"Highly engaging.... Will help you challenge the status quo and discover extraordinary new possibilities in whatever endeavor."

-Howard Schultz, chairman and CEO, Starbucks

Little Bets



PETER SIMS



What do Apple CEO Steve Jobs, comedian Chris Rock, prize-winning architect Frank Gehry, and the story developers at Pixar films all have in common? Bestselling author Peter Sims found that all of them have achieved remarkable results using a surprisingly similar approach: methodically taking small, experimental steps. Rather than believing they have to start with a big idea or plan a whole project out in advance, trying to foresee the final outcome, they make a methodical series of little bets about what might be a good direction, learning critical information from lots of little failures and from small but significant wins that allow them to find unexpected avenues and arrive at extraordinary outcomes.

Based on deep and extensive research, Sims discovered that productive, creative thinkers and doers—from Ludwig van Beethoven to Thomas Edison and Amazon's Jeff Bezos—practice a set of simple but often counterintuitive experimental methods—such as failing quickly to learn fast, trying imperfect ideas, and engaging in highly immersed observation—that free their minds, opening them up to making unexpected connections and perceiving invaluable insights. These methods also unshackle them from the constraints of conventional planning, analytical thinking, and linear problem solving that our educational system overemphasizes at the expense of creativity.

Reporting on a fascinating range of research, from the psychology of creative blocks to the influential field of design thinking so prevalent in Silicon Valley, Sims offers engaging and wonderfully illuminating accounts of breakthrough innovators at work, including how Hewlett-Packard stumbled onto the breakaway success of the first handheld calculator; the ingenious storyboarding process at Pixar films that has been the key to their unbroken streak of box office successes; the playful discovery process by which Frank Gehry arrived at his critically acclaimed design for Disney Concert Hall; the aha revelation that led Amazon to pursue its pioneering affiliates program; and the U.S. Army's innovative approach to counterinsurgency operations.

Fast paced and as entertaining as it is thought provoking, *Little Bets* offers a whole new way of thinking about how to break away from the narrow strictures of the methods of analyzing and problem solving we were all taught in school so that we can navigate uncertain situations and unleash our untapped creative powers.



Peter Sims is the coauthor with Bill George of the *Wall Street Journal* and *BusinessWeek* bestselling book *True North*. His work has appeared in the *Harvard Business Review, Fortune*, and *TechCrunch*, and he is a contributor to the Reuters and Harvard Business Review blogs. He received an MBA from Stanford Business School, where he and several classmates established a popular course on leadership, and he has had a long collaboration with faculty at Stanford's Hasso Plattner Institute of Design (the d.school). He frequently speaks or advises at corporations, associations, and universities.

Learn more at www.petersims.com

Praise for Little Bets

"Want a big idea? Start little. Whether you're an entrepreneur or an artist, Peter Sims shows you how big breakthroughs start with little bets." — Chip Heath, author of Switch: How to change things when change is hard

"Little Bets is a timely and compelling book that will change the way you think, a roadmap to success in the 21st century. And, a very enjoyable read." — Peter Georgescu, former CEO of Young & Rubicam

"A fascinating and revealing journey through the real-life dynamics of the creative process. Vividly written and bustling with examples from comedy to architecture, Little Bets is a wonderful example of itself: a big idea that takes shape through many small discoveries. I highly recommend it for anyone with a serious interest in cultivating creativity in business, education or in their own lives." — Sir Ken Robinson, New York Times bestselling author of The Element: How Finding Your Passion Changes Everything

"I really can't say enough about this book; Little Bets rings so true to my own experience at Teach For America. Peter Sims does a huge service by showing the world how big entrepreneurial and innovative successes come to be -- and in the process reveals ways of thinking that aren't the product of anything elusive or enigmatic but rather of traits we can all learn and foster, such as openness, inquisitiveness, and perseverance."—Wendy Kopp, CEO and Founder, Teach for America

"With examples that range from traditional businesses to stand-up comedians, Peter Sims shows that the path to big success is lined with small failures. Behind every breakthrough idea is often a host of experiments that flopped — and Sims shows how to leverage these "little bets" to produce lasting results. This is a powerful and practical book." — **Daniel H. Pink**, author of A Whole New Mind and Drive

"In Little Bets, Peter Sims convincingly argues that we need a new model of creativity, focused around gradual improvement and constant innovation. If you're not learning while doing, Sims points out, then you're probably doing it wrong."

— Jonah Lehrer, author of How We Decide

"'Little Bets' is a big idea. Here's my bet: if you're passionate about innovation, creativity, and entrepreneurship, you need to read this book!" — Alan M. Webber, Co-Founding Editor, Fast Company magazine, Author, Rules of Thumb

"I have always believed that constant innovation is core to success. The methods Peter Sims provides in the highly engaging Little Bets will help you challenge the status quo and discover extraordinary new possibilities in whatever endeavor you're engaged in."— Howard Schultz, chairman and CEO, Starbucks









Chris Rock has become one of the most popular comedians in the world and, while there is no doubt he has great talent, his brilliance also comes from his approach to developing his ideas. The routines he rolls out on his global tours are the output of what he has learned from thousands of *little bets*, nearly all of which fail.

When beginning to work on a new show, Rock picks venues where he can experiment with new material in very rough fashion. In gearing up for his latest global tour, he made between forty and fifty appearances at a small comedy club, called Stress Factory, in New Brunswick, New Jersey, not far from where he lives. In front of audiences of, say, fifty people, he will show up unannounced, carrying a yellow legal note pad with ideas scribbled on it. "It's like boxing training camp," Rock told the *Orange County Register*.

When people in the audience spot him, they start whispering to one another. As the waitstaff and other comedians find places to stand at the sides or back, the room quickly fills with anticipation. He won't launch into the familiar performance mode his fans describe as "the full preacher effect," when he

uses animated body language, pitchy and sassy vocal intonations, and erupting facial expressions. Instead, he will talk with the audience in an informal, conversational style with his notepad on a stool beside him. He watches the audience intently, noticing heads nodding, shifting body language, or attentive pauses, all clues as to where good ideas might reside.

In sets that run around forty-five minutes, most of the jokes fall flat. His early performances can be painful to watch. Jokes will ramble, he'll lose his train of thought and need to refer to his notes, and some audience members sit with their arms folded, noticeably unimpressed. The audience will laugh about his flops—laughing at him, not with him. Often Rock will pause and say, "This needs to be fleshed out more if it's gonna make it," before scribbling some notes. He may think he has come up with the best joke ever, but if it keeps missing with audiences, that becomes his reality. Other times, a joke he thought would be a dud will bring the house down. According to fellow comedian Matt Ruby, "There are five to ten lines during the night that are just ridiculously good. Like lightning bolts. My sense is that he starts with these bolts and then writes around them."

For a full routine, Rock tries hundreds (if not thousands) of preliminary ideas, out of which only a handful will make the final cut. A successful joke often has six or seven parts. With that level of complexity, it's understandable that even a comedian as successful as Chris Rock wouldn't be able to know which joke elements and which combinations will work. This is true for every stand-up comedian, including the top performers we tend to perceive as creative geniuses, like Rock or Jerry Seinfeld. It's also true for comedy writers. The writers for the humor publication the *Onion*, known for its hilarious headlines, propose roughly six hundred possibilities for eigh-

teen headlines each week, a 3 percent success rate. "You can sit down and spend hours crafting some joke that you think is perfect, but a lot of the time, that's just a waste of time," Ruby explains. This may seem like an obvious problem, but it's a mistake that rookie comedians make all the time.

By the time Rock reaches a big show—say an HBO special or an appearance on David Letterman—his jokes, opening, transitions, and closing have all been tested and retested rigorously. Developing an hour-long act takes even top comedians from six months to a year. If comedians are serious about success, they get on stage every night they can, especially when developing new material. They typically do so at least five nights per week, sometimes up to seven, and sweat over every element and word. And the cycle repeats, day in, day out.

Most people are surprised that someone who has reached Chris Rock's level of success still puts himself out there in this way, willing to fail night after night, but Rock deeply understands that ingenious ideas almost never spring into people's minds fully formed; they emerge through a rigorous experimental discovery process. As Matt Ruby says of Rock's performances, "I'm not sure there's any better comedy class than watching someone that good work on material at that stage. More than anything, you see how much hard work it is. He's grinding out this material."

The seed of this book was planted while I was attending Stanford Business School. One of the most common things I would hear people say was that they would do something new—take an unconventional career path or start a company—but that they needed a great idea first. I had worked before then as a venture capital investor, and in that work, I had learned

that most successful entrepreneurs don't begin with brilliant ideas—they discover them.

Ironically, this would include the biggest business idea to come out of Stanford in decades. Google founders Larry Page and Sergey Brin didn't set out to create one of the fastest-growing startup companies in history; they didn't even start out seeking to revolutionize the way we search for information on the web. Their first goal, as collaborators on the Stanford Digital Library Project, was to solve a much smaller problem: how to prioritize library searches online.

In working through possibilities for doing so, their clever innovation was to realize that the best way to prioritize the results was to measure how many other citations referred to a source. In the academic world, work is often judged by the number of other papers or books that cite it. So, if you wanted to search for books about Joan of Arc, the Joan of Arc book that was cited the most by other Joan of Arc sources would appear first. This insight was the core of their now famous PageRank algorithm.

Yet, even after they realized how powerful their search algorithm was and formulated their much more ambitious goal to "organize all the world's information," they still had not identified the company's breakthrough revenue engine. Until 2002, most web advertising sales, including Google's, came from banner ads that would appear at the top of search result pages. Prices were negotiated on a fixed-fee basis such that Google would price ad deals at, for instance, a million dollars and flash the display ad when it deemed appropriate. Borrowing an idea from a company called GoTo.com (renamed Overture), Google then created AdWords, an automated auction-based system that allowed advertisers to display ads next to specific search terms, such as "hockey" or "flowers." This allowed ad-

vertisers to target their ads, while the auctions automatically set the exact price that the market would bear across millions of search terms. Within three weeks after Google made this change, the system had produced twice as much revenue as fixed-priced ads produced within that same period, to the great surprise of many, including CEO Eric Schmidt. Once AdWords became the company's flagship product, Google's revenue growth exploded. Page and Brin did not begin with an ingenious idea, but they certainly discovered one.

The pioneering bookseller Amazon also embraces an experimental discovery mentality. Led by founder and CEO Jeff Bezos, Amazon's culture breathes experimentation. Employees there are encouraged to constantly try things and develop new ideas. It's such an important goal of the company to provoke this that whether or not employees are doing so is a part of their performance reviews. Bezos often compares Amazon's strategy of developing ideas in new markets to "planting seeds" or "going down blind alleys." They learn and uncover opportunities as they go. Many efforts turn out to be dead ends, Bezos has said, "But every once in a while, you go down an alley and it opens up into this huge, broad avenue."

Like Chris Rock, Bezos has accepted uncertainty; he knows that he cannot reliably predict which ideas for new markets will work and which won't. He's got to experiment. One such example is a feature the company launched that would compare a customer's entire purchase history with its millions of other customers in order to find the one person with the closest matching history. In one click, Amazon would show you what items that customer purchased. "No one used it," Bezos has said. "Our history is full of things like that, where we came up with an innovation that we thought was really cool, and the customers didn't care."

Other times, they will be pleasantly surprised. When Amazon launched its Associates program, a marketing scheme that allows other websites to earn affiliate fees by sending buyers to Amazon, it quickly exceeded expectations. "Very quickly we doubled down on it as a favored marketing program," Bezos recalled in an interview with *Harvard Business Review*, "and it's continuing to be very successful eleven years later."

Unlike most CEOs, when trying something new, Jeff Bezos and his senior team (known as the S Team) don't try to develop elaborate financial projections or return on investment calculations. "You can't put into a spreadsheet how people are going to behave around a new product," Bezos will say.

This certainly hasn't been easy: Bezos and his team have had to endure significant criticism over the years for failed experiments. As the dot-com era imploded, for example, Amazon experienced a symphony of negativity. In 1999, the company had opened its site to other sellers, such as used booksellers, when it launched Amazon Auctions, competing directly with eBay. But Amazon struggled to integrate Auctions with the core site and it never gained traction with customers. eBay proved too formidable a competitor. Two years later, Amazon had gained only a 2 percent share of the market and management shut down the operation. It was just one of several significant failures. Another was a partnership with Sotheby's. Launched in 1999 and shut down in 2000, it suffered from customer service-related problems from the start. Critics ridiculed the company, calling it "Amazon.bomb" or "Amazon .con." Some Wall Street analysts and investors even called for Bezos to resign.

However, the ultimate outcome has been that Amazon's exploratory mentality has spawned continual breakthroughs, such as Amazon stores, which allows small vendors to sell

products on its site, as well as Amazon Web Services (AWS), which includes Elastic Compute Cloud (EC2), permitting third parties to rent storage space on the company's servers. Third-party vendors now account for roughly 30% of Amazon's sales, a key source of the company's impressive growth.

Chris Rock, the Google founders, and Jeff Bezos and his team are examples of people who approach problems in a nonlinear manner using little bets, what University of Chicago economist David Galenson has dubbed "experimental innovators." Galenson has spent years studying groundbreaking creators, delving deeply into their personal histories and work methods, and he has identified two basic types of innovators, which he calls *conceptual* and *experimental*. Conceptual innovators, such as Mozart, tend to pursue bold new ideas and often achieve their greatest breakthroughs early in life. To be sure, there is an important place for such creative geniuses. Yet, as we all know, prodigies are exceptionally rare.

The type of creativity that is more interesting to Galenson, and that is far more common, is experimental innovation. These creators use experimental, iterative, trial-and-error approaches to gradually build up to breakthroughs. Experimental innovators must be persistent and willing to accept failure and setbacks as they work toward their goals.

The great advantage of working in this way is that when trying to do something new or uncertain, we rarely know what we don't know. Most successful creators, from tinkering inventors to songwriters to novelists, understand this. Thomas Edison famously said, "If I find ten thousand ways something won't work, I haven't failed. I am not discouraged, because every wrong attempt discarded is just one more step forward." He learned from more than nine thousand experiments before inventing the light bulb. Get to know the stories of other great

inventors and the pattern repeats. Beethoven made music that sounded like everyone else's until he used experiments to gradually differentiate his style from Mozart's established brand of composition. The creative process he adopted, driven by hundreds of little bets, allowed him to explore new styles and forms with audiences. His surviving manuscripts are riddled with pockmarks, corrections, changes, and cross-outs, some so deep that he would even puncture the manuscript paper with his quill. Over time, Beethoven arrived at a highly distinct style, helping to usher in a new period of classical music, the romantic era, distinguished by compositions full of power and intensity.

Experimental innovators like Rock, Brin and Page, Bezos, and Beethoven don't analyze new ideas too much too soon, try to hit narrow targets on unknown horizons, or put their hopes into *one big bet*. Instead of trying to develop elaborate plans to predict the success of their endeavors, they *do things to discover what they should do*. They have all attained extraordinary success by making a series of little bets.

Little Bets is based on the proposition that we can use a lot of little bets and certain creative methods to identify possibilities and build up to great outcomes. At the core of this experimental approach, little bets are concrete actions taken to discover, test, and develop ideas that are achievable and affordable. They begin as creative possibilities that get iterated and refined over time, and they are particularly valuable when trying to navigate amid uncertainty, create something new, or attend to open-ended problems. When we can't know what's going to happen, little bets help us learn about the factors that can't be understood beforehand. The important thing to remember is that while prodigies are exceptionally rare, anyone can use little bets to unlock creative ideas.

Because popular perception suggests that only certain people are brilliant creators (so much so that their feats often become mythical), the tremendous value of attaining innovations and creative outcomes through an experimental approach has long been neglected. When someone has the insight to see clearly into the future, as Bill Gates did about the emerging computer industry when he founded Microsoft, pursuing that brilliant vision with unwavering determination can produce remarkable results. However, when uncertainty replaces certainty or when we lack insight, experience, or expertise about problems, experimental innovation is a far better approach.

Bill Gates, for one, doesn't have enough expertise or insight about the problems the Gates Foundation is trying to solve in different parts of the world to know up front where their money will have the greatest impact. He must learn from hundreds of experiments in order to strategize about and prioritize his resources. One of his favorite experiments in philanthropy has been bed nets that prevent malaria. About two million people die from malaria each year, but ten-dollar bed nets that people wear over their bodies as they sleep to prevent being bitten by malaria-carrying mosquitoes have proven to be very effective at preventing the disease.

Most successful entrepreneurs, especially those who start businesses with limited capital, operate in this experimental way when trying new ideas. They think of learning the way most people think of failure. Take Bill Hewlett and David Packard, founders of one of the most innovative companies in modern history. Bill and Dave started Hewlett-Packard without knowing what they would eventually produce; they just knew they wanted to work together and to build a great company.

The entrepreneurial way of operating was the subject of

some fascinating research by Saras Sarasvathy, a professor at the Darden Graduate School of Business at the University of Virginia. She is one of the few researchers to study how entrepreneurs tend to make decisions. One of her studies, titled "What Makes Entrepreneurs Entrepreneurial," started to ripple through Silicon Valley after prominent investor Vinod Khosla, a cofounder of SUN Microsystems, posted a copy of the article on his firm's website along with the note, "First good paper I've seen."

Sarasvathy wanted to understand what decision-making paths expert entrepreneurs take to build a hypothetical business. Her sample included thirty entrepreneurs who had built companies ranging in size from \$200 million to \$6.5 billion. The founders, who came from a variety of industries, ranging from steel to semiconductors to biotechnology, worked through a seventeen-page problem set during a two-hour period.

Central to Sarasvathy's conclusions is that entrepreneurs and MBA-trained managers (whom she teaches at the Darden School) use two completely different approaches when doing something new. To illustrate this point, she contrasted two ways to cook a meal (both methods require that the chef know how to cook). The first is for a chef to begin with a specific menu, pick out recipes, shop for the ingredients, and then cook the meal in their own, well-equipped kitchen. Each step is known and can be planned sequentially: step A, followed by step B, to accomplish outcome C. Management training emphasizes this procedural planning approach, begin with a predetermined goal and use a given set of means to accomplish that goal in the fastest, cheapest, most efficient way.

Another way to cook a meal, Sarasvathy explained, is for a chef to go into a new kitchen, without having a menu or

knowing what ingredients will be there. The chef then has to rummage through cupboards in search of ingredients and piece together a meal, improvising along the way. The result may be great or it may not. The only certainty is that the outcome of the second approach will be less predictable than that of the first approach. But, importantly, entrepreneurs do not try to avoid errors or surprises. They seek to learn from them, just as chefs often arrive at new recipes through improvisation. As Sarasvathy wrote, entrepreneurial plans are "made and unmade and recast through action and interaction with others." Sarasvathy's work highlights that both approaches have their benefits. Both ways of working are valuable, but in different situations: When much is known, procedural planning approaches work perfectly well. When much is unknown, they do not.

For instance, when Howard Schultz launched what would become Starbucks, he modeled the stores after Italian coffee houses, a new concept for the United States. Schultz was definitely onto something, but the baristas wore bow ties (which they found very uncomfortable) while customers complained about the menus being written primarily in Italian as well as the nonstop opera music. What's more, the stores had *no chairs*. The Starbucks experience that emerged from the many refinements and tweaks obviously looks and feels quite different from Schultz's initial concept.

The methods of experimental innovation that I introduce in this book emerged from the study of an unlikely set of sources: from creative artists, to scrappy entrepreneurs, to military strategists, to agile software developers, to the rapidly growing field of design thinking. In researching this book, I wanted

to identify the methods that were being used by experimental innovators across a broad array of fields, from stand-up comedy to Pixar's creative processes, to find out how these creative people and organizations meet the challenge of consistently discovering new ideas and bringing them successfully to fruition. For several years, I became immersed in the empirical research on creativity and innovation.

One place my curiosity led me is to Stanford University's Hasso Plattner Institute of Design (known as the d.school). Founded by creativity and innovation masters David Kelley and George Kembel, the d.school is one of the leading institutions in the field, and a hub of creative thinking and doing. Kelley had previously cofounded the renowned consultancy IDEO, the company that developed the first Apple computer mouse. Kembel, who now leads the d.school, became my guide and collaborator, and insights from design thinking permeate this book.

Design thinking provides a set of creative methodologies for solving problems and generating ideas that is based on building up solutions, rather than starting with the answer. The field has been developed and refined over several decades, including at the renowned innovation center Xerox PARC during the 1970s and 80s, then later at such places as IDEO. As enrollment trends at the Stanford d.school show, students are flocking to design thinking to complement their more traditional training. Peter Georgescu, former CEO of ad giant Young & Rubicam, may have said it best: "This is the future."

I also conducted extensive field research at leading companies and with highly creative people, seeking to understand the nuanced inner workings of their work methods and creative processes, as well as the barriers that prevented people and organizations from using them. Through this process, I

discovered striking commonalities in the ways these people approached their work. Similar ways of thinking and work methods showed up in the ways that Pixar creates its films, the ways entrepreneurs and savvy CEOs like Jeff Bezos identify and develop new market opportunities, the ways architect Frank Gehry designs new buildings, the ways generals go about counterinsurgency strategy and training, and in the ways stand-up comedians generate new material.

These methods are decidedly *not* ways of just trying a lot of things to see what sticks, like throwing spaghetti against a wall. The most productive creative people and teams are rigorous, highly analytical, strategic, and pragmatic. They do not, though, use a formulaic model that can be followed. The ways of thinking and doing that will be introduced in the rest of the book are not a protocol; they do not add up to a step-by-step process. Rather, they are powerful aides to being productively creative that can free the mind to discover and to develop those discoveries in a wide variety of situations, which each of us can draw upon and adapt to our own situations and challenges.

Fundamental to the little bets approach is that we:

- Experiment: Learn by doing. Fail quickly to learn fast. Develop experiments and prototypes to gather insights, identify problems, and build up to creative ideas, like Beethoven did in order to discover new musical styles and forms.
- Play: A playful, improvisational, and humorous atmosphere quiets our inhibitions when ideas are incubating or newly hatched, and prevents creative ideas from being snuffed out or prematurely judged.

- Immerse: Take time to get out into the world to gather fresh ideas and insights, in order to understand deeper human motivations and desires, and absorb how things work from the ground up.
- Define: Use insights gathered throughout the process to define specific problems and needs before solving them, just as the Google founders did when they realized that their library search algorithm could address a much larger problem.
- Reorient: Be flexible in pursuit of larger goals and aspirations, making good use of small wins to make necessary pivots and chart the course to completion.
- Iterate: Repeat, refine, and test frequently armed with better insights, information, and assumptions as time goes on, as Chris Rock does to perfect his act.

For most of us, adopting this experimental approach requires a significant change in mindset. One reason for this is the way most of us have been taught. Great emphasis gets placed in our education system on teaching facts, such as historical information or scientific tables, then testing us in order to measure how much we've retained about that body of knowledge. Memorization and learning to follow established procedures are the key methods for success. Even when we are taught problem solving, such as solving math problems, the focus is generally either on using established methods or logical inference or deduction, both highly procedural in the way they require us to think. There is much less emphasis on developing our creative thinking abilities, our abilities to let our minds run imaginatively and to discover things on our own. We are given very little opportunity, for example, to perform our own, original experiments, and there is also little or

no margin for failure or mistakes. We are graded primarily on getting answers right.

Researchers and commentators have described the problem as an overemphasis on memorization and on left-brain analytical skills. The consequence is, they argue, that our right-brain capacities to create and discover get suffocated. As education and creativity researcher and author Sir Ken Robinson puts it, "We are educating people out of their creativity."

Another major factor is that, for years, organizational management has been developing methods for increasing productivity and minimizing risk and errors that tend to stifle creative experimentation. The predominant approach to management that evolved during the industrial era, known as *scientific management*, broke jobs down into specific, sequential tasks, which could then be allocated appropriate times for completion in order to optimize efficiency. Hierarchical organizations with centralized top-down decision making facilitated this process and became the norm. These methods famously allowed Henry Ford to streamline the automobile production line, first revolutionizing manufacturing and then the service businesses as well. But the emphasis on linear systems, top-down control, relentless efficiency and eradicating failure left little room for creative discovery and trial and error.

We need look no farther than General Motors to understand why the emphasis on sequential processes, regimented systems and detailed planning led to the stifling of innovative capacities, which was largely responsible for bringing GM to the verge of its death. Chet Huber, a retired thirty-seven-year veteran of the company, including as the founding CEO of the GM subsidiary OnStar, looks back on his GM tenure, work, and colleagues with great affection. But he readily acknowledges the company's crippling propensity to overplan. "There

were some *complicated* planning diagrams," he shared, his voice peaking with intonations, "There were these *crazy* diagrams where before you even got to the four-phase vehicle development process, there was a preprocess... If you put it all together with all the presumed feedback loops, it'd be a hologram that would probably take up a football field." It's not hard to see that with such elaborate, predetermined procedures to follow, employees wouldn't have the opportunity or inspiration to generate new ideas.

Huber is quick to add that GM's emphasis on sequential processes and detailed planning was the outgrowth of a lot of good intention on the part of people who wanted to make GM better. Each piece of a giant GM process diagram represented a place where someone (or some team) added a nugget of wisdom from their experiences. "There would be one more pipe on the drawing because we thought we learned something important out of the last launch cycle or that this was something that got missed, so how do we incorporate it?" Their intention was to prevent mistakes. "It was a very refined, templated process that was meant to refine one hundred years worth of knowledge," Huber recalls. Ironically, in attempting to minimize risk and reduce errors, GM's emphasis on regimented systems stymied innovation. GM was like an aircraft carrier that struggled to maneuver amid increasingly choppy waters.

One key reason for this is that the top-down, procedural planning approach is highly dependent on making predictions about the future based on past experience. GM, for example, emphasized improving on the products and the methods that had worked for it in the past, assuming that demand for its cars and designs would continue.

Throughout the business world, detailed planning became the primary method for trying to predict consumer demand,

financial costs, market conditions, and where competition would be coming from. The fact is that much of what we would like to be able to predict is unpredictable. Global market movements, political and cultural complexities, and demographic shifts constantly reshape the ground beneath us. This certainty of uncertainty is becoming ever more evident with the accelerating pace of technological change. The Internet has reduced communications barriers and allows new players from different corners of the world to rapidly emerge and compete globally. Thus, a key flaw with the top-down, central planning approach is how limited it is in allowing us to be limber and able to discover new ways of doing things.

To be sure, experimental innovation should not entirely replace linear thinking in our regular work processes. Engaging in discovery and making little bets is a way to complement more linear, procedural thinking. No one can take their eye off their core business or responsibilities, but anyone can spend a portion of their time and energies using little bets to discover, test, and improve new ideas. In this era of ever-accelerating change, being able to create, navigate amid uncertainty, and adapt using an experimental approach will increasingly be a vital advantage.

The way to begin is with little bets.