“The Lean Startup” Review and Summary

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Book Review

Our current economic environment is favorable for innovative startups, but there’s no consensus as to the best strategies these companies should use to find and maintain growth. Some managers randomly try out different solutions to see what will work, creating as many failures as successes. The chances of being successful can be significantly increased simply by taking a rational and systematic approach to finding the best strategy for running the business.

The Lean Startup is a method to develop and manage startups. Standard business practices can be harmful to startups. These organizations necessitate special policies and procedures for managing innovative enterprises. These policies and procedures aren’t created randomly, of course— they’re the result of scientific techniques and research.

The book offers a systematic, scientific way for business managers to get the information they need to make fast decisions in today’s changing world. While it may be impractical to follow this method to the letter in every situation, executives should come away from the book with a fresh viewpoint on the problems they face and the decisions they must make.

The name *The Lean Startup* was inspired by the lean manufacturing revolution developed at Toyota. This system includes: attending to the ideas and knowledge of the workers; making smaller batch sizes; implementing just-in-time production; and accelerating cycle times. Long-range planning is a useful strategy in an environment where the future is predictable. In a constantly shifting world, however, the advantage goes to those who are light on their feet and can change direction quickly.

There are many unknowns when it comes to launching a startup. The founder has a vision, but where that vision will lead is uncertain. In the beginning, even the product is unknown. Markets, partnerships, platforms— everything must be sorted out. Learning is essential to the company’s development. Validated learning is a system for demonstrating progress in a chaotic and changing environment. This method has the advantage of being quick and easy, and it’s backed by empirical data culled from real customers.

Although the book’s title suggests it is geared toward startups, the principles and tools are just as useful for larger companies. Established organizations can also unlock the growth potential of

innovation, but to do so, they'll have to make some conscious changes in company culture. Startups might benefit by having innovative qualities already built into their cultures, but older companies can catch up.

Eric Ries uses real case studies from a wide array of different businesses to illustrate the principles he discusses. He draws most of his material, however, from his own background as an entrepreneur, extensively detailing his experience at IMVU, the social media game company. At times, all the examples dominate the discussion at the expense of the subject matter.

The tenor of the book changes dramatically in the epilogue. Through most of the book, Reis assumes a tone that's friendly yet professional. He displays enthusiasm for the subject, but the epilogue becomes a rousing call to action. It is there that *The Lean Startup* morphs from a method into a movement. The move from the rational, sensible tone used in the book to the urgent emotional appeal in the epilogue might induce dissonance in some.

Like all proper movements, *The Lean Startup* has a website that includes bibliographies and other resources for those looking for additional information: theleanstartup.com.

Chapter 1

We are living in a golden age for entrepreneurship. There are more entrepreneurs now than ever before, and the economy is suitable for the startup business model. Entrepreneurs often don't think about establishing management structures for their enterprises, because they fear it might stifle creativity. They aren't wrong— traditional management practices can be very stifling. Without management, though, enterprises are beset by chaos. Startups need management but of the sort that is tailored to their unique needs.

Startups have growth engines— processes and structures that help them grow. Every iteration of the product and every new feature is intended to improve the growth engine. Startups also spend a great deal of time tinkering with their ideas and improving them, so feedback is essential. Feedback helps startups catch problems as early as possible.

Startups use a strategy to achieve their vision, and the product is the end result of the strategy. Products are always improving and changing, so sometimes strategies must change. (The vision, on the other hand, almost never changes.)

People usually measure their productivity by how many things they produce, how efficiently they work and how long they work. With a startup, though, you could end up building things no one wants, which isn't very productive. Customer needs are just as important as speed and industriousness, so *The Lean Startup* incorporates customer requirements and insights into the productivity equation.

Startups must acquire new customers while existing ones are being served. Because the product is being improved almost continuously, entrepreneurs must be watchful for signs that it is time to pivot and change strategy. Over time, the balance of these activities changes, but the balancing act itself is near constant.

Finally, startups require a certain amount of failure as various products are tested and improved. In established businesses, failure is typically not appreciated as being part of necessary processes.

Startups require entrepreneurial management that is sensitive to the special circumstances of innovation. The name *The Lean Startup* was inspired by the lean manufacturing revolution developed at Toyota. This system includes attending to the ideas and knowledge of the workers, making smaller batch sizes, just-in-time production and accelerated cycle times. We are going to borrow these ideas from Toyota and apply them to startups.

Chapter 2

Innovation isn't just the concern of startup entrepreneurs. There are managers in large companies whose job it is to head up an initiative for a new product or a whole new venture—sometimes they are called *intrapreneurs*. Clever, right? Like entrepreneurs, most managers in this context are the visionaries. They are willing to take risks and try out new ideas and solutions to develop the venture. These intrapreneurs have quite a bit in common with entrepreneurs, and for simplicity sake, going forward, we'll use the term entrepreneur to apply to broadly to these individuals as well.

While we're on definitions, what is a startup? Ries gives the following definition: "A startup is an institution that creates new products or services in an atmosphere of uncertainty." Breaking it down further:

- *Institution* can mean different kinds of organizations: government agencies, venture-backed firms, nonprofits, for-profits, exchange listed or mom-and-pop businesses. Startups are institutions built by entrepreneurs who hire employees and direct their activities. As much as it is about creating a great product, it is also an organization.
- A startup's *product* is something new, something innovative. "Product" is used in the broadest sense, meaning any source of value for the client, including goods and services. "Innovation" is also used broadly, including new inventions and discoveries. There are many ways things can be innovative without being wholly new, for example bringing a product to a new location or discovering a new use (and so a new market) for an existing product.
- *Uncertainty* is the final element in the definition. There are lots of companies, both old and new, and most of them don't qualify as having uncertain context. Standard business

practices aren't helpful and can be harmful to startups; they need management practices geared to this uncertainty.

In 2009, Intuit launched the startup Snaptax. Snaptax was ultimately successful because the managers at Intuit understood that trying to shoehorn the startup to fit within the larger company's normal way of doing things would be effective. Management had to adapt in order for disruptive innovation to have the space to do its thing. (In *The Innovator's Dilemma*, Clayton Christensen introduced the terms sustaining innovation and disruptive innovation to explain the structural differences between the two types of growth. These terms shall be used here.)

Chapter 3

Stick with the plan, do quality work and stay on budget. These are practices by which people measure progress, but following these strictures does not guarantee that customers will buy your product. Another key practice is to learn from mistakes. Often, people say they learn from mistakes as a cop out: "At least I learned something." Maybe it's a way to salvage what one can from a situation; maybe it saves face. It's likely just a big excuse. So really, learn from mistakes. Study error systematically and critically— and learn. But learning from mistakes takes time, which, in the business world, is perceived as waste.

Sometimes it's easier to raise money when you have no sales or revenue. When you have just a small amount of sales, people can ask why there aren't more. They may see the puny numbers as a sign of failure. On the other hand, when you have no sales and no revenue, people can imagine the potential. They can imagine overnight success. This reality can drive people to delay getting any hard numbers, but that's a huge mistake. The sooner you can get data on what your customers think, the sooner you can improve your product and the less waste you'll have in the development process.

Of course, you can't just go releasing products willy-nilly either. You have to be able to capture the consumer metrics, analyze them, learn from them, change the product in response and try again. This is how you minimize any loss that results from learning from mistakes. This is a surer path to success than any marketing push could ever be.

With startups, there are many unknowns. Learning is essential to their development, so startups need to measure a different kind of value than that of simply providing a benefit to the customer. Validated learning is a system for demonstrating progress in a chaotic and changing environment. It's quick and easy. It's also backed up by empirical data culled from real customers.

Here are some of the tactics that Ries and IMVU used: launched a low-quality early prototype; charged customers from day one; and used low-volume revenue targets to drive accountability. These are all good techniques, but every situation is different and will necessitate different

strategies. The important thing is to learn what the customer wants. Anything that doesn't give value to the customer is waste. Don’t bother with surveys. Get empirical data. Do experiments— lots of experiments.

Chapter 4

Launching a new product should be viewed much like conducting a scientific experiment. Like any good experiment, a product launch should be carefully designed. Frame a hypothesis; test the prediction.

Directly testing our assumptions gives us a great deal of information. The two most important assumptions are the *value hypothesis* and the *growth hypothesis*. Value hypothesis asks: Does the product deliver value to the customer? The best way to answer this question is through experimentation. Test the growth hypothesis to see how customers discover the new product. (Hope your product goes viral.) Test behavior to see if your assumptions are correct.

Experiment with actual products so that you’ll have a head start if the experiment is successful. By the time the product is ready for broader distribution, it will already have a core of established customers. And customers generate feedback, so producers can learn from this for the next iteration of the product. Everything is an experiment.

However, before going off half-cocked, developing products right and left, there are a few things you really need to consider. If consumers don’t think they need your product, they won’t buy it. Even if they think they need *something* to solve a problem, they might prefer your competitor’s product to yours. And even if you think they’d buy your product, you need to be capable of building it. Sometimes developers want to go straight to their great idea, without checking first to see if anyone would buy it.

The Build-Measure-Learn feedback loop is crucial. You have to start somewhere, so start with the Minimal Viable Product (MVP). This is the most basic version that can go through the build-measure-learn loop. Then, it’s time to evaluate the strategy and probably pivot. Planning is a useful strategy only insofar as the future is predictable. In an unstable and changing world, the advantage goes to those who can pivot as the occasion requires.

Ries uses a number of case studies in this chapter to illustrate how experimenting and iterating has helped developers improve their products: Zappos, Hewlett Packard, Kodak Gallery, Village Laundry Services and even the Consumer Federal Protection Bureau. He touches on some important ideas that will be developed throughout the book.

Chapter 5

A startup builds a product, and customers interact with it. While interacting with a product, customers create information, feedback and data that can be taken into the next iteration of the product. This is much more important than the money generated from early sales. This is the essence of the Build-Measure-Learn feedback loop. Many people have experience with at least one of the components of the feedback loop. Each of these components, however, are important, and while our backgrounds might make it easier for us to connect with one phase or another, we need to look at the totality of the process. The goal is to complete a feedback loop within the shortest possible cycle time.

Every startup contends with unique conditions. There's no magic formula to follow; you can't simply copy what others did and find success. Rather, you must develop a strategy that addresses the specific circumstances that you face. Strategies are built on assumptions. An entrepreneur should systematically test their assumptions, but when a startup is starting up, there's no data. There's no way to evaluate performance, so you have to go with intuition. Sometimes a leap of faith is necessary, but it's critical to test these leaps of faith as best as possible.

Once assumptions have been tested, it's important to get to the Build phase right away. Do this by creating a minimum viable product— in other words, the most basic version of the product that can kick start the Build-Measure-Learn loop.

We measure to find out if we're getting anywhere with product development. We want to be sure that we're creating a product that people will want. A good method for measuring is innovation accounting, which involves creating learning milestones to track progress. Once we get feedback, we analyze it to see if we're on track with our goals. If we aren't, it may be time to pivot. If one of our assumptions turns out to be false, we'll need a new strategy. The benefit of the Lean Startup method is in helping startups understand that it's time to pivot sooner than they'd realize it otherwise, saving time and money.

It comes back to the value hypothesis and the growth hypothesis. You need to understand how the product creates or destroys value, as well as how it creates or destroys growth. It can be complicated. Some endeavors are profitable in the short term but ultimately value destroying— think: Ponzi schemes.

Chapter 6

Get your MVP out there right away, even if it isn't wholly ready for prime time. The MVP lets you start the Build-Measure-Learn feedback loop and test your hypotheses.

Gear the MVP toward the early adopters, not the mainstream. Early adopters are the first customers for innovative products, and they understand that kinks haven't been completely worked out yet. Being first is more important to them than quality, so make the MVP as simple as possible. Get rid of all the features that the early adopters don't care about. Any features the early adopters don't want is waste.

A technique that some find useful is the concierge MVP. With this, you provide high touch service to the customer, removing every possible obstacle to their use and enjoyment of the product. You learn and study what the customer needs, and continue making refinements based on what you learned. The important thing is what the customer wants— let that drive design. Like how Aardvark developed a series of prototypes to test customer response before they eventually produced the social network.

There is a strong temptation to put a ton of energy into creating a thing of quality. We have a cultural aversion to producing sloppy work, but until you know what the customer wants, you don't really know which attributes the customer will value. To understand the level of quality you should aim to reach, you need to know who your customer is. The sole purpose of quality is to attract customers. You might think something is substandard but the customer likes it that way. (If customers don't think a feature is good enough they will tell you, don't worry.) Any pursuit of quality beyond that which the customers value is wasted energy. Of course, this doesn't mean making things with defects— that's also wasted energy and resources.

Problems with patents might make it risky to launch a MVP and potentially expose breakthrough innovations to competitors. In such cases, entrepreneurs will want to proceed cautiously. In most cases, however, the wealth of lessons to be learned through MVPs far outweighs the risk of an idea being stolen. After all, startups usually have a hard time getting anyone to notice their efforts, let alone steal their ideas.

The most important thing is to keep trying. Investors can get impatient with all this experimentation; they want to see results. This is one reason why through all these experiments there needs to be metrics for information and accountability.

Chapter 7

Ultimately, the goal is to prove that a startup can become a sustainable business. In getting there, a startup has to evaluate progress, but standard accounting practices don't work so well for evaluating the progress of startups. Rather, disruptive industries call for their own kind of accounting: *innovation accounting*. Here's how it's done: 1) use a MVP to establish baseline data; 2) improve and fine tune the product; and 3) if the product continues to improve, pivot and establish a new baseline, starting the process over again.

Design the first MVP to test the riskiest assumptions in the business plan. For example, a media company may assume they can sell advertising, but first they should test whether they can capture the consumer's attention. After establishing a baseline, try to improve the results. Every iteration of the product should teach you more about your customer's needs. If you're headed in the right direction, your metrics will improve. If your metrics don't improve significantly over time, then you know it's time to pivot.

Do a *cohort analysis*. Breaking things down into cohort groups, and looking at the performance of different groups of customers, can help you understand if real growth is happening. Don't be led astray by good looking metrics.

Beware of vanity metrics. Business can be measured in many ways, but we are all partial to those numbers that make us look the best. Be honest with yourself.

Split tests can help. Giving different versions of a product to different people can help refine what the customer does and does not want. If you test extra features but it doesn't change customer behavior, ask whether those features even matter.

Metrics should be actionable, accessible and auditable:

- Actionable— It has to show clear cause and effect; no vanity metrics allowed.
- Accessible— People need to understand the data. Using cohort based reports can humanize the numbers and give a feeling as to how the numbers reflect real people's actions and attitudes.
- Auditable— Everyone in the company should have faith in the metrics, and the reporting system should be more or less transparent. And it's always good for managers to spot check data by interacting with real customers from time to time.

Chapter 8

If an idea isn't working out, you need to change your strategy. Persevering when the cause is hopeless is just unwise.

When you pivot, you don't throw everything out and start over; you want to build on what you've learned so far. Knowing when to pivot is something of an art form. Less effective product experiments and unproductive product development may signal that it's time.

It takes some bravery to pivot. In some ways, it's an admission of failure, and no one likes that. People put it off, because denial is easy to lapse into. Some companies ultimately fail because they don't pivot.

Deciding to pivot requires an impartial and dispassionate frame of mind. “Pivot or persevere” meetings should be held regularly and attended by product development and business leadership teams. At these meetings, the product development team should report its metrics in relation to past performance, as well as goals. The business leadership team should have a solid understanding of the customers. Other specialists and advisors may be added to these meetings as needed.

Ries details a “catalog of pivots:” descriptions of different ways to change direction. But there’s no set formula to follow. One method is to zoom in— focus on a small part of the previous strategy, or a single feature of the product, and make that the whole product. Zooming out, on the other hand, involves expanding the scope to encompass a greater product. Another common method is focusing on the thing people liked about the previous iteration. The customer segment pivot is necessary when the product is sound, but you’ve been pitching it to the wrong people. Other types include:

- Platform pivot.
- Business architect pivot.
- Value capture pivot.
- Engine of growth pivot.
- Channel pivot.
- Technology pivot.

You can see that there are many different ways to pivot, but the most important thing is the strategy behind the pivots. Every situation is different, so there are no hard and fast rules about the best strategies to adopt. Regardless of which strategy a startup selects, a pivot needs to be structured and well thought out.

Finally, multiple pivots may be needed. Budget your resources accordingly.

Chapter 9

It’s not always easy to figure out which activities create value and which create waste. You need to know who your customers are, what your customers want, how to listen to your customers and how you plan to grow your business. The sooner these questions can be answered, the better.

Small batch sizes are better for startups. They are more efficient, costs are lower, workload is reduced, as is risk. It’s counterintuitive but true. Large, stable companies can benefit from economies of scale. But large batches are a liability for startups that must be nimble in the face of rapid change. Small batches make problems with quality easier to spot.

More important than the efficiency resulting from small batches, they shorten the learning cycle. For startups, learning faster provides a competitive edge. Mass production influences everything, including education, where large batch sizes can be equated with large class size. (There are schools challenging this dynamic with small class sizes that enable teachers to experiment and identify educational solutions.)

Large batches create all sorts of problems. If anything slows down the process, delays and interruptions affect everyone down the line. Some companies go into death spirals, pursuing larger and larger batches that ultimately fail.

In an established company, demand stimulates production. With startups, there is no demand. Instead, production occurs when there is a hypothesis you want to test. As soon as you frame a hypothesis, the product development team should be designing a product to test it. And although the process is called Build-Measure-Learn, you actually do the planning in the opposite order. First, decide what you want to learn, then figure out how to measure it. Only then, design the build to fit.

Chapter 10

The engine of growth is how startups achieve sustainable growth. (Sustainable in this sense is everything but one-time sources of growth that don't have a long-term impact.) There are a handful of ways to build sustainable growth. For example, past customers drive sustainable growth through word of mouth, when they talk about the product and give friends positive impressions of it. Sustainable growth also results when people see others using the product. When someone else looks good in the latest fashion, we're more inclined to buy it ourselves. Traditional advertising can also spur growth, as long as the advertising costs are less than the profit gained by additional sales. Finally, growth can be sustained through repeat purchasing. If you're selling light bulbs or toilet paper, repeat business will be an important part of your business model; if you're selling luxury yachts, not so much.

These dynamics can be harnessed to power engines of growth. There are several kinds of growth engines of growth, each providing frameworks with specific metrics on which to focus:

- *Sticky Engines* of growth rely on lots of repeat business. Startups must pay close attention to the churn rate, or the percent of customers who don't stay engaged with the product. If they can acquire new customers faster than they lose them, then they are growing. The rate of growth can be charted accordingly.
- With *Viral Engines* of growth, people are exposed to the product as a result of customer use. Customers aren't necessarily trying to spread your product around, but that's what happens. The Viral Engine is powered by a feedback loop— the viral loop— and its productivity is measured with the viral coefficient. The higher the coefficient, the faster

the product will spread. Small changes in the viral coefficient can have a dramatic effect on the growth curve.
- The *Paid Engine* of growth features traditional methods such as advertising. It's important that the cost of acquiring a new customer is less than the potential profit to be harvested from them. There are many other ways to pay for growth beyond spending money on advertising, including hiring a sales team or even relying on foot traffic. The important thing is that these methods increase revenue from customers and/or reduce the cost of acquiring new customers.

Established companies can have more than one engine of growth working at any given time. Startups, on the other hand, should probably just stick to one at a time. It will be easier to test things and to make decisions.

Chapter 11

There are many ways for a startup to fail.

Some entrepreneurs are so intolerant of bureaucracy that they don't want to scale up administration as the company grows. Other companies get so buried in bureaucracy that they can't function.

Sometimes teams move too fast and quality starts to suffer. Speed can compromise quality if you let it. Don't. In the effort to get an MVP out to consumers and tighten the Build-Measure-Learn loop, some entrepreneurs take shortcuts. They sacrifice quality. But the Build-Measure-Learn loop is not to blame. This is an ongoing process, and as such, you should be able to maintain whatever standards of quality your product requires throughout the cycle. Shortcuts on quality and design will just create problems down the line. Early adopters are tolerant of minor flaws, but eventually you'll want to go mainstream and that market is intolerant of flaws.

One way to regulate speed is to employ the "Five Whys." This method prompts you to ask "why?" five times, and with each iteration, you burrow deeper into the root of a problem. You'll find that behind every technical problem is a human problem. Once you understand the cause of a problem, you should try to fix it, but naturally you can't throw everything you have at every little problem. If it's a big problem, you should be willing to invest substantial resources to fix it. But if it's just a little problem, don't let it eat into everyone's time and energy.

The point of the Five Whys is to objectively analyze a problem, not to provide a method for assigning blame. If an individual made an error, management inherently was complicit because they are in charge of the business systems that allowed or encouraged the error. You should have a Five Whys meeting with all concerned parties to understand problems. Don't use the

Five Whys to analyze old baggage. Focus on new problems as they come up.

An organization has to think on its feet; it has to be adaptive.

Chapter 12

Innovation isn't just for young, small startups. Older, large companies can also reap the benefits of innovation, but they'll have to make some conscious shifts in culture. Startups have the benefit of having some of the necessary qualities already built into their cultures.

There are certain structures and organizational qualities that facilitate innovation. While these aren't the qualities that you see in established companies, it is possible for such organizations to facilitate this environment.

Startup teams in established companies should have scarce, but secure, resources. Startups don't need a lot of money, but they do need steady income and the confidence that comes with it. Startup teams should also be autonomous. They have to run many experiments, and it would be counterproductive if they needed to get permission for every action.

These teams should include people from every functional and relevant area of the company, so that the team won't have to take up extra time finding and consulting with experts who are already on board with the company.

Finally, innovators should have a stake in the outcome. In startups, innovators usually have stock options or some other form of ownership but it need not be financial. Recognition can be a powerful motivator, and if innovators know their name will be associated with a product, chances are they'll feel a strong sense of ownership.

Much has been said about protecting internal startups from parent organizations, but not much has been said about protecting parent organizations from startups. Sometimes this is important. If the startup team, for example, wanted to experiment with different price points, they could end up undercutting the parent company's business. After all, the parent company is supposed to provide stability for everyone under their umbrella, including the startup.

By necessity, the core business must be protected, but completely separating the innovation team from the parent company isn't a solution. A company that hides its innovation team is asking for negative politics. Secrecy breeds distrust. A better solution is to create a sandbox where innovators can try out new ideas. It's important to set specific ground rules, for example, "One team must see the whole experiment through from end to end." Products in the sandbox are real, but they are only marketed to extremely small, well-defined markets— at least initially.

Companies must manage several different kinds of work as their various products go through their respective cycles of growth. A growing startup has new customers and new markets, and the product is gaining visibility. Once the market for the product is established, procedures are routine; improvements and upgrades drive sustaining growth. Legacy products are the domain of outsourcing, automation and cost cutting measures.

Employees tend to move with products as they age through the system, which can put new products at a disadvantage, because many of the best people stick with the established products. It is better to have cross-functional teams that each focus on different stages of the growth cycle. As the product ages, it gets shifted from one team to the next.

Chapter 13: Epilogue

Frederick Winslow Taylor was an efficiency proponent who mourned lost productivity and waste. He wrote *The Principles of Scientific Management* in 1911, and while some of his ideas seem old fashioned and even harmful today, others feel almost contemporary. We need fresh solutions for today's problems, but we can still appreciate his early systematic and scientific approach to management.

We do all sorts of things wrong. We just aren't very efficient; we create all sorts of waste. It's not a matter of trying harder, but rather of working on the right things. Sometimes groups are efficient, but at the wrong things. Sometimes people work hard doing the wrong things. We need to experiment to verify that we're working on the right thing. The scientific method is the gold standard of learning through research, and *The Lean Startup* movement uses science to develop better organizations.

The manager is a systems' engineer where the system is composed of humans. Sometimes people get so focused on the system that they lose sight of the human side of the equation. People are the source of innovation. It's important that you don't get so hung up on maintaining the system that the organization becomes overly rigid.

And beware of pseudoscience, buzzword, and fads. Stick to the method, and approach innovation scientifically. As great as the Lean Startup method is, it's just the start of what could be done by applying the scientific method to innovation management. We have many more things to learn.