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## NEW PRODUCT DEVELOPMENT AT LEOLABS

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**ABSTRACT:** New Product Development (NPD) is a strategic process that helps pharmaceutical companies generate novel products and respond to changing healthcare demands. Gland Pharma, a well-known biopharmaceutical business, prioritizes the use of novel product development (NPD) approaches to ensure the safety, efficacy, and cost of its pharmaceutical products. From ideation to sales, the organization identifies possible product prospects using innovative technology, market research, and regulatory compliance. The key steps include concept development, feasibility assessment, formulation development, clinical investigations, and product release. Gland Pharma maintains strong quality standards while accelerating the delivery of new pharmaceuticals through the use of cutting-edge production methods and a highly skilled workforce. This strategy not only helps the company succeed in the marketplace, but it also improves the health of people globally. The Gland Pharma NPD paper emphasizes the pharmaceutical industry's capacity to strike a balance between strategic planning, innovation, and efficiency.

**Keywords:** *Product innovation, Product design, Market research, Idea generation, Product lifecycle, Prototype development*

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### I. INTRODUCTION

New product development, or NPD, is the full process of introducing a unique concept for a commodity or service into the market. It is a critical component of modern corporate strategy since it enables organizations to maintain a competitive advantage, meet changing consumer needs, and develop novel ideas. In today's fast-paced, technology-driven economy, companies who fail to generate innovative products risk losing market share and becoming less prominent. NPD is not restricted to the creation of unique items. It may also include the creation of unique service bundles, the inclusion of new features, or the improvement of current ones.

To grow and continue its operations, a business must develop new goods. By launching new items, a company can expand into new areas while also retaining existing customers and

attracting new ones. Furthermore, NPD creates revenue and profits by developing new items that better fulfill the needs of customers than its competitors. Businesses that consistently invest in the development of new products have an ability to adapt and recover in the face of economic and market volatility. As a result, their long-term position is strengthened.

The first steps in the new product development (NPD) process are usually idea generation, screening, development, and testing. Product design, development, and prototype testing are required before selling a concept. To reduce risks and maximize the likelihood of success, each stage requires rigorous planning, investigation, and analysis. This methodologically rigorous approach ensures that the finished product fits the needs of both the organization and its clients, and that resources are used efficiently.

While it has advantages, the process of creating new products is frequently plagued with difficulties. Businesses have no idea how well their items will be received by consumers, how much production will cost, how functional the technology will be, or how their competitors will react. A lack of original concepts, insufficient market research, or bad development and launch are the fundamental causes of many product failures. To address these problems, firms must use effective tactics such as ongoing market research, departmental collaboration, and the execution of changes based on feedback throughout the NPD process.

## II. REVIEW OF LITERATURE

Shinde, B. G.(2025): This paper looks into the challenges and opportunities connected with developing an efficient new product development process in the automobile sector, proposing a framework that is both adaptive and flexible, based on Cooper's Stage-Gate approach. The paper analyzes flaws in current NPD models and draws on the expertise of industry specialists to assist build more effective phases and gates as India's automobile industry grows more competitive and technologically sophisticated. The suggested framework stresses improved collaboration during the design, development, and market launch phases to assure the creation of high-quality, fairly priced, and on-time products. Significant contributions include developing decision gate criteria, providing clear work descriptions for each level, and implementing techniques to improve data administration and departmental communication.

Abidin, Z. Z. (2025): This paper looks into the important components that enable the successful development of new products in Malaysia's automotive industry, with a focus on IT skills, strategic orientation, and structured processes like Stage-Gate and lean

methodologies. The paper uses PLS-SEM analysis of survey data from automotive vendors to demonstrate how Industry 4.0 technologies and advanced digital tools enable real-time decision-making and innovation, while strategic planning based on market analysis and sustainability improves long-term project selection and competitive positioning. The use of structured new product development (NPD) procedures allows for a logical shift from ideation to product delivery, with a focus on efficiency, waste reduction, and good outcomes.

Qiu, L. (2024): This research uses a detailed case paper and grounded theory to evaluate the impact of an integrated product development (IPD) paradigm on the efficacy of new product development (NPD). According to the report, IPD solves traditional NPD concerns such as expensive price, long development cycles, and low efficiency by establishing a repeating, continuous cycle between innovation management and commercial value creation. Furthermore, it looks into how lean entrepreneurship theory and consumer innovation may be used to highlight issues in business intelligence, agile processes, and customer development. The findings show that the NPD process can be accelerated by improving business acumen and increasing customer involvement through the use of lean techniques and business model iteration.

Sopadang, A., & Anantana, T. (2024). This paper investigates the impact of important contextual factors, such as organizational, project, product, and market-related factors, on the new product development (NPD) process at a large Thai company. It also looks at the overall configuration of the process. Through in-depth interviews with eleven managers, the paper examines the impact of several contextual elements on the outcomes of new product development (NPD), workflow integration, and decision-making. The findings reveal that a number of factors, including market alignment with the company's strategy and internal resources, have a substantial impact on the prioritizing and execution of innovation phases.

Dąbrowski, Dariusz (2023): This paper investigates how organizations can modify their NPD processes to gain a competitive advantage by identifying particular actionable steps inside the NPD framework. The paper begins by stating that the major goal of releasing new products is to deliver superior value to competitors in order to gain a product-based competitive advantage. The essay proposes three critical procedures based on extensive research and logical reasoning: identifying opportunities for competitive potential, developing highly valuable products, and evaluating products at various stages of the NPD process in terms of their competitive impact.

### III. STAGES OF NEW PRODUCT DEVELOPMENT

#### Idea Generation

The first step in the NPD process is to generate ideas. At this point, businesses try to come up with a wide range of potential product ideas. This stage is critical because the amount and quality of ideas developed during this phase have a direct impact on the success of the next steps. Companies can develop new ideas through brainstorming sessions, staff suggestions, customer feedback, competitive analysis, market research, and rising consumer and technological trends. The goal is to identify novel, profitable concepts that address a market demand or lack while also facilitating future product development.



#### Idea Screening and Evaluation

The following phase entails evaluating and screening the concepts on the list. During this phase, firms can discard concepts that are neither profitable or successful in order to focus their resources on ideas with the best chance of success. Typically, when evaluating an item, one considers its market potential, cost, ease of production, and alignment with the organization's overall goal.

#### Concept Development and Testing

Following the selection of exciting concepts, the next step is to create and test the concept. During this stage, a complete concept is created, which often includes drawings, descriptions, and early prototypes to help buyers comprehend and envision the product's functioning. Following that, idea testing is carried out with potential clients or focus groups to get feedback and identify any concerns. Businesses can improve the product concept, correct challenges, and avoid exacerbating technological debt or design flaws along the development process by asking feedback from the start.

#### Business Analysis

Businesses conduct a thorough business analysis to assess whether the product will be profitable after the concept has been tried. At this point, you will assess the size and needs of your target market, perform competitive research, estimate sales and profits, and develop a preliminary business strategy. Business analysis ensures that the product has a clear market

opportunity and will generate revenue over time. This phase is critical because it provides you with data-driven knowledge that aids your decision to proceed with full-scale product development.

### **Product Development**

During the product development phase, the notion is given physical form. The initial steps of this technique usually include the creation of a prototype and, later, a Minimum Viable Product (MVP) to assess functionality, appearance, and usability. Following testing, the product design and production processes are finalized. Furthermore, organizations may use test marketing to assess consumer reactions and make last-minute changes.

### **Deployment**

Following product creation, the next phase is deployment, which entails bringing the product to market. The deployment process involves several steps, including committing to production, developing the final product, testing it internally in alpha deployment, testing it with a limited set of consumers in beta deployment, and finally delivering it in production. Each stage ensures that the product is stable, fulfills quality standards, and is ready for widespread market release.

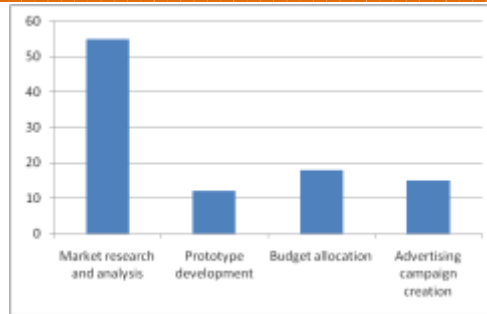
### **Commercialization**

Commercialization is the final stage of NPD, and it entails the official introduction of the product to the market. During this phase, the product is manufactured in large quantities and then marketed, delivered, and sold. Commercialization is vital since it determines a product's profitability and commercial success. To be commercially successful, a product must be marketed to the appropriate audience, positioned against competitors, and made available through the relevant sales channels. Commercialization refers to the process of developing an idea into a product that can be successfully marketed.

## **IV. PERFORMANCE EVALUATION**

### **1. What is the most important first phase for LEOLABS when creating new products?**

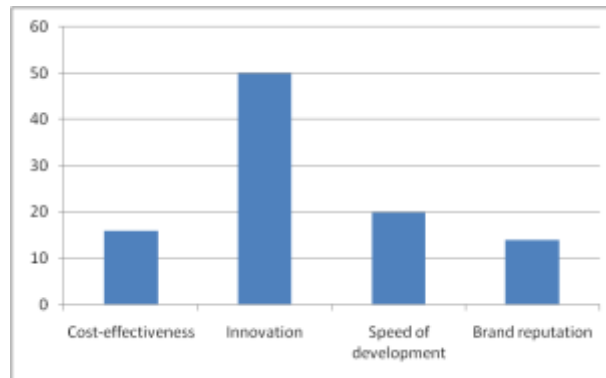
S.NO	PARTICULARS	RESPONDENTS	PERCENTAGE
1	Market research and analysis	55	55%
2	Prototype development	12	12%
3	Budget allocation	18	18%
4	Advertising campaign creation	15	15%
<b>TOTAL</b>		<b>100</b>	<b>100%</b>



Market research and analysis make up 55% of the comments, indicating that this is the members' primary area of interest. Designing prototypes (12%), distributing funding (18%), and designing advertising campaigns (15%) are all necessary but minor tasks.

**2. Which of the following variables is most important throughout the ideation process?**

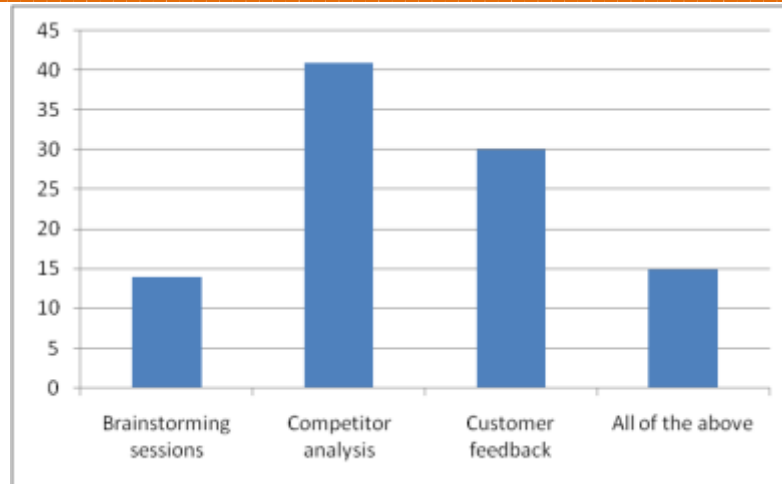
S.NO	PARTICULARS	RESPONDENTS	PERCENTAGE
1	Cost-effectiveness	16	16%
2	Innovation	50	50%
3	Speed of development	20	20%
4	Brand reputation	14	14%
<b>TOTAL</b>		<b>100</b>	<b>100%</b>



Innovation is the most important aspect, influencing the decisions of half of the respondents. Compared to the other elements, brand reputation (14%), development speed (20%), and cost-effectiveness (16%) are all less important.

**3. How does LEOLABS develop concepts for new products?**

S.NO	PARTICULARS	RESPONDENTS	PERCENTAGE
1	Brainstorming sessions	14	14%
2	Competitor analysis	41	41%
3	Customer feedback	30	30%
4	All of the above	15	15%
<b>TOTAL</b>		<b>100</b>	<b>100%</b>



Competitor analysis is the most popular method, according to 41% of respondents. Thirty percent of the information comes from client feedback, fifteen percent from the aforementioned sources, and fourteen percent from brainstorming sessions. This shows that a variety of methodologies are used, albeit at a lower priority than competitive analysis.

## V. CONCLUSION

In today's fast-paced commercial world, New Product Development (NPD) is a critical strategy for businesses to beat their competitors and grow. It enables businesses to turn new ideas into actual products that satisfy the changing needs and wishes of customers. To be successful in NPD, it is critical to follow a predetermined strategy that covers the entire process, from concept generation and ideation to full design, testing, and product launch. The teamwork among departments like as finance, manufacturing, marketing, and research resulted in a product that is practical, profitable, and well-received by the target audience. Incorporating market knowledge and consumer feedback improves the product's relevance while decreasing the likelihood of failure at all levels. Businesses can maintain a competitive advantage by constantly monitoring emerging technologies and trends. Furthermore, NPD fosters an inventive culture that promotes creativity and problem solving within the firm. It is critical to strike a healthy balance between the quality and speed of development processes by effectively allocating time and resources. Effective new product development (NPD) increases a brand's value, maintains consumer contentment, and helps the company's long-term viability. Producing items alone is insufficient; it is necessary to provide real solutions that allow your organization's expansion and leadership within the industry.

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