Report On

Crystal Martin Apparel Bangladesh Limited

Overview of Industrial Engineering, Production, Quality Assurance, Planning and Merchandising

By

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An internship report submitted to the Executive Development Center, Brac Institute of Governance and Development (BIGD), Brac University in partial fulfillment of the requirements for the degree of
Post Graduate Diploma in Knitwear Industry Management (PGD-KIM)

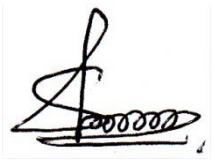
Executive Development Center, BIGD
Brac University
March 2026

Declaration

It is hereby declared that

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

Student's Full Name & Signature:



Md. Shydur Rahaman
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Academic Supervisor's Full Name & Signature:

Ashik Sufi Islam
Senior Research Associate
BIGD, Brac University

Letter of Transmittal

Ashik Sufi Islam
Senior Research Associate
BIGD, Brac University
66 Mohakhali, Dhaka-1212

Subject: Submission of internship report on Crystal Martin Apparel Bangladesh Limited.

Dear Sir,

It is a matter of pleasure to complete my internship report under your dynamic supervision. The internship report is based on three months period at Crystal Martin Apparel Bangladesh Limited. I did my very best to complete this internship report with the necessary data and recommendations in the most concise and comprehensive manner. I hope that the contributions during this internship have been valuable to the company and its goals.

Therefore, I hope my whole internship report will meet your desire.

Sincerely yours,

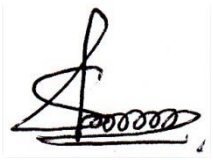
_____

Md. Shydur Rahaman
1000055578
Executive Development Center, BIGD
Brac University
Date: March 10, 2026

Non-Disclosure Agreement

This agreement is made and entered into by and between Crystal Martin Apparel Bangladesh Limited and the undersigned student at EDC, BIGD, Brac University.

Student's Full Name & Signature:



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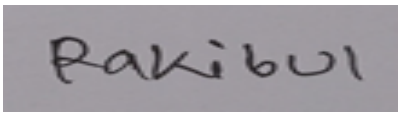
Industry Supervisor's Full Name & Signature:



Md. Rakibul Islam
Assistant Manager, IE
Crystal Martin Apparel Bangladesh Limited

Acknowledgement

For providing me with the chance to finish the internship program as part of the Post Graduate Diploma in Knitwear Industry Management, I would like to sincerely thank the Executive Development Center, BRAC Institute of Governance and Development, BRAC University.

I owe a profound debt of gratitude to everyone who contributed to this journey—those who guided me, extended their valuable time, and supported me with sincere dedication and hard work.

My sincere gratitude goes out to Ashik Sufi Islam, Senior Research Associate, my academic supervisor, who has effectively guided me in the right direction. I was able to finish this report in a meaningful way with Sir's help and direction. I'm grateful to my industry supervisor, Md. Rakibul Islam, for helping me and allowing me to collaborate with all departments to properly finish my report work.

Executive Summary

I worked on a variety of tasks in five different departments during my internship at Crystal Martin Apparel Bangladesh Limited (CMBD), a prestigious Garments Manufacturer IE, Production, Quality Assurance, Planning and Merchandising. During my internship, which ran from December 2025 to February 2026, I learned how to overcome everyday obstacles and challenges. The following are the main sections that make up my report. Industry Synopsis, An explanation of the tasks completed in Planning, IE, Production, Quality Assurance, and Merchandising. Evaluation of internship work critically, Final Thought. This report aims to highlight the activities that take place in each department, their significance to the organization, the working methods and relationships among various functional departments, and the areas that could use improvement. I also emphasized how the internship helped me grow personally and learn new things. This internship report concludes by confirming that Crystal Martin Apparel Bangladesh Limited is a profitable, well-run company that is genuinely committed to both customer happiness and manufacturing excellence. All things considered, my internship offered priceless professional insights into the operations, culture, and strategic priorities of a top-tier clothing manufacturing company.

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Chapter 1

About Organization

1.1 Overview of the Industry

Crystal Martin Apparel Bangladesh Limited (CMBD) is a premium-tier Cut and Sew Apparel Manufacturing enterprise and a wholly-owned subsidiary of Crystal International Group Limited—one of the world's most respected vertically integrated garment manufacturers, headquartered in Hong Kong and founded in 1970. As a strategically important production unit within Crystal International's global manufacturing network, CMBD represents the Group's dedicated footprint in Bangladesh's rapidly growing Ready-Made Garments (RMG) sector.

Situated in Valuka, Mymensingh, CMBD's purpose-built manufacturing facility spans approximately 1,60,000 square feet and accommodates 137 production lines supported by around 3,500 sewing machines and a skilled workforce of approximately 5,000 workers. The company specializes in the manufacture of intimate apparel and knitwear—including structured bras, soft cup bras, knickers, briefs, camisoles, and casual tops—supplying approximately 90% of its production to Marks & Spencer (M&S), the iconic British retailer universally recognized for its uncompromising quality, compliance, and sustainability standards. With a daily production capacity of up to 50,000 bra and top /bra pieces and 245,000 underwear /panty pieces, an annual turnover of USD 31–45 million, and the ability to handle about 120 different styles each month, CMBD has solidified its position as one of Bangladesh's most technically proficient and well-known intimate apparel manufacturers.

1.2 Vision & Mission

Vision

To use innovation, operational excellence, and responsible manufacturing leadership to build a bright and sustainable future.

Mission

To provide outstanding quality goods on schedule and within budget, all the while fostering an environment that is safe, empowering, and positive for our employees and making a significant contribution to the communities and society in which we operate.

1.3 Goals & Objectives

1. Sustainability & Environmental Stewardship

With the Crystal Net Zero 2050 plan, our main goal is to spearhead the shift in the garment industry toward a low-carbon economy.

Achieve a 35% absolute reduction in greenhouse gas emissions by 2030, with a long-term goal of Net Zero by 2050.Maximize clean energy usage through the continued expansion of on-site Solar Photovoltaic (PV) systems. Reduce freshwater intensity and implement "Smart Laundry" systems to minimize chemical and water waste. Increase the ratio of sustainable and traceable materials in production to align with global circular economy standards.

2. Customer Satisfaction & "Live Quality"

We aim to move beyond simple compliance to achieve "Customer Delight" for our partners (including H&M, Gap and M&S).

Uphold the "Live Quality" core value by integrating modernized, automated quality control at every stage of production. Maintain a high QQT (Quality, Quantity, Time) rating to ensure

flawless execution and 100% on-time delivery. Transition from a supplier to a strategic partner by offering high-level merchandising and transparent supply chain reporting.

3. Innovation & Efficiency

We utilize technological advancement to drive productivity and minimize environmental impact.

Scale the use of laser technology and automated finishing for sustainable denim and high-precision intimates. Implement 3D digital sampling and automated production planning to reduce lead times and physical waste. Collaborate in tandem with brand design teams to introduce cutting-edge, commercially viable goods with cost-effective designs.

4. Employee Welfare & Social Impact

CMBD is dedicated to being a "Great Place to Work," understanding that our success depends on our coworkers. Corroborate top-notch health and safety regulations, striving toward ISO 45001 accreditation and zero workplace incidents. All employees should have access to technical training programs and the Crystal Manager Curriculum for ongoing education. Encourage women's empowerment and gender equality by supporting organizations like P.A.C.E. and CARE.

1.4 Organogram, Organizational structure, Branches and Departments

The professional management structure of Crystal Martin Apparel Bangladesh Limited, a subsidiary of the Hong Kong-based Crystal International Group Limited, is characteristic of large-scale international clothing manufacturers. A group of directors and general managers control the company's specialist divisions, which include industrial operations and retailing.

CMBD Organogram

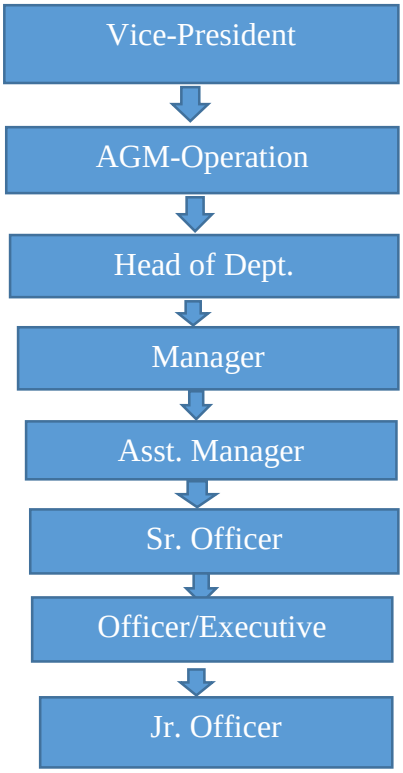

Figure 1: CMBD Organogram

CMBD Branches and Departments

Crystal Martin Apparel Bangladesh Limited, part of the Crystal International Group, is a major garment manufacturer specializing in knit and intimate apparel, with main factories located in Hobirbari (Valuka, Mymensingh) and a liaison office in Dhaka. Key operations include high-volume, automated production lines for global buyers, with established compliance (BSCI, WRAP).

Branches & Locations

Factory 1 (Main): SA Plot #203, Hobirbari, Seed Store, Valuka, Mymensingh.

Factory (Unit-2): Jamirdia, Valuka, Mymensingh or Kewa Gorgoria Master Bari, Sreepur, Gazipur.

Dhaka Office/Registered Office: House-Ne (K)-7/A, Apartment No-A1 & B1, Gulshan Avenue (North), Gulshan-2, Dhaka.

1.5 Products/services produced by the Industry

Crystal Martin Apparel Bangladesh Ltd, established in 2004 in Valuka, Mymensingh, is a major multinational garments manufacturer specializing in knitted garments, specifically intimate apparel (brassieres, panties, briefs), lingerie, and sportswear. The company manufactures, dyes, and prints fabrics for global brands like H&M, Gap and M&S, featuring over 137 production lines and advanced, eco-friendly washing technology.

Key products and services produced by the industry include:

Intimate Apparel: High-volume manufacturing of bras, panties, briefs, and underwear.

Knitted Garments: Casual wear, sportswear, and loungewear.

Fabric Processing: In-house knitting, dyeing, and printing services.

Sustainable Denim: Utilizing 4Zero technology (no PP spray, no hypochlorite, laser technology) for eco-friendly denim manufacturing.

Garment Services: Cutting, sewing, and finishing for varied apparel including tops, trousers, and sweaters.

Located in Mymensingh, the company operates as part of the Crystal International Group, focusing on high-quality, sustainable apparel production for the export market.

Chapter 2

Description about task accomplishment

Department Visiting Schedule

I have made a visit plan for 5 individual departments to work on. Though it is not easy to execute all the work as per plan being an employee but hope it will help me to get the best practical experiences. Let me mention the probable schedule on below:

Participating Department	**No of days**	**Location**	**Date**
Industrial Engineering	14 Days	Factory	01-Dec-25 to 20-Dec-25
Production	13 Days	Factory	21-Dec-25 to 05-Jan-26
Quality Assurance	13 Days	Factory	06-Jan-26 to 21-Jan-26
Planning	13 Days	Factory	22-Jan-26 to 07-Feb-26
Merchandising	13 Days	Factory	08-Feb-26 to 28-Feb-26
Total	**66 Days**		

Table 1: Internship department visiting schedule

Task Overview of Departments

2.1 Industrial Engineering Department

I started my internship task with Industrial Engineering Department department. This is actually my own working area where I perform my daily work. To be very honest this is one of the most challenging departments in the entire company. I have tried to work as much as possible to get the best knowledge. In our company, there is very important Industrial Engineering team. During my internship I have worked in both teams. Let me explain some of my working experience in brief.

The team is very big in CMBD. It consists of 36 members. Among them 10 executives, 15 officers, 3 Jr. officers,3 Sr.officersr, 4 Asst. Manager & one manager. As the "brain" of the production floor, the IE department balances resources (man, machine, material, and method) to maximize output while preserving quality. The Industrial Engineering (IE) Department in the RMG Industry in Bangladesh is in charge of using scientific methods and data analysis to make garments more efficient, reduce waste, and improve quality. The method study, line balancing, capacity analysis, and continuous improvement are all parts of how it works. The Industrial Engineering (IE) Department at our factory uses engineering principles to get the most out of our manufacturing processes while keeping costs as low as possible. It is very important to make sure that the clothes are made quickly, with high quality, and with the least amount of waste. First, our IE team does a Pre-Production Analysis, which means they look at the garment samples and technical sheets, break down the operations, and figure out what machines and people are needed. Then, they make a list of all the tasks, including the types of machines, the number of workers, and the standard time and share it with the planning and production teams. Then, they set up the machines and operators in the order they will be used and check their accuracy with GSD or a stopwatch. Then they keep an eye on production by

keeping track of output and efficiency on an hourly basis. They find areas that aren't doing well and suggest ways to fix them. Finally, they look at how well things actually went compared to how they were supposed to go, write down what they learned, and change their plans for the future. I have practiced some operations during my training sessions, such as Cycle Check and Production Study.

Cycle Check (Time Study)

Cycle Time is a way to keep track of the time spent on a task or its parts and measure work under certain conditions. The operator does the same thing every day, which helps figure out how long it will take them to finish the job at a set performance level. To check the cycle time, the following tool was needed:

- Stopwatch (for precise time measurement)
- Time Study Board (for structured data recording)
- Standardized Data Sheet Format
- Pen or Pencil

This exercise helped me better understand how operator performance, standard minute values, and their effects on production planning and efficiency reporting are all connected.

Production Study

A production study entails documenting all tasks executed by an operator within one hour and measuring the duration of each task. It is like a cycle check study in that it needs a lot of different tools, but instead of a cycle check sheet, it uses a production study sheet. I chose an operator who was working at less than the line's full capacity for the production study. I started by setting up the operator's work station according to our standard procedures. For an hour, I kept writing down the names of the jobs and their times on the production study sheet while

timing it with a stopwatch. After a one-hour case study of production. I looked at the recorded data to figure out the real times of productivity and non-productivity. Based on what I found, I gave the workers some tips on how to work more efficiently and asked the line supervisor to keep an eye on their work for another hour.The idea that productivity gains are most successful when they are based on objective data and backed by organized follow-up was reaffirmed by this exercise.

Thread Consumption Calculation

Depending on the machine being used, standard formulas are available to determine the quantity of thread required for sewing a garment. Before using the calculation, variables like fabric density and stitch class would also need to be taken into account. After taking these variables into account, the calculation involves multiplying the stitch length by the factor of the particular number to determine the total amount of yarn needed to create the outfit. The actual thread usage per unit length of seam is influenced by the following variables.

- Stitch class and type
- Stitch count per inch (SPI)
- Seam thickness
- Thread tension settings
- Thread count (thread fineness)

I calculated the thread consumption for a different query, "How much sewing thread do I need to buy for a garment"? This required accounting for a number of variables, such as the kind of cloth, the sewing thread, the number of orders, and the proportion of waste. The name of each operation of the garment and its related stitch length were then entered using specialized software that integrated previously developed calculations and parameters. I entered all the

necessary information after selecting the appropriate machine and stitch design. I considered wastage percentage too, according to the quantity of order of garments. Using this information, the software was able to produce an extensive report on specific requirements regarding the sewing thread needed for the garment. I saved this file and emailed it to the factory who was responsible for making the garment

Operation Bulletin (OB) Preparation

The Operation Bulletin (OB), which aids in setting up a manufacturing line with the appropri ate number of tools and staff, is a crucial instrument in industrial engineering.To make the pr ocess of building an OB easier to understand, I've broken it down into simple phses.The Oper ation Bulletin (OB) is prepared twice.

1. Costing Stage

2. Production Stage

The merchant sent me a tack pack or a sample before I could create an Operation Bulletin (O B) for a new order.Before logging into General Sewing Data (GSD) software, which standard izes all sewing activities and provides information on machine usage and required time for ea ch task, I carefully reviewed the technical specifications.One widely accepted buyer reference is General Sewing Data (GSD).Then, using the technical code and image as a guide for ident ifying the garment,Iprogressively entered each garment operation into General Sewing Data (GSD).I saved the file and downloaded it in PDF format after entering all the required inform ation. Lastly, I mailed copies of the Operation Bulletin to both the merchant and production unit.

Line Layout Development

The necessary materials for creating a line layout are a physical sample, an operation bulletin, and a manpower list.I started by translating the operation bulletin from PDF to Excel.I used t his to transform all the information from the operation bulletin to a line layout.I assigned skill ed labor and equipment in accordance with the line's goal.Every procedure was arranged sequ entially on the Excel line layout.After finishing it, I printed the layout format and had the Hea d of IE & Production sign it before sending it to the maintenance division.I also specified the necessary guide folder attachments during the layout phase.

Key Kaizen Activities

The Industrial Engineering (IE) Department, Crystal Martin Apparel Bangladesh Limited (CMBD) has made Kaizen—the idea of continual, incremental improvement—a fundamental operational discipline. CMBD IE team eliminate Waste by (7 Wastes Reduction): Defects, overproduction, waiting time, needless transportation, excess inventory, needless motion, and underutilized talent are the seven types of manufacturing waste that the IE team methodically finds and eliminates. The team also doing Method Improvement by analyzing operator movements at each workstation and redesigning working methods to remove non-value-added operations, IE engineers use structured motion and method studies.The main activities of CMBD that 6S Workplace Organization.The IE Department oversees and audits CMBD's strict 6S program (Sort, Set in Order, Shine, Standardize, Sustain, and Safety) in all production areas. Productivity, safety, and consistency in quality are directly supported by this endeavor.CMBD responsible IE also monitoring hourly production and quick reaction. Real-time measurement of hourly output against predetermined targets on each sewing line is a core Kaizen practice at CMBD. IE engineers and supervisors exemplify the Kaizen philosophy of small, frequent interventions building into considerable overall improvement by promptly investigating root

causes and implementing corrective actions when performance falls short of objective. The IE team also control WIP by super marketing.

2.2 Production department

I became aware of how difficult it is to work in production when I joined the team. From the outside, what we perceive is not entirely accurate. The production team is dealing with a lot of difficulties that we don't fully comprehend. In any case, the department works a single 10-hour shift every day. However, a second shift is added to meet shipment obligations without jeopardizing delivery schedules when order numbers beyond typical capacity limitations. 90% of CMBD's output is devoted to supplying Marks & Spencer, one of the most exacting and compliance-conscious retail customers in the world. The factory generates business worth around USD 30–45 million yearly.

Hierarchy of Organizations

Every level of the factory floor at CMBD has an efficient span of control, accountability, and operational discipline thanks to a well-defined and multi-tiered management hierarchy:

Position	**Number**
Factory Manager	1
Block Managers	6
Executives	10
Officers	8
Supervisors	76
Production Workers	5,000

Block Managers, each of whom is in charge of a specific cluster of production lines, assist the Factory Manager, who is the senior authority in charge of all production activities. Supervisors give direct, floor-level supervision of employees and manufacturing lines, while executives and officers manage data, coordinate operations, and communicate between departments.

End-to-End Production Workflow

Requesting Materials and Managing Input

The formal submission of a material request to the Input Team marks the start of the manufacturing cycle. This request includes every component needed for the specific production order, such as: Cut panels (fabric pieces that have already been cut and obtained from the Cutting Department), Sewing thread (different colors and counts depending on the style) ,Elastic (different widths according to the needs of the garment), Underwire and foam cups (for bras and structured personal clothing), Eyes and Hooks (H&E) Shoulder straps and cookies (specific bra parts).

Sewing activities:

Assembly stitching is the process of combining separate fabric components using the authorized construction method. Attaching cables, hooks, straps, elastic, and other functional parts, As needed by the buyer, special operations include ornate stitching, lace attachment, and ornamentation. Bundle and size management. To guarantee precise packing for shipping, supervisors strictly monitor size ratios and bundle integrity. About 3,500 sewing machines are used throughout CMBD's production floor. These machines are supported by seasoned foreign workers in mid-level and senior production management positions, mostly from Sri Lanka and the Philippines. Their global experience in complex multi-style production management has been a major operational advantage.

In-Line Quality Control Integration

An integrated in-line quality control system continuously monitors quality throughout the sewing process. By using a traffic light quality system, CMBD greatly reduces reliance on specialized in-line quality checkers by having operators self-check the quality of the parts they create. This strategy, which is in line with the company's "Live Quality" corporate philosophy, has produced an industry-leading rejection rate of less than 1%. When necessary, rework is done on the sewing line itself rather than being sent to a different rework station, which minimizes workflow disturbance and preserves production continuity.

Finishing Department Operations

Accomplished clothing is moved to the Finishing Section once all sewing operations are accomplished, where it goes through a number of post-sewing procedures before being ready for shipping. Two main product categories are produced by CMBD, each with unique finishing specifications:

Knicker Items (Bottom/Underwear):

- Thread trimming and cleaning
- Elastic quality verification
- Measurement and dimension check
- Ironing and pressing
- Folding and packaging as per buyer specification

Non-Knicker Items (Bra/Top/Structured Intimate Apparel):

- Cup and wire inspection
- Hook and eye functionality check
- Strap adjustment verification
- Padding and molding quality assessment
- Detailed measurement compliance check
- Final ironing, folding, poly-bagging, and carton packing

Metal Detection and Final Safety Check

All completed clothing goes through a metal detection procedure prior to packing and shipping in order to find and remove any broken needle fragments, metallic attachments, or foreign metallic objects that might have been unintentionally included during the stitching process.

Final Inspection and Shipment Preparation

The completed apparel is subjected to a final quality inspection in accordance with AQL (Acceptable Quality Level) regulations, typically AQL 2.5, before to being placed into shipping cartons. Throughout the packaging process, strict adherence to buyer-specified packing lists—which include precise size ratios, color combinations, and carton labeling specifications—is maintained. The vessel booking is confirmed at least 15 days prior to the final inspection date in order to ensure seamless shipping execution.

Key Performance Indicators (KPIs) Monitored by the Production Department

To assess operational performance and pinpoint areas for improvement, the Production Department monitors a predetermined set of KPIs every day, every week, and every month:

KPI	Description
Production Efficiency (%)	Actual output vs. target output per line per shift
On-Time Delivery (OTD)	Percentage of orders shipped on or before the committed date
Rejection Rate (%)	Percentage of garments failing final quality inspection
Non-Productive Time (NPT)	Hours lost to machine breakdown, material shortage, or other disruptions
Worker Absenteeism Rate	Daily attendance tracking relative to total workforce

Challenges and Operational Context

Some issues include low productivity brought on by antiquated equipment and manual procedures, which raises maintenance expenses. High defect rates are caused by a variety of operator skills, poor line balancing that results in bottlenecks and idle waiting times, worker fatigue and turnover from demanding work environments, operational efficiencies, consistency, and value to the patient. One Operators frequently lack training in standardized work methods, which affects consistency and output quality. Productivity gains can occasionally be hampered by decisions made without employing real-time data. Processes must be modified in order to meet sustainability criteria, which can be costly and difficult. Operational complexity is increased by the need for IE to support adherence to safety regulations, labor legislation, and buyer audits. IE often exists in silos that limit the impact of IE on a holistic factory performance.

The main driver of Crystal Martin Apparel Bangladesh Limited's manufacturing capacity is a multifaceted strategy is required to address the production department's issues. Invest in cutting-edge sewing machines, cutting equipment, and finishing tools to increase both speed and accuracy. Use lean techniques like Value Stream, Kaizen, and 5S. Mapping to optimize operational flow and remove waste streams Reduce waste and enhance flow by implementing lean manufacturing techniques. Should regularly hold workshops on safety procedures, quality assurance, and standard operating procedures (SOPs). To achieve a shared objective and exchange knowledge, promote collaboration between IE, production, HR, and the quality department. How to make the workplace better: Encourage employee morale and well-being. To keep an eye on output and identify problems early on, use real-time monitoring tools. Implement lean manufacturing practices so that waste and flow will be reduced.

2.3 Quality Assurance department

I transferred to the quality assurance team after finishing my work in production. The quality assurance staff of CMBD is well-organized. One of Crystal Martin Apparel Bangladesh Limited's (CMBD) most strategically important departments is the Quality Assurance (QA) Department. The QA Department's function goes well beyond defect identification in a business setting where CMBD distributes over 90% of its products to Marks & Spencer (M&S), a retail brand widely known for its strict compliance requirements and unwavering quality standards. It serves as the company's protector of consumer trust, brand reputation, and product integrity throughout the entire production process.

The "Live Quality" corporate value of its parent business, Crystal International Group Limited, serves as the foundation for CMBD's quality management philosophy. The Group's belief that a product's quality is ultimately determined by its personnel is reflected in Crystal International's substantial investment in improving QA effectiveness, which has resulted in

over 700 training hours across 11 departments. Every stage of CMBD's quality processes, from raw material inspection to final shipping audit, is infused with this mindset.

With a purposeful strategic focus on defect prevention rather than reactive defect remediation, the QA Department works within an organized Plan-Do-Check-Act (PDCA) continuous improvement cycle. This focus on prevention sets CMBD's quality culture apart from many of its contemporaries in the industry and is a major factor in the company's consistently low rejection rates and excellent consumer satisfaction ratings.

Departmental Structure

The CMBD QA Department is divided into specialized teams, each of which is in charge of a different phase of the quality control procedure:

Position	**Responsibility**
QA Manager	Overall quality strategy, buyer QA liaison, departmental leadership
Senior QA Officers	Pre-production quality planning, inspection coordination, audit management
In-Line QC Team	Real-time sewing quality monitoring at production line level
End-Line QC Team	Completed garment inspection before transfer to finishing
Final Audit Team	AQL-based final inspection, buyer compliance verification, shipment clearance

This tiered structure ensures that quality is monitored and controlled at every critical transition point in the production process—from the moment raw materials enter the factory to the moment finished cartons leave for the port of loading.

CMBD Quality Assurance Activities

Raw Material Inspection (Pre-Production)

At CMBD, quality control starts long before a single stitch is made. Upon reception, all inbound raw materials—such as fabric, elastic, underwire, foam cups, hooks and eyes, shoulder straps, thread, labels, and packaging materials—are rigorously inspected to ensure they meet buyer-approved specifications and quality requirements.

Important pre-production inspection tasks consist of:

- Supplier and material evaluation against approved reference samples
- Fabric inspection using the internationally recognized 4-Point System
- Accessory verification for dimensional accuracy, color consistency, and functional performance
- Examine test results related to colorfastness, shrinkage, tensile strength, and fiber composition.
- Third-party laboratory testing to ensure chemical compliance (e.g., REACH requirements, OEKO-TEX)

Materials are only approved for use in bulk production if they meet all inspection requirements. The most economical quality intervention used by CMBD is this upstream quality gate, which stops faulty materials from spreading throughout the manufacturing process and causing costly rework or rejection later on.

Fabric Quality Control – The 4-Point Inspection System

The industry-standard 4-Point Inspection System is used by CMBD to assess fabric quality. This system provides an objective, measurable indicator of fabric quality by allocating penalty points to fabric flaws according to their size and severity:

Defect Size	Penalty Points Assigned
Up to 3 inches (≤ 7.5 cm)	1 point
Between 3 and 6 inches	2 points
Between 6 and 9 inches	3 points
Over 9 inches or any hole/opening	4 points

Key rule: No single linear yard of fabric can accumulate more than 4 penalty points, regardless of defect count.

Fabric inspection is conducted on purpose-built inspection tables equipped with standardized D65 artificial daylight illumination, ensuring consistent visual assessment conditions. To guarantee ongoing conformity with buyer specifications, physical and chemical testing is carried out at pre-production, in-process, and final inspection phases. This testing covers colorfastness to washing and rubbing, dimensional stability (shrinkage), tensile and tear strength, and fiber content verification.

In-Line Quality Control (IPQC)

In-Line Quality Control (IPQC) is the cornerstone of CMBD's defect prevention strategy—a system of continuous, real-time quality monitoring conducted directly on the production line during active sewing operations. Rather than waiting for defects to accumulate before taking corrective action, IPQC enables immediate identification and resolution of quality issues at their source.

At CMBD, important IPQC initiatives include:

First Piece Inspection: Before bulk production begins, each line's first finished garment is thoroughly examined to ensure that machine setup, seam construction, and component placement meet specifications.

Process Monitoring: Throughout the shift, parameters are kept within acceptable bounds by conducting routine inspections at crucial sewing stages such waistband attachment, crotch seaming, cup insertion, and underwire casing.

Defect Categorization and Recording: To facilitate trend analysis and focused corrective action, all defects found during IPQC are categorized as minor, major, or critical and systematically recorded.

The use of operator self-inspection, a method in which sewing operators are empowered and instructed to recognize and report quality faults in their own work before sending it to the next operation, is a crucial component of CMBD's quality culture. Instead of putting quality responsibility in a specialized QC team, this strategy, which is supported by the 7.0 Inspection System, distributes it throughout the entire production team.

The 7.0 Garment Inspection System

The 7.0 Garment Inspection System, a structured, workstation-level inspection approach intended to maintain consistent operator quality performance throughout the manufacturing shift, is the major inline quality monitoring tool used by CMBD.
In this technique, seven finished garments are chosen for in-depth examination by roaming

quality inspectors who visit each operator's workstation on a regular basis. A traffic light framework is used to record the inspection result:

Result	Indicator	Action Required
0 defects in 7 pieces	✅ Green	Continue — quality is acceptable
1 or more defects in 7 pieces	🔴 Red	Stop — immediate supervisor intervention required

When a Red result is recorded, the line supervisor is contacted right away and works with the operator to determine whether the problem is due to poor material quality, inadequate expertise, wrong machine settings, or misinterpreted specifications. When necessary, training, retraining, or machine adjustments are given, and the inspector follows up until consistently acceptable quality is attained.This approach encourages individual operator accountability, makes it possible to identify quality degradation early on before it gets worse, and produces an open, transparent record of quality performance that management may access at any time.

End-Line Quality Control

Before being moved to the Finishing Section, completed clothing must pass a thorough End-Line Quality Check once all sewing operations are completed. This inspection examines:

Workmanship quality: open seams, skipped stitches, loose threads, uneven stitching; Component attachment: hook and eye security, strap attachment, elastic coverage;

Measurement compliance: garment dimensions compared to buyer specification tolerance charts;

Visual appearance: fabric flaws, oil stains, handling marks, and presentation quality.

Only fully conforming clothing moves on to finishing and final audit because any clothing found to be defective at this point is routed for rework within the sewing line.

Final Quality Audit (FQA) and AQL-Based Inspection

Before completed clothing is packaged for shipping, the final and most thorough quality verification step is the Final Quality Audit. The FQA, which provides a scientifically validated evaluation of overall lot quality, is carried out in compliance with Acceptable Quality Level (AQL 2.5) criteria and uses statistically determined random sampling from completed manufacturing.

- Inspection of appearance: including ironing quality, folding consistency, and the lack of stains and blemishes, is part of the FQA process.
- Workmanship review: every important seam and construction point is checked against the buyer's specifications.
- Measurement audit: measurements of clothing measured at various size points
- Verification of labels and tags: pricing tags, size labels, care labels, and brand labels are verified for correctness and placement.
- Metal detection: Every article of clothing was run through a metal detector to remove any contamination from broken needles or metallic fragments.
- Packaging inspection: shipping mark legibility, size assortment accuracy, carton strength, and polybag integrity

AQL Decision Framework:

Lot Decision	Condition
✓ Accepted	Defect count within AQL tolerance
⚠ Conditional	Minor exceedance — re-inspection of specific operations
✗ Rejected	Defect count exceeds AQL — 100% re-inspection required

Buyer Compliance

When it comes to orders going to Marks & Spencer, CMBD's quality assurance team collaborates closely with M&S's designated quality representatives and, when necessary, with independent third-party inspection companies like SGS and TÜV SÜD. These external auditors provide an extra layer of quality assurance that supports CMBD's internal QA procedures by conducting unbiased final inspections against M&S's particular quality and compliance standards.

Documentation and Traceability

From the arrival of raw materials to the final export, the QA Department keeps thorough quality records for each production lot and shipment. Important paperwork consists of:

- Fabric inspection reports and test certificates
- PP meeting minutes and sample approval records
- IPQC daily monitoring sheets and defect logs
- Final inspection reports with photographic evidence

- AQL sampling records and lot disposition decisions
- Third-party inspection certificates
- Buyer compliance audit reports

This documentation infrastructure is essential for ISO 9001 compliance, buyer audit preparation, and the systematic analysis of quality trends to support continuous improvement initiatives.

Quality Performance and Industry Recognition

CMBD's continuously exceptional performance indicators demonstrate its dedication to quality excellence. CMBD is one of Bangladesh's top-performing intimate clothing manufacturers, maintaining a garment rejection rate of less than 1% through the methodical implementation of their multi-stage quality control methodology. Given the complexity of CMBD's product portfolio—managing about 100 new types each month, each with unique construction requirements, customer specifications, and quality parameters—this performance level is especially important.

Personal Learning and Observations

My internship with the Quality Assurance Department at CMBD was a life-changing work experience that completely changed my perspective on quality management in a high-volume industrial setting. A few significant insights were noteworthy:

Quality is not a department, but a culture: The most notable thing I saw during my time on the QA team was that quality at CMBD is owned and practiced at every level of the company, from the General Manager to the individual sewing operator, rather than being enforced from the top down by a specific inspection function. In my opinion, the most potent and long-lasting

competitive edge a manufacturer can have is this cultural aspect of quality management. Every flaw found and fixed during the raw material inspection stage stops a chain reaction of rework, waste, and possible buyer rejection downstream, making prevention considerably more valuable than detection. CMBD's stringent pre-production inspection procedures serve as an example of the overwhelming economic case for investing in upstream quality control.

Consistency builds buyer confidence: Marks & Spencer's preference for CMBD as a supplier is a result of years of transparent quality management and consistent quality performance.

One of Crystal Martin Apparel Bangladesh Limited's most strategically important competitive assets is the Quality Assurance Department, a complex, multi-layered quality management function. The QA Department makes sure that every garment that leaves CMBD's facility satisfies the high standards of its top-tier retail buyers through its end-to-end quality framework, which includes raw material inspection, fabric quality control, in-line monitoring, the 7.0 inspection system, final quality audits, and buyer compliance management.

2.4 Planning department

After completing the assignment in the quality department, I went to the planning department. Crystal Martin Apparel Bangladesh Limited, the planning department is the operational core department of the whole production process. It works as the vital link that unifies verified buyer orders, production capacity, raw material availability, and shipment schedules into a unified, logical, and workable operational structure

Structure of Departments

The Planning Department of CMBD is organized as a small but extremely competent team of seven professionals, despite the wide operational scope it oversees. Because of the close connection between production scheduling and material planning in CMBD's operating model, both the Planning and Supply Chain departments report to the Head of Planning.

Position	**Key Responsibility**
Head of Planning	Overall planning strategy, senior management reporting, cross-departmental coordination
Senior Planners	Order-level T&A management, capacity planning, shipment tracking
Planners/ Officers	Daily line loading, MRP coordination, PP meeting facilitation

Despite having a lean organizational structure, the Planning Department has a big impact on the whole production lifecycle. Every day, it works in tandem with the IE, Production, Merchandising, Quality Assurance, Maintenance, and Store/Input teams to guarantee smooth order execution from raw material receipt to final shipment.

Planning Activities and Functions

Time & Action (T&A) Planning

The Planning Department's main responsibility after receiving a confirmed purchase order is to create a comprehensive Time and Action (T&A) Calendar, which is a detailed, milestone-based roadmap that outlines the timeframes for every critical job from pre-production to final shipment.

The T&A calendar includes benchmarks for:

- Proto sample and fit sample submission and approval
- Lab dip, fabric, and trim approval
- Bulk fabric and accessories in-housing confirmation
- Planned Cut Date (PCD) and Production Start Date (PSD)
- Inline and final inspection scheduling
- Vessel booking and shipment date

The TNA calendar is the most important planning document in the order execution process. It eliminates bottlenecks from forming at crucial points and provides a common operational reference that unites all stakeholders, from the merchandiser interacting with the customer to the production supervisor overseeing daily output targets. Additionally, it creates distinct timelines and ownership for each area

.

Capacity Planning and Line Loading

The CMBD Production capacity planning, which involves matching incoming and upcoming orders with available production capacity in a way that maximizes line utilization while ensuring delivery accuracy, is one of the Planning Department's most technically challenging responsibilities. With 137 lines working a 10-hour shift, however, because each style has a particular line configuration, operator skill profile, and machine arrangement, achieving this capacity potential necessitates careful coordination.

Structured coordination meetings with the IE Department, Production Management, Technical Team, and Maintenance are part of the line-loading process. Together, they evaluate:

- **Line capacity** based on current operator availability and skill profiles
- **Style complexity** as determined by SMV and operation count
- **Machine availability** for specialized operations such as underwire insertion and foam cup attachment
- **Priority orders** that need to be scheduled quickly in order to safeguard limited shipment windows

This cooperative strategy minimizes changeover interruption, optimizes workforce deployment, and maximizes the efficient use of CMBD's production resources by ensuring that the appropriate style is assigned to the correct line at the right time.

Material Requirement Planning (MRP)

No production line plan is approved at CMBD unless all necessary materials are verified as in-house and quality-cleared. This is a basic operational discipline. One of the most common inefficiencies in RMG manufacturing, line idle time due to material shortages, is eliminated by this approach, which is strictly enforced by the Planning Department.

The Planning team works with the Supply Chain and Input teams to confirm the availability of all production-critical items, such as:

- Bulk fabric panels (knitted and woven)
- Elastic in all required widths
- Underwire, foam cups, hooks and eyes, shoulder straps
- Sewing thread by color and count
- All buyer-approved trims and accessories

This proactive material verification process prevents the common and costly scenario of production lines being set up only to remain idle due to missing components—protecting both efficiency and worker morale.

Daily Production Scheduling

The CMBD every active manufacturing line, the Planning Department creates comprehensive daily and weekly production schedules that include the style number in production, daily output target of the line , size ratio, color assortment, order completion date, and the next style to be loaded upon completion. Production manager, IE engineers, and the input team can pre-position all necessary resources prior to the start of the shift by preparing the daily plan two day in advance. The factory floor can start each shift with operational clarity and purpose thanks to this advance planning, which also reduces changeover time and guarantees seamless material flow.

Pre-Production (PP) Meeting Coordination

A Pre-Production (PP) Meeting, a structured, cross-functional alignment session involving representatives from Merchandising, IE, Production, Technical/Sampling, Quality Assurance, Cutting, Store/Input, and Maintenance, is facilitated by the Planning Department prior to any new style entering mass production.The PP meeting serves as the official entry point between bulk manufacturing and sample approval. Before bulk cutting begins, its main goal is to guarantee that all departments have a common, accurate understanding of the order's technical specifications, quality standards, critical operations, line layout, and production timeline. The Planning team ensures cross-departmental agreement on the Production Start Date and daily output targets, presents the confirmed production plan, and draws attention to capacity limitations or material hazards during the PP meeting.

Weekly Performance Review and KPI Monitoring

Production, IE, Merchandising, and QA personnel attend a formal weekly performance assessment held by CMBD's Planning Department every Thursday. The topics on the agenda include:

- Production progress against the weekly plan for each active order
- Shipment status for orders approaching vessel booking deadlines
- On-Time Shipment (OTS) performance against buyer commitments
- Line efficiency and hourly output achievement
- Risk identification for orders flagged as potentially delayed

Where styles are identified as behind schedule, the Planning team immediately evaluates remediation options—including additional line allocation, overtime shift introduction, or order sequence adjustment—to protect the integrity of all outstanding shipment commitments.

Contingency and Risk Management

To handle the unavoidable disruptions of high-volume clothing manufacture, the Planning Department keeps an active contingency management system in place:

Risk Scenario	**Mitigation Strategy**
Fabric or trim shortage	Expedited sourcing, partial line start with available materials
Failed pre-production sample	Technical review, revised PSD, buyer communication
Machine breakdown	Maintenance priority escalation, temporary line consolidation
Operator absenteeism	Cross-trained operator redeployment via skill matrix
Buyer specification change	T&A revision, impact assessment, production rescheduling
Inspection failure	100% re-inspection, corrective action plan, revised shipment

Technology and Tools

Tool	**Application**
Fast React	Visual capacity planning, T&A tracking, critical path management, shipment reporting
SAP ERP	Integrated inventory, procurement, production data, and financial reporting
Microsoft Excel	Daily line loading plans, T&A maintenance, ad hoc performance analysis

CMBD's dedication to data-driven operational management is demonstrated by its investment in digital planning tools, which lessen the need for manual procedures and facilitate quicker, better-informed decision-making at all levels of the planning hierarchy.

Interdepartmental Coordination

The quality of the Planning Department's cross-functional interactions is a critical component of its effectiveness. The main interdepartmental planning interfaces used by CMBD are summarized as follows:

Department	**Nature of Coordination**
Industrial Engineering	Line capacity assessment, SMV data, PP meeting inputs, line layout review
Production	Daily plan execution, output reporting, changeover management
Merchandising	Order receipt, T&A alignment, buyer communication support
Quality Assurance	Inspection scheduling, PP sample approval tracking
Supply Chain	MRP verification, material in-housing confirmation
Maintenance	Machine readiness for line setup, breakdown escalation
Store / Input	Material requisition, cut panel feeding schedule

Personal Learning and Observations

One of the most beneficial aspects of my internship was working with CMBD's planning department. My knowledge of production planning was mostly limited to academic frameworks before this encounter. This theoretical basis became a realistic, operationally grounded competency with actual commercial repercussions as a result of the internship. During my tenure in the Planning Department, I noticed a few things that are very noteworthy:

The planning team keeps a thorough, real-time awareness of every active order's status, every line's current loading, and every impending shipment deadline. Planning is the organization's operational memory. Proactive buyer communication and management decision-making both greatly benefit from this organizational intelligence.The most successful planners I saw were those who could react to unforeseen interruptions with cool, data-driven agility—modifying plans without losing sight of the final delivery commitment—even if the T&A calendar offers crucial operational structure.One of the most reputable intimate clothing manufacturers in Bangladesh, Crystal Martin Apparel Bangladesh Limited's Planning Department is a strategically vital organizational function that oversees the operational coherence of the company. The Planning team makes sure that CMBD continuously satisfies the exacting delivery, quality, and compliance requirements of its international retail buyers through proactive cross-departmental coordination, evidence-based capacity planning, strict MRP discipline, and disciplined T&A management.

My appreciation for the intricacy, accuracy, and teamwork needed to plan and carry out top-notch clothing manufacturing operations has been profoundly enhanced by my internship in this department. It has also given me a professional foundation that I am dedicated to building and using throughout my career in the RMG sector.

2.5 Merchandising department

I started my last destination, the merchandising team, after finishing four departments. At Crystal Martin Apparel Bangladesh Limited (CMBD), the merchandising department holds a position of great operational and commercial importance. It acts as the main point of contact between the factory and its international retail customers, converting their specifications into workable manufacturing plans and safeguarding the factory's financial interests through timeline management, quality control, and disciplined costing.

The Merchandising Department's job goes much beyond order management in the context of CMBD's business model, where almost 90% of production is devoted to supplying Marks & Spencer (M&S), one of the world's most compliance-rigorous and quality-conscious retail brands.I had the honor of watching and interacting with the merchandising staff at various phases of the order execution cycle during my internship. My appreciation for the intricacy and accuracy needed in top-tier clothing merchandising was completely changed by this experience, which gave me a priceless, comprehensive understanding of how international clothing orders are handled from the first buyer inquiry to the last shipment.

Departmental Structure

The Merchandising Department at CMBD is set up to guarantee clear accountability throughout the entire order lifecycle. While junior team members manage the operational documentation and coordination tasks that support successful order execution, seasoned professionals manage buyer relationships at the senior level.

Position	Key Responsibility
Merchandising Manager	Senior buyer liaison, commercial negotiation, departmental oversight
Senior Merchandisers	Order management, sampling coordination, T&A management
Merchandisers	Day-to-day buyer communication, material booking, production tracking
Junior Merchandisers	Documentation, sample follow-up, shipment coordination support

The Merchandising division at CMBD primarily handles orders for Marks & Spencer (M&S), but they also have links with H&M (Hennes & Mauritz).

Activities of the Merchandising Department

Buyer Communication and Order Confirmation

When a buyer's inquiry or technical package is received, the merchandising cycle begins. In all interactions with buyers, Senior Merchandisers and the Merchandising Manager work as the factory's main commercial representatives. All crucial order parameters are discussed and agreed upon by both sides during the first buyer meetings, including:

- Product category, style, and design specifications
- Fabric composition and construction requirements
- Order quantity, size ratio, and color breakdown
- Target price and FOB (Free on Board) terms
- Shipment mode, port of loading, and delivery date

A commercial agreement, the buyer opens a Master Letter of Credit (LC) and issues a formal Purchase Order (PO), which are the financial and legal documents that formally start the order execution process at CMBD.

Technical Package Review and Sampling

Before starting the sampling process, the merchandising team thoroughly examines all garment specifications, including construction specifics, measurement charts, trim specifications, labeling requirements, and quality standards, after receiving the buyer's Technical Package (Tech Pack). At CMBD, the sample procedure adheres to a multi-phase, systematic approval process:

Sample Stage	**Purpose**
Proto Sample	Initial design and construction concept approval
Fit Sample	Garment fit, measurement, and proportion verification
Size Set Sample	Grading accuracy confirmation across all sizes
Pre-Production (PP) Sample	Final bulk production approval with confirmed materials
Salesman Sample (SMS)	Buyer's commercial and retail range presentation

Each sample stage requires formal buyer approval before proceeding to the next—a process managed meticulously by the Merchandising team to ensure that bulk production commences only with fully authorized specifications.

Costing and Price Negotiation

The Merchandising Department's most delicate business duties is Costing clothing and negotiating prices with buyer. Every style, merchandiser must create a thorough, precise cost breakdown that includes every factor that affects the final FOB price:

- Fabric cost (depending on waste %, usage, and fabric price per kilogram/meter)
- Costs associated with trims and accessories (thread, elastic, underwire, foam cups, hooks and eyes, labels, hangtags)
- Cost of Cut, Make, and Trim (CMT) (based on labor rate, SMV, and overhead allocation)
- Costs associated with washing, finishing, and packaging
- Commercial expenses (freight, insurance, bank fees, and testing fees)

A structured commercial discussion is followed while negotiating prices with buyers. The merchandiser offers a well-reasoned counter-pricing backed by comprehensive costing data, while the buyer usually starts with a target price below the factory's cost floor. A mutually agreeable FOB price that meets the buyer's margin needs and preserves the factory's commercial viability is the goal of the negotiation process.

One of the most technically challenging areas of the merchandising job is this costing ability, which calls for a deep comprehension of material markets, production procedures, and financial management.

Raw Material Booking and Supplier Coordination

The Merchandising team starts the raw material booking process after sample clearance and price confirmation. They work with the Supply Chain Department to find, approve, and in-

house all materials needed for bulk production. In order to simplify procurement from sub-suppliers, consecutive Letters of Credit are opened against the Master LC, such as:

- Fabric mills (knitting, dyeing, finishing units)
- Elastic and waistband suppliers
- Underwire and foam cup manufacturers
- Thread suppliers
- Trim and accessory vendors (labels, hangtags, polybags, cartons)

All raw materials must be submitted as approval samples and formally approved by the buyer before bulk orders are placed—a process that runs in parallel with garment sampling to maintain critical path timelines and prevent production delays.

Pre-Production (PP) Meeting and Pilot Run

The Pre-Production (PP) Meeting, a cross-functional alignment session comprising the Planning, IE, Production, Technical, Quality Assurance, Cutting, and Maintenance teams, is organized by the Merchandising team once all bulk materials are in-house and approved by the customer.

The formal transfer between the production function and the merchandising team takes place during the PP meeting. The merchandiser verifies the manufacturing schedule with the planning team, delivers the order's full technical specifications, and underlines any crucial quality problems or construction issues found during sampling.

Production Monitoring and Quality Coordination

Merchandisers actively monitor production progress against the T&A schedule during the bulk production phase. They track critical path milestones, keep tabs on daily output accomplishments, and collaborate with the Quality Assurance team for:

- In-line quality inspections at critical sewing stages
- End-line quality audits upon completion of sewing operations
- Third-party final inspections conducted by buyer-nominated agencies such as SGS

In order to ensure that any quality issues brought up by the client are promptly reported, completely examined, and successfully rectified prior to the final inspection, the merchandising team serves as a communication link between the buyer's QA representative and the factory's internal quality team.

Export Documentation and Shipment Management

The compilation and coordination of all export papers needed for foreign shipment is the last and most important step in the Merchandising Department's order management cycle. Important documents consist of:

Document	**Purpose**
Commercial Invoice	Transaction value declaration for customs and buyer payment
Packing List	Detailed inventory of carton contents, quantities, and weights
Bill of Lading (B/L)	Carrier's contract of carriage and proof of ownership
Certificate of Origin	Country of manufacture declaration for tariff purposes
GSP Certificate	Preferential tariff documentation for EU and other markets
Inspection Certificate	Third-party quality clearance documentation

In order to ensure that there is enough lead time to finish inspection, carton packing, and inland transportation to the port of loading without risk of shipment delay, vessel booking is confirmed at least 15 days before the final inspection date.

Key Buyers and Commercial Relationships

The merchandising department at CMBD oversees business partnerships with some of the most well-known and demanding retail brands in the world:

Buyer	**Product Category**	**Market**
Marks & Spencer (M&S)	Intimate apparel (bras, knickers, tops)	United Kingdom, Europe
H&M (Hennes & Mauritz)	Knitwear, casual wear	Global

The Merchandising Department's top strategic goal is to preserve and improve these buyer connections. Consistent delivery performance, open communication, proactive problem solving, and an unrelenting dedication to quality and compliance all contribute to the development and maintenance of buyer confidence.

Personal Learning and Observations

My interaction with CMBD's merchandising department gave me a very enlightening understanding of the operational and commercial realities of procuring clothing internationally. My internship experience gave me several important insights:

Merchandising is essentially relationship management: The strength and trust that are ingrained in CMBD's buyer relationships immediately affect the quality of its commercial outcomes. The merchandising team is in charge of fostering and safeguarding supplier partnerships on behalf of buyers like M&S, who do more than just place orders.

Precise costing is a strategic competitive advantage: I found that retailers that could create precise, well-supported cost sheets had much higher commercial credibility with consumers—and were in a better position to protect margins when prices were under pressure.

The most valuable resource in merchandising is time: Every phase of the order cycle has a deadline, and any delays at any one point affect the entire T&A calendar. I found that merchandisers who anticipated delays before they happened, as opposed to reacting to them after the fact, were the most successful.

Commercial success is determined by cross-functional coordination: merchandising is not a stand-alone activity. The responsiveness and proficiency of the Planning, Production, Quality Assurance, and Supply Chain teams with whom it collaborates on a regular basis determine its efficacy. I gained a profound understanding of how crucial it is to establish solid internal connections in addition to external buyer relationships.

Chapter 3

Critical assessment of Internship work

3.1 Application of Generic and Industry-Specific Courses during Internship

There are four generic and four industry specific courses. I would like to say details about the application of these courses during my internship. The format of the PGD-KIM curriculum combines exposure to real-world industry experiences with theoretical frameworks. My professional capacity and critical thinking abilities were much enhanced by this combination.

HR Skills and Competencie

This course outline explains what leadership is, how we influence others, what leadership skill is, what leadership style is, the qualities of a successful leader, positive leadership, behavior skill, kind of leader, model of leadership, etc. I'll attempt to apply that whole leadership quality in my workplace during my internship. If that happens on the manufacturing floor, I will advise them on how to implement autocratic leadership. (Northouse, 2019; Yukl, 2013).

Analytical Skills and Competencies

Analytical skills teach us how to take care of any issue by utilizing diagnostically and deliberately, the construct coherent thinking. By using this experience, we can take decision about new thing of any new project. This analytical approach made it easier for me to comprehend the need for evidence-based, as opposed to assumption-driven, decision-making in the apparel sector. Analytical ability is a strategic advantage that directly supports operational excellence in a cutthroat global market (Davenport & Harris, 2007; Brynjolfsson & McElheran, 2016).

Business Operation Skills

By this course we can learn about business type, foundation of a business, factor to start new business, how to set business goal, what is public and what is private business, about business environment. From this also learn about SWOT analysis. I was able to view operational difficulties from a strategic rather than a strictly technical perspective thanks to my deeper understanding of business (Hill, Jones, & Schilling, 2017).

Communication Skills

In the RMG sector, communication is essential to cross-functional cooperation. My ability to express myself clearly both orally and in writing has improved as a result of the Communication Skills course. It also made me conscious of obstacles to successful communication, such as linguistic difficulties, cultural differences, and misinterpretations of nonverbal cues. I spoke with departments like planning, production, quality assurance, and merchandising on a regular basis during my internship. I saw that poor communication frequently results in delays in manufacturing and problems with quality. As a result, I deliberately enhanced my ability to write formal emails, participate in meetings, and communicate with others. This course enhanced my interpersonal maturity and self-confidence in addition to strengthening my professional competence (Clampitt, 2016; Keyton, 2017).

Industrial Engineering (IE)

Perhaps the foundation for increasing productivity in the apparel sector is industrial engineering. SMV computation, work study methods, productivity measurement, motion economy, GSD systems, and performance evaluation measures were all covered in the course. I saw firsthand how line balancing and cost computation are strongly impacted by SMV (Standard Minute Value) during my internship. I developed a practical understanding of how

motion studies and job measurement methods can minimize non-value-added tasks and improve efficiency (Niebel & Freivalds, 2009; Zandin, 2001).

Introduction to Garments Industry – Knitwear

An extensive overview of the textile value chain, from fiber selection to final garment production, was given in this course. From fiber to garments, all information are include this session, suppose of that what is fiber, types of fiber, types of fabric, printing, embroidery, dyeing, finishing, cutting, sewing etc. All these textile knowledge are most important to run factory smoothly. By this course we learn about using of USTER report to ensure yarn quality. In our factory, nowadays we are taking USTER report of yarn from spinning mills which helps us to take decision about yarn selection (Glock & Kunz, 2005; Uster Technologies, 2018).

Quality Management

This course has taught me about the quality control of clothing factories. I now know what a barcode is, its applications, its types, how it functions, what it contains, and care labels, the symbols of various care labels, eco labeling, its class, and its advantages. Additionally, I now know how to regulate yarn quality and the criteria used to regulate grease fabric and finish cloth (Evans & Lindsay, 2017; Sower, 2011).

Fashion & Merchandising

During my internship, I suggest a number of tactical enhancements to boost operational effectiveness. I gained knowledge about fashion design, fabric manufacturing, fashion laws and regulations, market trends, and design forecasts in this course. I gained knowledge of export and import protocols, LC, amendments, bond systems, acceptance and maturity documents, and other associated operations from the business side. I gained knowledge about merchandising, including how a merchandiser manages an order following booking, the several

processes involved, and how various departments collaborate to effectively execute a shipment (Jackson & Shaw, 2009; Diamond & Diamond, 2013).

3.2 Suggestions for Industry Improvement

During my internship, I suggest a number of tactical enhancements to boost operational effectiveness.

Implementation of Lean Management

Every industry need to save waste, shorten lead times, and maximize resource use, the Industrial Engineering department should implement Lean Management techniques. Productivity can be greatly increased by using strategies like value stream mapping and continuous improvement cycles. So lean management is essential to establish for industry.

Productivity Monitoring System

Monitoring system is a systematic hourly target vs. achievement monitoring system should be put in place by the sewing department. Instead of making reactive changes, proactive problem-solving can be made possible via real-time data tracking. This system increases more productivity.

Cost Management Strategy

Given the increasing pressure from global customers to cut prices and the escalating cost of raw materials, it is imperative to reduce manufacturing costs (CM). The only long-term option is to increase productivity and efficiency. There should be daily, weekly, and monthly performance objectives. Performance-based rewards could motivate staff to exceed objectives. Research shows that both financial and non-financial motivation significantly increase operational effectiveness.

Strategic Planning

Both immediate remedial strategies and long-term strategic productivity objectives should be created by management. Workforce development strategies should incorporate ongoing training and skill development programs.

3.3 Learning for Self-Improvement

My professional identity has changed as a result of the PGD-KIM curriculum and internship. I initially lacked industry-specific technical skills because I came from a background in finance and banking. This program successfully filled that gap.

Leadership Development

I used to think about leadership only in terms of authority-based management. I now see leadership as the capacity to motivate, direct, and empower groups. My confidence in managing duties, taking initiative, and positively influencing people has grown. In order to improve my effectiveness as a leader, I am also constantly studying human psychology and emotional intelligence.

Costing and Analytical Development

I had no in-depth understanding of garment costing before to this training. I can now compute the cost of yarn, fabric, CM, overhead, trims and accessories, and labor. These skills have improved my capacity to make strategic contributions to cost optimization and financial planning.

Problem-Solving Capability

In the past, I frequently dealt with issues superficially. I now utilize a root-cause analysis methodology and concentrate on long-term fixes. I think transient correction is less successful than process re-engineering. I firmly believe that prevention is preferable to treatment. As a result, I stress process improvement as a proactive approach.

Communication Enhancement

My ability to communicate has greatly improved. I now feel comfortable interacting across departments, writing professionally, and completing official documentation. Professionals from nations like Sri Lanka and India frequently exhibit excellent communication abilities in the worldwide RMG sector. Bangladeshi professionals need to improve this competency in order to stay competitive.

Career Vision and Strategic Planning

I didn't have a clear career vision before I enrolled at PGD-KIM. I now have well-defined short-term and long-term objectives. My goal is to work for a reputable local or international company as Head of Operations within five years. I want to be a CEO in ten years. To accomplish these goals, I am actively honing my operational knowledge, leadership abilities, and strategic thinking.

Chapter 4

Conclusion

An important turning point in my career has been finishing the PGD-KIM program and working as an intern at Crystal Martin Apparel Bangladesh Limited. I gained cross-functional experience that is uncommon in traditional professional contexts by working across several departments, including Industrial Engineering, Planning, Merchandising, Production, and Quality Assurance.Crystal Martin Apparel Bangladesh Limited is one of the best, biggest and well organized factories in the textile field of world also Crystal Martin Apparel Bangladesh Limited is the second largest manufacturing in the world. The factory runs by a number of efficient Textile Engineers, Skilled technical & Non- technical persons. It is also well equipped with modern machineries and software. The working environment in Crystal Martin Apparel Bangladesh Limited is exceptionally better than any other competitive industry. The relationship among all departments and personnel from top to bottom is so pretty. We are very glad that we got the opportunity to intern in such a well reputed and well organized factory. Crystal Martin Apparel Bangladesh Limited fulfill our gap between theoretical knowledge and practical knowledge. It also gave us the inspiration that a factory is one of the appropriate places to implement theoretical knowledge we learned in our academic life. From this industrial attachment we got a detailed idea about the factory environment, production process, total management, maintenance and compliance of a factory. We hope this internship training will help us a lot in our future life. And also will help us when we face difficulty in industrial life.

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