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ANALYTICS LESSONS LEARNED

Case studies on the use of Lean Analytics

by Alistair Croll & Benjamin Yoskovitz

LEAN CONTENTS

INTRODUCTION

The Lean Startup movement is galvanizing a generation of entrepreneurs. It focuses on identifying the riskiest parts of your business plan, then finding ways to reduce that risk in a quick, iterative cycle of learning. Most of its insights boil down to one sentence: *Don't sell what you can make; make what you can sell.* And that requires figuring out what people want.

Unfortunately, it's hard to know what people really want. Many times, they don't know themselves. When they tell you, it's often what they think you want to hear.[1] 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.

Analytics can help. Measuring something makes you accountable. You're forced to confront inconvenient truths. And you don't spend your life and your money building something nobody wants.

Lean Startup helps structure your progress and identify the riskiest parts of your business, then learn about them quickly so you can adapt. **Lean Analytics** is used to measure that progress, helping you to ask the most important questions and get clear answers quickly.

Lean Analytics is the dashboard for every stage of your business, from validating whether a problem is real, to identifying your customers, to deciding what to build, to positioning yourself favorably with a potential acquirer. It can't force you to act on data—but it can put it front and center, making it hard to ignore and giving you a better chance of not driving off the road entirely.

The *Lean Analytics* book will be published in March-April 2013. But you can **pre-order *Lean Analytics*** today:

Pre-Order

In the meantime, we put together this e-book, *Analytics Lessons Learned*, which is a compilation of 14 case studies with companies, big and small, (as well as one church!) that have used analytics to learn and succeed. We know that real-world examples are key to helping others learn, adapt and experiment.

1 http://www.forbes.com/sites/jerrymclaughlin/2012/05/01/would-you-do-this-to-boost-sales-by-20-or-more/

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 coined by entrepreneur and professor Steve Blank—took direct aim at the outdated, "build it and they will come" waterfall method of 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*, and refined his ideas in *The Startup Owner's Manual*. His definition of a startup is one of the most important concepts in his work:

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

Keep that definition in mind as you read the rest of the e-book.

LEAN STARTUP

Eric Ries defined the *Lean Startup* process when he combined Customer Development, Agile Software Development methodologies, and Lean Manufacturing practices into a framework for developing products and businesses quickly and efficiently.

First applied to new companies, organizations of all sizes are now using Eric's work to disrupt and innovate. After all, Lean isn't about being cheap or small, it's about eliminating waste and moving quickly, which is good for organizations of any size.

One of Lean Startup's core concepts is *Build* → *Measure* → *Learn*—the process by which you do everything, from establishing a vision to building product features to developing channels and marketing strategies, shown in Figure 1. Within that cycle, *Lean Analytics* focuses on the *Measure* stage. The faster an organization iterates through the cycle, the more quickly it finds the right product and market. If it measures faster and better, it's more likely to succeed.

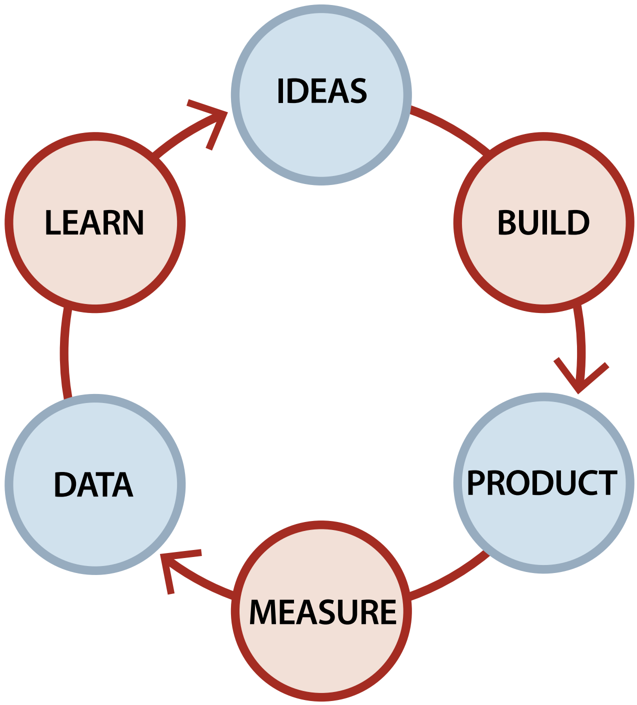

Figure 1: The Build, Measure, Learn cycle

The cycle isn't just a way of improving your product. It's also a good reality check. Building the minimum product necessary is part of what Eric calls Innovation Accounting, which helps you objectively measure how you're doing. Lean Analytics is a way of continuously quantifying your innovation, getting you closer and closer to a continuous reality check—in other words, to reality itself.

ABOUT THE AUTHORS

Alistair Croll has been an entrepreneur, author, and public speaker for nearly 20 years. In that time, he's worked on web performance, big data, cloud computing, and startups. Alistair is the chair of O'Reilly's Strata conference, Techweb's Cloud Connect, and Interop's Enterprise Cloud Summit. In 2001, he co-founded web performance startup Coradiant, and since that time has also helped launch Rednod, CloudOps, Bitcurrent, Year One Labs, the Bitnorth conference, the International Startup Festival and several early-stage companies.

This is Alistair's fourth book on analytics, technology, and entrepreneurship. Alistair lives in Montreal, Canada and tries to mitigate chronic attention deficit disorder by writing about far too many things at *Solve For Interesting* (http://www.solveforinteresting.com.) You can find him on Twitter as @acroll, or mail him at alistair@solveforinteresting.com.

Ben Yoskovitz is an entrepreneur with 15+ years experience in web businesses. He started his first company in 1996 while completing university. In 2011, he joined GoInstant as VP Product, which was subsequently acquired in September 2012 by Salesforce.com. He continues in his role with GoInstant and Salesforce.com.

Ben has been blogging since 2006. His *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 accelerator programs. He regularly speaks at startup conferences and events, including the Michigan Lean Startup Conference, Internet Marketing Conference, and the Lean Startup conference. You can reach him on Twitter as @byosko, or mail him at byosko@gmail.com.

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 one year of hands-on mentorship to five startups. Year One Labs followed a Lean Startup program, making it the first accelerator to formalize such a structure. Four of five companies graduated from Year One Labs and three went on to raise follow-on financing. One of those companies, Localmind, was acquired by Airbnb. A great deal of Alistair and Ben's experience and thought leadership around Lean Startup and analytics emerged during this time.

CASE STUDIES

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 with a new source of income. In 2012, travelers booked over 5 million nights with Airbnb's service. But it started small, and its founders—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 professional photography as a service." This is where the founders' gut instincts came in: they had a sense that professional photography would help their business. But rather than implementing it outright, they built a Concierge Minimum Viable Product (MVP) to quickly test their hypothesis.

Initial tests of their MVP showed that professionally 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.

In mid-to-late 2011, Airbnb had 20 photographers in the field taking pictures for hosts—roughly the same time period where we see the proverbial "hockey stick" of growth in terms of nights booked, as seen in Figure 2.

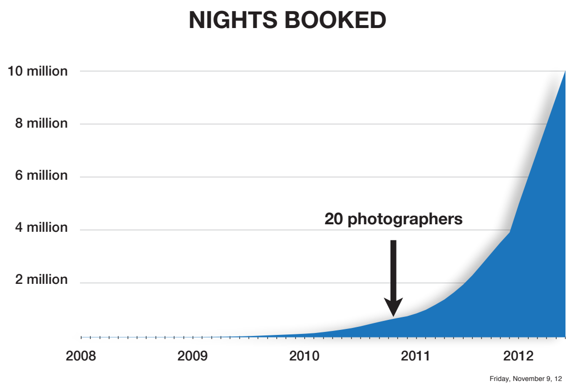

Figure 2: It's amazing what you can do with 20 photographers and people's apartments

Airbnb experimented further. It watermarked photos to add authenticity. It got customer service to offer professional photography as a service when renters or potential renters called in. It increased the requirements on photo quality. Each step of the way, the company measured the results and adjusted as necessary. The key metric it tracked was shoots per month, because it had already proven with their Concierge MVP that more professional photographs meant more bookings.

By February 2012, Airbnb was doing nearly 5,000 shoots per month and continuing to accelerate the growth of the professional photography program.

Summary:

- Airbnb's team had a hunch that better photos would increase rentals.
- They tested the idea with a Concierge MVP, putting the least effort possible into a test that would give them valid results.
- When the experiment showed good results, they built the necessary components and rolled it out to all customers.

Analytics Lessons Learned:

Sometimes, growth comes from an aspect of your business you don't expect. When you think you've found a worthwhile idea, decide how to test it quickly, with minimal investment. Define what success looks like beforehand, and know what you're going to do if your hunch is right.

circle of moms

CIRCLE OF MOMS EXPLORES ITS WAY TO SUCCESS

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

By mid-2008, Circle of Friends had 10 million 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 Mike, less than 20% of circles had any activity whatsoever after their initial creation. "We had a few million monthly uniques from those 10 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 the database of users and what they were doing. The company 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.
- They had friends who, once invited, were 50% more likely to become engaged users themselves.
- They were 75% more likely to click on Facebook notifications.
- They were 180% more likely to click on Facebook news feed items.
- They were 60% more likely to accept invitations to the app.

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

Initially, numbers dropped as a result of the new focus. But by 2009, the team grew its community to 4.5 million users—and unlike the users who'd been lost in the change, these ones were actively engaged. The company went through some ups and downs after that, as Facebook limited applications' abilities to spread virally. Ultimately, the company moved off Facebook, grew independently, and sold to Sugar Inc. in early 2012.

Summary:

- Circle of Friends was a social graph application in the right place at the right time—with the wrong market.
- By analyzing patterns of engagement and desirable behavior, then finding out what those users had in common, the company found the right market for its offering.
- Once the company had found its target, it focused—all the way to changing its name. Pivot hard or go home, and be prepared to burn some bridges.

Analytics Lessons Learned:

The key to Mike's success with Circle of Moms was his ability to dig into the data and look for meaningful patterns and opportunities. Mike discovered an "unknown unknown" that led to a big bet—drop the generalized Circle of Friends to focus on a specific niche—a scary, gutsy bet, but one that was based on data.

There's a "critical mass" of engagement for any community to take off. Mild success may not give you escape velocity. As a result, it's better to have fervent engagement with a smaller, more easily addressable target market. Virality requires focus.

SEOmoz

SEOMOZ TRACKS FEWER METRICS TO INCREASE FOCUS

SEOmoz is a successful Software-as-a-Service (SaaS) vendor that helps companies monitor and improve their websites' search engine rankings. In May 2012, the company raised $18 million. Its CEO, Rand Fishkin, published a detailed post about the company's progress up to that point.[2] Rand's update did include a number of vanity metrics—when you have roughly 15 million visitors on your site each year, you have a right to a bit of vanity—but he also shared some very specific and interesting numbers related to conversions from free trials to paid subscriptions and churn.

We spoke with Joanna Lord, Vice President of Growth Marketing at SEOmoz, to learn more about how the company handles metrics. "We are very metrics-driven," she says. "Every team reports to the entire company weekly on key KPIs, movement, and summaries. We also have a huge screen up in the office pumping out customer counts and free trial counts. We believe that having company-wide transparency into the metrics keeps us all informed, and is a great reminder of the progress (as well as the challenges) we are seeing as a company."

For a company that's found product/market fit and is now focused on scaling, it becomes more challenging to focus on a single metric. This isn't surprising; there are multiple departments all growing quickly, and the business can tackle several different things simultaneously. But even with all these concurrent efforts, Joanna says that one metric stands above the rest: Net Adds. This metric is the total of new paid subscribers (either conversions from free trials or direct paid signups) minus the total that cancelled.

"Net Adds helps us quickly see high cancel days (and troubleshoot them) and helps us get a sense of how our free trial conversion rate is doing," Joanna says.

SEOmoz tracks other related metrics including Total Paying, New Free Trials Yesterday, and 7-Day Net Add Average. All of these really bubble up into Net Adds per day.

Interestingly, when SEOmoz raised its last round of financing, one of their lead investors, the Foundry Group's Brad Feld, suggested that they track fewer KPIs. "The main reason for this is that as a company, you can't simultaneously affect dozens of KPIs," Joanna says. "Brad reminded us that 'too much data' can be counterproductive. You can get lost in strange trends on numbers that aren't as big-picture as others. You can also lose a lot of time reporting and communicating about numbers that might not lead to action. By stripping our daily KPI reporting down to just a few metrics, it's clear what we're focused on as a company and how we're doing."

2 http://www.seomoz.org/blog/mozs-18-million-venture-financing-our-story-metrics-and-future

Summary:

- SEOmoz is metrics-driven—but that doesn't mean it's swimming in data. It relies on one metric above all others: Net Adds.
- One of their investors actually suggested *reducing* the number of metrics the company tracks to stay focused on the big picture.

Analytics Lessons Learned:

While it's great to track many metrics, it's also a sure way to lose focus. Picking a minimal set of KPIs on which your business assumptions rely is the best way to get the entire organization moving in the same direction.

backupify

BACKUPIFY'S CUSTOMER LIFECYCLE LEARNING

Backupify is a leading backup provider for cloud based data. The company was founded in 2008 by Robert May and Vik Chadha, and has gone on to raise $19.5M in several rounds of financing.

Backupify was good at focusing on a specific metric at a specific stage, in order to grow their company. "Initially, we focused on site visitors, because we just wanted to get people to our site," said CEO and co-founder Robert May. "Then we focused on trials, because we needed people testing out our product."

Once they had people trialing the product in sufficient numbers, Backupify focused on signups (conversions from free trial to paying customer.) Now, the primary focus is Monthly Recurring Revenue (MRR).

The cloud storage industry has matured a lot in a handful of years, but back in 2008 it was a nascent market. At the time, the company was focused on consumers and they realized that, while revenue was going up, the Customer Acquisition Cost (CAC) was too high. "In early 2010 we were paying $243 to acquire a customer, who only paid us $39 per year," explained Robert. "Those are horrible economics. Most consumer apps get around the high acquisition costs with some sort of virality, but backup isn't viral. So we had to pivot [from consumer sales] to go after businesses."

The pivot for Backupify was a success. The company is growing successfully. For now, they remain focused on Monthly Recurring Revenue, but they also track how much a customer is worth in the entirety of their relationship with the company—the Customer Lifetime Value (CLV). CLV and CAC are the two essential metrics for a subscription business.

In Backupify's case, the ratio of CLV to CAC is 5-6x, meaning that for every dollar they invest in finding a customer, they make back $5 of $6. This is excellent, and it's partly due to their low churn. As it turns out, lock-in is high for cloud storage, which gives the company plenty of time to make back its acquisition costs in the form of revenues. We'll look at the CAC/CLV ratio in more detail later in the book.

"MRR growth will probably be our top metric until we hit $10M in Annual Recurring Revenue," said Robert. "I watch churn, but I'm more focused on Customer Acquisition Payback in months, which is how quickly I make my money back on each customer." Robert's target for that metric is 12 months or less for any given channel. Customer Acquisition Payback is a great example of a single number that encompasses many things, since it rolls up marketing efficiency, customer revenue, cash flow, and churn rate.

Summary

- Before focusing on sophisticated financial metrics, start with revenue. But don't ignore costs, because profitability is the real key to growth.
- You know it's time to scale when your price engine is humming along nicely, which happens when the CAC is a small fraction of the CLV—a sure sign you're getting a good return on your investment.
- Most SaaS businesses thrive on Monthly Recurring Revenue—customers continue to pay month after month—which is a great foundation to build a business on.

Analytics Lessons Learned:

There's a natural progression of metrics that matter for a business that change over time as the business evolves. The metrics start by tracking questions like, "does anyone care about this at all?" and then get more sophisticated, asking questions like, "can this business actually scale?" As you start to look at more sophisticated metrics, you may realize your business model is fundamentally flawed and unsustainable. Don't just start from scratch: Sometimes, what you need is a new market, not a new product, and that market may be closer than you think.

CLEARFIT ABANDONS MONTHLY SUBSCRIPTIONS FOR 10X GROWTH

ClearFit is a SaaS provider of recruitment software aimed at helping small businesses find job candidates and predict their success. When they started, founders Ben Baldwin and Jamie Schneiderman offered a $99/month (per job posting) package. "We kept hearing over and over that monthly subscriptions was the key to growing a successful SaaS business," says Ben. "So that's the direction we took, but it didn't work as planned."

Two things confused ClearFit's customers: the price point and the monthly subscription. Ben and Jamie wanted to price ClearFit below what customers paid for job boards (typically $300+ per job posting), but customers were so used to that price point they were skeptical of ClearFit's value at $99/month. Ben says, "We don't compete with job boards, we partner with them, but at the time it seemed reasonable to have a lower price point to garner attention." Customers didn't understand why they would pay a subscription fee for something that they would most likely use sporadically. "When a company needs to hire, they want to do it fast and they're willing to invest at that moment in time," says Ben. "Our customers are too small to have dedicated HR staff or recruiters that are constantly looking for talent, and their hiring needs go up and down frequently."

Ben and Jamie decided to abandon their low monthly subscription and switch to a model that their customers understood: a per job fee. ClearFit launched its new price point at $350 for a single job (for 30 days) and almost immediately saw three times the sales. The increase in volume and the higher price point improved revenue 10x. "When we increased the price," Ben says, "it was an important signal to our customers. They understood the model and could more easily compare the value against other solutions they use. Even though what we do is different than a job board, we wanted our customers to feel comfortable with purchasing from us, and we wanted to fit into how they budget for recruiting."

In ClearFit's case, innovating on the business model didn't make sense. Ben says, "People don't do subscriptions for haircuts, hamburgers and hiring. You have to understand your customer, who they are, how and why they buy, and how they value your product or service."

ClearFit's switch to a per job posting model may go against the popular grain of subscription-based SaaS businesses, but the company continues to see great success with 30% month-over-month revenue growth.

Summary

- ClearFit initially focused on a subscription model for revenue, but customers misinterpreted their low pricing as a sign of a weak offering.
- They switched to a paid listing model, and tripled sales while improving revenue tenfold.
- The problem wasn't the business model, it was the pricing and the messages it sent to prospects.

Analytics Lessons Learned:

Just because SaaS is a recurring service doesn't mean it needs to be priced that way. If your product is ephemeral—like a transient job posting—it might be better to offer more transactional pricing. Pricing is a tricky beast. You need to test different price points qualitatively (by getting feedback from customers) and quantitatively. Don't assume a low price is the answer; customers might not attribute enough value to your offering.

LikeBright

LIKEBRIGHT MECHANICAL TURKS ITS WAY INTO TECHSTARS

LikeBright is an early stage startup in the dating space that joined the TechStars Seattle accelerator program in 2011. But it wasn't an easy road. Founder Nick Soman says that at first Andy Sack, managing director of the Seattle program, rejected LikeBright, saying, "We don't think you understand your customer well enough."

With the application deadline looming, Andy gave Nick a challenge: Go speak to 100 single women about their frustrations with dating, and then tell TechStars what they'd learned.

Nick was stuck. How was he going to speak with that many women quickly enough? He didn't think it was possible, at least not easily. And then he decided to run an experiment with Mechanical Turk.[3]

Mechanical Turk is a service provided by Amazon that allows you to pay small amounts of money for people to complete simple tasks. It's often used to get quick feedback on things like logos, color choices, or to perform small tasks such as tagging a picture or flagging spam.

The idea was to use Mechanical Turk to speak with 100 single women, putting out a task (or what Mechanical Turk calls a HIT) asking women (who fit a particular profile) to call Nick. In exchange he paid them $2. The interviews lasted typically 10-15 minutes.

"In my research, I found that there's a good cross section of people on Mechanical Turk," says Nick. "We found lots of highly educated, diverse women that were very willing to speak with us about their dating experiences."

Nick setup several Google Voice phone numbers (throwaway numbers that couldn't be tracked or reused) and recruited a few friends to help him out.

He prepared a simple interview script with open-ended questions, since he was digging into the problem validation stage of his startup. Nick says, "I was amazed at the feedback I got. We were able to speak with one hundred single women that met our criteria in four hours on one evening."

As a result, Nick gained incredible insight into LikeBright's potential customers and the challenges he would face building the startup. He went back to TechStars and Andy Sack with that know-how and impressed them enough to get accepted. LikeBright's website is now live with a 50% female user base, and recently raised a round of funding. And Nick remains a fan of Mechanical Turk. "Since that first foray into interviewing customers, I've probably spoken with over 1,000 people through Mechanical Turk," he says.

Summary:

- LikeBright used a technical solution to talk to many end users in a short amount of time.
- After talking to 100 prospects in 24 hours, the founders were accepted to a startup accelerator.

3 http://customerdevlabs.com/2012/08/21/using-mturk-to-interview-100-customers-in-4-hours/

- The combination of Google Voice and Mechanical Turk proved so successful, they continue to use it regularly.

Analytics Lessons Learned:

While there's no substitute to qualitative data, you can use technology to dramatically improve the efficiency of collecting that data. In the Empathy Stage, focus on building tools for getting good feedback quickly from many people. Just because customer development isn't code doesn't mean you shouldn't invest heavily in it.

Sincerely

SINCERELY LEARNS THE CHALLENGES OF MOBILE CUSTOMER ACQUISITION

Sincerely Inc. is the maker of the Sincerely gifting network and a number of mobile applications including Postagram, Ink Cards and Sesame Gifts. The company's first application, Postagram, lets people create and send a custom postcard from anywhere in the world. Ink Cards, its second app, allows you to send personalized greeting cards. And Sesame Gifts, allows you to send themed gift sets in a beautiful box. The company has evolved from the simplest shippable item—a postcard—to $30-$50 gifts with Sesame.

When the company first started in 2010, co-founders Matt Brezina and Bryan Kennedy assumed that mobile ads would be like Google AdWords in 2000—early movers (to using mobile advertising) would have a huge advantage in a giant, not-yet-efficient user acquisition channel. "We figured by selling the simplest gift on the planet, a ninety-nine cent postcard, we could easily buy users, get credit cards, and begin to make our gifting network profitable," says Matt. "This strategy was gut instinct and some small experiments we ran on an off-branded app."

It turns out Sincerely was able to buy users through mobile advertising for Postagram, but not cheaply enough. "Our metric for success was buying a Postagram user cheaply enough that they'd become profitable in under one year," says Matt. "And if not, could we cross-promote them to another, more expensive gifting app to get them profitable within one year, and eventually three months."

Matt and Bryan not only found that mobile ads were too expensive, but also that they were hard to track and the conversion rate from initial acquisition to mobile installation and launch was abysmal. So they launched Ink Cards six months after Postagram, and set a price point starting at $1.99 per card. "Through cross-promotion, we increased the lifetime value of an initial Postagram user by around 30%," says Matt. "But the payback time *still* wasn't what we wanted it to be."

Now Sincerely has launched Sesame, which offers gifts at a higher price-point. "We now hope to get into the zone of sustainably growing the business through ads," says Matt. But as a result of the cost and challenges with mobile advertising, Sincerely spends a significant amount of time focused on virality. Matt says, "Through necessity—because the mobile ad equation just doesn't work well enough—we've learned a lot about driving growth by enabling our users to share their great experience with new friends. We do this by giving users free cards for people they've never sent any to." This focus on viral growth reduces the reliance on advertising alone for user acquisition in a mobile industry where acquisition tools aren't yet mature or efficient.

Summary:

- Sincerely launched Postagram to allow users to send ninety-nine cent custom postcards, and assumed that mobile advertising would be inexpensive and efficient enough for them to grow successfully.
- They were able to acquire users, but it was too expensive (because mobile advertising was hard to measure, drop off rates were high) and not rewarding enough (because the lifetime value of the customer was too low.)
- The company launched Ink Cards, personalized greeting cards with a higher price point. This improved lifetime value by around 30%, but the payback time was still too slow, and it wasn't enough for mobile advertising to be profitable.
- Now Sincerely has launched Sesame Gifts, curated gifts you can send people for between $30-$50. They hope that this new price point will allow them to grow profitably through mobile advertising, while they also focus more on growing virally to reduce their dependency on advertising channels.

Analytics Lessons Learned:

Mobile advertising is more complicated and more expensive than you may initially realize, and you need to track the Cost of Customer Acquisition carefully. You also need to track how quickly a user pays back the cost of acquiring them, as well as their lifetime value. Test different channels and track user behavior; and use virality as a means of lowering your acquisition costs.

PARSE.LY AND THE PIVOT TO REVENUE

Parse.ly makes an analytics tool that helps the web's big publishers understand what content is driving traffic. It was first launched in 2009 from Philadelphia's Dreamit Ventures as a reader tool for consumers to find stories they'd like. A year later, the company changed its approach: since it knew what a reader might like to read next, it could help publishers suggest content that would keep readers on the site for longer. And in 2011, it changed again, this time offering reporting tools to publishers who wanted to know what was working. The current product, Parse.ly Dash, is an analytics tool for publishers.[4]

While Dash is a successful product today, the company had to abandon its earlier work in its search for a sustainable business model. "It was very hard for us to shift away from our consumer news reader product. That's because all the metrics were actually quite positive," says Mike Sukmanowsky, Parse.ly's Product Lead.

"We had thousands of users and the product was growing rapidly. We were written up in top technology press like TechCrunch, ReadWriteWeb, and ZDNet. The product worked and we had a million ideas for how to improve it even further. However, it was lacking in one critical metric for any growing business—revenue. We ran tests/surveys, and learned that though our users loved Parse.ly Reader, they didn't love it so much that they'd be willing to pay for it."

The founders had plenty of code, but no revenue, and costs were growing. Mike attributes part of this to the focus startup accelerators have on rapid prototyping, often at the expense of customer development. "One of the challenges of an accelerator is that they are so product-focused (ship it quick) and pressure-oriented (2 months to demo) that a lot of our customer development had to happen parallel to product development. And, in fact, some of the biggest questions were answered after shipping our first version."[5]

4 The Parse.ly team have written a detailed explanation of these changes at http://blog.parse.ly/post/16388310218/hello-publishers-meet-dash

5 Mike is quick to point out that this is changing, with an increased emphasis on revenue generation. See http://go.bloomberg.com/tech-deals/2012-08-22-y-combinators-young-startups- tout-revenue-over-users/

Once the company had decided to change business models, it stopped development on the reader entirely. While the new offering was built from scratch, it leveraged much of the technology and many of the architectural lessons learned from the first product. Now a direct sales team sells its current offering, using a trial period for evaluation, and then charging a monthly fee.

As you might expect from an analytics firm, the Parse.ly team collect and analyze a lot of data. In addition to using Dash themselves, they rely on Woopra for engagement and to arm their sales team; Graphite for tracking time-series data; and Pingdom for uptime and availability.

As the company iterated through various business models, the metrics it tracked changed accordingly.

"For Parse.ly Reader, our core metrics were new signups and user engagement. We would pay close attention to how many signups per day we were getting based on our press write-ups and how many logins per day we were getting from user accounts," says Mike. "In the Parse.ly Publisher Platform, we focused entirely on number of recommendation impressions served, and click-through-rate of our recommendations. We still pay close attention to these metrics for users of our API."

For the current reporting product, the company tracks a broader set of metrics, including:

1. New signups per day for trial accounts.
2. Conversion rate on the signup flow and account activation process.
3. Number of active users (seats) per account and account invitation activity.
4. User engagement (based on Woopra data.)
5. API calls in Graphite.
6. Website activity in Google Analytics.
7. Tracked page views and unique visitors across all the sites running within the network of monitored sites.

Since its software is installed on a number of sites, it also tracks data for those sites, including the average number of posts published, average page views, and top referrers. It also tracks fundamental business metrics—headcount, customer count, server count, revenue, costs, and profit.

In the end, Parse.ly had to make some painful decisions despite the apparent success of a consumer business. It didn't test the monetization of their initial product, even though that was one of the riskiest aspects. But when, before its second pivot, it spent time talking to their enterprise customers about the dashboard, the answer was clear: "We'd show them proof-of-concepts of the analytics tool we could deliver to them, and they began to clamor for the insights we were proposing," recalls Mike. "They cared more about the prospect of this tool than the recommendations we were providing."

Summary:

- Even if you have healthy growth in an important dimension (like user count or engagement) it's not worth much if you can't convert it to money and pay the bills.
- Pivoting the business changed the OMTM immediately
- Every company lives in an ecosystem—in this case, of readers, publishers, and advertisers. It's often easier to pivot to a new market than to create an entirely new product; and once you've done so, for the market to help you realize what product you should have made them in the first place.

Analytics Lessons Learned:

Recognize that being able to make money is an inherent assumption of most business models, but that to de-risk the model you need to test it early. Be prepared to radically change, or even shut down, parts of your company in your quest for revenue.

WineExpress.com
A Classic Blend of Value & Service

WINEEXPRESS INCREASES REVENUE BY 41% PER VISITOR

WineExpress.com is the exclusive wine shop partner of the Wine Enthusiast catalog and website, which have been providing quality wine accessories and storage for over 30 years. The company actively A/B tests and runs different experiments to improve sales conversions.

They decided to tackle one of the most highly trafficked pages on their site—the "Wine of the Day" page—which features a single wine option that ships for just 99 cents. They drive traffic to the page through an opt-in email list and site navigation. The page's central focus, aside from the featured product, is a virtual wine tasting video with the company's highly regarded Wine Director.

The "Wine of the Day" page already converted well, but WineExpress.com felt there was an opportunity to improve it. However, they were well aware of the challenge—which is faced by all e-commerce sites; striking a balance between optimizing sales transactions and optimizing overall revenues. Focusing too much on sales conversions may negatively impact the bottom line if the average order size drops in the process.

WineExpress.com engaged conversion optimization agency WiderFunnel Marketing, develop and execute a strategy for the "Wine of the Day" page. WiderFunnel developed and tested 3 design variations, aiming mostly at testing different layout approaches. Figure 3 shows the original layout.

Figure 3: The original WineExpress wine of the day page

In the end, one of the variations was a clear winner, leading to a 41% increase in revenue per visitor. "Conversion also went up," says Chris Goward, CEO of WiderFunnel, "but the key here is that revenue per visitor went up substantially. A lot of e-commerce vendors focus too much on conversion. For WineExpress.com the success is that people bought substantially more product."

The winning layout and design is shown in Figure 4.

Figure 4: How would 41% more revenue per visitor change your business?

"We found that placing the video above the fold was a key element in the success of the new page," says Chris Goward, CEO of WiderFunnel. "The eyeflow of the new layout also improved clarity, with fewer distracting elements that could draw you away from purchasing."

Summary:

- WineExpress.com used A/B testing to find a better-converting page.
- While conversion went up, the real gain was in a 41% increase in revenue per visitor.

Analytics Lessons Learned:

Page optimization is important. But be sure you're optimizing the right metric. You don't just want a high conversion rate—though that's good. You want high revenue per visitor, or high CLV, because that's what's really driving your business model.

OFFICEDROP'S KEY METRIC – PAID CHURN

OfficeDrop helps small businesses manage paper and digital files in the cloud. Their service provides searchable cloud storage coupled with downloadable apps that allow businesses to sync, scan, search and share files anywhere at any time. Currently, over 180,000 users store data in their service, and its subscribers access and upload millions of files each month.

The company offers its solution as a freemium model with one free plan and three paid plans. We spoke with Healy Jones, Vice President of Marketing, to learn more about the company's key metrics and lessons learned.

"Our most important number is paid churn," says Healy. OfficeDrop defines paid churn as the number of paying users who downgrade to free or cancel divided by the total number of paying users available to churn at the beginning of the month.

For OfficeDrop, paid churn is a key indicator of the business's overall health. "For example, we can tell how our marketing messaging is doing based on paid user churn—if a lot of new customers churn out then we know our messaging doesn't match what the customers are actually finding when they start using the product," explains Healy. "We can also tell if our feature development is progressing in the direction that older users want: if they stick around for a long time then we are doing a good job, but if they churn out fast then we are not developing the product in the direction that they want. We can also tell if any bugs are causing people to be upset—if a lot of users cancel on a particular day then we have to look and see if there was a technical problem that ticked people off."

The company aims for a monthly churn rate below 4%. Healy says, "Three percent is good," Healy says. "Anything over 5% and we really don't have a business that will generate gross margin positive growth." Most recently, Healy says the company has been hitting a churn rate of 2% and hopes to maintain that.

As is often the case, churn is the inverse of engagement, and this is the second key metric for OfficeDrop. It defines an active user as someone who used the product in the previous month. When OfficeDrop launched, the founders assumed that people would not want to install programs on their computers or devices, that they would want a rich browser experience instead. "We did everything by our gut, and almost everything was wrong," says Healy. "We hypothesized that the browser experience—which is the easiest to get started with and has the lowest barriers to entry for new customers—would be more likely to create engagement, but we didn't start seeing real engagement, and in turn real customer growth and lower churn, until we built downloadable applications."

Figure 5 shows a classic hockey stick around June 2011. This measures the increased customer base (which is a result of increased engagement and reduced churn).

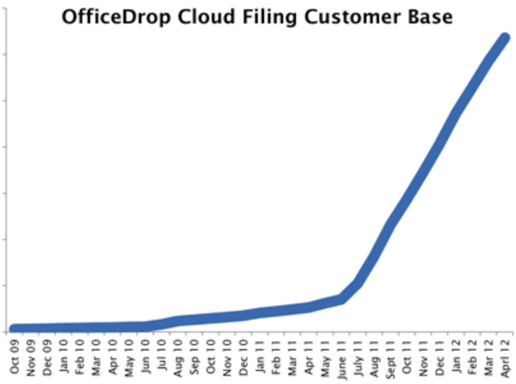

Figure 5: Can you tell where OfficeDrop added a mobile client app?

"In mid-2011, we went mobile and first started offering OfficeDrop as a mobile app, and that had a huge impact," says Healy. "A little harder to see—but equally important—was when we released our Mac desktop scanner application in January 2011. That was our first major downloadable app, and it got great press and drove even better engagement."

After seeing that initial uptick in engagement, OfficeDrop made the commitment to develop mobile offerings. They launched an Android app in May 2011, followed by an iPhone app in June 2011. "Going against our assumptions, we built a desktop application that proved successful. I think of that like a pivot for us, and it gave us the confidence to change our product offering. The results are clear: improved engagement and lower churn."

Summary:

- OfficeDrop watches paid churn—paying customers who switch to a free model or leave—as their key metric.

- The initial product was heavily browser-focused, and assumed users wouldn't want desktop or mobile clients, based on the founders' gut instincts.
- The introduction of a scanner application, followed by mobile client software, dramatically increased the growth of the company.

Analytics Lessons Learned:

Always question your assumptions, even when you're seeing traction. Customers want to use certain applications in certain ways—mapping on their mobile phone, for example. Doing a day-in-the-life analysis, or testing a major pivot with the introduction of a simple application, can often prove or invalidate a big assumption quickly, and change your fortunes forever.

KINGSWAY

KINGSWAY CHURCH TRACKS VELOCITY AND VISION VIRALITY

Dr. Ernie Prabhakar has a Ph.D. in Particle Physics from the California Institute of Technology and another degree from Massachusetts Institute of Technology. He's worked at one of the world's most successful technology companies in product marketing for over a decade. He's also very active in his church, Kingsway, in San Jose, California.

We connected with Dr. Ernie (as he's most often referred to online) because of his blog, where he writes actively about how churches need to evolve—to become more agile and lean.

He says, "I got into Agile many years ago; though I've never been a professional programmer, I continue to hack in my free time, and I've always been fascinated by the process of software development. Conversely, my professional background in physics, consulting, and product management led me to continually question how the business side works. Lean Startup is the perfect scratch for my intellectual itch."

So how has he applied the concept to his church?

"A year ago, our church was stuck in a leadership rut and desperately needed some new thinking," Ernie says. "After intense discussions among the leaders, I realized we needed to adopt a startup mentality."

He's now working to translate various concepts and practices from Lean Startup to the domain of non-profits. This effort has led Ernie to metrics and analytics. "In the church world, we generally only have crude metrics around attendance and giving," he says. "Like traditional business metrics applied to startups, these lead to bad results if you optimize them--but disastrous results if you ignore them entirely." Ernie believes that churches need a way of measuring incremental progress, to ensure they're optimizing the right thing.

Innovation in churches is a huge challenge. Ernie says:

"I often joke that churches have an ugly word for people who innovate—heretic. However, I like to point out that all the heroes in our tradition—Martin Luther, St. Paul, even Jesus Himself—were effectively considered heretics in their time because they dared to redefine the commonsense understanding of what religion was all about."

Ernie's blog caught our attention, because he wrote a post about the One Metric That Matters. [6]Ernie says that the most powerful concept he wants Kingsway to understand is "velocity," which is how fast they are doing new things. "This idea of pursuing ongoing change, and measuring it, is quite new to most of our leadership," he says. "However, we've successfully 'spread' our church to two new locations over the last twelve months, effectively doubling our leadership and reach, so the team is actually quite open to new techniques for sustaining growth."

Specifically, Ernie is experimenting with a metric he calls "vision virality," which is the number of new visions multiplied by the number of people they "infect." Ernie likens a vision to a use case or feature request. "An example might be 'Train existing members in hands-on evangelism' or 'Start a parenting class for families in our neighborhoods.'" Ernie believes that churches grow only as fast as new people are infected with new visions. "From that perspective," he says, "the job of leadership is to develop new visions and disseminate them more broadly. In other words, the proper role of programs and structures is to act as carriers for a never-ending flow of new visions."

Ernie used the principle of "vision virality" when the church kicked off its growth strategy to two new locations. He tracked the percentage of members that committed to at

6 http://ihack.us/2012/10/05/metrics-versus-goals/

least one of the new locations, which was a good initial indicator that people were ready to expand, and raised the church's confidence level about succeeding.

As far as Ernie knows, his church is the only one that's attempting to apply Lean principles as part of their formal lay leadership structure. But he has seen other churches work towards becoming more agile[7] and he's optimistic that more will follow.

Summary:

- Ernie Prabhakar is bringing a startup mentality to Kingsway Church and working to apply Lean Startup principles.
- He's focused on the concepts of velocity and virality, and the importance of tracking meaningful metrics that prove whether or not the church is achieving its goals.
- The church has succeeded in expanding to new locations, and used the "percentage of members that committed to one of the new locations" as a leading indicator of success.

Analytics Lessons Learned:

Lean Startup and analytics are not the sole purview of startups and technology companies. It's possible to take concepts from Lean Startup, and the importance of focused measurement to non-profits, government and other areas. The key is to start small and translate the concepts and terminology into things that your audience will understand.

P&G

SWIFFER GIVES UP ON CHEMISTRY

Proctor & Gamble makes lots of cleaning products. They're constantly trying to improve and revitalize their cash-cow products, but despite the efforts of many highly-paid experts, they were stalled in their efforts to invent a better cleaning fluid.

7 http://scrum.jeffsutherland.com/2009/06/scrum-in-church.html

The company's executives knew it was time to disrupt the industry, and they couldn't do it from within. So they brought in Continuum, an outside agency, Continuum, to help out.[8] Rather than mixing up another batch of chemicals, Continuum's team decided to watch people as they mopped. They focused on recording, testing, and rapid iteration during their investigation phase.[9]

At one point, they watched a test subject clean up spilled coffee grounds. Rather than breaking out a mop, the subject swept up the dry grounds with a broom, and then wiped the remaining fine dust with a damp cloth.

No mop.

That was an eye-opener for the design team, and they looked at the problem from a different angle. They discovered that the mop—not the liquids—was the key. They looked at the makeup of floor dirt (which is part dust, which is better picked up without water[10]) and innovated on the cleaning tool itself, giving P&G a $500M-dollar innovation—the Swiffer, a more user-friendly style of mop—in the otherwise stagnant cleaning industry.

The ability to step outside the frame of reference within which the existing organization works, and see the actual need rather than the current solution, is a fundamental ability of any intrapreneur.

Summary:

- By using basic customer development approaches, the company was able to create an entirely new product category.
- Pretending you're a startup, and focusing on disruption in the Empathy Stage, is a good way to rediscover what's possible and take off enterprise blinders.
- Despite the temptation to use surveys and quantitative research, the insights from one-on-one observation can unlock an entire market segment.

Analytics Lessons Learned:

For Intrapreneurs, sometimes starting back at the beginning, with a reconsideration of the fundamental problem you're trying to solve, is the best way to move a cash cow product—lucrative, but not growing—back to a high-growth industry. After all, if you don't see your customers through naïve eyes, someone else will.

8 http://www.kinesisinc.com/business/how-spilt-coffee-created-a-billion-dollar-mop/
9 http://www.dcontinuum.com/seoul/portfolio/11/89/
10 http://www.fastcodesign.com/1671033/why-focus-groups-kill-innovation-from-the-designer-behind-swiffer

EMI

EMI EMBRACES DATA TO UNDERSTAND ITS CUSTOMERS

David Boyle is the Senior Vice President of Insight at EMI Music, one of the major labels in the recording industry. His job is to help EMI make decisions based on data, and to help the company navigate the choppy waters of an industry in transition.

To get the company more focused on data and analytics, and less concerned with anecdotes and opinions, David first had to choose which decisions needed to be made, and then find ways to get the right evidence in front of the decision-makers.

"The decisions we ultimately focused on were, 'Which types of consumers should I try to connect an artist's music to in which countries?' and 'What kinds of marketing should I do to try and reach those consumers?' Most of that data came from consumer research."

David wasn't short on data. EMI has billions of transaction records from digital services, as well as usage logs from artist websites and applications. "But each of these data sources is very limited in scope and very skewed concerning the types of person that is represented in that data set," David explained. So EMI built its own survey tool. "We found that building our own data set based on asking people questions and playing them music was the way to go." The result was over 1 million detailed interviews, and hundreds of millions of data points.

"Bad data is a pain to sell to people. And even good data is a pain to sell to someone if it doesn't actually help someone, whether that's because it's not in a form that helps them work out what to do or because it doesn't actually answer the questions they are asking," he says. "But when the data's good and it really does help someone, then nobody can refuse it."

Many intrapreneurs talk about the friction they face when trying to create a data-driven culture in their organizations. But David is quick to caution against calling it resistance. "One of the key things we realized early on was that it's not helpful to think of it as resistance. When you realize that the 'resistance' is actually good people who deeply care about the artists and music they are working with trying to protect them from bad data or bad recommendations, then you see the whole thing differently."

“If you really believe in the data and the recommendations that the data makes, then you focus on why the person doesn't understand the data and you help them to understand it,” he explained. “When they understand, then their eyes light up, and they become a bigger fan of the data than I am!”

Despite his success with EMI, David admits there are real differences between a startup and a big company. “In a startup, you have the benefits of starting off as you mean to go on: you can shape the way of thinking and behaving to, for example, incorporate data in decision-making right from the start. That's a great advantage over working in a business where the culture is already set.” But that’s not always an advantage, he says. “A startup has another big problem: intense pressure to deliver quickly. I've actually noticed that this can get in the way of things like building the right culture if you're not careful.”

To build support and report progress within EMI, David used case studies.

“We got lots of people who’d successfully used our data to help their artists tell their story. They were better and more creative than anything we could have organized centrally to spread the word.” EMI’s new data helped align particular artists with demographics to whom they’d appeal, allowing the music to reach the most receptive audiences.

David didn’t tie the results of research to hard numbers. “We simply said: ‘Asking thousands of people what they think about something is better than not asking them, right?’ And we showed that we could do so at high quality and low cost and we went for it. After the first set of data came back people fell in love with it: it helped them and they loved that.”

Initially, the newly acquired research data helped EMI to understand the market and the ecosystem in which artists, music, and digital services exist. But now that they have that context, they can revisit the billions of transactional records they’ve collected in the past. “If we'd looked at that without first understanding the context in which it sits we would have taken our artists in the wrong direction,” David said.

The project has grown beyond the initial insight team, and now it’s owned by the overall business at EMI. And in the end, because everyone had access to data, the entire organization bought into the change. But what surprised David the most was how valuable the (relatively small) consumer research continued to be, even though the organization could use the Big Data hoard from billions of transactions. “Good data beats big data,” he concludes. “I am constantly surprised at how good it can be when done properly.”

Summary:

- EMI had a huge amount of data, and little idea how to use it.
- Rather than mining existing data sets, they conducted surveys, building a simpler, more specific set of information that executives could get comfortable with.
- Once the value of this smaller interview data was proven, it was easier to sell the value of a broader data-driven culture.

Analytics Lessons Learned:

Just because you have a lot of data doesn't mean you're data-driven. Sometimes, starting from scratch with a small set of data collected to solve a specific issue can help make the case for using data elsewhere in the organization. It's also more likely to get executive sponsorship because the problem is bounded and constrained—whereas nobody knows what controversies are lurking in the larger amounts of data exhaust the organization has collected over the years.

CONCLUSION

ASK GOOD QUESTIONS

There's never been a better time to know your market. Your customers leave a trail of digital breadcrumbs with every click, tweet, vote, like, share, check-in, and purchase, from the first time they hear about you until the day they leave you forever, whether they're online or off. If you know how to collect those breadcrumbs, you have unprecedented insight into their needs, their quirks, and their lives.

This insight is forever changing what it means to be a business leader. Once, a leader convinced others to act in the absence of information. But today, there's simply too much information available. We don't need to guess—we need to know where to focus. We need a disciplined approach to growth that identifies, quantifies, and overcomes risk every step of the way. Today's leader doesn't have all the answers. Instead, today's leader knows what questions to ask.

Go forth and **ask good questions**.

If you enjoyed *Analytics Lessons Learned*, you're going to love the full book.

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