



Faculty of Engineering
Department of Textile Engineering

" Study on issues that hamper the workflow of a merchandiser"

Course Title: Thesis; Course Code: TE-4214

Submitted By

Rajath Roy	Sakib Hossain
181-23-5238	181-23-440

Department of Textile Engineering
Daffodil International University

Supervised By

Abdullah Al Mamun
Associate Professor
Department of Textile Engineering
Faculty of Engineering
Daffodil International University

This thesis is submitting to partial fulfillment of the requirements for the degree
of **Bachelor of Science in Textile Engineering**

Advanced in Apparel Manufacturing Technology

Fall 2021

LETTER OF APPROVAL

March 10, 2022

To

The Head

Department of Textile Engineering

Daffodil International University

102, Shukrabad, Mirpur Road, Dhaka 1207

Subject: Approval of Thesis Report of B.Sc. in Textile Engineering Program

Dear Sir

I am writing to let you know that this thesis report titled "**Study on issues that hamper the workflow of a merchandiser**" has been prepared by the student bearing ID:181-23-5238 and ID:181-23-440 is completed for final evaluation. This report is prepared based on the collected data with their required belongings. These students have been directly involved in their thesis report-making activities, and the report became vital to spark valuable information for the readers.

Therefore, it will highly be appreciated if you kindly accept this report and consider it for final evaluation.

Sincerely,



Abdullah Al Mamun

Associate Professor
Department of Textile Engineering
Faculty of Engineering
Daffodil International University


DECLARATION

We now declare that the work provided in this report, "**Study on issues that hamper the workflow of a merchandiser**" is a unique piece of our own that has never been submitted for a degree at any other university. Therefore, all the resources of materials used for this work have been duly acknowledged.



Name: Rajath Roy

ID: 181-23-5238



Name: Sakib Hossain

ID: 181-23-440

ACKNOWLEDGEMENT

First and foremost, praise Almighty for the showers of blessings throughout this covid-19 pandemic and keep us safe and healthy.

We want to give our deep and sincere gratitude to Mr. Abdullah Al Mamun, Associate Professor, Department of Textile Engineering, Daffodil International University, for giving us the opportunity to work on this thesis report and providing us invaluable guidance throughout the work. His dynamism, vision, sincerity, and motivation have deeply inspired us. It was a precious privilege and honor for us to do the study under his guidance. Therefore, we are highly grateful to him.

We would also want to thank everyone who participated in our survey and gave us interviews, which helped us come up with some findings for our study.

We are incredibly grateful to our parents for their love, prayers, caring, and sacrifices for educating and preparing us for our future.

ABSTRACT

Merchandising is the department responsible for working as a bridge between buyer, manufacturer, and supplier. So merchandisers are capable on doing multitasking and schedule maintenance. But we are human beings, and a minor unconcerned fault will cause the whole merchandising flowchart to break down. With this reason in mind, we are here with this work; this work will give its readers insight into the challenges that merchandiser faces when working on their flowchart and give you an idea about some unique way to remedy those issues/challenges. So, to do the study, the authors use quantitative data collection methods and use Pareto analysis on the data to identify 20% of the area of challenges that cause 80% of the problem in the process. Also, you will see fishbone analysis (Cause and effect diagram) on that 20 % area of challenges. These techniques of data analysis make this works more precise. In this, works authors talk about how can project management app can change the way of thinking and workflow of a merchandiser. Also, the reader will find two follow-up charts made with MS Excel to follow-up efficiently with your project (Order from buyer) individual task responsible.

Table of Contents

CHAPTER-1	11
INTRODUCTION	11
1.1 Background of The Study	12
1.2 Objectives of The Study	13
1.3 Significance of The Study	14
1.4 Limitation of The Study	14
CHAPTER-2	15
LITERATURE REVIEW	15
2.1 Flowchart of Apparel Industry	16
2.2 Previous Works	17
2.3 Merchandising	19
2.4 Merchandising Type	19
2.5 Primary Roles of Merchandiser	20
2.6 Working Flowchart of a Merchandiser	21
2.7 Basic Organogram of a Merchandising Department	22
2.8 Roles of Fashion Merchandiser	22
2.9 Role of a Production Merchandiser	24
2.10 Retail Merchandising	31
2.11 Samples in Apparel Industry	33
2.12 Sampling Process	38
2.13 Quality of a Merchandiser	39
2.14 Merchandiser Interface with Other Departments of an Industry	40
2.14.1 Industrial Engineering or Production Planning department	40
2.14.2 Sourcing / Purchase Department	41
2.14.3 Quality audit Department	41
2.14.4 Production Department	42

2.14.5	Finance / Accounts Department.....	43
2.14.6	Marketing Department	43
2.14.7	Designing Department	44
2.14.8	Human Resource (HR.) Department.....	44
2.15	Time and Action Plan.....	45
2.15.1	Factors that Considered to Making Time and Action Plan	46
2.16	Gantt Chart.....	49
2.17	Network Chart.....	50
2.17.1	Critical Path Method (CPM)	51
2.17.2	PERT (Program Evaluation and Review Technique)	52
CHAPTER-3.....		53
SURVEY DETAILS.....		53
3.1	Maintaining the TNA Plan	55
3.2	Sourcing Materials.....	58
3.3	Negotiation	59
CHAPTER-4.....		60
DISCUSSION OF RESULTS.....		60
4.1	Maintain TNA Plan.....	61
4.2	Sourcing Materials.....	67
4.2.1	Purchasing by Requirement.....	68
4.2.2	Market Purchasing	68
4.2.3	Evaluating Supplier Market.....	68
4.2.4	Purchasing for Future Period.....	69
4.2.5	Contractual Purchasing	69
4.2.6	Amass Suppliers' information.....	69
4.2.7	Scheduled Purchasing	70
4.2.8	Formulate Sourcing Strategy	70

4.2.9	Group Purchasing	70
4.2.10	Negotiate with Supplier.....	71
4.2.11	Enforce the Sourcing Strategy.....	71
4.2.12	Monitor the Sourcing Plan	72
4.3	Follow-up	72
4.3.1	Determination of Need and Scope.....	72
4.3.2	Determination of Roles and Responsibilities	73
4.3.3	Gathering Data and Evaluation.....	73
4.3.4	Reporting.....	73
4.3.5	Set a Deadline.....	74
4.3.6	Use Multiple Channels.....	74
4.3.7	Don't Nag.....	74
4.3.8	Multi-Purpose Conversations	74
CHAPTER-5	_____	78
CONCLUSION	_____	78
Reference	_____	80
Annex	_____	80

LIST OF TABLES

Table 2.9.1: Role of a production merchandiser [1]	_____	24
Table 2.11.1: Samples in the apparel industry [1]	_____	34
Table 2.15.1: A Typical T&A Plan	_____	47
Table 2.17.1: Activity and their immediate predecessor	_____	52
Table 3.1: Challenges faced by the merchandisers	_____	54
Table 3.1.1: A TNA plan	_____	55
Table 4.3.1: Follow-up chart example for sample development	_____	76
Table 4.3.2: Follow-up chart for outsourcing materials	_____	77

LIST OF FIGURES

Figure 2.1.1: Flowchart of apparel industry [1] _____	16
Figure 2.3.1: Types of merchandising/merchandiser [1] _____	19
Figure 2.5.1: Activity cycle of a merchandiser _____	20
Figure 2.6.1: Working flowchart of merchandiser [1] _____	21
Figure 2.7.1: Organogram of merchandising department _____	22
Figure 2.8.1: Roles of fashion merchandiser [1] _____	23
Figure 2.10.1: Process flowchart of a retail merchandiser [1] _____	33
Figure 2.12.1: Sampling process flowchart _____	39
Figure 2.14.1: Merchandiser interface with other departments of an industry _____	45
Figure 2.17.1: Network path of a project _____	51
Figure 2.17.2: Components of simple network diagram [1] _____	52
Figure 3.1: Pareto analysis of founded data _____	54
Figure 3.1.1: Fishbone Analysis (TNA Plan Maintaining) _____	57
Figure 3.2.1: Fishbone Analysis (Sourcing Materials) _____	58
Figure 3.3.1: Fishbone Analysis (Negotiation) _____	59
Figure 4.1.1: Generic time requirements by different stages of an executed order _____	61
Figure 4.1.2: Project management app home interface _____	61
Figure 4.1.3: Project management app home view _____	62
Figure 4.1.4: Sidebar of the app _____	62
Figure 4.1.5: View after clicking on a task-1 _____	63
Figure 4.1.6: Contents on developments list _____	63
Figure 4.1.7: View after clicking on a task-2 _____	64
Figure 4.1.8: Duplicating folder _____	65
Figure 4.1.9: Duplicating space _____	65
Figure 4.1.10: Copying space window _____	66
Figure 4.1.11: Copying folder window _____	66
Figure 4.1.12: Gantt chart generated by the app _____	67

ABBREVIATIONS

TNA: Time and Action

PO: Purchase Order

PPC: Production planning and control

L/C: Letter of Credit

B/L: Bill of Lading

CI: Commercial Invoice

PI: Proforma Invoice

P/L: Packing List

CAD: Computer-Aided Design

GPT Sample: Garment Performance Test Sample

PP Sample: Pre-Production Sample

TOP Sample: Top of the Production Sample

CHAPTER-1

INTRODUCTION

1.1 Background of The Study

The Bangladesh apparel industry is one of the leading industrial sectors globally. People worldwide know us for our "Made in Bangladesh" tag as they trust us about the apparel products they get from us. It has made a significant contribution to our country's economy in terms of direct and indirect job creation and net foreign exchange profits. So, our garment industry has increased its annual revenue from \$19 billion to \$34 billion and a 79% rise in the last seven years. This makes the country the second-largest exporter of garments globally, with the sector accounting for 80 percent of Bangladesh's total export earnings. The garment industry, which employs 5 million people, primarily women, contributes more than 11% to the country's GDP. The development and progress of a country largely depend on export performance. In the case of Bangladesh, among the export sector, ready-made garments are the primary earning source of foreign currency. In this RMG sector, merchandisers and the merchandising departments from suppliers and buyers play a vital role. They are the people in the apparel industry who manage the buyers and their orders by taking care of the garment business. They oversee the Company's manufacturing activities to ensure timely delivery of the right quality and correct quantity. Time, cost, and agility management have been the significant objectives of apparel supply chain management in the last three decades.

Merchandising procedure involves activities like communicating with the buyer, confirming the order of a particular quantity of different or specific design, developing sample and approval, preparing consumption and costing sheet, negotiating with the buyer, maintaining Time and Action plan (TNA), in-housing fabrics and accessories, arranging pre-production meeting, bulk production, inspecting products quality, delivery or shipping. Those all activities are executed by a group of merchandisers. To accomplish the merchandising procedures, merchandisers should have good knowledge about the business legal documents, such as Letter of Credit (L/C), Bill of lading (B/L), Commercial Invoice (CI), Proforma Invoice (PI), Packing List (P/L), Shipping documents and many more. To achieve these goals, garment exporters are continually attempting to reduce the time and cost paid on operations that contribute to the value chain established for the buyer after evaluating value added at each level of the value chain. Therefore, clear lines of communication amongst all members of the value chain are of prime importance. All efforts must be participative and provide for linkages amongst all supply chain members to create and sustain (and improve) value at each stage.

The complex job of developing, executing, and delivering product lines based on the needs of a target market is the responsibility of the apparel merchandiser. The task must be performed with a focus on meeting the organization's overall objectives. The individual responsible for this function may be given different titles like merchandising, product development, design, merchandising director, etc. In today's larger companies, this function may be divided into more specialized areas such as general merchandising, creative design, technical design, sourcing, and quality management. In every Company, someone must make the decisions concerning designs and which garment styles will get adopted in the product line. In addition, someone in the Company must responsibly and accountably ensure that the garments are manufactured in time and meet the customer demand. Thus, the apparel merchandising process may be defined as developing, executing, and delivering a product line based upon the target market's needs. The apparel merchandiser's position, responsibilities, and authority evolved as apparel companies transitioned from the traditional focus on 'production efficiency' to the more recent focus on 'changing consumer needs.'

The merchandiser is the bridge between the management (or) industry and the buyer in the apparel industry. The merchandiser is responsible for making the product according to the buyer's parameters and satisfaction. Therefore, merchandisers have to look after every job like buying the raw material (which is required to assemble and finish the product), making the apparel, finishing the garment, documentation, and shipping as mentioned before. So, when a merchandiser does these labels of a task, they always face challenges. And that geared us towards determining these challenges.

1.2 Objectives of The Study

This project will exhibition the potential solution to those problems that a merchandiser faces at their merchandising workflow.

More objectives are given below-

- To know about the merchandising procedure for a buyer.
- To learn how merchandisers communicate with buyers and suppliers.
- To know about the organogram.
- To know about order sheet/purchase order for a buyer.

- To know about commercial activities.
- To get knowledge about how to sample development takes place.
- To get an understanding of the order sheet.
- To gain ideas about PP Meeting.
- To get knowledge about the shipping process.
- To gather an idea about all the textile processes.
- To acquire a fantastic concept about knit garment merchandising along with the manufacturing process.
- To know about the managing peoples and technical process.
- To get quality knowledge.
- Scope of behavioral principle practice in our RMG sector.

1.3 Significance of The Study

In this thesis report, we tried to show the challenges a merchandiser face during their work process. A general person can learn some things from the report. First, we discussed how merchandisers work in their daily working days as it is essential to identify the challenges they face. Then, merchandising department employees can apply how they can overcome these challenges. Can students learn from this report about merchandising? How merchandising flowchart works in the industry.

1.4 Limitation of The Study

- All concerned persons of the office have not been interviewed.
- Due to confidentially, the factory restricts getting specific data.
- The internship is for no more than two months.
- Limitation in movement around the factory.
- Limitation of working days in every section/department, Specially merchandising.

CHAPTER-2

LITERATURE REVIEW

2.1 Flowchart of Apparel Industry

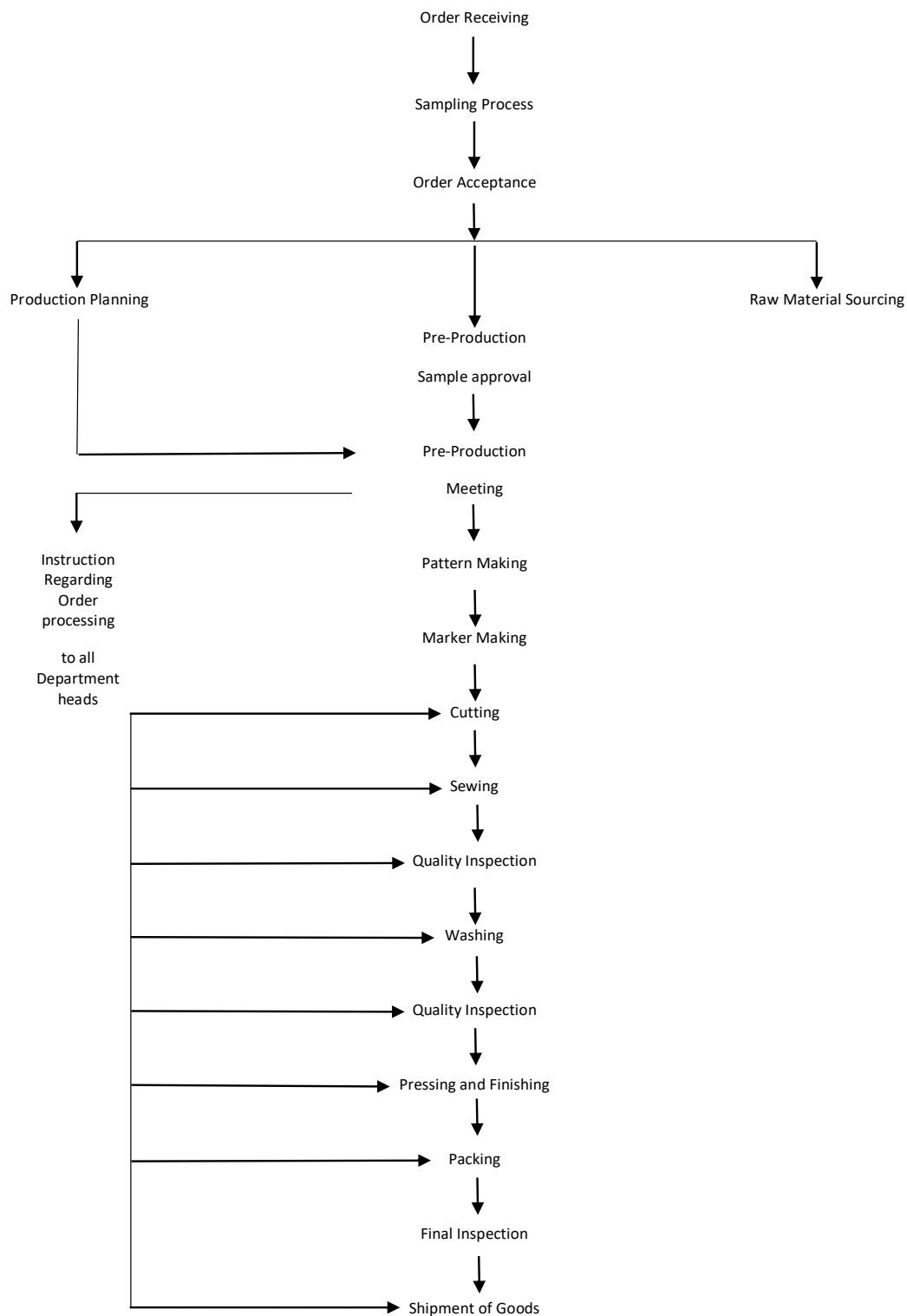


Figure 2.1.1: Flowchart of apparel industry [1]

2.2 Previous Works

"Report on challenges of merchandising in Divine Textile Ltd." It is one of the works done by Tareq Mahmud, 2017, Brac Business School. And that reports findings along with the report recommendation given below_

Findings:

- Developing the product as a sample is a difficult task.
- A slight problem in knitting may hamper the large production.
- Not being careful about color in dyeing may result in a significant loss for the Company.
- Yarn dyeing products are used for stripe and check print clothes mainly. The thread in the market also gets its color shades from yarn dyeing.
- Meeting lead time and factors after not meeting lead time.
- Follow-up is needed every time. Starting from the day of production to the day of delivery.
- Pricing is an essential thing of a duty of a merchandiser because his calculation and price will tell the Company's profit and loss.
- The merchandisers have to give the top quality service with minimum price.
- There are language and cultural barriers among the merchandisers and the buyers.
- Cultural factors often hamper the production quantity.
- Lack of modern technology compared to other developed nations.
- Modern machinery must be installed replacing the old ones for more production.
- The government must do the infrastructure development in the country.
- Disturbances free electricity and gas must be provided to the RMG sector.
- The workers must be given maximum facility as the complaints.
- Ensuring safety and other facilities must be given to make the workers happy because they are the main asset.
- Proper construction of the factory with the needed safety measures must be followed.
- The product should be delivered before the Lead time expires [3]

Recommendation:

- The main highways, namely Dhaka-Chittagong, Dhaka-Mymensingh, Dhaka-Tangail, through which our apparel products and the raw materials for apparel and textile are transported from factories to port, are being widened (from two lanes to four lanes) and drive-worthy for tapping our export potential.
- The gas connection to the factories and the uninterrupted power supply are prerequisites for the industry's steady growth. So, the government should consider giving gas and electricity connections to RMG and textile units as the top priority.
- Producing the required number of skilled workers is another challenge, and overcoming it will determine whether the country will be able to sustain the boom that is waiting to happen.
- Fashion, textile, and industrial merchandising departments need to be established at our major public and private universities. Inadequate infrastructure, bureaucratic inefficiency, and corruption are still the major problematic factors in industrialization and for the growth of an industry. These are also increasing entrepreneurs' costs of doing business.

Another works titled "Challenges of merchandising in SIKDAR Apparel Hosiery Ltd." by Md. Atiqur Rahman, Daffodil International University, 2018; found the same findings as to the earlier one though these works have different recommendation_

Recommendation:

- Where the Supply chain is not strong, the Company's important subject or department doesn't output the required product timely. So we should follow about the supply chain. Where their supply chain is strong, the Company will output more effects. So it will be helpful for merchandisers. So when the supply chain department procures all the raw materials, the merchandiser can quickly ship the goods within lead time.
- The international buyer gives more priority to the product quality. So every Company or garments should assuredly produce product modernize.

- The garment or Company should increase the Payscale. Because it is inferior, which is needed to be grown, Company will lose potential employees due to their policy.
- Instead of short-term relationships, Merchandisers need to develop long-term relationships with the key parties – buyers, buying houses and suppliers, etc.
- Power distribution is another important, so the management has to distribute to the right employee.
- Success depends on the planning. So there should be the right decision with planning for output quality product. [4]

2.3 Merchandising

Merchandising comes from the word merchandise. Merchandise means supplies or goods to be bought and sold. In the textile/apparel industry, merchandisers have always maintained a significant role in the entire product range of the apparel industry. Merchandising is the activity of purchasing and selling goods and services. Merchandising has been defined as a set of activities undertaken to ensure that the right product reaches at the right price in the correct quantity and at the right time to the final destination [2]

Merchandising activity involved different departments in the apparel industry. It creates a valuable relationship with the buyers. It builds an excellent relationship with the buying houses, and the merchandiser concentrates on queries, order processing, and assessing apparel products. These aspects make the merchandising activity an essential role in the garment industry.

2.4 Merchandising Type

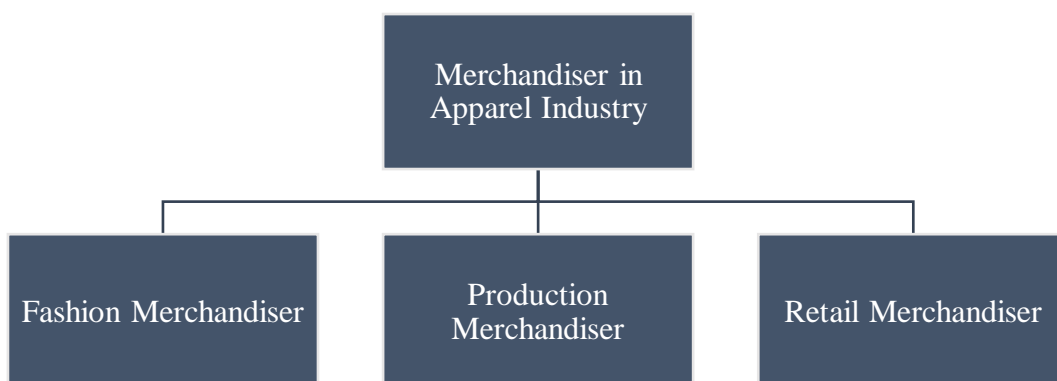


Figure 2.3.1: Types of merchandising/merchandiser [1]

2.5 Primary Roles of Merchandiser

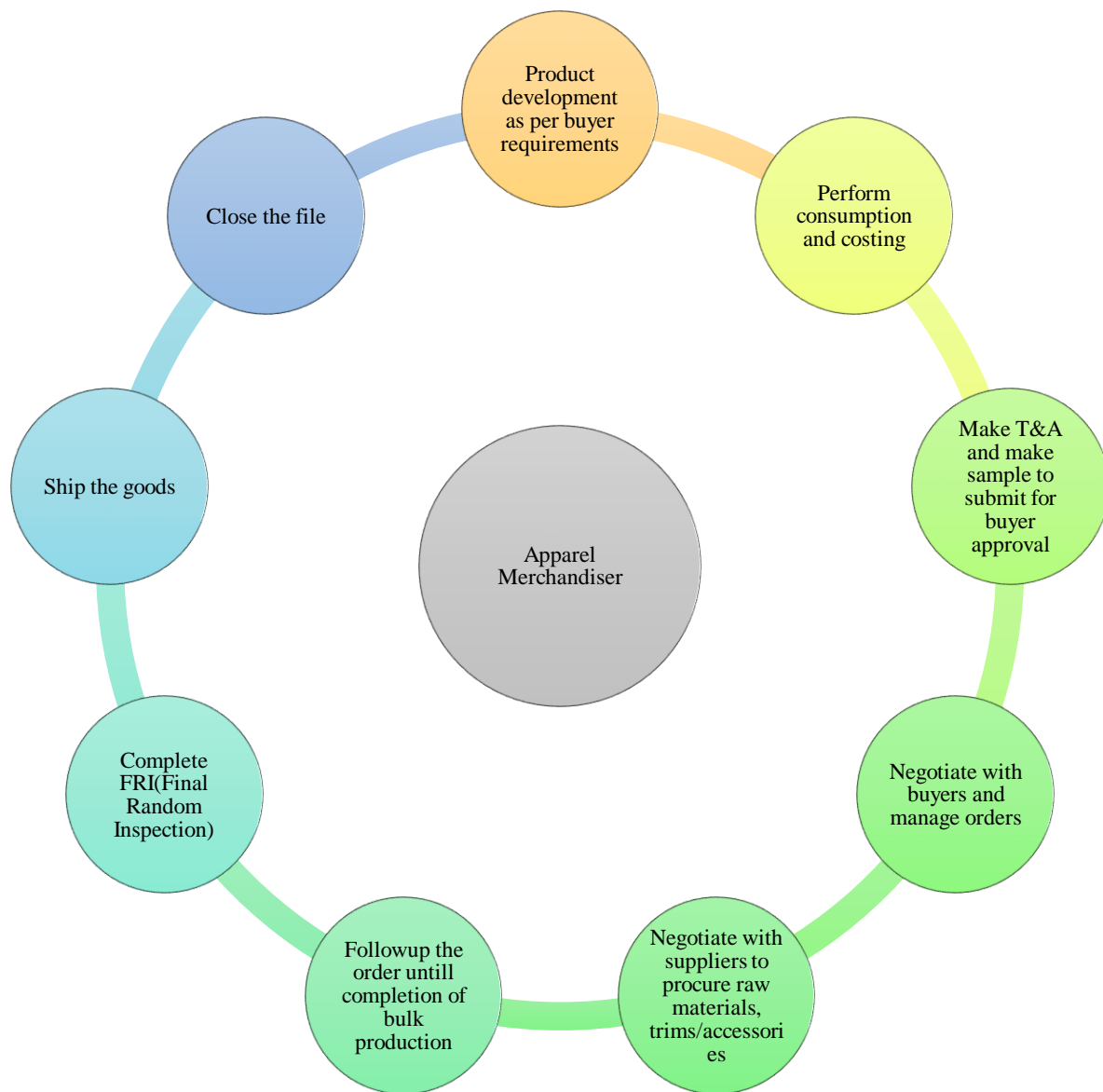


Figure 2.5.1: Activity cycle of a merchandiser

Merchandisers follow 4 R's rules to replenish their customers.

- ✓ Right Quantity: To dispatch the correct quantity of product the buyer ordered.
- ✓ Right Quality: It should be with the right quality as accepted by both parties.
- ✓ Right Cost: Everybody wants more from what they are paid.
- ✓ Right Time: No one loves to get delayed. So, keeping goods delivery on schedule is mandatory.

2.6 Working Flowchart of a Merchandiser



Figure 2.5.1: Working flowchart of merchandiser [1]

2.7 Basic Organogram of a Merchandising Department

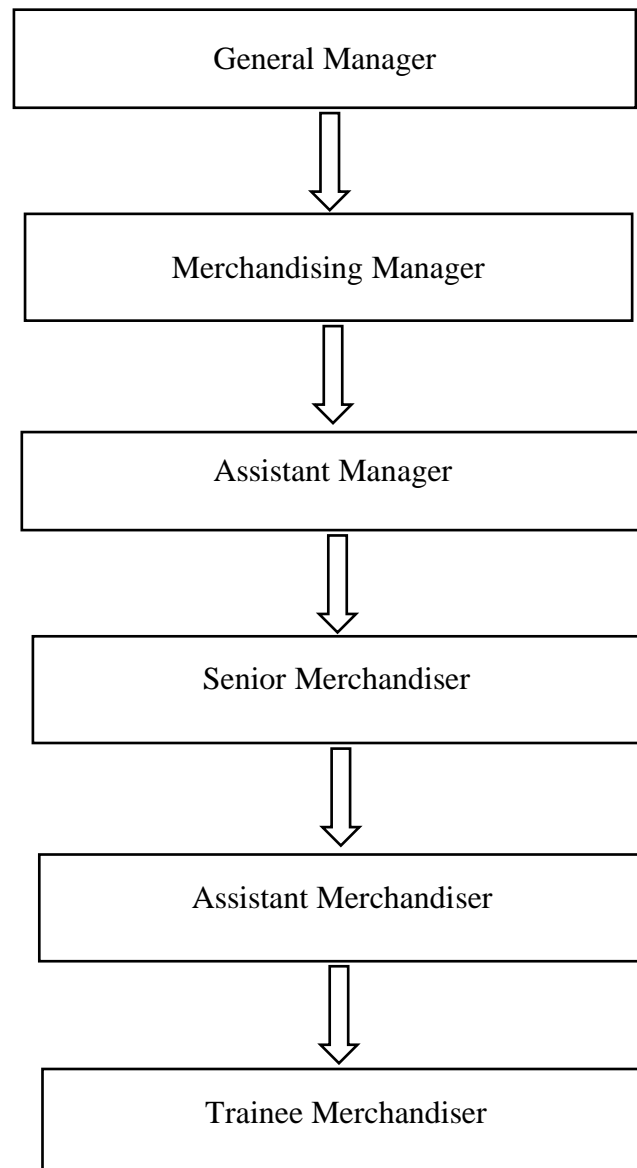


Figure 2.7.1: Organogram of merchandising department

2.8 Roles of Fashion Merchandiser

It involves the creating design and product development process. Therefore, this fashion merchandising process starts from completing different objectives.

- The buyer may have been to numerous locations and fashion events throughout the world, bringing his inspirations in the form of photographs and outfits.

- The buyer might have given the merchandiser and designer an idea or theme to develop a garment. In both cases, in a given situation, the designer can create different aspects of the forecasting process, mood board, silhouettes, color board, and requirement. But it is the merchandiser's role to coordinate with the designer about the buyer's needs and conditions based on his previous experience. Hence, the influence of the merchandiser in apparel designing plays a vital role in the acceptance of the developed design.
- In the third category, the manufacturing Company may own some brands. So, while designers develop products for their market, the merchandiser's role is essential in exploiting its target sector and marketing region. In addition, this will help them develop prototypes at the design development stage.

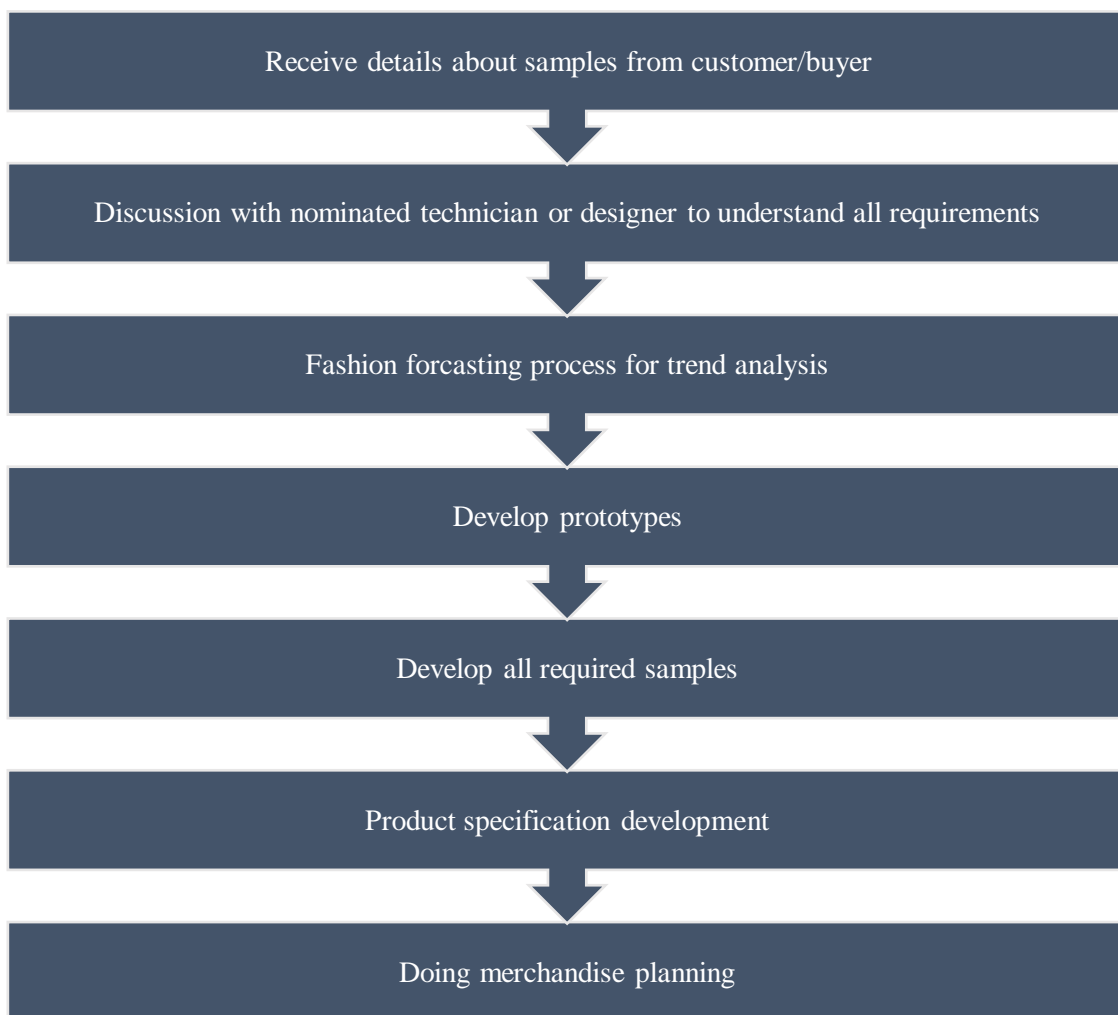


Figure 2.8.1: Roles of fashion merchandiser [1]

2.9 Role of a Production Merchandiser

A production merchandiser is a person who is responsible to communicate with the buyer, and the primary objective is to complete the work according to the necessity of the customer or buyer and dispatch the finished products to the buyer's destination on time. They interact and coordinate different jobs, which are discussed below

Table 2.9.1: Role of a production merchandiser [1]

Process	Roles Description
<p>Proto Sample Order Inquiry</p>	<p>It is the first stage in which the buyer will enquire with the merchant about the new order.</p>
<p>Forwarding Tech Pack</p>	<p>When the order inquiry has been made, then the buyer will send a "Tech Pack" or technical specification sheet to the merchant. Tech-pack includes all the details of a style and which consists of the items as follows:</p> <ul style="list-style-type: none"> ▪ Product style design ▪ Measurements ▪ Fabric (If have) ▪ Style code ▪ Surface ornamentation details and more.
<p>Product Development</p>	<ul style="list-style-type: none"> ▪ It is one of the main objectives of a merchandiser. Once the merchandiser receives the "Tech Pack," they have to arrange the tech pack details in a format by various individualizing styles and the details of the garment. ▪ The merchandiser will advise junior merchandisers/ trainee merchandisers regarding the specification details and requirements of the buyer to develop the product. ▪ This discussion will help the junior merchandisers/ trainee merchandiser assist the development of the sampling department manager/coordinator.

	<ul style="list-style-type: none"> ▪ The sample will be developed based on the requirements of the customer. Therefore, effective communication between the different levels of people plays a vital role in sample development.
<p style="text-align: center;">Getting Approval for The Developed Sample</p>	<ul style="list-style-type: none"> • After developing the sample, the required quantity samples will be sent to the buyer's address to approve the developed sample style. ▪ The most crucial objective of the development sample is that the buyer will understand how the garment style looks with the specific details. Also, the buyer will estimate the manufacturer's capacity and the ability to produce the sample. ▪ The samples can be prepared with the available fabric, closely matching the buyer's requirement. This helps the buyer to understand ▪ The manufacturer's ability about the product. Sometimes, to receive bulk orders, the merchandiser also develops the sample with original fabric ▪ In sample development, the tech pack follows surface ornamentations and fit. If some correction is to be done, the buyer will always send the correction details, and again the samples should be reworked/developed further and sent to the buyer. This process will continue until the sample gets approval from the buyer's side.
<p style="text-align: center;">Costing Stage</p>	<ul style="list-style-type: none"> • The buyer approves once the sample. Then the responsible merchandiser will perform the garment costing of that style. • Costing is done by calculating various costs incurred to make a garment style. It consists of multiple elements like: <ul style="list-style-type: none"> ✓ Fabric cost ✓ Trims and accessories cost ✓ CMT ✓ Washing or finishing cost ✓ Bank charges ✓ Buffer value

	<ul style="list-style-type: none"> ✓ Miscellaneous costs like rejection cost, wastage, etc.
Order Placement	<ul style="list-style-type: none"> ▪ The costing "quote" at first sent to the buyer based on the finalized pricing value. The price quote provided by the manufacturer company is not necessary to be accepted by the buyers, and there is always a negotiation that takes place between both buyer and manufacturer. ▪ The buyer accepts the price once the final costing or re-costing is done. Then the buyer will place the order with the required order quantity and other primary details to the merchant with and PO.
Fabric and Trims Ordering	<ul style="list-style-type: none"> • Once the buyer accepts the order, the order will be placed officially at the particular manufacturing firm through a responsible merchandiser. ▪ Immediately after receiving the order from the buyer, the merchandiser will place the order for required raw materials, accessories, etc., as per the GSM, color, weave, quantity, quality, etc., which is necessary for making the style in bulk and either sample making. ▪ The merchandiser must forward the requirement sheet to the purchasing department by advising them to place orders with the suppliers.
Lab Dip Approval	<ul style="list-style-type: none"> • The first process after receiving orders is lab dip. Next, the merchandiser will send the dyed fabric samples to the buyer for color analysis and approval. ▪ The submission of fabric/lab dip may include many shades of color, all of which the buyer has asked for the garment. ▪ The lab dip approval is a critical process, and this process will continue until the shades get approved by the buyer. Then, this approved lab dip shade will be used for the bulk dyeing of fabric for bulk garment production of that style.

<p style="text-align: center;">Fit sample</p>	<ul style="list-style-type: none"> ▪ After getting approval of the lab dip from the buyer side; The manufacturing Company develops the first sample for the provided specification is mentioned as the fit sample. ▪ This fit sample, generally developed with the actual fabric or available fabric, which should be very close to the buyer's requirement, can be used. The sample type will be created for a medium size in most cases. The main goal of this sample is to see how well it fits. When the buyer receives the sample, he or she will measure it to see how well it fits. The buyer will give feedback to the merchandiser for revision of that sample if needed. ▪ The buyer will return the fit approvals sheet with the previously submitted sample. The file will contain all the actual measurements, required measurements, and how much deviation has occurred for correction. Once this is approved, the order is in the confirmed stage now.
<p style="text-align: center;">Preproduction Samples</p>	<ul style="list-style-type: none"> ▪ Once the fit samples are approved, the pre-production (PP) or red seal samples are made. PP sample will have all the details of the style with the exact fabric, color, trims, surface, ornamentations, etc., given by the buyer. ▪ The sample development plays a vital role in the order confirmation. The process is the primary step, where the sample will look exactly as per the buyer's requirement. Then, around 2–3 samples (in four sizes each) are sent to the buyer for approval, and the buyer can advise any corrections if required.
<p style="text-align: center;">Size Set Samples</p>	<ul style="list-style-type: none"> • Until the pre-production sample, this sample also gets prepared in the Company's sample department. However, after this step for the size set sample, the buyer often advises the merchandiser to create in the central production unit. ▪ Size set samples are produced to compare the fit, dimensions, and styling of different sizes of the same style. It's also used to see if the allocated unit can generate that style according to the specifications. For all sizes, three sets are available. It's made from the same cloth as the original.

<p style="text-align: center;">Preproduction Meeting (PPM)</p>	<ul style="list-style-type: none"> ▪ The merchandiser will schedule a pre-production meeting once all of the samples have been approved and all raw materials have arrived in the shop to begin bulk production. ▪ A pre-production meeting will be conducted with all the department heads and essential personnel of the Company to plan the process so that that delay can be avoided ▪ Here, the merchants will discuss how the production can be scheduled and done within the required time with the production heads. So this meeting is essential and inevitable.
<p style="text-align: center;">Production files are transmitting to planning and control</p>	<p>A production file is a document that includes all the details of a particular style. The merchandiser makes this document. Once the PP sample is permitted, the production file is delivered to PPC (production planning and control); the merchandiser will also provide the approved PP sample with the file. The following are some of the details in the production file:</p> <ul style="list-style-type: none"> ✓ Measurements ✓ Export order sheet ✓ Color information ✓ Style information ✓ Packing instruction with the type ✓ Instructions for printing/embroidery, material requirement sheet category, item, location, color, size, consumption, kilos, quantity, the total quantity ✓ Details about the jobs of computer-aided pattern making (lectra) and fabric design ✓ Marker plan ✓ TNA ✓ 2D style diagram and trims

	✓ Information about how to pack
Checking the availability of fabrics and trims	When the PPC receives the file, they will examine and research every detail and confirm the availability of the fabric and trimmings in the shop. If it hasn't been reached in the house, they will follow up.
Examining the surface ornamentation of a specific style	Embroidery, printing, and appliqué are examples of surface embellishment done to the buyer's specifications. PPC will double-check the decorative details and make appropriate plans, as well as gather all of the necessary goods
Checking the status of stitching materials in-house	Stitching materials are used for sewing, such as threads and accessories that aid manufacturing, so they will arrange for the stitching materials in-house at the same time.
Checking the patterns with master	<ul style="list-style-type: none"> ▪ The production file contains all of the pattern specifics, and merchants will provide the original designs to the PPC along with the production file. ▪ When they get the patterns, they will send them to the pattern master, who will compare the pattern to the genuine article and confirm it.
Grading and final cross-check	<ul style="list-style-type: none"> ▪ The pattern is given to the CAD (computer-aided design) department for grading once everything has been examined and confirmed by the master. Grading is the process of converting one size into another. ▪ When the file is given to PPC, just one size pattern will be provided, and the other sizes will be graded. Finally, the graded pattern will be compared to the master and validated.
Laying and cutting	<ul style="list-style-type: none"> ▪ Laying is a technique in which many fabric lots are placed flat in various plies according to the length of the marker plan. ▪ Depending on the order amount, the production planning department will determine the width of the lay, the number of fabric in the lays, and the type of

	<p>lay to be distributed. After laying the pattern, the materials are cut using the created pattern layout generated from the marker plan.</p>
Wash	<ul style="list-style-type: none"> ▪ The cut textiles are sent to be washed; otherwise, they can be sent immediately to the next stage, such as printing or embroidery. ▪ During the washing process, the merchandiser should keep an eye on the quality standards and ensure that the delivery deadlines are met in terms of both quantity and time.
Bit printing/ embroidery	<ul style="list-style-type: none"> • After the garments have been washed, the bundles will be sent to be printed, applied, or embroidered if the style calls for it. ▪ Rather than an entire garment, surface decoration is done on chopped sections. ▪ This reduces the risk of spoiling the whole garment if some defects occur during printing. In addition, if a fault happens in cut pieces that can be replaced, then less Loading in line fabric wastage happens.
Loading inline	<ul style="list-style-type: none"> ▪ Cut parts will be packed and transferred to the sewing machine once the surface embellishment procedure is completed. Here the merchandiser needs to follow up on the correct schedule of the Loading. ▪ If any delay occurs, the merchandiser's responsibility is to get the targets on the date. They should take remedial measures to overcome the shortfall in production in different means.
Finishing	<ul style="list-style-type: none"> ▪ The items are sent to the finishing area once the entire garment has been sewn and collected at the end of the line. ▪ The clothes will be inspected for flaws in the finishing process, loose threads clipped, and steam pressed before being packaged as needed. ▪ At each point, the merchandiser should coordinate with the production in charge, and he should make sure that the customer's requirements are obtained without any deviations.

Dispatch	<ul style="list-style-type: none"> ▪ It is the end process in which the garments are packed in the cartons and shipped ▪ It is the merchandiser's responsibility to check the availability of required documents for the logistics and shipping process
-----------------	---

2.10 Retail Merchandising

Customer analysis: The retail merchandiser used to perform the customer analysis concerning the store's location and analyze the potential for the brand in their sector. The general analysis in terms of the following factors is performed.

- The geographical location of the store
- The population content of the area
- The social activities that the area offers
- The economic conditions and level of the local population
- The fashion influences of the particular population.

Image of the retail store: The retail merchandiser will understand their target customers and try to develop some reputed idea of the retail outlet in the consumers' minds.

Merchandise transaction: The merchandisers' responsibility is to buy and stock merchandise for different seasons. It requires much planning for budget, selection of merchandise, and selection of suppliers. Also, it is essential to decide on the quality of the goods to be ordered. After the goods are received and checked, those should be marked or tagged and kept in stock for sales.

Display: Based on research work and understanding about the customer and their buying capacity with behaviors, the retail merchandiser will decide the effective ways to display and attract the customers. A good display always enhances the store's sales, and poor production may slow the sale of sound merchandise. The store's image is based on the use of space for display.

Promotion activities: Sales promotion is significant to the successful sale of merchandise. Sales promotion refers to the rise of the sale of merchandise, services, or ideas. It includes advertising, publicity, visual displays, fashion shows, special events, personal selling, etc.

Sales evaluation: The retail merchandiser evaluates the sales rate of the product after every selling season. This includes analyzing the sales by product-wise, style-wise, size and color-wise, unsold items, fast sold goods, price line-wise, etc. The general process flow of the retail merchandising process is provided below in the figure.

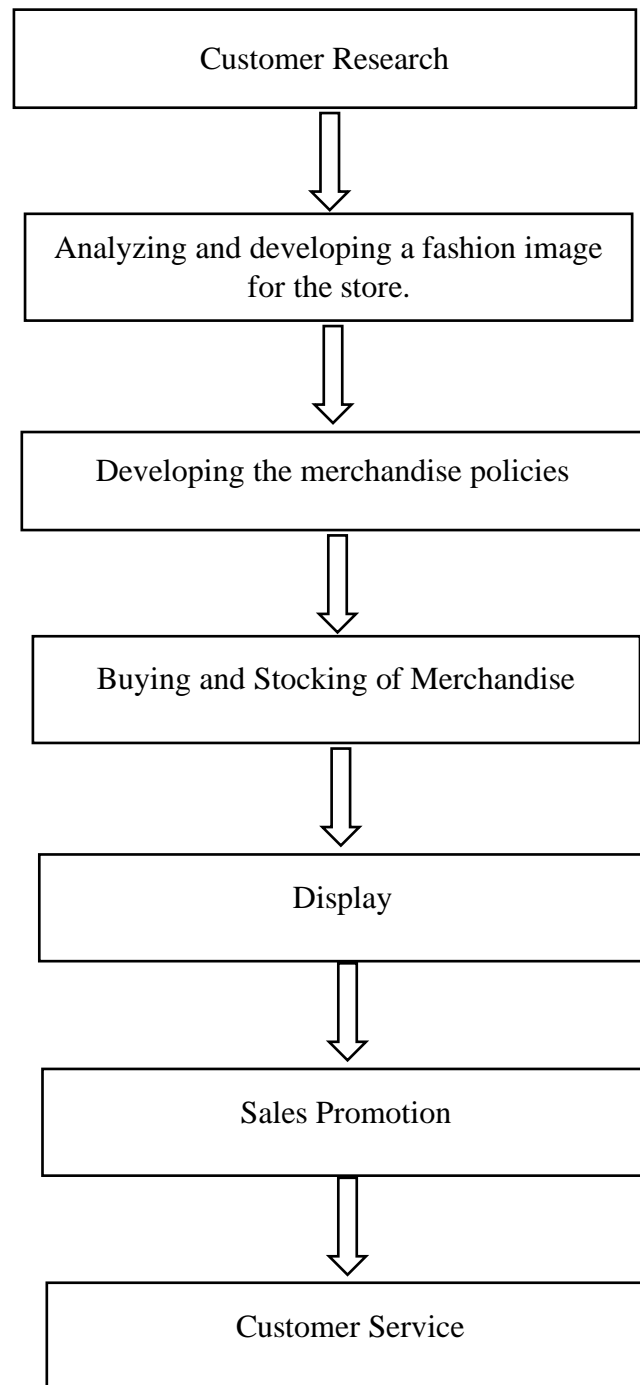


Figure 2.10.1: Process flowchart of a retail merchandiser [1]

2.11 Samples in Apparel Industry

The sampling process in the apparel industry is an important activity for order acceptance. The primary purpose of the sampling process is

- To help the users to assess the manufacturer's manufacturing capability.

- To allow for adjustments throughout the bulk manufacturing process.
- Allow the manufacturer to assess thread and fabric consumption and provide cost estimates.

After ordering goods, the customer also demands various sorts of samples. Therefore, the stage exporter must send a few additional samples to the buyer at different manufacturing stages, depending on the necessity. A sample comprises information such as a style code or reference number, color specifications, fabric type and composition, embroidery, buttons, zippers, or any other accessory utilized. As a result, clothing samples may be thought of as a link between buyers and exporters. As a result, more caution should be exercised when preparing samples. The following are the general categories for clothing samples.

Table 2.11.1: Samples in the apparel industry [1]

Sample Name	Description
Development sample	<ul style="list-style-type: none"> • The Company's initial sample was created in response to the buyer's request. • The sample is typically used to analyze the appearance and choose whether to go with or reject a particular style from the line based on the sample. • The sample is typically used to analyze the appearance and choose whether to go with or reject a particular style from the line based on the sample.
Style sample	<ul style="list-style-type: none"> • The style sample is created based on the feedback from the development sample. • A style sample is when a manufacturer provides a request utilizing the same fabric and trimmings or fabric with accessories that are currently available. • The buyer assesses the factory's capacity and quality based on this sample. • The buyer must provide the following information to produce a style sample_The garment's technical

	<p>specifications, a paper pattern (if applicable), a development sample (if available), and full print/embroidery instructions.</p> <ul style="list-style-type: none"> • This sample needs to be submitted by the merchandiser within 7–10 days. The merchandiser must submit at least 4–6 samples based on the buyer's requirement. If corrections are received, they need to resubmit the style sample
Fit sample	<ul style="list-style-type: none"> • A fit sample is used to compare the fit of a garment to that of a dummy or a real person. This sample aids the customer in comprehending the organization and merchandiser and the clarity with which they comprehend their requirements. • The sample should be created using the actual fabric specified for that order. The customer receives all sizes to determine the fit most of the time.
Size set sample	<ul style="list-style-type: none"> • To check the fitting of the sample, size-wise size set samples are asked. Hence, 2–3 garments in all the sizes are prepared with original or proximate fabric to send to the buyer • The merchandiser's responsibility is to ensure that the samples match the customer's requirements. • If the number of sizes is large, the buyer may request a jump size set sample, which skips some measures. As the buyer requires, samples might be made in the sampling room or factory floor. • Fabric cutting in bulk for production should begin only once the size has been determined. • When the customer is happy with all aspects of the sample, it is authorized. Then, they seal the sample and send it to the garment manufacturer as a symbol of understanding

	<p>between them that they are happy with the product and want the manufacturer to make this product only in bulk.</p> <ul style="list-style-type: none"> • These samples are known as "Red sealed samples," They are frequently utilized by quality inspectors who represent the customer during the final inspection phases.
Strike-off sample	<p>In most cases, the buyer places an order for any style in many fabric hues. The size setting can be created in any color. But suppose the garment has embroidery and printing over it. In that case, the garment manufacturer must approve print colors and sizes/ embroidery colors, appearance, thread, and sizes on each fabric shade. Strike-offs are the approvals for print and embroidery.</p>
Counter sample	<ul style="list-style-type: none"> • After the size set and fit sample clearance, the buyer provides the counter sample. Whether or not the Company receives the order is determined by validating this specific sample. • This sample was created using only original fabric, trimmings, accessories, sewing threads, care labels, and so on. • The buyer will execute a purchase order (PO) to the Company based on the counter sample clearance.
Ad or photoshoot sample	<ul style="list-style-type: none"> • These samples are requested only if the buyer needs samples to promote their styles in media like TV ads, promotional clippings, catalogs, etc. • These samples are delivered based on the buyer's size demands.

<p>Salesman / Marketing / Showroom sample</p>	<ul style="list-style-type: none"> • The primary purpose is to display the following season styles in the current season to get feedback from the customers. • These samples are being used to generate orders from stores.
<p>Garment performance test (GPT) sample</p>	<ul style="list-style-type: none"> • This sample is only needed if the technical parameters of the clothes need to be tested, such as shrinkage, colorfastness, seam performance, and so on. • Typically, the GPT process will run concurrently with the size set sample, but most customers request this sample only after the order has been accepted. • Third-party inspection companies such as SGS, Intertek, and other private testing firms typically undertake these inspections.
<p>Preproduction (PP.) sample</p>	<ul style="list-style-type: none"> • Pre-production samples are the pilot run samples created before production; the sample is prepared using the original fabric and all actual specifications. • Acceptance of samples motivates the factory to begin mass production of the items.
<p>Wash sample</p>	<ul style="list-style-type: none"> • A wash sample is created and sent to the customer for evaluation of the fabric's feel and handling after washing (if it is needed) • The washing sample is sent to the buyer for approval at the size set stage or PP stage. Then, based on the buyer's feedback, the merchandiser must continue manufacturing.

<p>Top of production (TOP) sample</p>	<ul style="list-style-type: none"> • As soon as the first items come off the sewing line, the buyer receives the top of production, including comments from the quality audit department. In the TOP sample, the buyer tries to evaluate the actual manufacturing of the style • The buyer checks whether bulk production is as per the submitted sample or not. The buyer also checks the TOP sample for the packaging.
<p>Shipment sample</p>	<ul style="list-style-type: none"> • Few purchasers may request shipping samples, which the firm must take from the actual cargo and provide them. The primary purpose of this sample is to assure buyers about the actual shipment dispatch • The customer may also request these samples for future reference. As a result, all shipping samples are delivered straight to a warehouse in a different/same nation. This example will include all packaging elements such as tags, poly bags, hangers, and so forth.

2.12 Sampling Process

The method of developing samples varies by industry, depending on the buyer's requirements and the style/type of clothing in question. Most sample terms and techniques, on the other hand, are widely desired by all purchasers. The typical sample department activity flow is shown below. It is critical to remember that all of these steps are not required for each order. The phases can be chosen based on the customer's needs and requirements.

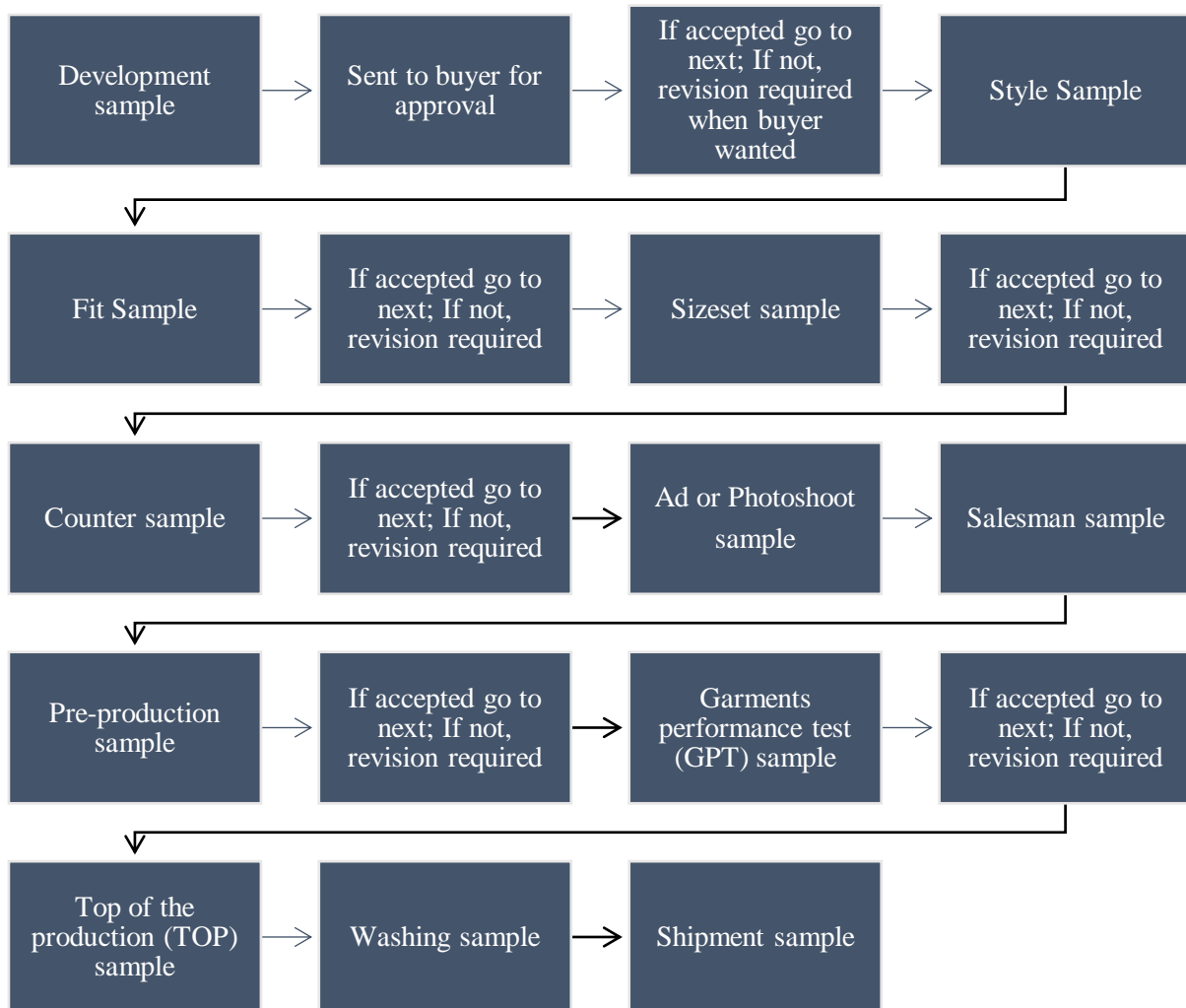


Figure 2.12.1: Sampling process flowchart

2.13 Quality of a Merchandiser

- ✓ For precise and effective communication, a good command of English and a proper understanding of technical vocabulary are required.
- ✓ Knowledge of yarn, fabric, dyeing, printing, finishing, dyeing colorfastness, garment manufacture, and so on is required.
- ✓ A good understanding of the typical raw materials inspection systems and garments inspection systems.
- ✓ Knowledge of the quota system used in each producing country, duty rate, customs regulation, shipping, banking documentation, etc.

2.14 Merchandiser Interface with Other Departments of an Industry

The merchandiser's job with other departments of the apparel industry is more complicated than the other workers in the industry. Hence, the merchandiser is the only person communicating with buyers, and his or her role extends each department's activity in one way. In addition, most manufacturing-oriented departments need to provide adequate information regarding the production requirements. [1]

2.14.1 Industrial Engineering or Production Planning department

- Once the order is confirmed, the merchandiser instructs either PPC or IE (Industrial Engineering) department regarding the order's requirements like order quantity, garment work content, lead time, delivery date, etc.
- The merchandiser mentions the milestone dates like sourcing, cutting initiation, etc. This will help the planning department work on the calculations like capacity available, line scheduling date, etc.
- The garment technical specification details like seams required special finishes required will be provided to these departments. This will help them calculate the expected time delays in the different processes and plan accordingly.
- After providing necessary information to the PPC and IE department, the merchandiser receives the following information from the PPC / IE department.
 - 1) Capacity plan for the next order
 - 2) Factory availability
 - 3) Raw material availability
 - 4) Consumption details of various raw materials like sewing
 - 5) thread, fabric, trims, etc.

- 6) Line planning details like operation bulletin, line layout, etc.
- 7) They also inform the technical issues faced during the order processing like critical point, bottleneck situation, etc.

The planning department also provides details like the expected production quantity per day in each department based on their previous knowledge. This will help the merchandiser to prepare his / revise his time and action plan accordingly to achieve the exact delivery date. [1]

2.14.2 Sourcing / Purchase Department

- Based on the information received from the planning department, the merchandiser will advise the purchasing department to purchase the required raw materials and their quantity.
- The merchandiser instructs the quality details required for each item strictly. In some cases, they also specify the place to be purchased based on their own experience or the buyers' requirements.
- He/she can advise the department in charge about the earliest and latest target dates and details to source that raw material.

In return, the merchandiser receives details from the sourcing department.

- a) The changes in the stock materials
- b) The possible expected delivery date of that raw material and availability
- c) Typical quality problems in any material
- d) Issues related to transportation and logistics. [1]

2.14.3 Quality audit Department

- The merchandiser issues the garment measurement specification sheets to the quality department, which carries the measurement specification of those specific styles for every size.
- The merchandiser also handovers all the garment requirements like shade requirement, quality of trims and accessories, artwork or print or embroidery details, placement, print strike-off, wash details, care label details, and packing instructions.

- This helps the quality audit department educate its quality controllers to monitor the production process.
- The merchandiser also advises the departments regarding the other specifications mentioned by the customer. For example, Matching Stripes, Closing raw edges in the inner seams, etc. The merchandiser also decides the quality audit inspection in consultation with the quality manager.

A Merchandiser receives comments and feedback about the processing methods in return from the quality department. This feedback will inform the quality of the products or the impact on the production quantity due to the processing methods. Hence, the merchandiser communicates this kind of feedback to the buyer and decides a possible alternative way of performing that process without or with minimal changes for the product's aesthetic and quality appeal. [1]

2.14.4 Production Department

- After order confirmation with the tentative production start date, the merchandiser informs the production department about the future order and requirements.
- This information includes details like order quantity, style numbers, color-wise, size-wise quantity requirements, expected output, and the delivery dates to be achieved.
- The delivery date details will be issued for each section of the production department, like cutting, sewing, washing, finishing, and packing. These details will help the concerned section managers to work for their target dates.

Merchandiser collects the following details from the production department:

- a) Current order status
- b) Approximate completion date
- c) Delay in the process and possible delivery date for the current order
- d) Details on delays influencing the forthcoming orders
- e) Technical / Machine related requirements from the department [1]

2.14.5 Finance / Accounts Department

Once the planning and scheduling activities are completed, the merchandiser consults with the finance manager before instructing the purchasing department. Based on the received order, he informs the finance section about

- a) Raw material quality required and the cost factors.
- b) The possible source of availability and the cost factor involved, like local or import.
- c) The available time for sourcing that material.
- d) The least possible dates to get every raw material.

Based on their request, the finance department advises the merchandiser about the fund allocation for purchase and fund availability at the current state. This information will be passed to the purchasing department. [1]

2.14.6 Marketing Department

This department will play an active role only if the Company develops the product. In that case, the merchandiser communicates the information like

- a) Line-up concept
- b) Product range
- c) Colour
- d) Other product details in the line-up

Based on this information, the marketing department conducts surveys, collects data using other data collection tools and performs research, and informs the merchandiser with the details on_

- a) Exact target group
- b) Target region – demography-based or geography-based, etc.
- c) Estimated season of sale
- d) Market potential
- e) Competitor
- f) Average price preferred, etc.

This information is so subjective and can be collected based on the requirements. This will help the merchandiser to get the confidence and choose selected products from the line and launch into the market. [1]

2.14.7 Designing Department

- The merchandiser closely works with the design department in both cases where the Company develops the product or performs the requirement asked from the buyer.
- In the first case, the merchandiser will be aware of the marketing department's market status and research report. Hence, he can guide the designer regarding the research results.
- In the second case, due to his prolonged communication with the buyer, the understanding of the buyer is high for the merchandiser. Hence during the design development, his feedback or comments are valuable to the Company and the designer.

2.14.8 Human Resource (HR.) Department

Once the order scheduling and time and action plans are completed, the merchandiser informs the following requirements to the HR department:

- a) Labour requirement
- b) Approximate schedule

The merchandiser will receive the following data from the HR department:

- a) Labor availability
- b) Company related issues
- c) National and local holidays
- d) Working hours – timing details
- e) Other requirements, if any

All this information is very important for an order to be processed successfully and delivered with the expected quality and on time. Hence, the merchandiser/merchandising department plays a vital role by communicating and coordinating with other departments of the apparel industry. [1]



Figure 2.14.1: Merchandiser interface with other departments of an industry

2.15 Time and Action Plan

The time and action plan (TNA or T&A Plan) is an essential tool in merchandising to keep track of his daily activities or the various processes involved in completing an order. Multiple departments and other personnel from the manufacturing industry were involved in this procedure. As a result, the merchandiser can use this T&A calendar/plan to examine each operation and determine when to begin. When will it be time to call it a day? Is everything going according to plan? Is there a difference in the activity? In a nutshell, a time and action calendar specify the optimal date/period for an order's primary operations to occur in order to meet a delivery deadline. In general, the merchandisers will develop a list of activities that need to be performed for an order in a spreadsheet in a column, the expected completion date on the next column, and the actual completion date on the next column. However, this time and action plan is not simply a data entering process; it is also about scientifically working out the activity

duration, logically determining the preceding and succeeding activities. The primary purpose of the time and action plan is to cross-check each activity related to particular order at infrequent intervals. The main advantage of the time and action plan is its graphical representation (Gantt chart). Hence, anyone can understand the information without any technical background. After preparing the TNA calendar, the merchandiser can list their daily "to-do-list" and take it one by one. As per the TNA schedule, Processes can be run on a regular basis to see if an order is on schedule or not. The merchandiser will need the following information to create a time and action plan.

- An order's whole process flow, from sampling through dispatch, including tasks to be completed for each activity.
- The detailed production capabilities of their unit's various departments. In some circumstances, the merchandiser will also need to know their vendor's production capacity.
- Details on the tentative lead times for various raw materials, as well as the buffer time required by each department
- Style difficulty at each departmental level, both in terms of technical elements and in terms of departmental throughput time
- Duration of transportation, shipment, and logistic facility for the specific client, as well as the customer's exact delivery date
- The availability of specialized machines and technologies, as well as their potential impacts
- Details about local and national holidays – in his or her organization, as well as holiday information about clients/suppliers, from whom raw materials are imported or to whom products are supplied
- Complications in sourcing and manufacturing trims and accessories
- Government and political policies of the countries in question
- Customer/buyer response time at various phases.

2.15.1 Factors that Considered to Making Time and Action Plan

- ✓ Production capacity of the plant
- ✓ Style type of merchandise
- ✓ Festivals of the manufacturing country

- ✓ Holidays
- ✓ Shipment details
- ✓ Festivals in the country where the raw materials are imported
- ✓ Logistics facilities
- ✓ Lead time estimated by buyer
- ✓ Style complications
- ✓ Fabric and trims manufacturing complications
- ✓ Buffer required from each department
- ✓ The political stability of the country
- ✓ The flexibility of freight forwarder
- ✓ Response time from the buyer at different stages
- ✓ Timelines for various activities such as L/C payments and customs clearance etc.
- ✓ Cut-off dates for shipments

A successful time and action plan help streamline the pre-production activities at different levels. The chart also clarifies information's about delays on day to day basis. This activity chart allows the merchandiser to monitor each task's sub or minor activities. The complications of this preparation work come along with the sampling department. Since approval from the buyer or the higher management of his / her own Company is necessary after each sampling stage, the unexpected delays in the sampling process make the merchandiser uncomfortable. Hence, sufficient buffer time needs to be provided between the operations during the TNA preparation, based on the individual's experience. The figure below details the various vital activities which need to be performed by a merchandiser at multiple levels of sample development.

Table 2.15.1: A Typical T&A Plan

SL. No.	Activity	Planned date
01	Buyer's inquiry and specifications receive	01.06.21
02	The pattern is made according to specification	04.06.21
03	Proto sample submission	09.06. 21
04	Proto sample approve	12.06.21

05	Order conformation	15.06.21
06	Trims and artwork send for approval	13.06.21
07	Lab dip send for approval	14.06.21
08	Request for sample of trims and fabric send	20.06.21
09	Sample lot of trims entered into the store	18.06.21
10	Sample lot of finished fabric entered into the store	19.06.21
11	Meeting with sampling and all other departments	21.06.21
12	Fit sample send to buyer	25.06.21
13	Approval of fit sample	01.07.21
14	Salesman sample send to buyer	07.07.21
15	Approval of salesman sample	15.07.21
16	PO raised by the buyer	18.07.21
17	Trims and artwork approved	11.07.21
18	Approval of lab dip	13.07.21
19	PO raised for fabric and trims by merchandising and scouring team	23.07.21
20	FPT send to buyer	26.07.21
21	Approval of FPT	04.08.21
22	Photoshoot sample send to buyer	08.08.21
23	Approval of photoshoot sample	10.08.21
24	All fabric in the house	12.08.21
25	All trims in house	13.08.21
26	Fabric and trims quality and quantity measured	15.08.21
27	Size set sample send to buyer	18.08.21
28	Approval of size set sample	25.08.21
29	GPT submitted to the buyer	26.08.21
30	GPT approved by the buyer	01.09.21
31	Planned cut date	03.09.21
32	Cut panel send to embroidery	05.09.21
33	Embroidery completed	07.09.21
34	Pilot run	09.09.21

35	Pre-production meeting	10.09.21
36	PP sample send to buyer	11.09.21
37	Approval of PP sample	12.09.21
38	Production date start	13.09.21
39	TOP sample send to buyer	15.09.21
40	TOP sample approval	20.09.21
41	Production end date	22.09.21
42	Finishing and packaging start	22.09.21
43	Finishing and packaging completed	24.09.21
44	Buyer quality audit	25.09.21
45	Shipment sample send to buyer	28.09.21
46	Exit factory	28.09.21
47	Exit country	30.09.21

2.16 Gantt Chart

Gantt charts are a project management tool for depicting the scheduling of tasks that must be performed to complete a project. Henry Gantt created the Gantt chart to visualize a project's schedule. Since 1910, bar charts have been an essential part of project management. Gantt charts let us imagine a project's start and finish dates and each component or task that must be accomplished. Furthermore, these charts allow us to see those connections and plan accordingly because many project tasks are dependent on earlier efforts. Most project managers use Gantt charts for the most complex projects because they are simple to understand and construct.

- Each task occupies one row in a Gantt chart.
- Dates are listed at the top in days, weeks, or months, depending on the project's entire duration.
- Each task's expected time is represented by a horizontal bar, with the left end marking the task's scheduled start date and the right end marking the task's scheduled completion date.
- Tasks can run in a sequential, parallel, or overlapping order.

- The chart will be updated as the project continues by filling in the bars to a length equivalent to the percentage of the task that has been completed.
- You may obtain a quick read on project progress by drawing a vertical line through the chart at the current date. Tasks that have been completed are located to the left of the line and are filled in.
- If the filled-in portion of current tasks crosses the line to the left, they are behind schedule; if the filled-in section stops to the right, they are ahead of schedule.
- Future assignments are located entirely to the right of the line.

Every order is essentially a project for a merchandiser. Therefore, every order has a series of tasks that culminate in a specified accomplishment and must be completed in a specific order.

- Non-routine jobs
- Distinct start/finish dates
- resource limits (time, money, people, and equipment)

Each "Task" is an activity that a merchandiser must accomplish to meet the order target. His or her priority is to derail the project into tasks and sub-tasks. It is good to use the verb-noun form for naming tasks (e.g., "create drawings" or "build prototype"). The use of action verbs such as "create," "define," and "gather" rather than "will be made" will provide better understanding. It is difficult to predict the duration of each task correctly. A merchandiser needs to spend much time on it. Their previous experience will help them put the time with the same buffer. "Milestones" are another important checkpoint or interim goal for a project. Milestones can be used to catch scheduling problems early. Name milestones by noun-verb form, (e.g., "report due", "parts ordered" "prototype complete"). A merchandiser must be adaptable and frequently keep their time and action charts up to date. It also aids in identifying project risk areas, such as things they do not know how to accomplish but will have to learn. These are dangerous since the merchandiser may not have a strong understanding of how long the task will take. Alternatively, he or she may not be aware of how long it will take for you to acquire the components you ordered for a project.

2.17 Network Chart

The network charts are generally used for project scheduling purposes; these scientific methods also can be adapted for the apparel order planning process. In general, there are two methods used in the network charts,

- Critical Path Method (CPM) — Can be used for projects where activity times can be accurately calculated, such as building a house or erecting a machine.
- PERT (Program Evaluation and Review Technique) – Can be used for projects in which there is a high degree of uncertainty about the activity times – Launching a space vehicle, developing a new product.

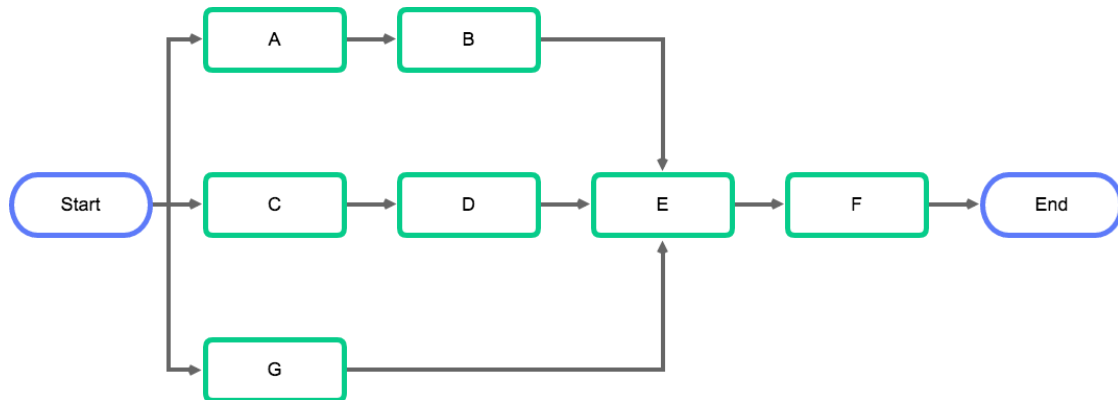


Figure 2.17.1: Network path of a project

2.17.1 Critical Path Method (CPM)

- One of the most important criteria for project management is a reasonable schedule for the various activities to complete the project as soon as possible.
- For the preparation of such a schedule, information will be needed about the duration in which the various activities can be completed
- The first step in network representation is to understand the interrelationship between multiple activities which constitute the project
- The input required to draw a network is the list of activities and their precedence requirements as provided in Table 3.2. In this method (CPM), the network diagram is made off symbols like nodes and arrows
- Where a node and an arrow represent the completion of activity represents a task and the order of events as in Figure 3.4
- This method will compute the earliest possible start time and the latest possible start time of each activity
- In addition, it will identify the critical activities, which can be defined as "The activities if they delayed even a short time, the whole project will be delayed.

Table 2.17.1: Activity and their immediate predecessor

Activity	Immediate predecessor
A	-
B	A
C	B

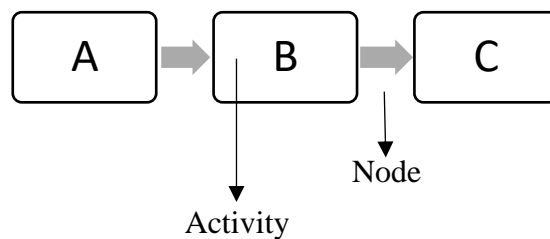


Figure 2.17.2: Components of simple network diagram [1]

2.17.2 PERT (Program Evaluation and Review Technique)

In the critical path method (CPM), it was assumed that the activity duration estimates, and the derived values for the earliest start, latest start, earliest finish, and latest finish were all deterministic. Unfortunately, this is seldom true, and durations are often not known in advance. PERT has extended this deterministic approach in the face of uncertainty about activity times and employs a unique formula for estimating activity durations. The approach of PERT assumes that the activity duration estimates are done by someone familiar with the activity and has enough insight into the characteristics of the action. Hence, the technique requires three duration estimates for each activity, as follows:

- Optimistic time estimate (T_o): This is the quickest time in which the task can be accomplished, assuming that everything goes smoothly.
- Realistic time estimate (T_m): Under normal circumstances, this is the most likely time for the action to be finished
- Pessimistic time estimate (T_p): Based on the worst-case scenario, the maximum amount of time the action could take.

CHAPTER-3

SURVEY DETAILS

We have done our thesis study at a renowned knit composite-based factory; we prioritize quantitative methods in our data collection. So, questionnaires and surveys with different merchandising teams and observation methods were obtained to fulfill our demand for data collection for this study. And for prioritizing the works, we did a Pareto analysis to identify 20% of challenges that cause other 80% of problems on founded data.

Table 3.1: Challenges faced by the merchandisers

Challenges	Voting Count
Maintain the TNA plan	13
Follow-up	8
Sourcing Materials	13
Handling Multitask	9
Communication	5
Negotiation	11
Managing Files	3

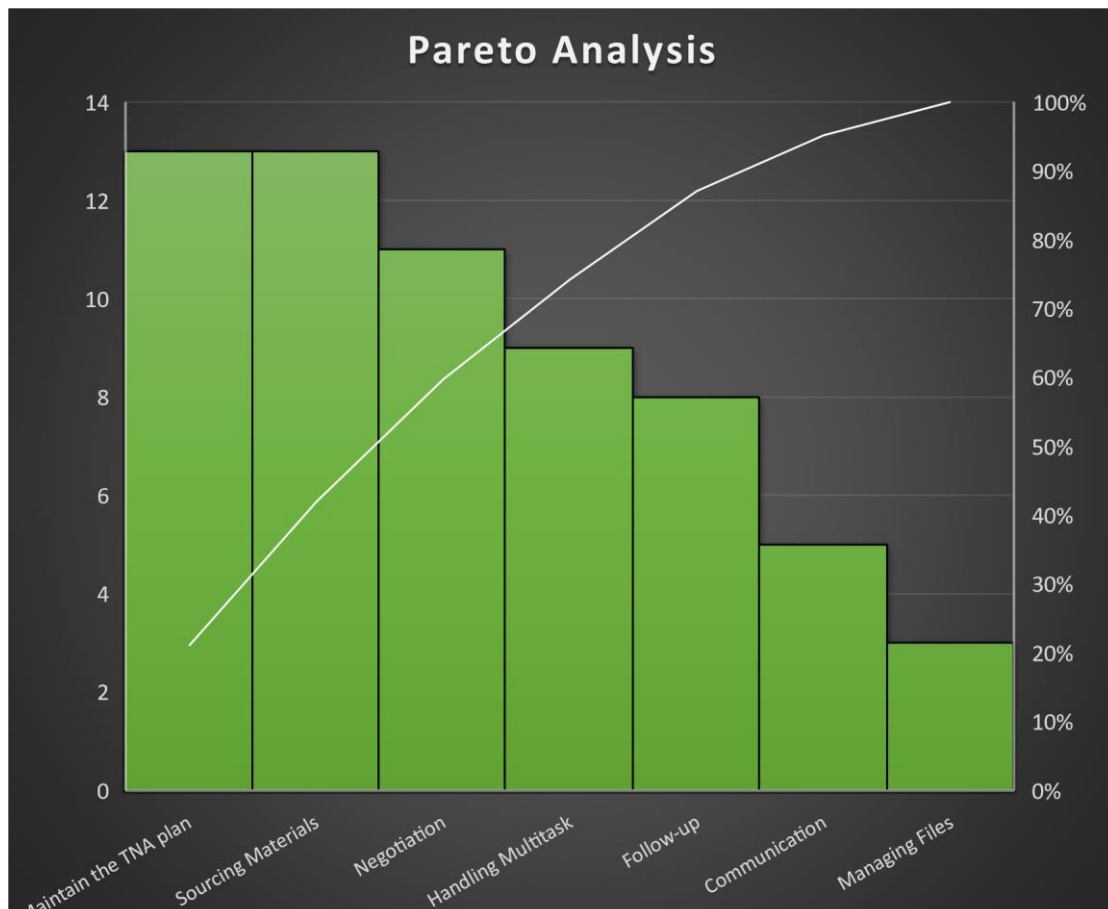


Figure 3.1: Pareto analysis of founded data

The Pareto principle (also known as the 80/20 rule) is a phenomenon that states that roughly 80% of outcomes come from 20% of causes. So, the Maintain TNA plan gets the highest voting at the time of the survey, and the count is 13. The same things go with sourcing materials that are also 13. Then, in negotiation, the voting count is 11, merchandisers face challenges in these specific parts when going through their process. There every points are related with each other. So, if we can solve the "Maintain TNA Plan, Sourcing Materials, Negotiation" issues, the final result of delayed shipment will change to on-time shipment.

3.1 Maintaining the TNA Plan

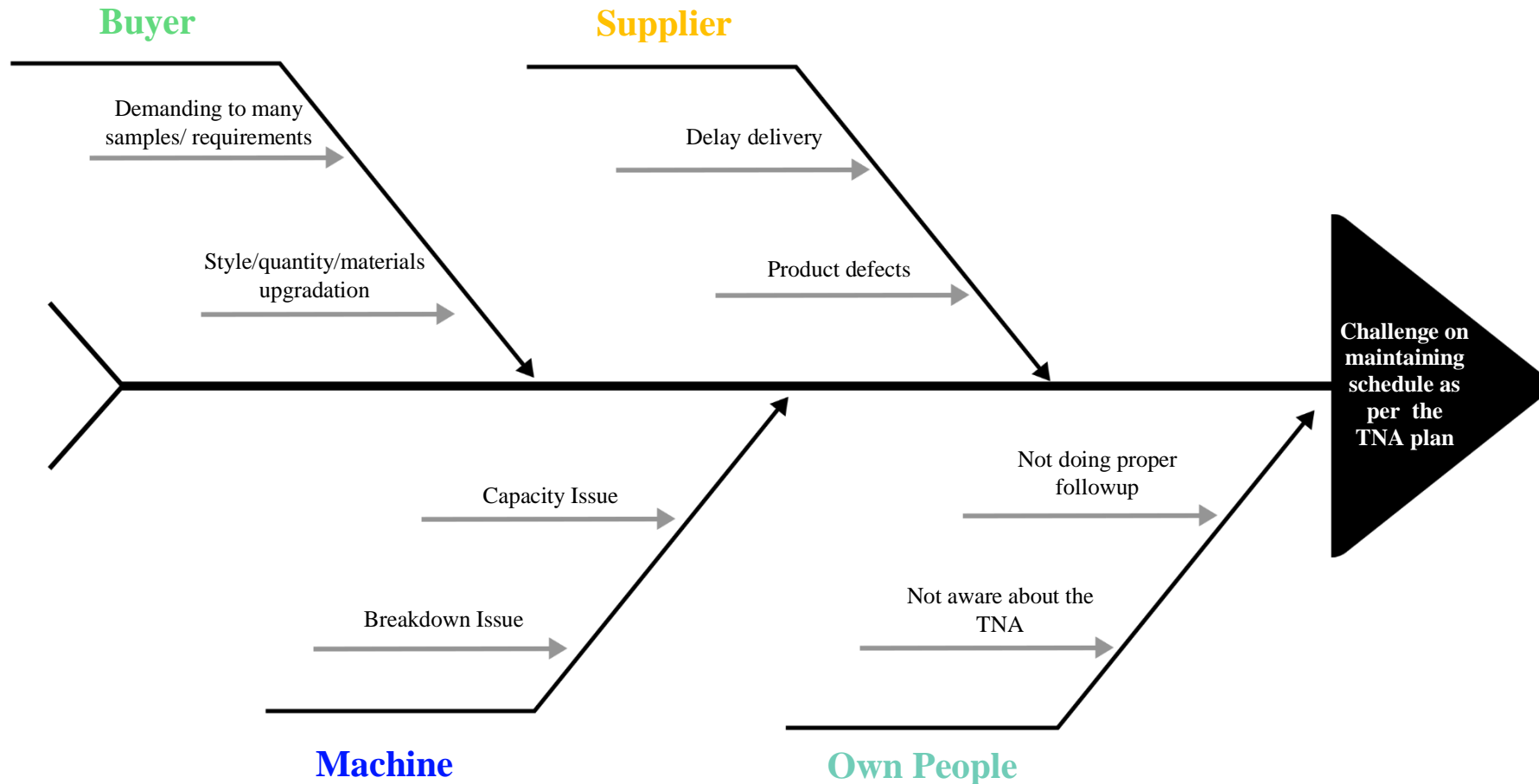
Maintaining a TNA plan is a challenging task. A TNA consists of several individual jobs, so it is crucial to keep all tasks on time by following up on time with the responsible person behind the task/job.

Table 3.1.1: A TNA plan

	Key Processes	Planned Start	Planned End	Responsible
1	Order receipt (Buyer PO)	20-Nov	X	Merchant
2	Consumption calculation	21-Nov	X	Pattern master
3	BOM generation	23-Nov	X	Merchant
4	PO issue for Fabric, trims	24-Nov	X	Store
5	Size set submission	25-Nov	X	Merchant
6	Size set Comments	28-Nov	X	Merchant
7	PP meeting	1-Dec	X	Merchant
8	Production planning updates and circulation	11-Dec	X	Production Manager
9	Fabric inhouse	24-Nov	8-Dec	Store
10	Trims Inhouse	24-Nov	3-Dec	Store
11	Pattern Grading	2-Dec	3-Dec	Pattern master
12	Cutting	11-Dec	12-Dec	Cutting in charge
13	Beading/Sequence	16-Dec	19-Dec	Production Manager

14	Embroidery	20-Dec	23-Dec	Production Manager
15	Re-cutting/shaping	23-Dec	26-Dec	Cutting incharge
16	Fabrication/stitching	26-Dec	30-Dec	Production Manager
17	Finishing	31-Dec	3-Jan	Finishing Incharge
18	Packing	2-Jan	6-Jan	Finishing Incharge
19	Inspection	7-Jan	X	QC
20	Dispatch	8-Jan	X	Finishing Incharge

Figure 3.1.1: Fishbone Analysis (TNA Plan Maintaining)

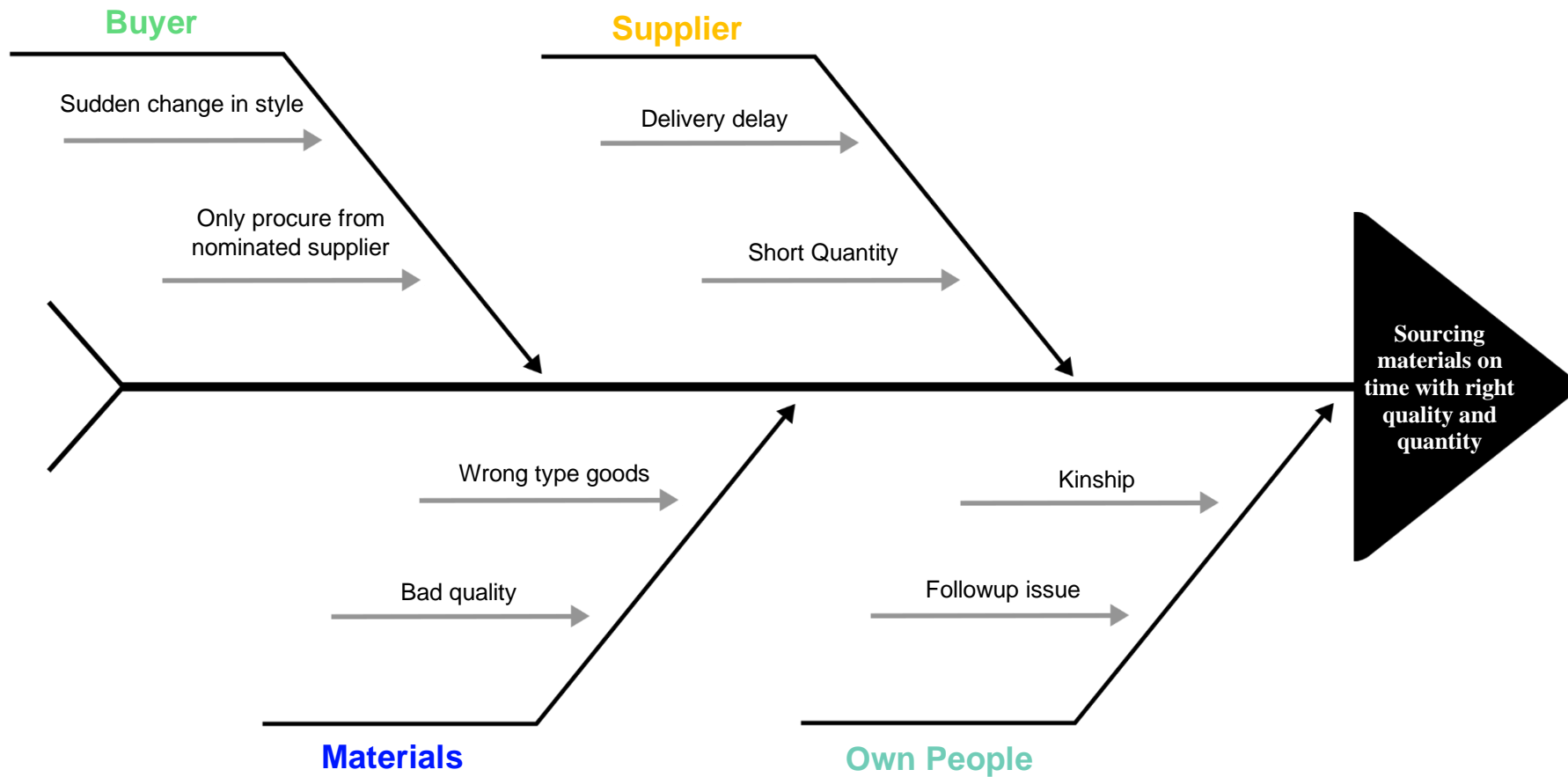


So, we did a fishbone analysis to sort out the issues with maintaining the TNA plan. There we identified Supplier, Buyer, Machinery, and Company's own people has a direct effect on the TNA execution on the planned basis. And there have been sub-categories/issues with each of the parts.

3.2 Sourcing Materials

Material outsourcing is a part where the manufacturer did not directly impact the supplier's manufacturing capacity or their facility rather than removing the supplier from the list if issues arise with the supplier.

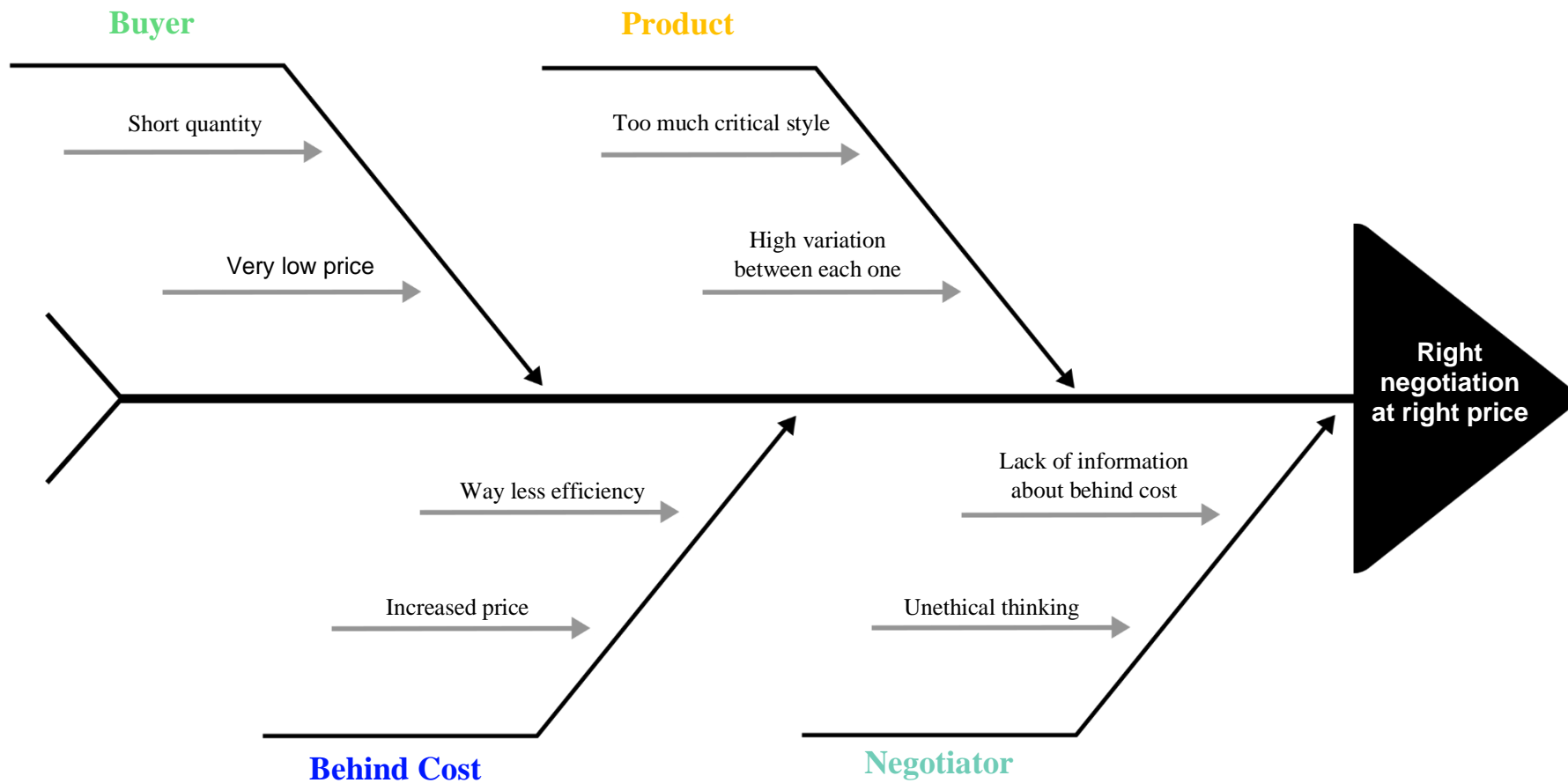
Figure 3.2.1: Fishbone Analysis (Sourcing Materials)



3.3 Negotiation

A good negotiator can make a minimal quantity order much more profitable when a merchandiser negotiate with the buyer about the price of goods (Based on International commercial term). This is because the negotiators know the product and its costs. However, negotiation is also an issue when a company orders less and has more frequent short quantities.

Figure 3.3.1: Fishbone Analysis (Negotiation)



CHAPTER-4

DISCUSSION OF RESULTS

4.1 Maintain TNA Plan

This chart shows that production activities are taking less than 50% of the total lead time. The rest is spent in various TNA activities like order confirmation, sampling, Raw material sourcing, etc. So, maintaining a production schedule will significantly impact the overall TNA plan.

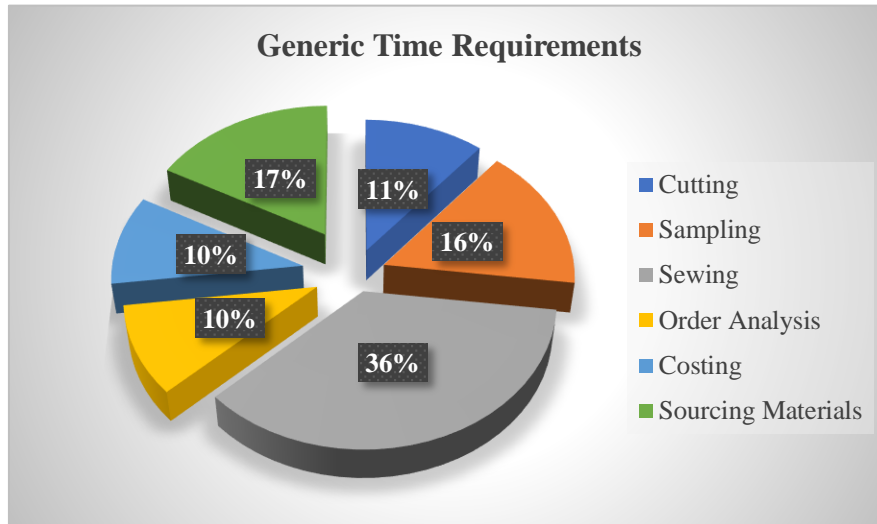


Figure 4.1.1: Generic time requirements by different stages of an executed order

To maintain a TNA plan, all merchandising responsible persons must work with the TNA and works aligning with it. Otherwise, the TNA will go in vain. Merchandiser is responsible for making decisions in the factory for an order, he/she will be responsible for this. So, here project management app comes out; it is the one that can help the merchandiser to maintain the TNA throughout the process.

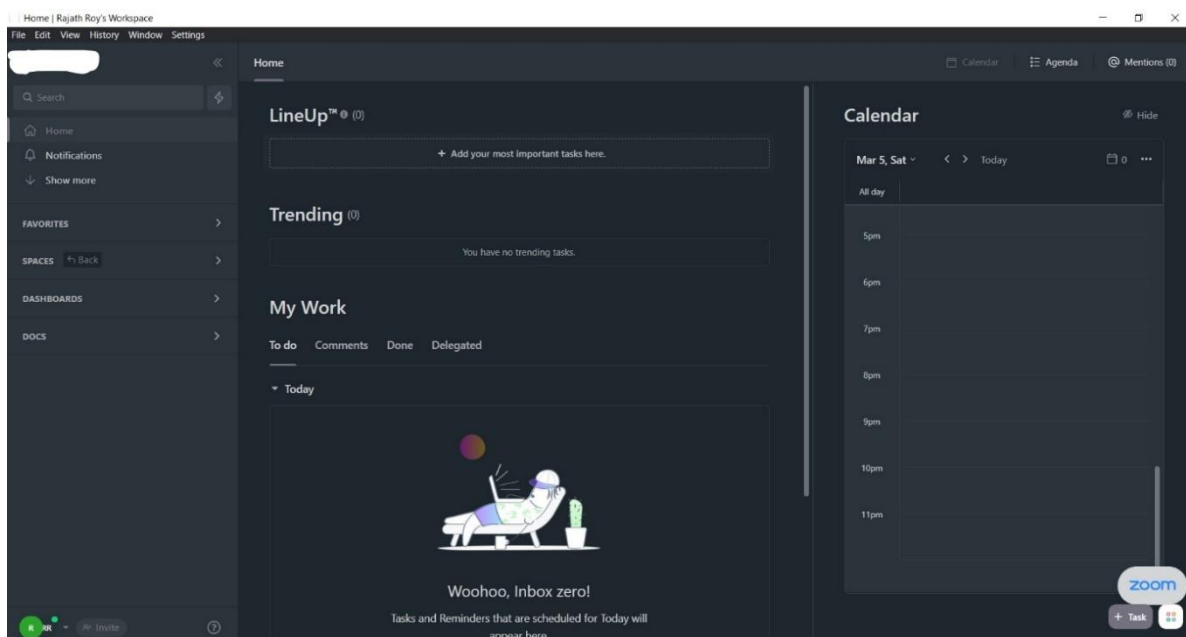


Figure 4.1.2: Project management app home interface

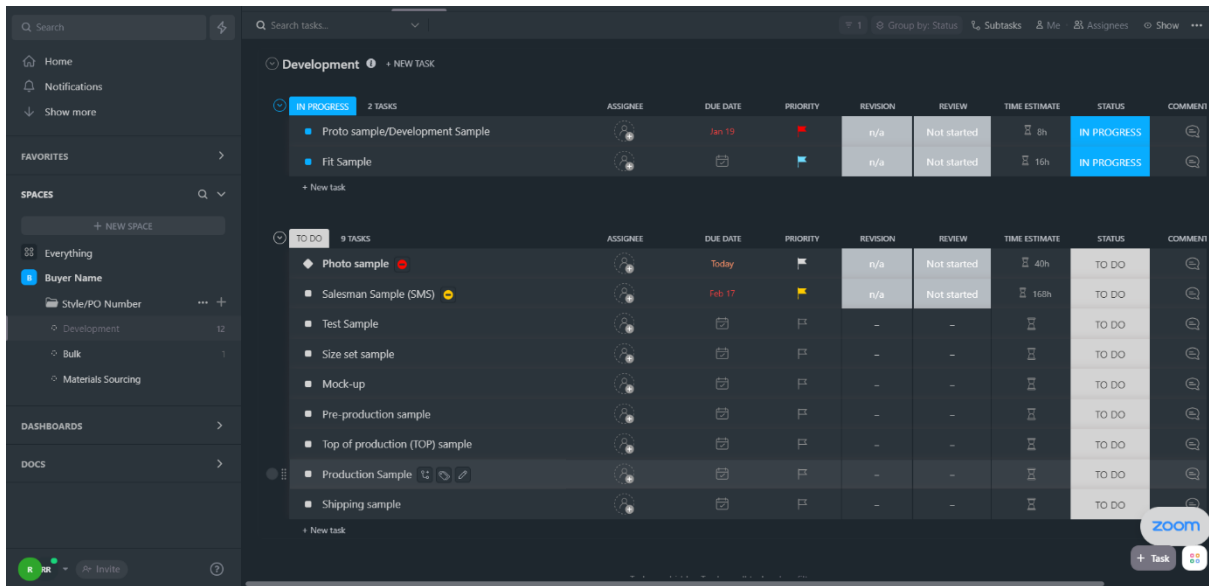


Figure 4.1.3: Project management app home view

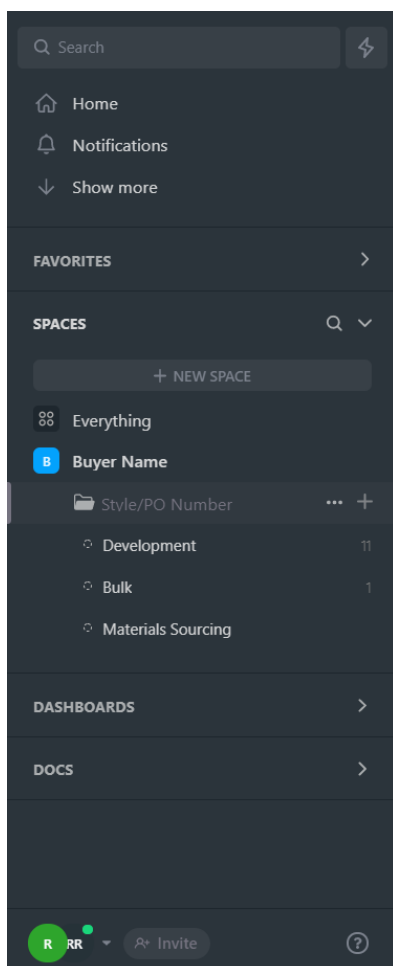


Figure 4.1.4: Sidebar of the app

Figure 4.1.3 shows how the page will look after adding the required samples that will be developed. This is the home page for the user when the user enters data on the app.

This "Figure 4.1.4" shows the sidebar of the app. From there, users can go to the home page quickly whenever the user wanted. Moreover, this is the place from where users can make his/her own space to start.

Here buyer's name will be the space name. Under this space folder name, follow the style number or the PO number given by the buyer, and the user is going to work on that style number or PO.

For doing the task, easily the user can create a list under the folder. As the picture has "Development, Bulk, Materials Sourcing."

And by clicking dashboard user can change the view of the dashboard how it will look like as per user preference.

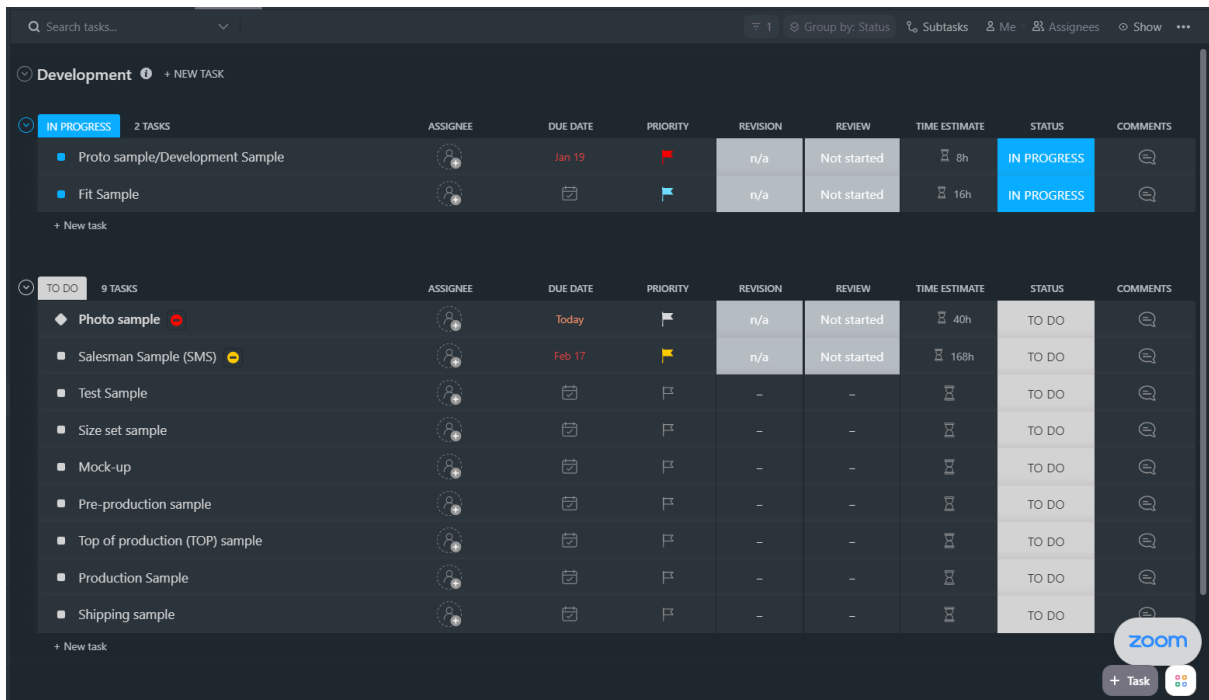


Figure 4.1.6: Contents on developments list

"Figure 4.1.5" shows all the contents on the developments list. These listed samples are a single task that is going to be developed by the user. Users can change the status after the completion of every job. Also, the user can assign a person for an individual task there. Setting the priority list is also essential as whenever a buyer wants a sample first, the user can identify and works on that sample efficiently and submit it on time. Users can set the time estimation for the

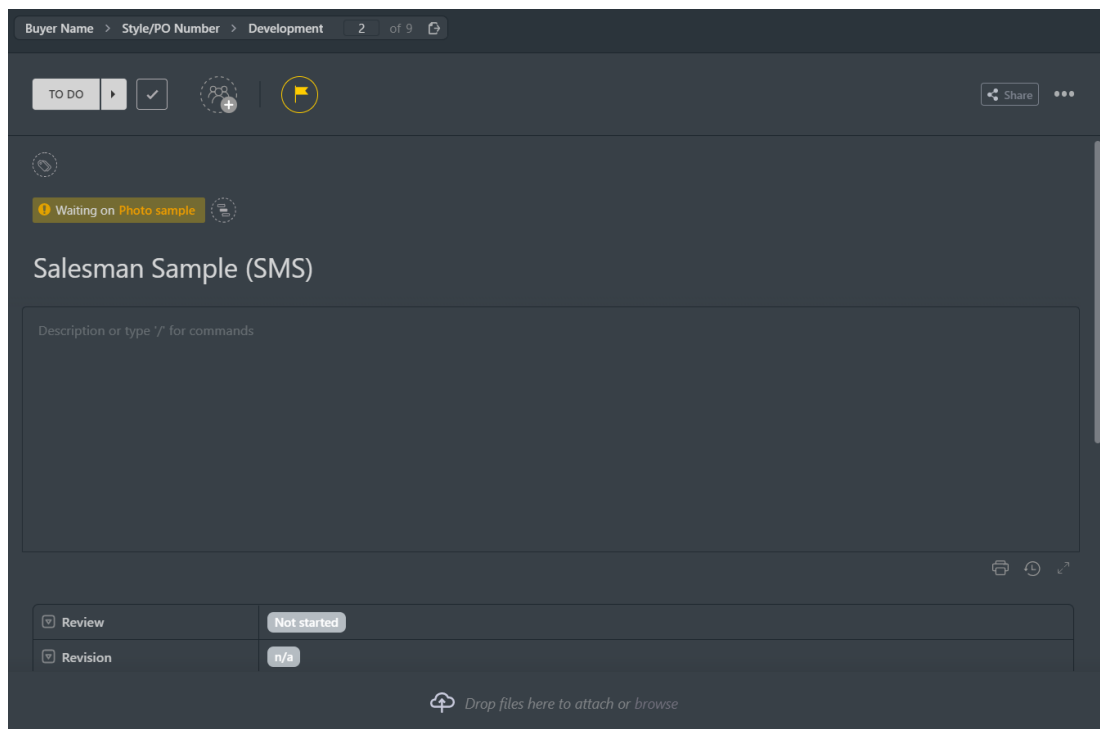


Figure 4.1.5: View after clicking on a task-1

specific task listed in "Figure 4.1.5". And with every task, the user can create comments whatever the user wants. It can be buyer comments on that sample or personal observations about the sample. It also has review and revision; It means the user can set whenever a buyer wants a revised sample for any.

"Figure 4.1.6" shows how the view will be after the user clicks on an individual task from the list.

In this window, the user can take notes about the sample. Also, from there user can set the dependency for the task. Without completing the selected task, the user can not update the status of one that the user set previously.

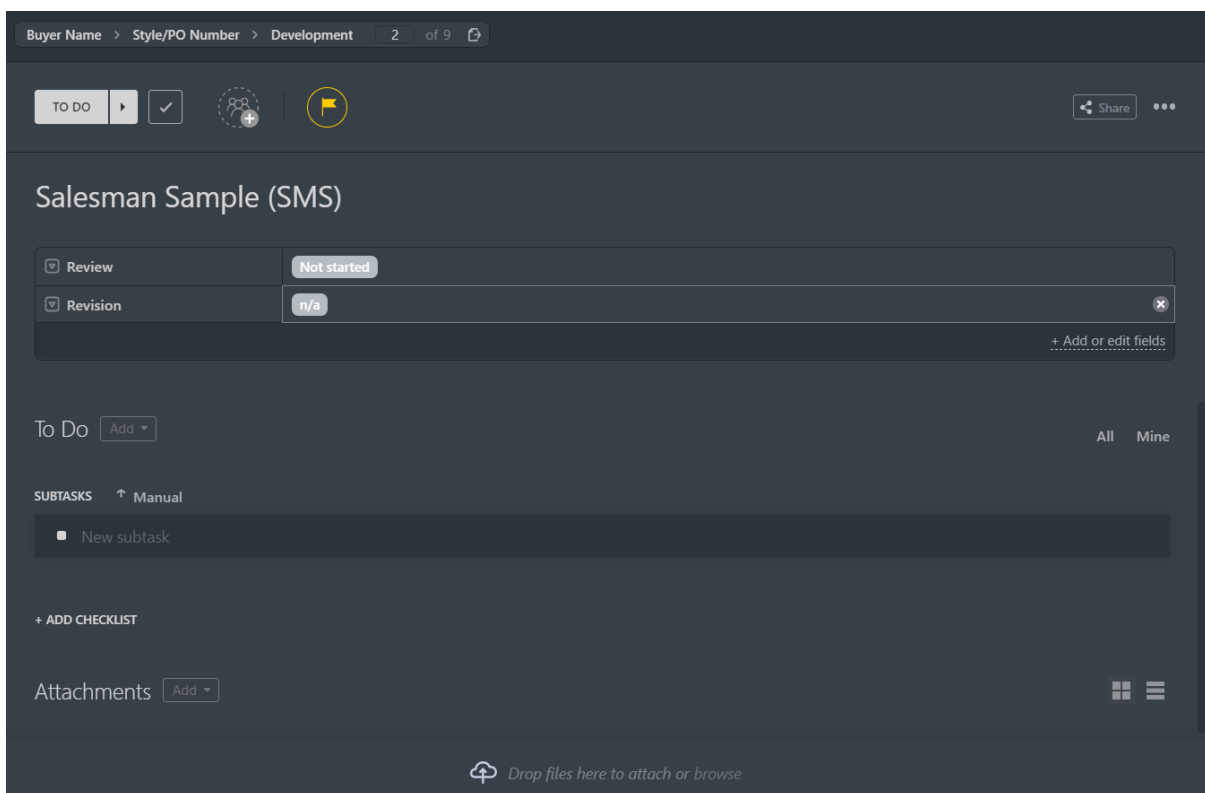


Figure 4.1.7: View after clicking on a task-2

As Figure 4.1.7 shows, the user can upload any file as an attachment, accessible whenever they want. Also, the user can make subtasks under that task, and then this task will appear as a master task for those sub-tasks. Also, users can add a checklist form there. It makes it easy to enter small steps checked for developing the sample, and finally, this window will appear as proof of the task that the user has done for completing the sample development.

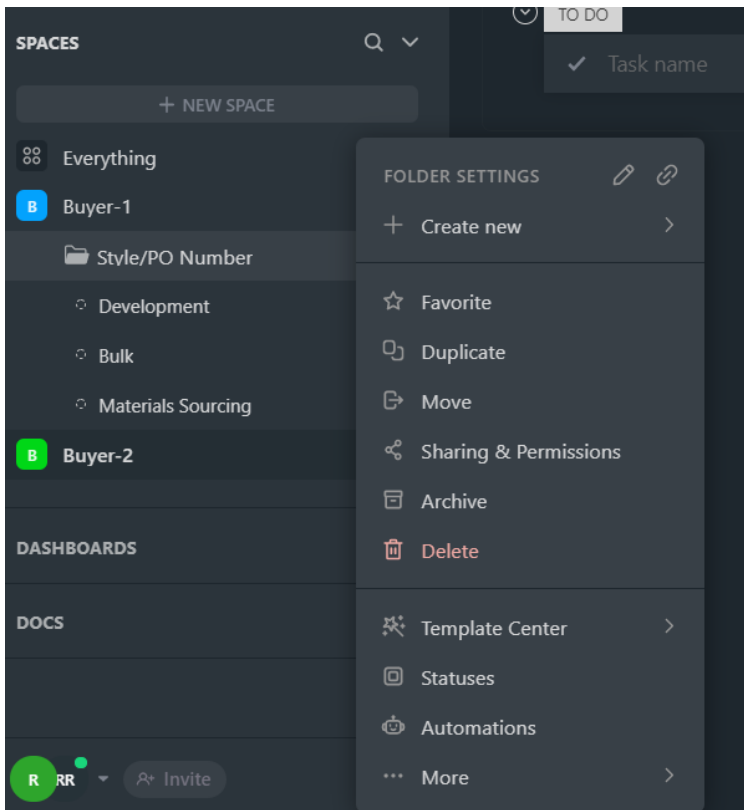


Figure 4.1.8: Duplicating folder

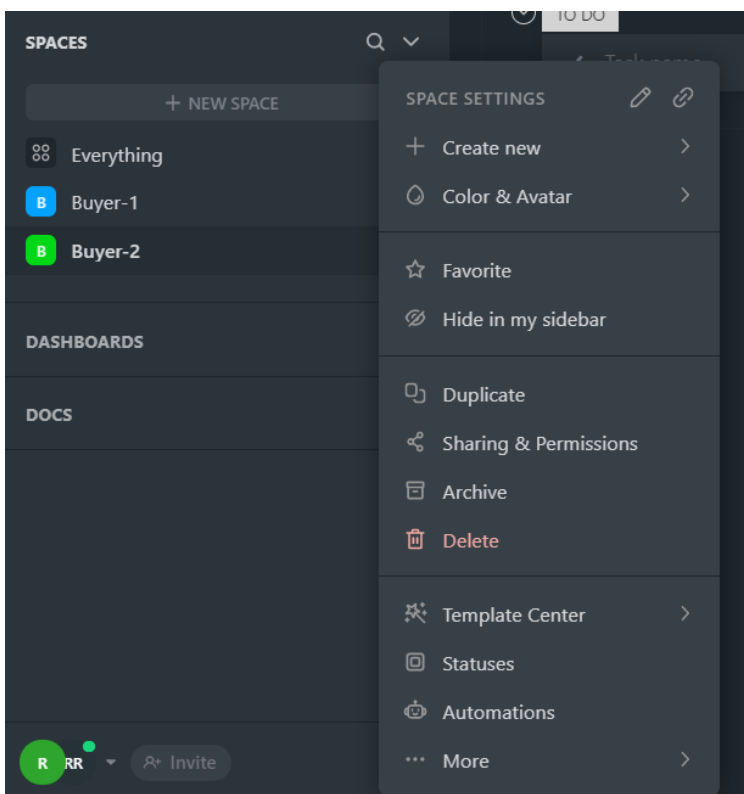


Figure 4.1.9: Duplicating space

"Figure 4.1.8 & 4.1.9" shows how users can copy a folder, subfolder also, and entire space. So, it makes things easy as the merchandising process repeats the process for all buyers; the variation only occurs on sample types. By duplicating, users can copy one and make another one contents like the other. So after doing this user has to change the sample's name schedule, assign a person's name, etc. So now formatting a new space is not an issue at all.

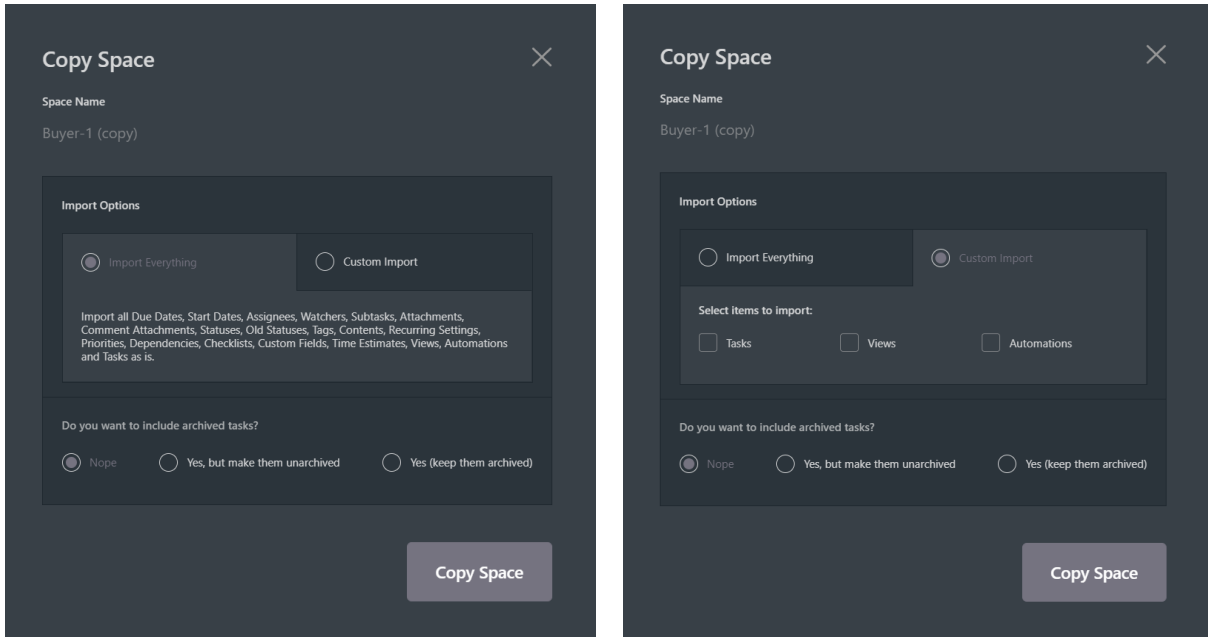


Figure 4.1.10: Copying space window

"Figure 4.1.10" shows two figures. Both is showing how can user copy space with customization.

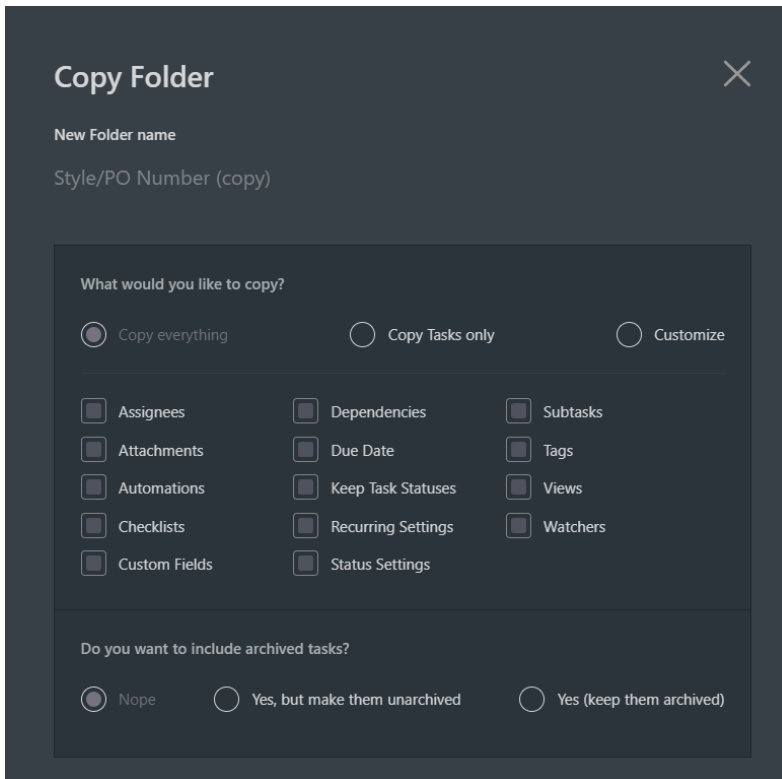


Figure 4.1.11: Copying folder window

"Figure 4.1.11" shows how the user can copy a folder make a duplicate with all customization

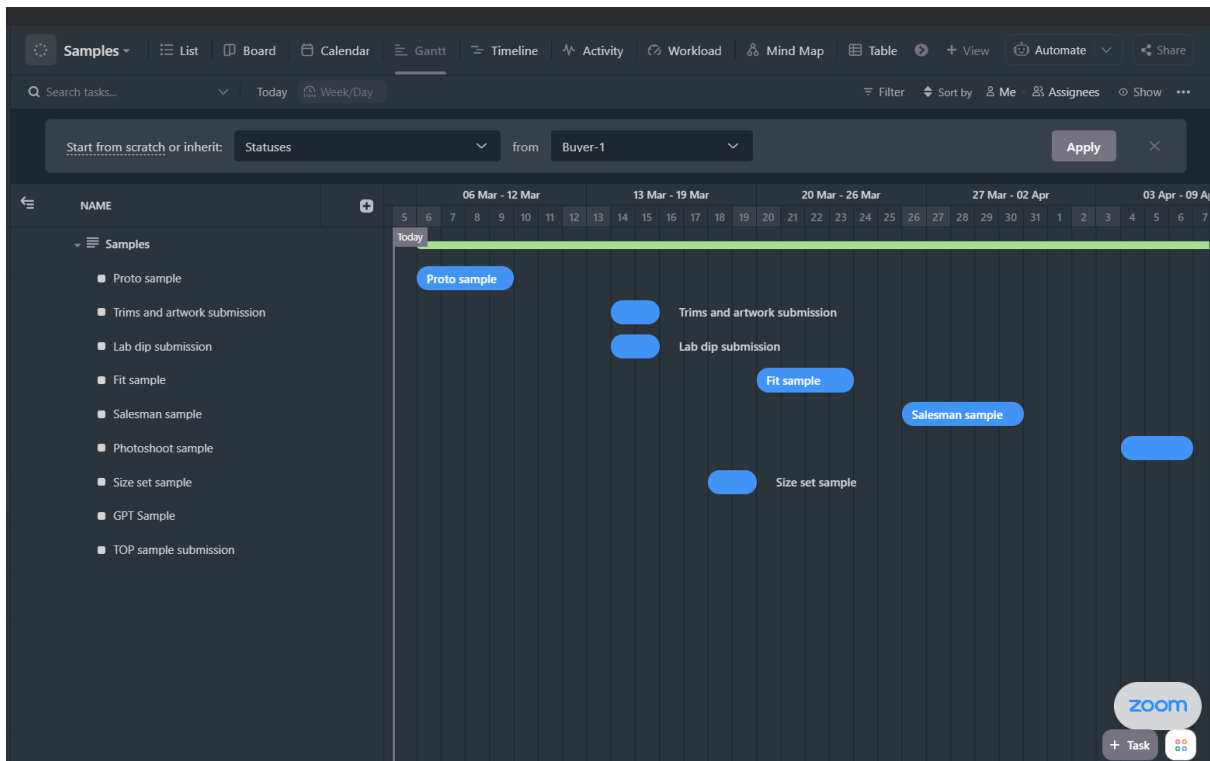


Figure 4.1.12: Gantt chart generated by the app

"Figure 4.1.12" shows the gnat chart that the user will follow. Gantt chart appeared data entry in the list. And Gantt chart is fundamental to procure goods on time ship manufactured goods at the correct set sample quantity on time.

So, users can use the project management app to work on time by following the TNA. As every order from a buyer is a project for a company. A project management app is there to keep the process aligned for a merchandiser.

4.2 Sourcing Materials

Sourcing is a balancing act. It is the process of asking for quotes for new products, obtaining vendor information and entering it into your procurement software, establishing lead time, pricing, minimum order numbers, and so on. With the exception of changing pricing information, this is typically done only once for each supplier. However, teams are always busy since it is critical to have a backup source or two if one cannot meet your needs for whatever reason. With global sourcing, you may discover that a more expensive supplier is more dependable and capable of handling higher numbers than your favored cheaper choice. Alternatively, you may need to locate alternate suppliers due to supply chain risks.

Before you can begin sourcing, you must first assess your purchasing needs, develop a strategy, do market research, and identify possible suppliers. After you've finished all of this, you'll review the vendors and select the best one for the job. The specific sourcing actions that follow may be determined by the requirements of the given sourcing event. For example, request for information (RFI), request for proposals (RFP), and demand for quotes (RFQ) can all be part of the procedure (RFQ). Then, the process is repeated for all other purchasing requirements until suppliers are in place for everything you need to buy.

4.2.1 Purchasing by Requirement

This strategy refers to things that are purchased only when they are necessary and in the required quantity. This method is used to purchase something that is not frequently needed. On the other side, it refers to the acquisition of emergency supplies. These items are not kept on hand. The purchasing department must be aware of the suppliers of such goods to obtain them quickly.

4.2.2 Market Purchasing

Market Buying is the purchase of goods to take advantage of favorable market conditions. Investments are not made to meet immediate needs but rather to address future demands. This strategy will be useful if future needs are precisely forecasted and purchases are made when market conditions are favorable. The market situation is regularly monitored to predict price developments. The benefits of this strategy include lower buy prices, higher margins on finished products due to lower material costs, and lower purchase expenses. However, this strategy has various drawbacks, including potential losses in the event of a wrong judgment, the worry of obsolescence, and increased storage costs resulting from more purchases.

4.2.3 Evaluating Supplier Market

When selecting a supplier, exercise caution. Organizations frequently wind up paying for a supplier's ineptitude. As a result, each garment company must evaluate suppliers based on their historical performance. Consider their financial statements, credit reports, and references before making a final decision with any supplier. Understand the supplier's working routine and how well it matches yours. To gain more

understanding, ask as many questions as possible of providers. Talk to them about their general experience and in your field, pay a visit to their website, and speak with their consumers. Do everything you can to obtain as much information as possible to know your future suppliers better. The better you know your sources, the better your results will be.

4.2.4 Purchasing for Future Period

This strategy is used to purchase things required regularly. These items are only needed in tiny quantities; thus, price swings are unlikely. The requirements for a specific period are analyzed, and purchases are made appropriately. The necessity for such purchases can be judged based on previous experience, the time frame for which supplies are required, the carrying cost of inventories, and so on.

4.2.5 Contractual Purchasing

Spiegel defines it as "the purchase under contract, typically formal, of needed materials, the delivery of which is frequently extended over a period of time." A certain number of materials is contracted to be purchased via this approach, and delivery is scheduled for the future. Even if the items are acquired in the future, the price and other terms and conditions are established in the contract. This strategy may be effective when anticipated future price increases and material requirements can be adequately forecasted.

4.2.6 Amass Suppliers' information

Another critical step is to gather information on your suppliers before dealing with them. Many clothing companies have a difficult time keeping a list of suppliers with the necessary information:

- ✓ Contact information
- ✓ Quotes
- ✓ Contracts
- ✓ Geographies potential
- ✓ Product information
- ✓ Performance data

Maintain all relevant information about the vendors you are collaborating with, both personal and professional. And, over time, keep updating the information to track performance and develop consistency.

4.2.7 Scheduled Purchasing

This strategy provides suppliers with a likely schedule for material requirements, allowing them to plan ahead of time. A precise manufacturing schedule is created to estimate future material requirements. Suppliers are notified of potential needs, and orders are placed appropriately. The timetable provided to the vendor by the purchaser is not a contract. This is merely a gentleman's agreement for purchasing terms and conditions. The key goals of this strategy are low inventory and quick service. Low prices, high-quality goods, and so on.

4.2.8 Formulate Sourcing Strategy

It's time to devise a foolproof strategy for meeting your sourcing objectives. First, you must understand where and how to source things for your firm. Next, create a sourcing plan that considers your Company's goals and the potential of your suppliers. Next, consider the market you want to reach with your product and services. Finally, look for strategies to maximize your sourcing efforts and include them all into your strategy. While developing a sourcing strategy, consider both internal and external considerations.

Internal criteria include: Quality and Budget

External forces include: Supplier Adaptability; Supplier's address; The performance of market participants; Other aspects to consider include:

Suppliers must meet specific requirements: Streamline operations; Relationship management with suppliers, Create an unbeatable approach to minimize risk and increase returns. And confidently enter the market.

4.2.9 Group Purchasing

Occasionally, a number of modest products must be purchased. Pricing for these items is so low that the costs of placing orders may exceed the prices. In such cases, the buyer places an order with the vendor for all of these things. The purchase price is decided

upon by incorporating a profit percentage into the dealer's cost. This method will be used only when the dealer's records are available for review to determine his cost. This form of purchasing lowers the buyer's costs by eliminating substantial clerical effort.

4.2.10 Negotiate with Supplier

You now have a plan and a supplier to put it into action. Before you issue any approvals to suppliers, get down with them to discuss the strategy and negotiate the best bargain possible.

Negotiation is vital for many garment businesses, but it is also essential to provide maximum value on a limited budget. Discuss your organization's vision with them and educate them thoroughly on your product.

Other essential aspects to consider are: Structure of pricing; Timeline for completion of the job; Teams and circumstances

Negotiate with the strategy you devised as if it were the only option available to you. But keep a backup plan on hand!

4.2.11 Enforce the Sourcing Strategy

It's time to put your sourcing plan to the test. Give the go-ahead to the suppliers and create a communication strategy and a mechanism for measuring and evaluating their performance.

Communication is essential in the beginning to maintain an ear on what's going on on the other side, especially if you're working with new vendors.

Due to misunderstandings between you and your suppliers, you may need to transfer suppliers at some point. Transition strategies are essential in this situation to keep the sourcing strategy on track. Information transfer from one provider to another may necessitate time, training, and even specialized physical assets. Therefore, you must be prepared as well as patient

Establish strong contact channels with suppliers and keep them up to date.

4.2.12 Monitor the Sourcing Plan

Keep track of your suppliers' performance and results. Examine how your vendors are performing on the job. What are the difficulties they are confronted with? How are they resolving the issues?

Understand your products' and suppliers' strengths and weaknesses. So you can improve it for the next time.

Examine the status of On-time delivery; Process suppliers are doing the same; Suppliers are experiencing difficulties; Product features and specifications

Make a list of the strategic points that worked for you and those that didn't. Then, analyze the outcome of your sourcing strategy and attempt to improve it.

4.3 Follow-up

Regardless of the significance of internal follow-up on fulfilled orders from buyers. It is frequently overlooked in the planning process. Follow-up is a component of the monitoring and evaluation phase, which is carried out in collaboration with stakeholders and end-users, although it is ultimately the duty of the implementing agency or organization (e.g., you and your team). Here, you will find critical information on properly supervising implemented projects and taking advantage of the lessons learned from past experiences to design spin-off projects.

4.3.1 Determination of Need and Scope

The topic of why you should perform an internal follow-up program for your project can be answered in various ways. Control, information, and communication are the primary goals. A follow-up program will undoubtedly add value to your project and future activities; thus, it must be considered throughout the planning stage. It is critical that you and your staff recognize the importance of it. In this step, you should describe the scope of the follow-up issues (what will be supervised), particularly the indicators that will assist you in keeping an eye on the project. For example, if you are going to make new development, you should monitor the quantity and quality of the sample and supplies and buyer satisfaction and take the required actions if there is room for improvement for that development.

4.3.2 Determination of Roles and Responsibilities

The most crucial thing to remember is to delegate finished jobs to your team members. It is critical to instill a sense of responsibility in your team members, especially for completed tasks. Otherwise, as new initiatives begin, the completed ones will be forgotten. Look for monitoring and evaluation abilities in all of your project/program and management positions; they will be helpful in all of these processes.

4.3.3 Gathering Data and Evaluation

Once the project is completed and the internal follow-up begins, make sure to organize and integrate visits, communication with stakeholders, laboratory analysis, and so on into your day-to-day activities.

Unfortunately, the evaluation of outcomes and results from follow-up is frequently not carried out, although this analysis should be carried out since it is a vital phase in the process. In addition, an analysis of the obtained data should be performed to ensure that the information provided is helpful to the intended audience. Overall, the evaluation step must identify the lessons learned from the follow-up program.

The evaluation stage of a follow-up program may find that additional steps are required to manage the problems highlighted. For example, changes to the project's design and operations are made to address issues discovered during follow-up. In addition, modifications to project design, activities, operation, or maintenance operations may be required to address concerns detected during follow-up.

4.3.4 Reporting

It is advised that a thorough reporting and evaluation process be implemented to guarantee that outcomes are not overlooked. To eliminate the extra effort and enable comparison, create a basic form for all staff members to report on their internal follow-up actions and evaluation. The following information should be included in the follow-up reports at a minimum:

A brief overview of the project, its location; a contact person at the project site (together with contact information); and a description of the project's follow-up mechanisms (e.g., field visit, lab test, etc.)

• Issues or problems found • Results • Data analysis and review • Corrective measures implemented • Additional actions proposed to address the issue • Lessons learned

4.3.5 Set a Deadline

Although all project-related tasks are meant to have deadlines, many are left open-ended in practice. Perhaps the assignment is too minor for an actual deadline, or you simply believe that the other person would complete it as soon as possible. In any case, human nature almost guarantees that open-ended initiatives will be assigned the lowest priority on someone's to-do list. And when you follow up, that person will be perplexed and wonder why you're so upset. After all, if it were truly urgent, you would have set a deadline, wouldn't you?

4.3.6 Use Multiple Channels

When following up, don't rely just on one mode of contact. For example, I've worked with clients who were never at their offices and hence only answered phone calls on their cellphones. Others only responded by email. And, in some instances, simply sending out automated deadline notifications is sufficient. When one method fails, try another. Just don't attempt all of them at once. The only thing you'd accomplish is irritating folks in that regard.

4.3.7 Don't Nag

My manager would hover over me and request an update every 10 minutes when a deadline was approaching. It was frustrating and distracting, and it simply slowed down the task. Nagging is counter-productive to projecting momentum and is detrimental to morale. Nagging your client may convert you become a pest rather than a trusted advisor, and that relationship will be tough to repair. Resist the impulse to bombard them with demands for updates. Instead, send a follow-up email once, then wait. The amount of time you spend relies on you and your connection.

4.3.8 Multi-Purpose Conversations

An excellent technique to avoid the "nagging" issue is to talk about something entirely different for lightening the mood, inquire about another aspect of the project, or engage in some small conversation. Then, after the initial chat is finished, throw in the follow-

up as an afterthought. The other party's guard will be down by then, and they will be more responsive to the follow-up than if you immediately jumped in and yelled, "where is it?"

Following up is a skill like any other, and project managers should learn it. However, it is not necessary to constantly crack the whip to complete projects. In reality, the soft-touch approach will benefit both project momentum and your reputation in the long run.

Table 4.3.1: Follow-up chart example for sample development

Development Initiated but submission date not given yet		Development ongoing with a submission date		Development sample/items received		Items sent to buyer											
Buyer	Status	Style	Item Description	Color	Specialization	Remarks	Development Name	Item Name/Type	Color	Reference	Sample Size	Composition/ Specification	Quantity	Submission/Submitted date	Comments	Remarks	
S.Oliver	Done	Premium Thermal Bottom	Leggings	Available	Antimicrobial & Wicking	X	Fabric	Lycra Single Jersey	X	AKJ.02458.1221	X	65% Acrylic 30%Viscose 5% Spandex	X	Submitted	X	X	
S.Oliver	Done	Premium Thermal Top (Full Sleeve)	T-Shirt	Available	Antimicrobial & Wicking	X	Fabric	Lycra Single Jersey	X	AKJ.02458.1221	X	65% Acrylic 30% Viscose 5% Spandex	X	Submitted	X	X	
S.Oliver	Done	Premium Thermal Half Sleeve	T-Shirt	Available	Antimicrobial & Wicking	X	Fabric	Lycra Single Jersey	X	AKJ.02458.1221	X	65% Acrylic 30% Viscose 5% Spandex	X	Submitted	X	X	
S.Oliver	Done	Premium Thermal Bottom	Leggings	Available	Antimicrobial & Wicking	X	Fit Sample	X	X	X	M	X	2pcs	Tuesday, February 22, 2022	X	X	
S.Oliver	Done	Premium Thermal Top (Full Sleeve)	T-Shirt	Available	Antimicrobial & Wicking	X	Fit Sample	X	X	X	M	X	2pcs	Saturday, February 12, 2022	X	X	
S.Oliver	Done	Premium Thermal Half Sleeve	T-Shirt	Available	Antimicrobial & Wicking	X	Fit Sample	X	X	X	M	X	2pcs	Saturday, February 5, 2022	X	X	
S.Oliver	Done	AW22SPIN01	Tops	Available	Wicking, pattern test	X	Fabric	Micro	X	AKPS-008.17	X	83% Polyester 17% Spandex	X	Submitted	X	X	
S.Oliver	Done	AW22SPIN01	Tops	Available	Wicking, pattern test	X	Fabric	Tricot	X	TBA	X	TBA	X	Thursday, March 3, 2022	X	Development responsible facing issue with the quality and dyeing shade so submission time increased now	

Table 4.3.2: Follow-up chart for outsourcing materials

Materials order Initiated but submission date not given yet	Materials shipment date given	Items received in factory										
Style Number	Supplier Name	Items	WO Number	PI Number	Buyer Name	WO Sent Date	Quantity	Delivery Date	Delivered Quantity	Balance Quantity	Delivery Responsible	Remarks
A039	ABC Accessories & Trims	Heat Seal	2022002332	X	Enamor	22-Feb-2022	34174	Thursday, March 10, 2022				
			2022003203				40798					
			2022002081				61724					
		2022001974	17919									
		2022001972	17922									
		2022002083	12240									
	Taihang	Button	2022003200	PI-10026	Enamor	19-Feb-2022	81600	Friday, March 18, 2022				
			2022003201				81600					

CHAPTER-5

CONCLUSION

By completing, authors get into a result of the way to improve the way of works and pressure of work for a merchandiser. As this works, concentrate only on merchandising the reader will get a deep insight about the practice of TNA, Followup. The idea about to maintain a TNA from the first to the last task using project management skillsets with the works. Authors develop a concise follow-up chart to perform immediate action whenever needed when developing new samples or contacting an outsource materials supplier.

There is a scope of further works; these mentioned remedies are not applied yet as they need training about the project management app and lack of time. So, authors, it's yours to avail yourself of the chance and works on this, and you can do a statistical analysis of how efficient this is of using these remedies in process with empirical data.

Reference

- [1] Rathinamoorthy R, Surjit R. Apparel Merchandising. Woodhead. 2018
- [2] Gowrek, Helen. Fashion Buying. Blackwell. 2004
- [3] Tareq Mahmud. Brac Business School. 2017
- [4] Md. Atiqur Rahman. Daffodil International University. 2018

Annex

Questioner:

1. Did you face any issues when you are working by following the process flowchart of your buyer along for a style/PO?
2. What type of challenges do you face when trying to fulfill the TNA plan hardly.
3. What is your experience with sourcing materials? How did you overcome obstacles on that part?
4. How did you negotiate with buyers virtually to resolve issues against any style/PO?
5. How many styles/PO are you working on right now.
6. How did you manage that much style/PO at the same time
7. How did you store your data records and follow up on time with the task responsible?
8. Can you say something about your task management from the day starting?

Workflow of Merchandising

ORIGINALITY REPORT

29%

SIMILARITY INDEX

25%

INTERNET SOURCES

3%

PUBLICATIONS

15%

STUDENT PAPERS

PRIMARY SOURCES

1	textilecourse.blogspot.com Internet Source	9%
2	Submitted to Daffodil International University Student Paper	3%
3	clothingindustry.blogspot.com Internet Source	3%
4	lib.buet.ac.bd:8080 Internet Source	2%
5	Submitted to BRAC University Student Paper	2%
6	www.scribd.com Internet Source	2%
7	Submitted to Nottingham Trent University Student Paper	2%
8	Submitted to Pearl Academy Student Paper	1%
9	www.coursehero.com Internet Source	1%

10	dspace.daffodilvarsity.edu.bd:8080 Internet Source	1 %
11	hdl.handle.net Internet Source	1 %
12	www.saulibrary.edu.bd Internet Source	1 %
13	Submitted to University of Westminster Student Paper	<1 %
14	meral.edu.mm Internet Source	<1 %
15	www.fibre2fashion.com Internet Source	<1 %
16	garments-merchandising.blogspot.com Internet Source	<1 %
17	Submitted to University of the Arts, London Student Paper	<1 %
18	asana.com Internet Source	<1 %
19	www.assignmentpoint.com Internet Source	<1 %
20	planergy.com Internet Source	<1 %
21	www.aeempire.com Internet Source	<1 %

22 Submitted to University of Lincoln <1 %
Student Paper

23 archive.sswm.info <1 %
Internet Source

24 Bernstein. "Estimation, Planning and <1 %
Investment", Trustworthy Systems through
Quantitative Software Engineering,
09/09/2005
Publication

25 vdocuments.site <1 %
Internet Source

Exclude quotes On

Exclude matches < 10 words

Exclude bibliography On