THE SMARTER STARTUP

A Better Approach
to Online Business
for Entrepeneurs

NEAL CABAGE, SONYA ZHANG, PHD

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The Smarter Startup: A Better Approach to Online Business for Entrepreneurs
Neal Cabage and Sonya Zhang

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Dedicated to Kelly & Ethan.

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ACKNOWLEDGEMENTS

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CONTENTS AT A GLANCE

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CONTENTS

PART I
THINK

PART II
KNOW

PART III

DO

INTRODUCTION

> "Vision without action is daydreaming and action without vision is a nightmare."
>
> —CHINESE PROVERB

You're probably reading this book because you're thinking about starting an online business or are already involved in one. And why not? In many respects, it is now easier to start a business than at any time in history, particularly an online business. The cost and complexity of launching a startup has fallen precipitously compared to even a decade ago. You no longer need an office, a phone system, or a climate-controlled server room. In many cases, you don't even need to write the core software your business will depend on—you can just plug into the cloud. And despite the lower cost of starting, finding capital to grow your business has never been easier.

Yet there are clear challenges that result from this new dynamic. Because it's so inexpensive to start a business online, a lot of people are doing it! In fact, if you've spent any time digging for that great unexploited online opportunity, you've likely already realized how difficult it is to find. And you're not just competing with other ambitious startups in your own backyard—you're up against every ambitious startup around the world. Some of these competitors have lower operating costs due to their geographic locations, while others are raising money from angels and venture capitalists, giving them tremendous leverage. Make no mistake, the Internet may represent the greatest boom in innovation-driven opportunity the world has ever known, but it comes with significant challenges, too.

The purpose of this book is to provide a conceptual framework for addressing these challenges. In the first section, we'll discuss the introspective aspects of finding and validating opportunities. In the second

section, we'll focus on strategic alignment with external forces. And in the third section, we'll provide actionable advice for setting up your business, building your team, and developing your product offering. We'll walk you through the entire process, from making the first decision to become an entrepreneur to launching your first online business, and we'll tackle the significant strategic challenges.

Our goal in creating this book is to help startup entrepreneurs improve their odds of success and smooth the path along the way, conveying a deeper understanding of why some businesses succeed while others fail and how to deal with the challenges that arise along the way. We developed the book by compiling lessons learned from a decade of startup experience, studying some of the best practices in the industry, and balancing them with academic business models that help to clarify and provide depth. It is our sincere hope that this book will help you achieve your ultimate startup success.

—Neal Cabage and Sonya Zhang, PhD

TIMING IS EVERYTHING

> ## "In the publishing business, you're either first, you're fabulous, or you're f***ed!"
>
> **—ANONYMOUS**

Everyone's heard the story about Isaac Newton sitting under an apple tree while developing the theory of gravity. Imagine the opportunities that existed in Newton's time, in the early days of modern science, to have a profound impact through relatively simple and foundational contributions. Today, you would need to deduce exceedingly complex theories about quantum physics and the existence of "god" particles to have even a fraction of the impact Newton had.

The same holds true today, at the end of the Internet's golden age. There are countless stories in recent memory of those who set up websites and made a million dollars. Google AdWords used to provide easy advertising opportunities in which lead generation and affiliate marketers could generate profound traffic—for pennies on the dollar of the income that traffic could generate. Even getting free traffic through Google's and Yahoo's organic search results was fairly easy, as the search algorithms were less sophisticated and the amount of competition was far less than now.

There was a popular idea floating around during the golden age that the Internet was the great equalizer. It brought democratization to the marketplace. It was the beginning of a new economy in which previous power structures were neutralized and anyone could start a business that reached everywhere, and had the same opportunity for success as anyone else. Ah, the good ol' days!

Today, the cost of AdWords equals or exceeds the value of the traffic it generates for many entrepreneurs (an issue of volume/size). Organic search results are heavily biased toward the largest and most established websites, with the proverbial wind of years of backlink history at their backs. Public companies have also started actively promoting their websites on television and through other major media, effectively doing end-runs around other online discovery-oriented channels. Not only has power begun to consolidate around major brands, there's also the issue of too much ambient noise. To illustrate this point, take a look at **Figure 4.1.** Netcraft.com has been keeping track of new websites since its inception and reports that, as of March 2012, there are 13 million active websites worldwide—a seven-fold increase since 2005.[1] No wonder it's begun to feel so crowded!
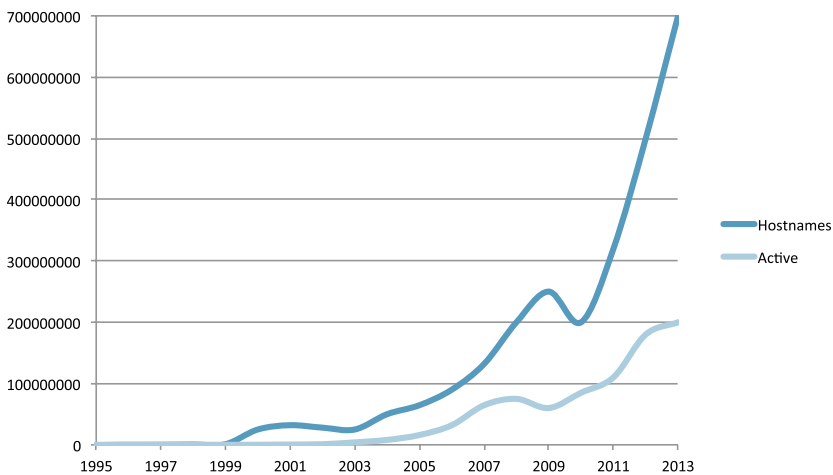
Figure 4.1 Active host names.

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1   http://news.netcraft.com/archives/2012/03/05/march-2012-web-server-survey.html

In 2007, the iPhone, a new delivery platform, hit the market and instantly provided an unexploited opportunity to create content for these new devices. Those who moved quickly were able to garner the download counts that now drive placement in the App Store. Today, just five short years later, there are over 700,000 iPhone apps, and 60 percent of those actually lose money (compared to the cost of development).[2]

If we look at these examples, the immediate conclusion might be that it's too late to make any money online. It's not, though it *is* a lot more difficult if you weren't there in the beginning when the field was wide open.

Time and again, startups have made a lot of money very quickly by being at the right place, at the right time. This was true in the golden age of science, in the American industrial revolution, and in the Internet and mobile revolutions. Today the opportunities are smaller and require greater time and capital to be competitive. The rare exception is if your idea takes off in the social web. But for most it's a hard slog to see returns.

Against this backdrop, imagine what would be possible if you were in the right place at the right time. The good news is that innovation and opportunity are still happening around us all the time. The key is to find the emerging opportunities and align your startup with those opportunities. Let's take a look at a framework that can prove helpful.

Innovation adoption curve

In 1962, sociologist Everett Rogers developed the Innovation Adoption Curve, a bell curve distribution model that describes the absorption of innovation into culture. Geoffrey Moore further added an adoption chasm that exists between innovators and early adopters (**Figure 4.2**).

Rogers's and Moore's work has mostly been applied to the adoption of a specific technology or product, but it could also be applied to macro technologies and trends. For example, the Internet was originally developed by the U.S. Defense Advanced Research Projects Agency (DARPA) in the 1950s (innovators). It was improved through the use of TCP/IP protocols in 1982. But the first commercial applications didn't really begin until the introduction of Netscape in the early 1990s (early adopters), and it snowballed from there a few years later, as the early majorities arrived.

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2 http://venturebeat.com/2012/05/04/ios-developers-lose-money/

New Entrant Opportunity

Ideal point to enter a market

Chasm

Innovators	Early adopters	Early majority	Late majority	Laggards
(2.5 %)	(13.5 %)	(34 %)	(34 %)	(16 %)
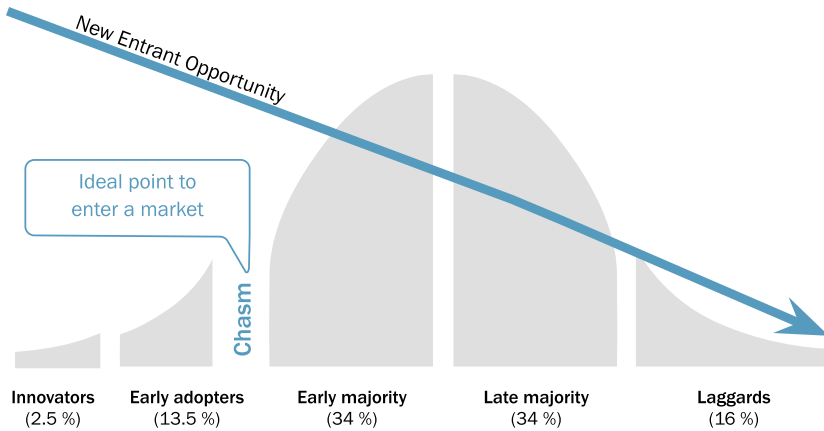
Figure 4.2 Everett Rogers's Innovation Adoption Curve.

This conceptual framework can be useful for analyzing timing of trends, in order to see the windows of entrepreneurial opportunity. We assume at a macro level that innovators are the academics and scientists creating pure innovation without application, the early adopters are the first to see opportunity for commercial application and either evangelize or commercialize it, and the consumers are the early/late majorities and laggards.

Take a look around your everyday life through the lens of this framework: Innovators are less than 2.5 percent of scientists and academics innovating without application. Early adopters follow with first attempts to apply the concepts with novelty products and in government defense work. The early majority are the first consumers to buy in, perhaps for social status purposes, similar to owning an iPhone in 2008. The late majority are busy pragmatists who cannot invest time until something has proven its value. And laggards are the grandparents who just signed up for Facebook to see the most recent pictures of the grandchildren.

There's something to be said for looking around you and observing the current level of adoption of an innovation before you attempt to commercialize it. The best commercial opportunities begin just as the late majority arrives, but you must have already built your product and gained some momentum before that time, which means you must be begin building your business before the early majority. And thus the chasm!

The chasm might also be ideal as you can minimize adoption risk by letting it play out just a little bit in that early adopter phase before investing

yourself. Certainly, though, you would not want to enter the market after the late majority phase, as competitors are already entrenched and your window for capitalizing on the innovation before it is commoditized is minimal.

Perhaps the best recent example of this is the mobile market. In 2007 Apple introduced the iPhone and revolutionized the smartphone industry. But the raw innovation had been out there since the late 1990s. There were even HTTP and WAP-enabled phones prior to the iPhone, but none had gained much traction. These were the early adopters. The iPhone was the product that was needed to give enough bounce to overcome the chasm and lead the industry into early majority. Apple enjoyed dominance over the early majority phase until Google hit the market with Android, a free competitive platform, and this led to a proliferation of competitive devices and marked the beginning of the late majority phase. Android was able to compete because it's free and Google has massive pull as a company. The introduction of the Android platform marked the entry into the late majority and the beginning of commoditization of the industry.

The takeaway is that one can enter the market late, as Google did, but (a) you better have significant money to spend to build momentum and catch up, and (b) you should be a large business that can be a cost leader and make money on volume, since commoditization is soon to set in. Because of the late-market timing, your role will be to lead the commoditization on the way down the backside of the curve, not up. This is a role suitable only for a major organization, not a small startup that will need the early majority evangelists to gain momentum.

Commoditization of technology

"As information technology's power and ubiquity have grown, its strategic importance has diminished. The way you approach IT investment and management will need to change dramatically ... It is difficult to imagine a more perfect commodity than a byte of data—endlessly and perfectly reproducible at virtually no cost ... IT management should, frankly, become boring."

—Nicholas Carr

In an infamous article published in 2003 by the *Harvard Business Review,* Nicholas Carr asserted that information technology serves a similar purpose in industry as any other major technology has, such as railroads, the assembly line, or combustible engines. At first these innovations are proprietary and offer a substantial advantage in the market for those who possess this technology. But over time the technology becomes more common and standardized, providers more plentiful, competition rises, and consequently, the value of that technology becomes insignificant from a competitive perspective.

Commoditization of technology is all around us. For example, bandwidth and hosting costs are trivial now, compared to 10 years ago. So is the cost of a new laptop, unless you buy a Mac (an excellent example of positioning strategy at work). Apple has managed to escape the commodity vacuum arguably by making their products not about the technology. When you look at the now famous marketing of the iPod for example, it wasn't about gigabytes or megahertz. It was simply about "a thousand songs in your pocket." In this case, technology is the means, not the end goal.

If we look at Internet consulting firms today, it's not really about building a website any more. Outsourcing has certainly commoditized those skills, and open source software like WordPress and its free design themes have eased the design concerns for most low-budget websites. Even writing better code is less important now with cheap RAM, CPUs, and mature concepts of server clustering. Consulting firms that are still going strong in 2012 are those focusing on the application of technology for the purposes of marketing, not the production of it. SEO and social marketing firms are red hot in 2012. Even at the higher end of the market, IBM has shifted away from technology and toward strategy consulting. As IBM's strategic executive Irving Wladawsky-Berger noted in 2003, "We've entered the post-technology era."

An article written by Timothy M. Chester in the *Educause Quarterly* went as far as saying that educators need to be mindful of training "future technology advocates and CIO leaders, not the leaders of technology mechanics,"[3] further recognition that the tide has shifted toward strategic

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3 Timothy M. Chester (2006), "A Roadmap for IT Leadership and the Next Ten Years," http://www.educause.edu/ero/article/roadmap-it-leadership-and-next-ten-years

use, not implementation. Chester suggests that projects and budgeting should no longer be considered IT projects, but rather as human resource projects, marketing projects, training products, and so forth, all of which utilize IT (a commodity resource) for their implementation, similar to how a house or office building project would implement electricity and plumbing.

In another interesting data point, Mark Suster of GRP Partners spoke about the explosion of technology entrepreneurship in the past 10 years.[4] He illustrates with a slideshow how substantially the cost of technology decreased for starting a business by 2011.[5] The proliferation of cloud computing, APIs (Application Programming Interfaces) for mashups, open source frameworks, and low-cost SaaS applications have dramatically reduced operating costs and increased opportunity to create compelling products by way of combining these technologies (**Figure 4.3**).

$5,000,000

2000

Hosting Commoditized

2005 $500,000

Open Source Software

2009 $50,000

The Cloud

Figure 4.3
2012 $5,000   The cost of technology.

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4 http://www.docstoc.com/docs/100225840/Future-of-VC-Internet

5 http://www.bothsidesofthetable.com/2011/10/20/5259/
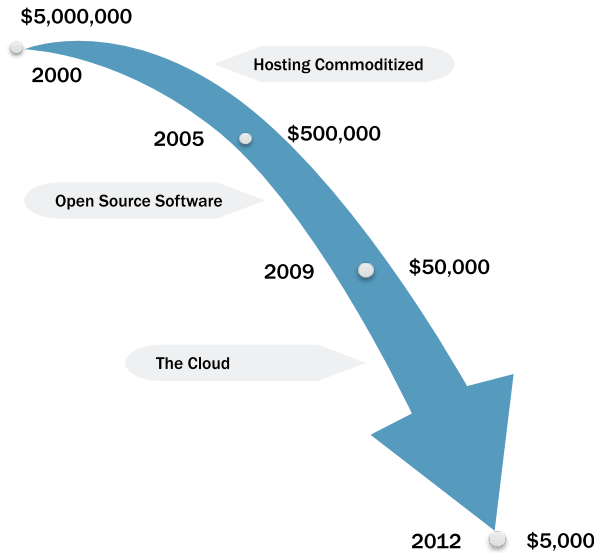
Though the process of commoditization may have accelerated in recent years, the phenomenon is nothing new. As far back as 1823, others such as David Ricardo and Karl Marx pontificated the Law of Diminishing Returns, asserting that the profits for a given unit will eventually be reduced to the incremental cost of production for an additional unit. So if it costs $1 to produce an additional cup of coffee once the original template is perfected, then that is the eventual price target for that cup of coffee. Likewise, if the cost of reproduction for a unit of software is $0 (it costs nothing to digitally duplicate software), the eventual price target should be close or equal to $0 (**Figure 4.4**).

The Law of Marginal Cost

Price

Marginal Revenue

Quantity
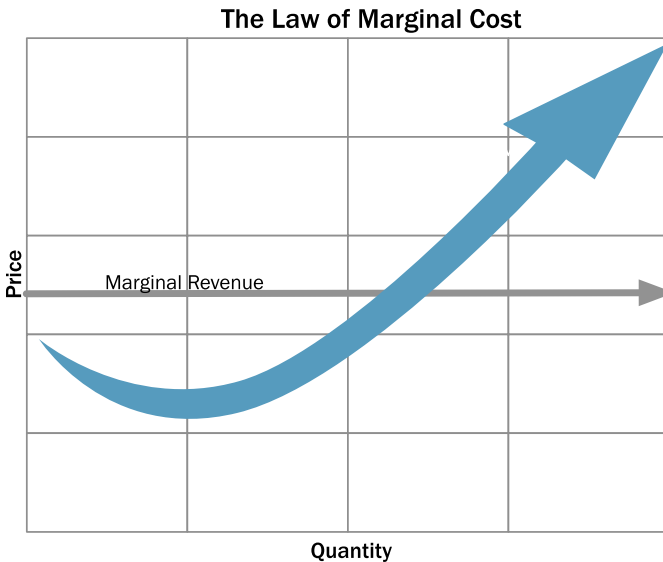
Figure 4.4
Marginal cost.

Your products and even your business are inevitably headed toward com-moditization unless you reinvest in them so that users get additional value when they buy from you. If you haven't reinvested by the time your products are commoditized, then you yourself have become a commod-ity. The only way to overcome this is to focus on the value you provide around that commodity. And yes, it is possible to do after the fact.

If you're a technologist or a technical entrepreneur, what do you do with this information? The lesson is not to avoid technology, but rather to build value *around* it, either with auxiliary services or by focusing your technology development efforts on how to augment existing commoditized technology, always innovating and staying a couple steps ahead of commoditization.

The value of network effects

Metcalfe's Law asserts that the power of a network is proportional to the square of the number of users connected to that network. It was originally calculated in the 1980s by George Gilder regarding telecommunications networks and later attributed to Robert Metcalfe.[6] It was referenced extensively for social networking sites during the Web 2.0 movement of the early 2000s.

It is considered to be a heuristic or metaphor, not a technically accurate model, but it does illustrate the significance of community adoption in the value of user adoption and what is otherwise called "networking effects."

When developing a business model with a dependence on social interaction, it's important to consider this dynamic carefully. If you are an early provider of a product or service, networking effects can have a profoundly positive effect on your business. Conversely, if you are a late entrant, this will be an exponentially negative effect and will cause significant difficulty in trying to penetrate your target market, particularly once the network has reached critical mass, which is when a sufficient amount of adopters of an innovation in a social system exist such that the rate of adoption becomes self-sustaining and creates further growth.

There were a couple lessons learned here. First, if you're a bootstrap company and are not first to market, avoid a business model that depends on networking effects; it is truly a tough paradox to overcome without resources. Second, if you're in such a market or have reasonable resources to overcome this initial challenge, look at how you can divide and conquer by appealing to specific segments one at a time.

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6 http://en.wikipedia.org/wiki/Metcalfe%27s_law

Like every dynamic, network effects can be a powerful force if channeled properly. Look for opportunities to leverage networking effects if you have a relatively new or viral idea that people might want to identify with socially. The litmus test when applying networking effects to your business model is to ask yourself if there is something inherently viral about your product. You can validate your chances early by doing simple tests such as posting content and doing a few social experiments via Twitter and StumbleUpon.

Takeaways

- Timing is perhaps the single greatest factor in whether your business will be successful. Use Rogers's Innovation Adoption Curve to identify the current stage of the life cycle a business to determine if timing is favorable.

- The cost of starting a business is lower than ever. While this presents a fantastic opportunity for entrepreneurs, it also means that competition is higher than ever.

- Understand Metcalfe's Law and avoid network effects businesses unless you're very early in the market cycle.

- Understand the effects of commoditization on your ability to enter a market profitably. Look carefully for signs of commoditization when validating opportunity.

INDEX

ABOUT THE AUTHORS

Neal Cabage

Neal Cabage is a technologist and digital product strategist based in Los Angeles, California. He has consulted for companies like Macys.com, Disney, AIG, and a number of startups. He is a thought leader in online product strategy who has spoken at leading conferences on topics such as market discovery and data-driven conversion optimization.

Neal has successfully founded and sold two online startups, experiencing the full life cycle of a startup business, and spent years studying why online products succeed—all of which led to the development this book. Neal studied Music Technology at New York University and Psychology at the University of Washington, reflecting his interest in the intersection of technology and human experience.

Sonya Zhang, PhD

Sonya Zhang is a professor at the College of Business Administration, Cal Poly Pomona. She received her PhD in Information Systems and Technology from Claremont Graduate University, and holds a Master of Science in Computer Science as well as a Master of Business Administration. Sonya's research focuses on user experience, web and software development, analytics and optimization, and Internet entrepreneurship. She has published numerous articles in leading journals and conferences.

Prior to working in academia, Sonya was a software engineer in health informatics and higher education for over seven years. With her diverse academic background and industry experience, Sonya develops unique insights and expertise that bridge business and technology.

Learn more about the book and authors at http://TheSmarterStartup.com.