

Inventing for profit

A guide to commercialising your idea

VITAL INFORMATION

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Each year, thousands of new consumer products are introduced to the marketplace, many of them developed by individual inventors and small firms.

Innovate Design has written this guide to introduce the ways entrepreneurs can make money from a new idea or invention. It begins by looking at how to protect your idea, explains the concept development process, and explores the different routes to financially benefit from your product.

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"Design is not just what it looks like and feels like. **Design is how it works.**"

Steve Jobs - Co-Founder of Apple Inc.

What category does your idea fall into?

Depending on the category of your product idea, there are different approaches to protecting, designing and commercialising your idea. There are tailored services to help bring ideas to life.













Further Reading

Innovate have compiled further useful information on the categories above which are available on request.

Available forms of protection

Patent

A patent protects the functionality of the product in terms of how it works and its application. Once granted, the patent gives the owner the right to prevent others from producing, importing or selling their invention, within a geographical jurisdiction, without prior permission.

Registered Design

A registered design protects an exclusive right for the outward appearance of a product or part of it. It gives the owner the right to stop anyone copying the external design of their product, within a geographical jurisdiction. In some countries they are referred to as design patents.

Copyright



Copyright protects many types of creative works, such as music, books, drawings, paintings, computer software and films. It is an automatic right and in Europe no official form of protection needs to be filed for to obtain copyright on your work.

Trademark

TM

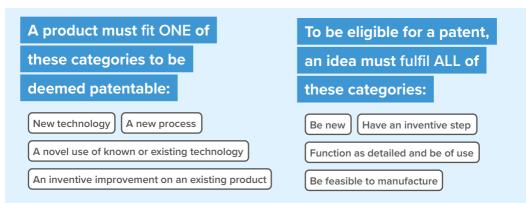
A trademark protects a word, symbol or logo for a 'class' of goods or services. Unlike registered designs and patents, trademark protection is renewable indefinitely. Registration can be applied for even after the image has appeared on the market.

The best method of protection depends on each individual product



What is a patent?

Patents primarily protect new product ideas that are globally original. They protect their functionality: **how they work, what they do** and **how they do it**. A patent allows the owner to prevent anyone else from producing, importing or selling their invention in the geographical jurisdiction of the patent or patents that they hold.



Your invention must NOT be:

A scientific or mathematical discovery, theory or method

A literary, dramatic, musical or artistic work

A way of performing a mental act

A business method or strategy

A way of playing a game

The presentation of information

A computer programme

A method of medical treatment or diagnosis

Against public morality or law

There are 4 main parts to a patent application:

The Abstract — a short synopsis of the application.

The Description — a detailed description of how the invention works including background information relating to other relevant patents, such as found in the worldwide patent search.

The Figures — a pictorial representation of your invention to support the wording of the patent.

The Claims — what you are claiming as unique about your concept; this is the most important part of the application and is the part the patent examiners will use to determine whether your patent will be granted.

How much does a patent application cost?

A patent application is a legal and technically complex document. Although you are not legally obliged to use a trained professional to write the application, it is advisable as the wording of the application is of the utmost importance.

Different options available to start the process.

- You can attempt to draft an application yourself which will mean just Option a) paying Patent Office fees.
- Option b) Use a professional patent drafter for an initial application for around £1,300 – start the process and obtain 'Patent Pending' status.
- Option c) Use a patent attorney to obtain a patent – The Intellectual Property Office indicate costs of typically £4,000 and the process can take approximately 5 years.

Patent Office fees can vary dependent on your choice of geographical jurisdiction and how you choose to apply. The UK application fee is £400 if you use the available 12 months in which to make payment to the UK Intellectual Property Office (UKIPO). You have 12 months in which to apply to other countries, should you wish to and if industry feedback is favourable; these additional applications will also have their own individual fees.

In the UK from the fourth year following the patent application filing date, there are annual renewal fees. These start off small and rise annually by small increments until the 20th year in which your patent expires. Patents typically last a maximum of 20 vears.

Why do a patent search first?

This is because the idea must be globally unique to be granted in most countries. It is considered a prudent first step before investing further time and money on the idea to complete a worldwide patent search.

- · You will be able to see previously published applications for inventions that might be important.
- The results of a patent search will guide you on how best to draft your patent application. For example, your idea may be an improvement on an existing idea, in which case your patent application can focus on this improvement.
- It will also help inform you how to develop the concept into an original product.

Patent timeline

An overview of a design led approach to the patent process in the UK.

Convention year

12 months from filing date to explore feedback and development options whilst claiming 'patent pending'.

Where required file 'follow on' patent applications claiming prior filing date for shared material within prior filing.

Formalise and finalise patent application using patent attorney when you have received positive commercial feedback.

Search must be in progress within first 12 months.

Before paying for PCT/foreign applications, review search results from the UKIPO.

Registered design applications can be filed at any point to protect visual appearance but will publish immediately.

See UKIPO website for specific information.

Worldwide Patent Search

It is highly recommended to complete an initial worldwide patent search before drafting a patent application.

Filing date

Initial patent application

Draft and file a technical specification containing a description of the concept. This will give you a priority date and 'patent pending' over any matter described within the application.

3 - 6 months from filing date

Official Search and Examination

Request combined Official Search and Examination. The UKIPO can take up to 6 months to complete this, at which point you will need to respond to argue the patentability of your claims.

12 months from filing date

End of Convention Year

By this point, you must have applied for any foreign filings or PCT.

18 months from filing date

Application publishes

Application is published into the public domain.

Use confidentiality agreements until your application publishes.

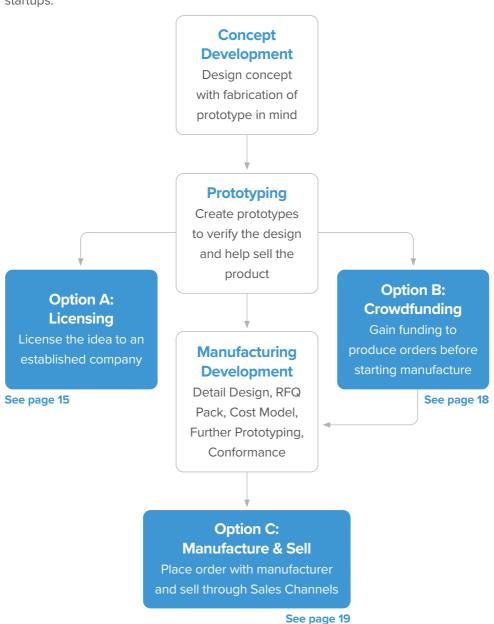
1 - 4 years from filing date

Patent granted

You now have the ability to own a 20 year monopoly over your invention.

New Product Development (NPD)

The flowchart bellow illustrates the stages typically involved for individuals and startups.

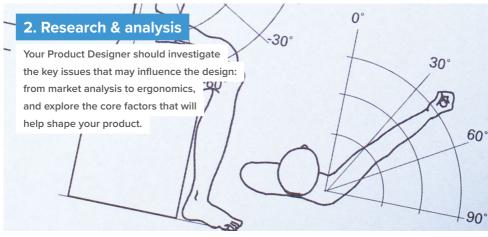


Concept Development process

Creating new products requires the specialist skills of a Product Design Engineer. They have an in-depth knowledge of materials, manufacturing methods, functionality and aesthetic form. The Concept Development process will help to resolve principal technical issues of the idea. Three key reasons for the process:

- Further define the intellectual property to strengthen your patent application.
- Provide consideration for how to build a prototype.
- Creation of presentation material to inspire confidence in the idea.





3. Preliminary sketches

Work with your Product Designer to produce a suitable concept design. They will present an interim design for your review.



4. CAD development

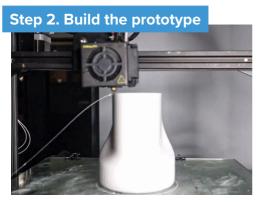
Your Product Designer will create a 3D Computer Aided Design (CAD) virtual model. This model is used for visualisation and the production of a prototype in a future stage.



Prototyping your concept



Before you can build a prototype, you need to plan what to make. Think about what the prototype will be used for and save money by making it as simple as possible. Design your prototype using 2d sketches and 3d models. Define the materials and dimensions.



Prototypes are built using fast to setup machines like 3d printers and laser cutters. These machines are cost effective for small volumes but usually too expensive for the final product.



Test your prototype to find out whether it meets the requirements of your customers. If you're happy with the performance, you're ready to progress the design further.

Types of Prototype

Prototypes range in price depending on how refined they are. Choosing the right prototype can help you save money by avoiding unnecessary details.



A Functional Prototype focuses on how the prototype functions with less attention to visual appearance. Use a Functional Prototype to confirm your customers are happy with the design.

Barry Jenkins, Fuel the Adventure founder, used a Functional Prototype we made to verify his design's electrical system worked.

Form & Function Prototype



A Form and Function Prototype communicates the design's style and features but has not yet been refined for manufacture. It can help you raise money from investors or on crowdfunding sites like Kickstarter.

Cocktail drinks dispenser, MyBar, used the prototype we built to raise over £20,000 on Kickstarter.





Check your manufacture ready design functions correctly before placing large orders. Include manufacturing details and use production-type materials if possible.

Tara Lalvani, the founder of Beautifect, asked us to make a Pre-production Prototype of her make-up case to check the design before committing to her first production order.

Mobile Phone App

These days mobiles account for around half of all world internet traffic! This has created a huge market for new apps with mobile apps expected to generate around \$200billion in 2022. There is tough competition in the field but with the right approach it is possible to tap into the success the market is having.



Mobile App Prototype

A cost-effective technique when developing a new app idea is to visualise the app early on, which can include mocking up a basic visual prototype. A visual prototype of the app allows innovators to finalise their concept and plan out the functionality and user journey through the app. These prototypes do not have the full functionality of the final app but cost a lot less to develop. You can use this basic prototype to gain feedback on the idea and find investment for further development. It will be used as the framework to develop the software in App Development.

Mobile App Development

In app development, the fully working version of the app can be developed ready to launch. This gives you time to find any bugs which may still remain in the app. It's important to remember that app projects are an ongoing process. It is generally a good idea to start simple, launch soon and keep improving as you gain insights from your customers.

Routes to market

There are three main ways to make money from an idea; Licensing, Crowdfunding and/or Self Manufacture.

Option A: Licensing

A licensing agreement for a new product idea is a contract between yourself, as the inventor, and the manufacturer to manufacture, distribute and advertise your product as their own while you receive royalty payments.

The agreement contains several terms and conditions dependent on those negotiated between you and the individual company or companies. These terms can include the length of the contract, the exclusivity of the contract, the royalties' structure and details of their intellectual property involvement.

The inventor receives a percentage of the profits as their reward. Sometimes an upfront lump sum is provided and other times the inventor receives set bonuses at certain sales targets. These types of additional payment will be dependent on the type of contract drawn up between you and the company or companies. Regardless of this, most deals will include a minimum payment that the company must make to the inventor, regardless of sales.

PROS:

- Total investment for production, and therefore total risk is provided by the company or companies to whom you are licensing your product.
- Licensing to an expert in the industry means that a company with the relevant networks and means already in place can get your product to market more quickly and successfully than if you took on the manufacturing, distribution, sales and marketing yourself.
- Minimum capital outlay.

CONS:

- Although you receive royalties, the return you make per unit sold will be a lot less than if you manufactured the product yourself.
- · It is often difficult to acquire licensing deals: you have to undertake a significant amount of background work in order to professionally present the idea to industry.

The likelihood of success and the financial rewards are often greater if more work has been completed by the inventor, prior to meeting with industry. Developed products always appear more attractive to potential manufacturers.

There are 3 main types of license:

An exclusive license: whereby only one company has the rights to produce your product.

A sole license: whereby only one company and yourself have the rights to produce your product.

A non-exclusive license: whereby any number of companies and yourself can produce your product.

A license agreement should typically address:

Exclusivity and Scope

- Duration and termination of the contract
- · Standard terms: breach and insolvency
- · Other termination rights: non-payment, failure to exploit, challenging the patent
- The geographical area covered by the agreement

Obligations to exploit (to stop a licensee from 'sitting' on an idea)

- · Minimum royalties
- · Contractual commitments
- Break clauses
- Consequences: termination / conversion to a non-exclusive license

Royalty structures

- · Running royalties, signing fees, milestones
- Are the royalties payable on net sales value of products sold?
- Does it include VAT / tax?
- Is it calculated as a percentage or fixed amount?

Patent Enforcement

- · Who is responsible for enforcing the patent?
- · Who will bear the costs?

Each licensing deal is unique and depends on the perceived value of the invention and its stage of development. Below is a very rough approximation of the royalty payment paid to the inventor at the different stages.

Idea only

0.5 - 1% of production price (very hard to license)

Product design + Patent pending / granted

3 - 4% of production price

Product design + Prototype + Patent pending / granted

4 - 10% of production price



Option B. Crowdfunding

Crowdfunding offers a relatively new and exciting way to launch your product. Crowdfunding platforms such as Kickstarter and Indiegogo give entrepreneurs the opportunity to raise money which can help pay for production. With crowdfunding, rather than "selling" a product and a customer "buying" it, you offer "rewards" in exchange for "pledges" from supporters of the project. For example, you could offer an early release version of your product in return for a monetary pledge which would cover the cost to make the product and a contribution towards any setup costs, i.e. you receive the money in advance to fund the manufacturing production costs.

How it works

On some crowdfunding platforms, you set a target amount of money that must be raised for the project to go ahead. If this amount is reached within a set time, then the campaign's creators receive the money and those who pledged are charged. It is then up to the campaign creators to start production and deliver the products which they promised in return for their pledges.

Benefits

In a commercial world where retailers will sometimes require 90 day invoicing (they pay you 90 days after receipt of your stock!), crowdfunding can be an exciting option for new products.

If your crowdfunding campaign is successful it gives you a strong position when negotiating with buyers. You can expect lots of direct feedback from the crowdfunding community which can help to make your product even better.

Typical requirements

- A fully functioning prototype
- Presentation material
- Video demonstrating the product
- Public relations to attract people's attention to your particular campaign

Option C: Manufacture & sell

Even if you are looking to manufacture the product yourself it is still important to develop presentation material for the purpose of gaining investment or interest from industry to secure deals. It is also necessary to have CAD (Computer Aided Designs) developed before looking to prototype.

By choosing to take on the project yourself you would be responsible for the manufacture, distribution and advertising of your product. There are lots of different options involved within this: whether you choose to manufacture abroad or in the UK; whether you distribute through your own retail outlet or through a distribution or fulfilment centre; whether to choose press releases, editorial, or media channels to advertise. A lot of these choices will be based on investment means and finances.

Although this process requires you to find the funds to pay for production there are numerous ways to obtain investment for your project to help move it forward, whether this be through venture capitalists, business loans or grant funding.

PROS:

- Receiving 100% of the profits.
- Having total control over the venture and its exploitation.

CONS:

- There is a larger element of risk when taking on a project yourself.
- It can often take some time to get to market
- High capital outlay.

Combining options

You do not have to definitively choose between these avenues for progressing your project. It is possible to change path at any point and sometimes even combine these options.

However, before you think about choosing the right path for you it is important to show that you have invested a small amount in the project yourself to professionally develop the idea.

Case Study: Rouleau

Inventor: Anne Sophie, www.rodolflerouleau.com

Successfully Crowdfunded

The product is a rolling pin that contains the essential kitchen utensils, making it perfect for small kitchens and camping holidays. Innovate helped Anne Sophie develop the design and build a prototype. The project raised over £20k through crowdfunding which enabled her to start production.

"I loved collaboraitng with Innovate" — Anne Sophie



Early design work by Innovate



The final product in production

Case Study: Den

Inventor: Yasser Khattak

Investment of £2.2 million

The world's first self-actuating smart switches. Innovate conducted a patent search, created presentation material and helped Yasser with his initial patent application. Since then Yasser successfully raised more than £2.2 million through crowdfunding.



Product sales

Once you have product stock, there are many ways you can sell it. They all vary in terms of potential sales volumes and the amount of margin you must give away to third parties. The sales channel best for you will depend on the type of product you have developed. Generally speaking, Party Plans and Ecommerce web shops can be a low-cost way to start selling.

Sales channels

Distribution (Wholesale)

Selling into retail shops via distributors. Examples: Argos, Boots, Lakeland

E-commerce

Sell through your own website or online marketplaces

Examples: Amazon, Ebay

Catalogues

Add your product to a collection of other products.

Examples: Airlines, ferries

Shopping Channel Sales

Demonstrate your product on shopping channels to win orders.

Example: QVC

Party Plan

Organise a get-together where customers can try the product and place orders. Great for feedback.

Example: Ann Summer's, Tupperware parties.

The Retail Supply Chain



Case study: BoginaBag®

Creator: Kate Castle, www.boginabag.com

As seen on **Dragon' Den**

BoginaBag is a unique portable toilet which is lightweight and extremely robust. It provides the owner with a solution to that age-old question of needing to go and having nowhere to go!

Kate Castle's idea for BoginaBag® came to her when she was desperate for a toilet in the middle of the night whilst camping and couldn't face walking across a dark campsite to the toilet block.

Kate approached Innovate for advice on how to bring her product to market. Innovate Product Design created concept development presentation material which helped her win £50,000 investment from Theo Paphitis on Dragons Den.

"I was very pleased with the final product design and the presentation boards that were produced." — Kate Castle



Kate Castle and her product

Product and carry bag together

About Innovate Product Design

Innovate is comprised of award-winning design engineers, researchers, business development professionals and Intellectual Property experts, with experience in all areas of IP, product design and manufacture. We provide a complete service from protecting your product, through design and prototyping, to advice on marketing. With in-house expertise, we can take your idea from paper to product, providing you with the best chance of success at market.

66 Innovate helped me to bring my idea to life, by taking my very own homemade model, made from sticky tape, foam pads, bits of plastic and stainless steel, transforming it into an impressive marketable product made from a special type of nylon. This enabled me to show my product to potential customers with total confidence for the first time. Looking back at the Topster journey, working with Innovate and making a prototype was, without doubt, one of the best decisions I ever made. 97

Steve Thomas, Topster[™] | www.topster.co.uk

⁶⁶It was a huge relief to meet a company that was able to translate my ideas into reality, in a practical and cost-effective way. The process felt quite low risk, I gained some sound business advice and it was great to have our initial meeting surrounded by examples of their previous clients successes⁹⁹

Sian Ellingworth, Buddies | www.buddiestoothpaste.com

⁶⁶Sourced the team through the internet and wanted to visit your office as quickly as I could , I was blown away with the knowledge and enthusiasm the team had, they got my idea straight away and probably exceeded my expectations in the design that was delivered.⁹⁹

Mike Leslie, Tub It Safely | www.tubitsafely.com



Our Services

Protection

Patent advice | Intellectual Property (IP) advice

Worldwide patent search | Patent drafting

Concept Development

Product design | Design engineering

Design for manufacture | Mobile Applications

Prototyping

Proof of concept | Functional | Production

Business & Marketing

Promotional website design | Logo design

Packaging design | Crowdfunding

Business advice Business start-up advice

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