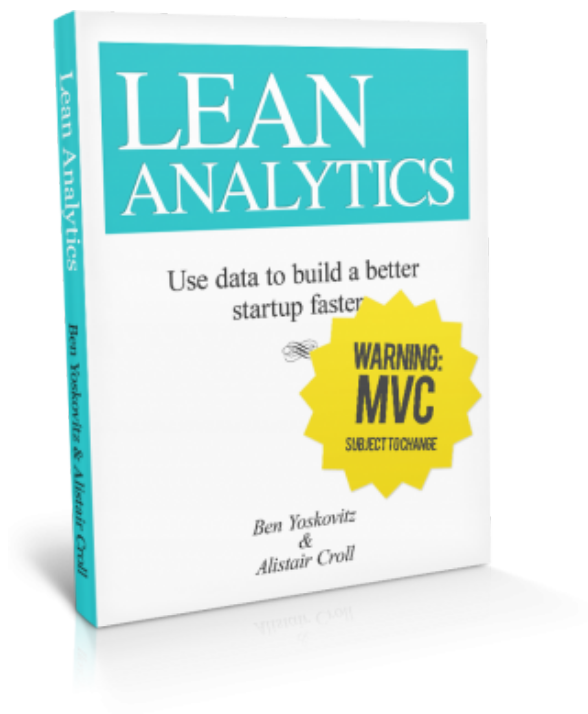


Lean Analytics

(a sneak peek)

by Alistair Croll and Ben Yoskovitz



1. A Quick Preamble

Welcome to the first sneak peek of *Lean Analytics*. We've included a few of the chapters for you to read, provide feedback on and—hopefully—enjoy! Think of this as our *Minimum Viable Product*. [Our blog](#) is a big part of our MVP as well; it's where we share ideas, test things and publish content that we're editing out of the book. Hopefully you're enjoying it.

Not surprisingly, writing *Lean Analytics* is very much like starting a company. And we're following a Lean Startup approach in our efforts: we have hypotheses around what we think people will like, we write some content, we test it (through the blog, giving presentations and so on), measure the results (mostly qualitatively, but there are some quantitative metrics too) and adjust as we learn.

Finally, we'd like to point out that we're shameless promoters. We're giving you this look at our work not only for your feedback, but also so you can spread the word.



Throughout the book, we've flagged some of the core points we're trying to make—like this.

If you like them, feel free to tweet them to the world (and us!)—it'll show us which parts of the book people are resonating with, and hopefully help us to reach an even wider audience. You can click on the Twitter icon next to each quote.

Writing *Lean Analytics* has been a great experience so far, and we've still got a long ways to go. So sit back, enjoy, take notes and send us your feedback!

2. Introduction

Startups use analytics to find their way to the right product and market before the money runs out. Learning and iterating is at the core of the Lean Startup methodology, but with a flood of information available, it's hard to know where to begin. Ultimately, you don't want to spend your life and your money building something nobody wants.

The problem, of course, is that it's hard to figure out what people want. Asking them is a good start, but often they don't know—and even when they do, they lie. What's worse, as a founder and entrepreneur you have strong, almost overwhelming preconceptions about how other people think, and these color your decisions in subtle and insidious ways.

The Lean Startup movement galvanized a generation of entrepreneurs. Most of its insights boil down into one simple sentence:



Don't sell what you can make; make what you can sell.

The devil, of course, is in the details of figuring out what you can sell—and how to turn a profit doing so. That's what we want to tackle.

In *Lean Analytics*, we hope to show you how to find the one metric that matters to your business for its current stage of growth—from identifying a need, to validating a particular solution, to testing new features, to improving revenues. We also want to help you tailor your metrics to different audiences, whether you're enticing investors, promoting to bloggers, or reporting progress to advisors. We want to give you an idea of what "normal" is, so you know if you're ahead or behind the industry on a particular aspect of your startup. Finally, we want to lay out practical, proven steps to take your startup from initial idea to product/market fit.

We're going to make some fairly bold statements in this book. We think you should pick only one metric to focus on; that you should draw a line in the sand; and that you should balance gut instinct with hard, impartial data. These are bitter pills to swallow. We've had founders tell us data-driven mindsets don't apply to certain businesses, such as gaming; or that they've already found their product/market fit and don't need to optimize. That's OK—it's why we wrote the book.

Who this book is for

In a digital, always-on world, everything can be measured. Anything that's reachable by a mobile device can be collected and quantified. Hashtags, QR codes, loyalty

cards, short URLs, near-field communications, and social network activity are all grist for the analytical mill, and all of them can point the way to the ideal product and go-to-market strategy for your business. Today, you can instrument every facet of your company to better understand your customers and market.

Recently, the Web Analytics Association rebranded itself the Digital Analytics Association in recognition of the far wider implications of tracking and measuring the world around us. Even traditional businesses like restaurants are embracing a lean, learn-first approach: San Francisco's Wise Sons deli used a temporary "pop-up" approach to optimize their menu and operations before launching a permanent restaurant. The food truck just might be the Lean Startup applied to the restaurant.

Many modern startups have a significant web-based component, which means there's a lot any business can learn from web traffic. But whether you're an entirely web-based business, or a local store with only a Foursquare presence and a loyalty program, your goal remains the same: identify and measure the single most important metric for the stage of your company, and then iterate until you get it right.

While this book is primarily about technology startups, its lessons can be applied far beyond the web. Many of the tools and techniques we'll cover were first applied to consumer web applications. Today, however, they matter to a far broader set of startups—independent local businesses, business-to-business startups, rogue civil servants trying to change the system from within, and "intrapreneurs"¹ innovating within big, established organizations.

In that respect, *Lean Analytics* is for anyone trying to make their organization more effective—from tiny startups to global corporations, restaurants to sports teams, communities and church groups to international charities.

The primary audience, however, is the lean entrepreneur or intrapreneur focused on the early stages of building something innovative. We'll walk readers through the analytical process, from idea generation to nearing or achieving product-market fit, so the content is as applicable to those starting their entrepreneurial journey as it is to those in the middle of it.

Web analysts and other data scientists may also find this book useful, because it will show them how to move beyond traditional "funnel visualizations" and how to elevate the things they work on into more meaningful business discussions. Similarly, business professionals involved in product development, product

¹ An entrepreneur within a large organization, often fighting political rather than financial battles and trying to provoke change from within.

management, marketing, public relations and investing will find much of the content relevant, as it will help them understand and assess startups.

The building blocks

Lean Analytics doesn't exist in a vacuum. We're an extension of Lean Startup, heavily influenced by customer development and other concepts that have come before. It's important to understand those building blocks before diving in.

Customer Development

Customer Development—a term and process conceived by entrepreneur and professor Steve Blank—took direct aim at the waterfall method for building products and companies. Customer Development is focused on collecting continuous feedback that has a material impact on the direction of a product and business, every step of the way. Steve first defined Customer Development in his book, *The Four Steps to the Epiphany*.

He continues to evolve his concepts around building and running startups, and recently published a new book, *The Startup Owner's Manual*.

One of the most important concepts in Steve's work is his definition of a startup, which is extremely relevant throughout *Lean Analytics* :

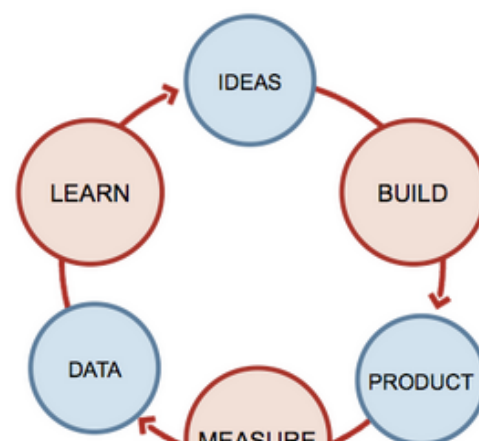
"A startup is an organization formed to search for a scalable and repeatable business model."

Lean Startup

From the foundation of Customer Development comes Lean Startup, a process defined and developed by Eric Ries. It combines Customer Development, Agile Software Development methodologies, and Lean Manufacturing practices into a framework for developing products and businesses quickly and efficiently.

Eric has done incredible work bringing Lean Startup not only to startups but into the corporate world as well. After all, Lean isn't about being cheap or small, it's about eliminating waste and moving quickly, which organizations of any size can benefit from.

One of Lean Startup's core concepts is *Build → Measure → Learn*—the process by which a Lean startup does everything, from establishing a vision to building product features. The speed at which an



organization can iterate through the cycle is key.

Every company starts with an idea—a realization that something could be done better, differently, more competitively. Lean is about subjecting that idea to rigorous analysis and development according to carefully measured steps. A key tenet of Lean Startup is to identify the riskiest parts of the business at a particular stage, and iterate until the risk is overcome. Within that cycle, *Lean Analytics* is focused primarily on the *Measure* stage, where we use data as an essential tool for making progress.

Most of the time, the risk isn't whether you can build something, but rather, whether anyone will care. The really important questions to answer are whether you've found a problem people care about having solved, and whether you can solve it remarkably better than others. Lean makes sure you don't put the "product" cart before the "need" horse.

We're not going to do a complete review of the Lean Startup. What we *will* do, however, is consider analytics in the four main stages any startup will go through, so you have a step-by-step guide to building your startup analytically, knowing which metrics to care about, how to collect them, and how to interpret and share them.

The four stages you'll go through are:

- **Validate a problem:** find a real issue people are aware of and need solved.
- **Validate a solution:** decide if you have a way of solving the problem that will work for them, and that they can consume from you.
- **Validate a market/revenue:** figure out how you'll deliver the solution to their problem reliably and repeatedly, and what they'll give you in return, and if there are enough people with the problem to sustain you.
- **Validate the channels & ecosystem:** understand where you stand in your industry, whether you're a standalone offering or a part of something bigger, who's competing with you, and who will help you sell more things to more people for more money more effectively.²

Keep this in mind as you're reading the book so you can hone in on those areas that are of most interest to you and the stage you're at.

About the authors

Alistair Croll has been an entrepreneur, author, and public speaker for nearly 20 years. He's worked on a variety of topics, from web performance, to big data, to cloud computing, to startups, in that time. In 2001, he co-founded web performance

² This is how Sergio Zyman, formerly the CMO of Coca-cola, defines marketing.

startup Coradiant, and since that time has also launched Rednod, CloudOps, Bitcurrent, Year One Labs, the Bitnorth conference, the International Startup Festival and several other early-stage companies.

Alistair is the chair of O'Reilly's Strata conference, Cloud Connect, and Interop's Enterprise Cloud Summit. This is his fourth book on analytics, technology, and entrepreneurship. Alistair lives in Montreal, Canada and tries to mitigate chronic ADD by writing about far too many things at Solve For Interesting (<http://www.solveforinteresting.com>.)

Ben Yoskovitz is a serial entrepreneur with 15+ years experience in web businesses. He started his first company in 1996 while completing university. In 2007 he co-founded Standout Jobs, a B2B software company in the recruitment space. The company raised \$1.8M from venture and angel investors and exited in 2010. Most recently, as VP of product at GoInstant, he led the company's growth in the co-browsing space until its acquisition in 2012 by Salesforce.com, and continues on in that role.

Ben has been blogging since 2006. The "Instigator Blog" (<http://instigatorblog.com>) is recognized as one of the top blogs on startups and entrepreneurship. Ben is also an active mentor to numerous startups and other accelerator programs, including FounderFuel (a TechStars-like program in Montreal.) He regularly speaks at startup conferences and events, including the Michigan Lean Startup Conference, Internet Marketing Conference, and the Lean Startup conference.

In 2010, Alistair and Ben were two of the co-founders of Year One Labs, an early stage accelerator that provided funding and up to 1-year of hands-on mentorship to 5 startups. Year One Labs followed a Lean Startup program, making it the first accelerator to formalize such a structure. Three of five companies graduated from Year One Labs and went on to raise follow-on financing. A great deal of their experience and thought leadership around Lean Startup and analytics emerged during this time.

3. We're all liars

Let's face it: you're a liar.

We all lie; some better than others. And the best liars are entrepreneurs.

Entrepreneurs are particularly good at lying to themselves. Lying may even be a prerequisite for succeeding as an entrepreneur—after all, you need to convince others that something is true in the absence of good, hard evidence. You need believers to take a leap of faith with you. As an entrepreneur, you need to live in a semi-delusional state just to survive the inevitable rollercoaster ride of running your startup.

Small lies are essential. They create your reality distortion field. Small lies are a necessary part of being an entrepreneur. But if you start believing your own hype, you won't survive. You'll go too far into the bubble you've created, and you won't come out until you hit the wall—hard—and that bubble bursts.



You need to lie to yourself, but not to the point at which you're jeopardizing your business.

That's where data comes in.

Your delusions, no matter how convincing, will wither under the harsh light of data. Analytics is the necessary counterweight to lying, the yin to the yang of hyperbole. Moreover, data-driven learning is the cornerstone of success in startups. It's how you learn what's working and iterate towards the right product and market before the money runs out.

Don't believe us? Well, that's precisely the point of this book.

We're not suggesting that gut instinct is a bad thing. Instincts are inspiration, and you'll need to listen to your gut and rely on it throughout the startup journey. But don't disembowel yourself. Guts matter; you've just got to test them. **Instincts are experiments. Data is proof.**

The Lean Startup movement

Innovation is hard work—harder than people realize. It's true whether you're a lone startup trying to disrupt an industry, or a rogue employee challenging the status quo, tilting at corporate windmills and steering around bureaucratic roadblocks. We get it. Entrepreneurship is crazy, bordering on absurd.

Lean Startup provides a measure of order to the chaos, a framework by which you can more rigorously go about the business of creating something new. By running through a cycle of building something, measuring what happens, and learning from that experience to build something better, you're able to identify real risks early on. Lean Startup has brought a generation of entrepreneurs a heavy dose of intellectual honesty. Follow the Lean model, and it becomes increasingly hard to lie, especially to yourself.

There's a reason the Lean Startup movement has taken off now. We're in the midst of a fundamental shift in how companies are built. It's vanishingly cheap to create the first version of something. Clouds are free. Social media is free. Competitive research is free. Even billing and transactions are free³. **We live in a digital world, and the bits don't cost anything.**

That means you can build something, measure its effect, and learn from it to build something better the next time. You can iterate quickly, deciding early on if you should double down on your idea or fold and move onto the next one. And that's where analytics come in. Learning doesn't happen accidentally. It's an integral part of the Lean process.

Peter Drucker famously observed, "If you can't measure it, you can't manage it." Nowhere is this truer than in the Lean model, where successful entrepreneurs build the product, the go-to-market strategy, and the systems by which to learn what customers want—simultaneously.

Poking a hole in your reality distortion field

Most entrepreneurs have been crushed—at least once, maybe twice. If you haven't been solidly trounced on a regular basis, you're probably doing it wrong, and aren't taking the risks you need to in order to succeed.

But there's a moment on the startup rollercoaster where the whole thing derails, and it's truly finished. There's little more to do than turn off the website and close down the bank account. You're overwhelmed, the challenges are too great, and it's over. You've failed.

You knew this was going to happen. Long before the actual derailment, you knew it wasn't working. If you're completely honest with yourself, you know it's true. But at

³ When we say "free," we mean "free from significant upfront investment." Plenty of cloud and billing services cost money—sometimes more money than doing it yourself—once your business is underway. But free, here, means free of outlay in advance of finding your product/market fit. You can use Paypal, or Google Wallet, or Eventbrite, or dozens of other payment and ticketing systems, and pass the cost of the transaction on to your consumers.

the time, your reality distortion field was strong enough to keep you going on faith and fumes alone. This probably meant you hit the wall at a million miles an hour, lying to yourself the whole time.

We're not arguing against the importance of the reality distortion field—but we do want to poke a few holes in it. Hopefully, as a result, you'll see the derailment in time to avoid it. We want you to not have to rely on the reality distortion field quite as much, and instead rely on lean analytics.

For starters, here are two definitions to remember throughout this book:

- **Lean Startup** helps structure your progress and hone in on what you should be focusing on at any given time.
- **Lean Analytics** is used to measure that progress, helping you to ask the most important question and get clear answers quickly.

Lean Analytics is the glue throughout the Lean Startup process (and beyond) that gives you the necessary decision-making capabilities to succeed. It's the dashboard for every stage of your business, from validating whether a problem is real, to learning who your customers are, to deciding what to build, to positioning yourself favorably with a potential acquirer. Lean Analytics drives insights. It can't force you to act on them—but it'll put them front and center, making them hard to ignore and giving you a better chance of avoiding derailment.

Case study: AirBnB Photography—growth within growth

AirBnB is an incredible success story. In just a few years, the company has become a powerhouse in the travel industry, providing travelers with an alternative to hotels, and providing individuals who have rooms, apartments or homes to rent out with a new source of income. In 2012, they booked over 5 million nights with their service. But they started small, and as adherents to the Lean Startup mindset, took a very methodical approach to their success.

At SXSW 2012, Joe Zadeh, Product Lead at AirBnB, shared part of the company's amazing story. He focused on one aspect of their business: *professional photography*.

It started with a hypothesis: "Hosts with professional photography will get more business. And hosts will sign up for it as a service." This is where their gut came in: they had a sense that something would help their business. But rather than implementing it outright, they built a Concierge Minimum Viable Product (MVP) to quickly test their hypothesis.

In their initial tests of their MVP, AirBnB found that professional photographed listings got *two to three times* more bookings than the market average. This validated their first hypothesis. And it turned out that hosts were wildly enthusiastic to receive an offer from AirBnB to take those photographs for them.

AirBnB then went on to further experiment and iterate. They watermarked photos to add authenticity to them. They got customer service to offer professional photography as a service when someone called in. They increased the requirements on photo quality. Each step of the way, they measured the results and adjusted as necessary.

Bridging the two worlds

Lean Analytics is how we bridge the gap between Lean Startup and Analytics. We're big believers in the effectiveness of both:

Lean provides a fantastic template for building businesses. It focuses on methodically but quickly learning and iterating, finding what will work (and what won't), mitigating risk and minimizing effort spent in the wrong places. We've seen Lean Startup work in our own companies and in other companies we've mentored

and advised. Lean Startup fundamentally changes the way you think. It's both a prescriptive process for building your startup, and a mindset.

Like Lean, **Analytix** is both a process and a mindset. It's a set of processes for collecting, analyzing, and using data to improve something, whether that's validating a business idea, finding a market, acquiring customers, expanding channels, marketing, relating to investors and the public, or reporting the metrics that drive your business.

But it's also a mindset, because once you're committed to using data in everything you do, you realize it's a way of thinking, and not just about crunching numbers. Analytical thinking is about asking the right questions, and focusing on the one key metric that will produce the change you're after.

With this book, we hope to provide you with the guidance, tools, and evidence to embrace data as a core component of your startup's success.



We want to show you how to use data to build a better startup faster.

4. How to keep score

Analytics is about tracking the metrics that are critical to your business. Usually, those metrics matter because they relate to your business model—where money comes from, how much things cost, how many customers you have, and how effective your advertising is. Analytics measures whether your customers are doing what your business model hopes they will.

A startup is a special (some might say dysfunctional) case of analytics. You don't always know what your key business metrics are, because you're not entirely sure what your business model is, and this means you're frequently changing the goals you measure and the activity you analyze. You're still trying to find the right product, or the right target audience. Because of this:



In a startup, the purpose of analytics is to find your way to the right product and market before the money runs out.

So we're going to need to learn how to talk analytics.

Metrics are the language of analytics. Analysts look at Key Performance Indicators (KPIs) to track the health of their businesses. Every industry has KPIs—if you're a restaurant owner, it's the number of covers (tables) in a night; if you're an investor, it's the return on an investment; if you're a media website, it's the unique visitors; and so on.

There are many different kinds of metrics you'll need to be familiar with. Three important dimensions include:

- **Qualitative and quantitative metrics.** Qualitative metrics are unstructured, anecdotal, revealing, and hard to aggregate; quantitative metrics involve numbers and statistics, and provide hard numbers but less insight.
- **Vanity and actionable metrics.** Vanity metrics make you (and your investors) feel good, but don't change how you'll act. Actionable metrics change your behavior by helping you pick a course of action.
- **Exploratory metrics and reporting metrics.** Exploratory metrics are speculative, and try to find unknown insights that can give you the upper hand, focusing on the interesting and unexpected and on trying new things, while reporting metrics keep you abreast of the normal, managerial, day-to-day operations.

Qualitative and quantitative

Quantitative data is easy to understand. It's the numbers we track and measure. It's sports scores and movie ratings. As soon as something is ranked, counted, or put on a scale, it's quantified. It's nice and scientific, and (assuming you do the math right) you can aggregate it, extrapolate it, and put it into a spreadsheet. But it's seldom enough to get a business started. You can't walk up to people, ask them what problems they're facing, and get a quantitative answer. For that, you need qualitative answers.

Qualitative data, on the other hand, is messy, subjective, and imprecise. It's the stuff of interviews and debates, and as its name suggests, it's hard to quantify. You can't measure qualitative data easily. If quantitative data answers "what" and "how much," qualitative data answers questions like "why." Quantitative data is bereft of emotion—qualitative data marinates in it.

Lean Startup shows us that initially, when validating an idea, you're looking for qualitative data. When you're trying to figure out if you even have a problem worth solving in the first place, you're not measuring results numerically. You're speaking to people—specifically, to people you think are potential customers in the right target market. You're exploring.

You're getting out of the building.

There's a process for collecting qualitative data the right way. You can't interview without preparation. You need specific questions and goals in mind, and you need to ask them without leading the witness or skewing the answers. You have to avoid letting your enthusiasm and reality distortion rub off on your interview subjects. Doing interviews without preparation will lead to meaningless—or just plain wrong—results. The quality of the qualitative feedback is critical.

Vanity metrics vs. real metrics

Lots of companies claim they're data-driven. Unfortunately, while they embrace the data part of that mantra, few focus on the second word: *driven*. If you have a piece of data on which you cannot act, you're simply collecting it to stroke your own ego. It's a vanity metric. You want your data to inform, to guide, to make you wiser, to improve your business models, to help you decide on a course of action. Your guy might be smart, but you'll only realize your full potential when you temper your gut with reality.

Whenever you look at a metric, ask yourself, "what will I do differently based on this information?" If you can't answer that question, you probably shouldn't worry about

the metric too much. And if you don't know what metrics *would* change your organization's behavior, you aren't being data driven. You're just floundering in data quicksand.

Consider, for example, "total number of users." This is a classic vanity metric. The number can only increase over time (a classic "up and to the right" graph.) More importantly, it tells us nothing about what those users are doing, or whether they're valuable to us. They may have signed up for the application and vanished forever.

"Total active users" is a bit better—assuming that you've done a decent job of defining an active user—but it's still a vanity metric. It will gradually increase over time too, unless you do something horribly wrong.

The real metric of interest—the *actionable*⁴ one—is "percent of users that are active." This is a critical metric because it tells us about the level of engagement your users are experiencing with your product. When you change something about the product, this metric should change, and if you change it in a good way, it should go up. That means you can experiment, learn, and iterate with it.

Another interesting metric to look at is "number of users acquired over time period X." Often, this will help you compare different marketing approaches—for example, a Facebook campaign on the first week, a Reddit campaign on the second, a Google Adwords campaign on the third, and a LinkedIn campaign on the fourth. Segmenting experiments by time in this way isn't precise, but it's relatively easy.⁵ And it's actionable: if Facebook works better than LinkedIn, you know where to spend your money.

Actionable metrics aren't magic. They won't tell you what to do—in the previous example, you could try changing your pricing, or your medium, or the way your offer is worded. The point here is that you're doing *something*, based on the data you collect.

Metrics are also complex. There are dozens of factors that affect customer acquisition, from the speed with which your website loads to the time of day you tweet a message to the placement of a banner ad. You can't control all of them; but

⁴ Once, "actionable" meant "you can be sued." But since George W. Bush redefined it, it's been accepted into the dictionary as meaning "something on which you can act," so we'll use it—grudgingly—here.

⁵ A better way is to run the four campaigns concurrently, using analytics to segment the users you acquire into distinct *cohorts*. You'll get your answer in one week rather than four, and control for other variables like seasonal variation. We'll get into more detail about segmentation and cohort analysis later.

you can try to identify the ones that really move the needle, and focus on them in a deliberate manner.

Finally, metrics aren't the same as value. You don't know what a user is worth, so it's hard to relate "engaged users" to money until you know what a user does for you. There are other metrics you'll focus on later, such as the lifetime value of a customer or the viral coefficient, that deal with the things a user *does* for you. In the early stages of your company, you care about gaining customer attention, and the validation—or repudiation—of your business model and solution by those customers.

Pattern: Eight vanity metrics to watch out for

It's easy to fall in love with numbers that go up and to the right. Here's a list of eight notorious vanity metrics you should avoid obsessing over.

- **Number of hits:** This is a metric from the early, foolish days of the Web. If you have a site with many objects on it, this will be a big number. Count people instead.
- **Number of pageviews:** Only slightly better than hits, since it counts the number of times someone requests a page. Unless your business model depends on page views (i.e. display advertising inventory) you should count people instead.
- **Number of visits:** Is this one person visiting a hundred times or are a hundred people visiting once? Fail.
- **Number of unique visitors:** The only thing this shows you is how many people saw your home page. It tells you nothing about what they did, why they stuck around, or if they left.
- **Number of followers/friends/likes:** Business can be a popularity contest if you can get those friends to do something, but counting followers rather than actions is a bad idea, particularly since many people follow back automatically. Once you know how many followers will do your bidding when asked, you've got something.
- **Time on site/number of pages:** These are a poor substitute for actual engagement or activity unless your business is tied to this behavior. If customers spend a lot of time on your support or complaints pages, that could be a bad thing.
- **Emails collected:** A big mailing list of people excited about your new startup is nice, but until you know how many will open your mails—and act on what's inside them—this isn't useful. Test some of them and see.
- **Number of downloads:** While it sometimes affects your place in app stores and rankings, downloads alone don't lead to lifetime value. Measure activations, account creations, or something else.

Shhh...vanity metrics are sometimes useful

So are vanity metrics always bad?

Not really, but you shouldn't waste much time on them, or use them to lie to yourself, particularly early on when you're still trying to decide whether you've found a problem worth solving. Do your best to eliminate all vanity metrics. You'll look at them, of course (after all, you're still human!) but you shouldn't use them for decision-making. That path leads to madness and self-delusion.

Vanity metrics have their place—reporting data to investors, creating infographics for the press, and so on. We’ll sneak in a bit more on vanity metrics later on (because we know you love them, even if you know they’re bad for you!)

Exploration versus reporting

As Avinash Kaushik points out, Donald Rumsfeld knew a thing or two about analytics.

“There are known knowns; there are things we know that we know. There are known unknowns; that is to say there are things that, we now know we don’t know. But there are also unknown unknowns—there are things we do not know, we don’t know.”

Understanding what kind of information we’re dealing with tells us a lot about how we should proceed. We need to check our facts; automate the repetitive reporting; and teach our hidden knowledge to the rest of the organization. But when we’re searching for insight and innovation, what we *really* care about is the fourth kind of information—the unknown unknowns. This is where the magic lives. It’s where we’ll learn things we didn’t know. [Table 1](#) shows us these four kinds of information.

	Things we know...	Things we don’t know...
... we know	Facts (which may be wrong and should be checked against data.)	Intuition (which we should quantify and teach.)
... we don’t know	Reporting (which we should automate.)	Exploration (which is where the interesting epiphanies live.)

Table 1: The four kinds of knowledge

We work with data in two “postures.” “Things we know” is a reporting posture—counting money, or users, or lines of code. We know we don’t know the value of the metric, so we go find out. But we know the metric is needed, and big companies spend a lot of time doing it. It’s the work of Business Analysts who work with Business Intelligence software and Data Warehouses.

Reporting metrics track progress along an assumed path. A reporting metric says, “How many widgets did we sell today?” and tells our accountant how much tax to pay; an optimization metric says, “Did the green or the red widget sell more?” and chooses the official color of our widgets.

The other posture, “Things we don’t know,” is much more relevant to startups: exploring, to find out something new with which to disrupt a market. It’s iterative, exploratory, and imprecise. It leads down plenty of wrong paths, and hopefully

towards some kind of eureka moment when the idea falls into place. This fits what Steve Blank says a startup should spend its time doing: search for a scalable, repeatable business model.

Exploratory metrics are “what if” metrics, the scores of our experiments. We expect them to change; we’re testing one thing against another. In some cases, we may find that a completely unexpected cause produced the change we wanted—that’s our secret advantage.

Analytics has a role to play in all four of Rumsfeld’s quadrants. It can check our facts and assumptions, such as open rates or conversion rates, to be sure we’re not kidding ourselves and check that our business plans are accurate. It can test our intuitions, turning hypotheses into evidence. It can provide the data for our spreadsheets, waterfall charts, and board meetings. And it can help us find the nugget of opportunity on which to build a business. In the early stages of your startup, the latter matters most.

Case study: Exploring your way to success

Mike Greenfield and his co-founders started Circle of Friends in September 2007, shortly after Facebook launched their developer platform. The timing was perfect: Facebook became an open, viral place to acquire users as quickly as possible and build your startup. There had never been a platform with so many users (Facebook had ~50 million users at the time) that was so open to reaching them.

Circle of Friends was a simple idea: a Facebook application that allowed you to organize your friends into circles for targeted content sharing. Mike Greenfield notes now that it was basically, “Google+ for Facebook” (before Google+ existed.)

By mid-2008, Circle of Friends had 10M users. Greenfield focused on growth above everything else. “It was a land grab,” he said. And Circle of Friends was clearly viral. But there was a problem. Too few people were actually *using* the product.

According to Greenfield, less than 20% of circles had any activity whatsoever after their initial creation. “We had a few million monthly uniques from those ten million users, but as a general social network we knew that wasn’t good enough and monetization would likely be poor.”

So Mike went digging.

He started looking through their database of users and what they were doing. They didn't have an in-depth analytical dashboard at the time, but Greenfield could still do some exploratory analysis. And he found a segment of users—moms to be precise—that bucked the poor engagement trend of most users. Here's what he found:

- Their messages to one another were on average 50% longer
- They were 115% more likely to attach a picture to a post they wrote
- They were 110% more likely to engage in a threaded (i.e. deep) conversation
- Circle owners' friends were 50% more likely to engage with the circle
- They were 75% more likely to click on Facebook notifications
- They were 180% more likely to click on FB news feed items
- They were 60% more likely to accept FB invitations

The numbers were so compelling that in June 2008, Greenfield and his team switched focus completely. They pivoted. And in October 2008 they launched Circle of Moms on Facebook.

Circle of Moms proved to be extremely popular. By late 2009, Circle of Moms had several million users and engagement continued to be strong. The company went through some ups and downs after that, as Facebook started to radically change their platform and limit applications' abilities to spread virally. Ultimately, the company moved off Facebook, grew independently, and sold to Sugar Inc. in early 2012. Mike shares more of this part of the story—post the pivot to Circle of Moms—when the company became particularly adept at testing, measuring and learning, on his blog [Nurate Choir](#).

What makes a good metric?

What you measure and when is affected by many things: your business model, stage of your company, and so on. Here are some rules of thumb for what makes a number that will produce the changes you're looking for.

A good metric is comparative. Being able to compare a metric to other time periods, groups of users, or competitors helps you understand which way things are moving. Increased conversion from last week is more meaningful than "2% conversion."

A good metric is understandable. This means it's no more complicated than a golf handicap. Otherwise, people won't remember it and discuss it, and it'll be much harder to turn a change in the data into a change in the culture.

A good metric is a ratio or a rate. Accountants and financial analysts have several ratios they look⁶ at to understand, at a glance, the fundamental health of a company. You need some too.

There are several reasons ratios tend to be the best metrics:

- Ratios are easier to act on. Think about driving a car. Distance travelled is informational. But speed—distance per hour—is something you can act on, because it tells you about your current state, and whether you need to go faster or slower to get to your destination on time.
- Ratios are inherently comparative. If you compare a daily metric to the same metric over a month, you'll see whether you're looking at a sudden spike or a long-term trend. In a car, speed is one metric, but speed right now over average speed this hour shows you a lot about whether you're accelerating or slowing down.
- Ratios are also good for comparing factors that are somehow opposed, or for which there's an inherent tension. In a car, this might be distance covered divided by traffic tickets. The faster you drive, the more distance you cover—but the more tickets you get. This ratio might suggest whether you should be breaking the speed limit.

Leaving our car analogy for a moment, consider a website with free and paid versions of its software. The company might choose between luring in new users with enticing features, and trying to convince users to pay for the service in order to unlock other features. Having a full-featured free product might reduce sales; but having a crippled product might reduce new users. The ratio of paying users to churn rate could combine these two metrics.

An online retailer lives and dies by its conversion rate—the ratio of visitors to buyers. If the site sells too hard, people won't visit it. If it doesn't try hard enough to sell, people won't buy. Years ago, executives at GSI Commerce told us they tracked the real-time ratio of revenue today to the same revenue on the same weekday last year. If the ratio dropped below one, they knew growth had stalled, which triggered an investigation. For a company that makes dozens of merchandising changes a day, this was a good overall metric to manage all of the tweaks and adjustments.

⁶ This includes fundamentals such as the price-to-earnings ratio, sales margins, the cost of sales, revenue per employee, and so on.

A good metric is targeted to the right audience. A good number in the wrong hands is useless. Some things you share internally won't help you in a board meeting; some metrics the media will talk about are just vanity content that won't grow the business or find product/market fit. Investors won't have the context to understand complicated data; overly simple information won't be useful to developers.

For a startup, audiences may include:

- **Internal business** groups, trying to decide on a pivot or a business model
- **Developers**, prioritizing features and making experimental validation part of the "Lean QA" process
- **Marketers** optimizing campaigns to generate traffic and leads
- **Investors**, when we're trying to raise money
- **Media**, for things like infographics and blog posts

As you're picking the metrics that will guide your business, keep the audience in mind.

A good metric changes the way you behave. This is by far the most important criteria for a metric: what will you do differently based on the answer?

- For "accounting" metrics like daily sales revenue, make sure that it's something which, when entered into your spreadsheet, makes your predictions more accurate. And double-check the data: this will be reviewed by the board, the investors, possible acquirers, and even the media.
- For "experimental" metrics you use to optimize the product, pricing, or market, choose something which, based on the answer, will significantly change your behavior. Better yet, agree on what that change will be before you collect the data. Drawing a line in the sand is a great way to enforce a disciplined approach.

Case study: qidiq changes how it adds users

One of the Year One Labs companies, qidiq, is a tool for doing really simple surveys of a small group via email or mobile application. In the early iterations of the product, a survey creator invited respondents to join a group. Once those respondents had signed up and created an account, they could answer surveys delivered by email or pushed to an iPhone client.

The problem was that only a small percentage of people who were invited actually created an account and responded. So we devised a test: why not just assume that the recipient has an account, and send them a survey question they can respond to with a single click or tap? The act of responding is tacit acceptance of enrollment; later, if the recipient wants to log into the account, they'll have to do a password recovery, since they never provided one—but that's easy enough, and by then, the recipient is engaged in the surveys and the group.

The qidiq team quickly changed their application and sent out more surveys. The results were striking: response rates went from 10-25 percent with the enroll-first model, even in the best of cases, to 70-90 percent with the vote-first model. This in turn led to a rethinking of the mobile application development, since mobile applications couldn't compete with the cross-platform ubiquity and immediacy of e-mail.

“By focusing on the key metric of response rate, we were able to avoid the temptation of wasting our energy on the sexier mobile app,” says co-founder Jonathan Abrams. “Because it was the response rate that mattered, it became clear early on that email, while less sexy, was the better strategy for our startup.”

The metric they were tracking, which was the basis of their whole product, was the number of people who would respond to a question. That was the right metric, and when they found a product change that moved it dramatically in the right direction, it made them rethink the design of their entire service.

Moving targets

When picking a target number early on, you're drawing a line in the sand—not carving it in stone. You're chasing moving targets, because you really don't know how to define success. There's always a significant element of guessing and guts involved. Adjusting your goals for key metrics as well as how you define those

metrics is okay, as long as you're being honest with yourself, recognizing the change this means for your business, and not just lowering expectations so that you can keep going in spite of the evidence.

When your MVP is in the market and you're acquiring early adopter-customers and testing their use of your product, you won't even know how they're really going to use it (although you'll have assumptions.) You might assume, for example, that your product has to be used on a daily basis to be successful—only to find out that's not the case. In a situation like that, it's reasonable to update your metrics accordingly provided that you're somehow able to validate the value created.

Case Study: HighScore House defines an “active user”

HighScore House is a Year One Labs portfolio company. We worked with the founders from day one, right from the moment of ideation.

When HighScore House launched their MVP, they had several hundred families ready to test it out. At the time, HighScore House was a simple application that allowed parents to list chores and challenges for their kids and assign point values for completing them. Kids could complete those tasks, collect points, and redeem them for rewards they wanted.

The founders drew a line in the sand: in order for the MVP to be considered successful, parents and kids would have to each use the application four times per week. Only families that did this were considered “active” families. It was a high, but good, bar. We all felt that if they could achieve this, we'd know that they were doing something right.

After a month or so of development and tweaking, the percentage of active families was still quite low. The founders were disappointed but determined to keep experimenting. They began changing a number of things to try and improve engagement:

- They modified the sign-up flow (making it more educational and clear to increase quality sign-ups and to improve on-boarding.)
- They started sending email notifications as daily reminders to parents (to increase engagement.)

There was an incremental improvement each time, but nothing that moved the needle significantly enough for us to believe that the MVP was a success.

Then co-founder and CEO Kyle Seaman did something critical: *he picked up the phone*. He started calling parents who had signed up, but who weren't active. First he reached out to those that had abandoned Highscore House completely ("churned out.") For many of them, the application just wasn't solving a big enough pain point. That's fine. We never assumed the market was "all parents"—that's just too broad a definition, particularly for a first version of a product.

Kyle then called those families that *were* using HighScore House, but not using it enough to cross the line the team had drawn in the sand. Many of these families responded positively: "We're using HighScore House. It's great. The kids are making their beds consistently for the first time ever!"

The response from parents was a surprise. Many of them were using HighScore House only once or twice a week, but they were getting value out of the product. From this, Kyle learned about segmentation and which types of families were more or less interested in the product. He began to understand that the initial baseline of usage the team had set wasn't consistent with how engaged customers were using the product.

That doesn't mean the team shouldn't have taken a guess. Without that initial line in the sand they would have had no benchmark for learning, and Kyle might not have picked up the phone. But now he really understood his customers. The combination of quantitative and qualitative data was key.

As a result of this learning, we all agreed to redefine the "active user" threshold to more accurately reflect existing users' behavior, because we now understood that getting significant value from HighScore House didn't require the level of application usage we'd thought it did.

The first lesson is this: there's no substitute for engaging with customers and users directly. All the numbers in the world can't explain the "why" which is critical to understand, particularly at the early stages of the minimum viable product. Pick up the phone right now and call a customer, even one that's disengaged. You'll learn.

The second lesson is that it's okay to adjust your key metrics as long as you truly understand why you're doing it and can justify the change. Lowering the bar for the sake of getting past it doesn't count: that's just cheating, and lying to yourself. But adjusting your key metrics based on an understanding of your customers' behavior and the value you're creating is a reasonable behavior as you iterate towards product/market fit.

5. Deciding what to do with your life

As a founder, you're trying to decide what to spend the next few years of your life working on. The reason you want to be lean and analytical about the process is so that you don't waste your life building something nobody wants.

Hopefully, you have an idea of what you want to build. It's your blueprint, and it's what you'll test with analytics. You need a way of quickly and consistently articulating your hypotheses around that idea, so you can go and verify—or repudiate—them with real customers. To do this, we recommend Ash Maurya's [Lean Canvas](#).

But the canvas is only half of what you need. It's not just about finding a business that works. You also want to find a business that you *want* to work on. Bud Caddell has three clear criteria for deciding what to spend your time on: something that you're good at, that you want to do, and that you can make money doing.

Let's look at both tools in a bit more detail.

The Lean Canvas

The Lean Canvas is a one-page visual business plan that's ongoing and actionable. It was created by Ash Maurya, who was inspired by Alex Asterwalder's Business Model Canvas. It consists of nine boxes organized on a single sheet of paper, designed to walk you through the most important aspects of any business. The Lean Canvas is fantastic at identifying the areas of biggest risk and enforcing intellectual honesty.

How to use a Lean Canvas

Unlike a traditional business plan, the Lean Canvas is meant to be continuously used and iterated upon. It's a "living, breathing" plan, not a hypothetical tome of nonsense that you throw out the minute you start actually working on your startup. Once you've filled out the Lean Canvas (or most of it), you start running experiments to validate or invalidate what you've hypothesized.

In its simplest form, think of each box as a "pass/fail": if your experiments fail, you don't go to the next box; rather, you keep experimenting until you hit a wall completely or get to the next step. The only exception is the "Key Metrics" box, which is meant to keep a record of the most important metrics you're tracking. You don't run experiments on this box, but it's important to fill it out anyway because it's definitely open to debate and discussion.

Below, we've provided a table that shows eight areas of Lean Canvas and the corresponding metrics we think you should consider; to measure the health of that area. These metrics may change depending on the type of business you're in, but the guidelines are valuable just the same. And we'll share more details later in the book on key metrics based on type of business, as well as benchmarks you can aim for.

Each of the boxes in Ash's canvas has relevant metrics you need to track. They either tie your one-page business model to reality, confirming each box—or they send you back to the drawing board.

Lean Canvas box	Relevant metrics
Problem	Respondents who have this need; respondents who are <i>aware</i> of having the need
Solution	Respondents who try the MVP; engagement; churn; most-used/least-used features
Unique Value Proposition	Feedback scores; independent ratings; sentiment analysis; customer-worded descriptions; surveys
Customer Segments	Reachability; unique keyword segments; targeted funnel traffic
Channels	Leads and customers per channel; viral coefficient; net promoter score; open rate; affiliate margins; clickthrough rate; pagerank; message reach
Unfair Advantage	Respondents' understanding of the USP
Revenue Streams	Lifetime customer value; Average revenue per user;
Cost Structure	Fixed costs; cost of customer acquisition; cost of servicing the nth customer; support costs; keyword costs

We encourage every startup to use Lean Canvas. It's an enlightening experience, and well worth the effort.

What *should* you work on?

The Lean Canvas provides a formal framework to help you choose and steer your business. But there's another, more human, side to all of this.

Do you want to do it?

This doesn't get asked enough. Investors say they look for passionate founders, who really care about solving a problem. But it's seldom called out as something you should devote much thought to. But if you're going to survive as a founder, you have

to find the intersection of demand (for your product); ability (for you to make it); and desire (for you to care about it.)

That trifecta is often overlooked, withering under the harsh light of data and a flood of customer feedback. But it shouldn't. *Don't start a business you're going to hate*: life is too short, and your weariness will show.

Bud Caddell has an amazingly simple diagram of how people should choose what to work on, shown in Figure 1.

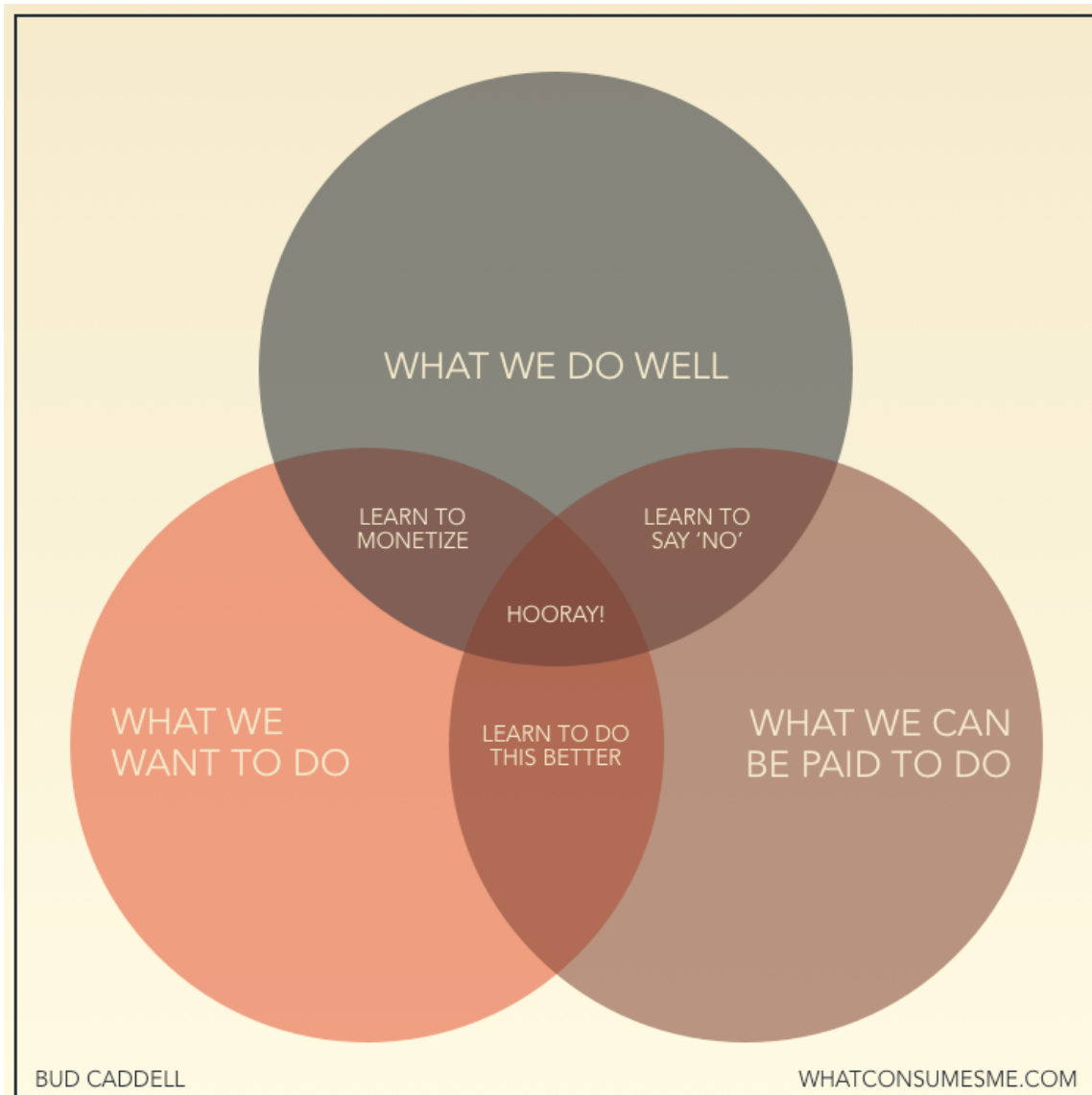


Figure 1: What to work on, as illustrated by Bud Caddell

Bud's diagram shows three overlapping rings: what you *like* to do; what you're *good at*; and what you *can be paid* to do. For each of the intersections between rings, he suggests a course of action:

- If you want to do something and are good at it, but can't be paid to do it, *learn to monetize*.
- If you're good at something and can be paid to do it, but don't like doing it, *learn to say no*.
- If you like to do something and can be paid to do it, but aren't very good at it, *learn to do it well*.

This isn't just great advice for career counselors: when launching a new venture, you need to properly assess these three dimensions well.

First, ask yourself: *can you do this thing you're hoping to do, well?* This is about your ability to satisfy your market's need better than your competitors, and it's a combination of design skill, coding, branding, and myriad other factors. If you identify a real need, you won't be the only one satisfying it, and you'll need all the talent you can muster. Do you have a network of friends and contacts that can give you an unfair advantage? Today's customers are fickle, and life's too short to do a crappy job.

Second, figure out *whether you like doing this thing*. Startups will consume your life, and they'll be a constant source of aggravation. Your business will compete with your friends, your partner, your children, and your hobbies. You need to believe in what you're doing so that you'll keep at it and ride through the good times and the bad. Would you work on it even if you weren't being paid? Is it a problem worth solving, that you'll brag about to others? If not, maybe you should keep looking.

Finally, be sure *you can make money doing it*⁷. This is about the market's need. This is by far the most important of the three; the other two are easy, because they're up to you. In sales, a prospect must have several attributes before they're a "real" lead: need, budget, timeline, authority, and awareness.

- **Need** is the most fundamental thing of all. A need is something you can satisfy for another, in return for something—money, attention, referral, and so on.
- **Budget** is simply whether they have money they can part with in return for what you're selling.
- **Timeline** is a sense of urgency within which they need to make a purchase. Time kills all deals. If there isn't a sense that the clock is ticking, and that inaction will be risky, your revenue stream is at risk.

⁷ Not everyone is hoping to make money with their startup. Some people are doing it for attention, or to fix government, or to make the world a better place. If that's you, replace "money" with "produce the results I'm hoping to achieve" as you read this book.

- **Authority** means the prospect can make the purchasing decision. If you're selling a children's toy, the child probably doesn't have purchasing authority. So their needs don't count unless someone who can make the purchase understands them.
- **Awareness** means the customer knows they need their problem solved. If the person isn't aware of the need, then you'll need to create it for them. Your market should immediately grasp how you'll solve their problem. This doesn't mean the customer is asking for the solution already—the Walkman, iPad and Minivan prove that customers often don't know they need something until they see it. But they must be aware of their need. Sony, Apple, and Chrysler didn't just have innovative ideas—they had hundreds of millions to spend on marketing. If your market isn't aware of its problem, you'll spend all your time convincing them of that need, and they'll lie to you about it until the money runs out.

In the early stages of a startup, you'll be dealing with a lot of data. You're hearing all kinds of opinions that can change your business model daily. You're awash in the tides of opinion, and buffeted by whatever feedback you've heard most recently.

Never forget that you're trying to answer three fundamental questions:



Have I identified a problem worth solving? Am I proposing the right solution? Do I actually want to solve it?

Or, more succinctly, **"Should I go build this thing?"**

6. Data-driven vs. Data-informed

Data is a powerful thing. It can be addictive, making you over-analyze everything.



You don't run detailed A/B testing before deciding what pants to put on in the morning or you'd never get out the door.

Much of what we do is unconscious, based on past experience and pragmatism. And with good reason: relying on wisdom and experience, rather than a rigid analysis, helps us get through our day.

As Lean Startup, with its rigorous approach to customer development, catches on in businesses of all sizes, it's sparked a backlash against too much data. It's almost heretical to criticize Lean loudly, but we hear whispered complaints in the co-working spaces and coffee shops of the world's tech hubs. Rather than be a slave to the data, these critics say, we should use it as a tool.



We should be data-informed, not data-driven.

Mostly, they're just being lazy, and looking for reasons not to do the hard work. But sometimes, they have a point: using data to optimize one part of your business, without stepping back and looking at the big picture, can be dangerous, even fatal.

Consider travel agency Orbitz and its discovery that Mac users were willing to reserve a more expensive hotel room. Roger Liew, the company's CTO, told the Wall Street Journal, "we had the intuition [that Mac users are 40% more likely to book a four- or five-star hotel than PC users and to stay in more expensive rooms], and we were able to confirm it based on the data."⁸

On the one hand, an algorithm that didn't include seemingly unrelated customer data (in this case, the type of computer that visitors were using) wouldn't have found this opportunity to increase revenues. On the other hand, an algorithm that blindly optimizes based on customer data, regardless of its relationship to the sale, may have unintended consequences—like bad PR. Data-driven machine optimization, when not tempered with human judgment, can cause problems.

Years ago, Gail Ennis, then CMO of Omniture, told us that they have to temper machine optimization with human judgment for other reasons. Left to their own devices, web optimization software quickly learns that scantily clad women generate a far higher click-through rate on web pages than other forms of content.

⁸ "On Orbitz, Mac users steered to higher prices", August 23, 2012 (<http://online.wsj.com/article/SB10001424052702304458604577488822667325882.html>)

But that clickthrough rate is a short-term gain, offset by damage to the brand and image of the company. So the company's software works hand-in-hand with curators who understand the bigger picture. The humans get the inspiration; the data does the validation.

Perhaps the most eloquent push-back comes from Andrew Chen. "Know the difference between data-driven and data-informed," he implores us. "Ultimately, metrics are merely a reflection of the product strategy that you already have in place and are limited because they're based on what you've already built, which is based on your current audience and how your current product behaves."⁹

In mathematics, local maxima or minima are the largest or smallest values of a function within a given neighborhood.¹⁰ That doesn't mean it's the largest *possible* value, just the largest one in a particular range. As an analogy, consider a lake on a mountainside. The water isn't at its lowest possible level—that would be sea level—but it's at the lowest possible level in the area surrounding a lake.

Optimization is all about finding the lowest or highest values of a particular function. One of Andrew's key points is that data used for optimization purposes is subject to *local* maxima. A machine can find the optimal settings for something, but only within the constraints and problem space it's aware of, in much the same way that the water in a mountainside lake can't find the lowest possible value, just the lowest value within the constraints provided.

To understand the problem with constrained optimization, imagine that you're given three wheels and asked you to evolve the best, most stable vehicle. After many iterations of pitting different wheel layouts against one another, you come up with a tricycle-like configuration. It's the optimal wheel configuration. Data-driven optimization can perform this kind of iterative improvement.

What it can't do, however, is say, "you know what? Four wheels would be way better!"



Math is good at optimization. Humans are good at inspiration. Change favors local maxima.

In his book *A River Out Of Eden*, Richard Dawkins uses the analogy of a flowing river to describe evolution. Evolution, he explains, can create the eye. In fact, it can create dozens of versions of it, for wasps, octopods, humans, eagles, and whales. What it

⁹ <http://andrewchen.co/2012/05/29/know-the-difference-between-data-informed-and-versus-data-driven/>

¹⁰ http://en.wikipedia.org/wiki/Maxima_and_minima

can't do well is go *backwards*: once you have an eye that's useful, slight mutations don't usually yield improvements. Put another way, a human won't evolve an eagle's eye, because the intermediate steps are all bad eyesight.

Machine-only optimization suffers from similar limitations as evolution. If you're optimizing for local maxima, you might be missing a bigger, more important opportunity. It's your job to be the intelligent designer to data's evolution. As Chen says, "not everything is an optimization problem. And delegating your decision-making to only what you can measure right now often de-prioritizes more important macro aspects of the problem."

We've found this sentiment in many of the startups with whom we've spoken. They have a general unease with the way in which their companies are being run by the numbers, without the opportunity to step back and look at the bigger picture of the market they're in, the problem they're solving, and their fundamental business models.



Ultimately, quantitative data is great for testing hypotheses, but it's lousy for generating new ones.

Lean Startup and Big Vision

There tends to be a spectrum of attitudes towards data-driven startups. Some entrepreneurs are maniacally, almost compulsively, data-obsessed, but tend to get mired in analysis-paralysis. Others are casual, shoot-from-the-hip intuitionists who ignore data unless it suits them, and pivot lazily from idea to idea without discipline.

At the root of this divide is the fundamental challenge that Lean Startup advocates face: how do you have a minimum viable product and a hugely compelling vision at the same time?

Having a big vision is important. Starting a company without one leaves you too susceptible to outside influences, be they from customers, investors, competition, press, or anything else. Without a big vision, you'll lack purpose, and over time you're likely to find yourself wandering aimlessly.

Plenty of people use Lean Startup as implicit approval for starting a company without a vision. "It's so easy to start a company these days," they reason, "the barriers are so low, that everyone can do it, right?" One clear result is that more companies are being created. Unfortunately, too few of them have a real vision for what they're trying to accomplish, and that alone is likely to kill them.

So if a big, hairy, audacious vision is important—one with a changing-the-world type goal—how does that reconcile with the step-by-step, methodical approach of Lean Startup?

The answer is actually pretty simple. You need to think of Lean Startup as the process you use to move towards and achieve your vision.



Early-stage founders aren't building a product. They're building a tool to learn what product to build.

This helps separate the task at hand—finding a sustainable business model—from the screens, lines of code, and mailing lists they've carefully built along the way.

Lean Startup is focused on learning above everything else, and encourages broad thinking, exploration and experimentation. It's not about mindlessly going through the motions of "Build → Measure → Learn"—it's about really understanding what's going on and being open to new possibilities.

Lean Canvas + vision

The Lean Canvas doesn't have a section for "vision", because Lean is all about testing, and you can't test a breadth of vision. Larry and Sergei might have had a vision of a global hive-mind for information when they first sketched out the Pagerank algorithm, but they couldn't test that vision. They could check whether it inspired people, and they could hold the idea in their heads as they gradually created search, maps, Android, and more.

Just because vision isn't explicitly spelled out in Lean doesn't mean it's not essential. Vision matters the moment you start describing a problem you want to solve, and seeing how it captures the attention of others. If you're tackling a problem that's not audacious and disruptive, you're unlikely to elicit much of a response. If, on the other hand, you discover something truly meaningful to people, something genuinely painful, then there's a very good chance there's a compelling vision of a better world that goes along with that problem.

Expanding your vision with Lean Startup

A lot of startups suffer from being too small in scope. We've talked to founders who want to be the leading provider in their state or province. Why not the world? Even the Allies had to pick a beachhead; but landing in Normandy didn't mean they lacked a big vision. They just found a good place to start.

Some people believe Lean Startup encourages that smallness, but that's not the case at all. Used properly, Lean Startup helps expand your vision because you're

encouraged to question everything. As you dig deeper and peel away more layers of what you're doing—whether you're looking at problems, solutions, customers, revenue or anything else—you're likely to find a lot more than you expected. If you're opportunistic about it, you can expand your vision and understand how to get there faster, all at the same time.

What's next?

We're hard at work on the rest of the book, and busy speaking with founders and aspiring entrepreneurs about building better companies faster. We want to hear from you—join us at www.leananalyticsbook.com, and sign up for the mailing list there so we can keep in touch.

Soon, you'll be able to buy a preview edition of the book from O'Reilly, and will receive regular updates of the “rough” version of the book as we publish it. We hope to be done in the next few months.

Thanks for taking the time to read this, and to share your thoughts with the rest of the startup community.

Ben & Alistair.