Preview edition: Chapters 1 & 2 only

Designing for

a design thinking tool kit for managers

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Designing for Growth:
a design thinking tool kit for managers

By Jeanne Liedtka and Tim Ogilvie

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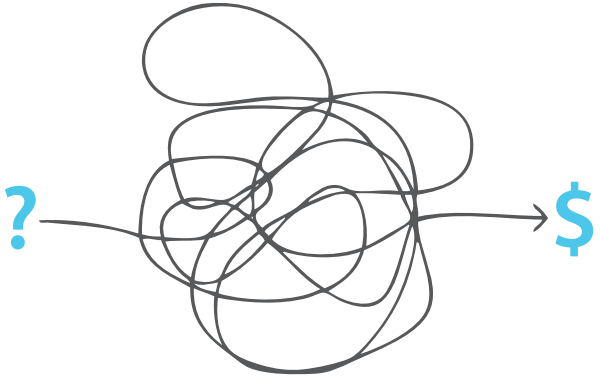
The Why and How of Design Thinking

CHAPTER ONE:

WHY DESIGN?

Every manager needs design. You can't grow a business without it. But what is it? Asked to describe design, Tim Brennan of Apple's Creative Services group drew the following picture:[1]



Design, this clever definition asserts, is simply magic. It is an utter enigma, a mysterious no-man's-land where only the brave (and the brilliant) dare tread. It mocks any idea that a formal process could exist for navigating those many hairpin turns. Sure—we'd all like to discover the equivalent of the iPod in our own businesses. But mere mortals—especially business types—are out of their league when it comes to unleashing that kind of innovation and growth. And so we throw up our hands and go back to poring over spreadsheets and market research reports in our search for the next silver bullet, the next catalyst for growth.

But don't be put off by Apple's view of design. Design has a lot of different meanings. And it turns out that the design thinking process that we are going to talk about in this book is more akin to Dorothy's ruby slippers than a magic wand. You've already got the power. You just need to figure out how to use it. Find a leader of innovation in any organization, and he or she has likely been practicing design thinking all along.

If you are a manager reading this book, get ready to roll up your sleeves—not throw up your hands. Because design thinking is actually a systematic approach to problem solving. It starts with customers and the ability to create a better future for them. It acknowledges that we probably won't get that right the first time. It does not require supernatural powers. This kind of design is absolutely safe to try at home.

And design's time has come.

We believe that the recent explosion of interest in design thinking has a lot more fueling it than Apple's success and high profile. We are looking for a new tool kit. We've come to the end of the runway on maximizing productivity and re-engineering processes. Competition has upped the ante: The Internet and the arrival of networking have made knowledge impossible to hoard. Our views of where creativity comes from are expanding: We are learning new things about our brain every day and recognizing different cognitive modes and how they perform in different contexts. Finally, the tools of design—including Post-it notes and whiteboards—have become simple and ubiquitous.

DAVE JARRETT

Think hotbed of design thinking. Think CPAs and tax accountants. Are you confused yet?

The first time you talk to Dave Jarrett, a partner at Crowe Horwath, one of the largest accounting firms in the United States, he just might ask if you've heard the joke about how you become a partner in a CPA firm. "You never get a better offer," he deadpans.

Dave joined Crowe in 1975 and spent two decades as an auditor and tax expert. For the past ten years, he has headed up a group that helps develop solutions aimed at enhancing the firm's capabilities, market recognition, sales, and profitability. And he knows how you feel.

DESIGN THINKER

"Design thinking intimidates people—it almost feels like it's a different skill set than what us normal people can do. When you think of design, your mind immediately goes to fashion, and I can't even pick out two things that should be worn at the same time. But what we're really trying to do here is make sure we're building something the way a buyer would like to have it."

Design thinking can do for organic growth and innovation what TQM did for quality—take something we always have cared about and put tools and processes into the hands of managers to make it happen.

Whether design thinking can—or should—be taught to managers is a hotly debated topic among designers. How you define design itself lies at the core of the argument. Designers bristle at the suggestion that managers can be taught enough about design to be anything but dangerous. They point to the years of specialized training that designers receive—and worry that unleashing managers to think of themselves as designers will erode the quality of and appreciation for what trained designers do. We believe that their concerns need to be taken seriously and that the way to do this is to differentiate *design* from *design thinking*.

Gifted designers combine an aesthetic sensibility with deep capabilities for visualization, ethnography, and pattern recognition that are well beyond the grasp of most of us—managers included. But when it comes to fostering business growth, the talent that we are interested in is not rooted in either natural gifts or studio training—it lies with having a systematic approach to problem solving. That, to us, defines design thinking, and it can be taught to managers.

Like any process, design thinking will be practiced at varying levels by people with different talents and capabilities. Can your average manager be transformed into Jonathan Ive, Apple's chief designer? No more than your local tennis pro can

turn you into Serena Williams. But can you improve your game? Absolutely. And having done that, we can guarantee that your appreciation for what the Jonathan Ives of the world do will have grown rather than diminished. More important, you will have a new tool kit to approach your growth challenge.

This book aims to demystify design thinking by translating "design" from an abstract idea into a practical, everyday tool any manager can profit from. Using a business perspective and business language, we'll translate the vocabulary of design, unpack the mysterious connection between design thinking and profitable growth, introduce a systematic process (complete with simple project management aids), and teach you the ten tools you'll need to marry the design approach to traditional business thinking in ways that enhance your ability to profitably grow your business. In the process, we'll introduce you to more people like Dave Jarrett, none of whom were trained in design, all of whom are using design thinking to drive innovation and growth in their organizations. People like Christi Zuber, a nurse with a passion for design, and Diane Ty, first a poly sci major, then an MBA on a mission at AARP to encourage young adults to make better financial choices—and help baby boomers get their adult kids off the payroll. All of these managers mastered design thinking. So saddle up those ruby slippers and let's get moving.

What if Managers Thought Like Designers?

But let's not get ahead of ourselves. What would be different if managers thought more like designers? We have three words for you: empathy, invention, and iteration.

Design starts with *empathy,* establishing a deep understanding of those we are designing for. Managers who thought like designers would put themselves in their customers' shoes. Of course, we all know already that we are supposed to be "customer-centered," but what we are talking about here is deeper and more personal than that. It means "knowing" customers as real people with real problems, not seeing them as targets for sales or as a set of demographic statistics around age, income level, or marital status. It involves developing an understanding of both their emotional and their "rational" needs and wants. The actor Stephen Fry (the ultimate Jeeves), writing about Apple's latest product after interviewing chief designer Jonathan Ive, noted in an April 2010 issue of *Time:*

> *"Consider for a moment. We are human beings; our first responses are dominated not by calculations but by feelings. What Ive and his team understand is that if you have an object in*

your pocket or hand for hours every day, then your relationship with it is profound, human, and emotional."[2]

Great designs inspire—they grab us at an emotional level. One of the saddest facts about the state of business is the extent to which we so often settle for mediocrity. We don't even attempt to engage our customers—or our employees—at an emotional level, let alone inspire them. Yet the difference between great designs and those that are only okay is the way the former call us to something greater.

Consider the difference between the San Francisco Bay Bridge and the Golden Gate Bridge.[3] The Bay Bridge offers a route across the water. The Golden Gate Bridge does that, too, but it also sweeps, symbolizes, and enthralls. It has, like other design icons such as the Sydney Opera House, become a symbol of the land it occupies. How many of our business inventions are that compelling? Too few.

Since design is also a process of *invention,* managers who thought like designers would think of themselves as creators. For all our talk about the "art and science" of management, we have mostly paid attention to the science part. Taking design seriously means acknowledging the difference between what scientists do and what designers and growth leaders do. Whereas scientists investigate today to discover explanations for what already is, designers invent tomorrow—they create something that isn't. To get to growth, we have to create something in the future that is different from the present. But powerful futures are rarely discovered primarily through analytics. They are, as Walt Disney said, "created first in the mind and next in the activity." This doesn't deny analysis an important role, but it does subordinate analysis to the process of invention when the goal is growth.

Great design, it has been said by Richard Buchanan, former Dean of Carnegie Mellon's School of Design, occurs at the intersection of constraint, contingency, and possibility—elements that are central to creating innovative, elegant, and functional designs.[4] But it matters greatly with which of these you start. In business, we have tended to start the growth conversation with constraints: the constraints of budgets, of ease of implementation, of the quarterly earnings focus that Wall Street dictates. As a result, we get designs for tomorrow that merely tweak today. Great design inevitably starts with the question "What if anything were possible?" After all, if growth is about invention and our assumptions about constraints bound what we can imagine, then seeing beyond these is job number one.

Consider the design of one of America's great public spaces: New York's Central Park. In 1857, the country's first public landscape design competition was held to select the plan for this park. Of all the submissions, only one—prepared by Frederick Law Olmsted and Calvert Vaux—fulfilled all of the design requirements. The most challenging—that crosstown vehicular traffic be permitted without marring the pastoral feel of the park—had been considered impossible to solve by all other entrants to the competition. Olmsted and Vaux succeeded by eliminating the assumption that the park was a two-dimensional space. Instead, they imagined the park in three dimensions and sank four roads eight feet below its surface.

Finally, design insists that we prepare ourselves to *iterate* our way to a solution, so managers who thought like designers would see themselves as learners. Most managers are taught a straightforward linear problem-solving methodology: define a problem, identify various solutions, analyze each, and choose one—the right one. Designers aren't nearly so impatient—or optimistic. They understand that successful invention takes experimentation and that empathy is hard won. So the task is one of learning.

Consider IKEA. When the company's visionary founder, Ingvar Kamprad, started out, he had only a general sense of what would become IKEA's revolutionary approach to the furniture business. Nearly every element of IKEA's now legendary business model—showrooms and catalogs in tandem, knockdown furniture in flat parcels, and customer pick-up and assembly—emerged over time from experimental responses to urgent problems. Customer pick-up, for instance, became a central element of IKEA's strategy almost by chance, when frustrated customers rushed into the warehouse because there weren't enough employees to help them. The store manager realized the advantages of the customers' initiative and suggested that the idea become permanent. "Regard every problem as a possibility," was Kamprad's mantra—and so in designing he focused less on control and "getting it right" the first time and more on learning and on seeing and responding to opportunities as they emerged.

A great park, an iconic bridge, an innovative business model—they share fundamental design principles: Don't let your imagined constraints limit your possibilities; aim to connect deeply with those you serve; seek opportunities, not perfection. But design brings more than just a set of principles; it also brings a methodology and a collection of tools that can help us realize those aspirations.

We wrote this book because we each fell in love with the idea of design about a decade ago, coming from very different places: Jeanne after spending most of her life on the business strategy side as a strategy consultant and pro-

fessor focused on organic growth. Tim as a systems engineer turned entrepreneur turned cofounder of an innovation firm. Neither of us trained as a designer. We like to say that Thomas Jefferson brought us and design together.

Design and Business: A Match Made in Heaven—or Hell?

We believe that the differences between a "traditional" business approach and a "design" approach are profound, yet the two are potentially so complementary that they can form a match made in heaven—or hell. Like opposites that attract—or repel—together they may be magic or misery.

Consider a challenge faced by a leading consumer products firm: how to think about and respond to changes in the retail marketplace over the next ten years. Suppose that two student teams—one composed of MBAs and the other of design students—tackle the issue. How might each team approach its study?

The MBAs would likely begin by researching trends in the marketplace—social, technological, environmental, and political. They'd read analysts' reports, interview industry experts, and benchmark leading retailers and competitors. They'd produce forecasts and a recommended set of strategies, complete with ROI (return on investment) and NPV (net present value) calculations. They'd deliver it all in a PowerPoint presentation.

The design students would probably approach the project quite differently. They might begin with a similar trend analysis, but they would use it to develop scenarios of possible futures

MR. JEFFERSON'S UNIVERSITY

The University of Virginia, Tim's alma mater and Jeanne's academic home for the past twenty years, provided the introduction to design for both of us. And what an introduction it was! Thomas Jefferson was the third President of the United States and author of the Declaration of Independence. He had a passionate, lifelong dedication to public education and devoted the last decade of his life to creating the University of Virginia.

He called it the "hobby of my old age … and the last service that I can render my country." Jefferson himself was personally responsible for every aspect of its design and implementation, from the architecture of its buildings and grounds to the composition of its curriculum and the selection of its faculty. It is impossible to dwell long in his beloved "academical village" and not be touched by how he used the power of design to shape the future.

Like all great designs, UVA starts out with both a challenge and a belief. The challenge—one of great concern to Jefferson and all of the founding fathers—was how to preserve a fragile democracy when the first generation of leaders had passed on. He believed that an educated electorate would make the right choices. For Jefferson, the link between democracy and education was

clear—without an educated populace, there was no hope of protecting self-government.

To the modern observer, Jefferson's genius may appear to lie in the beauty of the architecture that he created—but in reality, he took much of his architectural inspiration directly from the sixteenth century Italian architect Palladio. His true genius lay with the power of the space that he created—both physical and mental—and its ability to evoke so vividly the purpose for which it was designed. Jefferson's university was designed to be a community that rejected hierarchy, where faculty and students worked as partners to pursue the kind of learning that democracy required.

The architecture—a series of small buildings arrayed around a common—embodied this ambition. The curriculum would include the new "scientific" and "pragmatic" fields like botany and agriculture, appropriate to a democracy rather than an aristocracy, and student self-government would be the principle upon which the new university would run.

What Jefferson designed was much more than a set of buildings; it was an educational experience—of a very particular kind. All aspects of UVA's design, from the architecture to the curriculum to the selection of faculty and methods of governance, emerge out of an image that Jefferson holds of the educational experience that he committed to creating. An education for democracy. Like all great design, our campus inspires students and faculty alike as it puts us to work.

instead of spreadsheets. They would hang out in stores and talk to shoppers and employees, focusing on the shopping experience. They'd likely create some different customer personas and use the scenarios to try to model the changes in the personas' lives—and, accordingly, in their shopping habits—over the next ten years. They might sponsor a "store of the future" brainstorming session, inviting their fellow students (and offering free pizza). They would use the scenarios and personas as a starting point and build on them as a group. Ultimately, they'd present not solutions but a small number of concepts to be prototyped, with the aim of soliciting feedback from real customers and collaborators.

These obvious differences in framing, data gathering, and output signal more fundamental differences in the core assumptions and decision drivers underlying each approach. Business thinking assumes rationality and objectivity. Its decision driver is cold, clean, economic logic. Reality is precise and quantifiable. There is "truth"—and answers are "right" or "wrong." Design assumes instead human experience, always messy, as its decision driver and sees true objectivity as an illusion. Reality, for designers, is always constructed by the people living it. Decisions in this world are seen as driven by emotion more than logic; desire is seen as a more powerful motivator than reason. In this world, there is only our individual "truth"—and answers are "better" or "worse." Hence, the MBAs analyzed trend data; the designers observed the shopper's experience.

But the asymmetry goes even deeper. Even the very values on which each approach rests diverge dramatically. And this has a lot to do with messiness versus order. As one Procter & Gamble vice president explained to us, "At P&G we like neat, tidy conversations, but we realized early on that embracing design meant we were going to have to get comfortable with messy conversations." Business executives, more often than not, value order and control above all else—and structure their organizations to produce it. "At Abbott our motto is, Plan the work, then work the plan," we recall an Abbott executive telling us. No surprise there—you would, of course, expect this of people who run large organizations and are held accountable for achieving carefully forecasted quarterly performance. Ambiguity and uncertainty make them uncomfortable; they crave predictability. Innovation is just plain messy and often inefficient—there is no way around that. But ambiguity and uncertainty are like crack cocaine to designers. And so the MBAs benchmark competitors to identify what "leading edge" companies are doing today; the designers envision several futuristic worlds to prototype for and play in.

Not surprisingly, these differences in core values and assumptions translate into very different tools and practices—and people who often make each other nervous. Business thinking favors analytical approaches; decision-making processes demand "proof" that we have arrived at the "correct" answer. So the MBAs make their case with ROIs and PowerPoints. Design, in contrast, favors trying over extensive planning and is overwhelmingly experimental in its approach. Designers expect to iterate their way to increasingly "better" answers; so the designers create prototypes with paper, foam core, or video.

Finally, in business we almost always dwell in the land of either the abstract—producing pro formas and corporate visions at 20,000 feet—or the very specific (did you get that order out?). Design, as a practice, iterates not only in time but also across levels. It moves continuously back and forth between levels of abstraction, between the big picture and the concrete—and seeks comfort in the tangible. Designers produce models and prototypes that make ideas feel real, rather than spreadsheets and mission statements that dwell in abstractions. So here is where we end up:

	BUSINESS	DESIGN
Underlying Assumptions	Rationality, objectivity; Reality as fixed and quantifiable	Subjective experience; Reality as socially constructed
Method	Analysis aimed at proving one "best" answer	Experimentation aimed at iterating toward a "better" answer
Process	Planning	Doing
Decision Drivers	Logic; Numeric models	Emotional insight; Experiential models
Values	Pursuit of control and stability; Discomfort with uncertainty	Pursuit of novelty; Dislike of status quo
Levels of Focus	Abstract or particular	Iterative movement between abstract and particular

It seems, then, that business is from Mars and design is from Venus (to borrow an oft-used phrase). So why even try to put them together? Because—like most opposites—they have a lot to offer each other.

You're Not in Kansas Anymore

In today's increasingly fast-paced and unpredictable environment, business needs design precisely because of all the differences we've noted:

First, design is all about action, and business too often gets stuck at the talking stage. Let's face it—despite all our planning and analyzing and controlling, business's track record at translating its rhetoric into results is not impressive. The academics who study these things estimate that only somewhere between 10 percent and 60 percent of the promised returns of new strategies are actually delivered.[5] Not much of a performance, even at the high end of the estimates. Practices that consume enormous amounts of our time and attention—like writing mission statements—produce discouraging results. One recent global study found that an impressive 82 percent of the 300-plus firms surveyed had mission statements. Unfortunately, less than half the managers interviewed thought that those statements had anything to do with the reality of their day-to-day business.[6]

JEREMY ALEXIS, DESIGNER AND PROFESSOR

Illinois Institute of Technology

"When people ask me what design thinking is, I always go back to Gregory Treverton, a policy analyst at the Rand Corporation, who noted, 'There are two types of problems. There are mysteries and there are puzzles. Puzzles are problems where when you have the right level of data disclosure, when you have that absolute number, the problem can be solved.' In his example, it's finding Osama Bin Laden—if we had GPS coordinates, we'd know where he is.

There's another category of problem called mysteries, where there is no single piece of data, there is no level of data disclosure that will actually solve a problem. In fact, there might be too much data and it's about interpreting all the data that's there. And that's a richer, harder problem that requires more systems thinking, that requires prototyping and piloting. That's really where the designers are often most adept. Treverton's example here is rebuilding Iraq: There's no single piece of data that will make this task any easier. It's just about trying different things and experimenting and trying to move forward toward a solution … We'll never have enough information. We'll never have the right information. We just have to interpret what we have now and do the best that we can. It's the mysteries that get designers excited.

Too often in the corporate world there's the belief that we can use these PowerPoint reports and charts and statistically significant surveys to generate ideas. That may work for incremental improvements, but if you want something more disruptive you have to go into the field and find something proprietary and experience it for yourself. The old joke is that a lawyer will not ask you a question that he or she does not already know the answer to. It's just the opposite for designers. We ask questions only if we really have no idea: We want to be sponges and soak up ideas from the people we're working with. Inefficiency and ambiguity are both conditions of the design process. There has to be time for reflection and disagreement. These are core to great, new, big ideas. And they are also what makes processes inefficient. It's important to have time within your process to take a step back and look at what you created and consider the connections you're not seeing. You also need time for disagreement because good design thinking is about bringing together a diverse set of inputs.

If you want efficiency, you get everybody who thinks the same way and they'll get to a decision quickly. And that works 80 percent of the time. But for that 20 percent of the time when you need something disruptive, innovative, and creative, you're going to have to put up with a little bit more ambiguity."

All of this empty talk is making it harder and harder to get anything to actually happen—especially in big organizations. We tell managers to be "customer centered" but cut their travel budgets. We ask them to take risks and then punish them for mistakes. And we give them ambitious growth goals and only Excel spreadsheets to achieve them. Reality doesn't work that way. Getting new results requires new tools—and design has real tools to help us move from talk to action.

Second, design teaches us how to make things feel real, and most business rhetoric today remains largely irrelevant to the people who are supposed to make things happen. Executives can buy and sell, they can hire talent, they can talk to Wall Street—but they can't change an organization without a lot of help. The only people who will care enough to help are those for whom the strategy is real. Things that feel real to people, as psychologist William James pointed out over a century ago, are both interesting and personally significant. They are *experienced*, not just pronounced. While managers are showing spreadsheets—the ultimate abstraction—designers are telling stories. We have a lot to learn from design about how to tell a story that engages an audience, captures the experience dimension, and makes the future feel real. Look at any presentation created by anybody at a design firm and compare it with the PowerPoint dreck you are forced to sit through every day at work. Enough said.

Third, design is tailored to dealing with uncertainty, and business's obsession with analysis is best suited for a stable and predictable world. That's the kind we don't live in anymore. The world that used to give us puzzles but now dishes up mysteries. And no amount of data about yesterday will solve the mystery of tomorrow. Yet, as we've already noted, large organizations are designed for stability and control, and are full of people with veto power over new ideas and initiatives. They are the "designated doubters." The few who are allowed to try something new are expected to show the data to "prove" their answer and get implementation right the first time.

Designers have no such expectations. Uncertainty is mother's milk to them. They thrive on it—hence their enthusiasm for experiments and their patience with failure. Design teaches us to let go and allow more chaos into our lives. Designers lean into uncertainty, while managers often deny or fight it. Not all managers, though. When we studied managers who had succeeded at organic growth, we found a distinctly designer-oriented attitude toward uncertainty.

But it's not raw courage that sets designers apart—it is having a process they have faith in. As one designer told us recently about what he does when he's unsure he can pull off a particular challenge: "I trust the process. It has surprised me many times before." Acceptance is far superior to denial in a world in flux, but success takes courage and

more than just a positive attitude. Designers have developed tools—such as journey mapping and prototyping—to help them actively manage the uncertainty they expect to deal with.

Fourth, design understands that products and services are bought by human beings, not target markets segmented into demographic categories. It is easy in business to lose sight of the real people behind the "demand." The reality of human beings and their needs fades as they are tabulated and averaged into categories, reduced to the status of preferences in a conjoint analysis. Lost with that reality is the deep understanding of needs—often ones that aren't even articulated—that is the starting point for profitable growth. This messy reality—that behavior is driven by more than economic logic—is something that designers understand well. They master the skills of observation, of understanding human beings and their needs, while managers learn mostly to evaluate, an activity that rarely involves the kind of empathy that produces fresh insights. Professional doubters are much better at judging than creating. Dr. Alan Duncan at the Mayo Clinic noted: "Until design thinking came to the Mayo Clinic, we were better at poking holes in new concepts than filling them."[7]

For all of these reasons, it's easy to get swept up in the lure of design and the vilification of business as usual, but let's remember why business looks like it looks and acts like it acts. Managers are stewards of other people's resources, so there will always be a need for careful analytical processes that justify strategic investments and for the people whose natural inclinations lie

THE CATALYSTS

Over the past four years a group of colleagues, including Jeanne, have studied managers who have successfully achieved organic growth in mature businesses. They went inside some of America's most prestigious companies to dig into the details of how 50 of these managers achieved their success. They named them the "Catalysts" because, like chemical catalysts, they made things happen—quickly—that wouldn't have happened without them, mostly by virtue of their ability to skillfully navigate in a world of uncertainties and limited resources. They taught us a set of growth lessons.[8]

You don't have to search far and wide to find opportunities. Right under your nose there are opportunities to create better value for existing customers that will enhance your relationships with them. You just have to know your customers very well to see them.

You don't have to bet big in order to be successful. In fact, big bets often cause failure. Place small bets fast, and learn learn learn.

Speed thrills. An obsession with speed drives a surprising and powerful array of positive consequences. Overcoming the lethargy of "business as usual" pays off.

SIX THINGS MANAGERS KNOW … THAT ARE DEAD WRONG

With or without the benefit of MBA coursework, professional managers tend to follow a set of maxims that simplify their professional lives. Sayings like "Keep your boss in the loop" and "It's sometimes better to beg forgiveness than to ask permission" are good examples. Unfortunately, some of the old, reliable tenets don't work anymore. Here are six common management myths that will definitely make your life more difficult.

Myth 1:
Don't ask a question you don't know the answer to.

This one is borrowed from trial lawyers, and it traveled into mainstream business because it always seems career-enhancing to look smart. Unfortunately, growth opportunities do not yield easily to leading questions and preconceived solutions. A better maxim for growth leaders is:

Start in the unknown.

Myth 2: Think big.

There are always pressures to be sure an opportunity is big enough, but most really big solutions began small and built momentum. How seriously would you have taken eBay (online auctions?) Or PayPal (online escrow?)? In an earlier era, FedEx looked like a niche market. To seize growth opportunities, it is better to start small and find a deep, underlying human need to connect with. A better maxim for growth leaders is:

Focus on meeting genuine human needs.

Myth 3:
If the idea is good, then the money will follow.

Managers often look at unfunded ideas with disdain, confident that if the idea were good it would have attracted money on its own merits. The truth about ideas is that we don't know if they are good; only customers know that. Gmail sounds absurd: free e-mail in exchange for letting a software bot read your personal messages and serve ads tailored to your apparent interests. Who would have put money behind that? The answer, of course, is Google. In that light, a better maxim for growth leaders is:

Provide seed funding to the right people and problems, and the growth will follow.

Myth 4: Measure twice, cut once.

This one works fine in an operations setting, but when it comes to creating an as-yet-unseen future, there isn't much to measure. And spending time trying to measure the unmeasurable offers temporary comfort but does little to reduce risk. A better maxim for growth leaders is:

Place small bets fast.

Myth 5: Be bold and decisive.

In the past, business cultures were dominated by competition metaphors (sports and war being the most popular). During the 1980s and 1990s, mergers and acquisitions lent themselves to conquest language. Organic growth, by contrast, requires a lot of nurturing, intuition, and a tolerance for uncertainty. Placing bold bets falls well short of our proposed maxim:

Explore multiple options.

Myth 6:
Sell your solution.
If you don't believe in it, no one will.

When you are trying to create the future, it is difficult to know when you have it right. We think it is fine to be skeptical of your solution, but be absolutely certain you have focused on a worthy problem. You'll iterate your way to a workable solution in due time. In this case, we propose two design-based maxims:

Choose a worthwhile customer problem.

Let others validate.

in that direction. The organization's "designated doubters" may slow down innovation, but they play an important role in prudent decision making (wouldn't we have loved some more risk-averse doubters in on the Wall Street conversations that got so creative with innovative financial instruments like derivatives?).

An unavoidable but healthy tension exists between creating the new and preserving the best of the present, between innovating new businesses and maintaining healthy existing ones. As a manager, you need to learn how to manage that tension, not adopt a wholly new set of techniques and abandon all of the old. The problem in many established organizations today is not that our analytic approaches are bad—it's that they are all we've got, and so, like the young boy with a hammer, everything looks to us like the head of a nail.

The future will require multiple tools in the managerial tool kit—a design suite especially tailored to starting up and growing businesses in an uncertain world, and an analytic one suited to running established businesses in a more stable one—not two opposing sets wielded by warring groups of people who can't communicate with each other. For some managers, a design approach seems natural. But for most it isn't, in part because managers have literally been taught to do the wrong thing when faced with the uncertainty that surrounds growth.

They've been told to "think big" and not waste their time on the small stuff, to "prove" the value of new ideas using extrapolated historical data, to sit in conference rooms and show

PowerPoints instead of finding a customer in the real world to partner with on a small experiment. Why? Because, again, we've built mind-sets and skill sets attuned to dealing with predictability and control. Not surprisingly, these modes of thinking and behaving get in the way when the environment turns unpredictable and uncertain—the place that growth and innovation inevitably call home. Sadly, managers who rely solely on what they have been taught won't achieve the innovation that their career success depends on.

What managers need is not a right brain transplant that throws the old left brain tool kit away— they need to be taught some new approaches to add to the tool kit they've already got. So before we throw out the baby with the bath water, let's recognize that business as usual can help managers do things designers have trouble with. Design needs business thinking for good reasons:

First, because novelty does not necessarily create value. The flip side of the defense of the status quo because of its familiarity is the pursuit of novelty only because it's new. Profitable growth requires ideas that are not only new but that create value for somebody because of that newness.

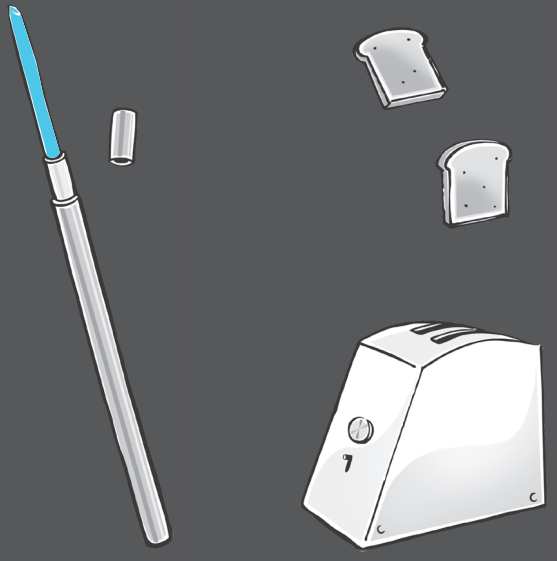
Second, because even value creation is not enough. Businesses, to survive, must care about more than just creating value for customers. It is an important, but insufficient, first step. To survive long-term, businesses need to be able to execute and to capture part of that value they create in the form of profits. This requires thinking about issues like how defensible your new idea is against competitors' intrusion and how scalable it is: Can we translate from small experiment to significant business without messing up the recipe? Understanding the value capture piece is often hard for designers but critical to designing profitable new organizational futures.

And third, because how many more stylish toasters and corkscrews do any of us need? Cool stuff is great, but design has the potential to offer so much more. Design has the power to change the world—not just make it pretty. And businesses are some of the most powerful institutions on earth today. We'll build a better planet only if we meld these two ways of working and use them to drive new futures that matter.

So—can business and design build a future together? Let us tell you why we are optimistic that they can. First, organizations similar to yours are doing it right now and making it work, with solid results. And while we've emphasized the differences in our discussion, there are some shared values as well. There is a movement toward convergence around some of the most important questions of all: Why are we here? What is our purpose? Designers have learned

AN ABSURDIST'S TAKE ON THE LURE OF "MORE NEW COOL STUFF"

As proof that design thinking is ready for a new challenge beyond the making of cool products, we offer Exhibit A: Freddie Yauner's line of extreme (and extremely cheeky) products called Because We Can. *Yauner is a 2007 graduate of London's Royal College of Art, and his product line includes:*



1. A lipstick that lasts an entire year (it is nearly 1 meter long).
2. A clock that tells time so accurately that it is impossible for the human eye to read the last two digits (it comes with an optional camera to capture an image of those two digits so you can know precisely what the time was a few seconds ago.
3. Our personal favorite, the Moaster, a toaster that launches the toast up to 5 meters in the air.

When asked what inspired him to create these objects, Yauner revealed his subtext:

> "Because we can do a thing doesn't mean we should do a thing."

His satirical aim is to poke holes in the notion of "the biggest, the best, the fastest," as a critique of the current state of design and consumerism. The discipline of design, Yauner believes, is ready to address some of the world's most challenging problems, rather than simply produce "objects that pretend to make us better or fulfill our dreams."[9]

that it's not all about cool gadgets and $200 trash cans. Business has been taught the painful lesson that there are some serious downsides to managing the numbers and chasing quarterly earnings per share growth as if it were the holy grail. Increasingly, we are recognizing that the fundamental measure of success—in design and business—is whether we are really creating value for somebody out there. Is somebody's life better (along some dimension of their choosing) because of our efforts? Without that, sustainable profitability is a mirage.

There's also the data thing in common. Sure, we know that managers love it—but there is a pervasive myth that designers don't, that design is synonymous with "winging it." Maybe when practiced by celebrity architects and fashion divas it is, but in the trenches, design is every bit as data-driven as traditional management approaches. It is just a different kind of data: Good designers take the time to make their ideas concrete and go out and get better data from the real world rather than extrapolating data from the past. In doing so, they belie another popular misconception—that a design approach is riskier than a traditional business approach. Quite the opposite is true: Managers need to accept that their basic belief that "analysis equals reduced risk" is just plain wrong in the face of uncertainty. Hiding in your office using questionable numbers from the past to predict the future is just about the riskiest thing you can do.

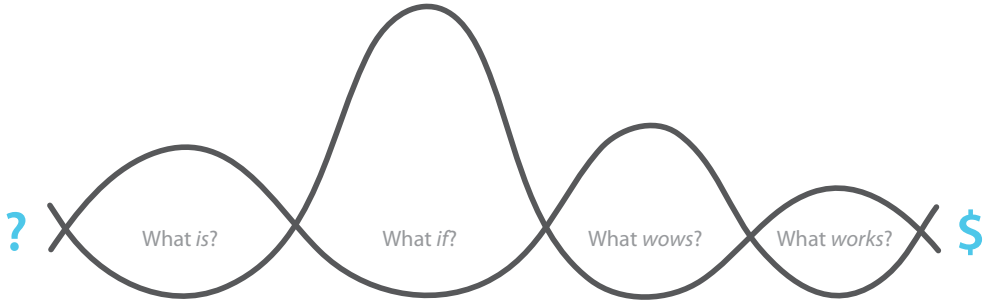
Uncertainty comes with the territory when your goal is growth. You can't avoid it or deny it and get the growth results you want. But that doesn't mean that you are powerless to do anything about it. You can't make it go away, but you can manage it rather than allow it to manage you.

Let's look closer at how the process and tools of design can help you minimize risk and maximize opportunity in this crazy world of ours.

CHAPTER TWO:

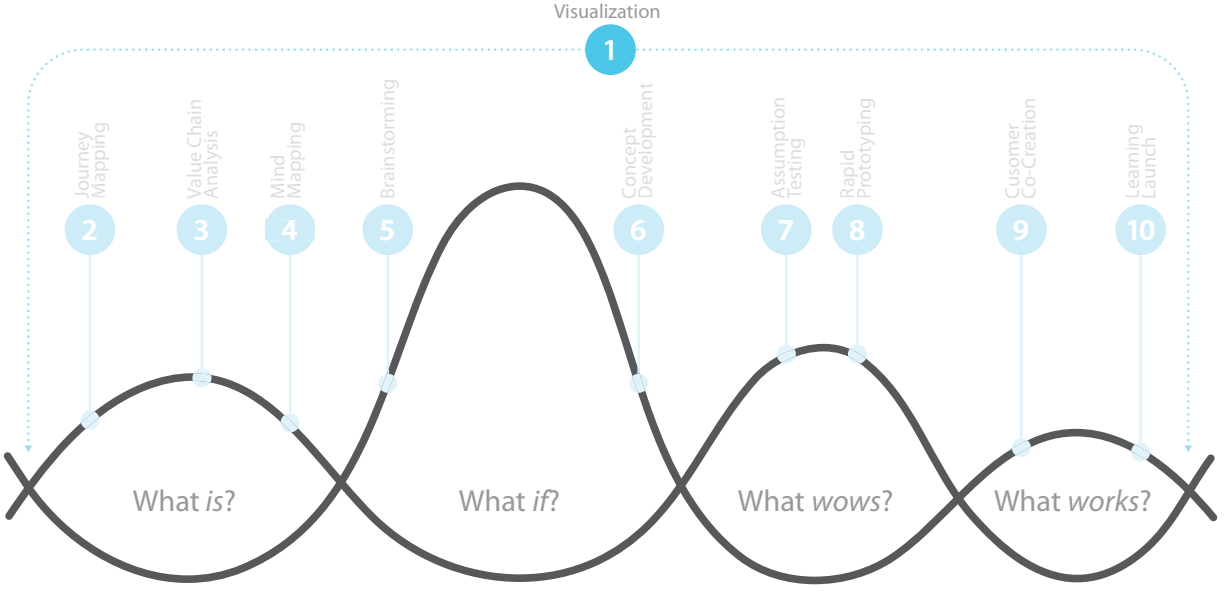
FOUR QUESTIONS, TEN TOOLS

Remember the drawing of the design process in Chapter 1? Here is ours:



We start and end in the same place as Apple's Tim Brennan, but we've untangled the hairball into a manageable process. Despite a lot of fancy vocabulary like "ideation" and "co-creation," the design process deals with four very basic questions, which correspond to the four stages of the process: **What *is*? What *if*? What *wows*?** and **What *works*?** The **What *is*** stage explores current reality. **What *if*** envisions a new future. **What *wows*** makes some choices. **What *works*** takes us into the marketplace. The widening and narrowing of the bands around each question represent what designers call "divergent" and "convergent" thinking. In the early part of each stage of the design thinking process, we are progressively expanding our field of vision, looking as broadly and expansively around us as possible in order not to be trapped by our usual problem framing and pre-existing set of solutions. After we have generated a new set of concepts, we begin to reverse the process by converging, progressively narrowing down our options to the most promising.

There are ten essential tools that a design thinker uses to address the four questions, to navigate this pattern of divergent and convergent thinking. These are the tools you need to create new possibilities and (equally important) reduce the risk as you manage the inevitable uncertainty of growth and innovation. The rest of this book will unpack each of these stages and tools, and help you apply them to your own growth challenges. First, we want to look at how the process unfolds across the four questions, and how each tool fits within it, acknowledging that this model imposes an artificial linearity on a very fluid process.



As we get started, we want to call your attention to a very special design tool: **visualization (tool 1)**. This is really a "meta" tool, so fundamental to the way designers work that it shows up in virtually every stage in the process of designing for growth. Often, visualization is integral to the other tools we will talk about. It is an approach for identifying, organizing, and communicating in ways that access "right brain" thinking while decreasing our dependency on "left brain" media such as numbers. Visualization consciously inserts visual imagery into our work processes and focuses on bringing an idea to life, simplifying team collaboration and (eventually) creating stories that go to the heart of how designers cultivate empathy in every phase of their work and use it to generate excitement for new ideas.

What *is*?

Step Away from That Crystal Ball

All successful innovation begins with an accurate assessment of the present, of current reality. We save the crystal ball for later. Sounds counterintuitive, doesn't it? When we think of something new, we usually think of the future—not the present. Why not start there?

For a lot of reasons: First, we need to pay close attention to what is going on today to identify the real problem or opportunity that we want to tackle. A lot of managers throw away all kinds of opportunities for growth before they even get started by framing the problem too narrowly. For years, product developers at P&G focused on improving the detergents that were used to clean floors. One day they realized (with the help of design thinking) that what their customers really wanted was cleaner floors, and that could be achieved through means other than better detergents—such as a better mop. That insight produced a runaway bestseller in the form of the Swiffer, a growth initiative that revolved around a product invented in the middle ages (if not before). Fruitful searches go back to the basics: What is the job to be done?

A funny thing often happens as we pay closer attention to what customers are up to—we find that the clues to the new future lie in dissatisfactions with the present. And not just when the innovation you are looking for is incremental. Ultimately, growth is always about solving customers' problems—even

THE TEN TOOLS

1. **Visualization:** using imagery to envision possibilities and bring them to life
2. **Journey Mapping:** assessing the existing experience through the customer's eyes
3. **Value Chain Analysis:** assessing the current value chain that supports the customer's journey
4. **Mind Mapping:** generating insights from exploration activities and using those to create design criteria
5. **Brainstorming:** generating new possibilities and new alternative business models
6. **Concept Development:** assembling innovative elements into a coherent alternative solution that can be explored and evaluated
7. **Assumption Testing:** isolating and testing the key assumptions that will drive the success or failure of a concept
8. **Rapid Prototyping:** expressing a new concept in a tangible form for exploration, testing, and refinement
9. **Customer Co-Creation:** enrolling customers to participate in creating the solution that best meets their needs
10. **Learning Launch:** creating an affordable experiment that lets customers experience the new solution over an extended period of time, to test key assumptions with market data

if they don't yet know that they have one. But if you pay close enough attention to their lives and their frustrations, you might see what they don't. You've got to meet your customers where they are today in order to take them where you think they need to be. So the most promising place to start any growth search is to find out what customers don't like about today—and identify the trade-offs they'd rather not have to be making.

This is precisely the approach that executives at Pfizer Consumer Healthcare used to address one of their growth challenges. Nicorette, the company's leading smoking cessation product, had reached a plateau. Pfizer was unhappy with Nicorette's performance, in every sense of the word. Its sales and profits had stagnated. Perhaps even more disturbing—it just didn't seem to be working very well. Pfizer executives estimated that smokers made seven unsuccessful attempts before they finally kicked the habit. Not good enough, in their view. So Pfizer set a goal of growing the brand significantly—in both sales and performance. In contrast to a "business as usual" approach, the Pfizer team chose to use design thinking to find growth.

The Nicorette team started by selecting a group of customers to get to know better. Pfizer executives wanted to eliminate the lengthy process involved in gaining FDA approval for a new product, so they decided to focus in Europe, on a group of customers who were likely to be open to change: young smokers. In taking a design thinking approach, the Pfizer executives committed themselves to developing a deep understanding of the underlying behaviors of these smokers—beyond the

CHRISTI ZUBER

Christi Zuber describes herself as "a nurse with a passion for design." After practicing nursing in outpatient surgery and home health, she got a master's in Health Administration and joined Kaiser Permanente, one of the largest health care providers in the United States.

Christi was first exposed to design when one of Kaiser Permanente's executives saw the infamous IDEO shopping cart video. He asked Christi if IDEO's design thinking methodology could be replicated in-house at Kaiser Permanente. Maybe so, she thought. So, she recruited a handful of pioneers (none with a design background) and took on her first project, looking at prenatal services and the journey of an expectant mother.

DESIGN THINKER

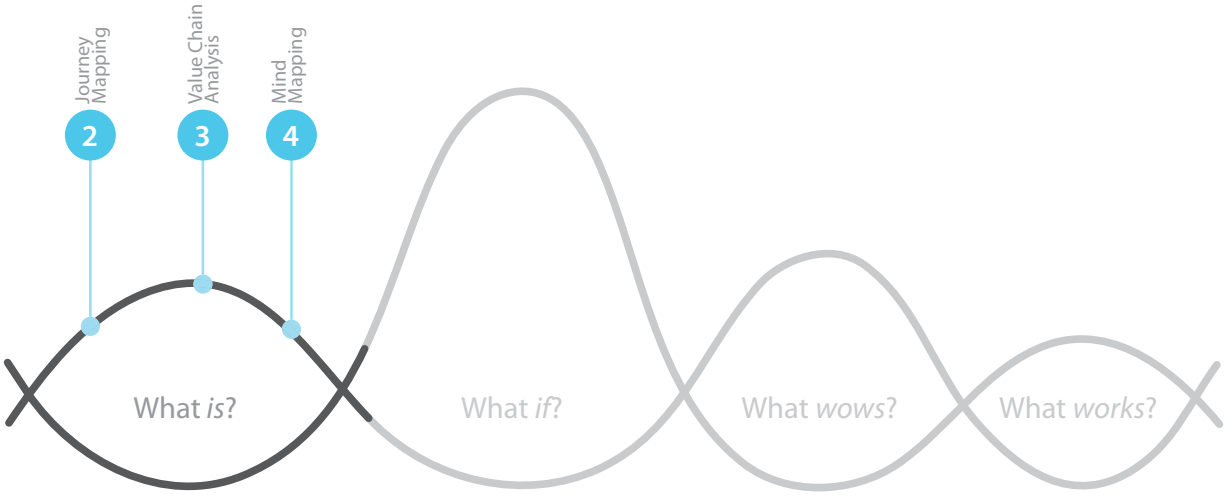
> "A lot of us are taught critical thinking—and the belief that if we go into a conference room with enough intelligent people we can come out with the perfect answer. Doing this made me realize that there is never a perfect answer, and you won't come up with one that is close by sitting in a conference room. You've got to get out and get hands-on with what you are trying to do. You've got to be involved with the people you are trying to change the experience for, to understand what their real needs are."

simple fact that they were chemically addicted to nicotine. They observed their daily lives, following them home and to their offices, trying to understand how both their cigarette habit and their attempts to quit fit into the bigger picture of their lives, the meaning these held for them. This research uncovered a surprising insight: The smokers who wanted to quit did not think of their habit as a medical problem. They didn't want to take pills to "cure" it. Instead, they viewed smoking as a lifestyle choice they had made and wanted to gain more control over. They believed that, one day, they would make a different choice, quitting eventually. Once Pfizer managers understood how their customers framed the smoking cessation issue, they felt confident that they would be able to design more effective offerings for them.

In Section II of this book, we look in-depth at exploring the present. First, we focus on the customers we hope to serve. Design offers a number of ethnographic tools, such as customer **journey mapping (tool 2),** to help us assess an idea's potential for value creation. This tool teaches us how to "follow customers home" and develop a deep understanding of their lives and the problems they struggle with, so that we can bring our organizational capabilities to bear on the ones in our sweet spot.

It is also important in our explorations to assess the potential for value capture (that is, profitability). So we need to do a deep dive on the value chain in which this new idea is likely to be implemented. Who are the powerful players? What are their incentives? Will they want and be able to help us? Accurate

information on your organization's own capabilities and resources (and that of key competitors) is also essential. And we'll want to recognize early on the capabilities we are missing and locate the right partner to provide them. All this involves a **value chain analysis (tool 3)**.



In our Pfizer example, the research produced important insights, not just into how smokers framed their "problem" but also around the larger issue of what it took to kick the habit. The Pfizer team realized that Nicorette usually did not work as well in isolation; success involved a multipronged program involving counseling, hypnosis, or some kind of clinic or support group. None of these seemed like opportunities that would leverage the organization's strengths. Pfizer would need to position itself in a new value chain, alongside partners that could provide complementary offerings.

When do you know that you've explored enough? This is always a judgment call. There is a deluge of low-quality information available from sources like the Internet. But high-quality information usually requires field research, which is expensive and time consuming, so we don't want to chase data we don't need. Figuring out what you need is not always easy. But keep in mind that the primary objective in this exploration stage is not to build a "business case" for any particular idea. That comes later. The purpose here is to prepare to generate ideas—not evaluate them.

Designers have come up with a number of tools for looking for patterns in and making sense of the wealth of data we've amassed in this exploratory stage. One approach is what we call **mind mapping (tool 4)**, which helps organize the mass of information we've collected and draw insights from it about the qualities of the innovations we need. We then use these design criteria to generate ideas in the next stage.

What *if*?

Pursue Possibilities

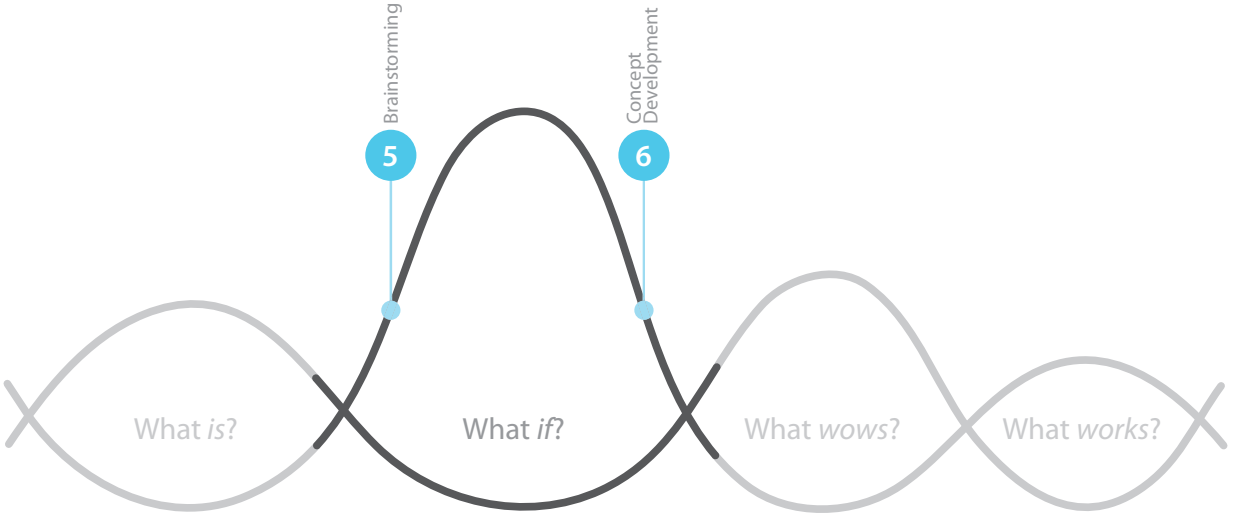
Having synthesized the data and identified emerging patterns, ideas begin to pop into our heads of their own volition. We start to consider new possibilities, trends, and uncertainties. Even without consciously trying, we are beginning to develop hypotheses about what a desirable future might look like. And so it is time to move from the data-based exploratory **What *is*** stage to the more creativity-focused question, **What *if*?** We'll do this in Section III.

At this stage, we are staring the future in the face. And we are tempted to ask, "Where did I put that crystal ball?" We begin to wonder (borrowing the words of historians Richard Neustadt and Ernest May) where the future might divert from the familiar flows of the past, how our insights could translate to new possibilities.[10] Designers call this stage *ideation*.

To generate truly creative ideas, it is crucial to start with possibilities. Often in business, in our attempts to be "practical," we start with constraints. This is deadly to breakthrough thinking. If we start by accepting all the things that don't allow us to do something better, our designs for tomorrow will inevitably look a lot like those for today. Our only hope for real creativity is to ignore some key constraints in order to identify a new set of possibilities. Then the real creativity kicks in—figuring out how to get those constraints out of our way. It takes a lot of momentum to do this—and that gets created in a good possibilities discussion that energizes the hard work of overcoming constraints. In many of the business innovations we have been involved with, the creativity that really matters lives in *how* the new future was accomplished, not *what* it looked like. As poet Eric Hoffer observed, there are few incentives to creativity more powerful than being told that you cannot have your own way.

During the **What *is*** stage, we looked at how customers currently frame their problems and the mental models and constraints that we impose on them. Now we'll use this information to formulate hypotheses about new possibilities.

Pfizer executives hypothesized about a new approach to reaching out to customers: What if, instead of presenting doctors in lab coats helping smokers with a medical problem caused by a chemical addiction, the company could offer coaches in sweat suits encouraging smokers to adopt a different training regimen? Pfizer knew that it also needed to incorporate Nicorette into a multifaceted smoking cessation program that would address not just the addiction but broader lifestyle choices. The company hoped to find a way to achieve this without investing in bricks-and-mortar elements, like health clubs and clinics. Eventually, the team found a small firm in Scandinavia that had developed a behavior modification program based on tailored reminder messages, delivered via cell phones.



We will approach the ideation challenge using a familiar tool, **brainstorming (tool 5)**, although we will apply it with more structure than the free-form approach often used. A disciplined approach to brainstorming is crucial to overcome its inherent pitfalls. A key reason that brainstorming is unfulfilling is the lack of a formal process to convert the output into something valuable. Another design thinking tool we introduce here, **concept development (tool 6)**, will take the output of the brainstorming process, organize it into coherent clusters, and architect the most compelling clusters into a robust "concept." We moved from data to insights in our first phase; in this one, we'll move from insights to ideas to concepts. Ideas often fit onto a Post-it note, but a concept requires a poster.

DIANE TY

Diane Ty spent ten years at American Express, in product marketing and new product development. With an undergraduate degree in political science and an MBA from the Wharton School, she had no formal exposure to design until she went to work for AARP and took on the challenge of helping twenty-somethings think about retirement — using design thinking tools to get there.

Diane didn't want to fall into the trap of brainstorming many ideas that would never be pursued. For her, the value of the design thinking tools is in the clear steps to pursue, improve, and validate concepts with users.

> "My background is very consumer focused. I have experienced the classic ideation several times, the kind where you bring together a bunch of colleagues and you brainstorm lots of different ideas. I was always disappointed when you got to the point of trying to see if any of the ideas were actually feasible, able to be implemented. Design thinking was an approach that was interesting to me because it was different from typical ideation."

DESIGN THINKER

Now, having developed some hypotheses (in the form of concepts) about new possibilities for creating value for our customers that might lead to profitable growth, we'll begin to think systematically about prioritizing the concepts we have come up with and figuring out what wows.

What *wows*?

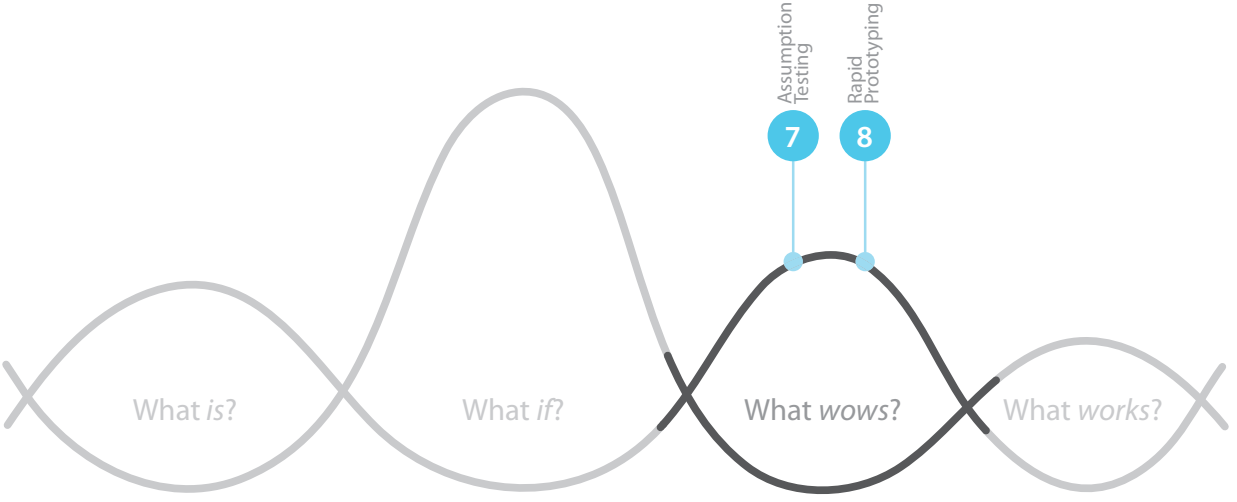
Find the Sweet Spot

If all has gone well in the preceding stages, we probably have far too many new concepts to move forward all at once. A firm we worked with recently generated more than 300 ideas of interest, which they narrowed down to 23 concepts. Of these, only five were eventually moved forward into marketplace testing during the **What *works*** stage. Clearly, much prioritizing must be done. We need to make some choices. And so in Section IV we move from our **What *if*** hypothesis-generating mode to a **What *wows*** strategy for culling our concepts down to a manageable number. We are looking for those that pack a potential "wow," that hit the sweet spot where the chance of a significant upside in customer value meets attractive profit potential. This is the "wow" zone.

This necessitates starting with some kind of evaluation of the only data we've got—data about today. Again, keep in mind that we are not "proving" the value of an idea; we are just ready to do some thought experiments to begin to assess what the business case might look like. Because it is often difficult to assess the long-term potential of a new concept, we want to tread carefully so that we don't unintentionally favor the incremental concepts and dismiss the more radical ones.

The good news is that we have an approach at our disposal that has been little used in business but is far more useful in assessing early-stage innovations than the much maligned but still commonly used metrics like return on investment (ROI) and payback. This is the good old scientific method. The scientific method uses both creative and analytic thinking. That is what makes it such a useful tool when we want to be imaginative in the search for possibilities and rigorous in figuring out which ones to pursue. Unlike brainstorming, it doesn't ask us to leave our analytic minds at the door. It invites both the left and the right brain into the process, and it is custom-made to deal with situations involving a lot of unknowns. It accomplishes all of the above by treating our new concept as a hypothesis and then testing it.

It starts with the hypotheses generated by the **What *if*** question we've just talked about. Then it takes these new possibilities (which are really educated guesses about something we think is likely to be a good idea) and tests them by asking "Under what conditions would that hypothesis in fact be a good business?" Or—worded differently—"What would need to be true for my concept to be a good one?" The idea is to surface and test the assumptions underlying each hypothesis. The hypotheses that "pass" this first set of tests are good candidates for turning into real experiments to be conducted in the marketplace. And so **assumption testing (tool 7)** is one of the most potent arrows in the designer's—and the manager's—quiver. Remember, the goal here is not uncovering "truth"—it is making better choices under conditions of uncertainty.



All design is essentially hypothesis driven, which, in the design world, is shorthand for saying that the solutions generated are the outcome of an iterative rather than a linear process. That is, design starts with a tentative solution and expects to improve it through experimentation. Think of an architect's progress through a series of representations of his or her work—sketches, to cardboard models, to wooden models, to perhaps 3D models these days—all before a single shovelful of dirt has been lifted at the construction site.

So having tested our assumptions as carefully as we can, given existing data, it is time to move to the real thing—experimentation in the marketplace, which allows us to collect real-time data on our new concept. In order to do

this, we need to take the concepts that have successfully passed through our screening process and translate them into something actionable—a prototype. **Rapid prototyping (tool 8)** a new business idea seems like a challenging task. Even the words sound formidable. But all we are talking about here is taking the concepts generated in the **What *if*** stage that have passed our screening tests and turning them into something concrete enough to spur conversations with important stakeholders (like customers and partners). Our intent here is to create visual (and sometimes experiential) manifestations of concepts. By giving our concepts detail, form, and nuance, we can better facilitate meaningful conversation and feedback about what needs improvement.

Prototyping should be robust and fast. Designers talk about "low-fidelity" prototypes, which are just good enough to share with those whose opinions we value. This is all we need, because we prototype to *learn* rather than to *test* a theoretically finished product. This allows us to make mistakes faster, identifying areas that can be improved while agreeing on what's working effectively. A strong prototyping phase can identify and correct potential problems and will ensure a smoother implementation. As Frank Lloyd Wright noted, it's easier to use an eraser on the drafting table than a wrecking ball on the building site. Regardless of the form that prototypes take, the focus is on capturing details of how the model will work and how people will experience it. Remember the goal: creating a compelling story that makes sense and makes the idea feel real to your collaborators.

At Pfizer, the team created a prototype of a new behavior modification program by combining the Scandinavian firm's IT platform, tailored to smoking cessation, with other elements of the business model, such as increased user interactivity and social networking elements like family support. Each of these elements was prototyped using tools like screen shots and story panels. Customers were asked to walk through the interfaces and provide their reactions to the design team.

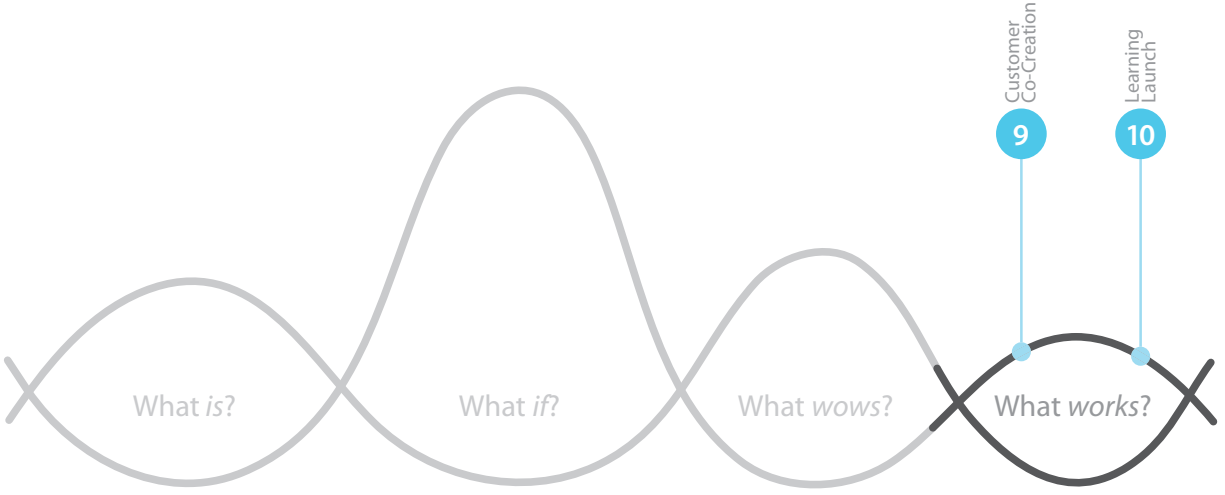
What *works*?

Time to Get Real

Finally! We are ready to launch and learn from the real world. First we'll try out a low-fidelity prototype on some customers and see how it goes. If it succeeds, we'll build a higher-fidelity prototype of our idea and see if any customers are willing to part with their money for it. This is our focus in Section V.

A particularly powerful approach to determining what works involves inviting the customer into the conversation in an active, hands-on way. The tool we'll use here is **customer co-creation (tool 9)**. There is no more effective way to reduce the risks of any growth initiative than to engage customers in designing it.

Improved prototype in hand, we are now ready to move into the marketplace. To accomplish this, we will offer a tool we call a **learning launch (tool 10)**, which moves your developing concepts into the field. As you design the launch, you will want again to be explicit about the search for disconfirming data. This is the information that disproves your hypotheses. It is the most valuable information to find—and the easiest to miss. To enhance your ability to detect it, you must lay out in advance what disconfirming data would look like.



Included in the learning launch is attention to another important task: designing the on-ramp. How do you launch your new offering in a way that will best persuade customers to give it a try? Without trial, all that value creation potential is only that—potential. So you will need to pay attention to how you get to awareness of your new offering, and from there to trial.

As you proceed, keep in mind some of the principles of this learning-in-action stage: Work in fast feedback cycles. Minimize the cost of conducting your experiments. Fail early to succeed sooner.

Test for key trade-offs and assumptions early. Most important, play with the prototypes in the field instead of defending them.

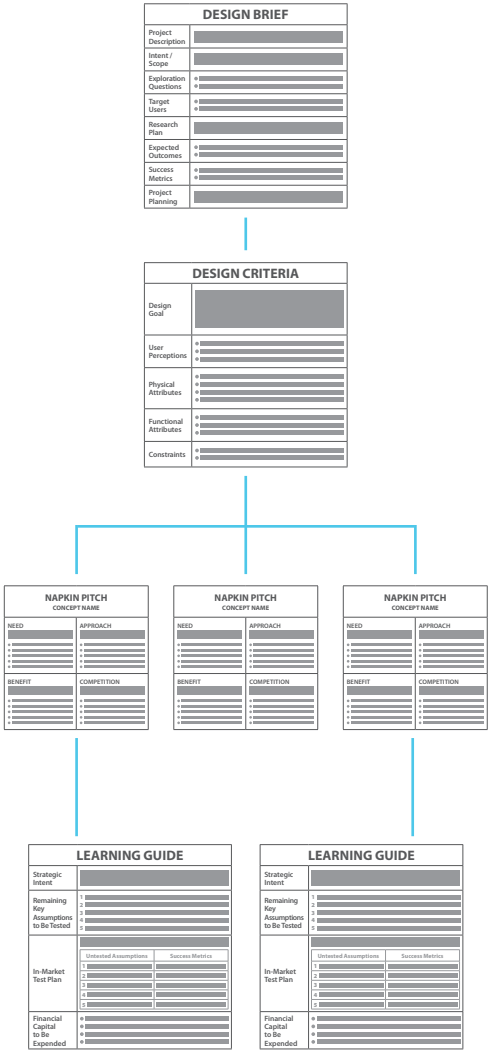
The Pfizer team tested three different on-ramp approaches: putting the offering on a retailer's shelf, selling it through intermediaries like employers or insurance providers, and selling direct over the Internet. To the executives' surprise, the offering sat on retail shelves and went nowhere. Selling through intermediaries proved to be too slow to meet growth targets. The third option, the Internet, emerged from the learning launch as the big winner, though Pfizer had never used this channel before.

Before we walk you through the ten tools in greater detail, there is one more ingredient you will need to become a successful design thinker.

The Project Management Aids

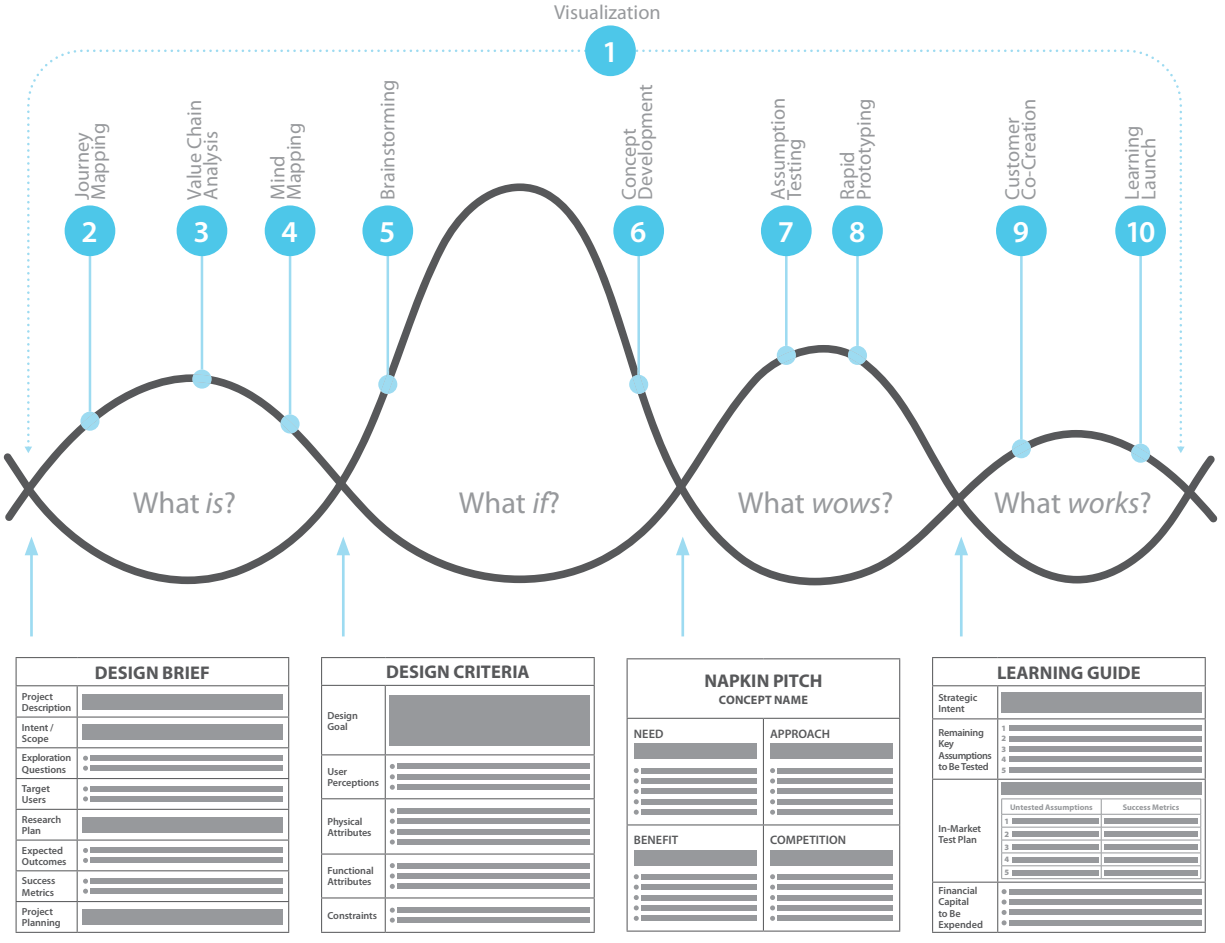
To succeed at harnessing the power of design thinking to grow your business, you need to do more than try out the ten tools of design thinking: You have to *manage* the growth project itself. This is not as easy as it may sound. You are gathering large amounts of data, dealing with significant ambiguity and uncertainty, and working with new internal and external partners—all under the pressure of deadlines and resource constraints. With all these new tools and new types of data, this train can easily come off the tracks.

To make sure that it doesn't, we will introduce four project management aids (PMAs) in this chapter as well. (Turn to the Appendix for more-detailed descriptions and templates.) The PMAs are not design tools—they are not about generating or testing ideas. Instead, they are communication protocols that link the design thinking process to the established project management structures of the organization. They will help you control the project by systematically capturing the learning from each stage, codifying decisions and transitioning from one stage to the next, and integrating the results into a successful growth project. The diagram to the right shows the purpose of each project management aid and how they fit together.



PROJECT MANAGEMENT AID	PURPOSE
PMA 1 **Design Brief**	• Formalizes the growth project • Defines goals, resources, timelines, etc. • Serves as a "North Star" throughout the project
PMA 2 **Design Criteria**	• Sets criteria to evaluate alternative designs (derived from study of user needs and business requirements) • Becomes part of the design brief
PMA 3 **Napkin Pitch**	• Crystalizes communication of solution concepts (after brainstorming and concept development) • Describes each of the best few (3–5) solutions that meet the design criteria in a template that allows for apples-to-apples comparison
PMA 4 **Learning Guide**	• Defines an affordable level of resources to invest in learning whether (or not) the top 2–3 concepts are feasible

The bottom row of our design thinking model (below) shows where each PMA fits in the process.



And that's the design thinking process: four questions, ten tools, and the project management aids. That's all there is to it.

Warning!

Incorporating design thinking into your search for growth is going to take some patience on your part. Most companies, however well intentioned and excited about innovation, aren't P&G and Google; they still don't "get it." Chances are that yours is one of those. All kinds of obstacles will probably be thrown your way while you are being asked to find profitable new growth opportunities. That challenge—moving a design project through an organization—is the subject of our final chapter.

Managers trying to innovate and grow new businesses in big bureaucracies need all the help that they can get. And design really can help. Big time. So let's get started on showing you how.