FINAL PRESENTATION

The implementation of a green supply chain and the enhancement of production line efficiency in Unnoyon Textile Limited using the SCOR Racetrack Model.

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Abstract

Unnoyon Textile Limited faces production issues causing delays and affecting customer deadlines. They're considering SCOR Racetrack 12.0 process to improve production scheduling, raw material procurement, and cycle time. Proposed measures involve maintenance planning, lean management, and 5S principles for an efficient, sustainable supply chain. These changes aim to enhance productivity, reduce waste, and achieve environmental goals. Implementing these steps can improve efficiency, quality, and long-term market competitiveness.

Table of contents

01.
INTRODUCTION

Background

Unnoyon Textile Limited, a leading RMG company, faces production challenges affecting efficiency and deadlines. Seeking sustainable solutions for green supply chain and operational excellence.

Process	Input Quantity (kgs)	Wastages	Output Quantity (kgs)
Cutting	2549.11	4%	2447.1456
Sewing	2447.1456	9%	2226.902496
Finishing	2226.902496	5%	2115.55

Process	Input Quantity (kgs)	Wastages	Output Quantity (kgs)
Cutting	2480.27	6%	2331.4538
Sewing	2331.4538	8%	2144.937496
Finishing	2144.937496	3%	2080.58

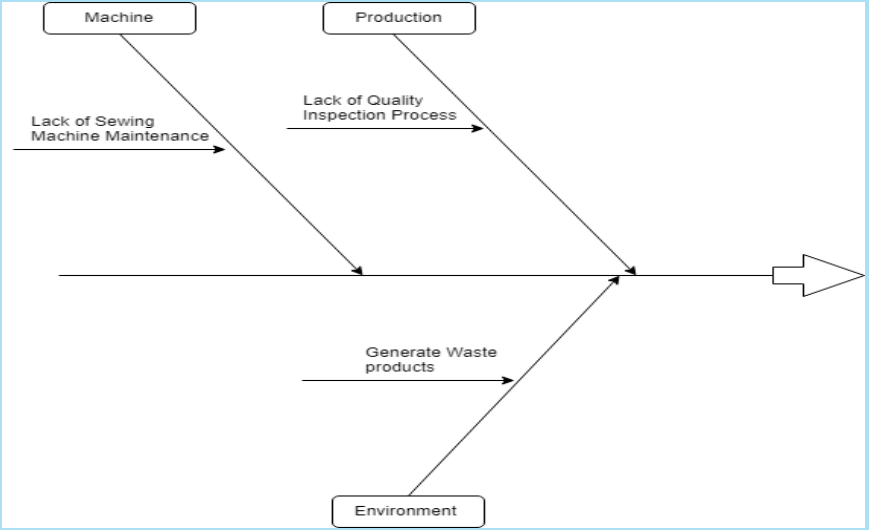
Background

Standard wastage percentages of 3% to 8% in cutting, 3% to 8% in sewing, and 2% to 5% in finishing process.

Process	Input Quantity (kgs)	Wastages	Output Quantity (kgs)
Cutting	2760.8	7%	2677.976
Sewing	2677.976	5%	2544.0772
Finishing	2544.0772	7%	2365.99

Process	Input Quantity (kgs)	Wastages	Output Quantity (kgs)
Cutting	2670.8	6%	2537.26
Sewing	2537.26	12%	2359.6518
Finishing	2359.6518	6%	2218.07

Fishbone Diagram



Fishbone analysis identifies three main issues in Unnoyon Textile Limited production line causing delays: machine, production, and environment factors.

Alternative Solutions

No	Root Causes	Alternative solutions
1	Lack of Production Standard Schedule Activities	Implementing standard schedule activities for production processes
2	Hard to Find Sustainable Raw Material	Implementing a material planning system to ensure availability
3	Lack of Maintenance Planning	Implementing maintenance planning for machinery and equipment
4	Lack of Consistent Layout	Implementing a consistent and organized layout for production

Problem Formulation

1. Based on the SCOR 12.0 Racetrack assessment, which aspect of supply chain management performance requires improvement at Unnoyon Textile Limited?
2. What suggestions can be proposed to enhance the performance of green supply chain management at Unnoyon Textile Limited?

Purpose

1. This research is intended to advance knowledge of the SCOR Racetrack model for evaluating the implementation of green supply chains in Unnoyon Textile Limited.
2. Determine the priority based on company performance results. Ensuring workable solutions with the results

Benefits

Environment Impact : Research identifies waste reduction process and advances sustainable practices for a greener future.
Cost Savings: Sustainable methods cut costs via waste reduction, energy efficiency, and operational improvement at Unnoyon Textile.
Faster Production: Enhanced machine maintenance minimizes production time.

02.
THEORETICAL BASIS

THEORETICAL BASIS

Supply Chain Management

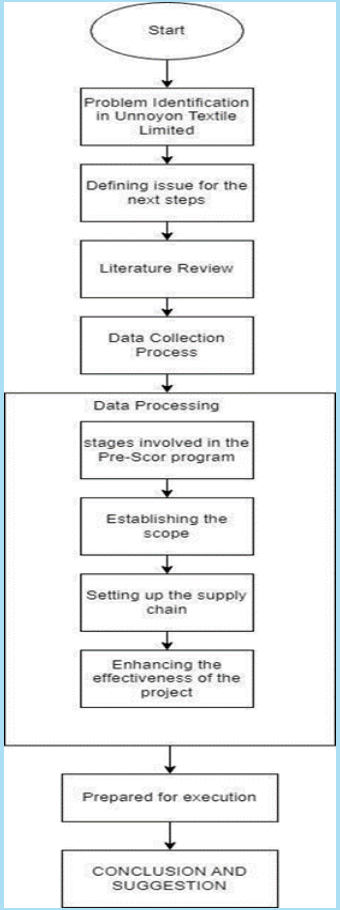
The three major kinds of flows in SCM are the flow of products, the flow of information, and the flow of money.

SCOR Racetrack

The SCOR Racetrack model outlines a methodology for implementing a SCOR improvement program, which involves incorporating the SCOR process and supporting methods. The methodology is divided into five distinct stages

03.
METHODOLOGY OF RESEARCH

Problem Solving Systematics



Identification of Integrated Components

	Man	Machine	Information
Object (system)	Operating company's data	Operating company's data	Analysis SCOR model
Design Solution	Perform all analysis based on the data	Calculation of production line data	Analyzed based on SCOR Racetrack

04.
DATA COLLECTION AND PROCESSING

Pre SCOR-Program Steps

Company Profile
- Briefly introduce the company's background, size, and industry presence.

Product Overview
- Describe the main product or service offered by the company.

Production System
- Explain the key aspects of the company's production process and methods.

Product Price List
- Display a summary of the product's pricing structure and options.

Establishing the Scope

Global Organization
- Describe the company's global presence, including locations, subsidiaries, and operations.

Global Network
- Explain the company's network of connections, partners, and stakeholders on a global scale.

SWOT Analysis
- Outline the concept of SWOT analysis and how it helps identify strengths, weaknesses, opportunities, and threats.

Document Supply Chain and Defining Scope
- Highlight the significance of understanding the document supply chain and how it contributes to defining the project scope.

Setting up the Supply Chain

Setting up the Supply Chain
- Briefly introduce the process of setting up an effective supply chain.

	Attribute	Level 1 Strategic matrices
Customer	Supply Chain Delivery Reliability	Reliability 1.1 Delivery Performance
		Reliability 1.2 Perfect Order Fulfillment
	Supply Chain Responsiveness	Responsiveness 1.1 Order Fulfillment Lead Times
	Supply Chain Agility	Agility 1.1 Supply Chain Responses Time
Internal	Supply Chain Costs	Cost 1.1 Total Supply Chain Management Costs
		Cost 1.2 Warranty / Returns Processing Costs
	Supply Chain Asset Management Efficiency	Asset Management 1.1 Cash-to-Cash Cycle Time
		Asset Management 1.2 Asset Turns

Level 1	Level 2	Actual Time (days) Average	Target (days) Average	Gaps
Supply Chain Responsiveness	RS 2.1 Sustainable Raw Material Cycle Time	1	1	0
	RS 2.2 Production Cycle Time	3	2	1
	RS 2.3 Delivery Cycle Time	2	2	0
	RS 2.4 Delivery Retail Cycle Time	2	1	1
	Total	8	6	2

Setting up the Supply Chain

No	Matrix	Formula	Characteristic
1	Supply Chain Responsiveness	On Time Delivery = (Number of On-time Deliveries / Total Number of Deliveries) * 100	Lesser better
2	RS. 2.1 Production Cycle Time	Production Cycle Time = Total Production Time / Total Quantity Produced	Lesser better
3	RS. 3.1 Production Scheduling activities	Average production time	Lesser better
4	RS. 3.2 Sustainable raw material procurement activities	Average time for collecting raw material	Lesser better
5	RS. 3.3 Production and test cycle time	Average Production and test cycle time	Lesser better
6	RS. 3.4 Eco-friendly Packaging Cycle Time	Average packaging time	Lesser better
7	RS. 3.5 Quality Control Cycle Time	Average Quality Control Cycle Time	Lesser better
8	RS. 3.6 Delivery Cycle Time	Average Delivery Cycle Time	Lesser better

Matrix		Average (Days needed)
RS.3.1	Production Scheduling activities	0.3
RS.3.2	Sustainable Raw material procurement activities	0.8
RS.3.3	Production and test cycle time	2.7
RS.3.4	Eco-friendly Packaging Cycle Time	0.1
RS.3.5	Quality Control Cycle Time	0.1
RS.3.6	Delivery Cycle Time	0.8
Total		4.8

Production Days		
Target time	Actual time	Gap
3 Days	4.8 Days	1.8 Days

Setting up the Supply Chain

Data Collection
- Explain the importance of data collection in designing a successful supply chain.

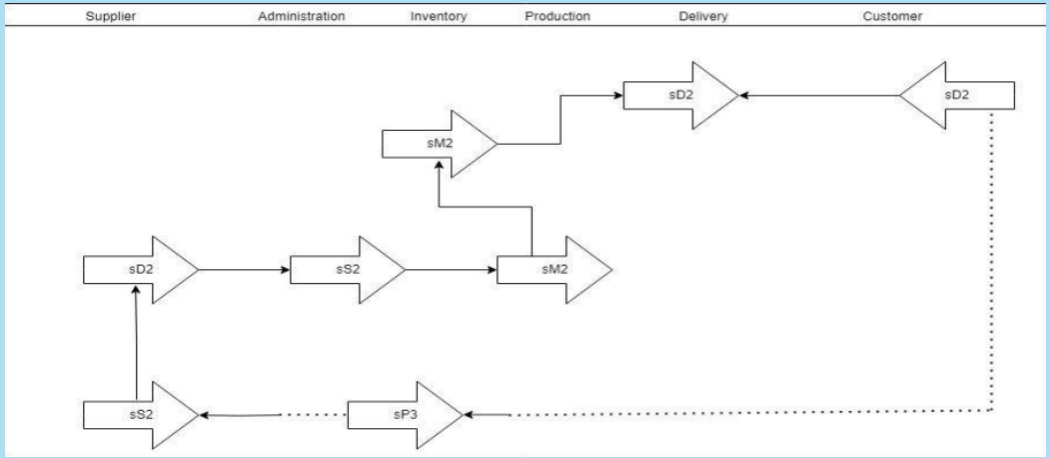
Benchmarking
- Describe the process of benchmarking and how it helps in improving supply chain performance.

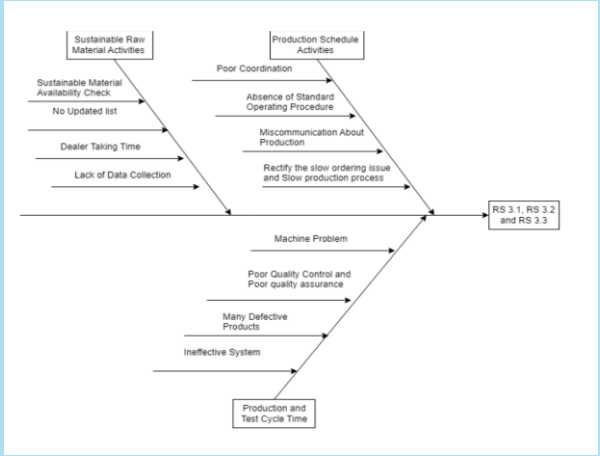
Matrix	Average actual time (days)	Internal Target (days)	Gap
RS.3.1	0.3	0.05	0.25
RS.3.2	0.8	0.10	0.70
RS.3.3	2.7	1.85	0.85
RS.3.4	0.1	0.1	0
RS.3.5	0.1	0.1	0
RS.3.6	0.8	0.8	0
Total	4.8	3	

Setting up the Supply Chain

Supply Chain Threat Diagram
- Present the concept of a supply chain threat diagram and its significance in identifying vulnerabilities.

Fishbone Diagram
- Discuss the use of a fishbone diagram in analyzing root causes of supply chain issues.





05.
PREPARE FOR EXECUTION

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Improvement Project Preparation
- Brief introduction to the chapter's focus on preparing for supply chain improvement.

Improvement Project Charter
- Explanation of the importance and role of an Improvement Project Charter in guiding the project..

Prioritization Matrix
- Brief explanation of how a Prioritization Matrix helps in selecting and prioritizing improvement initiatives.

Result Prediction
- Predicts feasibility by calculating weighted percentages for each priority.
- Indicates priority 1's 50% impact, priority 2's 33.33% impact, and priority 3's 16.67% impact towards achieving internal targets.

PREPARE FOR EXECUTION

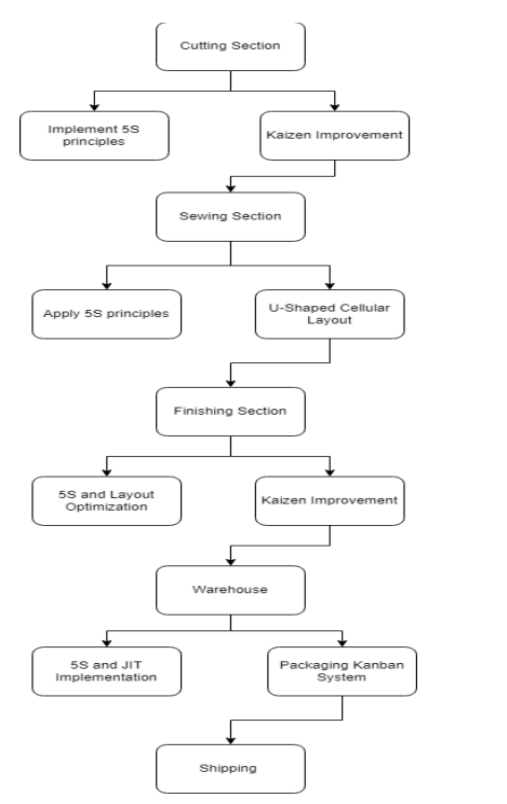
Machine Maintenance - Machine Maintenance
- Explanation of the improvement suggestion related to machine maintenance.

Activity No.	Maintenance Activity	Frequency	Green Supply Chain Focus
1.	Energy Settings of Industrial Sewing Machines	Once a week	Reduce energy consumption and promote sustainable practices.
2.	Inspection of Sewing Machine	Once a week	Enhance machine reliability, minimize downtime, and waste.
3.	Sustainable Lubrication	Once a week	Use eco-friendly, biodegradable lubricants for reduced impact
4.	Recycling and Reusing Cutting Blades and Parts	Once a week	Reduced waste, cost savings, sustainable resource management through recycling and reusing cutting blades and parts.
5.	Lean Maintenance Practices	Once a week	Optimize processes to reduce cycle time and resource usage.

PREPARE FOR EXECUTION

Lean Management

- Description of the Lean Management recommendation for supply chain enhancement.



06.

CONCLUSION AND SUGGESTION

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- Closely monitor production scheduling, raw material procurement, and production/test cycle time.
- Objectives: Timely production, on-time deliveries, waste reduction, green and sustainable system.
- Implementation boosts production efficiency and establishes a green supply chain.
- Green supply chain emphasizes responsible practices and sustainable resource management.
- Result: Unnoyon positioned as a responsible and forward-thinking industry leader.
- Positive resonance with environmentally conscious customers and stakeholders.
- Contributes to long-term viability and competitiveness in eco-aware market.
- Approach fosters growth and success for Unnoyon Textile Limited.

Thanks