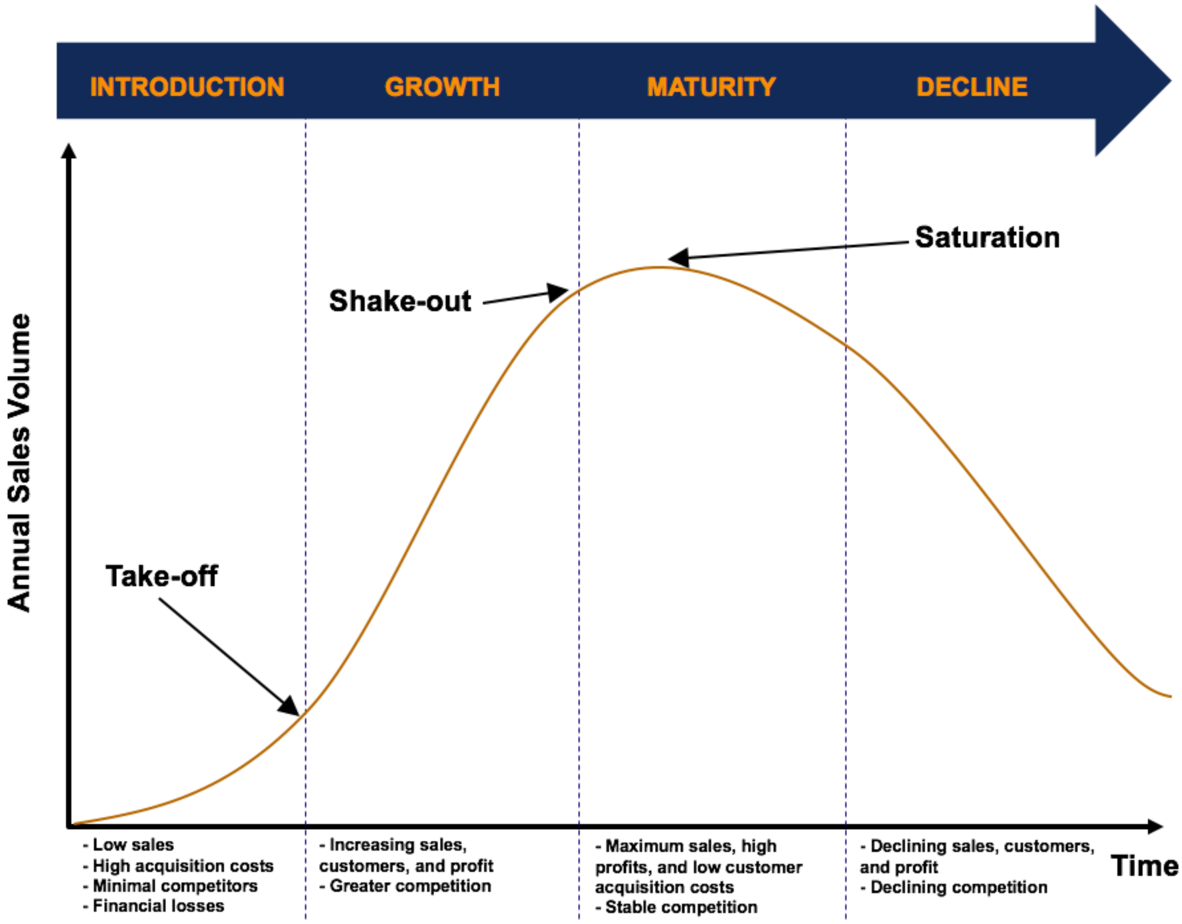
UNIT 1: INTRODUCTION TO PRODUCT LIFE CYCLE MANAGEMENT

1. Introduction to Product Life Cycle

The product life cycle (PLC) describes the stages a product goes through from its introduction to the market until it is eventually phased out. The PLC consists of four primary stages, each with its own characteristics and challenges:



1. **Introduction**
   - **Example:** The launch of the first iPhone in 2007.
   - **Launch Phase:** The product is introduced to the market.
   - **Market Response:** Sales grow slowly as awareness builds. For the iPhone, initial adoption was moderate, with early adopters being the primary buyers.

- **Investment:** High costs in marketing and promotion with low profits due to low sales volumes. Apple invested heavily in marketing campaigns to educate consumers about the new smartphone concept.

2. **Growth**
    - **Example:** The rapid adoption of streaming services like Netflix.
    - **Increased Demand:** Sales begin to increase rapidly as the product gains acceptance. Netflix saw exponential growth as consumers moved away from DVDs to streaming.
    - **Market Penetration:** Companies may introduce improvements or new features. Netflix expanded its library and began producing original content.
    - **Economies of Scale:** Production costs per unit decrease as volume increases. As Netflix's user base grew, the cost of delivering content per user decreased.
3. **Maturity**
    - **Example:** The widespread adoption of personal computers (PCs).
    - **Peak Sales:** Sales reach their maximum as market saturation occurs. PCs became a household staple, and the market was saturated.
    - **Competitive Pressures:** Competitors enter the market, leading to price reductions and product differentiation. Various brands like Dell, HP, and Lenovo offered PCs with different features and prices.
    - **Profit Stabilization:** Profits are at their highest but may begin to stabilize or decline due to competition.

4. **Decline**
    - **Example:** The decline of DVD players.
    - **Decreased Demand:** Sales start to decline as the product becomes outdated or less popular. DVD players saw a sharp decline with the rise of streaming services.
    - **Market Contraction:** The product may be phased out, discontinued, or replaced. Many manufacturers stopped producing DVD players, focusing instead on Blu-ray or streaming devices.

- **Cost Management:** Companies may reduce costs or attempt to revitalize the product.

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2. Product Lifecycle Management (PLM) - Definition & Overview

Definition: Product Lifecycle Management (PLM) is a strategic approach to managing a product's lifecycle from its inception through design, manufacture, service, and disposal. It integrates people, processes, business systems, and information to streamline product development and ensure optimal efficiency.

Overview:

- **Example:** The automotive industry's use of PLM in vehicle development.
- **Holistic Management:** PLM covers all stages of a product's life, ensuring that all information is accessible to stakeholders. For example, in car manufacturing, PLM systems manage everything from initial design to after-sales service.
- **Collaboration:** Facilitates collaboration among different departments, including design, engineering, manufacturing, and marketing. Automotive companies like Ford use PLM to coordinate between teams in different countries.
- **Integration:** PLM systems integrate data from various software tools, enabling seamless information flow. This integration is crucial in industries where design, manufacturing, and supply chain management need to be tightly aligned.
