THE LEAN STARTUP SERIES

2nd Edition

Ash Maurya

RUNNING LEAN

Iterate from Plan A to a Plan That Works

O'REILLY®

Eric Ries, Series Editor

Create Your Lean Canvas

Capture your business model in a portable, one-page diagram.

The Lean Canvas is the perfect format for brainstorming possible business models, prioritizing where to start, and tracking ongoing learning.

The best way to illustrate the use of the canvas is through an example. I'll describe the thought process that went into building my first product, CloudFire, using this methodology.

Brainstorm Possible Customers

When you first start out, all you have is an inkling of a problem, a solution, and maybe a customer segment. Just as rushing to build a solution can lead to waste, so can prematurely picking a customer segment or business model. The danger here is that this "selection bias" is untested and may result in a suboptimal business model or local maxima.

The Hill-Climbing Algorithm and the Problem of Local Maxima

In computer science, *hill climbing* is a mathematical optimization technique. It is an iterative algorithm that starts with an arbitrary solution to a problem, then attempts to find a better solution by incrementally changing a single element of the solution. If the change produces a better solution, an incremental change is made to the new solution, and the process is repeated until no further improvements can be found.

Hill climbing is good for finding a local optimum (a solution that cannot be improved by considering a neighboring configuration), but it is not guaranteed to find the best possible solution (the global optimum) out of all possible solutions (the search space).

Source: *http://en.wikipedia.org/wiki/Hill_climbing*

While there is no way to completely avoid the local maxima problem, you raise your odds for finding a better solution when you are initially open to exploring and even testing multiple models in parallel.

Start by brainstorming the list of possible customers for your product:

Distinguish between customers and users.

> If you have multiple user roles in your product, identify your customers.
>
> *A customer is someone who pays for your product. A user does not.*

Split broad customer segments into smaller ones.

> I've worked with startups that felt the problems they are solving are so universal, they apply to everyone.
>
> *You can't effectively build, design, and position a product for everyone.*
>
> While you might be aiming to build a mainstream product, you need to start with a specific customer in mind. Even Facebook, with its now 500 million+ users, started with a very specific user in mind: Harvard University students.

Put everyone on the same canvas at first.

> If you are building a multisided business, you might find it necessary to outline different problems, channels, and value propositions for each side of the market. I recommend starting with a single canvas first and using a different color or tag to identify each customer segment. This helps you visualize everything on a single page. Then split if needed.

Sketch a Lean Canvas for each customer segment.

As you'll find shortly, the elements of your business model can and will vary greatly by customer segment. I recommend starting with the top two or three customer segments you feel you understand the best or find most promising.

CASE STUDY

CloudFire

Background:

Prior to CloudFire, I had launched a file-sharing application called BoxCloud that simplified the process of sharing large files, using a proprietary peer-to-web (p2web) framework we had built.

BoxCloud's unique value proposition (UVP) was that it allowed the sharer to share a file/folder directly from his computer without any uploading. Recipients accessed the shared file/folder directly from their browser without the need to install any additional software.

BoxCloud was primarily targeted at business users and was in use by graphic designers, attorneys, accountants, and other small-business owners.

I was interested in exploring other uses of the p2web framework, especially around media sharing (photos, videos, and music), which is how CloudFire came about.

Really broad category:

Anyone that shares lots of media content.

More specific possible customers:

- Photographers
- Videographers
- Media consumers (scratch my own itch)
- Parents

While I was initially drawn to building something for the consumer segment (with myself as the prototypical customer), I had recently become a parent and witnessed some pain points around photo and (especially) video sharing. That is the segment I decided to model first.

Sketching a Lean Canvas

In this section, I'll outline the process for sketching a Lean Canvas.

Sketch a canvas in one sitting.

While it's tempting to iterate endlessly on the whiteboard, your initial canvas should be sketched quickly—in less than 15 minutes. The point of creating the canvas is to take a snapshot of what's in your head at this moment in time, then move on to identifying what's riskiest, and finally get out of the building and test your model with people other than yourself.

It's OK to leave sections blank.

Rather than trying to research or debate the "right" answers, put something down or leave it blank. Leaving a section blank might be indicative of what's really riskiest about your model and the place to start your testing. Some other elements, like "Unfair Advantage," take time to figure out, and your best answer right now might be "I don't know," which is also OK. The canvas is meant to be an organic document that evolves with time.

Be concise.

It's a lot easier to describe something in a paragraph than in a single sentence. The space constraints on the canvas are a great way to distill your business model down to its essence. Aim to fit your canvas on a single page.

Think in the present.

Business plans try too hard to predict the future, which is impossible. Instead, write your canvas with a "getting things done" attitude. Based on your current stage and what you know right now, what are the next sets of hypotheses you need to test to move your product forward?

Use a customer-centric approach.

Alex Osterwalder describes several techniques for approaching an initial business model canvas in his book. Since Running Lean is heavily customer-driven, I find it sufficient to start with just a customer-centric approach. As we'll see shortly, tweaking just the customer segment can completely change the business model.

When creating my canvases, I follow the prescribed order shown in Figure 3-1, which is the order the rest of the sections will follow.

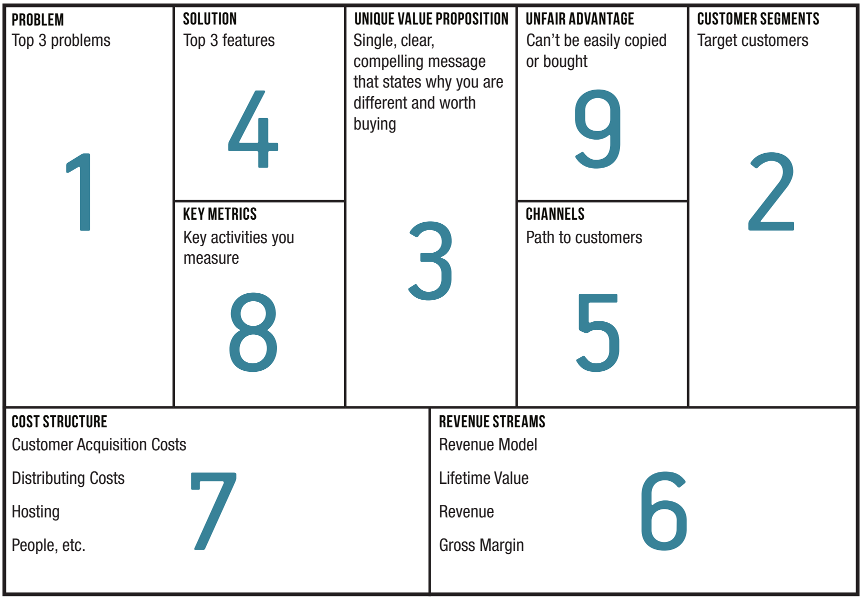

Figure 3-1. *Lean Canvas*

Problem and Customer Segments

I find that the "problem-customer segment" pair usually drives the rest of the canvas, which is why I tackle them together.

List the top one to three problems.

For the customer segment you are working with, describe the top one to three problems they need solved. Another way to think about problems is in terms of the jobs customers need done:

> *When people need to get a job done, they hire a product or service to do it for them. The marketer's task is to understand what jobs periodically arise in customers' lives for which they might hire products the company could make.*
>
> —*Clayton M. Christensen*

List existing alternatives.

Document how you think your early adopters address these problems today. Unless you are solving a brand new problem (unlikely), most problems have existing solutions. Many times these solutions may not be from an obvious competitor.

As an example, the biggest alternative to most online collaboration tools is not another collaboration tool, but email. Doing nothing could also be a viable alternative for a customer if the pain is not acute enough.

Identify other user roles.

Identify any other user roles that will interact with this customer. Examples:

- In a blogging platform, the customer is the blog author while the user is a reader.
- In a search engine, the customer is the advertiser while users are people running searches.

Hone in on possible early adopters.

With these problems in mind, get more specific on the customer segment. Narrow down the characteristics of your prototypical customer.

Your objective is to define an early adopter, not a mainstream customer.

CASE STUDY

CloudFire: Problem and Customer Segments

Having just become a parent, I observed the "perfect storm" of problems that I wanted to explore further, listed here and shown in Figure 3-2:

- The number of photos (and especially videos) we took increased significantly after the baby was born.
- We were sleep-deprived and found the existing solutions time-consuming and sometimes painful to use.
- The demand for this content from family (especially grandparents) and friends was high and often time-sensitive.

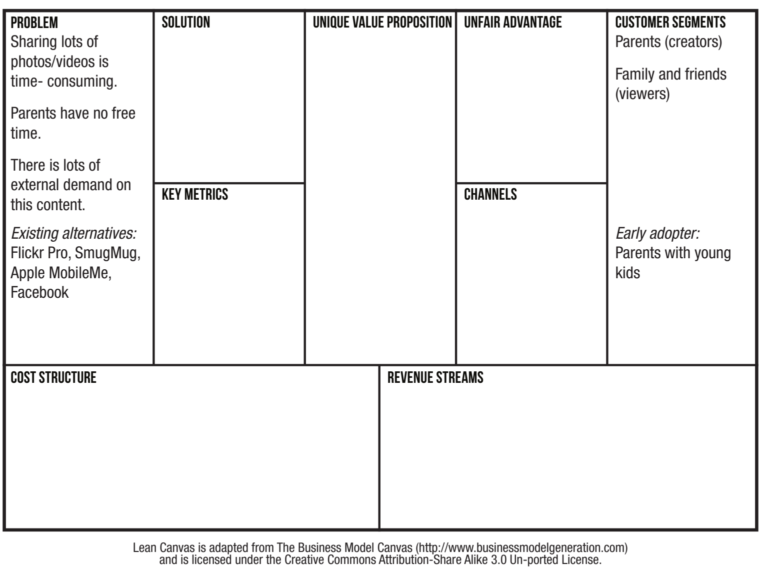

Figure 3-2. *CloudFire: problem and customer segments*

Unique Value Proposition

Dead center in the Lean Canvas is a box for your UVP. This is one of the most important boxes on the canvas and also the hardest to get right.

Since writing the first version of *Running Lean*, I have refined my definition of the UVP:

> *Unique Value Proposition: Why you are different and worth ~~buying~~ getting attention.*

"Selling" is a conversation, and I believe it's too hard to do that with a single statement. More important, the first battle isn't even selling; it's getting a prospect's attention.

> **NOTE**
>
> First-time visitors spend eight seconds on average on a landing page. Your UVP is their first interaction with your product. Craft a good UVP and they might stay and view the rest of your site. Otherwise, they'll simply leave.

Even with this revised definition, the UVP is still hard to get right because you have to distill the essence of your product in a few words that can fit in the headline of your landing page. Additionally, your UVP also needs to be different, and that difference needs to matter.

The good news is that you don't have to get this perfect right away. Like everything on the canvas, you start with a best guess and iterate from there.

How to craft a unique value proposition

First, I highly recommend getting a copy of the classic book on marketing by Al Ries and Jack Trout: *Positioning: The Battle for Your Mind* (McGraw-Hill). Ries and Trout are considered the fathers of modern advertising. This is an "easy read" and the best crash course on marketing I've ever come across.

Here are some of my tips on how to craft a UVP:

Be different, but make sure your difference matters.

> The key to unlocking what's different about your product is deriving your UVP directly from the number-one problem you are solving. If that problem is indeed worth solving, you're more than halfway there already.

Target early adopters.

Too many marketers try to target the "middle" in the hopes of reaching mainstream customers, and in the process they water down their message. Your product is *not* ready for mainstream customers yet. Your sole job should be to find and target early adopters, which requires bold, clear, and specific messaging.

Focus on finished story benefits.

You've probably heard about the importance of highlighting benefits over features. But benefits still require your customers to translate them to their worldview. A good UVP gets inside the head of your customers and focuses on the benefits your customers derive *after* using your product.

So, for instance, if you are creating a résumé-building service:

- A feature might be "professionally designed templates."
- The benefit would be an "eye-catching résumé that stands out."
- But the finished story benefit would be "landing your dream job."

A good formula for crafting an effective UVP (by way of Dane Maxwell) is:

Instant Clarity Headline = End Result Customer Wants + Specific Period of Time + Address the Objections

NOTE

The second and third items in the preceding formula are great if you can use them, but they are not required.

A classic example that fits this formula is Domino's slogan:

Hot fresh pizza delivered to your door in 30 minutes or it's free.

Pick your words carefully and own them.

Words are key to any great marketing and branding campaign. Look at how the top luxury car brands have used a single word to define themselves:

- *Performance:* BMW
- *Design:* Audi
- *Prestige:* Mercedes

Picking a few "key" words that you consistently use also drives your search engine optimization (SEO) ranking.

Answer: what, who, and why.

A good UVP needs to clearly answer the first two questions—what is your product and who is your customer. The "why" is sometimes hard to fit in the same statement, and I'll frequently use a subheading for that.

Here are example UVPs I have used in products:

Lean Canvas

Spend More Time Building Versus Planning Your Business.

The faster, more effective way to communicate your business model

USERcycle

Turn your users into passionate customers.

Customer Lifecycle Management Software

Study other good UVPs.

The best way to craft a good UVP is to study the UVPs of the brands you admire. Visit their landing pages and deconstruct how and why their messaging works.

Some of my best teachers have been Apple, 37signals, and FreshBooks.

Create a high-concept pitch.

Another useful exercise is creating a high-concept pitch. High-concept pitches are used heavily by Hollywood producers to distill the general plot of a movie to a memorable sound bite. The high-concept pitch was also popularized as an effective pitching tool by Venture Hacks in its ebook, *Pitching Hacks*.

Examples:

- YouTube: "Flickr for video"
- *Aliens* (movie): "Jaws in space"
- Dogster: "Friendster for dogs"

The high-concept pitch should not be confused with a UVP and is not intended to be used on your landing page. There is a danger that the concepts the pitch is based on might be unfamiliar to your audience. For this reason, the high-concept pitch is more effective when used to quickly get your idea across and make it easy to spread, such as after a customer interview. We'll cover this specific use of the high-concept pitch in Chapter 7.

CASE STUDY

CloudFire: Unique Value Proposition

Given the current list of existing alternatives, I decided to use speed as the "difference that would matter" for my UVP and "no uploading" as the key words to position around (see Figure 3-3).

Later, you'll see how this UVP evolved significantly after just a few customer interviews.

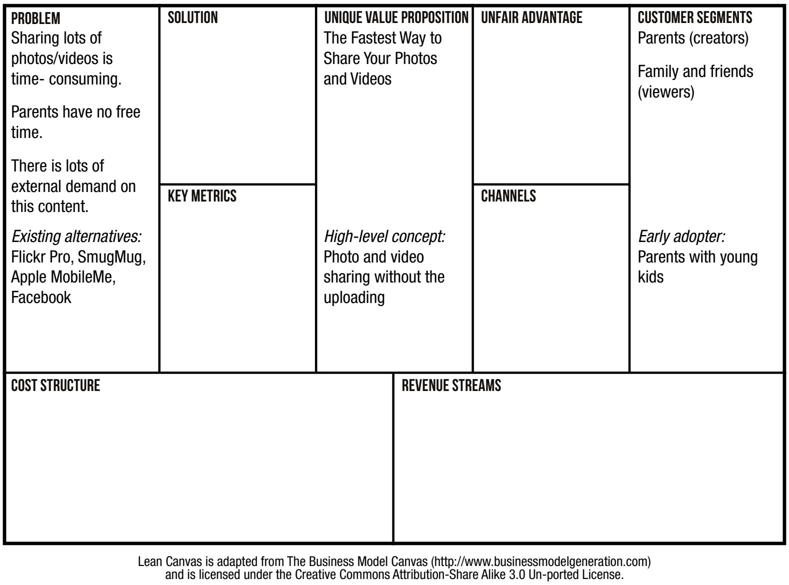

Figure 3-3. *CloudFire: UVP*

Solution

You are now ready to tackle solution possibilities.

Because all you have are untested problems, it is fairly common for them to get reprioritized or completely replaced with new ones after just a few customer interviews. For this reason, I recommend not getting carried away with fully defining your solution just yet. Rather, simply sketch out the simplest thing you could possibly build to address each problem.

Bind a solution to your problem as late as possible.

CASE STUDY

CloudFire: Solution

Based on my list of problems, I created a short list of top features I would include in the minimum viable product, or MVP (see Figure 3-4).

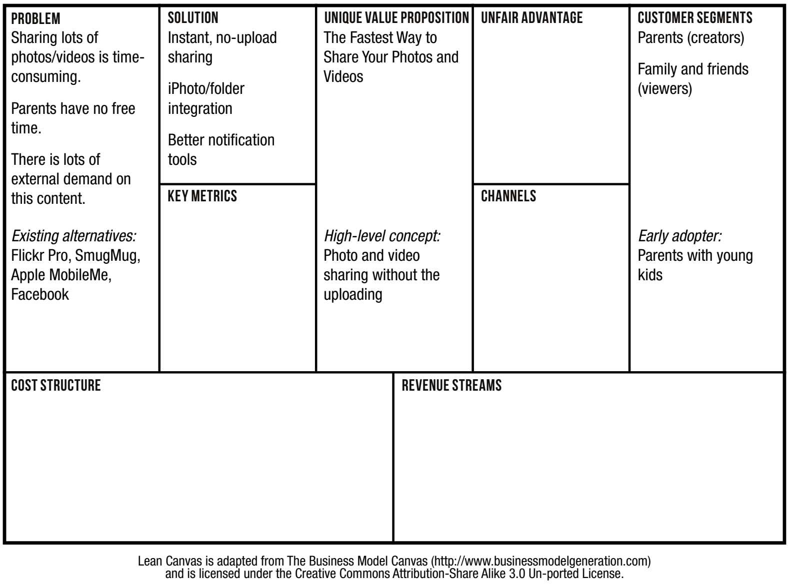

Figure 3-4. *CloudFire: solution*

Channels

Failing to build a significant path to customers is among the top reasons why startups fail.

The initial goal of a startup is to learn, not to scale. So, at first it's OK to rely on any channels that get you in front of potential customers.

The good news is that following a "customer discovery[1]/interview" process forces you to build a path to "enough" customers early. However, if your business model relies on acquiring large numbers of customers to work, that path may not scale beyond the initial stages, and it's quite possible you'll get stuck later.

1 The first step described by Steve Blank in his book *The Four Steps to the Epiphany* (*http://www.cafepress.com/kandsranch*).

For this reason, it's equally important to think about your scalable channels from day one so that you may start building and testing them early.

While there are a plethora of channel options available, some channels may be outright inapplicable to your startup, while others may be more viable during later stages of your startup.

I typically look for the following characteristics in my early channels.

Freer versus paid

First, there is no such thing as a free channel. Channels we normally associate as being free, like SEO, social media, and blogging, have a nonzero human capital cost associated with them. Calculating their ROI is complicated because, unlike a paid channel that is used up after you pay for it, these channels keep working for you over time.

A commonly cited paid channel is search engine marketing (SEM). Eric Ries has written about how he tested his early product on $5 a day using Google AdWords, driving 100 clicks at a cost-per-click of 5 cents. If you can pull this off today, by all means use it, but unfortunately those days are long gone for most products. Keyword competition is so fierce now that you need to either outspend or outwit your competition. Both of these activities are better suited to the after product/market fit time frame when your focus shifts to optimizing versus learning.

Inbound versus outbound

Inbound channels use "pull messaging" to let customers find you organically, while outbound channels rely on "push messaging" to reach customers.

Examples of inbound channels:

- Blogs
- SEO
- Ebooks
- White papers
- Webinars

Examples of outbound channels:

- SEM
- Print/TV ads
- Trade shows
- Cold calling

When you don't yet have a tested value proposition, it's hard to justify spending marketing dollars or effort on outbound messaging. Getting "tech-crunched" or seeking other forms of PR before then is a form of waste. Now might be the time to start building inroads to influencers, but you are not ready to "get covered."

Interviews are a form of outbound channel that are the exception. As we'll see with the next two points, the return on learning from an interview far exceeds the cost of running an interview.

Direct versus automated

As a scalable channel, direct sales only make sense in businesses where the aggregate lifetime value of the customers exceeds the total compensation of your direct sales people, such as in certain B2B and enterprise products.

But as a learning channel, direct selling is one of the most effective, since you interact face to face with the customer.

First sell manually, then automate.

Direct versus indirect

Another area where startups waste energy is prematurely trying to establish strategic partnerships. The idea is to partner with a larger company to leverage its channels and credibility. The problem is that until you have a proven product, you won't get the right level of attention from the bigger company's sales reps to make this work. Imagine you are a sales rep at the bigger company. Given the choice of selling what you know or selling an unproven product to make your quota, which would you choose?

The same principle applies to hiring external salespeople. While a salesperson can probably outsell you on the execution of a sales plan, she can't create that plan.

You have to first sell your product yourself, before letting others do it.

Retention before referral

Many startups are obsessed with building virality and referral/affiliate programs into their product from day one. While referral programs can be very effective in spreading the word about your product, *you need to have a product worth spreading first.*

> *Build a remark-able product.*
>
> —*Seth Godin,* Purple Cow *(Portfolio Hardcover)*

CASE STUDY

CloudFire: Channels

I planned to start with several outbound channels (friends and other parents at daycare) for interviews, and list a few possible, more scalable channels for later (see Figure 3-5).

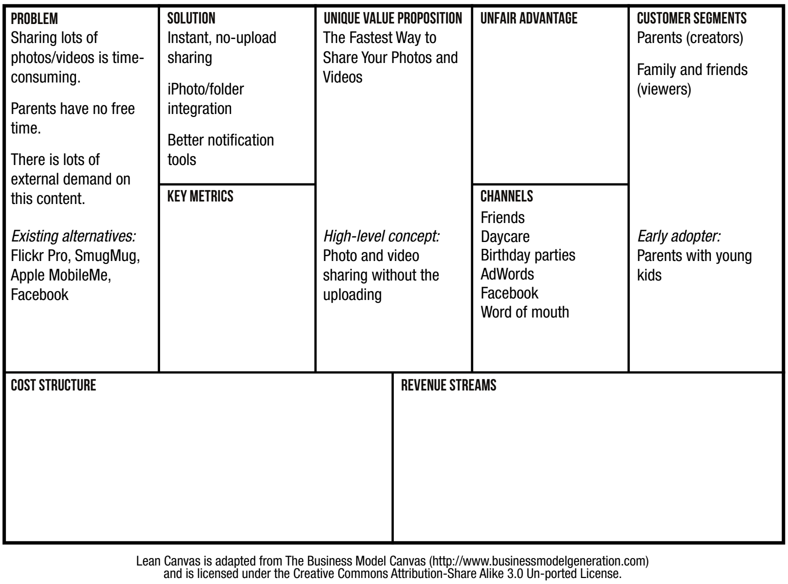

Figure 3-5. *CloudFire: channels*

Revenue Streams and Cost Structure

The bottom two boxes, labeled "Revenue Streams" and "Cost Structure," are used to model the viability of the business. Rather than thinking in terms of three- or five-year forecasts, take a more ground-up approach.

First, model the runway you will need to define, build, and launch your MVP. Then, revise after you get there.

Revenue streams

A lot of startups choose to defer the "pricing question" because they don't think their product is ready. Something I hear a lot is that an MVP is, by definition, embarrassingly minimal. How can you possibly charge for it?

First, an MVP is not synonymous with a half-baked or buggy product. Your MVP should address not only the *top problems* customers have identified as being important to them, but also the problems that are *worth solving*. By that definition, you should plan to deliver enough value to justify charging.

But there is another line of reasoning that is frequently cited for deferring pricing: to accelerate initial learning. The argument goes that pricing creates unnecessary friction that should be avoided early on.

The mindset most of us have when we're launching a new product is one of *lowering signup friction*. We want to make it as easy as possible for the customer to say yes and agree to take a chance on our product, hoping the value we deliver over time will earn us the privilege of his business.

Not only does this approach delay validation of one of the riskier parts of the model (because it's too easy for a user to say yes), but a lack of strong customer "commitment" can also be detrimental to optimal learning.

Furthermore, you don't need a lot of users to support learning—*just a few good customers*.

I believe that if you intend to charge for your product, you should charge from day one.

NOTE

A reasonable exception is when you're offering a value proposition that is built over time—for example, premium LinkedIn accounts.

Here's why:

Price is part of the product.

> Suppose I place two bottles of water in front of you and tell you that one costs 50 cents and the other costs 2 dollars. Despite the fact that you wouldn't be able to tell them apart in a blind taste test (the products are similar enough), you might be inclined to believe (or at least wonder) whether the more expensive water is of higher quality.
>
> Here, price has the power to change your perception of the product.

Price defines your customers.

More interesting is the fact that the bottled water you pick determines your customer segment. From the existing market for bottled water, we know there is a viable business for bottled water at both price segments. What you charge signals your positioning on which customers you want to attract.

Getting paid is the first form of validation.

Getting a customer to give you money is one of the hardest actions you can ask them to take and is an early form of product validation.

Although there is a lot of science around pricing, pricing is more art than science. For a great primer, I highly recommend getting a copy of Neil Davidson's free ebook on software pricing, *Don't Just Roll the Dice.*

One technique for setting initial pricing is pricing against the list of existing alternatives from the Problem box. These alternatives provide reference price anchors against which your offering will be measured.

(For more specific techniques for pricing Software as a Service [SaaS] products, including when to use freemium pricing, see "How to Set Pricing for a SaaS Product" in the Appendix.)

Cost structure

List the operational costs you will incur while taking your product to market. It's hard to accurately calculate these too far into the future. Instead, focus on the present:

- What will it cost you to interview 30 to 50 customers?
- What will it cost you to build and launch your MVP?
- What will your ongoing burn rate look like in terms of both fixed and variable costs?

Use the revenue streams and cost structure inputs to calculate a break-even point and estimate how much time, money, and effort you need to get there. You will use this later to prioritize which model you start with.

CASE STUDY

CloudFire: Revenue Streams and Cost Structure

Using the existing alternatives for price anchoring, which ranged from $24 to $39 per year for Flickr and SmugMug, to $99/year for Apple's MobileMe (a lot more than just photos/videos), I decided to start with $49/year pricing.

Prints (and other merchandise) were also revenue streams these companies used, but I wasn't sure if enough people still purchased prints anymore to make it worthwhile (a hypothesis that would need to be tested). More important, prints represented a potential secondary revenue stream that could only be realized once customers derived a core UVP. For this reason, I left out prints from both the MVP and initial canvas (see Figure 3-6).

The only initial costs to getting an MVP out were people costs, which I list in the next section.

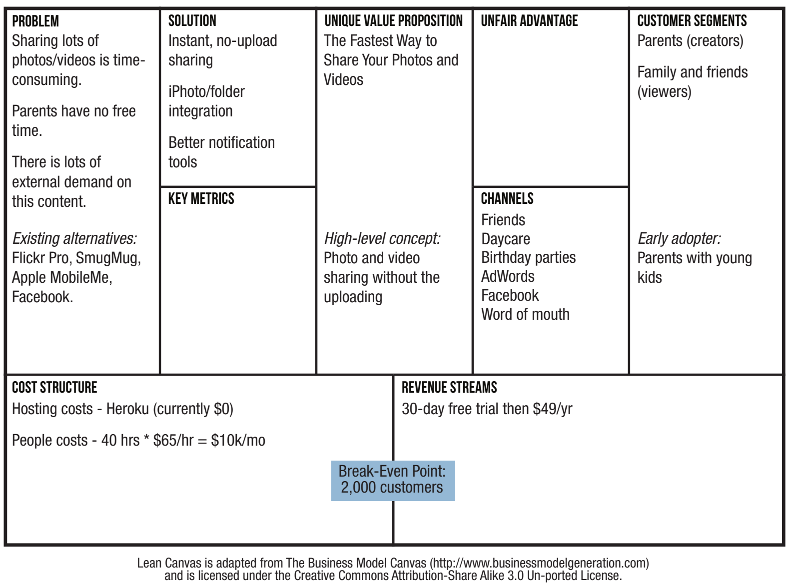

Figure 3-6. *CloudFire: revenue streams and cost structure*

Key Metrics

> *Find the key number that tells you how your business is doing in real time, before you get the sales report.*
>
> —*Norm Brodsky and Bo Burlingham,* The Knack *(Portfolio Hardcover)*

Every business has a few key numbers that can be used to measure how well it is performing. These numbers are key for both measuring progress and identifying hot spots in your customer lifecycle.

A model I use heavily is Dave McClure's Pirate Metrics,[2] shown in Figure 3-7.

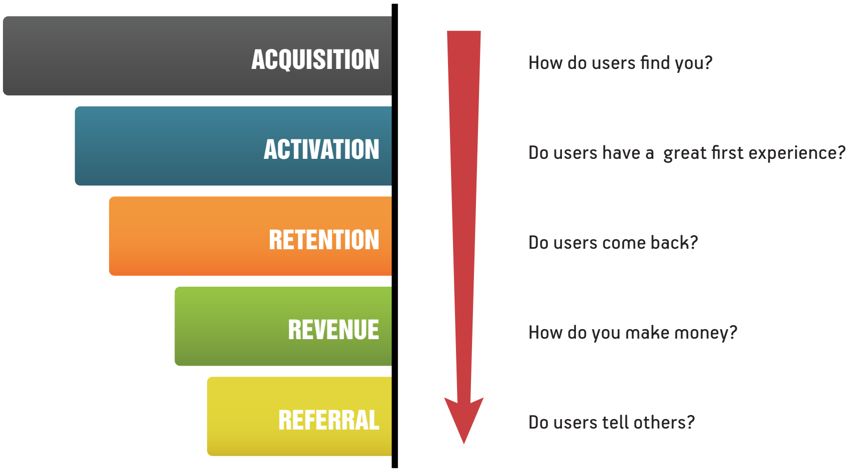

Figure 3-7. *CloudFire: Pirate Metrics*

Even though Pirate Metrics was built with software companies in mind, the model is applicable to many different types of businesses. Let's walk through each step using a flower shop and a software product as examples.

Acquisition

Acquisition describes the point when you turn an unaware visitor into an interested prospect.

In the case of the flower shop, getting someone walking by your window to stop and come in to your shop is an acquisition event.

On a product website, getting someone to do anything other than leave your website (abandon) is a measure of acquisition. I specifically measure successful acquisition as getting my visitors to view my signup page.

Activation

Activation describes the point when the interested customer has his first gratifying user experience.

2 Dave McClure called them Pirate Metrics because when you put the first letter in each funnel step together, they spell the word: AARRR.

In the case of the flower shop, if the prospect found the shop in disarray once he comes inside, there would be a disconnect with the promise made at the front of the store. That wouldn't be a gratifying first user experience.

On the product site, once the prospect signs up, you have to make sure you get the customer to a point where he can connect the promise you made on your landing page (your UVP) with your product.

Retention

Retention measures "repeated use" and/or engagement with your product.

So, in the case of the flower shop, the action of coming back to the store—and in the case of the product website, the act of logging back in to use the product again—would count toward retention.

As we'll see in Part 4 of the book, this is one of the key metrics to measuring product/market fit.

Revenue

Revenue measures the events that get you paid.

These could be buying flowers or buying a subscription for your product. These events may or may not occur on the first visit.

Referral

Referral is a more advanced form of a user acquisition channel where your happy customers refer or drive potential prospects into your conversion funnel.

In the case of the flower shop, this could be as simple as telling another friend about the store.

For the software product, this could range from implicit viral or social sharing features (like Share with a friend), to explicit affiliate referral programs or Net Promoter Score.

CASE STUDY

CloudFire: Key Metrics

In Figure 3-8 I map specific user actions that correspond to each of the key metrics discussed earlier.

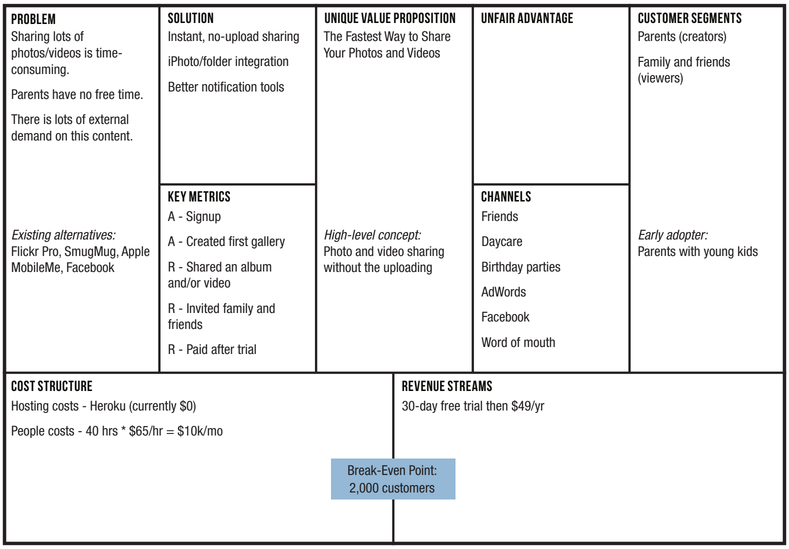

Figure 3-8. *CloudFire: key metrics*

Unfair Advantage

This is usually the hardest section to fill, which is why I leave it for last. Most founders list things as competitive advantages that really aren't—such as passion, lines of code, or features.

Another frequently cited advantage in business models is the "first-mover" advantage. However, it doesn't take much to see that being first can actually be a disadvantage, as most of the hard work of paving new ground (risk mitigation) falls on your shoulders, only to be potentially picked up later by fast-followers unless you're able to constantly outpace them with a real "unfair advantage." None of these companies were first movers: Ford, Toyota, Google, Microsoft, Apple, or Facebook.

An interesting perspective (via Jason Cohen) to keep in mind is that anything worth copying will be copied, especially once you start to demonstrate a viable business model.

Imagine a scenario where your cofounder steals your source code, sets up shop in Costa Rica, and slashes prices. Do you still have a business? How about if Google or Apple launches a competitive product and drops the price to $0?

You have to be able to build a successful business in spite of that, which led Jason Cohen to offer the following definition:[3]

> *A real unfair advantage is something that cannot be easily copied or bought.*
>
> —*Jason Cohen,* A Smart Bear *blog*

Here are some examples of real unfair advantages that fit this definition:

- Insider information
- The right "expert" endorsements
- A dream team
- Personal authority
- Large network effects
- Community
- Existing customers
- SEO ranking

Some unfair advantages can also start out as values that become differentiators over time.

For example, Zappos CEO Tony Hsieh believes strongly in creating happiness for his customers and employees. This manifested itself in many company policies that, on the surface, didn't make much business sense, such as allowing customer service representatives to spend as much time as was needed to make a customer happy and offering a 365-day return policy with two-way paid shipping. But these policies served to differentiate the Zappos brand and build a large, passionate, and vocal customer base that played a large role in the company's eventual $1.2 billion acquisition by Amazon in 2009.

You may have to leave this box blank when you first start out, but it's here to make you really think about how you can/will make yourself different and make your difference matter.

---

3 Jason Cohen. "No, that IS NOT a competitive advantage"; *http://blog.asmartbear.com/not-competitive-advantage.html.*

CASE STUDY

CloudFire: Unfair Advantage

Even though CloudFire is built on a proprietary p2web framework that might give us an early advantage, anything worth copying will be copied. So I decide to base my unfair advantage on something harder to replicate. In this case, community (see Figure 3-9).

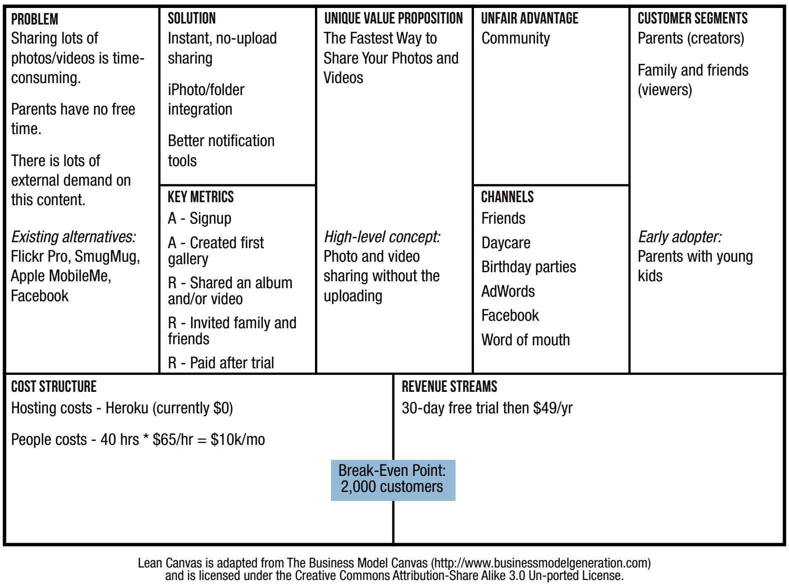

Figure 3-9. *CloudFire: unfair advantage*

Now It's Your Turn

Documenting your Plan A is a prerequisite for moving on. Too many founders carry their hypotheses in their heads alone, which makes it hard to systematically build and test a business.

You have to draw a line in the sand.

How you create your Lean Canvas is up to you.

You can:

- Visit *http://LeanCanvas.com* and create your online canvas there.
- Create a version in PowerPoint or Keynote.
- Sketch a canvas on paper.

The important thing is to share your Lean Canvas with at least one other person when you are done.


THE LEAN SERIES
Ash Maurya
RUNNING LEAN
Iterate from Plan A to a Plan That Works
Eric Ries, Series Editor
O'REILLY
2nd Edition