Seven Radical Principles That
Will Transform Your Business

FLASH
FORESIGHT

HOW TO SEE THE INVISIBLE
AND DO THE IMPOSSIBLE

DANIEL BURRUS

WITH JOHN DAVID MANN

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See the Invisible to Do the Impossible

>>> 7 RADICAL PRINCIPLES TO TRANSFORM YOUR BUSINESS

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To my wife, my soul mate, my best friend, and biggest fan Sharon: you are a constant source of love and inspiration.

And to the millions of people around the world who have been in my audiences, read my books, and taken action on the ideas I sparked in their minds. It is your positive actions that fuel my passion for continuing to inspire you to shape a better tomorrow.

FLASH

n. 1. a sudden burst of light or glint from a reflective surface. 2. an insight that occurs suddenly and unexpectedly: *a flash of inspiration*.

FORESIGHT

n. 1. knowledge or insight gained by looking into the future. 2. perception of the nature of events before they occur.

FLASH FORESIGHT

n. a sudden burst of insight about the future that produces a new and radically different way of doing something that will open up invisible opportunities and solve seemingly impossible problems before they happen.

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Something gave Dale Morgen a big idea.

Like most of us, Dale was concerned about the rising cost of energy, the problems of environmental pollution and climate change, and the politics of petroleum. Like most of us, he also knew that the nuclear-power alternative creates its own problems, including radio-active waste and the nagging threat of a catastrophic accident, not to mention the possibility of theft and nuclear terrorism.

However, unlike most of us, Dale is an accomplished inventor with more than thirty wildly successful patents under his belt.[1] In the course of his work he has honed a certain skill, and that skill is the *something* that gave him his big idea. I call it *flash foresight*, and the purpose of this book is to show you how it works so you can use it, too, in your career and in your life.

Flash foresight uses the data of your five senses, as well as that intuitive sixth sense we all have that some call a *gut feeling* or *hunch*. But flash foresight goes further, because in using it you synthe-size those sensory and intuitive faculties and project them forward through the dimension of *time*. A *flash foresight* is a blinding flash of the future obvious. It is an intuitive grasp of the foreseeable future that, once you see it, reveals hidden opportunities and allows you

to solve your biggest problems—*before* they happen. Flash foresight will allow *anyone* to both see and shape his or her future.

I'm not telling you anything you don't already know instinctively. You've had flash foresights; we all have. They are those fleeting glimpses we sometimes have of where things might be heading. Have you ever said, "I *knew* I should have done that," or "I *knew* that would happen"? That's hindsight, and it happens because you don't typically know ahead of time when your hunch is accurate and when it's not. Learning how to make that distinction—between glimpses of the future that are reliable foresight, and those that are simply hunches—is what this book is about. Flash foresight is a sensibility, a skill you can develop, refine, and strengthen. I'll show you how it works and how you can make it work for you on a regular basis.

Through the pages of *Flash Foresight*, we'll look at real people with real problems who have discovered how to find real solutions. We'll see how hundreds of overworked critical care nurses were able to add more than three hours of free time into their impossibly busy days; how a struggling urban school district found a way to generate the income to pay for its own endangered programs—without having to spend a dime; and how a phone company is transforming the social and economic landscape of Africa by doing something its American competitors never thought of. We'll look at dozens of examples of how people just like you have used flash foresight to see the invisible and do the impossible.

Let's start with our inventor Dale and see how he used this powerful principle to arrive at his great idea.

Dale knew that there is another approach to our worsening energy crisis that does *not* use fossil fuels, does *not* produce greenhouse gases or any other pollution, does *not* create radioactive waste or pose any other environmental dangers. It's called *nuclear fusion*, and many scientists believe it could become the energy source of the twenty-first century and beyond.

"Let's say you burn a certain amount of hydrogen and oxygen in today's most efficient fuel cell," explains Morgen, "and you get ten electron volts. Take two hydrogen isotopes and *fuse* them, now you

get 16.7 *million* electron volts. Fusing the hydrogen from a bathtub's worth of water would produce the same amount of energy you'd get from burning forty trainloads of coal. A relatively tiny amount of ocean water would provide everyone on the planet with all the energy we could ever use for the next 50,000 years. And the only by-product is harmless, nonradioactive helium."

Understandably, this prospect has a lot of major international players hot on the fusion trail. For example, a consortium of twenty countries, including the United States, China, Japan, Korea, Russia, and a half-dozen European countries, is building a massive, multi-billion-dollar facility in southern France. The International Thermonuclear Experimental Reactor (ITER) is the most expensive project ever mounted in pursuit of this holy grail. At California's famous Lawrence Livermore lab, another fusion facility is under construction that will span three football fields to blast its millimeter-sized hydrogen-fuel pellets with massive lasers.

However, there's a problem. So far, even with these massive and astronomically costly facilities, the fusion reaction requires more energy going in than it yields in output. Like an investment that keeps losing money, today's fusion reactors produce a net energy *loss*. The largest functioning fusion reactor in the world is the U.K.'s Joint European Torus (JET), yet even that facility has been able to reach a maximum output of barely two-thirds the input required—like investing $100 to get back a total return of less than $65.

And that's where Dale's idea comes into the picture. His flash foresight was this: *Instead of making these facilities bigger and bigger, why not make them radically smaller?* In fact, why not make a fusion reactor so small you can't even see it—so small it would be built out of single molecules? In a word: *nanofusion.*

Dale is not alone in this idea; he is one of a handful of early innovators who are exploring the emerging field of nanofusion. Dale's model is similar to the Lawrence Livermore reactor in concept, only instead of firing mile-long lasers at small glass pellets, his reactor would fire a nanolaser made from a single carbon molecule—called a *nanotube*—at hydrogen isotopes wrapped inside another type of carbon molecule called a *buckyball*. This material has a

much higher purity and density—and lo and behold, it produces a *net positive yield*: more energy coming out than it takes to make the reaction. Potentially, says Dale, *vastly* more.

Imagine the impact such a technology would have on the world. For all practical purposes, there would be no more energy crisis. Oil-producing nations would become just nations like any other— still producing oil, but no longer supplying the bulk of our energy needs. We would have enough energy to fuel our global economy for centuries—conceivably, forever—and without producing any greenhouse gases or radioactive waste.

"A lot of the other guys in fusion didn't even want to hear about this idea, at first," says Dale. "They thought we were crazy—but they said that about my other inventions, too." The long list of "crazy" inventions in whose development Dale's keen sense of flash foresight has played a key role includes the personal digital assistant (PDA) and matrix control for LCD and plasma TVs.

"Most people in the scientific community think practical fusion is fifty to a hundred years away," Dale adds. "We don't think it will take that long."

There are still considerable technological barriers to realizing this radical idea. For one thing, the nanofusion pioneers need to find a way to create a viable nano-based superconductor. "That's a formidable challenge," says Dale. How long does he think it will take to surmount the various challenges and actually have a working model of the process? "I'd say, oh, ten to fifteen years. Maybe less."

This book is not about nanofusion, or predicting that nanofusion will be the answer, or even about solving the energy crisis. It's about the *something* that gave Dale his big idea. What was that *something*? Was it a hunch, a gut instinct? A feeling? Intuition? No—it was something far more powerful than any of these. It was *flash foresight*.

Dale's insight is a classic *eureka!* moment, one of those legendary leaps of informed intuition, like Newton's discovery of gravity after watching an apple fall from a tree, or Kekulé's dream of a ring of snakes that prompted his discovery of the carbon ring, the foundation of organic chemistry. We think of such flashes of insight as the

hallmark of unfathomable genius—a kind of inspired epiphany that defies explanation or logic. Yet Dale's intuitive leap was actually triggered by the application of one simple principle.

Before we pull away the curtain and reveal exactly what that principle is, let's look at one more example—this one from a very different side of the energy equation.

In early 2006 I happened to speak at a conference of international insurance underwriters, where a series of oil executives described the extent of the devastation wrought during the previous hurricane season in the Gulf of Mexico.

This 800-mile basin is currently the source of nearly one-third of America's domestic oil supply and one-quarter of our natural gas. It is also one of the most hurricane-prone bodies of water on the planet, making the environmentally dicey business of oil extraction even more challenging.

Like most of us, these executives were also concerned about the rising costs of energy—in their case, on an especially vast scale. Sea-based oil platforms are among the largest mobile structures in the world. One platform, aptly named Thunder Horse, cost $5 billion to build and put out on the gulf. Another, with the modest name of Mars, sports a drilling rig that alone weighs 1,000 tons. Housing thousands of people, such a *flotel* (as these facilities are called) is really a miniature city perched out on the ocean's surface.

These superstructures are designed to withstand "100-year conditions," that is, to survive a hurricane so powerful it should occur only once every century or so. Unfortunately, those once-per-century storms have been happening a lot lately. In the fall of 2004 Hurricane Ivan ripped through the gulf, generating the highest waves ever recorded in the region. Wrecking seven platforms and crippling production for the next six months, Ivan was rated a *2,500*-year storm.

A year later, Katrina happened. There are about 800 manned, U.S.-owned oil platforms in the gulf, employing more than 50,000 people; the bulk of production is concentrated in about two dozen of them, each costing at least a billion or two to put into the water.

Katrina destroyed or sank fifty platforms and shut down 95 percent of production.

Now, the conference speakers explained, engineers faced the challenge of figuring out how to redesign these billion-dollar "hurricane-proof" giants to be twenty-five times *more* hurricane-proof.

"And that's not the worst of it," whispered the man sitting next to me, an executive with an oil company. "As bad as they are, hurricanes may not be our biggest problem. It hasn't happened yet, but we need to be prepared for the possibility of a terrorist attack. But how? It's hard enough to protect our guys from the elements out there. How the heck do you create top-level security out on the open sea?"

It was a thorny question, and while nobody asked it from the stage, it was on everyone's mind. Whoever spoke next would have to address it somehow. That next person turned out to be me: I was about to give the event's keynote address.

As a technology forecaster and strategist, I've tracked innovations in science and technology for more than twenty-five years, helping businesses and other organizations around the globe craft creative and productive strategies for the future based on technology-driven trends.

I took the stage, looked out at the group, and said, "Okay, we've clearly got a problem. Here's what we might do to deal with it—we could take the rigs off the water's surface and put them down on the ocean floor."

It wasn't hard to read their faces: *Impossible!* And who could blame them? It certainly *sounds* like science fiction, and ten years ago, it would have been. But technology allows us to make the impossible possible. We already use robotics for sophisticated vehicle repair in outer space and delicate surgery deep inside the human body. In fact, we already use robots on the ocean floor for exploration, equipment repair, and other tasks. We can certainly manage the tasks involved in robotic undersea oil extraction—and with far more efficiency, safety, and environmental integrity than we're doing now.

Here's the basic plan I quickly sketched out for the group.

"We put our platform on the water's surface, connected to the ocean floor, just as we presently do—only instead, we design the structure so that the drilling facility can disengage and move on, something like the segments of a rocket ship, leaving the platform behind. Once the drilling is done, we disengage the drill, submerge the platform, and let it descend to the ocean floor. All the people move on with the drill and head for their next drilling location or for port, leaving behind a pumping platform on the ocean floor with robotics performing all the necessary tasks for operations and maintenance.

"Of course, it would make the most sense to implement this at first in shallower water, where the majority of our wells are anyway, that is, to walk before we run. Once we've perfected the process, we can look at moving it out into deeper water—if we even need deepwater operations by that point.

"At present, most of the personnel on our oil rigs are there purely to support those few who do the actual work on the rigs, spending months away from their families in a harsh, punishing environment. Hundreds of lives have been lost in ocean rig disasters over the years. The cost of maintaining these flotels, in both economic and human terms, is staggering. Manage the task robotically, and you almost eliminate the need for staffing, which means a huge reduction in both the economic costs *and* the risk of casualties.

"And it would be far safer for the environment as well.

"During Katrina, we lost eight or nine million gallons of oil—nearly as much as we lost in the *Exxon Valdez* disaster. Even with all the catastrophic damage on the gulf's surface, the most vulnerable piece of the whole puzzle is the elaborate network of underwater pipelines. There's some 33,000 miles of piping down there that was badly damaged by Hurricane Ivan in 2004, causing a large invisible underwater spill. The way we're set up right now, it's difficult and expensive to do an effective job of repairing that network—but once we invest in the advanced robotics and underwater electronics to run the submerged facilities, it'll be a small step to extend our reach and maintain a far safer piping network."

Four years later this idea took on an entirely new significance

when another disaster happened in the gulf, this one caused not by hurricanes or terrorism but by that deadliest of foes, human fallibility. On April 20, 2010, an oil well blowout led to an explosion on the Deepwater Horizon, an oil platform on the Gulf's surface. The fire burned out of control and two days later the platform sank to the ocean floor, creating a swath of entangled cables, broken pipes, and snapped valves—and an oil spill even worse than that of the *Exxon Valdez*.

Suddenly the operators and designers of the platform were rushing to come up with technological solutions to an underwater disaster happening at nearly one mile deep. It was a classic and tragic case of hindsight: being forced to act in reaction to a crisis rather than with the calm deliberation of foresight.

Investigations later revealed that the rig's operators, BP, had cut significant corners in the Deepwater Horizon operation and, furthermore, that the federal government had issued waivers granting BP categorical exclusion from conducting the usual environmental-impact studies because, as BP put it, "a catastrophic blowout was impossible." But nothing is impossible. Obviously, as hindsight tells us, these cost-cutting steps were a series of calamitous errors. But let's take a closer look at the context of the disaster.

The catastrophic explosion and fire on the Deepwater Horizon could only have happened on the water's surface, not underwater, on the ocean floor. In fact, the great majority of all oil spills have started with problems that occurred on the surface.

Imagine for a moment that the Deepwater Horizon had been designed to submerge and operate on the ocean floor. If that were true, the explosion and resulting mass of broken piping would have been an unlikely scenario. And if we had been investing significant efforts and resources in advanced oil-spill containment and cleanup as well as the undersea application of advanced robotics (as we have, for example, with applications in surgery and space vehicle repair), the chances are excellent that, even if such an accident did occur, we would have been able to mobilize the necessary technology to stop the leak within days, before it became serious, instead of months.

I'm not necessarily forecasting that this idea represents the future of oil extraction, but it certainly suggests interesting possibilities. It's too late now to prevent the Deepwater Horizon disaster, but that 2006 flash foresight has since borne fruit and some in the industry have begun working in earnest on the concept, and in the foreseeable future we will see a far safer, more economical, and more environmentally sound approach to oil extraction.

Have you guessed what the simple flash foresight principle is underlying both Dale Morgen's nanofusion and this ocean-floor oil rig concept? It's this: *Go opposite*. While everyone else in fusion was focusing on building gigantic reactors that filled football fields, Dale and his colleagues went in the opposite direction, designing one so small it would easily fit onto the point of a pin.

The conventional design for oil rigs puts them on the surface of the ocean. Our solution was to *do the opposite*, and place them on the ocean floor.

The reason this principle works is as simple as the principle itself: when you look in the opposite direction from where everyone else is looking, you see things nobody else is seeing. It opens up hidden opportunities, unnoticed resources, and overlooked possibilities, acting as a spark that ignites a flash foresight. Practicing *go opposite* lets you see things that up until that moment were invisible—and therefore impossible—to almost everyone.

At my company, we track the very latest developments in every imaginable aspect of technology—lasers, robotics, genetics, fiber optics, everything. We look at these developments globally and have been doing so for more than a quarter century. Having spent most of my time over those years looking into the visible future, here is something I've noticed: *The more you look, the more you see*. The question is, where are you looking? The key to the power of *go opposite* is that it puts you looking where no one else is looking. Do that long enough, and you'll start seeing what no one else is seeing— which will give you the ability to do what no one else is doing.

Here are some examples of successes in diverse areas that arose from flash foresights that were triggered by the *go opposite* idea,

whether or not their creators were consciously aware of it (and if it isn't immediately obvious why each of these is an example of *go opposite*, don't worry, we'll revisit them all, one by one, in Chapter 5).

➤ Amazon.com
➤ Crocs
➤ Dell
➤ JetBlue and Southwest Airlines
➤ Kiva
➤ Netflix
➤ Starbucks
➤ Volkswagen
➤ Zappos

Warren Buffett, the famed investor, has explained his uncanny knack for making successful investments with just twelve words: "Be greedy when others are fearful, and fearful when others are greedy." A beautifully simple expression of *go opposite*, and one that has earned him billions.

So, is it really that simple? Just do the opposite of what everyone else is doing, and you'll solve the problem nobody else is solving? Of course not. But it's *nearly* that simple. *Go opposite* is only one flash foresight trigger. Over the twenty-five years I've been studying and systematically applying flash foresight, I've discovered *seven* such triggers.

1. *Start with certainty* (use hard trends to see what's coming).
2. *Anticipate* (base your strategies on what you know about the future).
3. *Transform* (use technology-driven change to your advantage).
4. *Take your biggest problem and skip it* (it's not the real problem anyway).

5. *Go opposite* (look where no one else is looking to see what no one else is seeing and do what no one else is doing).
6. *Redefine and reinvent* (identify and leverage your unique-ness in new and powerful ways).
7. *Direct your future* (or someone else will direct it for you).

Not every flash foresight uses every one of these triggers, but most will use at least several. You can think of it as something like the seven notes of the musical scale. Not all melodies use all seven notes. But if you want to know how to write music, you'd better know all seven, because you're going to need them sooner or later.

If you were to freeze-frame Dale Morgen's thought process and examine each thread, you would actually find a number of these triggers interacting to spark his flash foresight, and the same holds true with the oil rig concept. In fact, let's track a few of these. Of course, Dale is an inventor, and I'm a technology forecaster—but if you follow what we both did here, you'll find you can use these same principles just as easily in your life, too.

As mentioned, my company has been tracking cutting-edge in-novations in all areas of technology for over twenty-five years. This has made us familiar with the facts and particulars of oil drilling (Chevron, ExxonMobil, and Shell are on my client list), and also with the current state of the art in robotics and the other technical issues involved. So this example of flash foresight began with trig-ger #1: *Start with certainty*.

This familiarity with trends in technology also allows me to know what technology can and can't do today, how it's changing, and—most important, what will be possible tomorrow. In other words, to *anticipate*, trigger #2. Knowing the extraordinary leaps technology will be taking in just a few short years allows me to look at doing things in completely new and seemingly impossible ways, rather than just doing them in the same ways we currently do them but with incremental improvements: in other words, to completely *transform*, trigger #3.

The big problem here was "how to protect rigs on the water's

surface." Instead of trying to solve that problem, we decided to *skip* it altogether—trigger #4—by taking the rigs *off* the water's surface. And put them where? *Go opposite*, trigger #5: go to the ocean floor.

How do we do this? By using trigger #6, *redefine and reinvent*, redeploying the type of technology we're already using for prostate surgery and EVA (extravehicular activity) repairs on spaceflights to completely reinvent the oceanic oil-extraction process.

Do you see what just happened there? In rapid sequence, we just used six of the seven flash foresight triggers. It looks quite methodical and sequential when we reverse-engineer the whole process; in those few moments before it was my turn to speak, the actual flash foresight came rather more intuitively and immediately. But that's simply a matter of practice.

Using these flash foresight triggers is very much like walking. When you break down the act of walking into its component parts, it's quite complex: shifting your balance from ball to toe and then left to right, compensating the shift with a swing of your arms—if you had to think about every muscular element, you'd be overwhelmed. And so you were, when as an infant you took your first halting steps. Yet today you stride without a thought.

That's what flash foresight is like. At first you consciously exercise all seven mental processes, one at a time, carefully and perhaps haltingly. In time, it comes more naturally, and eventually it becomes fluid and virtually effortless.

Sometimes flash foresight is about using an amazing new technology, as with the oil rigs. But just as often, it's not about technology at all, but simply about using your eyes to look at things in a different way.

Years ago a young friend opened a brand-new pediatric dental practice in the Chicago area. We had lunch one day, not long after her grand opening. She had been very excited about opening her new office, and I asked her how it was going.

"Not as well as I'd like," she confessed. She had a modest clientele, but her few patients were not generating the referrals she

had hoped for. She needed word about her practice to spread, but it wasn't happening. She wondered, would I mind coming in and taking a look, to see what I might notice? So we got up from our lunch and went right up to her office. I spent five or ten minutes looking around, and then asked her to come back out with me to the entrance for a moment.

"This is a children's practice, right?" I said. "So let's start by approaching it from a child's point of view."

This time, we got down on our knees, shuffled into the waiting room, and looked around. "What do you see?" I asked my friend.

She glanced at me with surprise. "Not much of anything!"

It was true. Everything in the room was set at eye level—*adult* eye level. The receptionist was a wonderfully sweet and friendly person, but because she sat way up there behind an adult-scale desk, if you were a kid coming into the place you wouldn't even see her face.

"For starters," I suggested, "what if we lowered that reception desk so we can make eye contact with your nice receptionist? Then, what about our sense of hearing? When you first come into the room, what does it sound like?"

We both listened. It sounded like someone evil was torturing mice in the next room. Not the kind of sound you want to hear when you're a child coming in to see the dentist. I suggested we put in some one-beat-per-second music to evoke the sense of a heartbeat. It would be calming and soothing, and cover up all that noise from the drills and other equipment. A bit of sound-deadening material in the treatment rooms wouldn't hurt, either.

Then I asked my friend, "What does it smell like?"

Almost as soon as I said the words, she wrinkled her nose. Frankly, it smelled just like a doctor's office. To a child, that smell equals *panic*. The moment a kid walks in that door he's thinking about the last time he got a shot, and he doesn't like it.

My friend looked at me. "We need to change that, don't we?" she said.

"It sure seems so," I agreed.

My friend's problem was that she was thinking like a dentist, not

like a kid. It was a matter of perspective—and once again, a case of using the *go opposite* trigger: instead of thinking like a grown, tall adult, think like a young, short kid.

The next time I visited her office, she had transformed the place. In fact, she had implemented every one of the ideas we'd discovered. Her practice was thriving.

Flash foresight is what you get when you combine that shift of perspective, that willingness to get down on your hands and knees and look at things from a fresh point of view, with a grasp of where current trends of change are taking us in the future. It's about transforming the impossible with a glimpse of the possible.

You may not be personally concerned with protecting oil rigs from hurricanes or single-handedly solving the energy crisis. You've got your own life, with its own unique challenges. Like my pediatric dentist friend, maybe you're trying to figure out how to make your business work, how to keep your company's head above water, or how to further your career when all the best jobs are drying up. The problems you're facing are probably a lot less dramatic than protecting an oil rig in a hurricane—but to you, they may feel just as urgent, and just as impossible. Maybe it's a time crunch or a financial squeeze, a disappearing market, an impossible workload, or an unsolvable situation. Whatever it is, there is an elegant solution; all we need to do is make it visible.

In the past, flash foresight was useful, but not essential. Things changed so gradually, we could get by without it. Today, as the pace of technological change accelerates almost beyond the point of comprehension, it's essential.

There was a time when only a select few—the priests, scribes, and accountants—knew how to read. There was a time when only a few dozen people had ever driven a car, even fewer who cared. There was a time when only a handful of academic researchers and military strategists knew what the Internet was or how to use it.

Up to now, only a handful have known how to use flash foresight. It's time *everyone* knew.

FLASH FORESIGHT

Start with Certainty

On March 10, 1986, I walked onto the shop room floor of a vast, open manufacturing plant on the edge of Kansas City, stepped to a microphone, cleared my throat, and looked out at the several thousand men and women who sat silently waiting to hear what this visiting speaker had to say. They were not happy; in fact, they were furious.

We were standing at ground zero of a labor-management dispute at the Folgers Coffee Company that had led to a deadlock in negotiations. For the first time in the facility's seventy-eight-year history, they had shut down the entire plant to have a company-wide meeting.

Some weeks beforehand, one of the executives had heard me speak and approached me afterward to ask if I would come talk to their employees, who were locked in a contract clash. I pointed out that he was talking to a futurist, not a mediator; labor disputes were not exactly my area. He said he understood that, but in one of my talks, he'd heard me speak about the principle of *starting with certainty*, and he had a sense that idea might help break the logjam. In any case, he wanted me to come give it a shot.

And now, here it was, the big moment. I licked my lips, and the microphone crackled.

"My name is Dan Burrus," I began, "and your bosses invited me here to speak with you. But I want you to know that I've already been paid—so frankly, now that I'm here, I can say whatever I want."

A tense laugh rippled through the crowd.

"Before we go any further," I continued, "maybe we can agree on a few things. Can we all agree that you would all like to stay employed?"

A few dozen heads nodded grimly, and I jotted down a checkmark by the first item of a list I'd written on a blank pad that morning: STAY EMPLOYED.

"Can we all agree that you'd rather not have to relocate your families to other cities?"

This time a few hundred heads nodded, and a handful of voices muttered, "Hell yes!" and "Damn straight!" I checked off another item: STAY IN KANSAS CITY.

"Let's see, what else . . . Can we agree that we'd rather see this company stay in business than go belly-up?"

It went on like this for a while, and by the time we were finished, we'd worked our way through forty different points of alignment. I read the list out loud, glanced up at the assembly of workers and then at the smaller cluster of management sitting nearby, and said, "That's forty things you agree on. Seems to me, the only thing you have to work out is how you're going to make these forty things happen."

And the amazing thing was, *they did*. Before they knew it, the workers settled their grievances with the Folgers management and the plant was rolling again.

What happened here? After all, I didn't bring them any new information. By asking questions, all I did was to bring out of them what they *already knew*. Yet that was enough to break through the impasse, forge a new contract, and get their company back to production. The workers at Folgers already had everything they needed to find the solutions they sought. The problem was that they had been focusing on what they did *not* agree on instead of what they *did*.

Nations often do this, too; so do married couples. We all do it. It's so easy to focus on the *can't*: what we *can't* resolve, where we *don't* see eye-to-eye, what we *don't* know. But with that as our focus, coming to any kind of common understanding is just about impossible.

The same thing is true about the future. Doesn't it seem like the times we live in are full of uncertainty? In fact, more uncertain than ever before? Like everything is changing so much and so fast, there's just no way to know what's coming at us?

Not true. No matter how much it may seem like that, that's not how it really is. In fact, there's more certainty about our future today than ever before. We know a great deal more about the future than we think we know. We just need to understand where to look. Like the striking workers at Folgers, we can easily be overwhelmed by how much we think is impossible to predict. But the more we focus our attention on what seems uncertain—on what we *don't* know—the more we incapacitate our ability to take successful action.

For example, take the American automobile.

In the fall of 2004, at an evening event for the American Public Transportation Association, I had the opportunity to sit next to Rick Wagoner, then chairman and CEO of General Motors.

As the evening relaxed into informal socializing, Rick made a few comments to our group about the future of the auto industry and the U.S. economy that echoed statements I've heard from presidents, prime ministers, and leaders of organizations around the world.

> *Well, we just don't know . . . We give it our best guess, but who really knows where it'll all go? . . . The truth is, it's impossible to say—no matter how much data you gather and project, the future is flat-out unpredictable.*

If this were true, the future would indeed be a fearsome and forbidding place, fraught with impossible dangers. If it were true, frankly, our situation would be pretty hopeless. And if it were true, there would be no point in writing this book.

Fortunately, it *isn't* true. There is plenty about the future that is entirely predictable. But it's certainly understandable why Rick should have been so steeped in doubt and uncertainty. Just look at what his company, his industry, and his country had been going through.

At the dawn of the twentieth century, no nation was brimming with more potential than America, and no invention had a brighter future than the American automobile. The motor car represented the best of American ingenuity and innovation, and in the course of the century it changed forever the way we lived and thought, shopped and courted, made war and spread the peace. In 1953, at the century's midpoint, the president of GM made a declaration that echoed for decades: "What's good for GM is good for the country." A variation of that assertion became one of the American century's most pervasive slogans: "As GM goes, so goes the nation."

So, how was GM going? By the time I sat at dinner with Rick Wagoner, not so well. General Motors, which for decades had reigned supreme as the largest industrial company in the world, had lost billions of dollars, shut down more than a dozen plants, and laid off tens of thousands of employees. It would get worse. In the first quarter of 2007, for the first time in over seventy-five years, GM lost its title as the world's leading automaker—to Toyota. By the summer of 2009 Rick was forced to resign (along with hundreds of other executives) and the company, now a recipient of an astronomical federal bailout, was struggling to emerge from bankruptcy. Once the largest company in the world, GM had become the largest corporate business failure in history.

The American automobile started out as a brilliant example of flash foresight. What happened? The industry fell prey to the natural human tendency to protect and defend the status quo. It stopped looking to the future and asking, "What do we know—for sure?"

As GM goes, so goes the nation. Where is the American automobile going—or for that matter, where is America itself going? What I heard Rick saying in 2004 was: "We don't really know." But we *do* know—or at least, we know a great deal more than we realize.

In speeches I often say, "Wouldn't it be great if you could predict the future—and be right?" and the audience always laughs. It never fails. Perhaps this is because they know on a gut level that whenever someone says he's going to predict the future, the chances are excellent that he'll be *wrong*. (How often do you read the headline "Noted Psychic Wins Lottery"?) But perhaps they also laugh out of a sense of delight, because they know that if it *were* possible, it would be amazing. Imagine, if you could predict the future *and be right*? What an advantage you'd have! And that's exactly the point of this book.

Here is the next point I usually make in my talks: "You *can* predict the future accurately. All you have to do is leave out the parts you could be wrong about."

That, too, always gets a laugh—but I'm serious. And the amazing thing is, when you do leave out the parts you could be wrong about, there's enough left that you can be right about to make all the difference. The question is, how do you know which is which? That is the first of our seven flash foresight triggers, and it's what this chapter is about.

>>>Cyclic Change

In the book of Ecclesiastes, King Solomon wrote, "Vanity of vanities; all is vanity," and his words are echoed in the teachings of the ancient Greek thinker Heraclitus, who said, "*Panta rhei*," which means "Everything changes." Lao Tzu agreed, writing in the *Tao Te Ching*, "The only thing that is permanent is change."

It does seem true: the only thing that *never* changes is the fact that everything *always* changes. The only permanent thing about our world is that all is in a state of constant flux. Which is pretty disturbing, isn't it? After all, if we're looking for certainty, that doesn't give us much to go on . . . does it?

Actually, it does. In fact, it gives us *everything we need*. Because there are certain patterns in how things change that are as dependable as clockwork.

There are two distinct kinds of change we can use to find certainty; the first is *cyclic change*.

Cyclic change provides us with all sorts of certainty. Right now it's autumn here in the Northern Hemisphere, and I can confidently predict that within six months, it will be spring. Nature is brimming with examples of cyclic change; understanding the cycles of seasons, weather, crop development, animal migration, tidal fluctuations, and other such cycles helped create the first civilizations. In fact, the history of civilization is to some extent the story of humanity getting a grip on cyclic change and using it to increase our chances for survival.

There are also cycles in our economy and body politic, of boom times and lean times, expansive and defensive behaviors. Shakespeare wrote, "There is a tide in the affairs of men which, taken at the flood, leads on to fortune," and that tide appears in every aspect of our lives. Prices and interest rates rise and fall; Democrats rule Congress, then Republicans. There is a push toward the apparent safety of totalitarianism, and then a counterpush toward the greater personal freedoms of liberalism. Social standards grow more permissive, then more restrictive, and then back toward more permissive. The pendulum swings until it can swing no further, then reverses course and backtracks.

Politically, economically, socially, in every channel of human expression, we manifest with a tide that perennially ebbs and flows. Like a great social heartbeat, the mood of the people expands and contracts, now progressive and gregarious, now more conservative and protectionist. Moods cycle, reflected in fashions, politics, and even international relations, as well as personal relationships. In fact, humanity has identified over *three hundred* distinct cycles that allow us to accurately predict the future to some extent.

EXAMPLES OF CYCLIC CHANGE

planting and harvest
birth and death

day and night
tides and phases of the moon
seasons
migrations
stock prices
economic recessions
building and real estate activity
seasonal sales
interest rates

Keeping a sober eye on the truth of cyclic change lies at the heart of Warren Buffett's uncanny success as an investor; he is a master of those "tides in the affairs of men." In our introduction we mentioned Buffett's famous investment philosophy, "Be fearful when others are greedy, and greedy when others are fearful." In addition to being a good example of the *go opposite* principle, it is also a perfect example of understanding cyclic change. Buffett's simple philosophy illustrates the dictum *start with certainty*. If the market is contracting, then what can we know for certain? That before long, it will expand again. And if the market is going through a robust expansion, what does certainty tell us? Get ready for a contraction.

In 2008 the U.S. economy slipped into its worst crisis since the Great Depression of the 1930s. In this sophisticated, postmodern world, how could such a thing have possibly happened? Because we ignored the simple truth of cyclic change. Did we really think the real estate market would rapidly expand forever? That housing values would just go up, up, up, in some cases doubling in a year, and never come back down? Based on our actions, evidently that is exactly what we thought.

Of course, we knew this wouldn't *really* happen; we knew that property values can't dramatically increase forever because, as any schoolchild could tell us, "What goes up, must come down." But we got caught up in all the flurry of the moment, of possibilities and exhilaration. We got confused by our own hopes that the market would rise and rise and keep on rising without cyclical corrections

happening. We ignored what we knew and got distracted by what we didn't. We forgot to *start with certainty*.

"Yes," you might be thinking, "but nobody could have predicted with any certainty exactly *when* this would all come crashing down . . . could they?"

Actually, they could. In a 2005 radio interview, Yale economics professor Robert J. Shiller, author of *Irrational Exuberance* and *The Subprime Solution*, pointed out that U.S. real estate prices were "out of touch with economic reality" and called the market "a bubble" that would burst before long. This, added Shiller, was a *certainty*: "The only question is when."

In fact, you didn't need to be a professor of economics to see this; you just needed to look. Most of the subprime mortgages that precipitated this crisis were interest-only adjustable-rate mortgages (ARMs) set to start ballooning at either the five-year or seven-year mark. The real estate boom got under way in 2000 and was roaring by 2002 and 2003. If you start with 2002 to 2003 and add five years, you get 2007 to 2008—which was exactly when it all started to melt down. As homeowners began defaulting on mortgages and rushing to sell, real estate prices that were already falling began plummeting. And a large number of seven-year ARMs would reset in 2009 and 2010, driving the foreclosure trend even further. Obviously, this was not the only factor in this complex crisis, but this is nevertheless a perfect example of how cyclic change can yield predictability.

The truth is, a lot of people sensed this crash coming. They just hoped it wouldn't. But hope is not a strategy. Certainty is.

The same thing happened with the high-tech bubble of 1998 to 2000. In March 2000, the month the NASDAQ reached its high point, savvy investors were already following the Buffett dictum, pulling out of tech stocks and taking a more cautious position. Likewise, as the stock market came crashing down in the fall of 2008, while most were panicking and selling off their imploding stock portfolios, savvy investors were wading into the fray and quietly buying those financial stocks that were hit worst.

Why? Because they knew that cyclic change is inevitable. And this was not a guess: they knew this with *certainty*.

>>>Linear Change

However, cyclic change is not the whole story. Having a clear grasp of cyclic change is an important element of flash foresight, but it's not the core of the matter. Developing a keen sense of flash foresight depends more on the certainty that comes from understanding another pattern of change, one that is quite different from cyclic change. This second pattern is *acyclic* and *progressive*—that is, it does not cycle back on itself but progresses forward in one direction only. In other words, within this second type of change, what goes up does *not* necessarily come down. I call this *linear change*.

A simple example of linear change is your age. Your life progresses in one direction; no matter how well you take care of your health, you are not going to start aging backward. Actually, there *is* a cyclic nature to human aging, too, in that after you go through your teenage years, before long your children will start going through those same phases, and then your grandchildren, and so forth. And there is yet another cyclic overlay to the human journey, in that we begin as helpless babies, then mature and become autonomous adults, and then in our later years progressively lose our strength and faculties and become more dependent again, almost like a second infancy.

Still, in the absolute sense, *aging itself is linear.* Your children will grow up to become adults, but they will not then "de-age" back to become young again.

Or take a larger example, that of social and governmental change. As we have already noted, society's moods ebb and flow in a variety of cycles, including a pendulum swing within each individual society between a more liberal, open culture and a more restrictive, defensive, and reactionary one.

At the same time, as you look back over the full sweep of global history, you cannot help seeing a larger pattern of unidirectional, linear change. Despite the localized ebbs and flows, there has been an overall consistent trend toward more and more freedom for more and more people. There is something going on here that is not cyclic. Despite its many setbacks and temporary defeats, the march of freedom has moved throughout history in one linear direction.
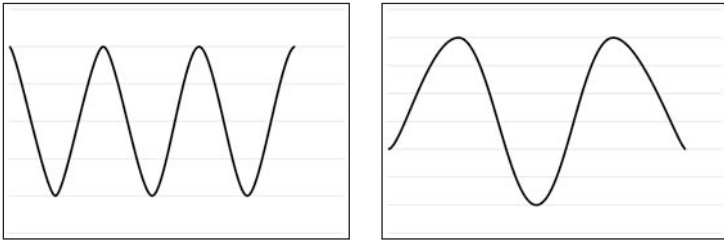
EXAMPLES OF LINEAR CHANGE

aging (of individual)
growth in the earth's population
increase in data, information, and knowledge
increase in worldwide literacy
increasing number of patents and inventions
acceleration of computer processing speed
convergence of features and functions
globalization

The varieties of cyclic change are endless; some cycles rise and fall sharply, like the EKG of a heartbeat, while others arc more smoothly, like the gradual flux of the seasons. Some, such as brain waves, cycle in fractions of a second, while others take place over eons, like the ice ages. But no matter what their shape or speed, they are all cyclic.

Linear change, too, takes place in many forms, from the sudden, logarithmic burst of a population explosion to the gradual accumulation of interest on a CD, yet they all share in common the trait that they curve in one direction only, and do not cycle back on themselves as cyclic change does.

The following diagrams illustrate examples of these two types of change.

Cyclic and Linear Change

Examples of cyclic change
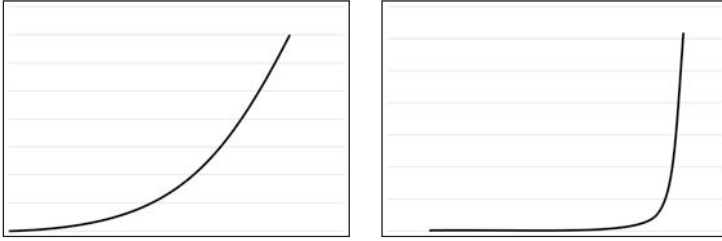
Examples of linear change

All the examples from our list of cyclic changes—the seasons, tides, stock prices, and so forth—belong to the first set of graphs. But it's the second set of graphs where things get really interesting. Linear change is where the real action is, precisely because it is *not* a repeating pattern and therefore creates entirely new and unique circumstances and opportunities. Linear change is what makes the future fundamentally new, and grasping this type of change is what allows you to begin making the invisible future become visible.

To a significant extent, developing your sense of flash foresight means being able to recognize linear change and its interplay with cyclic change. However, this is not always as easy as it might at first seem. Some changes are nothing but temporary blips on the radar of time, and contain no reliable information about the future. Other changes are so substantial and reliable that they offer very clear glimpses into the future. How do you know the difference? Because if you have no reliable way of knowing, you can end up with some pretty strange predictions, as the following example illustrates.

On August 16, 1977, one of the greatest recording artists of all time died at the tender age of forty-two. During his lifetime, Elvis Aaron Presley sold more than a billion recordings and achieved a level of star status unique among musicians. But if no one could equal him, many could certainly imitate. By the time the King died, there were a little over one hundred professional Elvis impersonators, and after his death that number quickly skyrocketed. An entire new profession had been born. How prevalent would it become?

Five years after the singer's death, as an exercise in trend analysis (albeit an admittedly whimsical one), I constructed a careful scientific study on the growing number of Elvis impersonators. Examining the statistics from the years 1977 to 1982, the findings projected that by the year 2000, one out of every three Americans would be a professional Elvis impersonator.

Given the cold, hard numbers at the time, this may have *looked* like a reasonable assumption, but obviously it wasn't. Why not? Because while those may have been "cold hard numbers," the trend they implied was as soft as the peanut butter and banana sandwiches the king of rock 'n' roll loved so much.

Of course, nobody *really* expected that we would all become Elvis impersonators. But the trend analysis nonetheless made a point: we make *and believe* faulty projections like that all the time, both in our own lives and on the massive scale of corporate and governmental policy decisions. We base trends on accurate, factual numbers, yet the trends don't turn out to be accurate.

In 1999 the United States government told us we were going to have a trillion-dollar surplus over the following decade. This projection was based on numbers that seemed just as sound as the Elvis numbers—and proved to have about the same level of reliability. According to the projections, we *should* be a nation of financially secure Elvis impersonators. Oops.

And this was not an error committed by only the federal government: of the fifty American states, forty-seven made similar projections of whopping budgetary windfalls. State governments got used to those rapidly increasing property tax revenues and spent that income as if there were no end in sight. They bet the farm on those projections—and came close to losing that farm. What happened? They bet on trends that looked solid, but weren't: the Elvis fallacy. It's a recipe for disaster, and it gets us in trouble over and over— trouble that could have been avoided if we knew the difference between *hard trends* and *soft trends*.

>>>Hard Trends and Soft Trends

People typically don't believe forecasts because forecasts are based on trends, and people don't trust trends. We think trends are like fads: here today, but who knows for how long? The word *trendy* means "fashionable," and everyone knows what happens to fashions: they go, well, in and out of fashion. "Trends," we say with a shrug. "Hey, sometimes they work out, sometimes they don't. It's a crapshoot."

But science means something different by the word *trend*. It means "a general direction in which something is developing or changing." And one of the principal findings of my twenty-five years of research is that there are two distinct kinds of trends, which I call *soft trends*, like the Elvis prediction and the trillion-dollar surplus that never materialized, and *hard trends*.

A hard trend is a projection based on measurable, tangible, and fully predictable facts, events, or objects. A soft trend is a projection based on statistics that have the *appearance* of being tangible, fully predictable facts. A hard trend is something that *will* happen: a future *fact*. A soft trend is something that *might* happen: a future *maybe*.

This distinction completely changes how we view the future. Understanding the difference between hard and soft trends allows us to know *which parts of the future we can be right about*. It gives us the insight we need to start with certainty, because it shows us where we are dealing with future *fact* and where we are dealing with hypothetical outcomes—future *maybes*. The reason we typically don't trust trends is that we haven't learned how to make the distinction between hard trends and soft trends. The Elvis fallacy is treating a soft trend as if it were a hard trend. Once we know the difference, we know where to find certainty—and the future suddenly becomes visible.

That trillion-dollar surplus the government predicted at the end of the nineties was a soft trend, only we treated it like a hard trend. We were not only expecting it to happen, we were acting on it as if it had already happened: we were spending like crazy. So much money

was coming in during '99, we were going nuts. We were gazing at the soft trend like a rabbit hypnotized by a snake. The Elvis fallacy.

"Hard numbers" don't necessarily mean a hard trend. My Elvis projection was based on "hard numbers," in the sense that they were *accurate*, but it was obviously not a hard trend. Why not? *Because it was soft*—in other words, the numbers it was based on could easily change in the future. Making a choice to become Elvis impersonators is purely that—a choice, and one that could easily flip the next day. Using an increase in Elvis impersonators as a basis for predicting the future is no more secure than saying that because we had a few days of rain lately, it will continue raining forever, or that because the number of hula hoops or Beanie Babies sold this year was twice that of last year, it will be twice as big again next year. These were fads, subject to the whims of fashion—not trends driven by immutable forces that could be counted on to continue.

The distinction between hard and soft trend is not always quite so obvious. To many observers, that trillion-dollar surplus looked quite believable. That's the problem with soft trends. Sometimes they look ridiculous, like my Elvis impersonator model—and sometimes they have the appearance of being credible. Still, soft is soft, and unless the trend is based on a direction of change that is clearly fixed, there is nothing certain about that trend. Saying something *could* happen is very different from saying it *will* happen, and that difference makes all the difference.

A hard trend can be either cyclic or linear in nature; both types of change yield hard trends. For example, if the stock market is falling today, we know that in the future, it will go back up again—and we know that *with certainty*. The rise and fall of the stock market is a cyclic change, and a hard trend.

Exactly when will it turn and start going up again, and how high will it go when it does? We don't know. The exact timing and extent of the market's behavior is a soft trend, because our behavior and choices can influence it. What we know is that after it falls, it will rise, and after it rises, it will fall. That may sound like a fairly simplistic hard trend, but it has been reliable enough to make Warren Buffett a very rich man.

On the other hand, if the rate at which our laptop computers can process an audio or video clip has gotten a lot faster in the last few decades, what can we know about the future? They'll be even faster. The increasing speed and capacity of computer processors is not cyclic, it is linear—and a hard trend.

Exactly which manufacturers will be introducing the newest, breakthrough models five years from now? We don't know. The acceleration of the technology is a hard trend—but who takes advantage of that technological advancement and brings it to market, that's a soft trend.

To get a clearer sense of what a hard trend looks like, let's revisit the American landscape at the close of World War II, when the American suburbs were poised to explode across the nation and GM still ruled the world. As American GIs returned victorious from their overseas tours of duty, millions of families were reunited—and nine months later, something happened that was 100 percent predictable: *a lot* of babies started appearing. Today there are about 78 million Americans who were born during the eighteen-year population boom lasting from 1946 through 1964, and there are similarly large groups in Japan, Europe, and the other developed nations of the post-WWII era.

Demographics is one of the primary generators of tangible, measurable hard trends, and the post-WWII baby boom is one of the clearest and most dramatic examples. This postwar population boom is a physical fact: those millions of people were born and they're going to stay born. What's more, they're going to consistently and progressively get older, creating a *fully predictable* set of consequences as they age.

"Right, the baby boom," you may be saying, "that's old news." You already know about the baby boom. Everyone does. And that's what makes it such a great example—because even though we think we know all about it, *we keep missing it*. This hard trend has been clearly visible for over half a century—and yet, amazingly, this population bump has continued to catch us by surprise at every stage of the boomers' lives.

In 1945 we might have predicted that when all those soldiers

came home, something big was going to happen. But we didn't, and when the wave of births started happening in 1946, we didn't have enough hospitals.

Okay, so we missed the hospitals; but surely we could learn from our mistakes. We had a good five years before all these newborns would be ready for kindergarten, so we had plenty of time to prepare, right? Wrong. After five years of headlines screaming that there weren't enough hospitals to have all these babies, all of a sudden we didn't have enough kindergartens. About seven years later, what do you know: suddenly we didn't have enough junior high schools. A few years after that, we discovered that there were not enough high schools. And you'll never guess what happened next: suddenly we found that we had not built enough colleges.

Who could have possibly seen all this coming? Anyone could—if they had developed the habit of looking at hard trends.

Recently my company consulted to a major insurance company. As we talked about hard trends and soft trends, about certainty and the fact that demographics was a good hard trend generator, one gentleman interrupted: "Yes, yes, we know all about demographics and baby boomers. We understand all that."

"Great!" I replied, "then we don't have to cover all that ground. So, let me just ask you a few quick questions. Roughly how many salespeople do you have driving your total sales around the globe?"

They knew this number right off the bat, and it was huge.

"Okay," I ventured, "let's see . . . Could you tell me, of those salespeople who generate 80 percent or more of your global sales, how many are within three years of retirement?"

There was an awkward silence. They could not tell me that number. They'd never thought to ask the question.

One executive went onto his laptop to access the information. They knew who their top salespeople were, so it wasn't hard to pull the answer from their database. Once we'd queried the system and gotten back our answer, the awkward silence turned to a shocked silence.

Sixty percent.

In the following three years, three out of five of their top sales-

people would be gone, and all that know-how and experience would be gone with them. The executives were thunderstruck. An important piece of information had just become visible. Why hadn't they seen this coming? Because they hadn't looked. They had not developed the habit of *starting with what they knew.*

At about the same time, I happened to be consulting with leaders from the Social Security Administration. As we began our session, the man who'd brought me in to speak introduced me to their head of training, and we began talking about the situation facing Social Security.

At one second past midnight on January 1, 2008, the first baby boomer turned sixty-two, making her eligible for early Social Security benefits.[1] During 2008, about 3.2 million baby boomers turned sixty-two—that's about 365 *per hour.* Today, the Social Security caseload is about 50 million people; by 2030, it will be 84 million people. Medicare will go from 44 million beneficiaries to 79 million. At that point, we'll have about two workers contributing to the system for each retired beneficiary. Back in 1945, that ratio was *forty-two* to one.[2]

As with the insurance company, I asked them if they had looked at the effects of retirement on their own organization. "For example," I said, "how many of you are retiring within the next few years?" It was a fairly large group of senior leaders, and quite a few hands went up. Much to their shock, a major percentage of their key senior people—again, the ones with the bulk of experience and know-how—were on their way out the door.

I once heard the CEO of Sony say, "If we only knew what we know!" He was talking about the data stored in their computers, but the comment applies here, too: we all *think* we know that a lot of baby boomers are about to retire—but do we?

Two months later, we had a vivid demonstration of the trend we were looking at: the man who had brought me in to consult to the agency was gone; a month later, so was the head of training. Both had retired. The exodus of retiring boomers had begun. Or to put it more accurately, they weren't really *gone*: they were still part of the Social Security system, only now they were its *customers.*

>>>Why We Keep Falling for the Elvis Fallacy

Despite all that has been said and written about the baby boom, we continue not to see it coming. Those 78 million boomers who were flooding America's ill-prepared kindergartens in the 1950s and America's ill-prepared colleges in the late 1960s are now flooding our ill-prepared health care system. If our trend blindness persists, in another ten years we won't have even a fraction of the doctors and nurses we'll need to care for this boom generation. Meanwhile, America's pension plans, along with Medicare, Medicaid, and Social Security, are catastrophically underfunded. Where's the money going to come from?

Nearly 80 million baby boomers are going to need greatly increased health care in the United States alone, with tens of millions more around the globe: that's a hard trend. Are we going to be able to provide that care or not? And if we are, then who will be doing the providing, and how? The answers to those questions are soft trends.

Again, notice where the hard trend is—and where it is *not*. The increasing numbers of boomers who will need medical care as they get older and their bodies need more repair is a hard trend, because those numbers are fixed and cannot be changed. But that projected lack of sufficient numbers of doctors and nurses to provide that care is a *soft* trend, because it is something we *can* change if we see it and elect to act on it.

Here is an example of the difference between a hard trend and a soft trend. Ten years from now (assuming you are still living), you are going to be ten years older than you are today. That's a hard trend. Why? Because there's nothing you or anyone can do to change that fact.

What will your state of health be like then—worse? Much worse? Better? About the same? I don't know; neither do you, and neither does anyone else. It is not definitively knowable, because that is a soft trend. Why? Because you can do things to affect it.

While we're on the subject of health, this is a point especially worth noting: a doctor's prognosis, no matter how clear or defini-

tive it may seem, is *never* a hard trend. We often see it as such: when the man in the white coat intones, "I'm so sorry—you have six months to live," it's pretty easy to feel grim. But plenty of people have defied their doctors' predictions by months, even by years.

How is that possible? By changing. Whether through a change in diet or exercise, in breathing and posture, in attitude and strength of will, nutritional supplementation or other unconventional health approaches, people have the ability to take actions that change their state of health—which means it is always a soft trend.

This is, in a nutshell, the power of flash foresight: knowing how to identify hard trends gives us the ability to *see* the future. Knowing how to identify soft trends gives us the ability to *shape* the future.

Recently, a colleague of mine who lives in Washington, D.C., told me that a car parked in a neighbor's driveway down the street had been vandalized. The next day it had happened again, this time to a neighbor just a few houses away. The following day it happened again, this time to his next-door neighbor's car.

"Hey," I said, "things aren't looking good for your car tonight!"

But was that a hard trend? No, it was soft—because he could do something about it. And he did. He got his car into a garage.

A soft trend may have a good chance of happening, even an excellent chance—but no matter how likely it looks, it's not carved in stone. There is an opportunity to do something about it. For years everyone seemed to accept that Toyota would eventually outsell GM. American automakers have been struggling ever since the seventies and eighties, when they lost the quality edge to their Japanese competitors, and they've been in catch-up mode ever since, missing the hard trends for decades.

For example, the rise of India, China, and the price of gas.

Strangely enough, while we often treat the cyclic change of real estate and stock prices as if they are linear and their values will go up forever, we also make the opposite mistake: we often treat a linear change as if it's cyclic. For decades, the Big Three automakers have been building cars as if cheap gasoline would continue forever. It won't.

Actually, the price of gas is affected by both kinds of change, cyclic *and* linear, as are many things in our world; the key is to sort them out and see which is which. The linear change patterns are the ones that tend to disrupt the status quo and change the direction of the future, and are therefore especially powerful. Seasonal consumption patterns, economic upticks and downturns, events in geopolitics, and other cyclic influences do cause fuel prices to rise and fall. But these smaller cyclic influences pale beside the long-term hard trend that is inexorably driving up the price of gas overall: the continuously increasing global demand caused by an explosive growth in the middle-class populations of emerging nations. It's not Saudi Arabia, Iraq, and Venezuela that are the overarching factor here: it's China and India. By the time you hold this book in your hands, there will probably be more cars being manufactured in China than in any other country in the world. And these newly auto-owning populations will *not* be going back to relying on bicycles.

So yes, gas prices will fluctuate somewhat from week to week and season to season, and the impact of events such as a global recession will temporarily bring down demand and prices. But recessions will always pass, and global demand will go back up again, taking prices with it. The larger trend is following a broad path of linear change, and that trend is *upward*.

For years the hard trends made it utterly predictable that the market for automobiles would trend toward smaller and more fuel-efficient cars, cars with lower emissions, and, ultimately, cars that run on something other than exclusively petroleum fuel. It made no sense whatsoever to base a manufacturing strategy on large, gas-hungry vehicles, with relatively little effort devoted to alternative-fuel vehicles, in hopes that gasoline would eventually become more affordable again. Yet American automakers continued to spend millions fighting proposed new emissions standards and billions in advertising and manufacturing costs to keep turning out large and inefficient gas guzzlers.

The automakers were not alone: the government colluded in that fixated rearview-mirror stare by creating economic incentives

that made it more lucrative to continue churning out more of that dying breed.

When I sat with Rick Wagoner at that dinner in 2004, GM had just shifted its production focus from sedans to SUVs. SUVs were soaring in popularity, and it must have looked for all the world like the demand would keep going and going. It was one of those things that certainly *seemed* like the smart thing to do at the time. It's just that it wasn't. It was a classic example of the Elvis fallacy. I'm sure that Rick never imagined at the time that five years later, with him no longer at the helm, a bankrupt GM would sell off its ultimate gas-gulping muscle car, the Hummer—to a Chinese construction company with no automobile manufacturing experience. Yet that is what happened.

The growing market demand for more fuel-efficient vehicles was a hard trend. GM losing its market dominance to Toyota was *not* a hard trend, because GM could have stopped it from happening. But they didn't.

"As GM goes, so goes the nation. . . . ," yet while that may have been true for the past half century, it's not necessarily going to *stay* true. It is a soft trend, not a hard trend. Just because things have been going a certain way, you cannot count on them to continue going that way *unless they're based on a fixed, clearly measurable hard trend*. In fact, if they are not clearly and causally linked to a hard trend, what you *can* count on is that they *are* going to change. The question is, in what direction is the change going to happen?

To make sure we're clear on this, let's look for a moment at two other auto companies: Toyota and Hyundai. With GM's sales shrinking and Toyota's continuing to rise, it was clear to all that Toyota would take the title of number one automaker worldwide. But by early 2010 Toyota was suddenly embroiled in a crisis of its own, and it was Toyota's CEO, not GM's, now sitting in the congressional hot seat answering pointed questions about his own performance. This is the beauty of knowing how to recognize soft trends as well as hard trends: knowing hard trends will tell you, for example, where technology is going and what capabilities we can expect to have in the future. But soft trends point to where the

opportunity lies. If Toyota's market supremacy were a hard trend, there would be no point in having any competitive car companies. But it's not. The advances in technology are a certainty; *who implements* those advances is soft.

There may be no better example than Hyundai. For years the icon of automotive cheapness, Hyundai was often viewed as sort of the joke of the industry. In the midst of the economic hard times of 2009, someone at Hyundai got creative: they started running television ads saying, "Buy a car from us, and if you lose your job, we'll let you return it, no problem." Their sales took off like crazy. By 2010 Hyundai was making a credible bid for taking the lead in luxury autos, with models going head-to-head with BMW, Lexus, and Mercedes-Benz.

We can predict with certainty many things about what kinds of vehicles we'll be buying five years from now. For example, we will still need trucks and larger cars, because there will still be stuff to haul and we'll still want to have a way to fit whole families into vehicles, so the cars of the future will not all be tiny. But we also know they *will* be more fuel-efficient and green, because of the hard trends of China's and India's demographics, and the realities of environmental impact. All these things, we can know for sure. But as to who we'll be buying them from—that is an aspect of the future that is up for grabs.

Not long ago, I spoke with a group of representatives from a large real estate company in Michigan about the difference between hard trends and soft trends. We had just gone through a definition of *hard trend*, and one man said:

"Okay, I think I have an example. In Detroit, the auto manufacturers have been taking a real beating, and people are moving out in droves. In fact, they've been moving out for over a decade. And since the auto manufacturers are just doing worse and worse, it's a hard trend that people are going to continue moving out of Detroit for the foreseeable future—right?"

Wrong. That's a soft trend. A very credible one, certainly, and one with a high degree of likelihood. But *likelihood* is not the same as *certainty*. What if Toyota (or Hyundai!) bought GM?

The key to opening the window that looks out onto the visible future is knowing how to distinguish a soft trend from a hard trend. It is knowing how to avoid falling for the Elvis fallacy. It is knowing how to recognize certainty.

>>>Finding the Fortune in Hard Trends

Demographics is only one major source of hard trends; another, which we'll devote much of this book to exploring, is the forward thrust of technological advancement.

In 1993 I was invited to address a convention of the National Booksellers' Association, attended by a crowd of some 10,000 bookstore owners. My keynote address included these remarks.

"Within the next two to three years, you're going to see a huge, successful *virtual bookstore* opening up online, and it's going to transform the way people shop for books. It could be one of you here in this room who does this—but chances are, it will be someone from the outside, someone who is not already invested in the present way of doing things. Someone who will look at things with fresh eyes and have a flash foresight."

No one in the room took my comments too seriously; after all, this was 1993, and hardly anyone even knew the World Wide Web existed, much less what it was. Mosaic, the first graphical-interface Web browser, had just been released that April, and the first widely used browser (Netscape Navigator) would not appear until the end of the following year. The concept of e-commerce as we know it today did not yet even exist.

And you already know what happened next. A year later, a thirty-year-old entrepreneur incorporated a brand-new company called Cadabra.com. A year after that, Cadabra launched an online bookselling portal, which its founder eventually renamed Amazon. That entrepreneur was Jeff Bezos, and four years later he was *Time* magazine's Man of the Year cover story. Bezos saw the hard trend; today he is one of the richest men in America.

Back in 1993, of course, none of this had happened yet, but

given the state of development of the World Wide Web and the increasing capabilities of home computers and modems, I was certain that it would—certain enough to risk my reputation by going on record with that prediction to an audience of thousands. It wasn't a lucky guess, and it had nothing to do with being psychic: given the hard trends, it was fully predictable.

That Amazon prediction was not an isolated event; over the past twenty-five years I've made hundreds of accurate predictions about the future of technology and how it will change every aspect of our lives. Here is a small sampling of my early predictions, including the year they were published; note that they were all made publicly, in speeches, articles, interviews, and books, and have not been edited in hindsight.

DATE OF PUBLICATION	*PREDICTION* / FULFILLMENT
1983	*The 1990s will see a digital revolution.*
	In 1983 we lived in an analog world and the word *digital* was seldom used in business or education. During the 1990s a global conversion from analog to digital technology sparked multiple predictable revolutions in such fields as cell phones, photography, and e-mail, to name just a few.
1983	*Fiber optics will soon become the medium of choice for broadband data transmission.*
	Fiber optics was still an emerging technology in 1983 and only a few were experimenting with it. By the end of the 1980s fiber optics had become the backbone of broadband communications globally, and in the late 1990s it created the worldwide explosion of the Internet in virtually every area of human enterprise.
1983	*There will be computers in every classroom by the mid-1990s.*
	In 1983 only a relatively few people were using computers and in order to use one, you needed to learn a programming language such as BASIC. In 1995 *USA Today* reported that every classroom in America had at least one computer.

DATE OF PUBLICATION	*PREDICTION* / FULFILLMENT
1984	*We will sequence the human gene code by the year 2000.*
	The Human Genome Project was begun six years later, in 1990; a "rough draft" of the complete human gene code was announced jointly by U.S. president Bill Clinton and U.K. prime minister Tony Blair on June 26, 2000.
1984	*By 1990 all computers will use an icon interface.*
	When Apple introduced the first Macintosh in 1984, the business world regarded it as an irrelevant toy. Microsoft introduced the first edition of its Windows operating system a year later, in 1985, to lukewarm response. The first edition to achieve widespread popularity was Windows 3.0, which was released in 1990 and sold two million copies within six months. Virtually all computers have used an icon-based interface ever since.
1986	*By the late 1990s we will use GPS to pinpoint location with applications ranging from agriculture to trucking.*
	In 1986 GPS was being used only by the military, and few saw a nonmilitary use. By the late nineties farmers were using GPS to plow their fields, and trucking companies were using it to track each truck on the road.
1988	*By the end of the 1990s e-mail will outpace paper mail.*
	In 1988 only scientists and technologists were using e-mail. By 1998 the number of e-mails sent over the Internet exceeded the number of physical letters sent through the postal service.
1988	*From the mid-1990s on, businesses will widely use and profit from the Internet.*
	In 1988 using the Internet required a working knowledge of computer programming, and the idea of a widespread business application seemed like science fiction. With the introduction of the first graphical-interface Web browsers in 1993 and 1994, this barrier was demolished, and the migration of the business community onto Web sites followed over the next several years.
1988	*There are more software programmers in India than in the United States; once they get networked, sometime in the late nineties, a revolution will be born.*
	In 1988 few were aware that India had more programmers than the United States; fewer still could see the impact on India's economy and the global service revolution that would result.

DATE OF PUBLICATION	*PREDICTION* / FULFILLMENT
1993	*Within another two to three years, someone will create a successful online bookstore.*
	As described above, Amazon.com was founded in 1994.
1996	*Between 2000 and 2005 we will see the rapid growth of wireless Web access.*
	In 1996 the Netscape and Microsoft Web browsers were barely one year old, and virtually every computer's Web access was through a slow wired connection. In mid-1999 Apple introduced its first AirPort (WiFi hub), and the wireless Web was born.
1996	*In less than ten years, people will have Web browsers on their smartphones.*
	In 1996 Nokia released the Nokia 9000, the earliest palmtop computer–style smartphone; it was expensive, huge, and weighed close to a pound. By 2006 nearly one hundred million Web-capable smartphones were shipping worldwide per year.
1997	*By the early 2000s the next generation of Web architecture (XML) will usher in a social networking revolution.*
	By 2004 the terms *Web 2.0* and *social networking* had come into widespread use to describe the new types of Web experience made possible by XML technology.
2006	*Starting in 2008 we will begin to see record defaults on mortgages due to the large number of speculative home purchases with zero-interest ARMs that will reset, driving foreclosures up and home values down.*
	In 2006 few were seeing the visible triggers that would send the United States and the rest of world into an economic crisis.
2008	*Social media and social-media marketing will go mobile and will be standard on smartphones by 2010.*
	In 2008 the business world was just discovering social media; few were taking it seriously, and fewer still were seeing the possibility of it going mobile.

How could one possibly see these things happen before they happened? It's not guesswork or psychic acuity. It's purely a question of knowing how and where to look, and taking the time to do the looking. In my case, it was possible to make all these predictions and hundreds more, even down to specific timelines many

years ahead of time, simply because I'd spent a good deal of time studying hard trends in technology.

Hard trends make the future visible. Once you see the distinction of hard trends, you start opening all sorts of doors to new possibilities.

In the late 1980s, while working with executives at the Mayo Clinic, I asked them to take a look at their visible future. When they did, what they saw was a world of decreasing Medicare and Medicaid reimbursements, increasing losses in their emergency rooms, and a generally depressing economic scenario. The future they saw, based on what seemed to them the likely demographic and economic trends, looked bleak.

But most of what they saw represented soft trends. The aging of the population itself was a hard trend—but that didn't necessarily have to translate into economic losses for the Mayo Clinic.

I directed their attention to a few key hard trends they hadn't been looking at: the increasing presence of computers in consumers' homes and the increasing speed and power of those computers, along with the introduction of CD-ROM technology. A steady increase in processing power and storage capacity (two hard trends) and the progressive miniaturization of components (another hard trend) were making it easier and easier to store, distribute, and search huge amounts of information, making it possible to access certain types of knowledge tools that had hitherto been impossible.

The world, in other words, was moving rapidly toward a *knowledge-based economy*. So I came up with this simple suggestion: why not take advantage of that hard trend and turn the Mayo Clinic into an organization that derived income not only from treating people who came to their facilities, but also from selling their *knowledge*?

From our vantage point today, this advice looks rather obvious, but it was a radical idea at the time. Remember, this was the late 1980s. The concept of CD-ROM was barely a few years old; Microsoft would not release Encarta, the first commercial CD-based encyclopedia, for another half a decade. Yet to Mayo's credit, they

leaped at the idea. The result was a CD that consumers could use anytime, day or night, to determine whether their child's rash and fever required a trip to the emergency room or could be treated with aspirin, or to get top-notch professional help in any one of thousands of other medical situations.

To some, this project seemed a long shot when they started spending time and money on it. "After all," many wondered at the time, "who would want access to medical guidance using a computer in their home?"

But the long shot paid off, and paid off in a big way. The clinic put a $100 price tag on this product; in its first year, it sold 670,000 copies. That's $67 million in gross sales in just one year—a very profitable flash foresight.

In fact, the benefits went even beyond sales of the immediate product. By expanding its services to offer a knowledge-based product, the Mayo Clinic began developing a new and powerful twenty-first-century brand in the marketplace. They not only created new value and new revenue, but with the subsequent rise of the Internet, their name recognition became international.

Today, when you visit MayoClinic.com, you'll see their slogan: "Tools for healthier lives." Their Web site lets you "manage your health with information and tools that reflect the expertise of Mayo's 2,500 physicians and scientists . . ." In other words, Mayo transformed itself from an organization that delivers on-site health care to an organization that delivers expertise and knowledge, anytime, anywhere.

Let's look at another example of using a hard trend to win in the marketplace, this one involving Dale Morgen, the inventor we met earlier.

As the nineties got under way, researchers had been working hard to develop a type of liquid crystal display screen for commercial application. However, there was a technical challenge they could not seem to overcome: the frustratingly slow refresh rate of the LCD's individual pixels, which, while fast enough to provide a readable picture, was nowhere near fast enough to meet the demands of a commercial television screen.

Around 1989, Dale Morgen had another of his big ideas: why not add a bit of memory to each pixel? The memory would act as an image buffer, managing the flow of information to each pixel. As you watched the screen you'd actually be about one second behind the broadcast, but no one would notice.

Everyone told Dale he was crazy. Memory was far too expensive to make the idea even remotely feasible: adding memory individually to each pixel would vault the cost of the average television set up into the tens of thousands of dollars! But Dale was not deterred. He knew a hard trend: the price of memory would fall dramatically.

And so it has. After languishing quietly for a decade and a half, Dale's patent was ready when the hard trend caught up with it. Today LCD screens claim more than 50 percent of market share, which means companies are shipping more than 100 million television sets around the world per year—and his matrix control technology is being used in plasma TVs as well. Dale is sitting on a modest fortune. His LCD patent became an idea whose time had come, as he knew it would, because of the hard trend of technological advancement.

>>>Some Million-Dollar Flash Foresights

Now let's be inventors ourselves for a moment. Let's say we want to take advantage of the certainty provided by the baby boom to create a successful business that will thrive in the years ahead. In fact, let's say we want to create a new million-dollar company. Where do we look? You might start by looking no further than your own family.

At age seventy-five, my mother used to say that climbing up and down her three flights of stairs "keeps me young." She passed away at the age of eighty-two—but if she had lived much longer, it's clear that she would have had to move. She knew this, but she didn't *want* to move. She loved living where she was. But because of the layout of the staircases in her house, electric chair lifts would have been out of the question. And as she became frailer, getting herself up and down through those floors would have become impossible.

She was not alone. There are millions of people living in two-story homes who want to stay there, but who will soon face the same problem my mother faced. And that's nothing compared to her children's generation. When you pour the 78 million–strong baby boom into this future situation, the problem becomes enormous. And so does the opportunity.

One flash foresight solution: retrofit these homes with *personal elevators.*

The highest of high-end homes have had these for years; why not bring the feature to the average home? Installing an elevator inside the home would be complicated, expensive, and in many cases not practical. So let's do what some hotels have done and *go opposite*: put the elevator on the *outside*. It's inexpensive and practical, it gets your parents up and down, and it gives them a good view of the neighborhood to boot.

So you develop an inexpensive, lightweight, durable elevator that retrofits on the outside of the house and goes up just one story. Would there be a market for that? There sure would. Baby boomers have parents just like my mom, so they need them *now*—and they'll need them even more in the future when they are in the same situation themselves.

Throughout this book, we'll explore entrepreneurial ideas that tap a range of technological hard trends. For now, let's stay with this hard trend of baby boom demographics, and use it to come up with a handful of other ideas you could flesh out to become full-fledged million-dollar entrepreneurial enterprises.

BOOMER VIDEO GAMES

We have immersive, participatory video games for kids that place the user right into the action in wars, science fiction worlds, and all sorts of other settings. What about video games for baby boomers that place you at Woodstock, the 1968 Democratic Convention, or the trial of the Chicago Seven, and let you interact with your friends within those events?

LATE-LIFE FINANCIAL PLANNING

In past generations, financial planners helped you make money, accumulate money, and then plan how to give it away. Today, because we're living much longer, that strategy is undergoing a radical change. Unlike their parents and grandparents, those of the baby boom generation plan on doing something different after retiring instead of dying after a few years: *living, and for a long time.* The focus in senior financial planning is now shifting from accumulating and transferring wealth to making one's money last—in many cases, for decades.

Today more than 80 percent of the wealth in the United States is controlled by people over the age of fifty. Ten years from now that mass of wealth will be in the hands of people preparing for retirement—or at least, their version of retirement. They'll be getting conservative with their money, looking for stocks with a dividend, and they're going to stay that way, because they know they won't have another lifetime to make up the shortfall if they're *not* conservative.

Will that have an impact on the stock market? It certainly will. Is that bad news? Only if you didn't know about it ahead of time. How can you find ways as a financial services company to serve that emerging market?

UNRETIREMENT HOMES

The entire concept of nursing homes is ripe for revolution. The majority of baby boomers do not expect to fully retire, but will stay engaged in some sort of gainful employment, often different from the work of their past career. Volunteerism, social involvement, entrepreneurialism, and collaborative new ventures will be commonplace career-shift choices—and because of advances in health care, wellness, and life extension, boomers are going to live a lot longer. There will be a huge market for living facilities that combine the health-care resources of nursing homes with more upscale styling and site design that better suits this sort of second-life career lifestyle. Let's call them *unretirement* homes.

And what about specially themed unretirement homes? A commune-style home would focus on gardening, energy self-sufficiency, and other sorts of back-to-the-land endeavors. How about an unretirement home where everyone played music. Or you could create an unretirement home that focused on fine cuisine, or arts and letters, or theater, or electronics.

Or, here's another thought: why don't we create an eHarmony for elders? Not for dating, but so we can match roommates in nursing homes. I recently heard in the news that an elderly person was charged with murder: she couldn't stand her nursing home roommate and strangled her.

GREEN FUNERAL HOMES AND BOOMER CEMETERIES

Baby boomers are on average going to live a lot longer than their parents—but we all die eventually. When that population swell hits dying age the nation will probably be no better prepared with cemeteries than we were with nursery schools, grade schools, or colleges. The burial industry, macabre though it sounds to say it, will become an enormously profitable growth niche. And not everyone wants to be buried; cremation centers will boom, too.

This is not purely a matter of available land, but also one of approach. What does a twenty-first-century, environmentally conscious cemetery look like? As boomers approach their final chapter in life and focus on leaving a legacy, what kind of funeral service do they want? How can we evolve the entire funeral-burial-farewell process so that it becomes more than a one-time ceremony and makes more of an ongoing impact and contribution to the world— because if you can find a way to design *that* experience, this generation will want to buy it.

>>>You, the American Automaker

Now let's take that same perspective, only this time you're not an entrepreneur brainstorming a start-up. This time you are an Amer-

ican automaker. You have decided to keep your eye on the hard trends, to steer clear of the Elvis fallacy, and to drive your company straight into the visible future. What do you do now?

You might start by asking, where's your market? Today GM sells more cars and trucks to China than any other company in the world. If you're GM, you already know something Rick Wagoner evidently didn't know in 2004 (though he should have and easily could have): unless you make some radical shifts in the kinds of vehicles you're manufacturing, someone else will be outselling you in China within ten years at most, and probably a lot sooner than that. And that's not a maybe, you know that *for certain*.

How do you know that? Because petroleum fuels, over the long term, are going to continue to become more and more costly, both economically and environmentally.

In parts of China today there are already new emission standards that are equivalent to the targets set for ten years from now in California, our most environmentally progressive state. In other words, in terms of environmental impact, America *at its most progressive* is a good decade behind China's market demand. China has been choking on its own fumes, and they're starting to make the tough decisions that the United States is still avoiding. American automakers have been complaining that they can't meet more stringent emission standards and better mpg ratings, because it would cost them billions. That's rearview-mirror thinking. Unless they start producing the vehicles the world of the future will need, those billions won't be there anyway.

As an American automaker, what will *you* do? With your eyes firmly on the visible future, you won't grudgingly try to *meet* those numbers—you'll immediately look for ways you can leap ahead and *exceed* them.

There are roughly one billion kids today in emerging nations who are going to enter the consumer market over the next five to eight years. Add to them the hundreds of millions of adults in these emerging nations who want cars *now*. This demographic group will be in the market for close to a *billion* new cars over the next decade. That's a hard trend: it *will* happen. Who's going to make and sell

them? That's a soft trend; we can't be certain about the answer to that one, and in fact, we can *change* the answer to that one. To do that, we need to ask a different question, one we *can* be certain about: *What kind of cars will they be?*

They're going to be eco-friendly cars that are inexpensive and have a small profile, so they can fit on the narrower streets of those emerging economies. They are going to be a combination of electric vehicles and hybrids running on multiple fuels. Why? Again, a hard trend: we're going to reduce our exclusive reliance on oil as our primary automotive fuel. That's a whole different kind of car. Someone is going to make an absolute fortune selling those cars in Africa, the Middle East, India, China, and the rest of Asia.

If you don't serve this emerging market, someone else will. In India, where the streets are quite narrow, the Indian automobile manufacturer Tata is already designing very small cars for use there—and they have announced their intention to market a hybrid version of their tiny car, making the world's smallest (and cheapest) hybrid. Tata's auto is named, appropriately enough, the Nano. And look out, Europe and America: Tata now owns Jaguar and Land Rover.

What if, instead of leaving innovation to the newcomers (as the booksellers did with Amazon), you decided to refocus the resources of your American auto company onto designing cars for these emerging markets? In fact, what if you put your focus on becoming the *best automaker on the planet* by doing that? You would be going with the tide, instead of against it. The financial profits would be immense, as would the goodwill and brand power you would generate. Imagine the shot in the arm you would engender, not only for your own beleaguered industry but for American industry as a whole.

"But we've got major manufacture-cost problems," you point out. "How can we possibly compete with Toyota's approach to manufacture?"

Well, why not go with a model like Dell's? Today, in hindsight, everyone can readily see how brilliant the Dell model was. But when Michael Dell set out to have other manufacturers make its computers according to Dell's customer specs, to have people pay

for the computer they wanted, not from a showroom but sight unseen, and then take their money and go manufacture it out of parts from their "just in time" supply chain, people thought he was a fool. He was no fool: he had a flash foresight and acted on it. Dell later lost its way, because they grew big and sought to milk their cash cow instead of continuing to pioneer and innovate—but the model of "just in time" inventory, a highly responsive supply chain, and customer custom design is even more practical today than it was when Dell first explored it.

Early in Ford's history, founder Henry Ford made a famous remark about his Model T: "Customers can have it any color they like, so long as it's black." Ford's greatest contribution to technology was the concept of assembly-line mass production, a process that derives its power from the uniformity of its product. At the time, Ford's insight was itself a flash foresight. Yet a century later, that is still the approach of American automakers today. We still haggle over our limited options on the shop floor and pay through the nose for extra features. Meanwhile, the truth of today's manufacturing technology is that it is now possible to produce 100 uniquely different items at nearly the same profitability as producing 100 exact replicas of the same item. "Have it your way" is not just a fast-food slogan: it's an accurate distillation of twenty-first-century consumer expectation.

So why not give your customers preordered, custom-designed automobiles? Instead of keeping all that massive investment in manufacturing capacity, outsource all the manufacturing. Let your customers go online, choose the features they want, and design the car they want, make a down payment, and then go have it made. Cash up front. Instead of tying up billions in manufacturing capacity, you're using the customer's money.

Dell computers are made in Taiwan; so are IBM's, so are Apple's. Where it's made isn't the point: it's still a Dell or a Mac, because it's manufactured to Dell's or Apple's brand and quality specs. We could just as easily manufacture our GM cars overseas.

Or here's a thought: instead of outsourcing your labor, why not *insource* it: have it done right here in the United States, as Toyota

is doing. Toyota makes most of the cars for the American market here in the United States, and they're hiring American workers to do it. In fact, why not talk with Toyota and explore the possibility of them being your manufacturing arm? Why don't you have U.S. workers build your cars according to Toyota specs, with your company name on it? With your highly customizable, fluid-design Dell model, you're going to need to hire a lot more engineers. And with the popularity of your new on-demand customizable autos, soon your plants are going to be *hiring*, not laying off.

Even before doing any of the above, there's one sweeping change you might make as an American auto company: stop thinking of yourself as an American auto company, and start seeing yourself instead as a global auto company, building cars all over the world, using employees all over the world, to serve markets all over the world. Could you perhaps form a strategic alliance with Tata? Or if you'd rather, set up your own manufacturing facility over there? China has already realized it can't continue building conventional, polluting, twentieth-century cars, and has now set a goal of becoming the number one hybrid-car manufacturer on the planet. Why not build your own facility over there and build for them?

And while you're becoming a global car company, why not also become a *green* car company? Instead of building cars in China and shipping them to the United States (which GM is doing), build your autos all over the world, manufacturing them locally for the markets they're going to serve—so you stop all the polluting involved in all that shipping, and at the same time start employing the local populations to build their own cars.

Of course, you haven't solved all your problems. You've got some major issues with labor and health care to deal with. You're going to need to show your labor unions how to look at the visible future, because you're going to need twenty-first-century unions that are focused on retraining their workers for the visible future, instead of protecting and defending the turf of bygone years—that is, unions that understand the need to shift from lifelong employment to lifelong *employability*. And you'll need to completely redesign your approach to health care. We'll talk more about both issues in later

chapters. But in the pursuit of your car company's makeover, you're well on your way.

Strategy based on certainty has low risk and high reward. Base your strategies on certainty, on the known future visible in hard trends and the soft trends that you can manipulate, knowing which is which and acting accordingly, and you will build something that will not only survive but even thrive in the years ahead.

Hope is not a strategy: certainty is.

>>>History May Be Bunk— But the Future Is Real

They say we can learn from history, and that's true—to an extent. But there may have been more insight than wisecrack in Henry Ford's remark, "History is bunk," because, in fact, hindsight does not necessarily bring wisdom. If it did, everyone would have lots of wisdom. Yet we still keep making the same mistakes.

No, too often what hindsight brings is not wisdom but *lament*. "I should have bought Google stock when it first hit $100 a share. We should have sold our house when the market was up. I should have realized our marriage was in trouble. I should have known. . . ."

The universal lament: *I should have seen it coming.* But if we're operating out of hindsight, we *never* see it coming.

Why does it always seem that we learn about something too late to take advantage of it? The answer is so simple it's shocking: We didn't see it coming because we weren't looking.

In 2008, as GM began its final downward spiral toward insolvency, Rick Wagoner expressed regret that he had not moved faster on developing an alternative-fuel car. He said he wished he hadn't pulled the plug on the EV1, GM's earlier electric-car prototype, and he acknowledged "underestimating how the emergence of consumer societies in China and India would help put a $100 floor under oil prices."[3]

Lament—the eternal expression of hindsight.

In another announcement, just before GM's annual meeting in

June 2008, Rick declared that the soaring price of gas had forced a "structural shift" by American consumers, away from larger vehicles and toward smaller, more fuel-efficient cars. "These prices are changing consumer behavior, and changing it rapidly," he said, adding, "we don't believe it's a spike or temporary shift. We believe it is permanent."[4] In other words, as we had said in our brief conversation four years earlier: *This is not a cyclic change but a linear change—and it's a hard trend.*

So why did it take 2008's $4-a-gallon gasoline to finally bring this point home, when it was fully and wholly predictable years earlier? This is a sobering question, and one that every captain of industry would do well to ask. Because GM is only one example among thousands. The leaders of the American auto industry are in the same boat as every other CEO, every other manager, every other employer, and in fact, every other person in America—and everywhere else in the world. We're all too busy reacting to the present, putting out fires, to look at and act on the opportunities the future holds.

But looking into the visible future is no longer a luxury. In an era of rapid, epic change, it has become a survival necessity. When we buy into the myth that "we live in an uncertain world," and indeed, that in the twenty-first century, the world is becoming "more uncertain than ever," we do so at our peril. It simply isn't true.

Is the world changing faster than ever before? Absolutely. But within that bewildering maelstrom of change, there are always vast currents of certainty—currents that allow us not only to predict the future but to positively *shape* it. We just have to know where to look.

If we don't make this shift today, it will be far more difficult tomorrow. Because as dizzying as the pace of change has been these past few years, this has been only a warm-up. Things are about to start changing a *lot* faster.

>>>*CHAPTER 1* ***ACTION STEPS***

Typically we limit ourselves by looking at all the things we don't know and all the things we can't do. Instead, create the habit of starting with a list of things you *can* know and do. Don't let yourself get boxed in by the word *can't*. Every time you bump into something you aren't certain about, put that to the side and keep focusing on the things you are certain about.

➤ **Make a list of all the *cyclic changes* that are affecting you, your life, and your business.**

➤ **Make a list of all the *linear changes* that will have an impact on your life.**

➤ **Make a list of all the *hard trends* that are taking place in your industry, so you know what you can be certain about. Eliminate from this list anything you are not certain is a hard trend.**

➤ **Make a list of all the *soft trends* taking place in your industry, so you can see what you can change or influence.**

➤ **Instead of being blocked by the uncertainties around you, ask yourself: "*What can I be certain about?* What do I *know* will happen in the next few weeks, months, and years? And how can I innovate to take advantage of what I now *know for certain* about the future?"**

➤ ***Business plans on certainty have low risk.* Does your business plan take advantage of certainty?**

➤ ***Involve others* from your business, business partners, even your customers, in the process of identifying what *will* happen versus what *might* happen. Use the results to *cocreate the future*.**

➤ ***Question your assumptions.* Examine each item on your list to see if it a truly a hard trend or a soft trend, is certainty or only a possibility.**