YOUR FIRST PRODUCT

How to Leverage the Power of the Internet to Create and Sell Your Own Physical Products

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CHAPTER 1

WHY CREATE PHYSICAL PRODUCTS

Chapter 1: Why Create Physical Products

There are many attractive reasons to work online. There's the freedom, there's the potential for big earnings and there's the sense of satisfaction that comes from *choosing* what kind of business you want to run.

But for some of us, the biggest draw of making money online is that sense of accomplishment. We love being able to tell people we're 'entrepreneurs' and we get a thrill out of earning a living on the back of our own ingenuity alone. But perhaps you're getting to the point where that isn't quite enough? Because sometimes, selling digital products and running blogs can start to feel a little empty… while you might be creating value, at the end of the day you're still just selling ideas and text and nobody actually gets anything physical to hold at the end of the day.

When you tell someone you're an entrepreneur, what springs to mind? Most likely, they'll imagine that you're an eccentric inventor – someone who comes up with gadgets, gizmos, ideas and more and then uses those to make people's lives better and make a bit of money on the side. We think about people like Arthur Fry – the inventor of post-it notes.

When you say: 'nah, I run a website', you can almost hear them deflate with disappointment. Oh, *that* kind of entrepreneur…

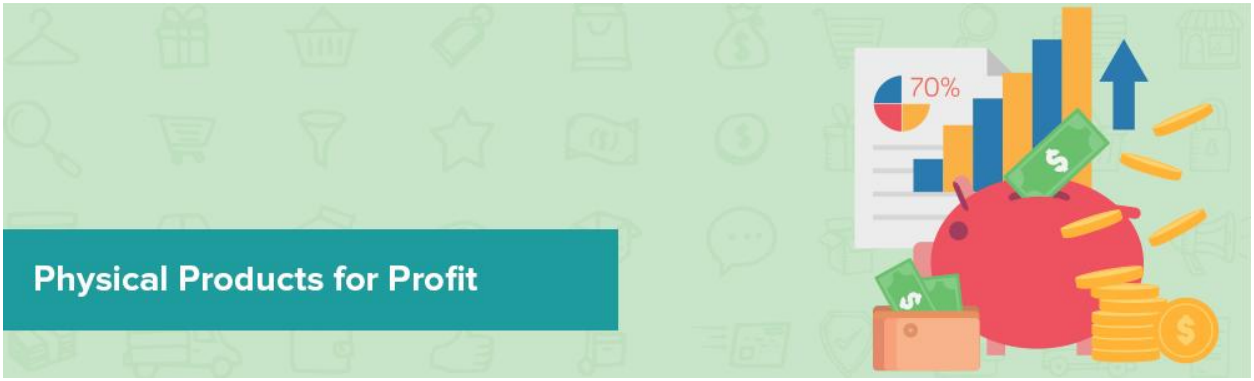
Make no mistake – making money online is a fantastic way to earn cash while enjoying the lifestyle you want. And it's incredibly skilled, talented and impressive if you can do it.

But at the end of the day, it's not *quite* as exciting as creating a genuine, physical product.

Imagine being able to hold something in your hands that you dreamed up. Imagine being able to use it as part of your routine. And imagine visiting a Big Box store and seeing your product there on the shelf…

Imagine your product taking off and becoming incredibly popular. Imagine walking down the street and seeing lots of people using your item.

With a physical product you can quite genuinely change the world and make a *much* bigger impact than you can with an ebook.



Physical Products for Profit

But it's not *just* about the noble cause of getting to feel that sense of accomplishment. Making a physical product also makes a lot of sense in terms of money.

That's because physical products are still where it's at when it comes to revenue and that's not likely to change any time soon.

For starters, physical products have a *much* wider appeal and can sell to a significantly bigger audience. Even through ecommerce, physical products sell significantly more than digital products. Why? Partly it's just because people like to hold something in their hands when they've spent money. Have you ever bought a digital product online and then felt immediately empty? As though you haven't really gotten anything worthwhile for your money?

Now imagine trying to sell an ebook to people on the street. How many people would be likely to go for it? Or even be interested?

A lot of people would *never* buy an ebook and certainly not one on making money online. In fact, the vast majority of people would never consider that. They're not getting anything tangible that they couldn't find for free online, they don't like reading books on their computers and they're not interested in working online.

Compare that with a physical product though and you now have something with obvious value to a large audience. If it's the right price, then there's a chance anyone who passes on the street will be interested.

Imagine just *showing* your Grandparents what you make for a living. Show them a book you wrote on the computer and you'll get an unenthusiastic 'that's nice dear' if you're lucky. Show them that you've made your own toy, gadget or item of clothing though and you'll have genuine interest.

That's the difference with a physical product.

And then you have the ability to scale. The most scaling you can do with a digital product is to get it on JVZoo or another affiliate marketing platform. That way, you can get countless other marketers helping you to promote your product in exchange for commission. That's good – but it's not quite as good as having millions of units selling through countless high street stores around the world…

Why Now is the Best Time

So with all this in mind, why is it that most people don't create their own physical products? Why is it that most people will settle for ebooks or just placing ads on a website?

The answer is simple: they think that creating a physical product is beyond them.

The assumption here is that companies like Apple, Microsoft, Hasbro, Ikea, Nike… They make the physical products because they're the huge, multinational corporations. They have

manufacturing plants, patents, shipping deals, huge amounts of marketing and more – and they poor billions into market resource, focus groups, R&D and more.

So how can one person do all that? How can you possibly compete?

Well, that's where things are changing. And that's where all this gets very exciting.

Because right now, it's actually *incredibly* easy to create and sell your own digital product. If you're willing to make something simple, then there are options that will allow you to start selling physical products from your website today.

But I'm not just talking about those simple ideas. I'm also talking about the ambitious ones. Want to make your own smartwatch? Well you can do! Want to make some kind of device for opening jam jars and sell it from major stores?

Again, you have that option.

It takes a *little* bit of work – and that's why I recommend creating an online business first and using that to bootstrap yourself (although we'll see how you can avoid the need for doing that too).

Ultimately though, the web is the 'great equalizer' and has closed the gap in many ways when it comes to creating hardware. It's now more possible than ever to not only do all this but to do it from the comfort of your home without ever stepping foot outside. You can outsource your manufacturing, you can outsource your shipping and storage and you can do all your marketing and selling through the web.

Today, just one person can have the same kind of impact with a physical product that a large company can. And it's only going to move more and more in this direction in future. And actually, that's an incredible thing.

There is a genuine hardware revolution occurring right now. Are you going to get involved?

CHAPTER 2

SOME VERY EASY WAYS TO GET SIMPLE PRODUCTS OFF THE GROUND

Chapter 2: Some Very Easy Ways to Get Simple Products Off the Ground

This book is going to tackle everything you ned to know about coming up with an idea and then taking this all the way to market and manufacturing/selling it.

But before we get into the technical and ambitious stuff, let's start out by looking at the easy stuff. If you want to create a physical product to sell from an existing website – just to gain some additional profits and perhaps strengthen your brand (it always looks very 'professional' when you have your own physical products), then there are ways you can do that right now without having to learn a ton of new skills or invest any cash.

Let's take a look at some ways you can dip one toe tentatively into the world of physical products.

Physical Books

One of the easiest ways to start selling products is to sell physical books. If you're already selling a digital product such as an ebook, then it's only a small transition to start selling a hard copy of that book. And actually, this is *incredibly* easy to do.

If you already have the file, then all you need to do is to take that file and upload it to either Lulu (www.lulu.com) or Amazon's publishing service. This is called 'Print On Demand' (POD) and it essentially means that you're printing out your physical books every time someone orders one.

Normally, if you were going to self-publish a book, then you would have to order thousands of copies of the book to keep in a warehouse. This would involve a large up-front investment and

you'd then have to sell all those copies at a profit to make any money. That would mean going to retailers and generally it's a lot of work that led to a lot of people crashing and burning over the years. Alternatively, you could try and find a publisher, which would mean going via an agent – and this would usually lead to years of rejections before you got a deal. Even *Harry Potter* was rejected by several publishers before it found one!

With POD though, you simply upload the files to a machine that's capable of printing out the books. When someone orders your book (or you do), the printer simply makes a new copy ready to sell. There's no up-front investment and no risk of losing a profit. And the only overheads are the printing costs (which are very small) and whatever you paid for designing a cover etc.

Custom Gifts

There are plenty of sites on the web that allow you to create items with your brand printing on them. These include sites like Vista Print (www.vistaprint.com) and like Spreadshirt (www.spreadshirt.com). Using these sites, you can start selling printed t-shirts or printed mugs, caps, mousemats and more – and all of them will look highly professional without any work on your part.

Like POD, these print each time items are ordered, which means you'll never end up with a ton of stock on your hands! You can't create anything particularly inventive but if you just want to get a physical product on your website, it's another easy way to do it. What's more, is that this route is ideal for strengthening your brand. By giving or selling items with your logo printed on them, you increase the sense of loyalty your customers have as they feel proud to brandish your

brand. What's more, every time someone uses your custom mug or cap in public, more people will see your logo!

And some people actually manage to make quite a lot of money by selling t-shirts with funny slogans on them etc.

Crafts

And guess what… there is one more way you can quickly start selling. It's pretty retro but it works!

That method? Simply start making things by hand and selling them online. If you watch *The Big Bang Theory*, then you might remember the 'Penny Blossom' episode where Penny creates lots of small paper flowers and sells them online. She ends up creating a human assembly line and minimizing her overheads and the result is that she's able to generate a good profit for a day's work.

You can do the exact same thing, with a website to sell your product and something you can relatively easily mass produce, you have all the basics you need for an easy online business. This is made even easier by the fact that you can also promote your products on sites like Etsy (www.etsy.com) or eBay (www.ebay.com).

There's also no reason that your items have to be mass produced at all. If you are a creative type and you have a particular skill or craft that you can sell, then you can just as easily make money selling portraits on eBay, caricatures, home-made jewelry or even artwork. My sister left art college with no job lined up and became a sales-person. That wasn't exactly what she wanted

but it doesn't matter to her because her real passion comes from making stunning artwork and selling it on eBay. What's more is that this makes her a very nice little profit on the side!

Drop Shipping

Finally, why not have someone else design and manufacture the products – even handle the fulfilment – and you just put your logo on it? As it happens, that's actually a thing! And it's called 'drop shipping'. This is a white label service, meaning no one will ever know the other company is involved. The only difficulty is finding companies that offer this. Try WorldWideBrands (www.worldwidebrands.com) or Alibabab (www.alibaba.com) to find companies that do.

CHAPTER 3

ONE MORE EASY OPTION - 3D PRINTING

Chapter 3: One More Easy Option - 3D Printing

One more easy option that is now starting to take advantage of modern technology is 3D printing. 3D printing is basically like any other kind of printing, except that instead of printing onto paper, you're now printing actual 3D objects!

These objects can be made from plastic, metal, wood, china and more and all you need is the raw material (which will often come in the shape of a thin tube) and a 3D file called a CAD file (computer aided design). The file provides the 3D printer with the detailed instructions for how to produce the item and the printer then goes about melting the material and drawing it one layer at a time. As it does this, it slowly builds the solid object up from the ground.

What this means is that as long as your product is relatively simple, you can 'print' it from nothing with no need for any complex manufacturing or assembly. There are websites you can do this from, such as Shapeways (www.shapeways.com) for example. To use Shapeways, you simply need to send your CAD file away and then choose your material. This way you can make literally anything you can think of. And of course if your product has more than one part, or if it uses more than one material, then you can just attach those two materials or two colors yourself by hand as the last stage of production.

Shapeways in particular has actually come on a long way. Today it has more options such as drone parts and even allows you to open your own store right there on the site to begin selling. You can also browse what other people have made.

The other good news? It's actually possible to buy 3D printers for your own home. These aren't particularly cheap and the amount you'll spend really depends on what it is you want. The products range from things like Formlabs Form 2 (for several K) to CHINA A8 for just over $100-$200. If you're going to be making tiny, plastic toys then these cheap desktop 3D printers are probably enough. If you want to run a full business, then investing in a larger printer becomes necessary.

If you're looking for a selection of 3D printers, then perhaps the best place to start is with Makerbot. This is a brand that makes a wide range of printers, all of which get great reviews and should be more than up to whatever challenges you throw at them. Visit www.makerbot.com.

Once again, with a simple tool like this and perhaps an ecommerce store on your website, you can then start selling simple 3D products from your site. That might mean things like phone cases, tablet stands, keyrings, toys/figurines, desk caddies and more. You can then simply print out each order as it comes in and send it off for a considerable profit.

The phone case business model is in fact a very popular one and one that a lot of people make a lot of money from.

How to Get Started With 3D Modelling: Rhinoceros 3D

Before this can be a viable business model for you though, you're first going to need to learn how to create those 3D CAD files. This basically just means using a piece of software, just as you would use Photoshop to create a professional image.

The good news? There is plenty of free software to use out there and lots of cheap software as well. One great option is Rhinoceros or 'Rhino 3D' (www.rhino3d.com) and another is 'Blender' (www.blender.org). Let's take a look at how you would get started with Rhino 3D and what you learn here should be relatively easy to apply to your CAD software of choice. What you're left with will be a file that you can then either send to Shapeways for printing or print out at a 3D printer at home.

You’re going to need these skills later on too – when it comes to prototyping and even manufacturing. So even if your business model isn’t going to be selling 3D printed products, I highly recommend that you give this a go. And there’s a real thrill that comes from creating a model and then receiving the finished article in the post…

When You Load Up

When you load up Rhinoceros 3D you will be greeted first by the option to select a template which will allow you to pick the rough scale you want to work with. Decide on whether the item you're going to be designing would be served better by being measured in centimeters or millimeters and then choose appropriately. Note however that once you begin you can go to View > Grid Options to change this specifically and to set the distance between squares on your grid. This is very useful if you are prototyping because it lets you create images of a specific size accurately and conveniently.

Now you will be greeted by four panels which give you your top view, front view, right view and 'perspective view'. The first three are schematic views allowing you to precisely measure the shape of images, while the top right one allows you to rotate your image around in 3D. If you want to see what it would look like as a solid object then select this view and then click 'render' or 'shade' for a preview of what it would look like. By clicking on layer you can meanwhile edit the materials and the colors that your object use an even set textures in order to make your item look like a real 3D object rather than a block of dough.

Getting Started

Now to get started you will probably want to select one view to work in. You can double click the title of any view to expand it to fill the whole screen and click again to switch to the four plane view.

Now you will begin to draw onto the grid and you can do this by drawing individual lines, shapes or 3D objects by selecting the tool from the left toolbars or from along the top. Drawing individual lines gives you the most control, and to use this you should select 'near' (a check box down the bottom of the screen) so that the lines start and finish in the same place when you want them to

(otherwise you can have minute gaps between lines which is very frustrating when you try to join them) and hold 'shift' while dragging if you want your line to be completely straight.

Going 3D...

Draw yourself a box or a triangle or whatever to start with and now you will want to make that a 3-Dimensional objet. To do this you have several objects. First select all the lines and click 'combine' down the left (it looks like a jigsaw piece) and that will become a flat outline. Now to pull that outline upwards to create a box or a sheathe click 'extrude planar surface' and then click on your new shape to drag it up or down along the Y-axis. This object will be hollow, so to close it off click 'cap planar holes' to turn it into a box or pyramid.

Another option is to simply change views and to draw the other sides going up and along the top manually – as long as you connect them all you can then choose combine again and then Surface > Curve Network in order to turn those lines into another box or pyramid – but remember to use cap again as well.

Finally, if you want to use one of Rhino's fancier abilities, try selecting your shape and then typing 'revolve' into the command box (you can learn a lot of functions by playing around in here). Now draw the line along which you want to revolve your object and then choose the degrees. Type 360 degrees and you will make a tube out of your shape – which is how you make things like vases, cups and cylinders.

Play around and make a few shapes, and then drag them to overlap (making sure they are solid shapes and not just outlines) because selecting 'Boolean Union' to combine those two shapes into one shape. And with just this basic knowledge you can pretty much get started...

CHAPTER 4

IDEAS AND INTELLECTUAL PROPERTY

Chapter 4: Ideas and Intellectual Property

Okay, so we've had some fun with hand crafted products and 3D printed products. Some people will be happy to stop there and make a living selling those kinds of items.

But if you really want to take the world by storm, you're going to need to create something more unique and you're going to need to mass-manufacture it in big enough quantities so that you can get it into stores and generally start making lots of money from it.

So where do we start?

Of course we start with the idea.

This is going to be the hard part for some people and it's what will often be the stumbling block. To create something that will be successful, you need a unique idea with a 'USP' (unique selling point). You're probably not going to be able to compete with the big businesses on price or marketing, so you need to come up with something original *or* you need to use savvy marketing.

To come up with something original, you should still try to think about the 'buyer persona' – the person that you're targeting with your items. What markets do you have good access to? What channels can you utilize to get your items out there into the real world? Once you know this, you can start to think about what *category* of product you want to create.

And it's always best to 'create what you know'. In other words, fitness products are best designed by the genuine 'fitness freaks' of the world!

From there, try to think about your own 'pain points'. Think about common frustrations or irritations you have and then think about how you're going to solve them in a unique way. This is called 'scratching your own itch'.

Other ways you can try to come up with new ideas in a given niche is to try combining two previous successful products. Alternatively, think about something really cool that everyone undoubtedly wants but isn't possible just yet – and then try to find out what the closest thing to that is that you could make.

But if none of this works, then you *can* go the route of creating a tried and tested product and there's actually nothing wrong with this approach. If you have a dedicated audience on your website, or if you are able to source your products cheaply… then you can simply market yourself and sell something with your unique design, or your unique logos etc.

Designing Your Product

Coming up with just an idea though is not enough. What you *also* need to come up with is an actual product – as in you need to know how that idea is going to work and

Design Engineering

Once you've done your design on paper, you then need to think about how it will actually operate and how you'll be able to produce it. Enter: design engineering. Design engineering is perhaps best explained as being the nexus where design and engineering collide. In other words, this is where the line becomes blurred between form and function and where engineering decisions are going to start directly impacting on the user experience and the functionality of the process.

Industrial designers will often be responsible for the aesthetic and ergonomic aspects of a design, whereas the design engineer will then work with the engineers and designers to create a much more detailed set of designs outlining how all this will work.

If you imagine any new product, then it's easy to see why there would need to be back and forth between the designers and the engineers. Imagine for instance a new computer – the design team might have an idea for how this should look and interact with the user, but they are going to be limited by the electronic engineers who know how large the components are going to be, how hot the device is going to get etc.

The Engineering Design Process

Design engineering will often follow the 'engineering design process' which consists of several steps.

First will come research which involves looking at the literature and research as it relates to the target market, to previous products etc. From here will come feasibility, at which point the feasibility of the proposed project is discussed with the additional information now provided by research. A feasibility study will not simply define a project as feasible or not – but will also look at how it could be altered to come in under budget/to be functional etc. This narrows the scope of the project and leads to a further design phase.

Conceptualization starts next and will usually involve a concept study where the project is planned and different ideas are discussed. This steps help to minimize error and improve the project's chances of success ultimately.

Some different tools are sometimes used to help with this stage. These tools are intended to aid 'ideation' and thus to encourage the flow of new ideas through trigger words, brainstorming and synectics.

Production

From here you then establish design requirements and then create a preliminary design with basic schematics, diagrams and layouts. If this is successful then the preliminary design can move onto a detailed design which can also include the creation of prototypes, models and drawings.

In this stage, CAD (computer aided design) can be used to stress test the project to an extent and to find ways to reduce the costs by removing materials without negatively impacting on resilience. Finally, this moves on to production planning and tool design (the creation of the tools needed for production) and ultimately the production of the project.

This might seem like a lengthy process but ultimately it is these crucial stages that helps to prevent issues down the line and thus keeps profits high.

Starting to feel your stress levels rise? Don't worry! I've used all the technical terminology here just to make sure you understand the process in detail and you can discuss it if necessary (see the next chapter). But if you're planning on manufacturing everything yourself, then it's actually sufficient to do all these things 'vaguely'. Just come up with your idea and then make sure you design what it is actually going to look like and how its function is going to inform the form.

Outsourcing the Design Process

Still got that headache? Don't worry, I got you covered. It's actually possible to outsouce the process of designing your project and more specifically – to 'crowdsource' it (meaning that lots of people submit ideas).

CrowdSpring (www.crowdspring.com) for instance, is a website that allows you to find designers for your projects starting for as little as $7. So if you have your idea and you're not sure how to make this into a CAD file you can actually use, just head over here to get exactly what you need! The platform is geared specifically toward small businesses and entrepreneurs (like you!) and has given life to some popular products such as the Diet Wizard Wristband from Bluenova.

A similar option is CAD Crowd (www.cadcrowd.com). This allows you to run contests for CAD designers, wherein you pay only your favorite designer once several options have been submitted. There's also a more traditional option to pay by the hour though.

One of the very best ones for people who are absolute beginners though is Idea Bounty (www.ideabounty.com) which is a site that allows you to have discussions about specific ideas and designs. If you have nothing other than a specification and no idea how to go about it, then this site will be able to help you – and again, you'll only pay the people who come up with the

resources you want to use. Tons of big brands have used this site too, including Top Gear (which used the site to come up with ideas for covermounts for their UK magazine).

And for everything else – packaging, branding etc. - you can always use the ever-popular 99Designs.com.

Is Your Idea Profitable?

Having a great idea is something that you should never underestimate. With the right idea you have not only the power to change your life and that of others, but also the power to change the world. The right idea can get you passionate, it can make you rich and it can make your life easier and better in all sorts of ways. Right now we have an idea of what's possible and what's not, but when we come up with a new idea, a new solution to a common problem, we can change this definition by creating new ways to do things and even creating entirely new things to do in the first place.

But if you want to create a business on the back of your idea, then it's not enough for it to simply be useful or even transformative - your idea also has to be profitable.

What that means is that your idea needs to be commercially viable - you need to be able to create it in a cost effective manner so that you can charge a reasonable price for it and still make a profit. Likewise you need your idea to be attractive enough to other people that they are willing to pay that much for it - and you may also need it to speak to lenders and investors so that you can get financial backing to go ahead.

So how do you know if your idea is really a possible business? How do you know if your idea is profitable?

Cost Per Unit

Well in order to decide whether or not your business is going to be profitable you need to look at two things in particular: your cost per unit, which tells you how much it is going to cost to manufacture, and your price.

For that first figure - the cost per unit - you need to make sure that you account for every single expense that you will need to make in order to create your products. That doesn't just mean thinking about the cost of manufacturing the item itself (which you can get from your manufacturing contractor), it also means finding out how much packaging and instructions are going to cost, how much you will spend running your business in that time and on labour, and how much it will cost to deliver your item.

Likewise, you also need to think about marketing, how much money do you want to spend on making your product known?

Pricing

Once you know that, it's now time to work out a price and to see if there is any profit left over for you at the end of the day. Bear in mind that you will need to work out two prices - one being the 'wholesale' price that you offer to resellers, and one being the RRP that end users pay for your item. Bear in mind that everyone in that chain also needs to make a profit, and that you need to keep your price competitive and do market research to ensure people are willing to pay it.

If you run these numbers to find that your product isn't going to earn you any money, then don't be disheartened - by tweaking a few elements you can normally increase your margins. And it's better to find out now than later!

CHAPTER 5

PREPARING YOUR IDEA – PROTOTYPING, IP PROTECTION AND FOCUS GROUPS

Chapter 5: Preparing Your Idea – Prototyping, IP Protection and Focus Groups

So now you have an idea that you think can sell, you have worked out roughly what kind of profit you can expect to get from it and you even have a 3D CAD file ready to send off to those interested in helping you make your idea a reality.

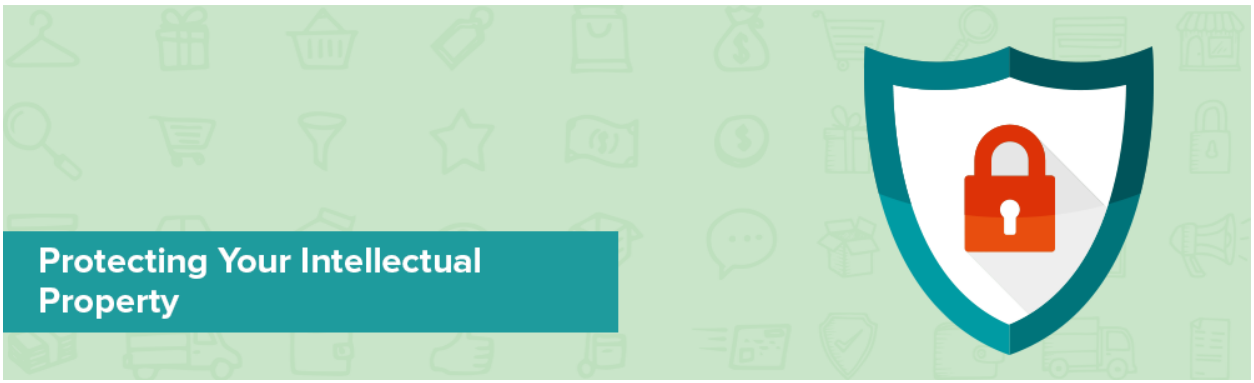
Prototyping

At this stage, it's always a good idea to create a prototype. There are numerous ways you can do this, from talking with a manufacturer (more on that later), to using 3D printing, or even creating your very own prototype from scratch if you have the DIY skills and necessary materials! This will come in handy for the focus groups (next stage) and also just so that you can get an idea of how this is all working and if you feel positive about your product. Prototyping can also bring to light problems that might not have been apparent from the CAD file alone.

Focus Groups and Market Research

Once you have your prototype, it's a good idea to consider using focus groups or doing other market research at this stage. This means researching how other products in the market are performing and who your buyer persona is. At the same time, you might want to create an actual focus group for your product, which means hiring a venue, getting people together and getting feedback from them regarding your product. This is a very good strategy, as it will allow you to see how people react to your product in person. Again, it might be painful to learn things about your idea at this stage but it's better to find out now than later!

You can then take the feedback you get and use this to iterate on your product design. Likewise, you can record positive responses and use this as evidence that your product has legs when you're trying to get a licensing deal or funding (see subsequent chapters).



Protecting Your Intellectual Property

Now at this point, you might find yourself starting to worry. You've got a great idea, a great design and you're all ready to go.

Should you really be sending that to manufacturers? Showing it to focus groups? What's to stop someone from simply taking your idea and using it for themselves?

Of course this is a real problem, so you need to think about intellectual property law and what you can do to protect yourself.

5 Types of Intellectual Property Law You Need to Know

1 & 2 Patents

When it comes to hardware, the most relevant form of intellectual property protection is no doubt, patent; and its patents that Apple and Samsung have infamously fought over so publicly about.

Patents protect physical creations, they protect medicines, and they protect designs. More specifically though, they protect the method of execution, as opposed to the original idea. To

demonstrate this, consider that the inventor of the chair could not patent chairs, and nor could they patent ‘something you sit on’. They may though have had more luck protecting ‘something you sit on with four legs and a back’.

As a maker then, you can use a patent to protect the design/engineering innovations that made your product possible, rather than the product itself.

The two types of patent are design patents and utility patents, which protect designs and utilities respectively. In other words, if you have a smartphone, the design patent would protect the look of the phone, while the utility patent would protect the inclusion of whatever new-fangled chip it had in it. Unfortunately for designers, getting a patent is a complex, expensive, and a slow process however, and your ideas will only be protected in certain regions. They also expire (20 years for utility patents and 14 for design patents), and can’t be renewed indefinitely.

To get more information on patents, check out the Patent Office here.

3 Copyright

Copyright law is less likely to apply to makers, but can still play a role. Copyright protects stories, writing, music, and even code, to some extent. In other words, a copyright protects creative pursuits, and comes into effect the moment you complete something. So if you write a blurb for your new product, that blurb will be immediately protected under copyright law, and you can threaten legal action if someone publishes it against your will. What this also means, is that you can’t just take an image from Google Images, and use it in your packet design or on your website. The main challenge with copyright is in proving that the idea was yours originally. Again, you can find much more information at the intellectual property office.

4 Trademark

A trademark is a name or an image that you trade under, and which can be used to identify your business or your products. That might mean your company name then, or it could mean your products, or even a branch of your business. Microsoft is a trademark, for instance, but Windows, Xbox and Surface are all also trademarks owned by Microsoft.

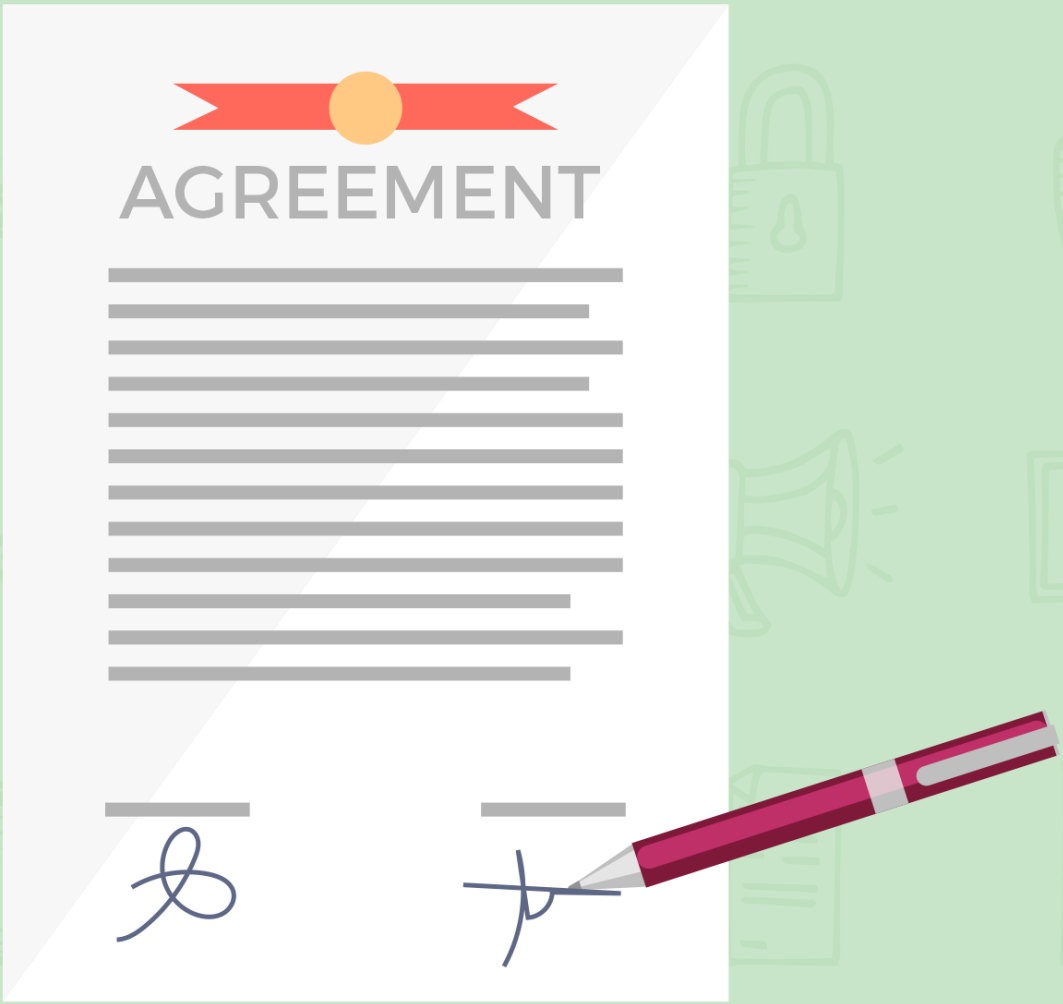
Trademarks are relatively easy to acquire, and will set you back a few hundred dollars, which protects you for 10 years. It's always worth doing a search before you create new products, in case someone should already own the rights. You can do that here.

5 NDA

An NDA is a 'Non-Disclosure Agreement'. This is a contract used to prevent others from talking about your ideas, which in turn, means you can speak freely with business partners and employees about your projects. Typically, an NDA will be in the form contract and will include a list of things that you can and can't mention outside of the meeting.

These days though, many serious companies and start-ups won't use NDAs, and you can risk looking unprofessional if you push this too strongly. As a rule, people you will consult with have their own ideas and plans, and aren't bent on stealing yours. What's more, ideas are in no short supply – it's the ability to see them through that matters.

As with most things, the best form of protection is simply to be the first, and to be the best. No one will remember the imitators. At some point, you just need to start getting your idea out there and push ahead. Take the plunge!



CHAPTER 6

SIDESTEPPING MANUFACTURING WITH LICENSING AGREEMENTS

Chapter 6: Sidestepping Manufacturing With Licensing Agreements

What is it that appeals to you about being an entrepreneur or inventor? For most of us it's not to do with the money necessarily, or even the fact that we can be our boss. For the majority it all comes down to creative freedom, the joy of inventing and creating, and the incredible satisfaction that comes from seeing our products on the shelves and in the papers. All the rest of it - the financing, the packaging, the order fulfilment, the budgeting, the marketing… it's all just a big pain in the neck that prevents us from doing what we really want to do.

Well if that's how you feel, then you may be interesting in licensing. When you license an idea you see, you'll get to spend the time focussed on doing what you love - coming up with the ideas in the first place and testing them out - while letting someone else worry about the finer details.

This is your last chance saloon to side-step the actual process of building your product yourself but this option is a little different than using something like Spreadshirt say, because it allows you to make something completely unique and new rather than having to stick to a tried and tested formula. And it's different from 3D printing, in that you have the option to mass produce and even to get help getting your product into stores. There are downsides though, as we'll see.

What is Licensing?

When you come up with a great idea for a product you have two routes open to you. Either you build an entire business around your idea and invest in manufacturing, marketing and the rest of

it (though we will learn how to do this the easiest and cheapest ways possible!), or you sign a product licensing deal in order to let someone else handle that on your behalf.

What this means is that you'll let an established company worry about the financing and marketing while getting a cut of the profit for coming up with the idea in the first place. This is great news if you don't have much cash as it means there's a lot less risk. But it can be a bad strategy if you end up with a megahit on your hands - as generally the deal will give you less than 10% of the profits.

Is Licensing for You?

Before you begin then, ask yourself whether you want to be a businessman (or woman) or an inventor. What is it that drives you? Seeing your product on the shelves and having more time to spend with your family? Or having complete control over your 'baby' and shooting for the stars?

Of course this doesn't have to be an 'either/or' scenario depending on the nature of the agreement you sign, and you can always license one product in order to test the viability of your ideas and gain financing for your next idea…

How to Get a Licensing Deal

But just because you've chosen to go the 'easy' route, doesn't mean that it's going to be a walk-in-the park. Getting a company to take a chance on your idea can be incredibly difficult.

The first thing you need to do is to protect your idea. Whether that means getting a patent, a trademark or a copyright you should do so right away. Not only will this ensure that companies

don't decide to use your idea without paying you, but it will also demonstrate that you're serious, sensible and that you know your stuff.

The next step is to see how your invention can be a serious business opportunity. This means knowing how much it will cost to produce and what people will be willing to pay for it. It means identifying a target demographic and a route to market. It means doing market research and assessing the competition. In short you need to present more than idea when you try to sell and you need to show that you're serious. What we've looked at in the last chapter should help you with that.

Now learn to present your product in a compelling way and practice your public speaking. Make sure that your passion comes across and that you can get people excited for your creations, but that you also come across as realistic and down to Earth. If you can identify one person within a company who's excited for your product early on then that's a great asset to have. Speak with them and get advice on how to approach the company.

Finally, be prepared to fail - at first at least. Don't get disheartened though, keep trying and try to learn from your setbacks. If your idea really has legs, then eventually you'll find someone with the vision to see it.

For more information, I highly recommend the book *One Simple Idea: Turn Your Dreams Into a Licensing Goldmine While Letting Others Do the Work* by Stephen Key.

CHAPTER 7

FINDING A MANUFACTURER

Chapter 7: Finding a Manufacturer

Okay, so you have your idea, your CAD file, your IP protection and you're ready to go. You've decided *not* to go the licensing route because you want to maintain total control over your product and get all of the profit for your baby – and understandably so!

So how do you take the leap and become and honest-to-God hardware startup with your own manufacturing in place?

You now have two options:

- Directly approaching manufacturers
- Approaching contractors

A contractor of course is someone who will act as a 'go-between' for you and the manufacturer. They will pass on any communications and will generally ensure that you have your hand held at every stage of the way.

You're now going to want to send out proposals and you can do that by looking on Google for the companies that meet your requirements, or by going to trade shows, or by looking at websites that list everything you need all in one easy place. For example, the websites Alibaba (www.alibaba.com) and ThomasNet (www.ThomasNet.com – Thomas' Register of Manufacturers) will give you plenty of manufacturers you can choose from and from there it's a simple matter of scrolling through and finding what you're looking for.

Another option is the excellent 'Maker's Row' (www.makersrow.com). The tagline of this site is 'manufacturing made easy' and as this suggests, the entire concept is that this one site will provide you with everything you need to get started in one convenient location. They have a list of over 10,000 American Manufacturers but unfortunately, you will have to pay to become a member.

If you're planning on creating something specific – such as clothes – then you will be looking for a specific type of contractor. For example, you might need a garment contractor and you can find

these at www.garmentcontractors.org among other sites (though this site sorely needs an update!).

Tim Ferriss spoke to Shopify (https://www.shopify.co.uk/blog/7076768-tim-ferriss-on-manufacturing-and-prototyping-a-product) and recommended that makers send out lots of proposals to lots of factories and let them all know that you're speaking with others. Let them bid for your attention and try and win your business.

Prototyping

Now you can also choose to make a prototype this way by speaking with the factory. This is a good idea because it will give you some indication of the quality of your product and it will give you a more 'realistic' example of your product. In other words, if you are going to Kickstarter with your item (more on that in a moment) then you'll benefit from being able to show proof of concept and to explain that the product you're showing off was made *by* the manufacturer you're eventually going to work with!

The Proposal

Okay, so now you need to send your proposals… what do you send? Well fortunately, we've already gone through all the steps necessary at this stage so you should have a most of the materials you need to include in your proposal ready. Here is what you will need to send…

Defining Your Product

The first and most important step in your manufacturing process will be to define your product. In other words, you need to know exactly what it is you're making in order for the manufacturers

to be able to know whether or not they can help you. This means you need to know the precise materials and how they're going to be assembled.

To start then, you may want to produce a **functional specifications** or **product requirement** document. This only needs to be a word document but the basic idea is that you're going to describe all of the tangibles and intangibles in as succinct a manner as possible. This might mean saying how long you want your battery to last, or it might mean saying how waterproof you want it to be. Who is it for? What should the user interface be?

Specifically, these are some points you should include:

- Aesthetics
- Durability
- Food Safety
- Certifications
- User Interface
- Target Demographic
- Intangibles of How It Should Look / Feel / Act
- Potential Problems You Foresee And Expectations Of The Results
- Will It Be Used Inside Or Outside ?
- And UV Resistance....

You don't actually *need* to go through this stage but if you don't know the first thing about manufacturing then this document will mean you can get guidance and consultation from those that do. It can also be helpful for your own planning and for structuring your own thinking. You can also submit this document when you're crowdsourcing your designs, or you can ask the designers you hire to do it for you!

Bill of Materials

Now comes the **BOM**. The Bill of Materials is a *complete* list of all the materials and components needed to create your product. Think of it like the first page of the assembly instructions you get with your IKEA flat pack furniture – it should include every last screw and even the paint. For those making electrical products, you will need an **electrical BOM** too. If you aren't a DFMA

expert – then consult with one or ask your manufacturing partner. This is where the functional specifications document comes in handy! Your electrical BOM should contain part numbers where possible, or you can include these details in a separate **components specifications** sheet.

Technical Files

The **technical files** are the blueprints which you will often create using software. For plastic parts you'll want to use CAD (computer aided design) software to create a 3D image file. For mechanical parts you'll want to use a Gerber file for board layouts (using software like Cadsoft Eagle). This detailed information is necessary for your manufacturer to answer a number of questions regarding how the product will be made and ejected, how shrinking will be managed etc. Again, you might want to get help with this step.

The Final Steps

Now comes the fun part – getting to hold your product in your hand and see it work for the first time! Sort of… The **prototype** is like a real-world 'beta' that you can use to check that the end product looks, feels and functions as intended. In a perfect world, you should send your prototype to the manufacturer along with your documents as best you can. You can use 3D printing to do this or even construct it by hand.

Along with all this, you'll also want to include your **rough order estimate** or **MOQ** (minimum order of quantity). This tells the manufacturer how many pieces you want to make and it's important because the best technique will depend on whether you've ordered a small or large run. What's more, you may be able to get bulk discounts for larger orders.

Summing Up

That’s everything you need to get your product made and to take it from an idea, to a reality. Now there may be several steps here that you don't fully understand or that you don't feel comfortable with but don't worry: if you find the right person you'll be able to get help through each step. Don't be afraid to speak to people and ask questions. Now you have the technical terminology, you should find it's at least a little easier to get started…

CHAPTER 8

FUNDING

Chapter 8: Funding…

Except that's not *quite* everything because you now have a product that's ready to go but no actually inventory to start selling. Oh dear!

This is where the next step comes in: finding funding for your idea. And it's really a rather important stage.

Top Crowdfunding Sites

The good news? Once again, the internet has come to our rescue and made this all as easy as it possible can be. And in this case in particular, we're going to be using 'crowdfunding' to make our money. Crowdfunding simply means that we're asking the community to fund our projects and the most famous example of this is Kickstarter (www.kickstarter.com). The best part is that you don't have to give away any percentage of your business or your profits – backers on crowdsourcing sites get involved because they want to place pre-orders and because they want to see your ideas come into fruition. This is famously how projects like the Oculus Rift came into being.

Finding an investor means giving away a share of your business, getting a loan means taking a serious risk. But crowdfunding? There is zero risk and no downside. And this is why more and more makers are now finally able to see their ideas come to fruition when previously it would never have been possible!

There are other crowdsourcing options out there though and other funding options too.

Kickstarter

The most obvious place most people will start is Kickstarter which is the best known crowdfunding site on the web and possibly largely responsibility for the strategy's current popularity.

Indiegogo

While Kickstarter might be the most famous and provide you with access to the biggest number of potential backers, this can also be a bad thing in that it means you'll be facing more competition and will need to follow stricter guidelines. Indiegogo then provides a slightly more 'lightweight' alternative where it can be easier for beginners to get noticed.

Peoplefund.It

Kickstarter rules the roost in the US, but until recently it was less accessible for those based in the UK and Europe. Peoplefund.It aimed to take advantage of this by focusing on the UK market, and has now found a niche as a great place for charities to raise money and for British entrepreneurs to find backing.

Smallknot

Smallknot is a relatively young crowdfunding site that looks at businesses rather than projects and encourages users to invest in small local organizations.

RocketHub

RocketHub functions largely similarly to Kickstarter, but has become particularly popular among musicians and philanthropists.

Note that crowdfunding sites do have their drawbacks and limitation. For instance, crowdfunding only works if you can raise the money you've set yourself as a target (at least that's the case with Kickstarter, Indiegogo does not have this rule). These platforms are also becoming increasingly saturated, which means you're going to need to have a very good and unique idea and then do a lot of promotion on top of this to make it a reality.

Other Funding Options

There are likewise many more funding options for raising capital. One option is simply to find investors and there are many websites that can help you to do this too. For example, 'AngelList' (www.angellist.com) is a website that works similarly in some ways to a CrowdFunding site, except that the investors *do* get some money and some share of your business. However, they can back you with small amounts of cash which means that you're not only approaching massively wealthy individuals and companies. Creating a profile on AngelList is a great way to learn about investors and let them start getting to know you, even if you don't end up looking for money on the site. Other sites like CrowdCube (www.crowdcube.com) and Angels Den (www.angelsden.com) can also do similar things.

Note that it's also possible to get funding at other stages of your manufacturing. For example, you can get funding from business angels and 'accelerators' (look at companies like TandemCap.com and HAX.co) at the **preseed** stage of your business – the point where you're still prototyping!

Seed capital is the money you get to turn your idea into a reality – the 'industrialization phase'. At this point you can get money from crowdfunding or from investors, after which you enter the 'growth phase'. Growth phase funding is what happens in the first few years of your business and is referred to as **Series A**, **Series B** and **Series C** funding. Series A tends to raise anything from $1-10 million and is riskier for investors as you don't have as much data backing your potential for success. Then you have series B, which is mainly about scaling. You can bring in much more money at this stage. Finally, series C is for the fully mature business, at which point an acquisition might even be on the cards which is ideal if you're looking for an exit strategy.

After this comes the '**IPO**' or your '**Initial Public Offering**'. At this point, you can consider your business a roaring success… you don't need me helping you anymore!

Finding Funding for Small Projects

Otherwise, you can find other ways to fund smaller projects. One option is 'bootstrapping' which means earning capital from a side business and funnelling this into your own hardware manufacturing. Alternatively, you can get a bank loan – even PayPal (www.paypal.com) offer business loans now – or you can even use a credit card loan…

Just make absolutely sure that you have tested the market for your product and you know you're going to make your money back if you're going to take out loans!

Then there's always the Bank of Mum and Dad, or friends and family. If you have a good idea, they might want to be a part of it.

CHAPTER 9

SELLING YOUR PRODUCT

Chapter 9: Selling Your Product

And now, all that is left to do is to actually *sell* your product! Again, you have a few different options here…

Ecommerce

Of course you can do this through your own website using a 'sales page' or more likely an ecommerce store, which will turn your website into a shop. Great tools for creating ecommerce stores include **WooCommerce** (www.woothemes.com/woocommerce/) which has the advantage of being a WordPress plugin, thereby enabling fast and easy installation. Then there is **Magento** (www.magento.com), for which you need to create as a separate standalone site. The advantage of Magento though is that it's capable of stocking more items – up to 50,000 to be precise. But chances are you won't be quite at this stage for a while! Or you might pick **Shopify** (www.shopify.com) which is hosted – meaning you set up an account and then just link to that from your website. There are many more ecommerce platforms but one of these three should provide you with most of what you need.

If you have a small project and a prominent website with lots of traffic, then this might be more than sufficient and you may not need to do get serious funding from angel investors. This is the 'easy win' option!

Approaching Buyers

But if you're a little more ambitious, then you might want to approach a buyer, which will mean getting your product into stores!

Here's how you do it…

Step 1 - Do Your Research

If you approach retailers without doing any research first you're only going to be wasting everyone's time (primarily your own). For starters you need to know beforehand whether a company is even likely to carry products like yours, and for this you need to research the kinds of things they tend to sell and who their main shoppers are. A good way to find potential outlets is to search for products from your competitors and then see where they are being sold.

Next you should learn everything you can about those stores. Look at their retail guidelines and see if they have a 'product submissions' page on their website (Wal-Mart for instance has step-by-step instructions right on their website!). The more prepared you are, the better chance you will have.

Step 2 - Know Yourself

Likewise, you also need to know everything you can about your product and about your business model. When your present your proposal to retailers, you need to be able to show them why you're confident it will sell, who your target demographic is and how much it can sell for/how much profit the store will make. Again the more detail you go into, the more confident stores will be in you and your product. Providing product samples is a good strategy if you can and providing

extra materials such as POS displays (point of sale) can help you to win extra brownie points. Press coverage etc. can also help you to win your case.

Step 3 - Find Your Ally

Now you have your pitch/package ready you need to find someone who's willing to listen. Start by contacting the buyer using the details on the website or by calling up and asking to speak to the buyer or representative. If you get snubbed though or don't get any response, you can always try again by looking for contacts you might have within that organisation (LinkedIn is a powerful tool in that regard) or by arranging a meeting with anyone you can. If you can get just one person to listen and to get enthusiastic about your product, then they might help you to get the meeting you need.

Step 4 - Use a Sales Representative

If you're still not having any luck, then another option is to use a sales representative who will handle this part of the process for you. It costs money and you lose some control, but they have experience and

contacts which can help them to get you noticed. However, you go about it though, don't give up. You can get a thousand rejections but when you get one positive response it will all be worth it!

Conclusions

And there you have it – that's literally everything you could possibly need to create a physical product and start making real profit from it!

This might sound very complicated but let's take a moment to reflect. You can come up with an idea yourself and then outsource the design of that idea, giving you your ready-made CAD file to send to manufacturers. You can then use a site like Alibaba to find manufacturers using a prototype you printed *very* cheaply at Shapeways. Then you can raise capital with no risk through Kickstarter and you can start selling through an ecommerce store…

So actually… it really isn't that hard at all! In fact, you barely have to lift a finger. That's the power of the web and it's gradually going to cause a seismic shift in the way that business is done. Why not be at the forefront of that change and create something amazin?