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THE ROLE OF PRODUCT LIFE CYCLE MANAGEMENT IN COMPETITIVE MARKET POSITIONING-KESORAM INDUSTRIES LIMITED

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ABSTRACT

Product Life Cycle Management (PLM) plays a crucial role in helping organizations maintain a strong competitive position in dynamic and highly competitive markets. PLM is a strategic approach that manages a product throughout its entire life cycle, from concept development and design to manufacturing, marketing, distribution, and eventual decline or replacement. Effective PLM enables companies to optimize product performance, reduce costs, improve quality, and respond quickly to changing customer needs and market trends.

In today's business environment, where innovation and customer satisfaction are key drivers of success, organizations use PLM to enhance decision-making and streamline product-related processes. By understanding the different stages of the product life cycle—introduction, growth, maturity, and decline—companies can develop appropriate marketing, pricing, production, and promotional strategies to maximize profitability and market share. PLM also facilitates collaboration among departments, improves resource utilization, and supports continuous product innovation.

Furthermore, Product Life Cycle Management helps businesses identify opportunities for product improvement, extension, or diversification, enabling them to sustain their competitive advantage. It assists organizations in anticipating market challenges, managing risks, and maintaining customer loyalty through effective product planning and management. As competition intensifies across industries, PLM has become an essential tool for achieving long-term business growth and strengthening market positioning.

This study examines the significance of Product Life Cycle Management in enhancing organizational competitiveness, improving market responsiveness, and supporting strategic decision-making. It highlights how effective PLM practices contribute to business success by aligning product strategies with market demands and customer expectation.

I. INTRODUCTION

Product lifecycle management:

Product Life Cycle Management (PLM) is a systematic approach used by organizations to manage a product throughout its entire life cycle, from its initial concept and design to production, marketing, service, and eventual disposal or replacement. PLM integrates people, processes, business systems, and information to improve product development and performance.

PLM helps companies reduce development time, lower costs, improve product quality, and increase collaboration among different departments. It enables businesses to make informed decisions regarding product design, manufacturing, marketing, and support, ensuring that products meet customer needs and remain competitive in the marketplace.

In modern industries, PLM acts as an information backbone that connects:

- Customer Relationship Management (CRM)
- Supply Chain Management (SCM)
- Enterprise Resource Planning (ERP)
- Engineering and Design Systems

Effective PLM enables organizations to reduce time-to-market, improve product quality, enhance coordination, and maintain competitive advantage.

Scope of the study

- The scope of this study is to examine the role of Product Life Cycle Management (PLM) in enhancing competitive market positioning

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and organizational performance. The study focuses on understanding how businesses manage products through different stages of their life cycle, including introduction, growth, maturity, and decline.

- The study covers the impact of PLM on product development, innovation, cost reduction, quality improvement, and customer satisfaction. It evaluates how effective product life cycle strategies contribute to increased market share, profitability, and sustainable competitive advantage. The research also explores the relationship between PLM practices and strategic decision-making in product planning, marketing, and resource allocation.
- Furthermore, the study analyzes the challenges faced by organizations in managing product life cycles and identifies best practices for extending product longevity and improving market performance. The findings are intended to provide insights for managers and business organizations seeking to optimize product management processes and strengthen their position in competitive markets.
- The study is limited to the analysis of product life cycle management practices and their influence on business performance and market competitiveness within selected industries and organizations.

NEED OF THE STUDY

The study on **Product Life Cycle Management (PLM) in Competitive Market Positioning** is important because businesses operate in highly dynamic and competitive environments where customer preferences, technology, and market conditions change rapidly. Organizations must effectively manage their products throughout their life cycle to remain competitive and profitable.

This study is needed to understand how Product Life Cycle Management helps companies develop successful products, improve product quality, reduce costs, and respond quickly to market changes. It highlights the importance of adopting appropriate strategies at each stage of the product life cycle to maximize sales, profitability, and customer satisfaction.

The research also helps identify the challenges faced by organizations in managing products from development to decline and explores methods to extend product life and maintain market relevance. Additionally, the study provides insights into how PLM supports innovation, efficient resource utilization, and strategic decision-making.

The findings of this study will be beneficial to managers, marketers, product developers, and business organizations in improving product performance, strengthening competitive market positioning, and achieving long-term business growth and sustainability.

OBJECTIVES OF THE STUDY

To analyze the role of **Product Life Cycle Management (PLM)** in enhancing competitive market positioning and organizational performance.

1. To understand the concept and stages of Product Life Cycle Management.
2. To examine the impact of PLM on product development and innovation.
3. To evaluate the role of PLM in improving product quality and customer satisfaction.
4. To analyze how PLM helps organizations reduce costs and optimize resources.
5. To study the strategies adopted by companies at different stages of the product life cycle.
6. To assess the contribution of PLM to increasing market share and profitability.
7. To identify the challenges faced by organizations in managing product life cycles.
8. To examine the relationship between PLM and competitive advantage in the marketplace.
9. To explore the role of PLM in supporting strategic decision-making and business growth.

10. To suggest measures for improving Product Life Cycle Management practices for long-term organizational success.

II. RESEARCH METHODOLOGY

1. Research Design

The study adopts a **descriptive research design** to examine the various phases of the Product Development Life Cycle and their influence on product success. Descriptive research helps in understanding the current practices followed in organizations and identifying factors affecting product development efficiency.

2. Sources of Data

The study uses both **primary and secondary data** to ensure comprehensive analysis.

Primary Data:

Primary data is collected directly from respondents through structured questionnaires, interviews, and surveys with product managers, development teams, and marketing professionals involved in product development.

Secondary Data:

Secondary data is collected from journals, research articles, company reports, books, and online databases related to product development, innovation management, and market analysis.

3. Sampling Method

The study uses **convenience sampling**, where respondents are selected based on accessibility and willingness to participate. This method helps gather insights from individuals directly involved in product development activities.

4. Sample Size

A sample size of **100 respondents** is selected for the study, including product developers, project managers, marketing executives, and other professionals associated with product development processes.

5. Data Collection Tools

The primary tool used for data collection is a **structured questionnaire** containing multiple-choice and Likert scale questions. These questions focus on different PDLC stages such as idea generation, product design, development, testing, and commercialization.

Limitations of Study:

1. The study is limited to selected organizations and industries; therefore, the findings may not be applicable to all sectors.
2. The research is based on the data collected from respondents, and the accuracy of the results depends on the reliability of their responses.
3. Time constraints may limit the depth and scope of the analysis.
4. The study focuses only on Product Life Cycle Management practices and does not cover all factors affecting competitive market positioning.
5. Rapid changes in technology, customer preferences, and market conditions may influence the relevance of the findings over time.
6. Financial and resource limitations may restrict the collection of a larger sample size and broader market data.
7. The study primarily considers current PLM strategies and may not fully account for future market developments.
8. Some confidential organizational information related to product management and strategic planning may not be accessible for research purposes.
9. The conclusions drawn are subject to the limitations of the available data and research methodology used.
10. External factors such as economic conditions, government policies, and competitive actions are not examined in detail within the scope of this study.

III. REVIEW OF LITERATURE

Introduction to Product Lifecycle Management

Product Lifecycle Management (PLM) refers to the strategic and systematic management of a product throughout its entire life—from initial concept generation to design, manufacturing, service, and eventual disposal. PLM integrates people, processes,

business systems, and digital tools to ensure seamless product development and operational efficiency.

Unlike Product Life Cycle (PLC), which focuses on market performance stages (introduction, growth, maturity, and decline), PLM emphasizes the management of product information, engineering processes, and cross-functional collaboration throughout the product's lifespan.

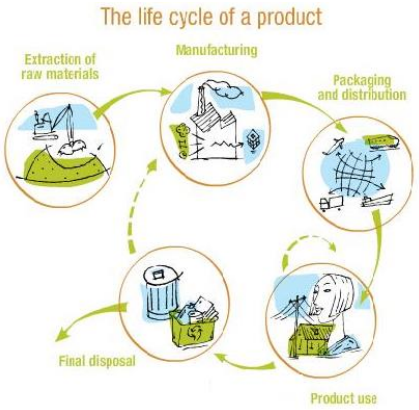
PLM is not merely a software system; it is a business strategy that connects engineering, manufacturing, marketing, and supply chain operations.

New Product Development (NPD)

New Product Development (NPD) refers to the complete process of bringing a new product or service into the market. It includes:

- Idea generation
- Concept development
- Engineering design
- Market research
- Commercialization

NPD operates within the broader PLM framework and plays a vital role in maintaining competitive advantage and market share.



Introduction to development process

The core of PLM (product lifecycle management) is in the creations and central management of all product data and the technology used to access this information and knowledge. PLM as a discipline emerged from tools such as CAD, CAM and PDM, but can be viewed as the integration of these tools with methods, people and the processes through all stages of a product's life. It is not just about software technology but is also a business strategy.

The reality is however more complex, people and departments cannot perform their tasks in isolation and one activity cannot simply finish and the next activity start. Design is an iterative process, often designs need to be modified due to manufacturing constraints or conflicting requirements. Where exactly a customer order fits into the time line depends on the industry type, whether the products are for example Build to Order, Engineer to Order, or Assemble to Order

History

Inspiration for the burgeoning business process now known as PLM came when American Motors Corporation (AMC) was looking for a way to speed up its product development process to compete better against its larger competitors in 1985, according to François Castaing, Vice President for Product Engineering and Development. After introducing its compact Jeep Cherokee (XJ), the vehicle that launched the modern sport utility vehicle (SUV) market, AMC began development of a new model, that later came out as the Jeep Grand Cherokee. The first part in its quest for faster product development was computer-aided design (CAD) software system that make engineers more productive. The second part in this effort was the new communication systthat allowed conflicts to be resolved faster, as well as reducing costly engineering changes because all drawings and documents were in a central database. The product data management was so effective, that after AMC was purchased by Chrysler, the system was expanded throughout the enterprise connecting everyone involved in designing and building products. While an early adopter of PLM technology, Chrysler was able to become the auto industry's lowest-cost producer, recording development costs that were half of the industry average by the mid-1990s.

Phases of product lifecycle and corresponding technologies

Many software solutions have developed to organize and integrate the different phases of a

product's lifecycle. PLM should not be seen as a single software product but a collection of software tools and working methods integrated together to address either single stages of the lifecycle or connect different tasks or manage the whole process. Some software providers cover the whole PLM range while others a single niche application. Some applications can span many fields of PLM with different modules within the same data model. An overview of the fields within PLM is covered here. It should be noted however that the simple classifications do not always fit exactly, many areas overlap and many software products cover more than one area or do not fit easily into one category. It should also not be forgotten that one of the main goals of PLM is to collect knowledge that can be reused for other projects and to coordinate simultaneous concurrent development of many products. It is about business processes, people and methods as much as software application solutions. Although PLM is mainly associated with engineering tasks it also involves marketing activities such as Product Portfolio Management (PPM), particularly with regards to New product introduction (NPI).

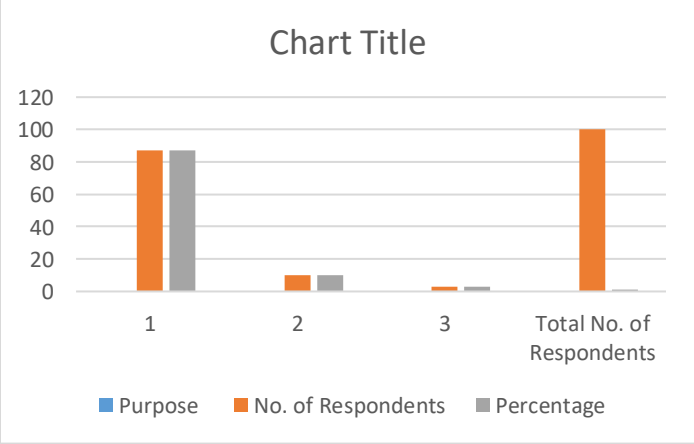
IV. DATA ANALYSIS & INTERPRETATION

FOR ORGANIZATION:

1. Organization will provide the information of the new developing products?

A) Yes
B) No
C) If required

S.No	Purpose	No. of Respondents	Percentage
1	Personal use	87	87
2	industrial use	10	10
3	Other use	3	3
Total No. of Respondents		100	100%



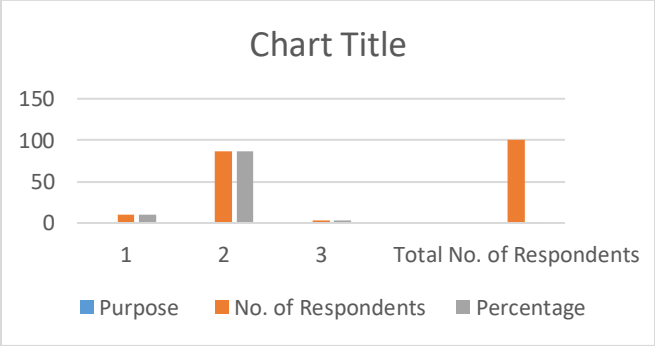
Interpretation: From the data collected it is observed that 87% of the Data on new products will be displayed, 10% of the data use for hide and 3 % of the data use for if required.

2. How much time it requires to develop a new product process?

A) Weeks
B) Months

C) Years

	Purpose	No. of Respondents	Percentage
1	Weeks	10	10
2	Months	87	87
3	years	3	3
Total No. of Respondents		100	100%



Interpretation: From the data collected it is observed that 87% of the employees says that it will take the months of time , 10% of the of the employees says that it will take the weeks of time , 3% of the of the employees says that it will take the years of time .

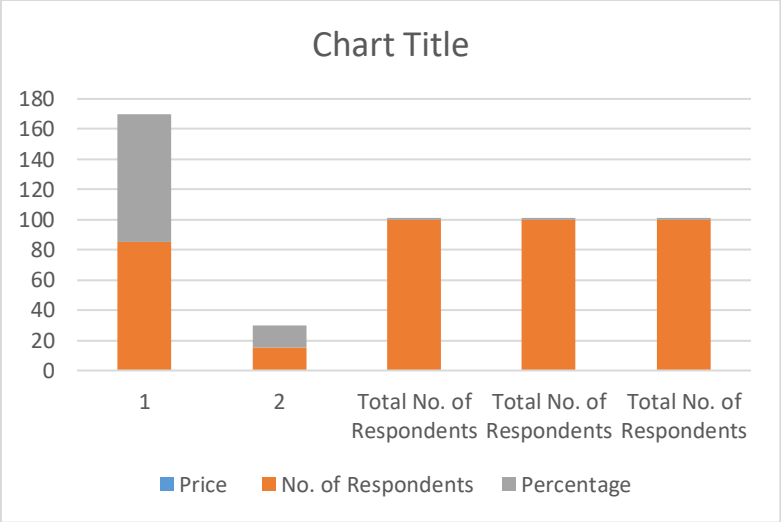
3. Role of R&D in the new development process?

A) Total work

B) Only developing

C) Only design

	Purpose	No. of Respondents	Percentage
1	Total work	95	95
2	Only developing	5	5
3	Only design	0	0
Total No. of Respondents		100	100%



Interpretation:

It is observed that 95% of the people feel that the R&D is affordable, and 5% of people feel that the R&D of service is not affordable.

V. FINDINGS

1. A majority of employees expressed satisfaction with the existing new product development process in the organization.
2. Employees have a positive perception of the overall organizational performance and production efficiency.
3. There are adequate opportunities for personal and professional growth within the organization, though some employees expect further enhancement.
4. Production operations are considered systematic and well-managed by most respondents.
5. Teamwork within departments is viewed positively, contributing to smooth workflow and coordination.
6. The communication system within the organization is reasonably effective and supports operational efficiency.
7. Research and Development (R&D) activities play a significant role in improving employee skills and technical knowledge.
8. Employees are generally satisfied with the performance evaluation and appraisal system followed by their superiors.
9. The organizational environment is perceived as professional, with minimal internal politics affecting work performance.

VI. SUGGESTIONS

- The organization should strengthen its focus on innovative new product development programs to remain competitive in the market.
- More structured training and career development initiatives should be introduced to improve employee growth opportunities.
- Management should further enhance teamwork practices through collaborative workshops and cross-functional projects.
- Internal communication channels can be improved by implementing digital communication platforms and regular review meetings.
- The performance appraisal system should be made more transparent and development-oriented to better motivate employees.
- The company should adopt advanced demand forecasting and market analysis techniques to improve production planning.
- Management must ensure a professional work culture by maintaining fairness,

transparency, and zero tolerance for workplace politics.

- Continuous quality improvement practices should be implemented to strengthen product lifecycle sustainability

VII. CONCLUSION

The study on Product Life Cycle Management at Kesoram Cement Limited indicates that the organization maintains a structured production system and effective operational practices. Most products are currently positioned in the maturity stage of the product life cycle, indicating stable market presence and consistent demand. However, a few products show signs of entering the decline phase, requiring strategic intervention.

The company demonstrates satisfactory employee engagement, efficient production management, and supportive R&D initiatives. To sustain long-term competitiveness, the organization must focus on innovation, quality enhancement, and proactive lifecycle management strategies.

By strengthening product development processes, improving quality standards, and maintaining strong employee relations, Kesoram Cement Limited can successfully extend product lifecycle stages and avoid early decline in the competitive market

BIBLIOGRAPHY

BOOKS

1. Security analysis and portfolio management
   - Fischer & Jordan
2. Financial Management
   - Prasanna Chandra
3. Financial Management
   - M.Y. Khan

NEWS PAPERS

1. Business to day
2. Economic times.
3. Times of India
4. Business line

MAGAZINES

1. The week
2. India today

WEBSITES.

1. www.kesoram.com
2. www.nyse.com
3. www.google.com