* A startup is a catalyst that transforms ideas into products
* The feedback is both qualitative (such as what they like and don’t like) and quantitative (such as how many people use it and find it valuable)
* Build-Measure-Learn feedback loop is at the core of the Lean Startup model.
* For engineers, it’s learning to build things as efficiently as possible
* Some managers are experts at strategizing and learning at the whiteboard.
* Plenty of entrepreneurs focus their energies on the individual nouns: having the best product idea or the best-designed initial product or obsessing over data and metrics
* we need to focus our energies on minimizing the total time through this feedback loop
* I call the riskiest elements of a startup’s plan, the parts on which everything depends, leap-of-faith assumptions.
* The two most important assumptions are the **value hypothesis** and the **growth hypothesis**.
* The MVP is that version of the product that enables a full turn of the Build-Measure-Learn loop with a minimum amount of e5ort and the least amount of development time
* The minimum viable product lacks many features that may prove essential later on
* When we enter the Measure phase, the biggest challenge will be determining whether the product development efforts are leading to real progress
* **innovation accounting**, a quantitative approach that allows us to see whether our engine-tuning efforts are bearing fruit. It also allows us to create learning milestones, which are an alternative to traditional business and product milestones
* Learning milestones are useful for entrepreneurs as a way of assessing their progress accurately and objectively
* feedback loop as Build-Measure-Learn because the activities happen in that order, our planning really works in the reverse order: we figure out what we need to learn, use innovation accounting to 'figure out what we need to measure to know if we are gaining validated learning, and then figure out what product we need to build to run that experiment and get that measurement
* The first challenge for an entrepreneur is to build an organization that can test these assumptions systematically
* The second challenge, as in all entrepreneurial situations, is to perform that rigorous testing without losing sight of the company’s overall vision.
* we assume that customers have a significant desire to use a product like ours, or we assume that supermarkets will carry our product.
* Acting as if these assumptions are true is a classic entrepreneur superpower. 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.
* analog-antilog concept
* there are many organizations that are wildly profitable in the short term but ultimately value-destroying, such as the organizers of Ponzi schemes, and fraudulent or misguided companies (e.g.,Enron and Lehman Brothers).
* **success theater**, using the appearance of growth to make it seem that they are successful.
* 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 knowledge.
* **customer archetype**, a brief document that seeks to humanize the proposed target customer.
* There are many techniques for building an accurate customer archetype that have been developed over long years of practice in the design community. Traditional approaches such as interaction design or design thinking are enormously helpful.
* To me, it has always seemed ironic that many of these approaches are highly experimental and iterative, using techniques such as rapid prototyping and in-person customer observations to guide designers’ work
* The problem with most entrepreneurs’ plans is generally not that they don’t follow sound strategic principles but that the facts upon which they are based are wrong
* A minimum viable product (MVP) helps entrepreneurs start the process of learning as quickly as possible.3 It is not necessarily the smallest product imaginable, though; it is simply the fastest way to get through the Build-Measure-Learn feedback loop with the minimum amount of effort.
* Contrary to traditional product development, which usually involves a long, thoughtful incubation period and strives for product perfection, the goal of the MVP is to begin the process of learning, not end it. Unlike a prototype or concept test, an MVP is designed not just to answer product design or technical questions. Its goal is to test fundamental business hypotheses.
* IMVU The gross numbers were small because we were selling the product to visionary early customers called early adopters. Before new products can be sold successfully to the mass market, they have to be sold to early adopters. These people are a special breed of customer. They accept—in fact prefer—an 80 percent solution; you don’t need a perfect solution to capture their interest
* In consumer products, it’s often the thrill of being the %rst one on the block to show o= a new basketball shoe, music player, or cool phone. In enterprise products, it’s often about gaining a competitive advantage by taking a risk with something new that competitors don’t have yet
* Early adopters are suspicious of something that is too polished: if it’s ready for everyone to adopt,
* The lesson of the MVP is that any additional work beyond what was required to start learning is waste, no matter how important it might have seemed at the time.
* In a concierge MVP, this personalized service is not the product but a learning activity designed to test the leap-of-faith assumptions in the company’s growth model. In fact, a common outcome of a concierge MVP is to invalidate the company’s proposed growth model, making it clear that a di=erent approach is needed. This can happen even if the initial MVP is pro%table for the company. Without a formal growth model, many companies get caught in the trap of being satis%ed with a small pro%table business when a pivot (change in course or strategy) might lead to more signi%cant growth. The only way to know is to have tested the growth model systematically with real customers.
* 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
* quality products; it is a point of pride
* customer is the most important part of the production process.
* Most modern business and engineering philosophies focus on producing high-quality experiences for customers as a primary principle; it is the foundation of **Six Sigma**
  + lean manufacturing
  + design thinking
  + extreme programming
  + the software craftsmanship movement.
* If we do not know who the customer is, we do not know what quality is.
* the Lean Startup method is not opposed to building high-quality products, but only in service of the goal of winning over customers.
* But once again, this does not mean operating in a sloppy or undisciplined way. (This is an important caveat. There is a category of quality problems that have the net e=ect of slowing down the Build-Measure-Learn feedback loop.
* As you consider building your own minimum viable product, let this simple rule suffice: **remove any feature, process, or effort that does not contribute directly to the learning you seek**..
* The most common speed bumps are:
  + legal issues
  + fears about competitors
  + branding risks
  + the impact on morale.
* Part of the special challenge of being a startup is the near impossibility of having your idea, company, or product be noticed by anyone, let alone a competitor.
* The truth is that most managers in most companies are already overwhelmed with good ideas. Their challenge lies in prioritization and execution, and it is those challenges that give a startup hope of surviving.
* A head start is rarely large enough to matter, and time spent in stealth mode—away from customers—is unlikely to provide a head start. The only way to win is to learn faster than anyone else.
* entrepreneurs in existing organizations often are constrained by the fear of damaging the parent company’s established brand. In either of these cases, there is an easy solution: launch the MVP under a different brand name
* a long-term reputation is only at risk when companies engage in vocal launch activities such as PR and building hype
* **A false negative**: that customers will reject a (awed MVP that is too small or too limited
* That is the essence of the waterfall or stage-gate development model. If an MVP fails, teams are liable to give up hope and abandon the project altogether. But this is a solvable problem.
* The solution to this dilemma is a commitment to iteration. You have to commit to a locked-in agreement—ahead of time—that no matter what comes of testing the MVP, you will not give up hope.
* The solution to this problem resides at the heart of the Lean Startup model. We all need a disciplined, systematic approach to figuring out if we’re making progress and discovering if we’re actually achieving validated learning. I call this system innovation accounting, an alternative to traditional accounting designed specifically for startups
* 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
* Innovation accounting is. An Accountability Framework That Works Across Industries
* Innovation accounting enables startups to prove objectively that they are learning how to grow a sustainable business
* The rate of growth depends primarily on three things:
  + the profitability of each customer
  + the cost of acquiring new customers
  + the repeat purchase rate of existing customers
* Sellers want the marketplace with the highest number of potential customers. Buyers want the marketplace with the most competition among sellers, which leads to the greatest availability of products and the lowest prices. (In economics, this sometimes is called **supply-side increasing returns and demand-side increasing returns**.)
* Learning milestones:
  + Establish baseline
  + Tuning the engine
  + Pivot or Persevere
* The sign of a successful pivot is that these engine-tuning activities are more productive after the pivot than before.
* Before building the prototype, the company might perform a smoke test with its marketing materials. This is an old direct marketing technique in which customers are given the opportunity to preorder a product that has not yet been built. A smoke test measures only one thing: whether customers are interested in trying a product. By itself, this is insu;cient to validate an entire growth model. Nonetheless, it can be very useful to get feedback on this assumption before committing more money and other resources to the product.
* **a good design is one that changes customer behavior for the better.**
* **WM527**
* if we’re not moving the drivers of our business model, we’re not making progress. That becomes a sure sign that it’s time to pivot.
* **“funnel metrics”** behaviors that were critical to our engine of growth:
  + customer registration
  + the download of our application
  + trial, repeat usage, and purchase.
* Instead of looking at cumulative totals or gross numbers such as total revenue and total number of customers, one looks at the performance of each group of customers that comes into contact with the product independently. Each group is called a cohort.
* This technique is useful in many types of business, because every company depends for its survival on sequences of customer behavior called 9ows.
* Customer 9ows govern the interaction of customers with a company’s products.
* poor quantitative results force us to declare failure and create the motivation, context, and space for more qualitative research
* downward cycle begins: the product development team valiantly tries to build a product according to the speci‑cations it is receiving from the creative or business leadership
* This system is called agile development for a good reason: teams that employ it are able to change direction quickly, stay light on their feet, and be highly responsive to changes in the business
* Agile is an e;cient system of development from the point of view of the developers. It allows them to stay focused on creating features and technical designs. An attempt to introduce the need to learn into that process could undermine productivity.
* vanity metrics: the total number of customers and the total number of questions answered
* super‑cial aspects of the Lean Startup learning milestones: they shipped an early product and established some baseline metrics
* A split-test experiment is one in which different versions of a product are offered to customers at the same time
* Kanban: in the product backlog, actively being built, done (feature complete from a technical point of view), or in the process of being validated.
* A solid process lays the foundation for a healthy culture, one where ideas are evaluated by merit and not by job title.
* Most important, teams working in this system begin to measure their productivity according to validated learning, not in terms of the production of new features.
* 3 A’s: actionable, accessible, and auditable.
* For a report to be considered **actionable**, it must demonstrate clear cause and effect
* Otherwise, it is a **vanity metric**.
* Vanity metrics wreak havoc because they prey on a weakness of the human mind.
* Actionable metrics are the antidote to this problem. When cause and effect is clearly understood, people are better able to learn from their actions. Human beings are innately talented learners when given a clear and objective assessment
* a zoom-in pivot, refocusing the product on what previously had been considered just one feature of a larger whole
* each time the company pivoted, it didn’t have to start from scratch
* a legacy product, one that was no longer suited to the goals of the company
* Measuring runway through the lens of pivots rather than that of time suggests another way to extend that runway: get to each pivot faster
* the startup has to +nd ways to achieve the same amount of validated learning at lower cost or in a shorter time. All the techniques in the Lean Startup model that have been discussed so far have this as their overarching goal.
* Pivots come in di-erent Qavors. The word pivot sometimes is used incorrectly as a synonym for change
* A pivot is a special kind of changed: designed to test a new fundamental hypothesis about the product, business model, and engine of growth.
* Pivots:
  + Zoom-in Pivot
  + Zoom-out Pivot In the reverse situation, sometimes a single feature is insu&cient to support a whole product. In this type of pivot, what was considered the whole product becomes a single feature of a much larger product.
  + Customer Segment Pivot: , the company realizes that the product it is building solves a real problem for real customers but that they are not the type of customers it originally planned to serve. In other words, the product hypothesis is partially con+rmed, solving the right problem, but for a different customer than originally anticipated
  + Customer Need Pivot: As a result of getting to know customers extremely well, it sometimes becomes clear that the problem we’re trying to solve for them is not very important. However, because of this customer intimacy, we often discover other related problems that are important and can be solved by our team. In many cases, these related problems may require little more than repositioning the p y q pg existing product. In other cases, it may require a completely new product. Again, this a case where the product hypothesis is partially con+rmed; the target customer has a problem worth solving, just not the one that was originally anticipated. A famous example is the chain Potbelly Sandwich Shop, which today has over two hundred stores. It began as an antique store in 1977; the owners started to sell sandwiches as a way to bolster tra&c to their stores. Pretty soon they had pivoted their way into an entirely different line of business.
  + A platform pivot refers to a change from an application to a platform or vice versa. Most commonly, startups that aspire to create a new platform begin life by selling a single application, the so-called killer app, for their platform. Only later does the platform emerge as a vehicle for third parties to leverage as a way to create their own related products. However, this order is not always set in stone, and some companies have to execute this pivot multiple times.
  + Business Architecture Pivot:
    - two major business architectures: high margin, low volume (complex systems model) or low margin, high volume (volume operations model)
  + Value Capture Pivot: ,changes to the way a company captures value can have far-reaching consequences for the rest of the business, product, and marketing strategies.
  + Engine of Growth Pivot: three primary engines of growth that power startups: the viral, sticky, and paid growth models. In this type of pivot, a company changes its growth strategy to seek faster or more profitable growth.Commonly but not always, the engine of growth also requires a change in the way value is captured.
  + Channel Pivot: the mechanism by which a company delivers its product to customers is called the sales channel or distribution channel. A channel pivot is a recognition that the same basic solution could be delivered through a di-erent channel with greater e-ectiveness.
  + Technology Pivot: Occasionally, a company discovers a way to achieve the same solution by using a completely di-erent technology. Technology pivots are much more common in established businesses. In other words, they are a sustaining innovation, an incremental improvement designed to appeal to and retain an existing customer base. Established companies excel at this kind of pivot because so much is not changing. The customer segment is the same, the customer’s problem is the same, the value-capture model is the same, and the channel partners are the same. The only question is whether the new technology can provide superior price and/or performance compared with the existing technology.
  + A pivot is not just an exhortation to change. Remember, it is a special kind of structured change designed to test a new fundamental hypothesis about the product, business model, and engine of growth. It is the heart of the Lean Startup method. It is what makes the companies that follow Lean Startup resilient in the face of mistakes: if we take a wrong turn, we have the tools we need to realize it and the agility to find another path.