



# EXTENDING PRODUCT LIFE CYCLE STAGES

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## Abstract

The “*Product Life Cycle Model*” (also known as the “*PLC Model*”) is introduced and its merits and faults are addressed. Considerations, ways and reasons to extend PLC stages are explained. Examples are provided to show how product planning and product marketing strategies can be used at different PLC stages to help establish market dominance and drive sales. This article relates to consumers and consumer goods. “*Consumers*” are individuals or households that buy and use goods and services created by industries.

## Introduction

Businesses are always seeking better ways to grow profits and maximize revenue from the sale of products or services. Revenue allows a company to maintain viability, invest in new product development and improve its workforce; all in an effort to acquire additional market share and become a leader in its respective industry.

A consistent and sustainable revenue stream from product sales is key to any long-term investment, and the best way to attain a stable revenue stream is a “*Cash Cow*” [i] product. Cash cows are leading products that command a large market share in mature markets. Cash cows display a “*Return On Investment*” (ROI) that is greater than the market growth rate, and thus produce more cash than they consume. The question is therefore: How can a company develop a cash cow product? One way of doing so is by applying relevant product planning and/or product marketing strategies, a.k.a. competitive moves, at the various stages that make a PLC.

The “*PLC Model*” is a relatively new theory which identifies the distinct stages affecting sales of a product, from the product's inception until its retirement. Companies that successfully recognized those stages and subsequently applied a custom “*Marketing Mix*” (combination of product, pricing, promotion, and place [distribution] activities) at each stage, were able to sustain sales and defend or win market share. By deliberately extending the length of time spent at each of the PLC stages through different tactics, companies were also able to realize much of the revenue potential a product can offer.



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## Product Life Cycle Model Assumptions

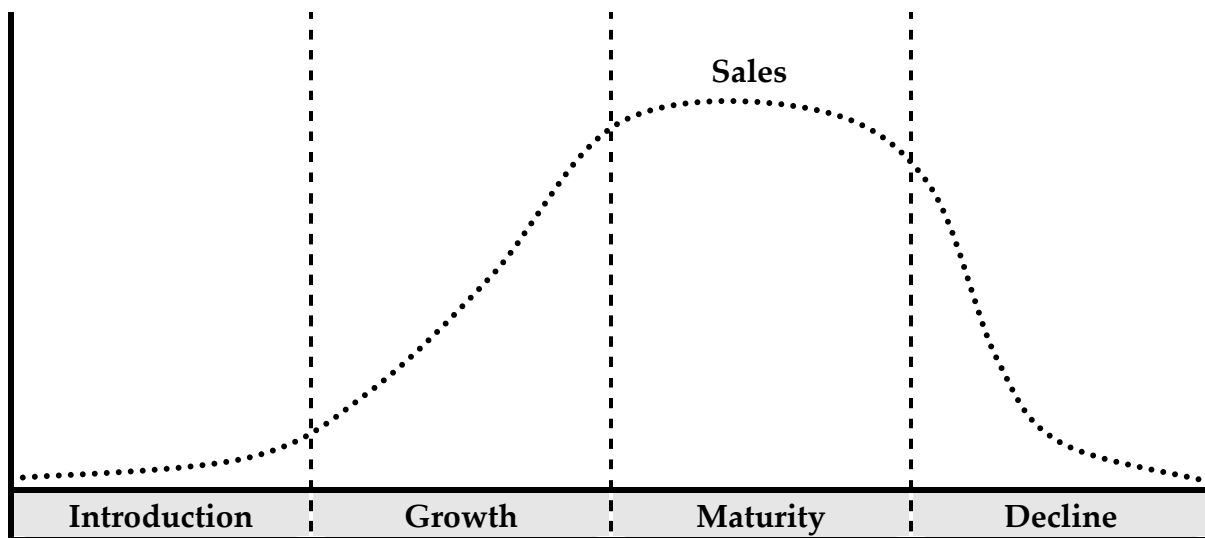
At the core of the "PLC Model" are the following simple assumptions:

- All products have limited life spans.
- Product sales pass through different and distinct stages.
- Each stage presents a different challenge, which calls for the application of a customized marketing mix.

## Product Life Cycle Model Stages

A PLC is traditionally viewed, from a marketing perspective, as being comprised of four distinct stages: *Introduction*, *Growth*, *Maturity* and *Decline*.

In the "Introduction" stage, the product is introduced to the market through a focused and intense marketing effort designed to establish a clear identity and promote maximum awareness. Many trial or impulse purchases will occur at this stage. Next, consumer interest will bring about the "Growth" stage, distinguished by increasing sales and the emergence of competitors. The "Growth" stage is also characterized by sustaining marketing activities on the vendor's side, with consumers engaged in repeat purchase behavior patterns. Arrival of the product's "Maturity" stage is evident when competitors begin to leave the market, sales velocity is dramatically reduced, and sales volume reaches a steady state. At this point in time, mostly loyal consumers purchase the product. Continuous decline in sales signals entry into the "Decline" stage. The lingering effects of competition, unfavorable economic conditions, new fashion trends, etc. often explain the decline in sales.



Timeline and PLC Stages



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## Reasons for Extending the PLC

Understanding and extending the PLC stages allows a company to fully exploit market opportunities, and defend or establish a competitive advantage through a lasting market presence. The main business reason for extending the PLC is to gain more sales through longer presence in the marketplace. The main marketing reason is since not all consumers are alike; certain consumer types will adopt a product at different stages of the product life cycle. By extending each stage of the PLC there is a better chance of exposure to the relevant consumer group. Extending the PLC should not be confused with extending the life of the product, which applies to enhanced durability, reliability or technical quality.

## Strategies for Extending the PLC

The nature and type of applicable strategies to extend the PLC will vary with each stage, and the level of variation depends on the product type, market conditions, consumer audience and projected PLC timeline. It is hard to predict a transition from one PLC stage to another (because of measurement lags) and proactively react to the change with targeted action. However, through proper marketing mix design and contingency planning, it is possible to apply various product planning and product marketing strategies at the beginning of a particular stage when it arrives. The underlying approach with any of the strategies listed below is Targeted Improvement. [ii]

### Product Planning Strategies for Extending the PLC

- *Product Diversification - Creating different product variants.*

Microsoft's family of Windows 9.x operating systems allowed the software giant to continuously extend the life cycle of this desktop computer operating system. Windows 95, Windows 98, Windows 98SE, Windows ME, Windows XP are among the better-known variants. Coca-Cola's vanilla flavored drink is an example and a variant to the venerable Classic Coca-Cola drink.

- *New Product Uses - Applying the core product to different uses.*

Apple Computer has been very innovative and successful by finding additional uses for its Macintosh computer, such as desktop publishing and strong graphics/animation capabilities. Apple's Digital Hub concept extends the Macintosh's functionality even further to serve as a center for managing multimedia files from cameras, DV recorders, scanners, and MP3 devices. [iii] On the retail side, in the world of "Consumer Packaged Goods" (CPG), Arm & Hammer had devised over several decades a multitude of deodorizing uses for their core product, baking soda.



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- *Changing Product Layers - Altering the product features and creating different product families.*

Hewlett-Packard's InkJet and LaserJet printers are examples of product families that share the same technological core. In addition are Jell-O's product families of puddings, colored gelatins, and snacks which are all based on raw gelatin.

### Product Marketing Strategies for Extending the PLC

- *Re-Positioning - Changing the product's perceived values and intent in the mind of the consumer.*

Microsoft's Windows NT was designed as a multi-tasking, multi-threaded, multi-functional desktop operating system. It was based on work done by Microsoft for IBM's OS/2 and in terms of its feature set resembled Unix more than it did Novell's NetWare. NetWare, a Network Operating System (NOS) and Novell's flagship product dominated the File&Print server market in the early 90's to the tune of 75% market share. Through massive and prolonged positioning efforts, Microsoft was able to persuade corporate IT departments that Windows NT could be more than just a powerful desktop OS, and could replace NetWare as the departmental File&Print server. Novell tried unsuccessfully to shield NetWare from Windows NT by attempting to position UnixWare (Novell's Unix based OS) against Windows NT. [iv]

- *Co-Branding - Enhancing (or diluting) the product's brand equity by association with another strong brand.*

In an attempt to boost sales, IBM announced in 2001 a joint effort with J.D. Edwards & Company to market a specialized IBM eServer called the IBM eServer for J.D. Edwards, optimized to run J.D. Edwards' collaborative commerce software for small to medium size businesses. These types of co-branding initiatives are nearly always an attempt to capitalize on synergy between brands and products.

- *Re-Packaging - Literally placing the product in a new package as to revive its appeal.*

This is common practice in retail markets with the introduction of new labels, different container sizes and different container types, such as Colgate's toothpaste in a tube or pump dispenser. In the computer software world, virtual repackaging is done through the introduction of a new visual GUI (Graphical User Interface) while application functionality remains relatively unchanged.

- *Re-Branding - A drastic and costly measure used to disassociate the brand from the previous values with which the brand has been associated.*

The key concern with such a move is maintaining existing market share. For example, in 2000, IBM re-branded its eCommerce software application,



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Net.Commerce to WebSphere Commerce. It also re-branded its line of servers as eServer (formerly Netfinity). This was an attempt by IBM to make a fresh entry and position itself as a competitor in the world of Unix and Intel based servers dominated by Sun Microsystems and Dell Computers. Sometimes companies re-brand themselves in an effort to build new reputation and brand equity - Datsun/Nissan vehicles, Borland/Inprise software products, and GTE/Verizon telecomm services.

- *Increasing Frequency of Use - Encouraging consumers to break away from traditional molds of product usage.*

Chivas Regal was always considered a fine Scotch whisky to be consumed on special occasions such as weddings, or given as a gift. Through a worldwide advertising campaign, Chivas was able to increase consumption by delivering a consistent message about the brand's broader appeal.

- *New Markets and Segments - This strategy is an attempt to penetrate non-traditional markets or consumer segments.*

Companies are able through exploratory research to discover the potential of geographically remote markets (Asia, Africa, and former Soviet Bloc) or new consumer segments (seniors, minorities, and women). During 2001, Subaru specifically targeted women as a new automotive consumer segment, realizing their strong potential as first-owner buyers.

- *Pricing and Special Offers - Pricing is a positioning tool and a way to influence sales through the use of various price, payment schemes and models.*

Price manipulation can take place at all stages of the PLC, including the "Introduction" phase. For example, only six months after its launch in November 2001, Microsoft reduced the price of the xBox game console in North-America by about 30%.

### Strategy Application within the PLC Model

Planning which product planning and product marketing strategies to apply, and when, should be part of any long-term approach. Since there are so many diverse products, markets and companies, it is difficult to provide a definitive, single methodology for strategy selection and application.

However, some general guidelines can be followed to help ensure marketing mix effectiveness in promoting a PLC stage extension. Once a decision to extend a PLC stage has been made, the following elements must be factored into the planning:

- *The company's product line's business strategy - leader, follower, innovator.*
- *The company's marketing policies - soft or hard product launches, traditional choice of media vehicles, pricing policies, sales channels selection, etc.*



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- *External constraints* - government regulations, distribution networks, cultural barriers, politics, tariffs and taxes, etc.

Sometimes a certain strategy may seem applicable to all PLC stages. Price manipulation is an example of something that can be used at all stages of the PLC to help influence sales and serve as a flexible way to rapidly react to competition. The drawback of repeatedly applying a certain strategy or using several strategies at once is that it may confuse the consumers. Exercising any such combined approach should be well justified.

Below is a table noting the strategies considered most applicable to their respective PLC stage.

## Strategy Application within the PLC Model

<ul style="list-style-type: none"> <li>• Increasing Frequency of Use</li> <li>• Pricing</li> </ul>	<ul style="list-style-type: none"> <li>• Product Diversification</li> <li>• New Product Uses</li> <li>• Changing Product Layers</li> <li>• Pricing</li> </ul>	<ul style="list-style-type: none"> <li>• Re-Packaging</li> <li>• Co-Branding</li> <li>• Product Diversification</li> <li>• New Product Uses</li> <li>• Pricing</li> </ul>	<ul style="list-style-type: none"> <li>• Re-Branding</li> <li>• Re-Positioning</li> <li>• Increasing Frequency of Use</li> <li>• New Markets and Segments</li> <li>• Pricing</li> </ul>
<b>Introduction</b>	<b>Growth</b>	<b>Maturity</b>	<b>Decline</b>

## Limitations of the PLC Model

It is difficult to foresee transitions in PLC stages since the key indicators are sales which are always calculated with some lag. Therefore, the realization that a stage transition has occurred is nearly always in retrospect. In addition, fluctuations in sales will produce erroneous conclusions, therefore declining sales do not necessarily mean the product has reached the decline phase and the resulting conclusion to retire the product and divert resources is wrong.

Products, companies and markets are different; therefore not all products or services go through every stage of the PLC. There have been many cases where



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products have gone straight from introduction to decline, usually because of bad marketing, misconceived features, lack of value to the consumer or simply a lack of need for such a product. However, even if products would go through every stage of the PLC, not all products and services spend the same length of time at each stage. This adds another level of complexity in determining which PLC stage the product is in and consequently, which strategy to apply.

Finally, the *"PLC Model"* is inefficient when dealing with brands or services. *"Brand"* is an identity, made of symbols and ideas, which portray a specific offering from a known source. Brands apply to both companies and products. Brands have a life cycle of their own, and products belonging to a certain brand will experience a very different life cycle than the brand itself. For example, Dell and Mercedes-Benz are very strong brands whose life cycle is marginally affected by the failure of any of the products which they hold. Apple Computer's Lisa, Newton (market failures) and iMac (market success) are proof that brands and products have different PLC's although they are closely related. [v]

### Benefits of the PLC Model

Managers are always in need of predictive tools to help them navigate a seemingly chaotic market, and the *"PLC Model"* gives managers the ability to forecast product directions on a macro level, and plan for timely execution of relevant competitive moves.

Coupled with actual sales data, the *"PLC Model"* can also be used as an explanatory tool in facilitating an understanding of past and future sales progression. The *"PLC Model"* aids in making sense of past events as part of any extrapolatory and interpretive approach to building strategy. Once a product strategy or product line strategy has been formulated, the *"PLC Model"* can be used as part of an ongoing strategy validation process, since it reflects on market trends, customer issues and technological advancement.

Companies always anticipate the emergence of new competitors and therefore must prepare in advance to battle the competition and strengthen their product's position. The *"PLC Model"* is advantages in planning long-term offensive marketing strategies, particularly when markets and economies are stable. Nevertheless, most products die and once products are dead they hold no substantial revenue potential and represent a toll on a company's resources. By combining the elements of time, sales volume and notion of evolutionary stages,



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the “*PLC Model*” helps determine when it becomes reasonable to eliminate dead products.

### **Conclusion**

Keeping a product alive for decades is a sign of successful PLC extensions, and brand/product combinations such as Heinz Ketchup, Hershey Chocolate and Gillette's Safety Razor are clear indicators of such extensions. Through consistent PLC management, a company will be able to improve products and become a marketplace leader. The role of the product marketing department is to understand the Product Life Cycle theory and identify the critical PLC stages. This will aid the planning and execution of an effective marketing mix, designed to support business (revenue, profit) and marketing (market share, loyalty, growth) objectives.

The “*PLC Model*” can and has been effectively used by business managers to support decision-making at every stage of a product's life cycle. Although the “*PLC Model*” itself is subject to many interpretations with some advocates theorizing five or even six stages, it will always remain fairly flexible and adaptive to many product categories.

The “*PLC Model*” is yet another tool managers have when dealing with dynamic and complex situations that abound in the world of proactive product planning and product marketing.

### **References**

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<sup>i</sup> The BCG Growth Share Matrix Boston Consulting Group, <http://www.bcg.com/>

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<sup>iii</sup> Welcome to the digital lifestyle - Apple's Digital hub, <http://www.apple.com/amac/digitalhub.html>

<sup>iv</sup> Networking Wars: Is Novell Finally Finished?, By Robyn Weisman, <http://www.newsfactor.com/perl/story/17803.html>

<sup>v</sup> Product Life Cycle Management, AICPA, <http://www.aicpa.org/cefm/plcm/index.htm>

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**This article is part of the “*Market-Value Pricing™*” training seminar.**