



Business
LINK

Product life cycle

All products or services that your business offers will change throughout their life cycle. A product life cycle is the period that begins with the initial idea for the development of a product or service to the eventual withdrawal of that product from the market.

There are several stages involved in developing, selling and using a product. By better understanding them, you can increase the profitability, interest and demand for your product or service.

This guide explains the various stages involved in a life cycle. It also covers how you can increase your profits, generate increased interest, and the ideal time to start developing and bringing a new idea to the market. There's also information on life cycle analysis and understanding the environmental impact of your product throughout the different stages of its lifecycle.

What is a product life cycle?

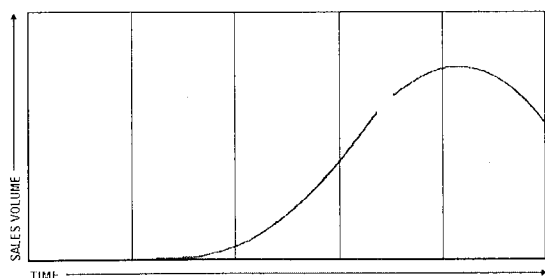
All products or services created or provided by your business have a life cycle. This is the period that runs from the initial idea and development of a product to its withdrawal from the market and beyond. Read about how to understand the impact of goods and services across their life cycle in our guide on sustainable goods and services - an overview.

Depending on the type of product or service you launch, the length of a product's life cycle will vary substantially. For example, a fashionable item may have a life cycle of only a few months, whereas an everyday item may have one lasting years.

A product's marketplace life cycle typically goes through the following main stages:

- **development** - the product or service is designed and physically created
- **introduction** - the product or service is launched and marketed to a small group of customers
- **growth and maturity** - the product or service is marketed to a wider audience and further iterations are produced
- **decline** - the product or service either comes to its natural end or is re-developed

To understand more about the levels of revenue generated at different stages of a product's life cycle, see our example product life cycle curve below.



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When developing a new product or service you should assess the following key points:

- **design** - how efficient the product is, how it can be produced and how it can be easily manufactured
- **materials** - how you can use the best or most cost effective materials to increase profit margins, improve the environmental impact of your product, or reduce financial risk
- **manufacture** - how to make the manufacturing process more efficient, or reduce costs
- **retail** - how to optimise costs incurred through packaging or transportation
- **use** - how you can make the product or service last longer in order to increase customer satisfaction
- **end of life** - how materials or ideas from your service or product can be recycled

You need to think about how each of these will affect the various areas of your profitability. For more information, see the page on how to understand the impact of goods and services across their lifecycle in our guide on sustainable goods and services - an overview.

Development stage of a product life cycle

Product development is the first stage of the product life cycle - only beginning when you have found and started to develop a new idea.

You may be an inventor who has already come up with a new product or service idea, and are ready to bring that idea to market. However, if you are a business that needs some help to regularly develop new ideas, you might want to partner with innovators, designers, university researchers or manufacturers to develop your ideas generation processes. Then you can work as a team to develop the idea.

Read our guide on how to support networks and facilities for innovation and R&D.

At the development stage of the product life cycle, you should ensure that your idea will meet:

- potential customer expectations
- design, resource and manufacturing requirements
- the strategy outlined in your business plan

You should plan for all the potential outcomes and risks in advance so you can analyse what is involved in the process. At this stage you should not be concerned about sales or introducing the product. Your main focus should be on

working with a team of designers, manufacturers or product development experts on:

- producing prototypes
- testing prototyped product
- sourcing and pricing materials
- intellectual property issues

To further develop your product, you should:

- consult team members on development plans
- speak to suppliers and other business associates
- communicate with customers about your plans
- consider the environmental impacts of your product - for more information, see the page on how to develop sustainable products and services in our guide on how to make your business more sustainable - an overview
- ask a group of potential customers to test your product and give feedback - you can use this to develop the product and, later in the product's life cycle, to market it

For more information, see the page on developing your ideas in our guide on how to develop new products and services.

When developing your product or service you need to establish the level of quality you are aiming for, and how many different versions you want to develop to generate interest at launch.

You should also ensure that all intellectual property rights - eg patents and trademarks - are obtained before you launch the product or service. Doing this protects you from other competitors copying the idea and hurrying through an alternative.

How you plan to distribute and sell your product may also determine how it is developed. For instance, if you plan to sell online, it may well be worth designing the product and its packaging so that it is small enough to fit through a customer's letterbox, so that customers don't miss out on deliveries when not at home.

Introduction stage of a product life cycle

The introduction stage of a product's life cycle is when you can build an awareness of your product or service in certain markets and develop a specific market.

Once your product or service is introduced to the market, you should focus on an intense marketing effort to establish a clear identity and promote your product.

You should concentrate on building a base for the product at the introduction stage, rather than making an immediate profit.

At the introduction stage, you should focus on the following marketing factors:

- pricing
- distribution
- promotion

Pricing

You should initially start pricing at the highest point you believe it is possible to achieve.

You can also consider a skimming price strategy: charging a relatively high price for a short time when a new, innovative, or much-improved product is launched onto a market. The objective with skimming is to skim off customers who are willing to pay more to be one of the first to have a new product. Prices can be lowered later when demand from the early adopters falls.

A penetration pricing strategy may work best for businesses entering a new market or building on a relatively small market share. It involves the setting of lower, rather than higher prices in order to achieve a large, if not dominant market share.

Distribution

Your distribution should be selective and limited to a specific type of consumer, until your product is accepted. Also, different distribution models should be considered during different periods of the product life cycle, eg new products for different seasons in a clothes shop.

Promotion

You should try to build brand awareness at an early stage. It is worth working with a brand design or communications agency as you develop a product to establish a strong brand.

You can use samples or trial incentives to capture early adopters of the product or service. Introductory promotions can also help convince potential resellers to carry your lines.

It is likely that at the introduction stage, your sales will be low until customers become aware of your product or your service's benefits. Due to the high cost of advertising and low sales, you may find that the product is producing negative profits at this stage. However, you should make up for this with increasing revenue generated at the growth and maturity stage of a product life cycle. For more information, see the page in this guide on product life cycles - growing and maturing a product.

Product life cycles - growing and maturing a product

At this point in your product's life cycle, you should be putting your efforts into increasing your product's market share and creating a brand preference for your customers.

This should be a period of rapid growth in both sales and profits for your product or service. Your profits should rise through an increase in output and more competitive pricing.

You should also consider the following:

- maintaining product quality and including additional features or support services for the product
- maintaining pricing to increase demand for the product
- increasing distribution channels to cope with additional demand

- aiming promotion at a wider audience

If your profits are still low, you could consider reducing the price of the product or service to increase the volume of sales.

Product maturity stage

If your product or service makes it to the maturity stage, this should be the longest part of its product life cycle.

At this point, the market has often reached saturation as a result of competitors releasing their own version of your product. You will notice your product or service experiences a decreasing rate of sales, which should eventually stabilise.

You should try to differentiate your product or service from others that your competitors offer. You can do this by focusing and highlighting any branding, trademarks, or customer testimonials that may give you an advantage.

You will probably notice the following trends at the product maturity stage:

- product features may have to be enhanced to make your product more appealing than competitors'
 - pricing may need to be lowered due to increased competition
 - distribution becomes more intensive and incentives may need to be offered
 - promotion will focus on the difference between existing products
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Product life cycles - decline stage

Due to factors such as technological advances, fashion, innovation or changing consumer tastes, the sales of most products will decline at some stage. You will know when your product reaches the decline stage of its life cycle because you will notice a significant downturn in the revenue it generates.

At this stage, you should consider the following options:

- maintaining the product in the hope that your other competitors will withdraw their versions before you, which may create an increase in demand again
- reducing your costs and finding another use for the product - entering into another niche area could increase profits
- reducing marketing support, 'harvesting' the product, coasting along until profits dry up and then discontinuing the product
- discontinuing the product when your profit disappears, or when you unveil a successor product

Some of these methods can form an 'extension strategy' that prolongs the life of your current product or service. This may give you enough time to create a new version, or an entirely new product. However, this strategy will only temporarily delay a product or service's decline.

By understanding the product life cycle of all of your products and services, you can ensure that at least one of your ventures is at growth or maturity stage, while another is in decline. By doing this you can guarantee a regular source of profit for all of your products.

Product life cycle checklist

By understanding the life cycle of your product or service, you can react to situations that arise within your business. Being organised and prepared for each stage gives you the opportunity to create maximum profitability. This checklist outlines the key points to consider throughout your product or service's life cycle.

Pre-development

- Have you got an initial idea for a product or service that you believe will be profitable?
- Who could you work with to generate new ideas and embed a research and development process?
- Consider how each stage of the product life cycle will practically affect the business and its profitability.
- What services of specialist professionals - eg designers, materials experts, retailers, customers and recycling experts - do you need to employ at different stages of your product development?
- Are you setting out to create a sustainable product or service with a closed loop life cycle?

Development stage

- Set key performance indicators and plan potential outcomes before developing your product or service and analyse any barriers to success and the risks involved in the whole product development and marketing process.
- Improve your development processes by getting help or feedback from team members, suppliers and business associates, or customers.
- Produce prototypes of products and work with designers, suppliers and manufacturers to ensure you have the correct pricing for the materials used.
- Sort out potential intellectual property issues, such as registering any relevant patents or copyrights.

Introducing your product

- Do you intend to launch with an intense marketing effort? Focusing on establishing a clear brand identity and connecting with the right partners can help you promote your product.
- Consider setting up consumer tests, or providing samples or trials to key target markets. Customer testimonials can increase your product or service's popularity.
- Price the product or service as high as you believe you can feasibly sell it, and to reflect the quality level you are providing.
- Try to limit the product or service to a specific type of consumer - being selective can boost demand.

Product growth - increasing profits

- Maintain quality and consider including additional features or support services for the product or service to grow your market share.
- Keep your pricing as high as is reasonable to keep demand and profits high.
- Increase distribution channels to cope with additional demand.
- Increase your promotion and marketing campaigns and aim them at a wider audience.
- Consider skimming product prices if your profits are too low.

Maturity stage

- Market saturation means you have to embrace some changes to your product,

service or prices.

- Update or improve the original version of your product or service to lure back existing customers and entice new ones.
- Consider lowering your prices to attract consumers from rival businesses.
- Use the difference between your product and others as a means of promotion.

Decline - end of product life

- Maintain the product or service and wait for competitors to withdraw from the market first.
 - Reduce costs and find another use for the product or service.
 - Harvest the product or service before discontinuing it.
 - Discontinue the product or service when your profit disappears, or when you unveil a successor.
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Here's how an understanding of the product life cycle has helped my business (Flash video)

Samantha Fernando

Keela International - Opens in a new window

Samantha's top tips:

- "Look to your users for their requirements, involve them in the beginning of the product lifecycle process so that the product will be successful in later stages."
 - "Use your product lifecycle to determine how to allocate your company's resources - the amount of research and marketing for each product will be decided by the perceived duration of that product's lifecycle."
 - "Ensure that resources in the development stage are not wasted in subsequent stages of introduction and growth - always match your efforts at every stage."
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Keela International is a technical outdoor clothing manufacturer based on the East Coast of Scotland that has been operating for over 30 years.

Here, Sales Director Samantha Fernando explains how an understanding of the product lifecycle has helped when developing new products.

- [Read transcript](#) - Opens in a new window
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