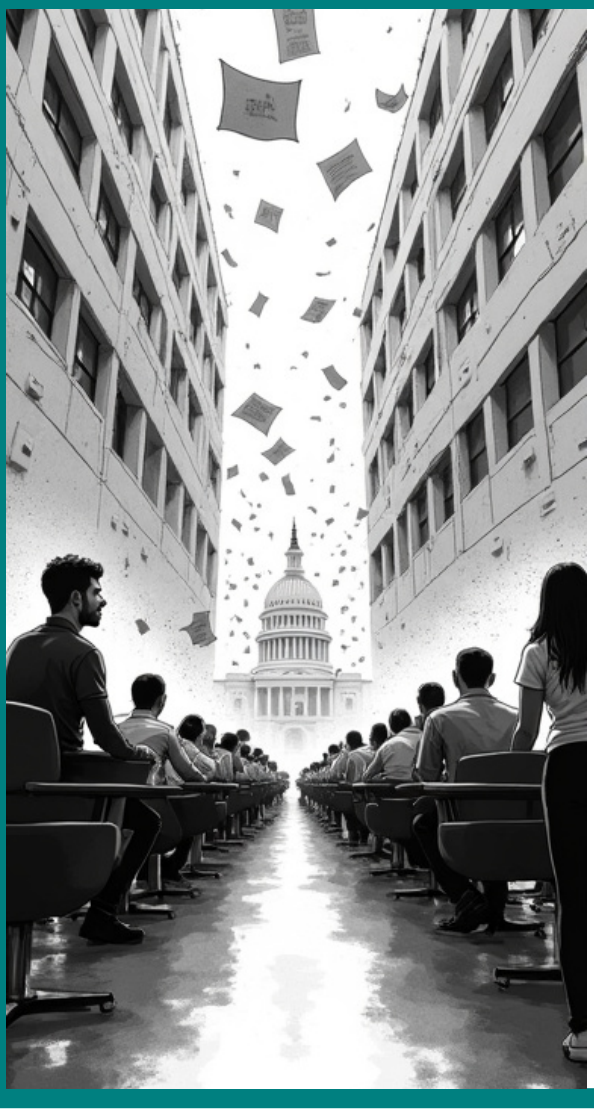


The Need for Entrepreneurial Management

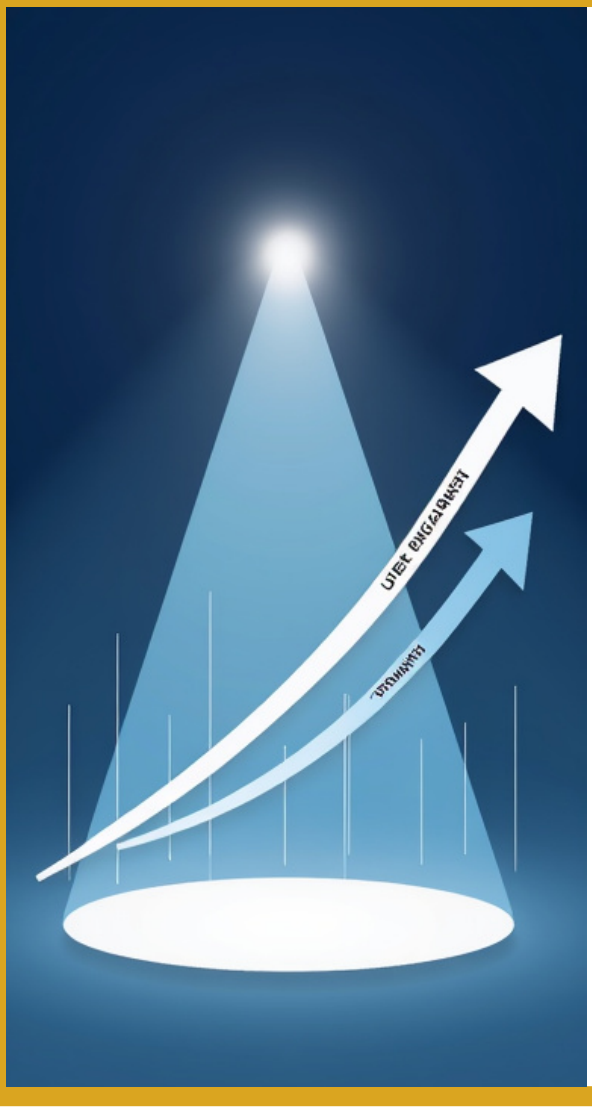
Traditional management principles, designed for predictable environments, are **ill-suited for startups** operating under extreme uncertainty, often leading to chaos and failure. A new managerial discipline is essential to effectively harness the current global entrepreneurial opportunities.

- Entrepreneurs are rightly wary of implementing traditional management practices early on in a startup, afraid that they wil invite bureaucracy or stifle creativity.
- Unfortunately, this approach leads to chaos more often than it does to success.
- The tremendous success of general management over the last century has provided unprecedented material abundance, but those management principles are il suited to handle the chaos and uncertainty that startups must face.
- We are living through an unprecedented worldwide entrepreneurial renaissance, but this opportunity is laced with peril.

IMVU's Pivot: Learning from Customer Action, Not Assumption

The author's first startup, IMVU, initially built a complex IM add-on based on flawed strategic assumptions. Through **painstaking customer interviews and empirical testing**, they learned their customers wanted a standalone IM network for making new friends, leading to a critical pivot and eventual success.

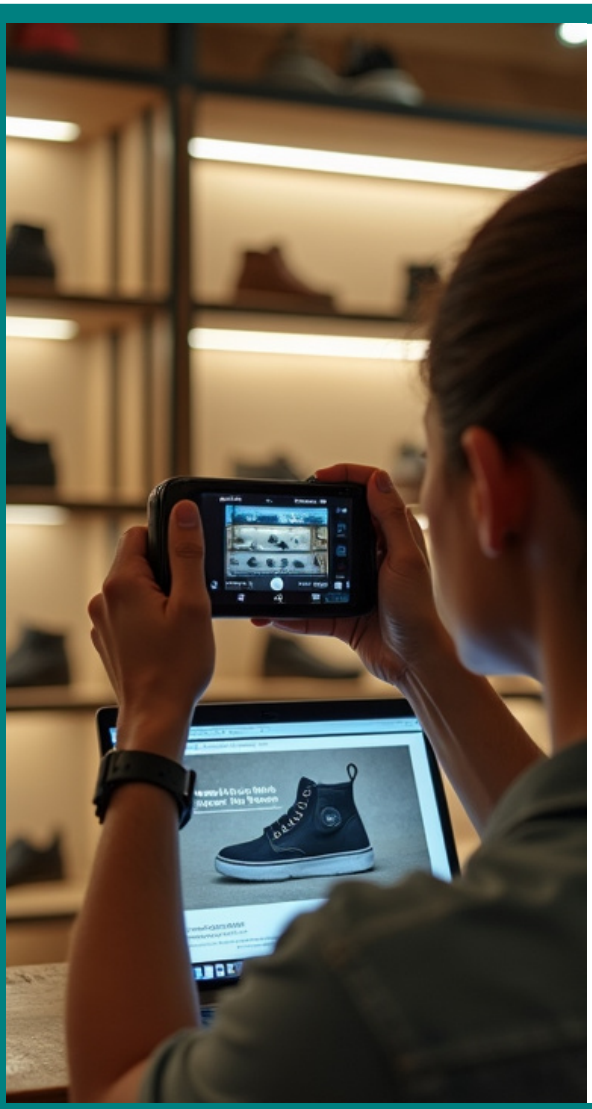
- After all the hours we had spent arguing about which features to include and which bugs to fix, our value proposition was so far off that customers weren’t getting far enough into the experience to find out how bad our design choices were.
- Our failure to move the numbers prodded us to accelerate our efforts to bring customers into our office for in-person interviews and usability tests.
- Our customers did not want an IM add-on; they wanted a stand-alone IM network.
- I had committed the biggest waste of all: building a product that our customers refused to use.



Validating Core Business Hypotheses

For a new venture, early success hinges on proving two critical assumptions: that customers find the product valuable (value hypothesis) and that it can grow rapidly (growth hypothesis). Investors prioritize this empirical validation over immediate revenue.

- This is an example of how a company can validate its value hypothesis—that customers find the product valuable.
- In other words, Facebook also had validated its growth hypothesis.
- These two hypotheses represent two of the most important leap-of-faith questions any new startup faces.



Zappos's First Experiment: Testing Demand with Local Shoe Stores

Zappos founder Nick Swinmurn tested his hypothesis that customers would buy shoes online by **taking pictures of local shoe store inventory** and buying them only after an online sale. This **minimum viable product** allowed him to validate demand and learn from real customer behavior without significant upfront investment.

- His hypothesis was that customers were ready and willing to buy shoes online.
- To test it, he began by asking local shoe stores if he could take pictures of their inventory.
- By building a product instead, albeit a simple one, the company learned much more: It had more accurate data about customer demand because it was observing real customer behavior, not asking hypothetical questions.
- Zappos' initial experiment provided a clear, quantifiable outcome: either a sufficient number of customers would buy the shoes or they would not.

Experimentation as the Core of Startup Progress

Startup progress hinges on conducting rigorous **experiments** to test critical hypotheses like value and growth, starting small to learn quickly and iterate. This approach replaces elaborate, assumption-driven plans with constant, empirical feedback, enabling pivots or perseverance based on real customer behavior.

- A true experiment fol lows the scienti c method. It begins with a clear hypothesis that makes predictions about what is supposed to happen. It then tests those predictions empirical y.
- The two most important assumptions entrepreneurs make are what I cal the value hypothesis and the growth hypothesis.
- The Lean Startup method, in contrast, is designed to teach you how to drive a startup. Instead of making complex plans that are based on a lot of assumptions, you can make constant adjustments with a steering wheel cal ed the Build-Measure-Learn feedback loop.
- Success is not delivering a feature; success is learning how to solve the customer's problem.

Intuit's SnapTax: Intrapreneurship and Continuous Innovation

Intuit, a large company, developed an innovative mobile tax preparation product called **SnapTax** by fostering an 'island of freedom' for a small internal team. This exemplifies how established corporations can achieve **disruptive innovation** through entrepreneurial management, even when it competes with their flagship products.

- SnapTax was developed by Intuit, America's largest producer of finance, tax, and accounting tools for individuals and small businesses.
- What allowed the SnapTax team to innovate was not their genes, destiny, or astrological signs but a process deliberately facilitated by Intuit's senior management.
- They're running up to seventy different tests per week.
- Brad explained to me how they hold themselves accountable for their new innovation efforts by measuring two things: the number of customers using products that didn't exist three years ago and the percentage of revenue coming from offerings that did not exist three years ago.

Entrepreneurship Beyond Stereotypes: The Intrapreneur

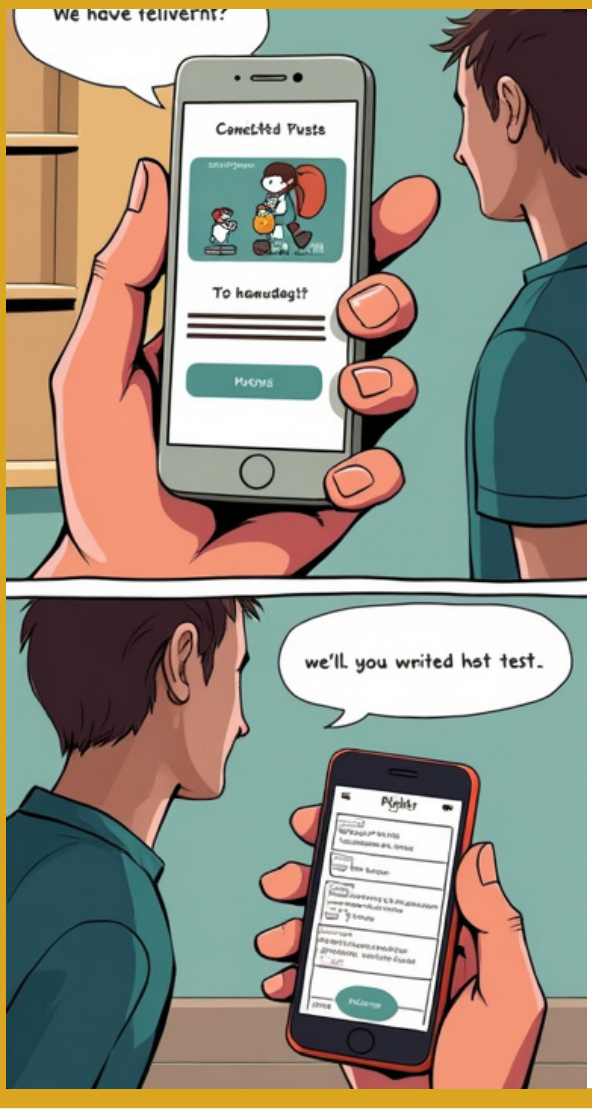
An **entrepreneur** is anyone creating a new product or service under conditions of extreme uncertainty, irrespective of company size, industry, or sector. This definition includes 'intrapreneurs' within large corporations, highlighting that the challenge of innovation requires the same Lean Startup principles everywhere.

- A startup is a human institution designed to create a new product or service under conditions of extreme uncertainty.
- My point? Mark is an entrepreneur just like a Silicon Val ey high-tech founder with a garage startup.
- Entrepreneurs who operate inside an established organization sometimes are cal ed “intrapreneurs” because of the special circumstances that at end building a startup within a larger company.
- Innovation is a bot oms-up, decentralized, and unpredictable thing, but that doesn’t mean it cannot be managed. It can, but to do so requires a new management discipline.

The Lean Startup: A Scientific Approach to Validated Learning

The Lean Startup is a managerial discipline that applies lean manufacturing principles to innovation, defining progress by **validated learning**—empirically demonstrating valuable truths about business prospects. It reframes product development as a series of experiments guided by a vision to quickly discover what customers truly want.

- The Lean Startup adapts these ideas to the context of entrepreneurship, proposing that entrepreneurs judge their progress di erently from the way other kinds of ventures do.
- The Lean Startup asks people to start measuring their productivity di erently. Because startups often accidental y build something nobody wants, it doesn’t mat er much if they do it on time and on budget.
- Validated learning is not after-the-fact rationalization or a good story designed to hide failure. It is a rigorous method for demonstrating progress when one is embedded in the soil of extreme uncertainty in which startups grow.



Diverse MVP Approaches for Validated Learning

MVPs can take various forms, from a simple video demonstration (Dropbox), to a manually delivered 'concierge' service (Food on the Table), or a 'Wizard of Oz' setup where humans simulate backend technology (Aardvark). Each method prioritizes learning over perfection and avoids premature over-engineering.

- In this case, the video was the minimum viable product.
- Instead of supporting thousands of grocery stores around the country as it does today, FotT supported just one.
- In a Wizard of Oz test, customers believe they are interacting with the actual product, but behind the scenes human beings are doing the work.

Genchi Gembutsu: Get Out of the Building

To overcome the limitations of abstract planning, entrepreneurs must adopt the 'go and see for yourself' (Genchi Gembutsu) principle. This involves direct, firsthand interaction with potential customers to deeply understand their problems and confirm critical assumptions.

- The importance of basing strategic decisions on firsthand understanding of customers is one of the core principles that underlies the Toyota Production System.
- You cannot be sure you really understand any part of any business problem unless you go and see for yourself firsthand.
- Startups need extensive contact with potential customers to understand them, so get out of your chair and get to know them.

Strategy Built on Testable Assumptions

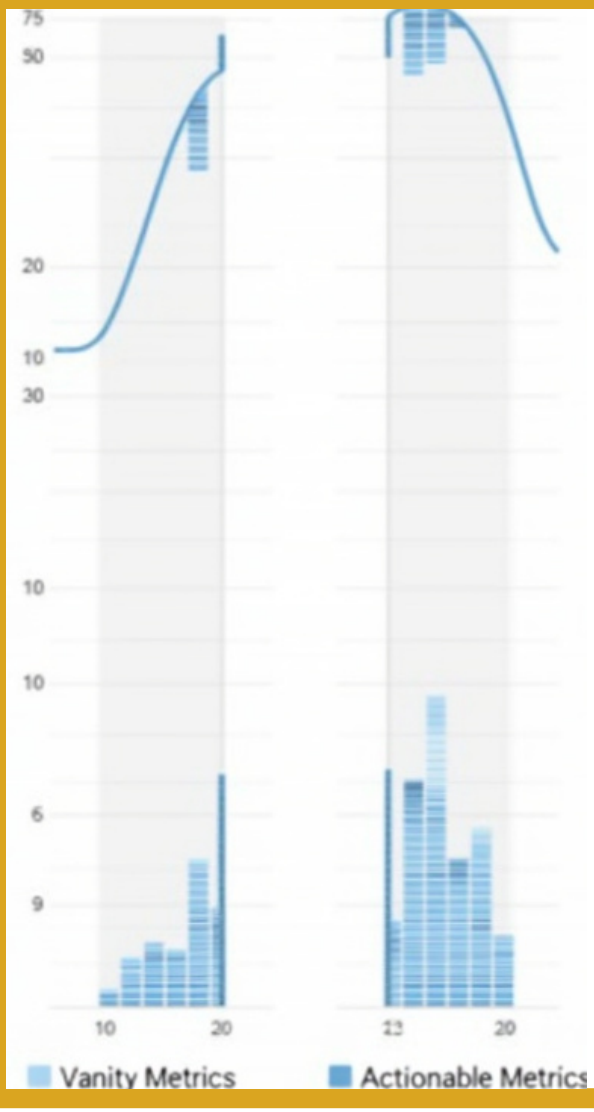
Every business plan is built on a set of assumptions, some mundane and some 'leaps of faith' critical to the venture's success. A startup's initial efforts must focus on **systematically testing these assumptions** as quickly as possible.

- Every business plan begins with a set of assumptions. It lays out a strategy that takes those assumptions as a given and proceeds to show how to achieve the company's vision.
- They are called leaps of faith precisely because the success of the entire venture rests on them.
- If they are true, tremendous opportunity awaits. If they are false, the startup risks total failure.

The Strategic Pivot: A Course Correction

A pivot is a structured course correction, a fundamental change in a startup's strategy, product, or growth engine based on validated learning from the market. It requires courage to acknowledge what's not working and redirection, rather than blind perseverance.

- That change is called a pivot: a structured course correction designed to test a new fundamental hypothesis about the product, strategy, and engine of growth.
- Companies that cannot bring themselves to pivot to a new direction on the basis of feedback from the marketplace can get stuck in the land of the living dead.
- The more money, time, and creative energy that has been sunk into an idea, the harder it is to pivot.



Actionable vs. Vanity Metrics

Startups must rely on **actionable metrics** (Actionable, Accessible, Auditable) that demonstrate clear cause and effect, rather than misleading **vanity metrics** (e.g., total users, gross revenue). Cohort analysis is a powerful tool for actionable metrics, tracking distinct groups of customers to reveal true behavioral changes.

- “ I call the traditional numbers used to judge startups “vanity metrics,” and innovation accounting requires us to avoid the temptation to use them.
- “ To get a better sense of the importance of good metrics, let’s look at a company called Grockit.
- “ For a report to be considered actionable, it must demonstrate clear cause and effect. Otherwise, it is a vanity metric.

The Minimum Viable Product (MVP)

An MVP is the fastest way to get through the Build-Measure-Learn feedback loop with the minimum amount of effort. Its goal is to test fundamental business hypotheses by engaging early adopters who are willing to use an incomplete solution.

- “ A minimum viable product (MVP) helps entrepreneurs start the process of learning as quickly as possible.
- “ Its goal is to test fundamental business hypotheses.
- “ Early adopters use their imagination to fill in what a product is missing.

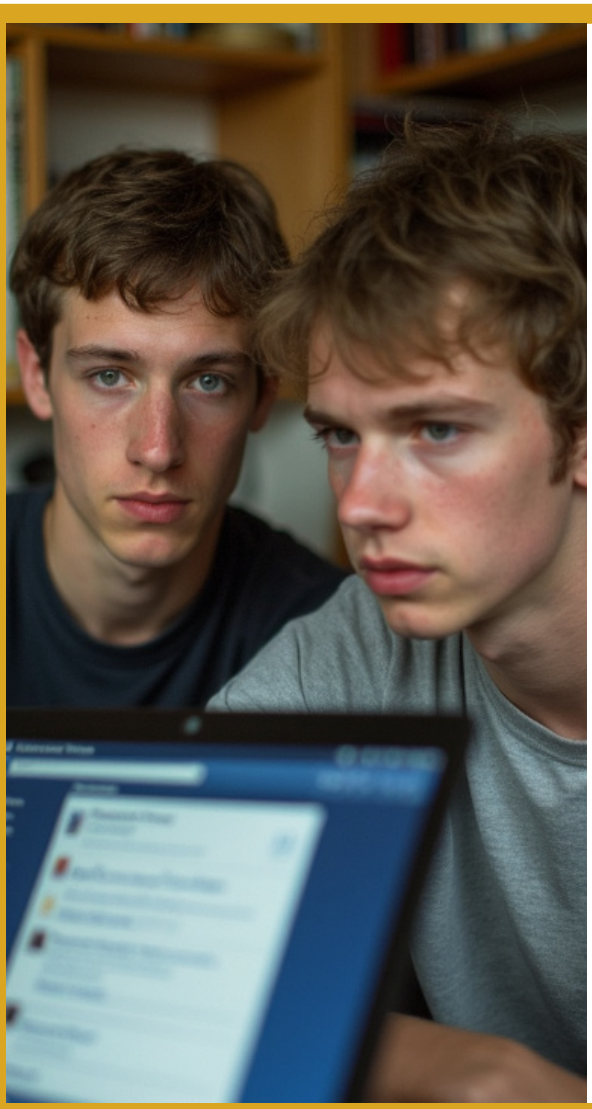
Innovation Accounting: Three Learning Milestones

Innovation accounting provides a disciplined framework for startups to measure progress and validate learning. It involves three milestones: establishing a **baseline** with an MVP, **tuning the engine** through experiments, and deciding whether to **pivot or persevere** based on actionable metrics.

> Innovation accounting works in three steps: first, use a minimum viable product to establish real data on where the company is right now.

> Second, startups must attempt to tune the engine from the baseline toward the ideal.

> That is the third step: pivot or persevere.



Facebook's Early Validation of Hypotheses

Mark Zuckerberg and co-founders successfully raised significant venture capital in 2004, not due to large revenue, but by demonstrating **high user engagement** (value hypothesis) and **rapid campus takeover** (growth hypothesis) without marketing spend.

> With 150,000 registered users, it made very little revenue, yet that summer they raised their first $500,000 in venture capital.

> More than half of the users came back to the site every single day. This is an example of how a company can validate its value hypothesis—that customers find the product valuable.

> Facebook launched on February 4, 2004, and by the end of that month almost three-quarters of Harvard's undergraduates were using it, without a dollar of marketing or advertising having been spent.

> These two hypotheses represent two of the most important leap-of-faith questions any new startup faces.

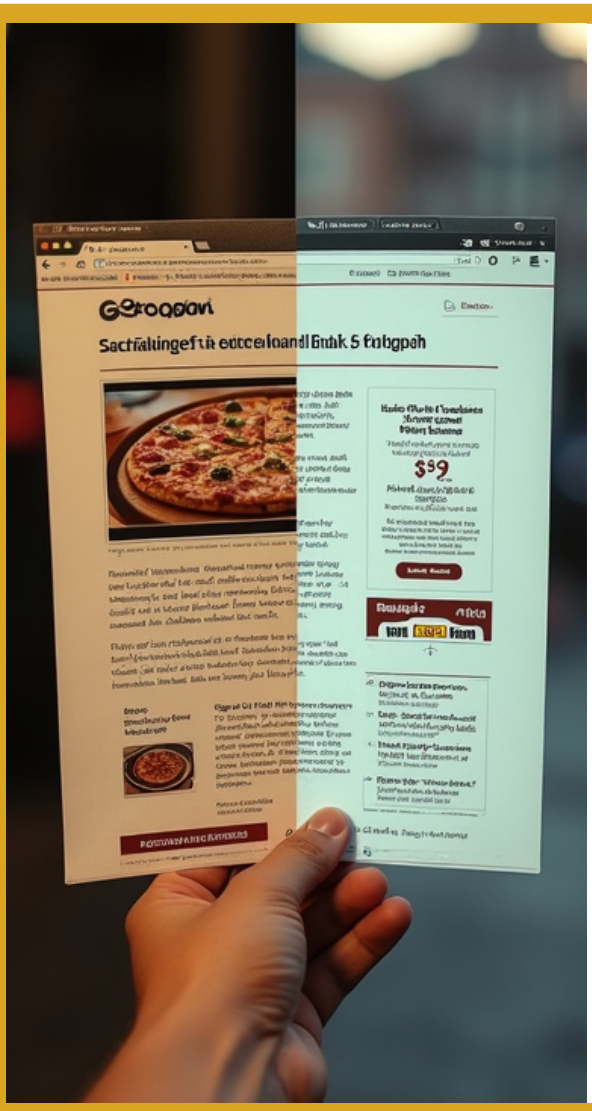
Toyota's 'Go and See' Approach for Sienna Minivan

To improve the 2004 Sienna minivan for the North American market, Chief Engineer Yuji Yokoya embarked on an **audacious 53,000-mile road trip** across the US, Canada, and Mexico to personally observe and interact with real customers. This "genchi gembutsu" approach revealed that **children were the primary "users"** influencing minivan feature decisions.

> At Toyota, this goes by the Japanese term genchi gembutsu, which is one of the most important phrases in the lean manufacturing vocabulary. In English, it is usually translated as a directive to “go and see for yourself” so that business decisions can be based on deep firsthand knowledge.

> The 2004 Sienna was assigned to Yuji Yokoya, who had very little experience in North America, which was the Sienna’s primary market.

> In all, he logged more than 53,000 miles of driving. In small towns and large cities, Yokoya would rent a current-model Sienna, driving it in addition to talking to and observing real customers.



Groupon's Humble Beginnings with an MVP

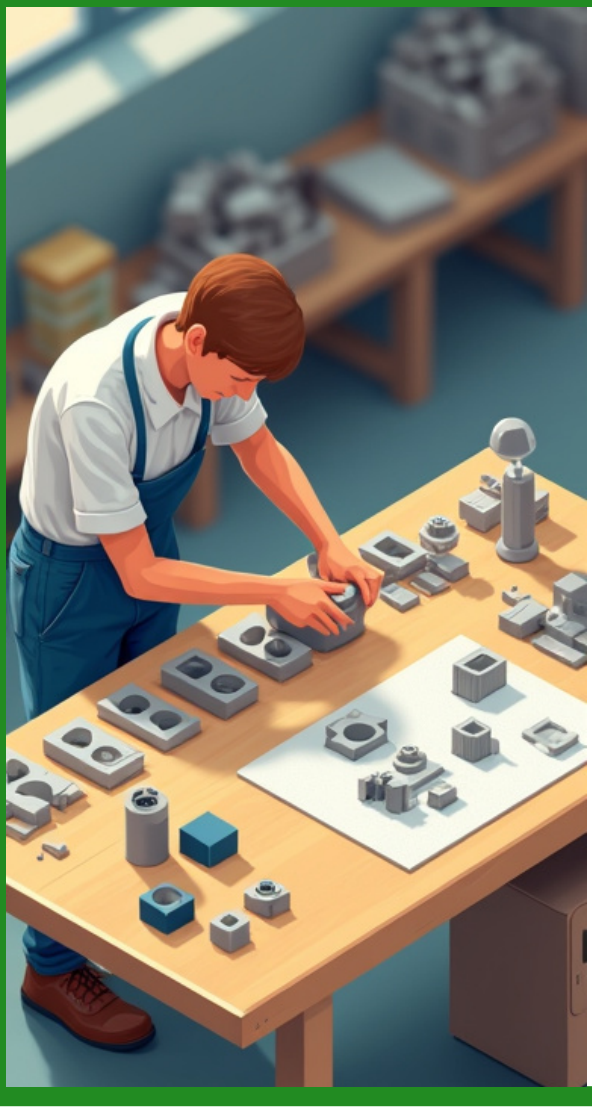
Groupon, one of the fastest-growing companies, started not as a complex platform but as a **"totally ghetto" WordPress blog** called The Point. Its initial "product" involved selling T-shirts and manually emailing PDF coupons, demonstrating that even a **bare-bones MVP** can validate a concept and lead to massive success.

> When customers took Groupon up on its first deal, a whopping twenty people bought two-for-one pizza in a restaurant on the first floor of the company’s Chicago offices—hardly a world-changing event.

> We took a WordPress Blog and we skinned it to say Groupon and then every day we would do a new post. It was totally ghetto.

> The actual coupon generation that we were doing was all FileMaker. We would run a script that would e-mail the coupon PDF to people.

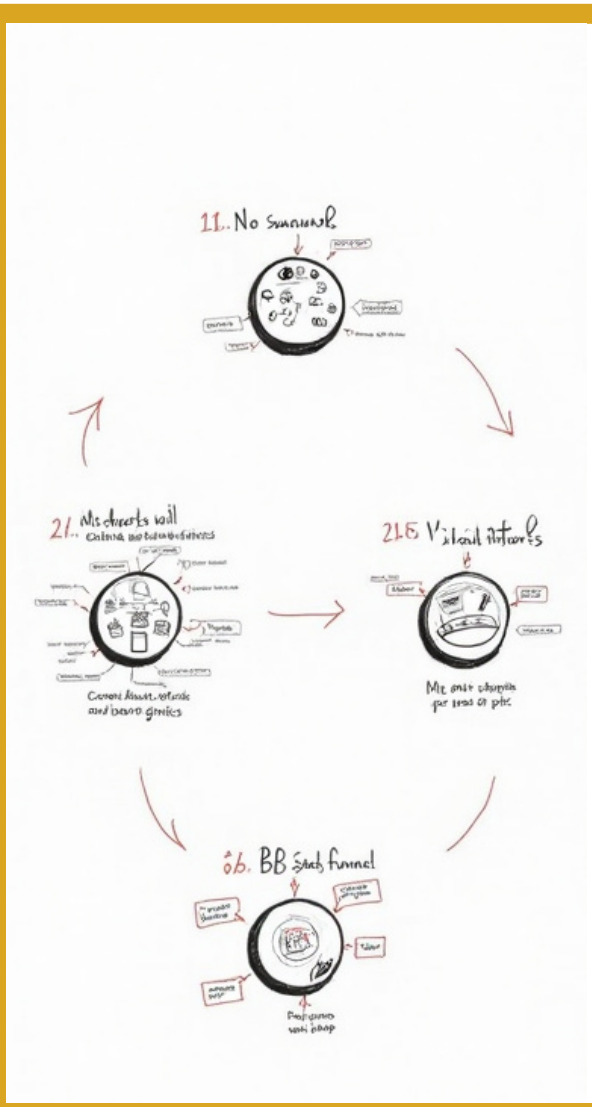
> Handmade PDFs, a pizza coupon, and a simple blog were enough to launch Groupon into record-breaking success; it is on pace to become the fastest company in history to achieve $1 billion in sales.



The Counterintuitive Power of Small Batches

Working in **small batches**, or 'single-piece flow,' is counter-intuitively faster and more efficient than large batches. This approach significantly reduces overhead, speeds up the discovery of defects, and improves overall system performance over individual task efficiency.

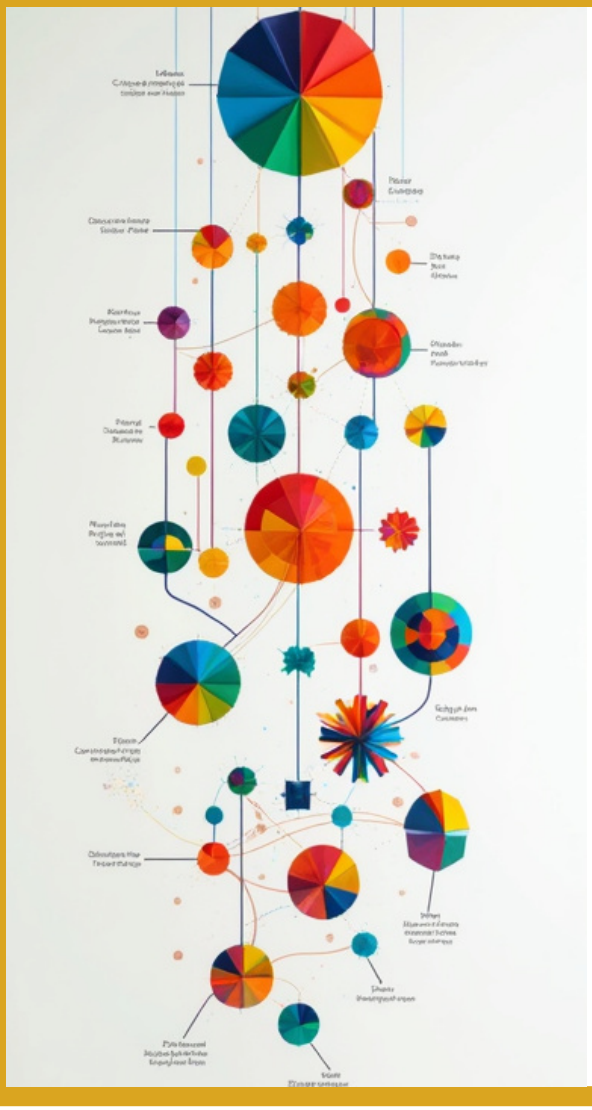
- The one envelope at a time approach is called “single-piece flow” in lean manufacturing. It works because of the surprising power of small batches.
- When we do work that proceeds in stages, the “batch size” refers to how much work moves from one stage to the next at a time.
- With small batches, we’d know almost immediately.
- individual performance is not nearly as important as the overall performance of the system.



Votizen's Iterative Pivoting to Find a Business Model

David Binetti's Votizen started as a social network for verified voters but underwent **multiple strategic pivots** (zoom-in, customer segment, platform) after systematically testing hypotheses and facing discouraging metrics. This iterative process, including a 'social lobbying platform' and a self-serve ad platform, ultimately led to a viable and valuable business model.

- David built his first minimum viable product for just over $1,200 in about three months and launched it.
- David achieved a referral rate of only 4 percent and a retention rate of 5 percent.
- David decided to undertake what I call a zoom-in pivot, refocusing the product on what previously had been considered just one feature of a larger whole.
- David decided to reduce staff and pivot again, this time attempting what I call a platform pivot. Instead of selling an application to one customer at a



Catalog of Pivot Types for Strategic Agility

Pivots come in various forms, each representing a distinct strategic shift (e.g., zoom-in, customer segment, platform, channel). Understanding these types enables startups to maintain agility and adapt their vision to market realities, even after initial success.

- “ Pivots come in different flavors.
- “ A pivot is a special kind of change designed to test a new fundamental hypothesis about the product, business model, and engine of growth.
- “ It’s about repurposing what has been built and what has been learned to find a more positive direction.

The Lean Startup: Applying Small Batches to Innovation

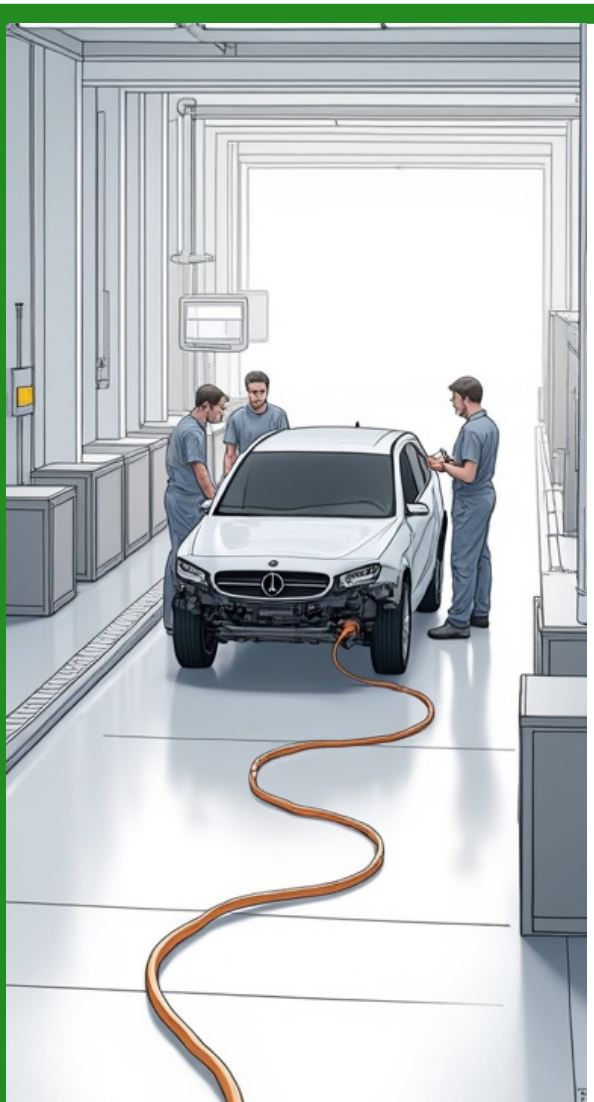
The Lean Startup methodology extends small-batch principles to product development, emphasizing **rapid experimentation and continuous learning**. This approach, exemplified by companies like IMVU, leverages continuous deployment and automated 'immune systems' to quickly validate ideas and adapt to customer needs.

- “ In the Lean Startup the goal is not to produce more stuff efficiently. It is to —as quickly as possible—learn how to build a sustainable business.
- “ Working in small batches ensures that a startup can minimize the expenditure of time, money, and effort that ultimately turns out to have been wasted.
- “ Just as with the Toyota Production System, the key to being able to operate this quickly is to check for defects immediately, thus preventing bigger problems later.
- “ The ability to learn faster from customers is the essential competitive advantage that startups must possess.

Escaping the Large-Batch Death Spiral with Pull Systems

The **large-batch death spiral** occurs when efforts to minimize overhead lead to increasingly large batches, causing delays and rework. Counteracting this, 'pull' systems ensure production is driven by actual demand, significantly reducing work-in-progress inventory and fostering leaner operations.

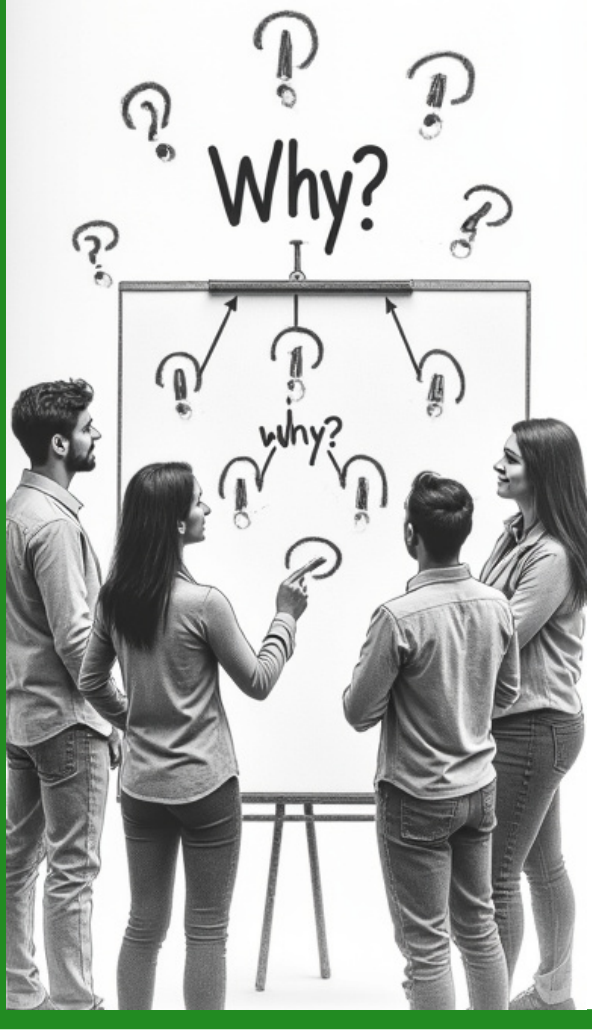
- Large batches tend to grow over time. Because moving the batch forward often results in additional work, rework, delays, and interruptions, everyone has an incentive to do work in ever-larger batches, trying to minimize this overhead.
- This is called the large-batch death spiral because, unlike in manufacturing, there are no physical limits on the maximum size of a batch.
- Lean production solves the problem of stockouts with a technique called pull.
- Almost every Lean Startup technique we've discussed so far works its magic in two ways: by converting push methods to pull and reducing batch size.



Toyota's Lean Revolution: Small Batches for Quality and Diversity

Toyota pioneered **Lean Manufacturing** by adopting small-batch production and general-purpose machines, revolutionizing quality and enabling product diversity. This included innovations like SMED for rapid machine changeovers and the Andon cord for immediate problem detection, leading to superior products at lower costs.

- Lean manufacturers discovered the benefits of small batches decades ago.
- Toyota used smaller general-purpose machines that could produce a wide variety of parts in small batches.
- Shigeo Shingo created the concept of SMED (Single-Minute Exchange of Die) in order to enable a smaller batch size of work in early Toyota factories.
- The biggest advantage of working in small batches is that quality problems can be identified much sooner. This is the origin of Toyota's famous andon cord...



Building an Adaptive Organization with the Five Whys

An **adaptive organization** continuously adjusts its processes and performance, balancing speed with quality. The 'Five Whys' technique facilitates this by enabling proportional investments to solve root causes of problems incrementally, fostering a learning culture over a blaming one.

- “ I call this building an adaptive organization, one that automatically adjusts its process and performance to current conditions.
- “ The core idea of Five Whys is to tie investments directly to the prevention of the most problematic symptoms.
- “ At the root of every seemingly technical problem is a human problem.
- “ The goal of the Five Whys is to help us see the objective truth that chronic problems are caused by bad process, not bad people, and remedy them accordingly.

The Three Engines of Sustainable Growth

Sustainable growth for startups is powered by feedback loops where **new customers emerge from the actions of past customers**. There are three primary 'Engines of Growth'—Sticky, Viral, and Paid—each requiring specific metrics and strategic focus for optimization.

- “ Sustainable growth is characterized by one simple rule: New customers come from the actions of past customers.
- “ Each is like a combustion engine, turning over and over. The faster the loop turns, the faster the company will grow.
- “ Engines of growth are designed to give startups a relatively small set of metrics on which to focus their energies.
- “ Most entrepreneurs already have a strong leap-of-faith hypothesis about which engine is most likely to work.

Fostering Innovation: The Sandbox and Portfolio Thinking

To foster continuous innovation within larger entities, companies need a **'sandbox' for autonomous experimentation** and a 'portfolio thinking' approach to manage diverse stages of business growth. This requires secure resources, independent authority, and a personal stake for innovators, allowing new ideas to flourish while protecting the core business.

- Internal or external, in my experience startup teams require three structural attributes: scarce but secure resources, independent authority to develop their business, and a personal stake in the outcome.
- I would like to reframe and reverse the question: How can we protect the parent organization from the startup?
- My suggested solution is to create a sandbox for innovation that will contain the impact of the new innovation but not constrain the methods of the startup team.
- Entrepreneurs can build organizations that learn how to balance the needs of existing customers with the challenges of finding new customers

The Envelope Stuffing Race

This classic anecdote illustrates the power of **small batches** and single-piece flow over traditional large-batch processing, leading to faster completion times. It highlights how intuitive methods can often be less efficient in process-oriented work.

- Every envelope had to be addressed, stamped, filled with a letter, and sealed.
- Their father wanted to do it the counterintuitive way: complete each envelope one at a time.
- The father won the race, and not just because he is an adult.
- The one envelope at a time approach is a faster way of getting the job done even though it seems inefficient.
- Because our intuition doesn’t take into account the extra time required to sort, stack, and move around the large piles of half-complete envelopes when it’s done the other way.

Toyota's Small Batch Revolution

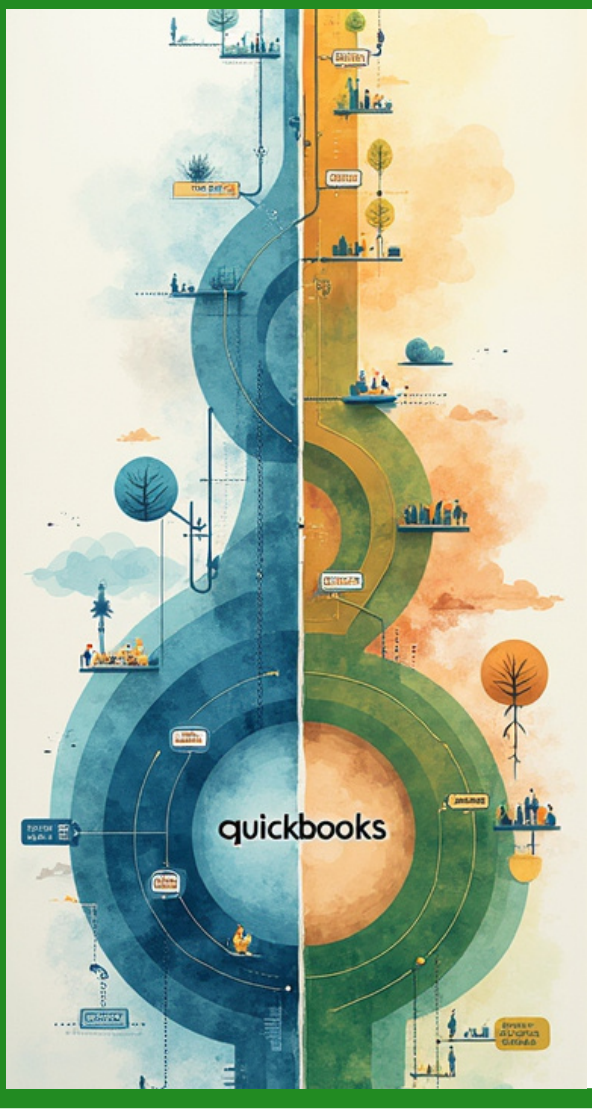
Faced with competition and limited capital, Toyota pioneered **small batch production** and rapid machine changeovers (SMED) to achieve greater product diversity and superior quality, eventually becoming the world's largest automaker. This system enabled quicker identification of quality problems, exemplified by the 'andon cord'.

- Japanese carmakers such as Toyota could not compete with huge American factories that used the latest mass production techniques.
- Instead of buying large specialized machines that could produce thousands of parts at a time, Toyota used smaller general-purpose machines that could produce a wide variety of parts in small batches.
- Shigeo Shingo created the concept of SMED (Single-Minute Exchange of Die) in order to enable a smaller batch size of work in early Toyota factories.
- The biggest advantage of working in small batches is that quality problems can be identified much sooner.
- This is the origin of Toyota’s famous andon cord, which allows any worker to ask for help as soon as they notice any problem, such as a defect in a

IMVU's Software Immune System

IMVU applied lean manufacturing's small batch principles to software development, releasing product changes **multiple times a day** to a small percentage of users. This continuous deployment, coupled with an 'immune system' of automated tests and business monitoring, allowed immediate detection and correction of defects.

- At IMVU, we attempted to design, develop, and ship our new features one at a time, taking advantage of the power of small batches.
- In fact, in the aggregate, IMVU makes about fifty changes to its product (on average) every single day.
- Just as with the Toyota Production System, the key to being able to operate this quickly is to check for defects immediately, thus preventing bigger problems later.
- We called this our product’s immune system because those automatic protections went beyond checking that the product behaved as expected.
- When our immune system detects a problem, a number of things happen immediately: 1. The defective change is removed immediately and automatically. 2. Everyone on the relevant team is notified of the problem.



QuickBooks Shifts from Waterfall to Agile

Intuit's QuickBooks, a leading accounting software, underwent a challenging transition from a large-batch **annual waterfall development cycle** to a rapid, small-batch process. This involved smaller, cross-functional teams and new virtualization technology to enable frequent customer feedback and improve satisfaction.

- “ Typically the first three to four months of each annual cycle was spent strategizing and planning, without building new features.
- “ When the product finally shipped, the results were terrible. It took customers four to five times longer to reconcile their banking transactions than it had with the older version.
- “ Intuit’s senior management, including the general manager of the small business division and the head of small business accounting, recognized the need for change.
- “ They made a public declaration that their combined teams would be creating new processes and that they were not going to go back to the old way.
- “ They built a virtualization system that allowed them to run multiple versions of QuickBooks on a customer’s computer. The second version

Section 2: STEER

Building upon the foundational understanding of validated learning, this section dives deep into the practical application of the Build-Measure-Learn feedback loop. It focuses on identifying critical assumptions, developing Minimum Viable Products (MVPs) for rapid testing, implementing innovation accounting for objective progress measurement, and making the crucial decision to pivot or persevere.

Section 3: ACCELERATE

With a solid understanding of validated learning and the Build-Measure-Learn loop, this section focuses on accelerating growth and maintaining innovation as a startup scales. It introduces techniques like small batches and adaptive organizations, explores different engines of growth, and discusses how to foster continuous innovation even within large enterprises.

Section 1: VISION

This foundational section introduces the core principles of the Lean Startup methodology. It redefines who an entrepreneur is and what a startup entails, moving beyond traditional perceptions. The focus is on embracing extreme uncertainty through continuous learning and scientific experimentation to build sustainable businesses.

The Lean Startup: How Today’s Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses

Eric Ries

Section 1: VISION

1. Start

This chapter establishes that entrepreneurship is a form of management, emphasizing that traditional management principles are ill-suited for the uncertainty of startups and advocating for a new, disciplined approach.

- “ I believe that entrepreneurship requires a managerial discipline to harness the entrepreneurial opportunity we have been given.
- “ What makes these failures particularly painful is not just the economic damage done to individual employees, companies, and investors; they are also a colossal waste of our civilization’s most precious resource: the time, passion, and skil of its people.
- “ The Lean Startup method, in contrast, is designed to teach you how to drive a startup. Instead of making complex plans that are based on a lot of assumptions, you can make constant adjustments with a steering wheel cal ed the Build-Measure-Learn feedback loop.

2. Define

This chapter broadens the definition of an entrepreneur to include 'intrapreneurs' within large organizations and defines a startup as a human institution creating new products under extreme uncertainty, exemplified by Intuit's SnapTax.

- “ A startup is a human institution designed to create a new product or service under conditions of extreme uncertainty.
- “ What Mark was missing was a process for converting the raw materials of innovation into real-world breakthrough successes.
- “ Innovation is a bot oms-up, decentralized, and unpredictable thing, but that doesn’t mean it cannot be managed. It can, but to do so requires a new management discipline, one that needs to be mastered not just by practicing entrepreneurs seeking to build the next big thing but also by the people who support them, nurture them, and hold them accountable.

3. Learn

This chapter introduces 'validated learning' as the true measure of progress for a startup, contrasting it with traditional metrics and illustrating its importance through the iterative failure and eventual success of IMVU.

- In the Lean Startup model, we are rehabilitating learning with a concept I cal validated learning.
- Our customers did not want an IM add-on; they wanted a stand-alone IM network.
- I’ve come to believe that learning is the essential unit of progress for startups. The e ort that is not absolutely necessary for learning what customers want can be eliminated.

4. Experiment

This chapter advocates for treating every startup effort as a scientific experiment with clear hypotheses, using real customer behavior for validated learning, and provides diverse examples from Zappos to government projects.

- A true experiment fol ows the scienti c method. It begins with a clear hypothesis that makes predictions about what is supposed to happen. It then tests those predictions empirical y.
- The two most important assumptions entrepreneurs make are what I cal the value hypothesis and the growth hypothesis.
- Success is not delivering a feature; success is learning how to solve the customer’s problem.

Section 2: STEER

5. Leap

This chapter explains that startup strategies are built on 'leap-of-faith' assumptions about value creation and growth, which must be rigorously tested using methods like 'genchi gembutsu' and customer archetypes.

- These are cal ed leaps of faith precisely because the success of the entire venture rests on them. If they are true, tremendous opportunity awaits. If they are false, the startup risks total failure.
- You cannot be sure you real y understand any part of any business problem unless you go and see for yourself rsthand.
- The goal of such early contact with customers is not to gain definitive answers. Instead, it is to clarify at a basic, coarse level that we understand our potential customer and what problems they have.

6. Test

This chapter introduces the Minimum Viable Product (MVP) as the fastest way to initiate validated learning, demonstrating how various MVP types (video, concierge, Wizard of Oz) enable testing core hypotheses without perfection.

- A minimum viable product (MVP) helps entrepreneurs start the process of learning as quickly as possible. It is not necessarily the smal est product imaginable, though; it is simply the fastest way to get through the Build-Measure-Learn feedback loop with the minimum amount of ef ort.
- The lesson of the MVP is that any additional work beyond what was required to start learning is waste, no mat er how important it might have seemed at the time.
- If we do not know who the customer is, we do not know what quality is.

7. Measure

This chapter details 'innovation accounting' as a new framework for startups to measure progress objectively, distinguishing between actionable and misleading 'vanity metrics' through tools like cohort analysis and split-tests.

- A startup's job is to (1) rigorously measure where it is right now, confronting the hard truths that assessment reveals, and then (2) devise experiments to learn how to move the real numbers closer to the ideal reflected in the business plan.
- I cal the traditional numbers used to judge startups "vanity metrics," and innovation accounting requires us to avoid the temptation to use them.
- Actionable metrics are the antidote to this problem. When cause and e ect is clearly understood, people are bet er able to learn from their actions.

8. Pivot (or Persevere)

This crucial chapter addresses the challenging decision of whether to 'pivot' (make a fundamental strategic change) or 'persevere,' explaining various types of pivots and emphasizing the courage and data-driven approach required for these critical course corrections.

- That change is cal ed a pivot: a structured course correction designed to test a new fundamental hypothesis about the product, strategy, and engine of growth.
- Failure is a prerequisite to learning.
- The true measure of runway is how many pivots a startup has left: the number of opportunities it has to make a fundamental change to its business strategy.

Section 3: ACCELERATE

9. Batch

This chapter reveals the counterintuitive power of small batches in speeding up the Build-Measure-Learn cycle, highlighting how reducing batch size accelerates learning and problem detection in both manufacturing and entrepreneurship.

- “ The one envelope at a time approach is cal ed “single-piece ow” in lean manufacturing. It works because of the surprising power of smal batches.
- “ The biggest advantage of working in smal batches is that quality problems can be identi ed much sooner.
- “ The essential lesson is not that everyone should be shipping fty times per day but that by reducing batch size, we can get through the Build-Measure-Learn feedback loop more quickly than our competitors can.

10. Grow

This chapter identifies three distinct 'engines of growth'—sticky, viral, and paid—explaining how each drives sustainable customer acquisition and emphasizing the need for startups to focus on and optimize one engine at a time to achieve product/market fit.

- “ Sustainable growth is characterized by one simple rule: New customers come from the actions of past customers.
- “ Companies that rely on the viral engine of growth must focus on increasing the viral coe cient more than anything else, because even tiny changes in this number wil cause dramatic changes in their future prospects.
- “ I believe the concept of the engine of growth can put the idea of product/market t on a more rigorous footing.

11. Adapt

This chapter introduces the concept of an adaptive organization, which uses feedback loops like the 'Five Whys' to incrementally invest in process improvements and prevent recurring problems, thereby maintaining speed and agility as the company scales.

- “ I cal this building an adaptive organization, one that automatical y adjusts its process and performance to current conditions.
- “ The core idea of Five Whys is to tie investments directly to the prevention of the most problematic symptoms.
- “ In a Five Whys analysis, we want to have a systems-level view as much as possible.

12. Innovate

This chapter outlines how to nurture disruptive innovation within established companies by creating 'innovation sandboxes' with scarce but secure resources, independent authority, and personal stakes, allowing for continuous experimentation and growth without stifling existing operations.

- Successful innovation teams must be structured correctly in order to succeed. Internal or external, in my experience startup teams require three structural at ributes: scarce but secure resources, independent authority to develop their business, and a personal stake in the outcome.
- I would like to reframe and reverse the question: How can we protect the parent organization from the startup?
- My suggested solution is to create a sandbox for innovation that wil contain the impact of the new innovation but not constrain the methods of the startup team.