

## Concept to Product, an Outline

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There are many stages in developing a product and leaving out crucial steps can lead to disaster. Also, you have to learn to think from both ends of the process. Initially there is the concept; what do you want to make? And, then there is the final product; what do people do with it and do they want it? These are very important parts of the process, whether you are doing all of the work or having someone else do part of it.

The initial concept: I want to make a box that does something, maybe it tells time. OK, how many other boxes already out in the world also tell time and what makes this one special so that people will want to buy mine? You need to make sure that your concept is unique to the marketplace and is general enough to ensure that enough people will want to buy it to compensate you for the time and energy that you are putting into your idea.

A lot of this can be just a guess, but it pays to look around at the serious market and at the fads. The serious market will keep buying the product into the future, because they believe it is beneficial to them. The fads are often short lived, but can make a lot of sales before they go out of fashion. Now, if too much time is put into this part of the research, you may never get your product to market, or some competition may get there before you. It's wise to never give out all of your secrets.

The initial design: how do I build this thing? What parts are needed? What does the box look like? Do I have to build a lot of the parts or can I buy some or all of them? Are the parts available both now and in the near future? And, how much does it cost to do all of this? Once you have approximated the cost of production, you can determine if it is marketable.

Retail prices are figured at about three times the cost of production to guarantee a profit. Is that a good price, and will the public want to spend that much? This is a good time to ask around: if this was available, would you pay this much for it? Another aspect about price is that people tend to pay more for something if they think it's valuable. If a product is too inexpensive, they will consider it to be cheap junk and avoid it. So, you may end up selling your product for more than you had anticipated. But, this is the time to check out your potential competition and make sure that you sell for a little less than them, but not too much, or the public will think that your product is inferior.

It's also good at this time to consider how you are planning to market your product. Other than standing on the street and handing out advertising fliers (which will also cost you money to print), most marketing facilitators will charge fees for advertising your product. You will also have to determine how you are going to deliver your product to your customer and what costs that will entail.

The first build: now that you have decided to build your product, you want to get together enough or the basic parts to build one prototype. At this point, it's not necessary to have your final enclosure, but it doesn't hurt to have one available to ensure that all of the parts will fit in it. You may find you get a better price buying some of the parts in quantity and that's a good

thing, but make sure you don't buy too many and overspend. Any money you spend at this point is what you are hoping to get back from sales.

Once you have acquired all of the parts that you need, it's time to put them together and see if it does what you want it to. Does it work?? This is called Proof of Concept. Now, if your product is going to need a PCB to mount electronic components, you may substitute for the time being by going the old way and using wires to solder together the parts.

Now, here's another expense that you need to consider when you are first approximating the cost of build. What tools do I need to build this thing? You may even have to buy or build a work bench and have a place to put it. That's part of the three times production costs concept. Hopefully, most of your expenses will be constant for each product you make, but there will be one time expenses for tools and sometimes reoccurring expenses for the maintenance of certain tools or machines.

Overwhelming, isn't it? But, when you've done it once, you can begin to anticipate when these issues will come up in the future. And there is the aspect of new technology coming along that will make some of your work easier. But, then there's another expense.

OK, your first build works, that's wonderful, now you can start thinking about your production. Is it the type of thing that can be mass produced, or do you have to make each one on an individual basis? Some things are like that, but time may be a factor on your investment return. This must be considered.

But, if your prototype doesn't work, then it's back to the drawing board to revise your design. There can be many factors in design problems and it takes time to find them. But, if you have done your research and believe in your product and don't give up on it, you may have a good chance of succeeding.