

EXECUTING CROWDFUNDING CAMPAIGNS

Crowdfunding Goals

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About this eBook.

Scope and audience

Crowdfunding Goals is the second eBook in our Executing Crowdfunding Campaigns series. The target readers are companies and individuals who are planning to run a reward-based crowdfunding campaign.

The book dives into one of the most essential parts of crowdfunding campaign planning, namely, *how to set funding goals*. This is an overlooked subject, and for this reason, we decided to dig in!

Our topic closely relates to areas such as setting optimal reward-structures, pre-pitching expenses, and campaign planning in general. We have tried to keep the presentation as concise as possible and not sidetrack into adjacent topics unless we feel that it will benefit the reader.

Researcher

Kevin Berg Grell, co-founder and CEO of APEN Designs, holds a PhD in Business Administration (Finance), is the co-author/editor of “Crowdfunding: The corporate era” with Dan Marom and Richard Swart, and is a contributor to Wired, Crowdfund Insider, Crowdfund Beat, Crowdfunding Campaigner Magazine, and WestJournal.us.

APEN Designs

APEN Designs, Inc. builds a fully integrated communications platform for startups and SMEs. This solution will enable our users to create, manage, analyze, track and improve their stakeholder communication.

CROWDFUNDING GOALS

If you are about to embark on reward-based crowdfunding – the typical model offered by Kickstarter, Indiegogo, and the like – then you are probably already aware of the different workflow associated with

- Planning
- Pre-pitching
- Campaigning
- Post-campaigning

Planning and Pre-pitching covers all your efforts before launching the campaign; Campaigning (naturally) covers your efforts while the campaign is live; and Post-campaigning covers your efforts after the campaign ends.

We explore one of the most important decisions in the Planning phase, namely setting your funding goal. This task is more crucial than you might think and it can have far reaching implications for your venture.

After reading this eBook you will

- Understand WHY it is critical that you understand the economics behind setting funding goals.
- Learn about the three main motivations for using crowdfunding
 - Fundraising
 - Product validation
 - Market validation
- Find the relationship between funding goals and the price points on your campaign.
- Get hands on examples that illustrate how you can validate your product and your market potential via crowdfunding.

Twin peaking funding volumes.

Many entrepreneurs launch their campaigns without paying much attention to their funding goal. Lured by the crowdfunding success stories that hit the media, one can easily get the impression that if you are successful, your total funding will vastly exceed your goal anyway... so why bother!

If we look at the data (in this case from Prof. Ethan Mollick's research), the reality seems very different. Mollick was the first to uncover the fact that campaigns succeed with a very small margin. In other words, if you are successful, chances are that you will get exactly the amount you asked for.

So...

DO NOT ASK FOR LESS THAN YOU NEED!

As the figure below shows, 51.9% of campaigns are unsuccessful, while 48.1% successfully reach their goals. 22.2% of campaigns never takes off (they reach less than 2.5% of their goal), and 9.8% of campaigns barely make it (they reach between 100% and 102.5% of their goals). Generally, we can see that either campaigns never takes off or they make it just above their funding goals. It is therefore a very bad idea to ask for less than what you need and speculate that your campaign will exceed its goal with a large margin – *the data simply does not support that strategy!*

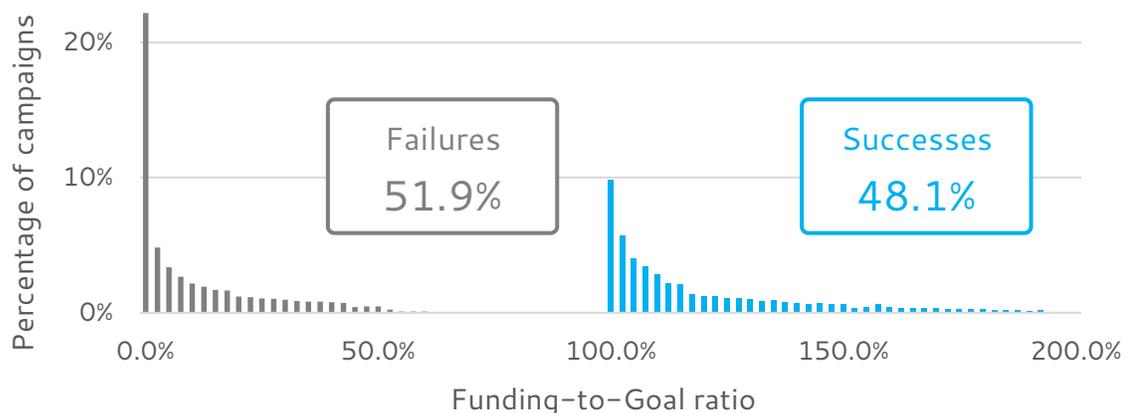


Figure 1: Data from E. Mollick:
"The Dynamics of Crowdfunding" – Journal of Business Venturing.

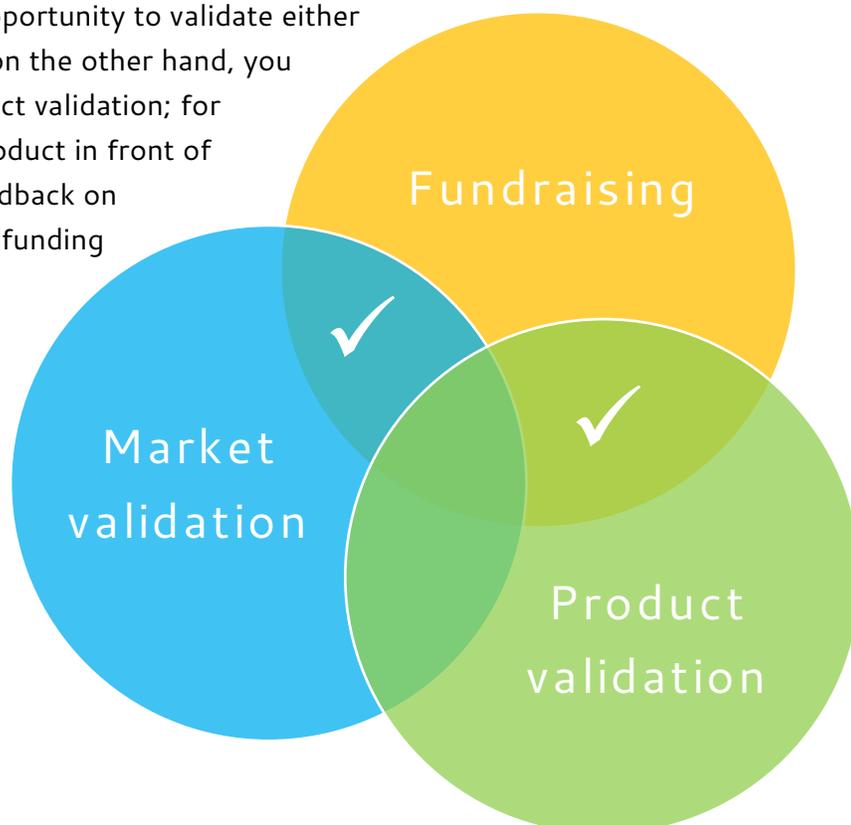
What are you trying to achieve?

There are three overarching reasons why companies and creative ventures take to crowdfunding. Fundraising, product validation, and market validation. While the “fundraising” aspect may seem rather trivial, the ways that especially companies validate products and markets are not. The subsequent pages explains what product- and market validation strategies means for pricing and funding goals.

We argue that validating a product and validating a market should be separated when possible. For this reason, if you look at the figure here below, we have not tick marked the “blue-green” subset.

Furthermore, any of the pure strategies (yellow, green, and blue) are suboptimal. I.e. if you are crowdfunding only because of the funds you can raise, you are missing an opportunity to validate either your product or market. If on the other hand, you are only interested in product validation; for instance by getting your product in front of potential customers for feedback on applicability, fit, etc., crowdfunding may not be the most cost-efficient option for you.

Finally, if you are looking to validate your target market, the “Fundraising” aspect almost comes natural, as we shall see.



Fundraising.

To keep matters simple, we will assume that you consider a reward-based crowdfunding platform that such as Kickstarter uses an “all-or-nothing” funding system. This means that you have to reach (or exceed) your funding goal within a given timeframe in order to get any funds out afterwards.

Furthermore, (also for simplicity) we assume that you are pitching a single product, and do not offer “merchandise” beside your product; e.g., no coffee mugs, no t-shirts, no Twitter shout outs, etc. In this setting, you will raise

$$Q \times P$$

Here Q is the amount of products claimed via the campaign and P is the sales price per piece. Because reward-based crowdfunding carries similarities to pre-selling, the fundraising level is identical to a revenue function.

Your cost function is slightly trickier. Even in our simple setting, your costs should be divided into *fixed costs* (we denote these with the letter F) and *variable costs*. Fixed costs include all costs related to your project that are independent of the amount of products claimed via your campaign; i.e. F is independent of Q .

Variable costs on the other hand increase with the amount of goods claimed on your campaign. There are several ways to model variable costs, but here we assume that they are *linear* in Q . This means that we can find a cost (we denote this V) per item claimed and multiply this with the total amount to find the variable costs. Adding fixed and variable costs we get

$$F + (V \times Q)$$

In order to break even, your revenues must balance your costs. The following example gives you an idea of how this balance determines your funding goal.

Example: Fundraising

Say you have come up with a brilliant product idea. You need to acquire new machinery for \$30,000; you need to hire a contractor, who charges a flat fee of \$15,000 to set everything up properly; and you need to secure certain permissions and cover a couple of fees before setting up production, which will run you \$5,000. Thus, your *fixed costs* are \$50,000.

Furthermore, with the weight and dimensions of your product, the shipping costs amount to \$10 per shipped item. The manufacturing costs (incl. costs of raw materials etc.) amount to \$15 per item. Thus, your total *variable costs* are \$25 per item, and your cost function will therefore look like this

$$\$50,000 + (\$25 \times Q)$$

Assuming that you want to sell the product for \$75, your revenues are

$$\$75 \times Q$$

From these two functions, you can find the break-even point as follows:

$$\$75 \times Q = \$50,000 + (\$25 \times Q)$$

Isolating Q it is now clear that you must sell $Q=1,000$ items in order to break even.

Now, if you take the point of the “Twin peaking funding volumes” into account, and NOT SPECULATE that your campaign will exceed its goal with a large margin, you set your funding goal at $(\$75 \times 1,000)$ \$75,000, which guarantees that you will be able to deliver without being out of pocket.

The figure on the following page illustrates this example.



It should be clear from the example and the figure above that, if you are crowdfunding only to finance a project, the sound decision on your part is to set the funding goal where the revenue- and cost functions intersect. If you set the goal lower, you are at risk of being out of pocket in order to deliver. If you set the goal higher, you are at risk of not reaching your goal, but reaching a lower level that actually would have been viable for you. Hence, you lose an opportunity to take your product to market.

To save time, you can calculate the funding goal directly, by isolating the break-even quantity in the formulas on page 6. Similarly, to what we did in the example, we isolate Q in the equation

$$Q \times P = F + (V \times Q)$$

You find that the break-even quantity is $Q = F / (P - V)$. Now multiply this with the price P to find the funding goal as

$$(F \times P) / (P - V)$$

You can confirm that the result from the example is still true by calculating:

$$(\$50,000 \times \$75) / (\$75 - \$25) = \$75,000, \text{ as in the example.}$$

Prices and funding goals.

In the previous example we assumed that the price, P , is already set and that allowed us to derive the funding goal easily as $(F \times P) / (P - V)$. Remember that F are your fixed costs and V is the variable costs (per item). In reality however, you probably have a good idea of what the product should sell for, but at this stage, you do not know for sure. In other words, you have to make two decisions simultaneously:

- Setting the price point, P
- Setting your funding goal

The figure here below shows the relationship between prices and funding goals. The dashed curve illustrates the break-even funding goals. If you choose a funding goal below this dashed curve, then you are at risk of losing capital. If you set the funding goal at (or above) the dashed curve you should be able to cover your costs with the amount you raise.

The curve is decreasing in P because the margin on each item sold is then higher, and hence your fixed costs will be covered with a lower sales volume (Q). This lowers your total variable costs and you can therefore break even with a lower funding level.



Product validation.

Besides capital, crowdfunding offers an opportunity for you to get feedback on your idea and your product. As with any other experiment (or test) that you run, you will require a certain sample size for the experiment to make sense.

From your *minimum* sample size and your fixed and variable costs, you can deduce the minimum funding goal. Remember the break-even condition from page 8:

$$Q \times P = F + (V \times Q)$$

If you know the minimum sample size (let us call it X), you can determine the price point by isolating P in this equation and replace Q with X

$$P = (F / X) + V$$

The intuition is straightforward. To avoid the risk of underfunding, the price is set such that each customer pays an equal share of the fixed costs, on top of the variable costs. The equal shares of the fixed costs are set such that if the campaign reaches the desired sample size, you have got the fixed costs covered. If it goes beyond the sample size level, you will be turning a profit.

Example (cont.): Product validation

We use the parameters from the previous example: $F = \$50,000$ and $V = \$25$. You want feedback from at least 125 customers, but you expect that the response rate will be around 10%. Therefore, you want to set your price point and your funding goal such that the campaign pays out when it reaches 1,250 customers. From the formula above, we find the price point to be

$$P = (\$50,000 / 1,250) + \$25 = \$65$$

The funding goal follows directly: $1,250 \times \$65 = \$81,250$

Market validation.

In the “Fundraising” section we saw how to determine the break-even funding goal if you already know the price point. “Prices and funding goals” showed how this result generalizes, and we illustrated the break-even funding goal as a decreasing function of the price point.

“Product validation” showed how to derive the price point and subsequently the funding goal when you need a specific number of customers to give you feedback on the product. In this final section, we dig deeper into crowdfunding’s potential for market validation.

The main difference between this section and the “Fundraising” and “Product validation” sections is that here, we will no longer assume that you are looking to just break even. We will however assume that you wish to run a viable campaign, which means that your choices of price point and funding goal put you above the dashed line in the figure on page 9. This example sets the stage.

Example (cont.): Market validation

Let us keep the parameters from the previous example such that $F = \$50,000$ and $V = \$25$. Instead of validating the product, you are now looking to validate whether the market interest in your product is strong enough for you to include the product in your pipeline.

Your product is unique and you are therefore struggling to learn how big your market is. You have determined that the product is long-term viable if at least 500,000 people will buy the product over time. The price point that you need to make this investment worthwhile is $P = \$100$.

What you need now is a signal of market interest. You want to use crowdfunding to get that signal.

A good read in this context is Everett Rogers' *Diffusion of Innovations*, because it explains how innovations are accepted over time. A central point of Prof. Rogers' seminal work is that people differ in their adoption of new ideas, products, and other innovations.

On average 2.5% of a population are considered innovators, which means, people who adopt ideas more or less, *because* it is an innovation. For a crowdfunding campaign, this is the target audience! Getting this group interested in your idea/product is essential, and their adoption is one of the most important signals you can get about market interest.

You can use this percentage of innovators to estimate your market size. What you need to take into account however, is the limit of your reach; i.e. how big a fraction of the 2.5% innovators you can pitch your idea to.

Example (cont.): Market validation

You take as given that, the percentage of innovators in your customer base is 2.5%, and you assume that via intensive marketing prior to launching your campaign you will be able to reach 10% of the innovators.

If we denote the total customer base over time as Y , you will be able to get $0.025 \times 0.1 \times Y$ customers via your crowdfunding campaign. The idea is then to set your funding goal such that it only pays out if you believe that Y is large enough.

Since your challenge is to find out if 500,000 people will buy your product over time, you need to figure out if Y is larger than 500,000. Remember that the price point is $P = \$100$, so if you set the funding goal to

$$0.025 \times 0.1 \times 500,000 \times \$100 = \$125,000,$$

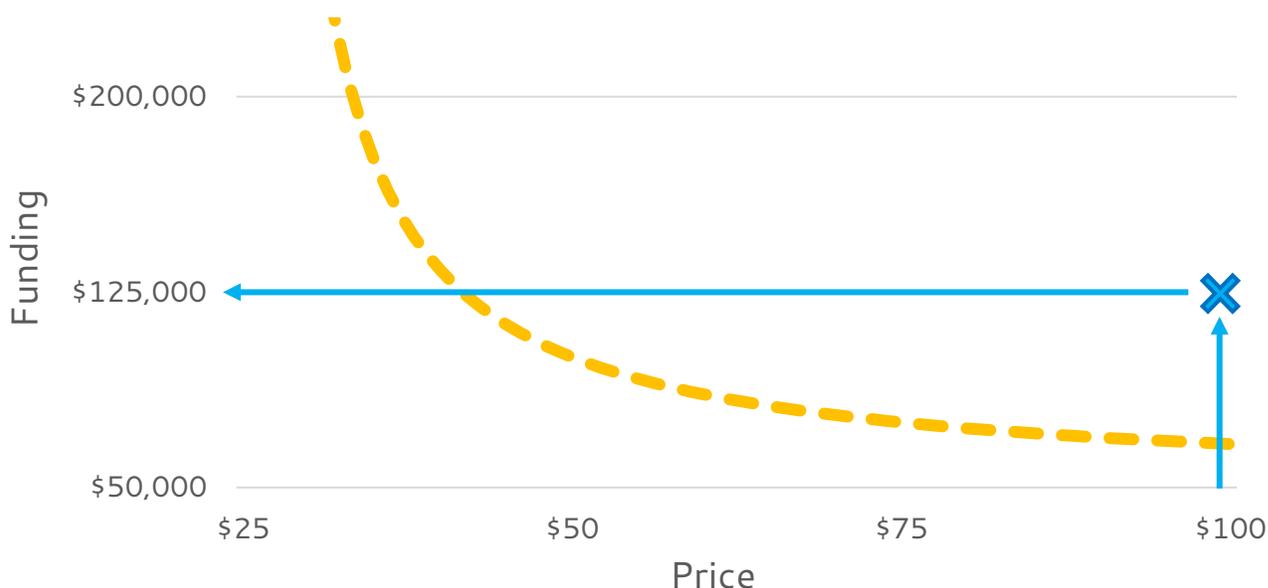
you will have the signal you are looking for.

From the example above, we see that when you use crowdfunding for market validation, you have to make additional assumptions about the audience of your campaign. You need to assume something about the percentage of *innovators* who would support you if they only knew about your campaign, and you need to make an assumption about how many of these you can reach with your campaign. This, of course, makes the market assessment uncertain, but that is unfortunately the hard reality when you introduce innovative products.

Crowdfunding can help you with the first signal about the market potential for your product, but you should continue with the market analysis as you move forward.

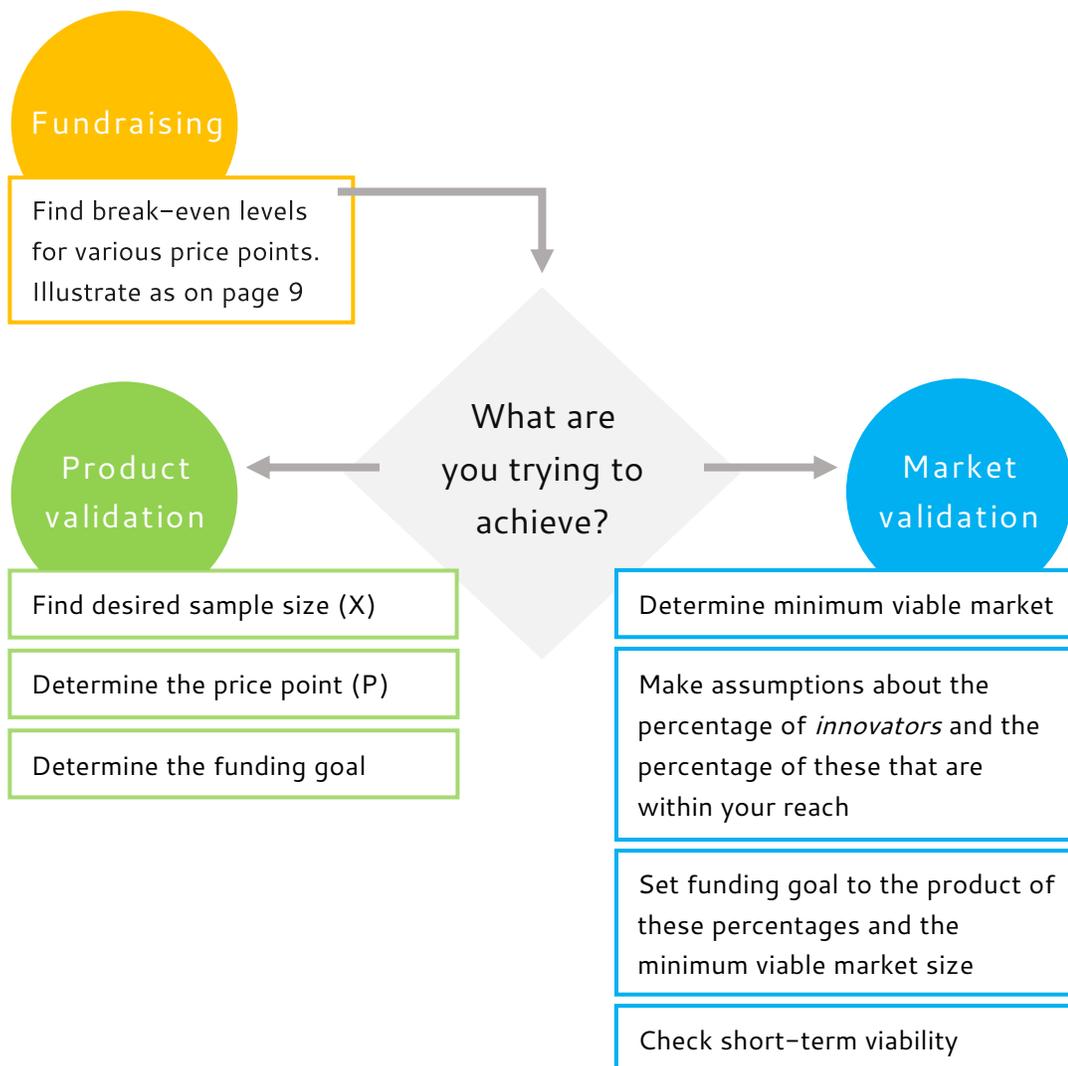
You might have noticed that we did not use neither the fixed nor the variable costs parameters (F and V) to find the funding goal. This is because the goal of this type of campaign goes beyond breaking even; the goal is to figure out if the product is strong enough to be included in your company's pipeline long-term.

As you can see in the figure here below, the campaign is short-term viable as well, since the \$125,000 funding goal is located above the break-even line.



Roadmap.

How can you use these results? The chart below summarizes the ideas behind this eBook. It takes you through the central decision-making and analysis you need to set price points, sample sizes and funding goals in a sound manner. Start with “Fundraising” and work your way through “Product validation” or “Market validation”.



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