Full Container Load (FCL), and Less than Container Load (LCL) are used in this port depending on the situation.

In case of FCL, 20 Feet (30 CBM) and 40 Feet (60 CBM) containers are used. The process is as follows:

1. Declaration of Common Landing (CL) (Free time of 4 days) in the port and C&F informs import section and inbound logistics. If the free time exceeds, then demurrages have to be borne by the company.
2. Delivery Order (D/O) is collected from the Shipping Line Company.
3. C&F gives an Intend to the port authority 1 day before it is going to clear the containers.

4. Then, the inbound logistics team contacts the transport agencies for vehicles according to the requirement. The vehicles that are going to carry the containers, their Vehicles' Numbers have to be collected from the Transport Agency.
5. Those Vehicles' Numbers have to be approved and permitted from the port authority to enter into the port.
6. Port authority scans the containers to see if there is anything suspicious inside the containers. If they are okay, then they are ready for the delivery. If there is anything suspicious, then the port gives a stay order and calls for settlement with the company through C&F agent.
7. Later, Rubber Tyred Gantry (RTG) Cranes are used in the port to load the containers in the vehicles.
8. The containers are then delivered to the destination site.
9. After the unloading of the containers, the empty containers are returned to the nominated depot. There are 14 days of free time from the shipping line company to return them. Otherwise, demurrages have to be borne by the company.
10. Bills from the transport and other agencies are received. They are reviewed and then sent to the Accounts Department for payment.

In case of LCL, the process is almost same except some differences. Here, the containers are not taken out of the port, rather they are opened within the port, and the particular packages are delivered through the vehicles. So, the company doesn't have to be bear any demurrages for not returning the empty containers within 14 days. Bills from agencies are then received and sent to the Accounts Department.

ii) **Benapole Port:** Raw Materials, Consumables, Machinery & Spares, and Chemicals are imported through this port. Covert Van and Truck are used in this port. There is a BSRM employee along with the C&F agents in the Benapole port. The employee contacts the inbound logistics about the shipment. Then the inbound logistics contacts the transport agencies. The products are then delivered to the destination site. There is a free time of 3 days in the Benapole Port.

iii) **Burimari Port:** Consumables are imported through this port. Covert Van and Truck are used in this port. The process is same as Benapole Port.

iv) **Dhaka AirPort:** Machinery & Spares are imported through this port. Packages and containers are used in this port. Air transport is used in case of emergency shipment and sensitive items. Here, when the products come to the airport, then C&F agent contacts a local courier service provider to courier the product from Dhaka to

Chittagong; and clears the product from the customs and the port. When the products are delivered to Chittagong, then they are collected by the inbound logistics team to the destination plant.

Rate of Demurrage for Containers in Chittagong Port:

In case of containers, there comes two types of demurrages. First one is for crossing the free time of the port authority - Common Landing (4 days). Second one is for crossing the free time of the shipping line company for returning the empty containers (14 days). Different rates are applicable for different sizes of containers and slabs of time.

All Types of Raw Material Internal Shifting

Internal shifting is the internal logistics support for ensuring on-time production. It is done within the sister concerns of BSRM Group of Companies.

INBOUND LOGISTICS			
Raw Materials/ Consumables/ Others		**Billet**	
Scrap Yard/ Warehouse	Melting Unit	Melting Unit	Rolling Mill

The internal shifting of inbound logistics is fully done by the own vehicles of BSRM Logistics Ltd. There are different sizes of Trailers, Dump Trucks, and Tipper Trailers. When an internal shifting is necessary, then the respective unit gives a requirement, and the inbound logistics team schedules, delivers and monitors the internal shifting.

Own Vehicle Management

The vehicles under the BSRM Logistics Ltd. are managed by this team. The cost related to the salary of the driver, helper, supervisor; fuel & line cost; management cost; maintenance cost etc. are incurred by BSRM but these vehicles are managed by contracted third parties for staff hiring and proper utilization of the vehicles.

Equipment Contract Management and Engagement

At times, different projects of BSRM need additional equipment to handle different operations that are not available to BSRM. In this case, the team contracts and manages the equipment by collecting different quotations, making comparative statements, and approving PO from higher authority. Here, the team does the work of a purchaser.

❖ **Inbound Logistics Control Cell (ILCC):**

Besides the four major operations/subject matters in the inbound logistics team, there is also an Inbound Logistics Control Cell (ILCC) which is involved in the field level operation. The tasks of the team are as follows:

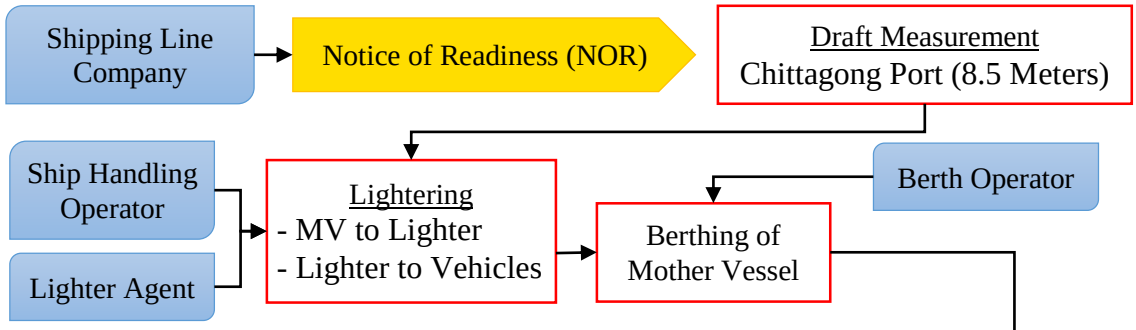
☑ 24 hours field operation, the corporate inbound logistics team supervises them.

☑ Real-time tracking of the own vehicles in the transportation system.

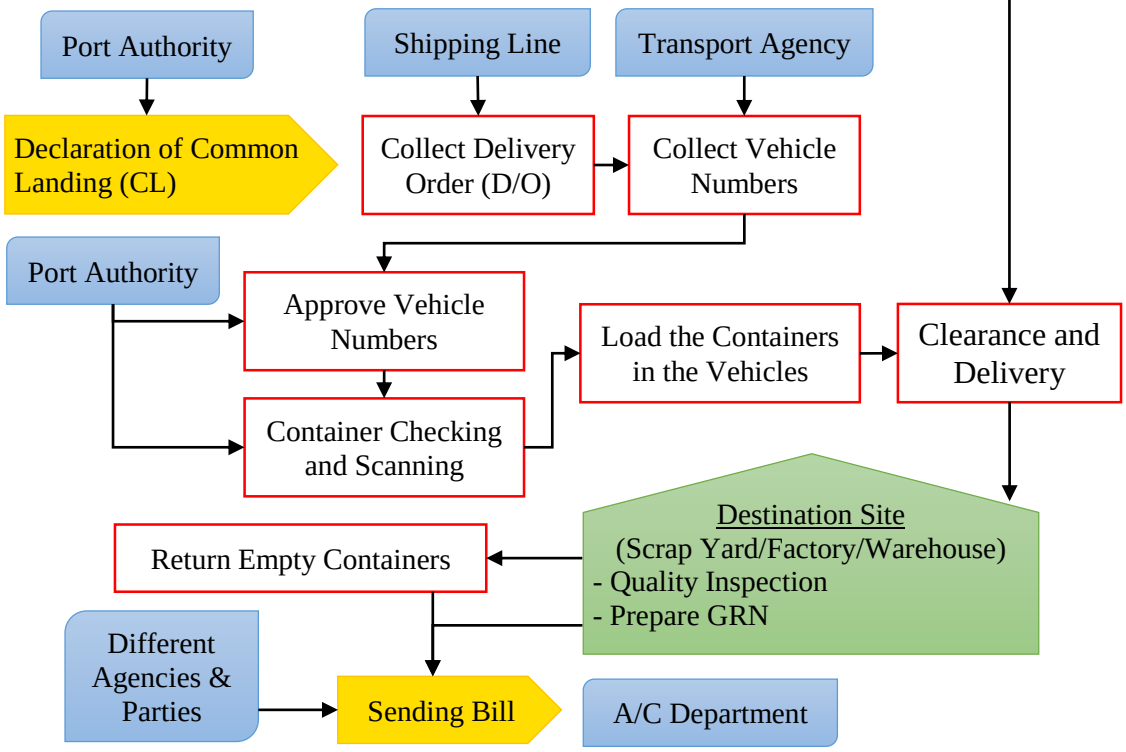
☑ Tackling different difficulties and challenges in the field level such as strikes, riots, theft, obstacles by different authority, vehicle problem etc.

❖ **Flow Chart:**

All Imported Item Delivery from Port to Plant/Yard/WH - Bulk Vessel Operation



All Imported Item Delivery from Port to Plant/Yard/WH – FCL Delivery



❖ **Involving Parties and Their Tasks:**

1. Import Section – they facilitate the import of the products.
2. Port Authority – through which the goods will enter the country.
3. Shipping Line/ Air/ Vehicle Authority – the company that transports the products from the exporting country.
4. Different Agencies/ Parties – Berth Operator, Ship Handling Agent, Vessel Repair Agent, Lighter Agent, Escort Team, Transport Agency etc.
5. C&F Agent – it facilitates the clearing of the products from the port.
6. Inbound Logistics Control Cell (ILCC) – supervises 24-hour field operation.
7. Accounts Department – which pays the bills of different agencies.

❖ **Involving Documents:**

1. Notice of Readiness (NOR)
2. Import Related Shipping Documents
3. Different kinds of Bills from Different Agencies and Parties

B. Outbound Logistics

The primary activity of the section is to facilitate the flow of finished steel product from Rolling Mills to Warehouse and to different Dealers & Customers around the country at the right time, at the right place, at a minimum cost according to the requirement of warehouse, government projects, dealers, big clients, and individual customers.

OUTBOUND LOGISTICS	
Bar/ Rebar/ Others	
Rolling Mill	Warehouse
	Dealers
	Customers

There are two methods of for determining outbound logistics costs:

i) Ex-Mill – where all the costs of transportation are borne by the buyer. Here, the rate given to the customer is only for the product.

ii) C&F – where all the costs of transportation are borne by the seller i.e. BSRM. Here, the rate given to the customer includes the transportation cost.

Both the type of customers are balanced while giving priority in the delivery. There are corporate and big clients who buy Straight Bars that need to be transported by the trailers; and, dealers & small clients who usually buy Bend Bars need to be transported by trucks.

BSRM Logistics Ltd. owns different sizes of trucks and mini trucks which travel through Chittagong local areas, inter-city, and inter-district. The trailers are fully outsourced. The outbound logistics team continuously make follow up with the sales and the commercial (export) section, transport agencies and other parties to ensure the delivery on time.

❖ **Subject Matters:**

1. Delivery of the Finished Steel Products

❖ **Input and Output in the Process:**

Subject Matters	Input	Output
Delivery of the Finished Steel Products	Sales Order (SO) Release	Bill to the A/C Department

❖ **Process Steps:**

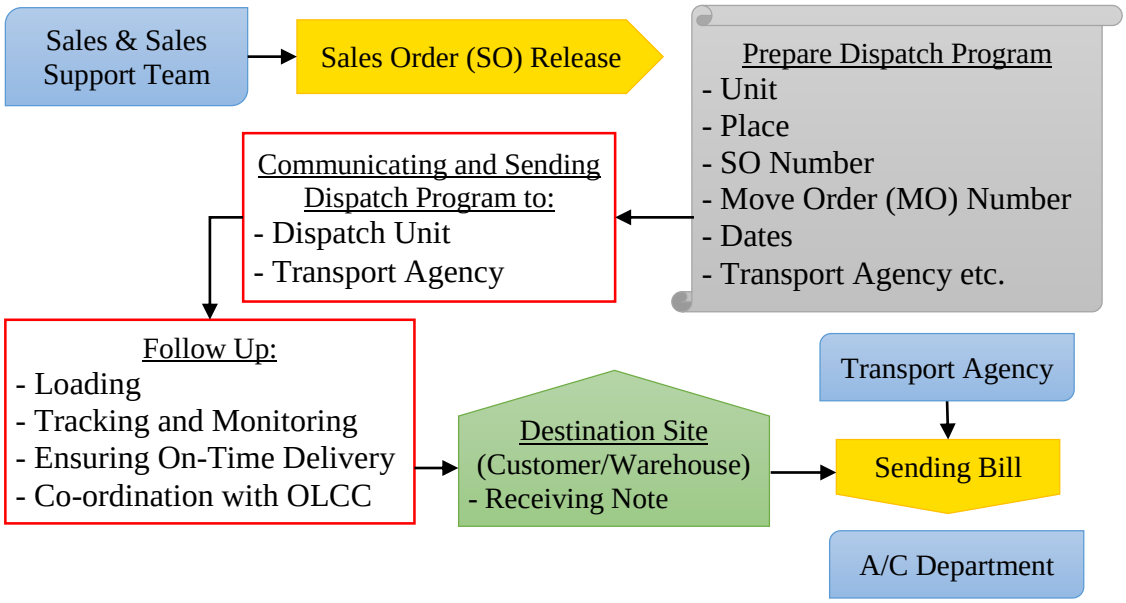
1. The process starts with the receiving of Sales Order (SO) Release by Outbound Logistics Team. Usually, the salesperson collects different sales order (SO) from the customers around the country. Then the Sales Support Team receives the SO and sort it out by ensuring the payment terms and confirmation. Then the SO is released when the order is ready to be dispatched.
2. The outbound logistics team collects the SO from the ERP system by giving certain information such as from which BSRM unit it will be dispatched, Truck/Trailer, Ex-Mill/C&F, shed number, and the like. Then it prepares a Dispatch Program for a particular day mentioning the place, SO Number, date of dispatch, move order number, transport agency used etc.
3. The Dispatch Program is then sent and communicated to the unit of dispatch (Warehouse/Plant/Shed) and transport agencies.
4. Then the Follow-Up is started if the vehicles have been loaded, dispatched, tracked, reached the destination etc. by Outbound Logistics Corporate Team and Outbound Logistics Control Cell (OLCC).
5. When the products are successfully received by the client, then the transport agency sends the bill to the Outbound Logistics Team. Then the bills are reviewed in terms of receiving, destination site, qty., rate of transportation etc. and sent to the Accounts Department for the payment.

❖ Outbound Logistics Control Cell (OLCC):

Besides the corporate office team of outbound logistics, there is also an Outbound Logistics Control Cell (OLCC) which is involved in the field level operation.

- ☑ 24 hours field operation, the corporate outbound logistics team supervises them.
- ☑ Real-time tracking of the own vehicles through Vehicle Tracking System (VTS).
- ☑ Tackling different difficulties and challenges in the field level such as strikes, riots, theft, obstacles by different authority, vehicle problem etc.

❖ Flow Chart:



❖ Involving Parties and Their Tasks:

1. Sales and Sales Support Team – they collect orders from customers, sort it out and release these to the outbound logistics team.
2. End Users - warehouse, govt. projects, dealers, big clients and individual customers.
3. BSRM Logistics Ltd – responsible for own vehicle ownership.
4. Transport Agency – whose vehicles are contracted for outbound logistics.
5. Outbound Logistics Control Cell (OLCC) – supervises 24-hour field operation.
6. Accounts Department – which pays the bills of different agencies.

❖ Involving Documents:

1. Sales Order (SO) in ERP, & Manual Dispatch Program
2. Sales & Export Related Shipping Documents
3. Different kinds of Tickets & Bills from Transport Agencies and Others

C. Logistics Support

The logistics support of BSRM usually looks after the vehicles of BSRM Logistics Ltd.

1. Fleet management of own vehicles
2. Workshop for the maintenance of own vehicles in Baroawlia
3. Fuel station for the fuel refilling of the own vehicles and others in Baroawlia

3.3.5 Warehouse Management

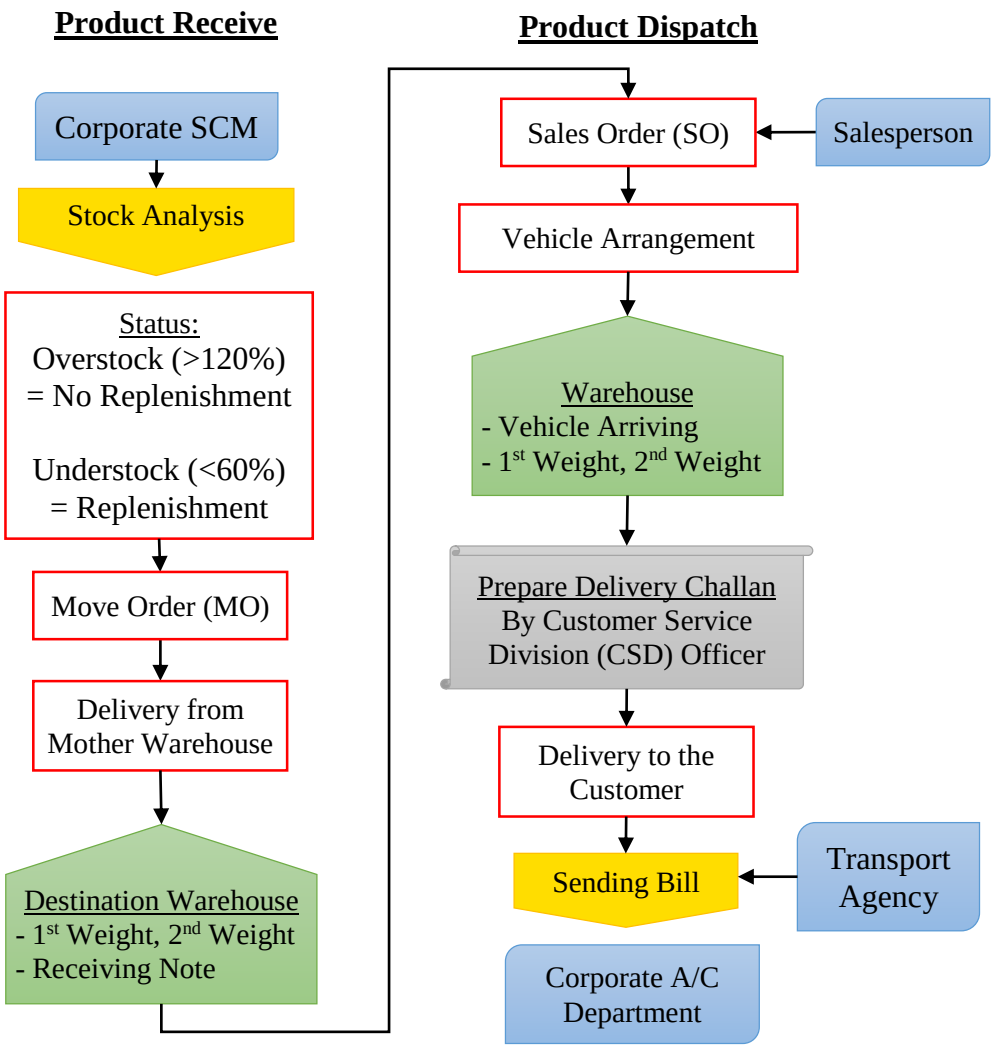
The raw materials, consumables, machinery & spares, finished steel products, and different other items are stocked in the warehouse. A proper warehouse management can reduce the cost and time involved in the process. The warehouses are placed at different places of the country and they are managed by a different management team. The Corporate SCM only coordinates with the warehouses on different issues. BSRM has 8 warehouses under warehouse management at: Jungal, Mirasrai, Mymensing, Bogra, Rangpur, Benapole, Khulna, and Barishal. Besides, it has two more mother warehouses under the re-rolling plants known at Steels, and K. Rahman. There are two basic activities of a warehouse:

1. Product Receive:

The Corporate SCM team decides about the level of stock that has to be maintained in a particular warehouse depending on the sales projection. Every day the warehouses send current stock report to the Corporate SCM. Depending on this projection, the warehouse checks the stocks whether it is overstocked (>120%) or understocked (<60%). Then, depending on the requirement of replenishment, the warehouses place a Move Order (MO) to the mother warehouses. Delivery is done by the outbound logistics. Products are weighted and received.

2. Product Dispatch:

Sales Order (SO) is received by the salesperson. Transport vehicles are arranged by checking the SO assigned to that particular warehouse. On the date of dispatch, the vehicles arrive and they are given a token according to the serial. The products are loaded on the vehicle, and weighted. The Customer Service Division (CSD) Officer issues a Delivery Challan. After the delivery of the product to the ultimate customer, bills are received from the transport agency, and payment is cleared.



3.3.6 Vendor Development

Vendor Development is structurally a new wing of BSRM SCM. The task of this wing is to develop new foreign vendors for different items used in production, plant, and other structures of BSRM. The major goal of this wing is to minimize the cost of the company and being competitive by developing alternative sources of supply. New foreign vendors or alternatives sources are developed based on the priority of three important issues:

1. Monopoly Issue – there are items whose vendors are only one or very few. These types of items need to be developed with new vendors.
2. Pricing Issue – high value, mostly used items. If the vendors are charging very much high price, then new vendors need to be developed.
3. Location Wise Dependence – for example, depending on India and China for some raw materials and consumables. This dependence creates a barrier for competition. New vendors are developed based on new location.

❖ **Subject Matters:**

1. Develop New Vendors and Alternative Sources

❖ **Input and Output in the Process:**

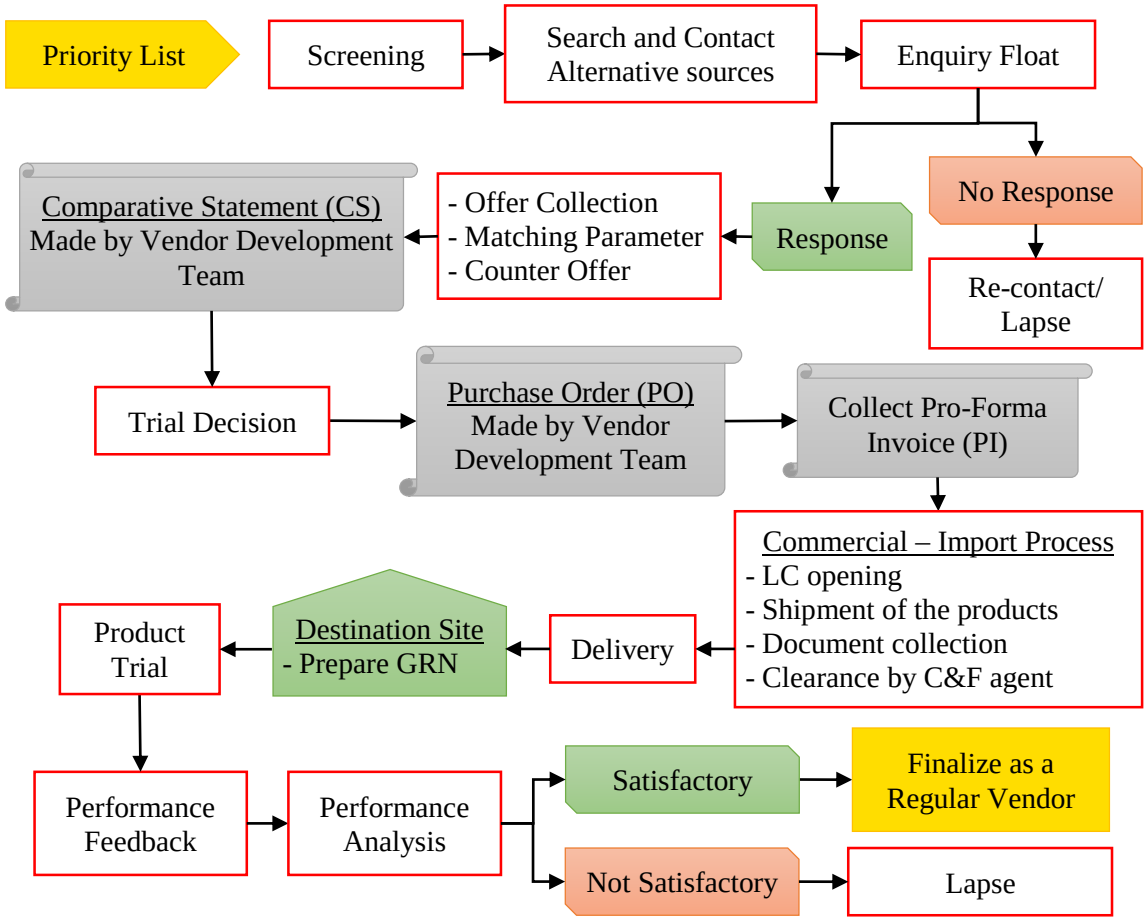
Subject Matters	Input	Output
Develop New Vendors and Alternative Sources	Priority List	New Vendor Finalization

❖ **Process Steps:**

1. Based on the priority, an item list is prepared which is categorized by Monopoly, Price, and Location issue.
2. Further screening is made on the items based on emergency requirement.
3. Different alternative sources are searched and contacted over the phone & internet.
4. The vendors are given enquiry float. If they response, then the team proceed with further query. If they don't response, then a reminder is given and they are reconnected or lapsed.
5. When the vendors are contacted, Techno Commercial Offer is collected. They may have questions regarding the parameters of the particular items. A questionnaire is given to the company to match the parameters, filled in and sent to the vendors.
6. The offer is evaluated in terms of the precision and tolerance limit of the parameters. Counter offer is given.
7. Comparative Statement (CS) is prepared and approved.
8. Since the vendor is new, a trial order decision is made in a small quantity.
9. Purchase Order (PO) is prepared and sent to the vendor.
10. Pro-Forma Invoice (PI) is received.
11. Commercial – Import process:
    i) LC opening
    ii) Shipment of the products
    iii) Document collection
    iv) Clearance by C&F agent
12. Delivery to the destination site and preparation of GRN.
13. The trial of the products is done.
14. The production team prepares a performance feedback and sends to the vendor development team.

15. The vendor development team analyzes the performance, see whether there are any quality deviations. Based on the facts and future requirement, the vendor is finalized and confirmed as a regular vendor.

❖ **Flow Chart:**



❖ **Factors that Can Be Considered while Foreign Sourcing/Vendor Development:**

1. Website of the Vendor/Supplier – detail orientation, and a professional look and feel of the website of the vendor can create a good first impression.
2. Credit Report – this report can be collected from the supplier's bank. The credit rating of the vendor conveys the message of reliability about the supplier.
3. Client List – the clients of the supplier can be contacted for collecting feedback.
4. Physical Inspection – suppliers can directly be visited and evaluated.
5. Trade Fairs – suppliers can be met at the international trade fairs.
6. Personal Reference – personal references can be the source of supplier evaluation.

3.3.7 Instrumentation Maintenance

As mentioned earlier, steel is a very heavy manufacturing industry which involves various mechanical and electrical equipment to run and assist the flow of production. The primary activity of the Instrumentation Maintenance wing is to maintain the instruments used in two major operations: the weighing of the products at different sites of BSRM and the bulk vessel operation. It is truly a technical team which is divided into two separate teams:

1. Weigh Bridge Maintenance Team
2. Grab & Magnet Maintenance Team

❖ **Weigh Bridge Maintenance Team:**

Every plant/warehouse/shed of BSRM has weigh bridges that are used to weigh the products that enter into (IN) the site, and get out (OUT) of the site. 1st weight is taken - IN (loaded or unloaded), 2nd weight is taken – OUT (after loading or unloading); then the deviation automatically generates the weight of the product.

The maintenance and calibration of Weigh Bridge is very much fundamental because any wrong calculation in the weighing of the product can incur huge loss to the company. For example, if the site dispatches few more KGs of product with every single vehicle, it will create a huge impact after the day, month, and year. There are 80 MT, 60 MT, 50 MT of weigh bridges, having the dimension of 18*3 Meters, 16*3 Meters, 9*3 Meters.

The weigh bridge maintenance team is responsible for the following activities:

- ☑ Planning about the maintenance schedule and conducting the maintenance operation. Usually maintenance is done twice a year.
- ☑ Providing SOP training.
- ☑ Troubleshooting different bridges as and when required on emergency basis.
- ☑ Challenge and inspect the customer's weigh bridge if required.
- ☑ Surprise audit at different sites to check if the proper maintenance is being done.
- ☑ Check if there is any violation of SOP.
- ☑ Projecting the requirement and maintenance of spare parts.
- ☑ Purchase of any spares as and when needed.
- ☑ Technical support in the time of commissioning.

❖ **Grab and Magnet Maintenance Team:**

Grabs and magnets are used in the bulk vessel operation at the port & outer; and scrap yards of the company for handling scraps. Since any downtime or improper handling of the grab and magnet can incur huge cost to the company, the maintenance of them is very much vital.

The grab and magnet maintenance team is responsible for the following activities:

- ☑ Provide support at the time of bulk vessel operation at the outer, and lighter vessel discharging at the jetty.
- ☑ Preparing plans about the requirement of the equipment needed based on the number of bulk vessel operations for a year.
- ☑ Maintenance of the cargo discharging equipment.
- ☑ Troubleshooting of the cargo discharging equipment as and when required on emergency basis.
- ☑ Full utilization of the equipment. If possible, ensure utilization by renting them.
- ☑ Coordinate with the inbound logistics team for vessel operation.
- ☑ Projecting the requirement and maintenance of spare parts.
- ☑ Purchase of any spares as and when needed.

The Instrumentation Maintenance team continuously need to make follow up with the Trading, Purchase, Commercial; and mostly & extensively with the logistics team for the proper maintenance. The team is responsible for keeping the equipment 100% running up time; which in turn impacts the production.

3.3.8 Supply Chain Management (SCM) Analysis

❖ **Why SCM Analysis?**

Data are scattered, and they needed to be sorted and processed to provide a meaningful conclusion. Different BSRM SCM wings store a lot of data in the ERP and other tools. Bringing out a meaningful insight of those data is the major task of SCM Analysis. Before the implementation of ERP system, data were scarce and the analysis was difficult. But currently data are much available and the scope has been widened.

❖ **Data Collection, Data Analysis, and Report Preparation:**

Data are basically collected from ERP, and some manually recorded sources from the Purchase, Commercial, Logistics, Warehouse, Inventory, Production, Sales, and other related departments. The secondary sources like internet is used to collect some data as such exchange rates fluctuation, fluctuation in material prices etc.

These data are analyzed mostly with the help of MS-Excel to bring out the desired insight. Some daily reports are prepared along with few new reports as per the requirement of the concerned authority.

❖ **Outcomes of the Analysis:**

- ☑ Trend Analysis
- ☑ Future Projection Analysis
- ☑ Root Cause Analysis
- ☑ Process Development

The end users of the reports are variant. Not only Supply Chain Management but also other departments and top management use these reports for having an insight about the overall supply chain cost structure; and how it impacts the company's competitive strategy.

Chapter 04

BSRM SCM – The Road to Progress

BUILDING A SAFER NATION

BSRM

CHAPTER 04

BSRM SCM – THE ROAD TO PROGRESS

4.1 Importance of SCM in the Success of BSRM as a True Brand

There's a saying, "Products are made in the factory, but brands are created in the mind of customer". All the front-line departments of a company can make the promises to the customers and other stakeholders of the company by defining a competitive strategy for the market. But fulfilling the promises is way much harder than making the promises. Streamlining the flow of products, funds, and information from the tiers of supplier to the supplier to the manufacturer to the intermediaries to the customer effectively and efficiently is very much difficult as the customer's needs and the situations are ever changing. BSRM supply chain management plays the following roles in the success of BSRM as a true brand:

- ☑ Keeping the production running is very much crucial in a heavy manufacturing industry like steel. A simple shortage of any raw materials, machinery & spares, or other items can hamper or shut the production which is a matter of great loss to the company. The SCM dedicates itself to keep the production running.
- ☑ The SCM works closely with the suppliers and regulatory stakeholders to reduce the lead time needed which in turn reduces the cost and negative impacts.
- ☑ SCM considers the suppliers as partners rather than mere parties who supply items. The partnership paradigm is truly beneficial for the company in the long-run.
- ☑ The aggregate level planning, inventory management, sourcing, purchasing, manufacturing, transportation, warehousing & distribution, continuous improvement are major parts of BSRM SCM, continuously working for the fulfillment of company leadership in the steel industry of Bangladesh.
- ☑ By being efficient in cost minimization, SCM helps in making money for the company. And, being responsive to the market by providing quality products, it can charge premium prices in the market. The trade-off is contemporary.
- ☑ Fulfilling the promises needs a top management commitment which entails giving proper authorization and responsibilities to the employees who work for the company. BSRM SCM is truly committed to gain a competitive advantage.

4.2 The Interrelationship among the BSRM SCM Wings

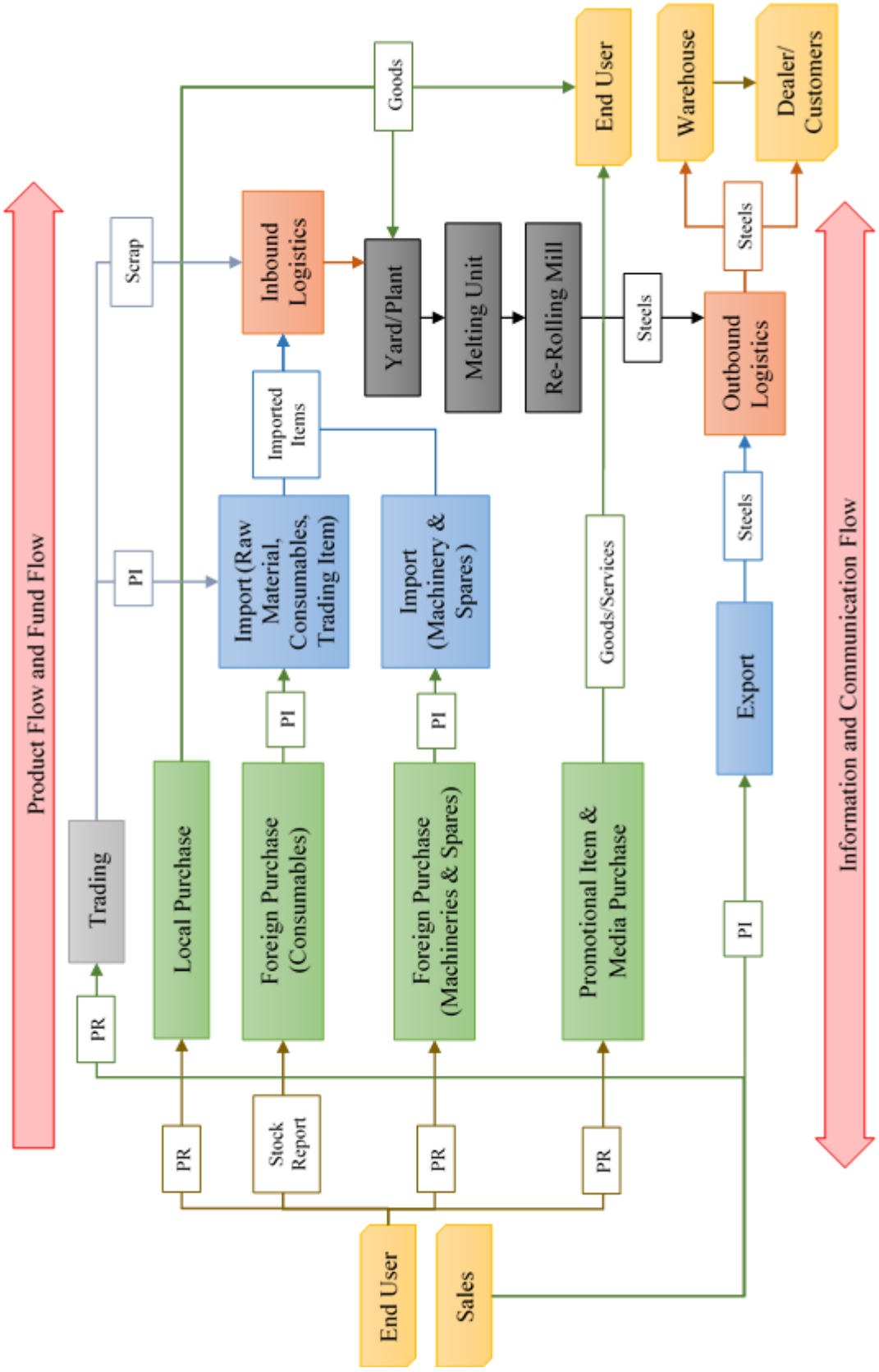


Figure: The Interrelationship Among the BSRM SCM Wings

4.3 Challenges of Major Wings of BSRM SCM

❖ Purchase

Local Purchase

1. Quality of the works and products is not uniform since all the suppliers don't conform to a unified system of production
2. Uneducated suppliers who don't have proper expertise in communication
3. Manual and conventional system of the supplier that make the communication difficult

Foreign Purchase

1. Physical inspection is difficult, in turn it is difficult to assess their credibility
2. Non-conformance of the imported items and their remedies is complex
3. International price fluctuation of products and their impacts on the overall cost

❖ Commercial

Import

1. Bank rates and charges related issue
2. Documentation related problem – human error and discrepancies
3. Harmonized System (HS) code related problem – extra duty demanded by customs
4. Duty related problem – duty overload
5. Legal compliance issue – compliance with BIDA, Customs, Port, BB etc.

Export

1. Ensuring on time shipment and document negotiation according to the terms of LC
2. Coordination between the logistics and customers
3. Collection of payment from the importer

❖ Logistics

1. Managing congestion related problem in the port is difficult
2. Minimizing the huge amount of demurrages is a big challenge
3. Managing the charges and prices of transport agency
4. Regulatory bars given by the transport authority

4.4 Prospects of BSRM SCM

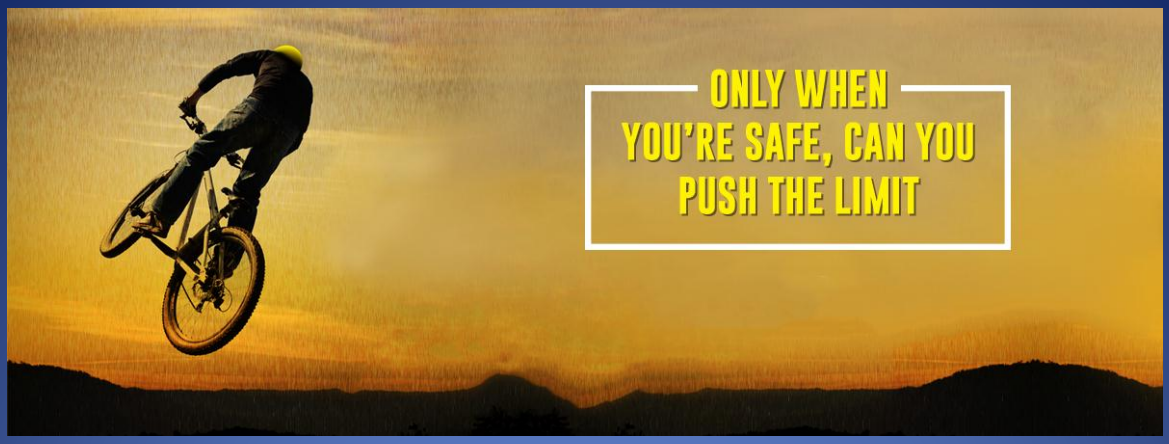
The prospect of any particular department depends on the overall prospect of the particular firm, industry, and the economic condition of the country. BSRM as the leading steel manufacturing firm in the industry is facing enormous progression in making quality products and providing safety solution with the motto of "Building A Safer Nation".

- ☑ Enormous business growth and infrastructure development in the country, projects adopted by the government and privately-owned organization.
- ☑ There is a huge scope of applying scientifically proven methods of supply chain structure in BSRM by proper consultation, training and development.
- ☑ Developing diversified portfolio of business can open a new door for BSRM SCM as the nation progresses to a phase of developed economy.

4.5 Concluding Remarks

Bangladesh is emerging as the economic tiger in this region of South Asia. For many countries, Bangladesh is the safe and reliable destination for investment, especially government's investment friendly policies encouraging many foreign investors. These investments will surely increase demands for prime quality construction steel. Demand for high quality steel is also fuelled by a number of mega civil construction projects, undertaken by both private and public sectors. BSRM is supplying a lot of products to those mega projects, ensuring proper quality and compliance issue.

BSRM Supply Chain Management as a benchmark for others in the industry plays a very vibrant role to keep the company surviving and comply with the competitive strategy. Depending on that competitive strategy the supply chain structure is created. Earlier, BSRM SCM was a very insignificant department when the company was searching for opportunities in the market. After a tremendous growth with the brand BSRM Xtreme in the Bangladesh steel market, the supply chain has become the most significant part of the company. It grew with experience, learning, expertise, training and development. Beholding from the top of the house, BSRM SCM is now such a department that integrates every other department and safeguard the reputation of the company by proper flow of products, funds, and information. The significance of supply chain management is universal and ever growing.



Annexure

BUILDING A SAFER NATION

BSRM

References

Annual Report 2016-17, Bangladesh Steel Re-Rerolling Mills (BSRM) Limited.

Annual Report 2016-17, BSRM Steels Limited.

Bangladesh Brand Forum, (2015), 'The Story of BSRM: How a Brand Changed an Industry', http://bbf.digital/the-story-of-bsrm-how-a-brand-changed-an-industry

BSRM Website, (2018): www.bsrm.com

CastleConsultants.in 'Ferrous Products – Description, Ferrous Products List', http://www.castleconsultants.in/ferrous-products.html

Council of Logistics Management (1991), Chicago, Oak Brook, Ill, Society of Logistics Engineers (SOLE) (1974).

D.K. Agrawal (2001), '7 Ms to Make Supply Chain Relationships Harmonious', Proceeding of National Conference On People, Processes and Organizations: Emerging Realities, Excel Books, New Delhi.

D.K. Agrawal (2003), *Textbook of Logistics and Supply Chain Management*, Macmillan Publishers India Limited.

E.W. Smykay, D.J. Bowersox and F.H. Mossman (1961), *Physical Distribution Management*, Macmillan, New York.

European Commission (2011), *Best available techniques reference document for iron and steel production*.

Fenton M.D., 2005 – Fenton 2005 – *Mineral Commodity Profiles* – Iron and Steel. United States Geological Survey.

Overview of the Steelmaking Process, Worldsteel Association

Porter, M.E. (1998) 'On competition', *A Harvard Business Review Book*, p.67.

Porter, M.E. (2001) 'Strategy and the internet', *Harvard Business Review*, March, pp.18–21.

Porter, M.E., (1985), "Competitive Advantage: Creating and Sustaining Superior Performance", *The Free Press, New York, NY*, pp.38.

ReflectionNews.com 'Alihussain Akberali FCA, Chairman BSRM Group of Companies' (2011), http://reflectionnews.com/alihussain-akberali-fcachairman-bsrm-group-of-companies/

S G Acharyulu, K Venkata Subbaiah and K Narayana Rao (2015) 'Value chain model for steel manufacturing sector: A case study', *International Journal of Managing Value and Supply Chains (IJMVSC)*, Vol. 6, No. 4, December 2015

S.G. Deshmukh and R.P. Mohanty (1999), *Reengineering of Supply Chain: Lessons from Case Studies*, ICSCM, Macmillan India Ltd., New Delhi.

S.K. Acharya (1999), *Logistics Predicament and Indian Infrastructure—Great Challenges Ahead*, ICSCM, Macmillan India Ltd., New Delhi.

Webster's Seventh New Collegiate Dictionary (1963), G&C, Merrium Company Publishers, Springfield Mars.

Glossary

Airway Bill: An air waybill (AWB) or air consignment note is a receipt issued by an international airline for goods and an evidence of the contract of carriage, but it is not a document of title to the goods. Hence, the air waybill is non-negotiable.

Annual Rate Contract (ARC): The Annual Rate Contract is a contract between the buyer and the seller under which, during the period of its currency (one year), the contractor engages to supply materials on demand, irrespective of quantity, at fixed unit rates or prices, within a given period of the receipt of such demand.

Berthing: Berth is the term used in ports and harbors for a designated location where a vessel may be moored, usually for the purposes of loading and unloading. Berths are designated by the management of a facility (e.g., port authority, harbor master). Vessels are assigned to berths by these authorities.

Bill of Entry: An account of goods entered at a customhouse, of imports and exports, detailing the merchant, quantity of goods, their type, and place of origin or destination. It is issued by the customs presenting the total assigned value and the corresponding duty charged on the cargo.

Bill of Lading (B/L): A document by which the master of a ship (or any other carrier) acknowledges receipt of goods for transport.

Bill of Quantity (BOQ): A bill of quantities (BOQ) is a document used in tendering in the construction industry / supplies in which materials, parts, and labor (and their costs) are itemized. It also (ideally) details the terms and conditions of the construction or repair contract and itemizes all work to enable a contractor to price the work for which he or she is bidding. The quantities may be measured in number, length, area, volume, weight or time.

C&F Agent: Any person or organization who or which is engaged in providing any service, either directly or indirectly, concerned with the clearing and forwarding operations in the port in any manner to any other person and includes a consignment agent.

Certificate of Origin: Certificate of origin (COO), is the country of manufacture, production, or growth where an article or product comes from. There are differing rules of origin under various national laws and international treaties.

Comparative Statement (CS): A CS is a statement mentioning the comparison of different vendors for a particular item/s based on price, incoterm, warranty, payment method etc. The need for comparative statement (CS) arises especially in case of bids comparison of local and foreign vendors. There are many additional charges applying on foreign vendor like duties, while taxation effects are also different.

Consignment Note: Document prepared by a consignor and countersigned by the carrier as a proof of receipt of consignment for delivery at the destination. Used as an alternative to bill of lading (specially in inland transport).

Copy Documents: Copy documents are the copy of original commercial documents sent by the exporter to the importer for the purpose of tracking shipment, and clearing goods from the port by using the letter of indemnity or no objection certificate.

Debit Note: A debit note is a document sent by a buyer to a seller, or in other words, a purchaser to a vendor, while returning goods received on credit. This notifies that a debit has been made to their accounts. A debit note is issued for the value of the goods returned. In some cases, it is created for claiming compensation of goods that are damaged and of other non-conforming issues.

Delivery Challan: A Delivery Note or Challan is a document addressed to the Stores-in-charge containing instructions to effect delivery of the goods mentioned therein. A copy will go along with the goods package to the customer.

Delivery Order (D/O): A delivery order (D/O) is a document from a consignee, or an owner or his agent of freight carrier which orders the release of the transportation of cargo to another party by the Shipping Line. Usually the written order permits the direct delivery of goods to a warehouseman, carrier or other person who in the course of their ordinary business issues warehouse receipts or bills of lading.

Demurrage: Penalty for exceeding free time (usually 4 days) allowed for taking delivery of a shipment from the port, or returning of containers (usually 14 days) to the shipping or transporting company's nominated depot.

Draft: The draft or draught of a ship's hull is the vertical distance between the waterline and the bottom of the hull (keel). In the simplest terms, the draft of a ship or boat is the distance between the surface of the water and the lowest point of the vessel. The measurement should be made as close to vertical as possible. Draft determines the minimum depth of water a ship or boat can safely navigate.

Export Permit (EXP): To export certain goods out of the country, the exporter must have a permit ensuring the compliance with applicable export control measures. The export of some goods may be restricted to support strategies of beneficiation or to assist local manufacturers to obtain raw materials before they are exported.

Ferrous Metals: Ferrous Metals mostly contain Iron. They have small amounts of other metals or elements added, to give the required properties. Ferrous Metals are magnetic and give little resistance to corrosion. Examples of the ferrous metals: Vehicle scrap metal, Demolition Site scrap metal, Metal offcuts from manufacturing industries.

Full Container Load (FCL): FCL is a container shipping option where a container is exclusively used for a single shipment and the container is not shared with other cargo shipments, and the costs are borne by one party. Even if the container isn't enough completely filled to the brim with cargo, the shipping party can choose to still opt for it.

Goods Receiving Note (GRN): The goods receipt note is an internal document produced after inspecting delivery for proof of order receipt. Generally produced by your stores team. It's used by stores, procurement and finance to raise any issues, update your stock records and to be matched against the original purchase order and supplier invoice, to allow payment to be made.

Harmonized System (HS) Code: The Harmonized Commodity Description and Coding System, also known as the Harmonized System (HS) of tariff nomenclature is an internationally standardized system of names and numbers to classify traded products. It came into effect in 1988 and has since been developed and maintained by the World Customs Organization (WCO) (formerly the Customs Co-operation Council), an independent intergovernmental organization based in Brussels, Belgium, with over 200 member-countries. It allows participating countries to classify traded goods on a common basis for customs purposes. At the international level, the Harmonized System (HS) for classifying goods is a six-digit code system.

Import General Manifest (IGM): Once before arrival of cargo at destination port, the carrier has to file the details of cargo arriving to such port of importing country with the Customs. Normally IGM is filed on the basis of Bill of Lading or Airway bill, issued by the carrier. The IGM Import General Manifest contains the details about shipper, consignee, number of packages, kind of packages, description of goods, airway bill or bill of lading number and date, flight or vessel details etc.

Import Permit (IP): An import permit is a document issued by a national government authorizing the importation of certain goods into its territory. Government may put certain restrictions on what is imported as well as the amount of imported goods and services.

Incoterm: The Incoterms rules or International Commercial Terms are a series of pre-defined commercial terms published by the International Chamber of Commerce (ICC) relating to international commercial law. They are widely used in International commercial transactions or procurement processes as the use in international sales is encouraged by trade councils, courts and international lawyers. It is a series of three-letter trade terms related to common contractual sales practices, the Incoterms rules are intended primarily to clearly communicate the tasks, costs, and risks associated with the transportation and delivery of goods. Incoterms inform sales contract defining respective obligations, costs, and risks involved in the delivery of goods from the seller to the buyer. However, it does not constitute contract or govern law. Also, it does not define where titles transfer and does not address the price payable, currency or credit items.

Inspection Certificate: A report issued by an independent surveyor (Inspection Company) or the exporter on the specifications of the shipment, including quality, quantity, and / or price, required by certain buyers and countries.

Institute of Scrap Recycling Industries (ISRI): The Institute of Scrap Recycling Industries (ISRI) is a United States-based private, non-profit trade association representing more than 1,600 private and public for-profit companies. Its membership is made up of manufacturers and processors, brokers and industrial consumers of scrap commodities, including ferrous and nonferrous metals, paper, electronics, rubber, plastics, glass and textiles. ISRI's associate members include equipment and service providers to the scrap recycling industry. Manufacturers and sellers of equipment and services—such as shredders, balers, cranes,

cargo transporters, computer systems and more—also promote the scrap recycling industry through their membership in ISRI.

Insurance Cover Note: A temporary document issued by an insurance company that provides insurance coverage until a final insurance policy can be issued. A cover note is different than a certificate of insurance or an insurance policy document. The note features the name of the insured, the insurer, the coverage, and what is being covered by the insurance.

Insurance Policy: An insurance document, with full details of the insurance coverage, evidencing insurance has been taken out on the goods shipped.

Invoice/Commercial Invoice: It is a formal demand note for payment issued by the exporter to the importer for goods sold under a sales contract. It should give details of the goods sold, payment terms and trade terms. It is also used for the customs clearance of goods and sometimes for foreign exchange purpose by the importer.

Lead Time: Lead time is the amount of time that elapses between when a process starts and its completion. Lead time is examined closely in manufacturing, supply chain management and project management, as companies want to reduce the amount of time it takes to deliver products to the market.

Less than Container Load (LCL): LCL is a shipping term when various cargo shipments share the same container as well as the container shipping costs.

Letter of Credit (LC): A letter of credit (LC) also known as a Documentary Credit, is a written commitment by a bank issued after a request by an importer (foreign buyer) that payment will be made to the beneficiary (exporter) provided that the terms and conditions stated in the LC been met, as evidenced by the presentation of specified documents.

Letter of Credit Authorization Form (LCAF): LCAF is mainly application for permission for opening LC as well as importing of goods into Bangladesh and remittance there against. So it is used for opening LC, releasing goods and remittance there against.

Letter of Indemnity: A letter of indemnity is a written confirmation by the loading port shipping line to the destination port shipping line that the goods can be cleared without the original documents by using copy documents.

Lightering: Lightering (also called lighterage) is the process of transferring cargo between vessels of different sizes, usually between a barge and a bulker or oil tanker. Lightering is undertaken to reduce a vessel's draft in order to enter port facilities which cannot accept very large ocean-going vessels. Lightering can also refer to the use of a lighter barge for any form of short-distance transport, such as to bring railroad cars across a river. In addition, lightering can refer to the process of removing oil or other hazardous chemicals from a compromised vessel to another vessel to prevent oil from spilling into the surrounding waters.

No Objection Certificate (NOC): A no objection certificate is a written confirmation the bank to the commissioner of customs & shipping line that if the goods are cleared from the port without the original documents, then the bank will not have any problem to honor the payment.

Notice of Readiness (NOR): A paper or telex document urgently issued by a shipmaster that advises a person awaiting a shipment that his ship has arrived and is prepared for the cargo to be unloaded or loaded. When a business receives a notice of readiness (NOR), it means that the company needs to make appropriate preparations for their cargo immediately.

Original Equipment Manufacturer (OEM): An original equipment manufacturer (OEM) is a company whose goods are used as components in the products of another company, which then sells the finished item to users.

Outer: Ship-to-ship transfer operations take place at open sea or outer port limit. When the mother vessels cannot enter the country port, then the lighter vessels transfer goods from them in the deep sea.

Packing List: A list with detailed packing information of the goods shipped.

Payment Method: The payment of the LC can be made Advance, At Sight, Deferred (Banker's Usance or Supplier's Usance) basis; or in open term basis such as Cash Against Documents (CAD).

Process Flow Chart: A picture of the separate steps of a process in sequential order. Elements that may be included are: sequence of actions, materials or services entering or leaving the process (inputs and outputs), decisions that must be made, people who become involved, time involved at each step and/or process

measurements. The process described can be anything: a manufacturing process, an administrative or service process, a project plan. This is a generic tool that can be adapted for a wide variety of purposes.

Production Schedule Chart: The timetable for the use of resources and processes required by a business to produce goods or provide services. A typical business will modify its production schedule in response to large customer orders, to accommodate resource changes, to reduce costs, and to increase overall production efficiency.

Pro-Forma Invoice (PI): An invoice provided by a supplier prior to the shipment of merchandise, informing the buyer of the kinds and quantities of goods to be sent, their value, and importation specifications (weight, size and similar characteristics). This is not issued for demanding payment but may be used when applying for an import license/permit or arranging foreign currency or other funding purposes such as LC.

Purchase Order (PO): A purchase order (PO) is a commercial document and first official offer issued by a buyer to a seller, indicating types, quantities, and agreed prices for products or services. It is usually a ERP generated document used to control the purchasing of products and services from external suppliers.

Purchase Price Cost Analysis (PPCA): The Purchase Price Cost Analysis (PPCA) allows users to develop an understanding of the cost build up and profits earned by suppliers of the products and/or services being sourced. The price of any product or service is made up of labor, material, production and logistic costs, plus overheads and profit margins. It allows the user to build up the cost, overhead and profit structure relative to the price of the product and/or service being purchased. This information allows users to understand what is a 'fair' price for suppliers to charge when they respond to a Request for a Proposal (RFP) or an Invitation to Tender (ITT). Should the price quoted be significantly different from the expected 'fair' price, the PPCA work allows the user to identify where the supplier is being opportunistic in their pricing and, therefore, a target for exclusion or structured negotiation.

Purchase Requisition (PR): Document generated by a user department or storeroom-personnel to notify the purchasing department of items it needs to order, their quantity, and the timeframe. It may also contain the authorization to proceed with the purchase. Also called purchase request or requisition.

Quotation: An offer to sell goods and should state clearly the price, details of quality, quantity, trade terms, delivery terms and payment terms.

Request for Proposal (RFP): A request for proposal (RFP) is a document that solicits proposal, often made through a bidding process, by an agency or company interested in procurement of a commodity, service, or valuable asset, to potential suppliers to submit business proposals. It is submitted early in the procurement cycle, either at the preliminary study, or procurement stage.

Request for Quotation (RFQ): A request for quotation (RFQ), whereby the customer may simply be looking for a price quote. It is a standard business process whose purpose is to invite suppliers into a bidding process to bid on specific products or services.

Sales Contract: An agreement between the buyer and the seller stipulating every detail of the transaction. Since this is a legally binding document, it is therefore advisable to seek legal advice before signing the contract.

Society for Worldwide Interbank Financial Telecommunication (SWIFT): The SWIFT provides a network that enables financial institutions worldwide to send and receive information about financial transactions in a secure, standardized and reliable environment.

Transshipment: Transfer of a shipment from one carrier, or more commonly, from one vessel to another whereas in transit. Transshipments are usually made (1) where there is no direct air, land, or sea link between the consignor's and consignee's countries, (2) where the intended port of entry is blocked, or (3) to hide the identity of the port or country of origin. Because transshipment exposes the shipment to a higher probability of damage or loss, some purchase orders or letters of credit specifically prohibit it.

Uniform Customs and Practice for Documentary Credits (UCPDC): The Uniform Customs and Practice for Documentary Credits (UCP) is a set of rules on the issuance and use of letters of credit. The UCP is utilized by bankers and commercial parties in more than 175 countries in trade finance.