



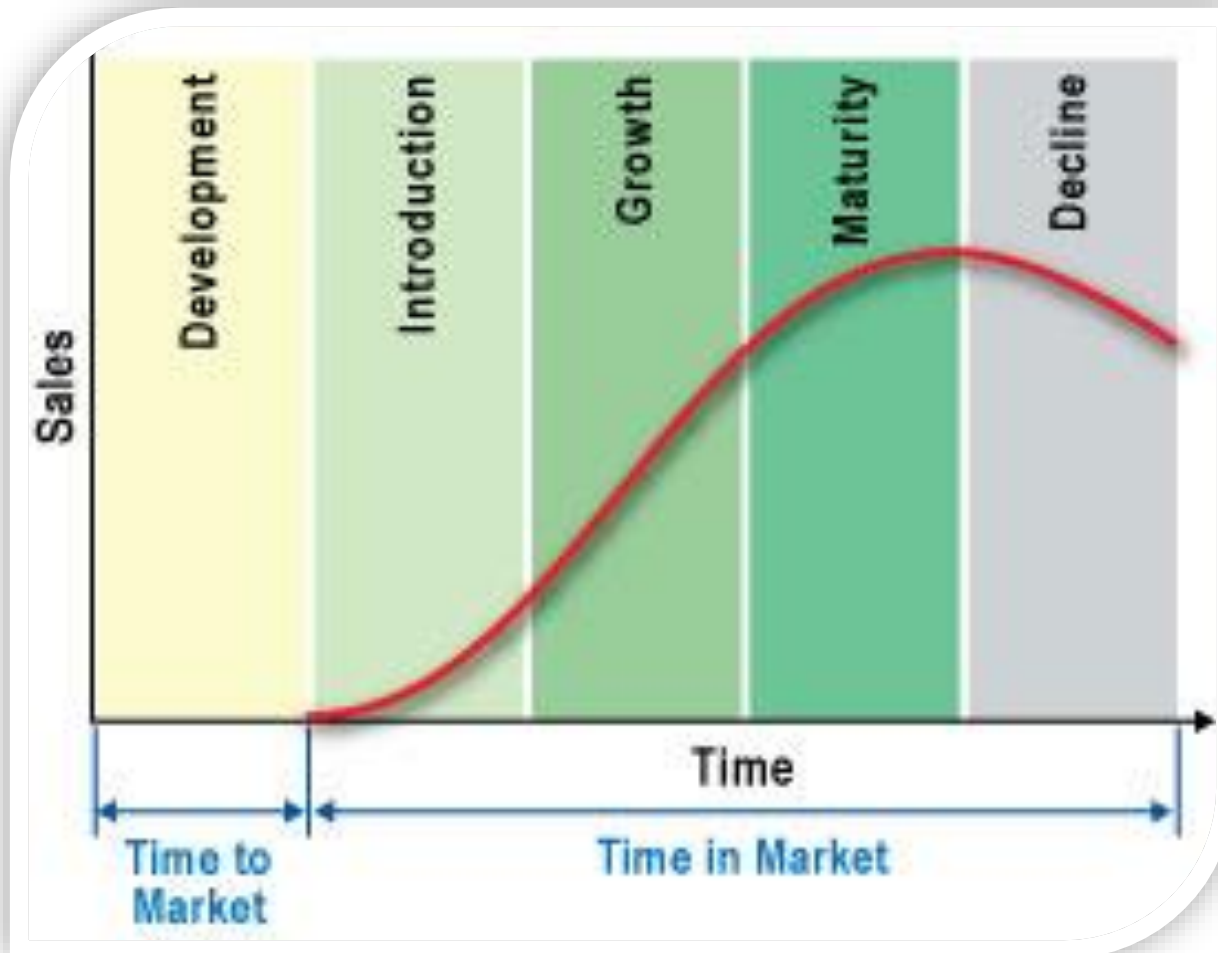
New Product Development Process

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Stages in New Product Development



Product Life Cycle



New Product Development

New product development (NPD) is the term used to describe the complete process of bringing a new product to market.

There are two **parallel paths** involved in the NPD process:

one involves the **idea generation, product design and detail engineering;**

the other involves **market research and marketing analysis.**

New Product Development

- Companies typically see **new product development** as the **first stage** in generating and commercializing new products within the overall strategic process of **product life cycle** management used to maintain or grow their market share.
- It can be a product or service.
- Eg. Covid-19: Britannia launches WhatsApp store locator to meet consumer demand**

https://www.business-standard.com/article/companies/covid-19-britannia-launches-whatsapp-store-locator-to-meet-consumer-demand-120042901169_1.html

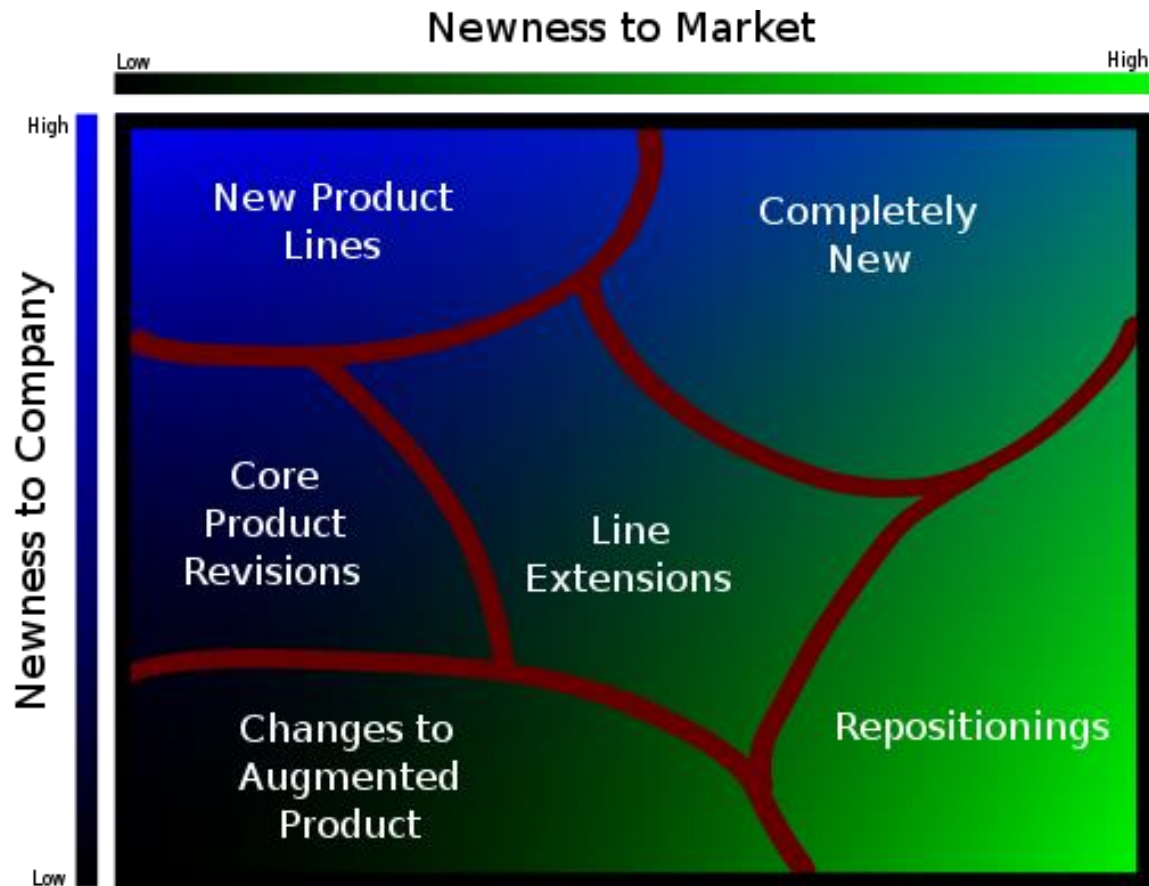
- Eg. Reliance launches Jio Glasses**
- <https://www.youtube.com/watch?v=MOKrODAiYQ>



New Product Development



Types of New Product Development



Is new product really “new”?

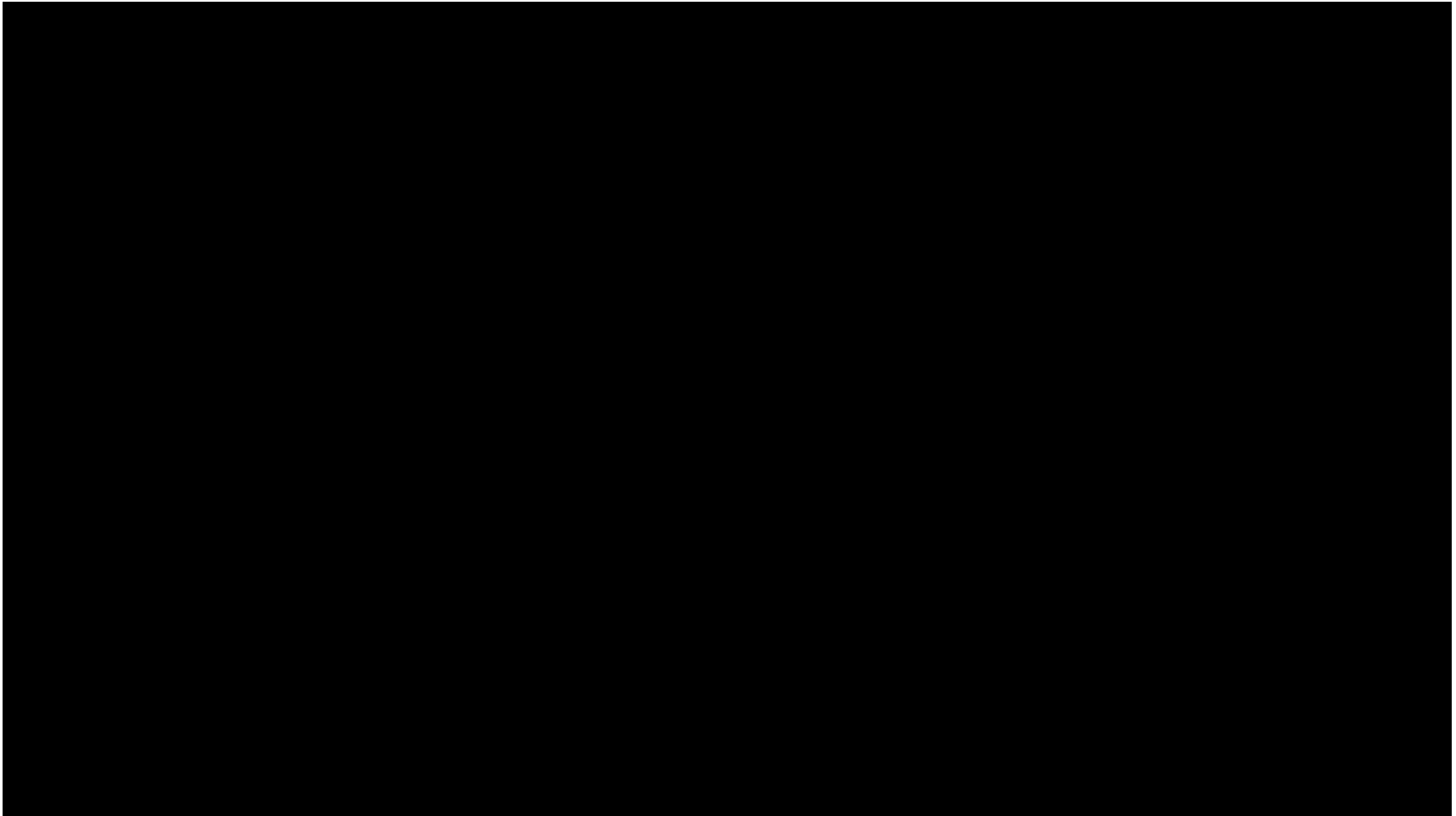


Idea Generation

- Ideas for new products can be obtained from basic research using:
- a SWOT analysis ,
- Market and consumer trends,
- Arising consumer needs,
- company's R&D department,
- competitors,
- focus groups, employees, salespeople, corporate spies, trade shows, or Ethnographic discovery methods (searching for user patterns and habits) may also be used to get an insight into new product lines or product features.
- Brainstorming of new product, service, or store concepts .

Eg. Mi Air purifiers video

VIDEO - Launch of Mi Air Purifiers – Product launch addressing rising consumer needs



VIDEO - Launch of Google Assistant – New service/ App



Idea Screening

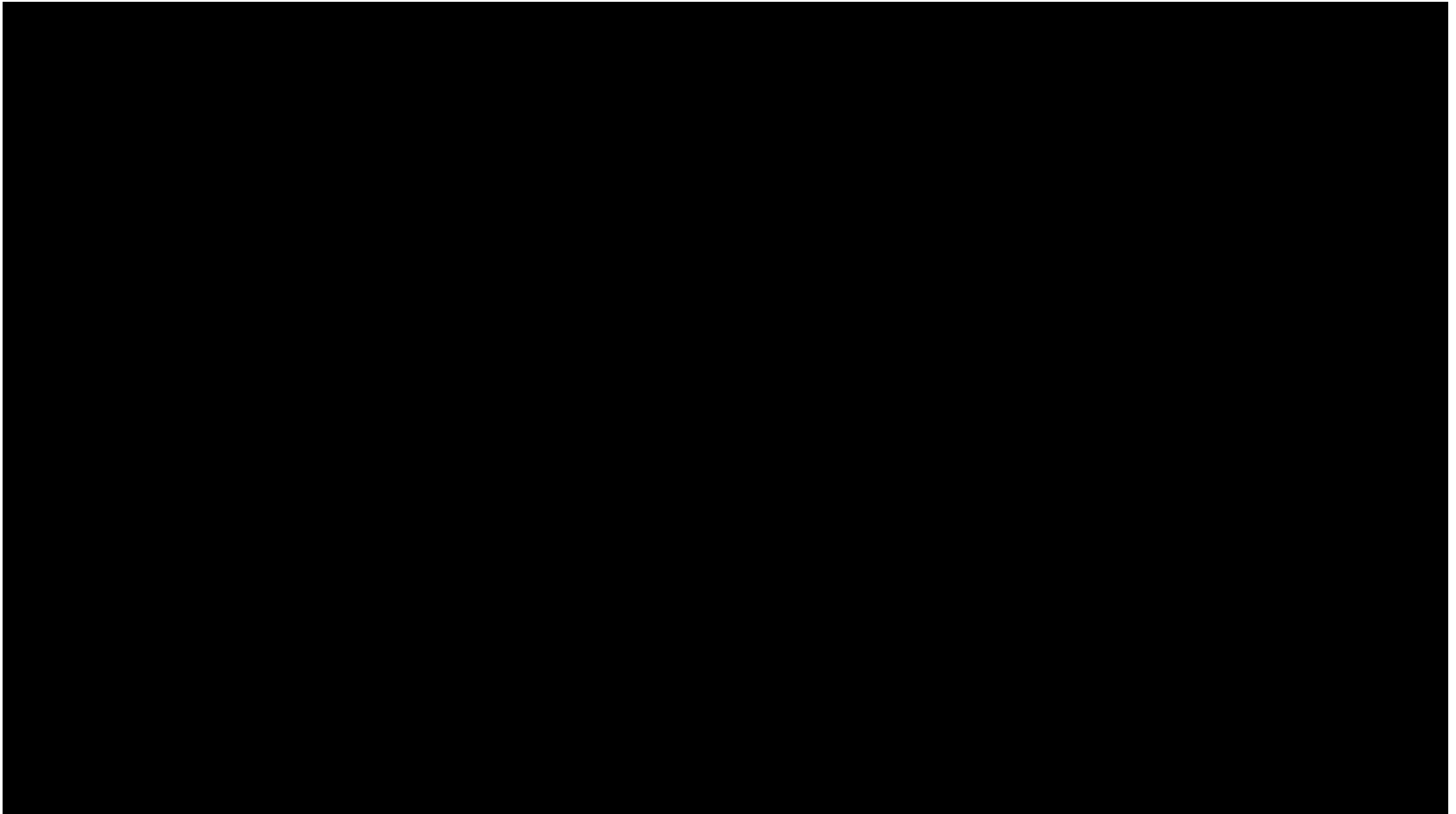
- The object is to **eliminate unsound concepts** prior to devoting resources to them.
- The screeners should ask several questions:
 - Will the customer in the target market benefit from the product?
 - What is the size and growth forecasts of the market segment/target market?
 - What is the current or expected competitive pressure for the product idea?
 - What are the industry sales and market trends the product idea is based on?
 - Is it technically feasible to manufacture the product?
 - Will the product be profitable when manufactured and delivered to the customer at the target price?



Concept Development and Testing

- Develop the marketing and engineering details
 - Investigate **intellectual property issues and search patent data bases**
 - Who is the **target market** and who is the decision maker in the purchasing process?
 - What **product features** must the product incorporate?
 - What **benefits** will the product provide?
 - How will consumers react to the product?
 - How will the product be produced most **cost effectively**?
 - Prove feasibility through virtual computer aided rendering, and rapid prototyping
 - What will it cost to produce it?
- Testing the Concept by asking a sample of prospective customers what they think of the idea.

VIDEO - Launch of Apple Watch – Product features demonstration



Business Analysis

- Estimate **likely selling price** based upon competition and customer feedback.
- Estimate **sales volume** based upon size of market.
- Estimate **profitability** and break-even point.



Break-Even Analysis



- Produce **a physical prototype or mock-up**.
- **Test the product** (and its packaging) in typical usage situations.
- Conduct focus group customer interviews or **introduce at trade show**.
- Make adjustments where necessary.
- Produce an initial run of the product and sell it in a test market area to determine customer acceptance.
- Eg. i- phone
<https://www.youtube.com/watch?v=M9DL52zPYpw>



Stages in NPD

Technical Implementation

- New program initiation
- Finalize Quality management system
- Resource estimation
- Requirement publication
- Publish technical communications
- Engineering operations planning
- Department scheduling
- Supplier collaboration
- Logistics plan
- Resource plan publication
- Program review and monitoring
- Contingencies - what-if planning
- Eg. The Making of Tata Nano video

<https://www.youtube.com/watch?v=rNYbYIDootQ>



Stages in NPD

Commercialization (often considered post-NPD)

- Launch the product eg. Google assistant launch, Mi purifiers launch
- **Produce and place advertisements and other promotions**
- **Fill the distribution pipeline with product**
- Critical path analysis is most useful at this stage
- Eg. Apple MacPro manufacturing process video



advertisements



distribution

New Product Pricing

- Impact of new product on the entire product portfolio
- Value Analysis (internal & external)
- Competition and alternative competitive technologies
- Differing value segments (price, value, and need)
- Product Costs (fixed & variable)
- Forecast of unit volumes, revenue, and profit



Vital predevelopment activities include:

- Preliminary market assessment.
- Technical assessment.
- Source-of-supply assessment: suppliers and partners or alliances.
- Market research : market size and segmentation analysis, VoC (voice of the customer) research.
- Product concept testing
- Value-to-the customer assessment
- Product definition
- Business and financial analysis.
- <https://www.youtube.com/watch?v=F4U2gXXhOEQ>