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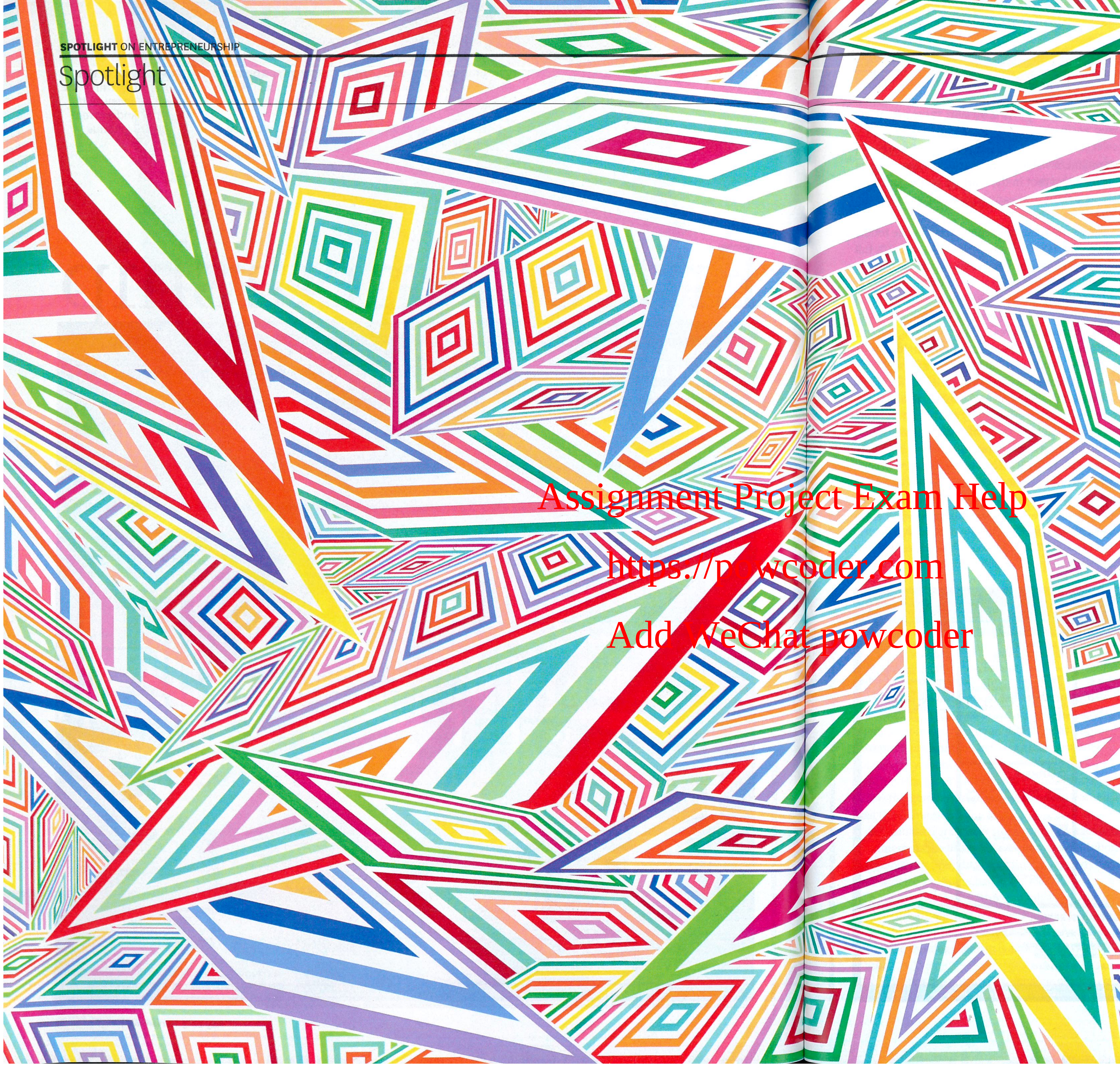
Harvard Business Review

MAY 2013

TURN A GREAT IDEA INTO A GREAT BUSINESS

"Lean" is changing everything you know about starting a new venture PAGE 63



ARTWORK Sara Hughes, *Download*, 2005
Acrylic on linen, 1.5 m x 1.5 m
Wallace Trust Collection

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Why the Lean Start-Up Changes Everything

by Steve Blank

Launching a new enterprise—whether it's a tech start-up, a small business, or an initiative within a large corporation—has always been a hit-or-miss proposition. According to the decades-old formula, you write a business plan, pitch it to investors, assemble a team, introduce a product, and start selling as hard as you can. And somewhere in this sequence of events, you'll probably suffer a fatal setback. The odds are not with you: As new research by Harvard Business School's Shikhar Ghosh shows, 75% of all start-ups fail.

But recently an important countervailing force has emerged, one that can make the process of starting a company less risky. It's a methodology called the "lean start-up," and it favors experimentation over elaborate planning, customer feedback over intuition, and iterative design over traditional "big design up front" development. Although the methodology is just a few years old, its concepts—such as "minimum viable product" and "pivoting"—have quickly taken root in the start-up world, and business schools have already begun adapting their curricula to teach them.

The lean start-up movement hasn't gone totally mainstream, however, and we have yet to feel its full impact. In many ways it is roughly where the big data movement was five years ago—consisting mainly of a buzzword that's not yet widely understood, whose implications companies are just beginning to grasp. But as its practices spread, they're turning the conventional wisdom about entrepreneurship on its head. New ventures of all kinds are attempting to improve their chances of success by following its principles of failing fast and continually learning. And despite the methodology's name, in the long term some of its biggest payoffs may be gained by the *large* companies that embrace it.

In this article I'll offer a brief overview of lean start-up techniques and how they've evolved. Most important, I'll explain how, in combination with other business trends, they could ignite a new entrepreneurial economy.

Sketch Out Your Hypotheses

The business model canvas lets you look at all nine building blocks of your business on one page. Each component of the business model contains a series of hypotheses that you need to test.

KEY PARTNERS
Who are our key partners?
Who are our key suppliers?
Which key resources are we acquiring from our partners?
Which key activities do partners perform?

KEY ACTIVITIES
What key activities do our value propositions require?
Our distribution channels?
Customer relationships?
Revenue streams?

KEY RESOURCES
What key resources do our value propositions require?
Our distribution channels?
Customer relationships?
Revenue streams?

VALUE PROPOSITIONS
What value do we deliver to the customer?
Which one of our customers' problems are we helping to solve?
What bundles of products and services are we offering to each segment?
Which customer needs are we satisfying?
What is the minimum viable product?

CUSTOMER RELATIONSHIPS
How do we get, keep, and grow customers?
Which customer relationships have we established?
How are they integrated with the rest of our business model?
How costly are they?

CHANNELS
Through which channels do our customer segments want to be reached?
How do other companies reach them now?
Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?

CUSTOMER SEGMENTS
For whom are we creating value?
Who are our most important customers?
What are the customer archetypes?

COST STRUCTURE
What are the most important costs inherent to our business model?
Which key resources are most expensive?
Which key activities are most expensive?

REVENUE STREAMS
For what value are our customers really willing to pay?
For what do they currently pay?
What is the revenue model?
What are the pricing tactics?

SOURCE WWW.BUSINESSMODELGENERATION.COM/CANVAS. CANVAS CONCEPT DEVELOPED BY ALEXANDER OSTERWALDER AND YVES PIGNEUR.

PHOTOGRAPHY PREVIOUS PAGE: COURTESY OF THE ARTIST AND THE WALLACE TRUST

Idea in Brief

Over the past few years, a new methodology for launching companies, called the "lean start-up," has begun to replace the old regimen.

Instead of executing business plans, operating in stealth mode, and releasing fully functional prototypes, young ventures are testing hypotheses, gathering early and frequent customer feedback, and showing "minimum viable products" to prospects. This new process recognizes that searching for a business model (which is the primary task facing a start-up) is entirely different from executing against that model (which is what established firms do).

Recently, business schools have begun to teach the methodology, which can also be learned at events such as Startup Weekend. Over time, lean start-up techniques could reduce the failure rate of new ventures and, in combination with other trends taking hold in the business world, launch a new, more entrepreneurial economy.

The Fallacy of the Perfect Business Plan

According to conventional wisdom, the first thing every founder must do is create a business plan—a static document that describes the size of an opportunity, the problem to be solved, and the solution that the new venture will provide. Typically it includes a five-year forecast for income, profits, and cash flow. A business plan is essentially a research exercise written in isolation at a desk before an entrepreneur has even begun to build a product. The assumption is that it's possible to figure out most of the unknowns of a business in advance, before you raise money and actually execute the idea.

Once an entrepreneur with a convincing business plan obtains money from investors, he or she begins developing the product in a similarly insular fashion. Developers invest thousands of man-hours to get it ready for launch, with little if any customer input. Only after building and launching the product does the venture get substantial feedback from customers—when the sales force attempts to sell it. And too often, after months or even years of development, entrepreneurs learn the hard way that customers do not need or want most of the product's features.

After decades of watching thousands of start-ups follow this standard regimen, we've now learned at least three things:

1. Business plans rarely survive first contact with customers. As the boxer Mike Tyson once said about his opponents' prefight strategies: "Everybody has a plan until they get punched in the mouth."

2. No one besides venture capitalists and the late Soviet Union requires five-year plans to forecast complete unknowns. These plans are generally fiction, and dreaming them up is almost always a waste of time.

3. Start-ups are not smaller versions of large companies. They do not unfold in accordance with master plans. The ones that ultimately succeed go quickly from failure to failure, all the while adapting, iterating on, and improving their initial ideas as they continually learn from customers.

One of the critical differences is that while existing companies *execute* a business model, start-ups *look* for one. This distinction is at the heart of the lean start-up approach. It shapes the lean definition of a start-up: a temporary organization designed to search for a repeatable and scalable business model.

The lean method has three key principles:

First, rather than engaging in months of planning and research, entrepreneurs accept that all they have on day one is a series of untested hypotheses—basically, good guesses. So instead of writing an intricate business plan, founders summarize their hypotheses in a framework called a *business model canvas*. Essentially, this is a diagram of how a company creates value for itself and its customers. (See the exhibit "Sketch Out Your Hypotheses.")

Second, lean start-ups use a "get out of the building" approach called *customer development* to test their hypotheses. They go out and ask potential users, purchasers, and partners for feedback on all elements of the business model, including product features, pricing, distribution channels, and affordable customer acquisition strategies. The emphasis is on nimbleness and speed: New ventures rapidly assemble minimum viable products and immediately elicit customer feedback. Then, using customers' input to revise their assumptions, they start the cycle over again, testing redesigned offerings and making further small adjustments (iterations) or more substantive ones (pivots) to ideas that aren't working. (See the exhibit "Listen to Customers.")

Third, lean start-ups practice something called *agile development*, which originated in the software industry. Agile development works hand-in-hand with customer development. Unlike typical year-

PHOTOGRAPHY: SARA HUGHES WITH HER WORK, *COLOUR CODES*, 2011, GOW LANGSFORD GALLERY, AUCKLAND, NEW ZEALAND

About the Spotlight Artist
Each month we illustrate our Spotlight package with a series of works from an accomplished artist. We hope that the lively and cerebral creations of these photographers, painters, and installation artists will infuse the pages with additional energy and intelligence to amplify what are often complex and abstract concepts.

This month the Spotlight artist is **Sara Hughes,** an artist from New Zealand. Hughes's abstracts explore the way modern technology influences perception. She also draws on the culture of consumerism for some of her symbolism.

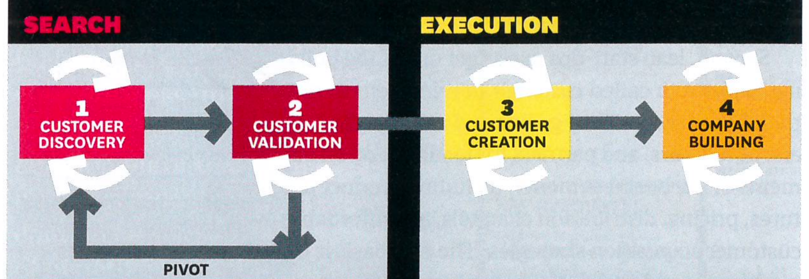
View more of the artist's work at **sarahughes.co.nz.**

long product development cycles that presuppose knowledge of customers' problems and product needs, agile development eliminates wasted time and resources by developing the product iteratively and incrementally. It's the process by which start-ups create the minimum viable products they test. (See the exhibit "Quick, Responsive Development.")

When Jorge Heraud and Lee Redden started Blue River Technology, they were students in my class at Stanford. They had a vision of building robotic lawn mowers for commercial spaces. After talking to over 100 customers in 10 weeks, they learned their initial customer target—golf courses—didn't value their solution. But then they began to talk to farmers and found a huge demand for an automated way to kill weeds without chemicals. Filling it became their new product focus, and within 10 weeks Blue River had built and tested a prototype. Nine months later the start-up had obtained more than $3 million in venture funding. The team expected to have a commercial product ready just nine months after that.

Listen to Customers

During customer development, a start-up searches for a business model that works. If customer feedback reveals that its business hypotheses are wrong, it either revises them or "pivots" to new hypotheses. Once a model is proven, the start-up starts executing, building a formal organization. Each stage of customer development is iterative: A start-up will probably fail several times before finding the right approach.



1. Founders translate company ideas into business model hypotheses, test assumptions about customers' needs, and then create a "minimum viable product" to try out their proposed solution on customers.

2. Start-up continues to test all other hypotheses and tries to validate customers' interest through early orders or product usage. If there's no interest, the start-up can "pivot" by changing one or more hypotheses.

3. The product is refined enough to sell. Using its proven hypotheses, the start-up builds demand by rapidly ramping up marketing and sales spending and scales up the business.

4. Business transitions from start-up mode, with a customer development team searching for answers, to functional departments executing its model.

Stealth Mode's Declining Popularity

Lean methods are changing the language start-ups use to describe their work. During the dot-com boom, start-ups often operated in "stealth mode" (to avoid alerting potential competitors to a market opportunity), exposing prototypes to customers only during highly orchestrated "beta" tests. The lean start-up methodology makes those concepts obsolete because it holds that in most industries customer feedback matters more than secrecy and that constant feedback yields better results than cadenced unveilings.

Those two fundamental precepts crystallized for me during my career as an entrepreneur. (I've been involved with eight high-tech start-ups, as either a founder or an early employee.) When I shifted into teaching, a decade ago, I came up with the formula for customer development described earlier. By 2003 I was outlining this process in a course at the Haas School of Business at the University of California at Berkeley.

In 2004, I invested in a start-up founded by Eric Ries and Will Harvey and, as a condition of my investment, insisted that they take my course. Eric quickly recognized that waterfall development, the tech industry's traditional, linear product development approach, should be replaced by iterative agile techniques. He also saw similarities between this emerging set of start-up disciplines and the Toyota Production System, which had become known as "lean manufacturing." Eric dubbed the combination of customer development and agile practices the "lean start-up."

The tools were popularized by a series of successful books. In 2003, I wrote *The Four Steps to the Epiphany,* articulating for the first time that start-ups were not smaller versions of large companies and laying out the customer development process in detail. In 2010, Alexander Osterwalder and Yves Pigneur gave entrepreneurs the standard framework for business model canvases in *Business Model Generation.* In 2011 Eric published an overview in *The Lean Startup.* And in 2012 Bob Dorf and I summarized what we'd learned about lean techniques in a step-by-step handbook called *The Startup Owner's Manual.*

The lean start-up method is now being taught at more than 25 universities and through a popular online course at Udacity.com. In addition, in almost every city around world, you'll find organizations like Startup Weekend introducing the lean method to hundreds of prospective entrepreneurs at a time. At such gatherings a roomful of start-up teams can cycle through half a dozen potential product ideas in a matter of hours. Although it sounds incredible to people who haven't been to one, at these events some businesses are formed on a Friday evening and are generating actual revenue by Sunday afternoon.

Creating an Entrepreneurial, Innovation-Based Economy

While some adherents claim that the lean process can make individual start-ups more successful, I believe that claim is too grandiose. Success is predicated on too many factors for one methodology to guarantee that any single start-up will be a winner. But on the basis of what I've seen at hundreds of start-ups, at programs that teach lean principles, and at established companies that practice them, I can make a more important claim: Using lean methods across a portfolio of start-ups will result in fewer failures than using traditional methods.

A lower start-up failure rate could have profound economic consequences. Today the forces of disruption, globalization, and regulation are buffeting the economies of every country. Established industries are rapidly shedding jobs, many of which will never return. Employment growth in the 21st century will have to come from new ventures, so we all have a vested interest in fostering an environment that helps them succeed, grow, and hire more workers. The creation of an innovation economy that's driven by the rapid expansion of start-ups has never been more imperative.

In the past, growth in the number of start-ups was constrained by five factors in addition to the failure rate:

1. The high cost of getting the first customer and the even higher cost of getting the product wrong.

2. Long technology development cycles.

3. The limited number of people with an appetite for the risks inherent in founding or working at a start-up.

4. The structure of the venture capital industry, in which a small number of firms each needed to invest big sums in a handful of start-ups to have a chance at significant returns.

What Lean Start-Ups Do Differently

The founders of lean start-ups don't begin with a business plan; they begin with the search for a business model. Only after quick rounds of experimentation and feedback reveal a model that works do lean founders focus on execution.

	Lean	Traditional
Strategy	Business Model Hypothesis-driven	Business Plan Implementation-driven
New-Product Process	Customer Development Get out of the office and test hypotheses	Product Management Prepare offering for market following a linear, step-by-step plan
Engineering	Agile Development Build the product iteratively and incrementally	Agile or Waterfall Development Build the product iteratively, or fully specify the product before building it
Organization	Customer and Agile Development Teams Hire for learning, nimbleness, and speed	Departments by Function Hire for experience and ability to execute
Financial Reporting	Metrics That Matter Customer acquisition cost, lifetime customer value, churn, viralness	Accounting Income statement, balance sheet, cash flow statement
Failure	Expected Fix by iterating on ideas and pivoting away from ones that don't work	Exception Fix by firing executives
Speed	Rapid Operates on good-enough data	Measured Operates on complete data

5. The concentration of real expertise in how to build start-ups, which in the United States was mostly found in pockets on the East and West coasts. (This is less an issue in Europe and other parts of the world, but even overseas there are geographic entrepreneurial hot spots.)

The lean approach reduces the first two constraints by helping new ventures launch products that customers actually want, far more quickly and cheaply than traditional methods, and the third by making start-ups less risky. And it has emerged at a time when other business and technology trends are likewise breaking down the barriers to start-up formation. The combination of all these forces is altering the entrepreneurial landscape.