Book Chapter:
Foresight and Extreme Creativity Strategy for the 21st Century
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The Innovator: Business Model Warfare

They've sent a young madman who attacks right and left, front and rear.
It's an intolerable way of waging war!

Austrian Army Officer
Complaining about Napoleon's battlefield tactics in 1796[336]

Established companies are being driven to death by the rate of innovation.

Alfred Chuang
Commenting about marketplace competition in 2015

Silicon Valley is a remarkable engine of innovation and economic growth. Sitting in the middle of it is Stanford University, one of the world's great centers of creative thought, where people come from all over the world to study and perhaps through it to gain admission to the booming high technology industry that surrounds it. As I mentioned in Chapter 4, two Stanford professors recently calculated the combined current revenues of existing companies whose founders had studied at Stanford at $2.7 trillion. [337] If Stanford and these companies were a nation, it would rank as the seventh or eighth largest economy in the world.

Just down the street from Stanford a pleasant walk through downtown Palo Also is where you'll find Alfred Chuang's company, Magnet Systems, which builds the infrastructure that developers use to create apps that deliver information and services to iPhones and Android. This puts him at the forefront of changes to the global economy, in which localized services delivered on mobile devices are transforming our economic lives.

This technology is of course at the very epicenter of the global economic earthquake that digitization is bringing to the economy. The combination gives him a front row seat at the festival of disruptive technologies that are coursing through the economy, and from that seat he sees clearly that the speed at which innovations are being produced presents, in and of itself, a monumental challenge to established businesses.

Established companies are being driven to death by the rate of innovation, he tells us one day, and indeed as innovation consultants, we see the impact all the time. Entrepreneurial start-ups, many of them coming from Stanford, have a huge advantage in speed contests because they know that speed is critical to their survival, and so their entire existence is built around the imperative to get to market as fast as possible. There is an extensive literature now focused around speed and how to achieve it, and many of the titles have come from the experiences of successful entrepreneurs in Silicon Valley. [338]

Larger firms often have a different reality. They're accustomed to an era in which their size and scope provide competitive advantages, so they use their market muscle to protect their market share. What they often fail to realize is that these factors are no longer such useful competitive levers. Through the convergence of social media, apps, mobile computing, universal connectedness, as well as the global-digital supply chain, small start-ups have access to resources comparable to giant multi-nationals without owning any of it, which only makes the start-ups still faster and yet more nimble.

Bigger firms also tend to be more concerned with balancing the profitability of their existing operations with the pace of innovation, and they hesitate to disrupt profitable cash flows with new products and services. This allows the start-ups to gain a position in the market. And finally, the big companies are usually also burdened with a more deliberate, i.e., slower, process for making major decisions.

All of these dimensions work against large firms when their competitors are smaller, nimbler, and hungrier, which they almost always are. In the past the large firms have been able to control the pace of innovation, but they no longer have that control, and hence Alfred Chuang's astute observation that the rate of innovation is killing the big guys.

What we thus observe is that any individual business leader can attempt to speed up the rate of change in a given market or industry by investing wisely in new technologies or new go-to-market models, but no one company can prevent the market from evolving. In other words, you can speed things up, but you can't slow them down. The other quote cited at the beginning of this chapter describes exactly the same sentiment, and with exactly the same sense of frustration, but it was 200 years ago that Napoleon's armies sped across Europe and entirely changed the nature of warfare, again by applying the power of speed.

Creative Destruction

While the sense of urgency and the time compression caused by the acceleration of change is certainly real, the underlying dynamics of the competitive marketplace are definitely not new. [339] Joseph Schumpeter, whom we met in the last chapter, described the overall capitalist process as "creative destruction," and he pointed out that the natural behavior of capitalist systems brings revolution not as the result of vague external factors, but from within. This is exactly what Stanford and all the great universities do. Change, Schumpeter observed, is the common condition of capitalism, not stability. And in an utterly prescient comment about prevalent management practices at the time (and still today), he wrote, "The problem that is usually being visualized is how capitalism administers existing structures, whereas the relevant problem is how it creates and destroys them."

The significance of this comment is nearly impossible to overstate. While so many observers and leaders focus their attention on how businesses perform in today's markets, Schumpeter points out that it is in the very nature of market evolution to weaken some companies while creating enticing opportunities for others. Therefore, just as important as today's market structures, or today's technologies, or today's competitive advantage, is how the forces of change will affect a firm tomorrow and the day after. Now that we've identified the six revolutions we have a better idea of what's coming, and how significant it's likely to be.

The short-term mentality is the "logic of operations," characterized by actions that have as their goal to create a stable, scalable enterprise that returns strong, steady profits to its shareholders. The qualities that are important from this perspective include predictability, the capacity to forecast future growth, revenues, and profits, and as a result tremendous emphasis is placed on management of today's business. Standardization, policy, procedure, organization structure, and short-term decision making are tuned and fine-tuned.

The problem, of course, is that the obsession with predictable scalability ignores the realities of external change, and cannot succeed. It does no good to be Nokia and far and away the globe's leading cell phone maker, with 9 of the top 10 selling phones worldwide as Nokia was in 2007, when the iPhone comes along, if you have no response. Nokia's 2007 Annual Report was written in glowing and highly optimistic language, but about $150 billion of market value has been erased since then as its prospects transformed from bright to negligible from 2007 to 2016.

Part of the challenge with this type of thinking is that the misplaced focus is usually evident only in hindsight, when wars, market share, jobs, or stock value have already been lost. You have to find a different way of thinking, and a different way of working, before the changes come.

Military leaders are familiar with this problem, which they refer to as "preparing to fight the last war." Such preparations, even fully implemented with rigor and discipline, consistently fail if the style of warfare has in the interim changed. Whether we use as example Napoleon's tactics of mobility that crushed Europe's static armies, armored knights slaughtered by the long bow, France's Maginot Line, the Polish horse cavalry that bravely rode to face Hitler's blitzkrieg, the American army confounded by Vietnamese guerrilla fighters, civilian aircraft hijacked and turned into guided terrorist missiles, or a new class of weapon based on the cell phone, the IED (improvised explosive device) as the preferred example, the history of warfare is the history of innovations that render past strategies ineffective. This is also the history of business as Schumpeter observed it in the 1940s, and as we experience it today, 75 years later.

Hence, the relevant question for business leaders is, "What is your strategy for dealing with six revolutions and accelerating change?" When things are moving so fast, in fact it's a new kind of radar that you need, along with a different approach to making decisions. For business leaders as for generals, hindsight does not provide sufficient preparation, and it is therefore essential to have an effective way not only to look toward the future, but even better, to create it.

Innovation

The term creative destruction gives us a warning, a name, and a general explanation for the waves of change that move continually through the marketplace, and "fighting the last war" warns us as well that we have do it differently if we're going to survive. Both help us direct our attention toward understanding the forces of change rather than supporting the illusion of stability, and by also reminding us that the waves of change are themselves created not by mysterious forces, but as a result of purposeful innovation in the competitive arena of the market. That's right … your rivals in the marketplace or the battlefield are targeting you. There is a business, or more than one, whose innovative thinkers are working right now to take away your share of the market, for innovation is indeed the weapon of choice.

What is your best response? Innovations of your own, of course. In fact, innovation may be your only valid response.

Innovation and Economics

While innovation events and the innovation process occur in the life cycles of individual companies, innovation is also a significant driver of macroeconomics at the level of nations and the economy as a whole. Economists know that it is only through effective innovation that real economic growth occurs, because the underlying economic impact of innovation is to make resources more productive, which is literally how wealth is created in any society. Hence, innovation is crucial to the economic viability of nations, and it is why every nation is now investing heavily in the education of its future scientists, technologists, managers, and entrepreneurs.

But when we're discussing innovation the focus should remain on individuals and individual companies because it is their work that drives the economy forward. Thus, just as innovators drive microeconomic change in specific markets and macroeconomic change in economies, it is innovators who trigger creative destruction in their search for commercial success and competitive advantage in robotics, genetics, energy systems, etc., etc.

Among the companies widely admired today, most have attained success precisely because they have innovated. Through their innovations they brought structural change to their markets, and their motivation was to gain advantage within the capitalist process precisely as Schumpeter described, and they succeeded in doing so.

But the innovator's role is only half of the equation. Customers are the ones who determine the value of innovations, because they're the ones who pay for them. Market behavior is an aggregate reflection of each buyer's drive to find the most attractive offers, and to maximize value received for cost incurred. As innovation is the process of creating higher value offerings, buyers naturally gravitate to innovative products.

This brings us directly back to the great challenge we discussed in the last chapter, our willingness and indeed our enthusiasm for whatever it is that we can make and sell, regardless of its broader social, economic, or environmental impact. Whether we're talking about drug smugglers and drug dealers bringing products that destroy lives and communities, or auto makers that knowing sell illegal device to evade emissions laws as Volkswagen did, or manufacturers of cigarettes, guns, chemical weapons, or land mines, the economic competition drives entrepreneurs and giant global enterprises to pursue, and sell, whatever is feasible regardless of whether or not it is desirable. And as I noted above, this is precisely what makes us a super predator, and it may in fact constitute the greatest challenge that humanity faces, our own proclivity to do what we can rather than what we ought. Inherent in the dynamics of market demand is the process that drives competition through innovation. The waves of change launched by innovators are countered by others who innovate in order to defend their existing positions, or to attack with ambitions of their own.

It's an endless cycle that serves only to drive the process of change still that much faster and more widely throughout the economy. Accelerating change and the convergence in the marketplace of many competing innovators results in greater complexity for all.

Any enterprise that intends to survive must somehow innovate because innovation itself is the only defense against innovation. Through innovation you may catch up if you are behind, or even taking the lead. Thus, we see that the future of each and every firm is determined largely as a function of its ability to innovate effectively. Innovation is therefore a mandate, an absolute requirement for survival. And it is a problem. An enormous, thorny problem for enterprises, because managing the innovation process is one of the most challenging issues facing any of them. It's extraordinarily difficult to do well.

The Cone of Uncertainty and Innovation Management

A very useful graph, one that's familiar to all investors, is the stock chart that indicates the historical price of a company's shares. Here's a nice looking one.

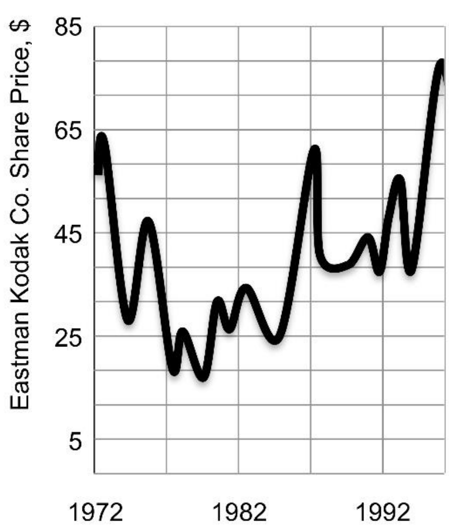

Figure 108
Share Price History, 1970 – 1999
Things are looking good for shareholders.

The share price history of this nice company provided handsome returns to investors and productively employed tens of thousands of workers. Suppose that it's 1999, and you look at the graph and conclude that the company's prospects are stellar. You invest, wait, and hope.

After 1999 the story isn't so pleasant, as the company was doomed by the digital camera. Hindsight can be brutal to investors, as it so often highlights their mistakes. Thus, we must understand not only why a chart shows its current value, but also what changes, positive or negative, may alter the forward moving direction. To anticipate the future requires us to identify the forces acting in the present or future that will reinforce the historical trend, or alter it. Here we come around again to the six revolutions… Investors search for these insights continually, and they buy and sell to adjust their stock portfolios according to whatever evidence they seize upon. Studying similar charts and the evidence about where they may lead is a primary concern of strategists in all fields, including investment, strategy, and management.

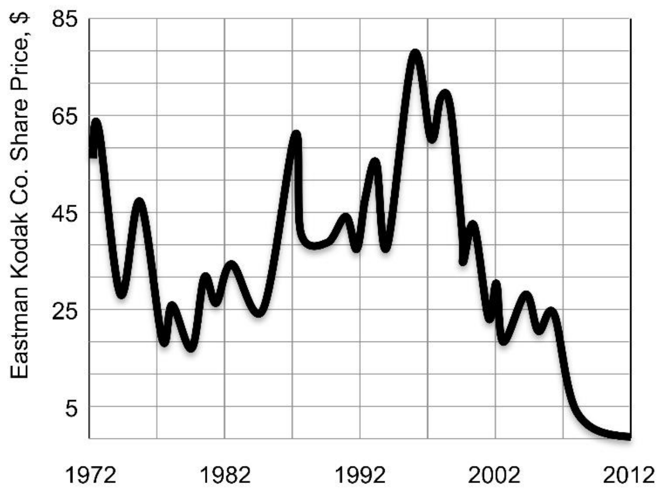

Figure 109
Kodak Share Price, 1970 – 2013[340]
Hopes are dashed.

Leaders and managers also search for insights about the trends and driving forces, but they also do something else that is as important, or more. They can innovate, and thus create new value. The experience of preparing scenarios has reinforced the insight, which certainly isn't very profound, that the world of tomorrow will most likely be considerably different from the world of today. For leaders in business and government this presents some serious problems, though, because they're responsible for preparing for the future, and as the future is highly uncertain, what should they prepare for?

We can explore this by visualizing the future as represented by a cone. Moving from the left side, the present, to the right, the future, the cone represents the variety of possible states of the future. At the far left is the apex of the cone, which represents today, which we think we understand. To the right the openness of the cone represents possible futures; the further to the right we go the wider the cone opens, and thus the less predictable the situation becomes. Hence, we call this the cone of uncertainty.

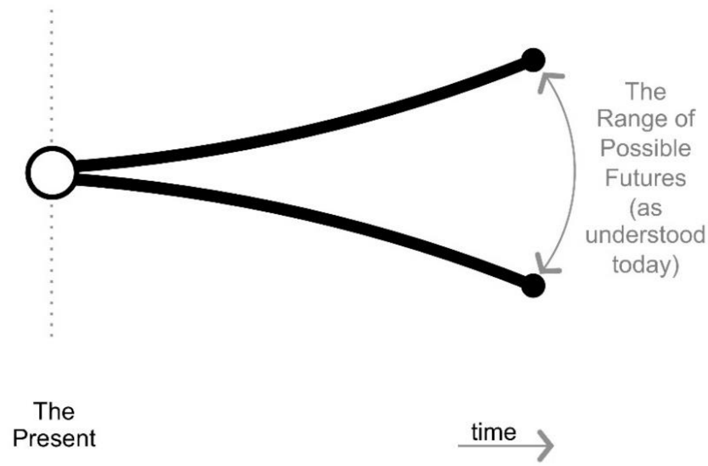

Figure 110
The Cone of Uncertainty: Narrow
The opening at the right side represents the range of possible
futures that we anticipate as of today.

If we envision the cone as a narrow one, this suggests that we see a world in which the uncertainties of the future are not so great, and by implication, that we therefore need to prepare for a narrow range of future possibilities. In the following figure, our way of preparing is represented as dots; each row of dots represents a technology area or innovation theme or topic that we believe may be important in the future. Each individual dot represents an idea, a possibility, or a project.

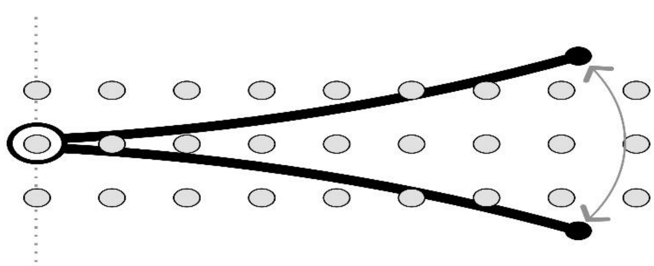

Figure 111
Our Innovation Portfolio
The narrow cone of uncertainty representing a future without a lot of uncertainty implies a relatively narrow range of options under development in our innovation portfolio.
Each row represents an area of investigation; each dot represents a specific project or inquiry.

Scenario planning has told us quite clearly, however, that this is probably not the right approach. A much better representation of the uncertainties of the future is a cone that starts out narrow, but which quickly broadens to become very wide. The width, of course, represents the much greater (and more realistic) breadth of possibility that lies ahead.

And this enormous range of possibilities tells us that it's mandatory that we must not base our organization's strategy on predictions that will most likely be wrong, but rather on the understanding that we cannot predict the future, so we have to ready for a huge range of possible futures. The first impression this might give us could well be discouraging because there's so much to prepare for, and it can be intimidating, as well, to wonder about the costs and complexities that are implied. The huge range of possible futures is a threat to every organization's viability. If the market changes radically, and we can expect that it will, the more agile organizations will be more likely to be able to adapt, while the rigid and fragile ones probably will not. Hence, for businesses to remain relevant to the needs of the market, and for communities and nations to remain relevant to their citizens, they will indeed have to come to grips with these challenges.[341]

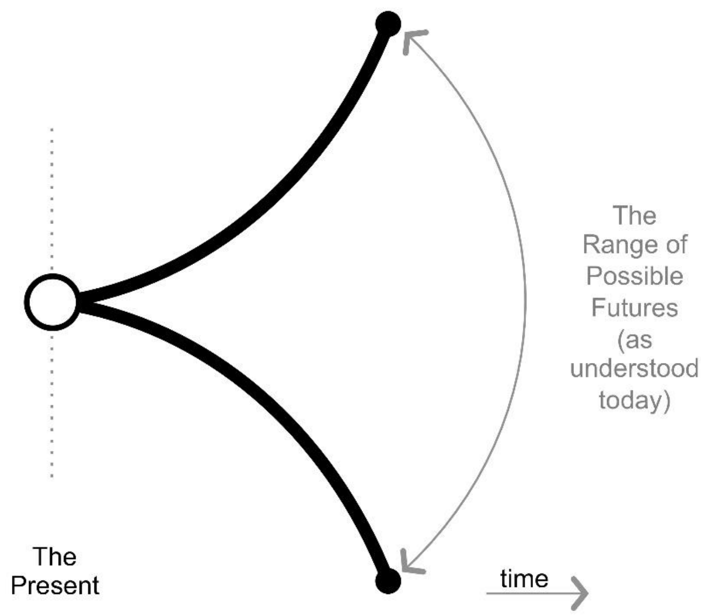

Figure 112
The Cone of Uncertainty: Wide
The much wider opening at the right suggests much more uncertainty about the future. Based on the scenarios examined here and the dynamism of the driving forces of change this is probably a much more accurate model.

We have arrived at the very heart of the risk problem as business leaders confront it, and the fact of mega risk problem that gives the book its title. Please note this:

The broader the cone of uncertainty, the more likely it is that the future harbors more massive risks. It's also more likely that we're not able to see them very clearly, if at all, from the vantage point of the present moment.

When business leaders come to understand the nature of the threat that accelerating change and increasing complexity present to their businesses, they also realize that their organizations must develop new capabilities if they're going to survive. Particularly important among these is the capacity to innovate quickly, the speed imperative I mentioned above, to create proactive (rather than too-late-reactive) responses.

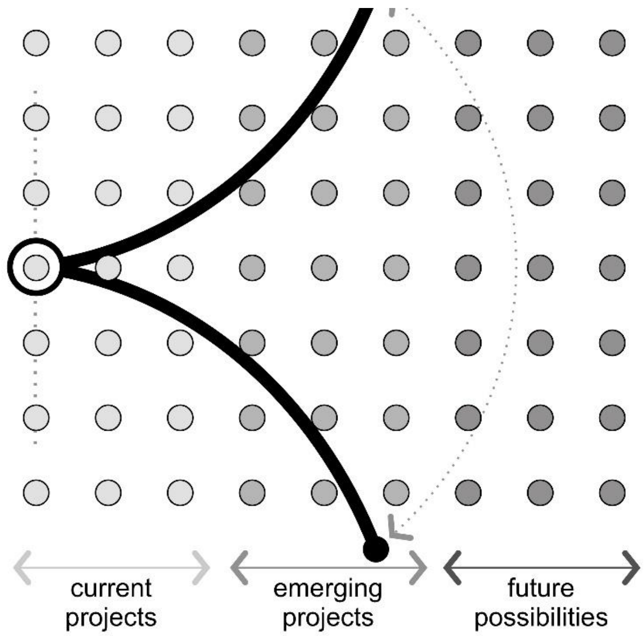

Figure 113

A Better Innovation Portfolio

The future is highly uncertain, so we prepare by assuring knowledge of and competence in a wide range of skills and disciplines. Our innovation portfolio is quite extensive, although the investment in each area could be quite modest. What's important is that we are not surprised, and so our portfolio is both a record of work in development, and also of learning in process. This broad portfolio also enables us to go faster when we choose to act, as we are preparing across a wider range of possibilities. Each row represents an area of investigation; each dot represents a specific project or inquiry.

This is an acute problem now, for us, but it's not a new one. History has known a many great revolutionary leaders whose innovations posed fundamental challenges to their established competitors, but perhaps none were greater than our friend Napoleon. A supremely self-confident man, and an unusually clear and creative thinker, Napoleon rose quickly in up the ranks of the French military because of his successes on the battlefield. Once he became France's leader he and his armies marched across Europe between 1796 and 1810 and transformed the map of the entire continent, along with its governments, universities, and indeed all of its institutions. By inventing and perfecting radically more effective ways to wage war Napoleon became one of military history's greatest generals; by recognizing that nations should be governed according to logic rather than whim, he also transformed French society, and the system of laws that he commissioned, the Napoleonic Code, is still the underlying basis of French law and much of Western Europe's as well.[342]

The psychological struggle that his innovations presented to his opponents were highlighted after one of the early victories in the Italian Campaign of 1796, during which he decisively demonstrated the effectiveness of mobile warfare. Napoleon and a handful of his officers were riding along a country road on a dark night when they happened upon a straggler from the defeated Austrian army who was walking dejectedly in the opposite direction. His own identity hidden by the gloom, Napoleon asked the Austrian how the battle had gone.

"Badly," growled the Austrian. "They've sent a young madman who attacks right and left, front and rear. It's an intolerable way of waging war!" The innovation celebrated by one created the intolerable situation for the other.

Innovation Confronts Stagnation

This is what happens when innovation confronts stagnation at any era of history, and Napoleon had to restrain himself from laughing, for that was exactly what he had intended. With new concepts of artillery and mobility his specific goal and ambition was exactly to revolutionize warfare, and he had succeeded perhaps beyond even his own immodest dreams.

The established powers of Europe immediately recognized Napoleon for the enormous threat he was, a monumental danger to their ancient aristocracies and stratified societies. The vast armies of Republican France were the arch-nemesis of the noble families that ruled England, Germany, Austria, Italy, Spain, and Russia, but it took the allied monarchies fifteen years to figure out that the way to defeat Napoleon wasn't with still more of the old, static style of warfare, but instead by adopting his own methods. At Waterloo, in 1814, Wellington succeeded because he used the very same tactics that Napoleon had perfected.

In fact, on a hill overlooking the Waterloo battlefields Napoleon observed the maneuvers of the opposing armies and he commented in appreciation, "They're learning!"[343] In fact they had learned too well, and soon Napoleon was fleeing toward Paris, and soon after that he endured his second and final exile on remote St. Helena. Wellington became a hero in England, and in victory his army preserved the reign of the Europe's monarchies for another hundred years. But Napoleon was on the J-curve, while the monarchies plodded along the going out of business curve, and the next great disruption of World War I finally ended the aristocratic monopoly and they went out of business.

Revolutions in Business

159 years after Napoleon was finally defeated Southwest Airlines was born, and it immediately began revolutionizing the airline industry by introducing a system of innovations that changed the structure of competition in the air travel marketplace. This was not an accident, as disrupting the existing market was exactly what the founders of Southwest wanted to do. It was the central and specific idea behind their business. It's also what many visionary entrepreneurs want to do – they rock the boat, upset the apple cart, make waves, and move the cheese in order to create competitive advantage, to seize upon opportunity, to grow their business. This is the essence of competitive capitalism doing its best work, the search for new opportunities in business, the side effect of which is change that, as we see every day, has the greatest impact on the established organizations that are have become stuck in their used-to-be-successful-but-not-anymore ways.

One of the important insights that the Southwest story highlights is that the changes that Southwest introduced were not new technologies, nor new products, nor even new services. The focus of the company's magnificently successful innovations were its business model. That is, it was the way the company organized itself to create value that was the innovation. As change continues to accelerate, as new digital technologies make new products and solutions possible, as people become ever more connected to one another, then the likelihood that new business models will emerge increases from possibility to certainty. The digital revolution that was the subject of Chapter 1 will continue to enable new business models, and it is these business models above all forces and factors and innovations, that will continue to put so much pressure on the established companies and institutions.

That pressure comes about because old institutions, like the monarchies of Napoleon's Europe, become set in their ways, and they resist change. In a concise bit of profound understatement, IBM CEO Lou Gerstner said, "We don't know how to change."[344]

This was his way of explaining the great difficulties that befell IBM in 1989 when the company nearly collapsed into bankruptcy. His point was that although IBM's leadership had seen the problems coming well in advance they had literally been unable to change the way the organization operated in time to avoid disaster because they could not change their way of thinking. This insight reinforces the utility of scenario planning because it such a powerful way of forcing people to confront the need for change and the consequences of being inflexible. Vulnerabilities become as obvious as a giant, bruised thumb.

As a result of IBM's incapacity to change proactively more than 200,000 IBM employees lost their jobs in a catastrophic restructuring process that Gerstner led quite brilliantly, and which saved IBM from self-destruction. And what the essence of that new structure? It was precisely a new business model.

Southwest's success at business model innovation forced all the other airlines to lower their prices and their costs. It also inspired other entrepreneurs to copy them. EasyJet, RyanAir, and Jet Blue successfully imitated Southwest, and between 1990 and 2000, the new, frugal approach to air travel became the dominant business model. In 2001, however a handful of terrorist-innovators developed a new business model for violence by demonstrating that commercial airplanes also make very effective weapons, and the resulting economic shock from 9/11 compounded the airline industry disruption that Southwest was already causing. The old airline business model finally and utterly collapsed and died on September 11, 2001, and the structure of the air travel industry could never be the same thereafter.

How bad was it? Delta, Northwest, United, Continental (twice), Aloha, ATA, Frontier, America West, and USAir (also twice) all tumbled into bankruptcy, marking the definitive end of the old ways. All of them victims of accelerating change, business model obsolescence, the failure to adapt by proactive means, all compounded by an unprecedented and previously unimagined calamity.

Through it all, Southwest earned profits year after year for 36 consecutive years until 2008 even as its competitors were racking up losses in the billions and then tens of billions. This is indeed the power of a new business model. And of course, it isn't just the airline industry that's been shaken to its very foundations by business model innovation. Retailing, telecom, media, advertising, computers, and banking are all being subjected to radical change, and of course the auto industry was sent reeling by the economic collapse of 2008.

Thus, in the spring of 2009 General Motors' CEO Rick Waggoner was summoned to Washington DC to meet with President Obama's Automotive Task Force, a group whose mission was to figure out how to rescue the ailing US auto industry. Desperately short of cash, Waggoner and Chrysler CEO Bob Nardelli had already dragged themselves in front of Congress with their tails between their legs to beg for government money to keep their businesses in operation. Not that any auto company was thriving at the time – in the economic collapse of 2008-2009, every carmaker was losing buckets of money as sales plunged, even world leader Toyota. But GM and Chrysler were genuinely desperate. The abrupt downturn had exhausted their resources, and without government help they were surely doomed.

How had it come to this sad state of affairs? During his fifteen-year tenure as GM's CEO, revolutionary change swept over the industry while GM failed to keep pace. A new business model was emerging, but GM stuck with the old ideas and focused on the middle of the consumer market, avoiding designs that carried even a hint of originality, while reaching customers through a lazy and bloated franchise distribution network. GM once controlled more than 50 percent of the US market, but it fell to 30 percent, and then it fell further still. The company lost a staggering $82 billion between 2005 and 2009 while the Japanese manufacturers were earning nice profits nearly every year.

Toyota brought the first mass volume hybrids to the market, positioning themselves as friends of the environment and making the American firms look like environmental laggards. To accentuate the differences, GM had acquired Hummer at exactly the wrong time, only bringing more attention to its anti-environment reputation just the Prius was enhancing the Japanese firm's reputation as a forward-thinking, environmentally sensitive, industry leader.

Meanwhile, the design and manufacturing quality of Japanese and European cars were three to five years ahead while many of GM's brands were struggling because of mediocre design and second-rate manufacturing. Oldsmobile had already been shut down in 2001, and Pontiac and Saturn were stumbling badly; Ford, meanwhile, unloaded its Jaguar and Land Rover brands even as Toyota's Lexus thrived at the high end of the market.

The stark contrast between the American firms and the Japanese caused heartbreak all across Michigan and the upper Midwest, where the auto industry was shrinking rapidly. As their jobs evaporated people moved on, and entire Detroit neighborhoods sat eerily vacant, boarded up, abandoned. So, when Waggoner left the task force meeting that spring morning, he didn't stand quite as tall, and he was no longer CEO, having been fired by the government. Perhaps his inability to cope with change had been his downfall.

A few weeks after Waggoner accepted the government's suggestion that he ought to resign GM declared bankruptcy and retreated under the protection of the courts. The company had to dump billions of dollars of obligations merely to survive. Chrysler also declared bankruptcy and found its way forward as the partner of Fiat, the once-ridiculed Italian automaker that, between 1995 and 2009, had entirely remade itself. So, what had Fiat accomplished that Chrysler and GM could not? Throughout much of its history, Fiat had been one of Europe's most successful automakers, but by the 1980s the company experienced a severe downturn. After a humbling decade, the company reemerged in the 1990s, and by focusing aggressively on a new business model – high quality standards, intriguing designs, and fuel-efficient cars – won European design awards and won customers too. GM and Chrysler had waited too long to improve its fundamentals of its designs and its quality, and so they drove an old and obsolete business model straight into the ground. Just as the market collapsed, Fiat was poised to become a global company once again, and it acquired Chrysler to gain access to the enormous US market.

Revolutionary Innovators

Innovation is how the world's leading organizations respond to revolution when it is thrust upon them from the outside; it's also about how they create revolutions when they aspire to become the leader, the change maker, and the disruptor.

By revolutionary change I mean massive upheaval that causes entire industries to undergo gut-wrenching transformation, change that propels new companies into leadership of entirely new industries, while leaving the laggards hopelessly far behind. Think digital revolution, climate revolution, and energy revolution, and the massive breakthroughs that will enable these revolutions to restructure the market.

These will be revolutionary changes that cause not just one bankruptcy, but waves of them; that costs not thousands of jobs, but hundreds of thousands leading to entirely new economic structures, new social and cultural and challenges and stresses, new industries and new workforces. And behind every innovation is a person who saw things differently, and then used that insight to create a better value proposition for one customer, and then for millions, and thereby changed the very structure of the market. These are the innovators who are making today's revolutions.

But how do they do it? What's their secret? More than any other single factor, today's successful innovators create new business models, because among all the types of innovation business model innovation may be the most important route to success in today's world. Business model innovators exploit new technology, as Google does. Google has become the world's leading advertising agency by auctioning "words," and now companies bid for the right to have their own web sites linked with ad words and phrases that people search for.

Who would ever have imagined that this could become so wildly profitable? Initially, even the creators of Google didn't. Actually, they discovered it mostly by accident. For a few years they had rejected proposals to sell advertising, but when they realized what it could mean, the insight transformed the company's co-founders into two of the richest men in the world.

Sometimes business model innovators implement new forms of organization, as Wal-Mart did, changing the landscape of mass market retail by squeezing inefficiencies out of the supply chain, progressively lowering the cost of doing business, and then passing the savings on to millions of its by now very devoted customers. Sometimes innovators market their products in new ways, as Nike did when it revolutionized the sports apparel industry by making everyone all feel that we, too, could and should aspire to be world class athletes and we could just do it.

Changing our expectations is also a big part of business model innovation. FedEx changed the way people think about package delivery, and charges 10 to 50 times more to deliver packages than the post office does. Starbucks changed the way millions of people drink coffee, and sells it for $5 a cup instead of 50 cents.

IBM transformed itself by creating a new business model, and so do industrial giants GE and Michelin. These industrial manufacturing icons have become product-service hybrids. GE monitors the jet engines on commercial aircraft in real time using a network of satellites, and its customers don't buy the engines, they rent them. And Michelin doesn't sell aircraft tires, it rents them on a per-landing charge because landings are what make the tires wear out. All of these companies are technology innovators and business model innovators, and business model innovation is contributing more and more of the critical value that makes them successful.

On the other side of the coin, however, many companies that are struggling also show the significance of business model innovation. These include GM and Chrysler, K-Mart, Sears, Circuit City, and most of the big US airlines. So, what's the attribute that these companies have in common? Bound by old thinking and old ways of operating, they did not grasp the impact of change and watched as their old business models collapsed in the face of innovative competitors. The lack of business model innovation did them in as the world changed, but they didn't.

Today, business model innovators are creating revolutions with increasing frequency, ensuring that the days of stability are gone forever. No company can consider itself safe from the dangers that change brings, as innovators with new insights and new business models lurk just over every horizon, waiting for the opportunity to pounce.

So how will you defend your organization?

Changing a Culture

A few years ago, one of our clients was a large company that was struggling with change in its market when I met with one of the senior executives. He knew that the company is too slow to change, too set in its ways, too focused on short-term gains at the expense of long-term success. "We're probably not unique in that way," he said. Of course, he was right.

He knew that many of the management incentives he himself had put in place to assure growth were backfiring because they were making it harder for people to think about anything except the next product launch or the next marketing campaign. His biggest problem, he realized, was that he didn't know how to change the corporate culture that he had been carefully cultivating for the previous ten years.

He mentioned a new competitor that recently come into the market with a different business model. Together with his CEO he had visited one of the competitor's first retail stores at a shopping mall outside of Atlanta. They looked around in the competitor's store and saw a crude attempt at retail, lacking entirely in charm. They immediately knew that the new company had no chance.

"We laughed," he told me, with a bemused look on his face, deeply aware of the irony of this. "But we were wrong. We were very wrong…." The new entrant had a new business model and it became an instant success. Then it became a huge success, the biggest story the industry had seen in more than a decade. It was a revolution. While the store lacked refinement, it offered each customer a unique, customized experience in a product offering of unprecedented breadth. Instead of trying to control customers, power was willingly given over to customers, as the entire product line was laid out for everyone to see, to touch, and to try. This defined a new relationship between the company and its customers, one that deviated significantly from the traditional model. A revolution indeed.

Caught by surprise, contemptuous of the upstart, and unwilling to accept that the new approach could possibly be successful, my client's company was reluctant to move into the market segment that the interloper had pioneered. Eventually the success of the upstart and the persistence of market analysts pressured them into a response, but the attempt was halfhearted, too little, too late. Even their customers knew that they had merely copied the competitor's business model, and it cost them a lot of credibility.

And he was afraid that it would happen again. He didn't know which of his brands would come under attack, or from where the attack might come, but deep inside he felt a gnawing vulnerability. Perhaps all of the brands would be attacked. "We are too slow," he says. "And we don't take enough risks."

The irony of this statement was not lost on him, either. Under his successful leadership, risk has been progressively removed from the business. Only sure things were acceptable, while failure was not allowed, and definitely career threatening. Unfortunately, the "no failures" mandate also suppressed the learning process and squelched innovation. The top management team, himself included, had nearly perfected the old business model, which had cranked out reliable growth and comfortable profits for more than a decade, making them all rich. Their intellectual and emotional investment in the old ways was obviously hard to shake, but in the end, he was right to fear change.

Despite the crisis, it was still possible for this company to seize the initiative again, but this would require new insights and new leadership. There was a vast pool of talented middle level managers who were eager to experiment, eager to innovate in the face of competitive pressures that they thoroughly recognized, because they experienced the consequences every day.

A group of about 20 young leaders formed an ad-hoc team, prepared a detailed analysis of change and a compelling argument for innovation, and managed to get an hour on the CEO's agenda to make their case. He sat politely through the entire presentation, but when it was over he disputed their premise – that the market was changing faster than the company was changing – and also their recommendation – that the company needed to inject a strong dose of innovation into all its activities. Not surprisingly, they came away from this experience thoroughly disheartened.

There were lot of potential solutions available, but without the support of top management few of them had a chance. Talented young people, whose astute senses quickly perceived the blockage at the top, began moving out of the company, compounding the innovation gap by creating a mini-brain drain.

David vs. Goliath

When Southwest Airlines was just a would-be innovator, it had petitioned the FAA to establish service between Dallas, San Antonio, and Houston. The existing airlines at the time banded together in an attempt to block the upstart company from ever being born. "Southwest should not be allowed to fly," they insisted. "The company would disrupt the existing market!"

But from the very beginning the founders and managers of Southwest clearly understood that their primary competition wasn't so much the other airlines but rather Greyhound buses and family cars. They had a plan, largely an intuitive one, but a plan nonetheless. It was based on the strategy of keeping ticket prices very low, as this was clearly essential to success.

This meant that their airline had to reduce its operating costs to a level below what any other airline considered possible, and in the process of figuring out how to become the most frugal air carrier ever. In the new, competitive environment fostered by deregulation, Southwest's disruptive business model emerged as the clear winner, the one that unexpectedly transformed the entire industry.

Executing their plan brilliantly, Southwest won, and as happens so often in the game of innovation, David defeated Goliath yet again. This is central to the story of GM and of Chrysler versus the once-much-smaller Honda and Toyota, the story of the mighty airline industry against tiny Southwest, the story of giant Sears and upstart Wal-Mart, and the stories of so many others: David confronts Goliath as smaller, younger companies take on older, more established ones. And what weapons do the upstarts have? New ideas, and new business models.

This is also the story of Nike, led by young MBA graduate Phil Knight and track coach Bill Bowerman, who envisioned a new and better kind of shoe, and ruined a perfectly good waffle iron making rubber soles for prototypes shoes that eventually revolutionized track athletics. They also pioneered a new approach to marketing, and their innovations utterly disrupted the market that had previously been dominated by the giant Adidas, which was about to become the world's former leader in sport shoes. Shoved into an unaccustomed second position, Adidas struggled for nearly a decade before it finally began to turn itself around. Its method? As Wellington had copied Napoleon, Adidas copied Nike.

Today, however, it is Nike that wears Goliath's shoes. Its business model has remained about the same for nearly thirty years, its market share is gigantic, and so the firm can no longer pretend to be the David. Will a new, as-yet-unknown competitor, a new David, come up with the next business model revolution in sports apparel? That firm may be Under Armor, which is cleverly surrounding Nike with yet another generation of innovations.

Under Armor could indeed succeed, but it's also possible that Nike will transform itself and its industry. Or perhaps Adidas will. We can't say for sure when or who, but we can be sure that one day in the not-too-distant future a new business model will emerge, just as it will in every other industry. It will happen because innovators and entrepreneurs will make it happen, driven by the own visions and their own ambitions, and most likely by applying new technologies and exploiting new trends.

The history of FedEx is also a David and Goliath business model innovation story. Fred Smith's plan called for a package to be picked up, carried by truck to an airport, flown to another city, transferred to another truck, and finally delivered, all within about 18 hours, a shotgun transportation marriage that had never before been attempted. After years of capital raising and planning, the company's monumental first day of operation finally arrived on April 17, 1973. The experience was somewhat deflating, however, as FedEx received and successfully delivered a magnificent total of four (4) lonely little packages. It took three more long years, a heavy dose of manipulation, persistent brand building, and millions more dollars of capital than anyone had anticipated for the company to finally achieve profitability. When it did, however, Smith's vision of a new business model was fully validated; the company thrived, grabbing significant market share from UPS and the postal service, and becoming in the process a global business icon.

Along the way to becoming the leader, the name of the company transcended who it was to become what it did: the word "FedEx" became a verb, a description of what you do when you have to get it there tomorrow. You don't say, "I sent the package," you say, "I FedExes the package."

Smith, Knight, and Bowerman were founding entrepreneurs, and certainly geniuses in their fields, but sometimes the business model innovation breakthrough doesn't come from the founder. Starbucks was a simple coffee roasting business founded in 1971 by three college professors who started the company just because they wanted to drink high quality coffee. They gradually built their business in Seattle, and by 1982 they operated three modest stores.

That's when a New Yorker name Howard Schultz happened along. Intrigued by what he saw, he applied for a job. But the owners were worried that his New York style would conflict with the company's laidback culture, so they turned him down.

Schultz persisted, however, and eventually persuaded the trio to hire him as marketing director. With access to additional inside knowledge, Schultz soon recognized the potential for a new business model that combined the coffee roasting business with the coffee house concept, but when he failed to persuade the three owners that his idea was sound, he left Starbucks to start his own business. Within a year his new concept proved successful, and he turned around and bought Starbucks from the three professors and then transformed the company into a global beverage powerhouse. Soon Starbucks was opening more than one store per day, an explosive growth process that lasted through the early 1990s. The boring fifty cent cup of coffee became the seductive and ubiquitous five dollar "vente double-caf carmel macchiatto."

Southwest Airlines, Nike, FedEx, and Starbucks are widely admired and tremendously successful companies. Each transformed its industry: airlines, sports shoes, package delivery, and coffee will never be the same, all because of a single type of innovation – business model innovation.

But it's not just these four. When you take a closer look at Google, Microsoft, Facebook, Apple, IBM, GE, Coca Cola, Xerox, Napster, Shell, Toyota, and even PPG, the 125-year-old glass and paint company, you'll find that business model innovation is critical in their industries as well. Each transformed its industry by figuring out better ways to deliver value and create new experiences for customers.

So, what about your industry?

As the economy races forward, as new technologies emerge, as social values, expectations, and needs are overturned, radically new ways of doing business emerge. This process is happening faster than ever in this time of accelerating change, presenting your company with new threats and perhaps also with significant opportunities. Do you understand how revolutionary change will shape your company's future?

Acceleration of Change

The context of business strategy is the marketplace in which it is played out, so discussions of strategy must begin with reference to market dynamics. Not to be too repetitious, but today's critical external factors are the six revolutions and the impacts they cause, accelerating change, increasing competition, and increasing complexity, while the two major internal drivers are innovation and corporate decision making.

Each of the external ones presents its own particular problems, but the impact of all of them acting together significantly compounds the problem, composing a "change conspiracy" that increases the danger exponentially. The results are a drastically compressed planning horizon for every company, the need for faster responses throughout the organization, and the accelerating rate of corporate failure as leaders simply fail to master these dynamics.

The parade of failures makes for dramatic stories that are illustrated by the sad losses suffered by individuals and families struggling to survive the economic and emotional strains, but as more and more companies fail, it is becoming clear that these are no longer unusual events.

In spite of the attempts by governments, central banks, and multilateral organizations such as the IMF, WTO, and the World Bank to reduce the impacts of change, it's evident that the forces of change are far stronger than ever before. Turbulence continues to increase as the fiver revolutions and the anti-revolution play out their momentum, which means that business failures will continue to be common occurrences going forward. And managers wonder obsessively deep into the night, *What should we be doing differently?*

It's Not How Much You Spend

While it is imperative for organizations to be continually engaged in the process of innovation, an important question concerns where those efforts to innovate should be focused. Interestingly, it's not a question of how much you spend on innovation, but rather the process you use to manage that effort. Booz & Co. has shown through its research that spending a lot on R&D is surely no guarantee of future business success:

Yearly R&D spending among the world's 1,000 largest public corporate R&D spenders has hit a record high of US$638 billion. However, despite the sustained overall increase in R&D budgets over the last decade, this year's findings show once again that higher spending doesn't guarantee bigger payoffs. Indeed, the 10 most innovative companies our study identified this year financially outperformed the world's top 10 spenders, despite actually spending significantly less on R&D.[345]

The reason for this is that most large organizations allocate the vast majority of their R&D investments to protecting existing businesses from competition rather than on creating new markets for the future. Just because the current structure of the market favors your solution today does not mean that the structure of the market tomorrow will also favor you. While one set of products and services may be exceptionally well-suited to the market at a particular point in time, it's surprisingly rare for a company to successfully adapt its products and services to changing market conditions quickly enough to sustain its leadership position.

Many examples confirm this.

• Kodak was the world's number one manufacturer of film but collapsed when digital cameras displaced film cameras. Alas, Kodak itself invented the digital camera, but could not come to grips with its potential or its significance even though it had the huge R&D budgets.

• Nokia dominated the cell phone market and it was a huge R&D spender, but was not prepared for the smart phone market.

• Sears was the leading American retailer for decades, but lost out to Wal-Mart when discounting and supply chain management became the key differentiators.

• Between 1995 and 2004 world-leading Coca-Cola dropped 50 percent of its share price when customers switched their preference to healthier beverages like water (and much like IBM, it has since recovered). R&D didn't help when the strategists lost track of what mattered to customers.

• There were many happy and charming bookstores all over America until Amazon.com undercut their prices by 20 or 30 percent, and now there are almost none.

The Changing Nature of the Problem

When a company is small its top managers are often in direct contact with customers as a natural part of their role in the company. But as they deal with the complexities of larger enterprises and multiplying layers of organization they often become quite far removed from direct experience of the market. Without direct contact they are intuitively forced to rely on past experiences and they have a progressively more difficult time hearing the voice a changing market that was different than the one they remember.

The increasing disconnect contributes to a growing gap between what managers think is important and what the market thinks is important, and that gap is precisely where emerging companies find a foothold.

Hence, it's entirely different matter of management and style to be an innovator in a small market than to bring effective creative drive to a large operation. As a company grows and the stakes become higher, the risks that the small company has taken as a matter of course are now subjected to a lot more scrutiny, and reaction times slow. Sometimes they slow disastrously. More levels of management have a stake in major decisions; time lags in decision making are longer. In extreme cases, "analysis paralysis" sets in. That's another reason we like scenario planning so much; it motivates real action, not just more market studies that end up on sitting on the shelf in big, fat binders.

Smaller, more nimble competitors have less to lose, fewer people to convince, and often a sense of desperation that sharpens top management's perception of market needs. In fact, the well-tuned senses of entrepreneurial top managers become magnets for capital – small, new companies are founded specifically to attack new market niches that only their entrepreneurs and the capitalists that back them even recognize. This is why Alfred Chuang's office is in Palo Alto, where so many entrepreneurs and so much capital and so many technical breakthroughs are to be found. The result of this complex process is a pattern that repeats with astonishing regularity. But as innovative companies grow they tend to become followers rather than leaders.

Winning and Losing at Business Model Warfare

As we have noted, in addition to erroneous assumptions about stability, managers also fall into the trap of focusing too much of their attention inside their own organizations. This is a particular danger with middle managers who are under pressure from upper levels in the hierarchy of organizational authority. Their instinctive and entirely logical sense of self-protection forces them to pay great attention to the behavior and desires of senior management, but disturbingly less attention is often paid to customers.

To succeed at business model warfare, managers cannot be internally focused on products, services, or administration to the exclusion of the critical relationships between these elements, and the even more crucial interactions between a company and its customers. Thinking about innovation in the business model is a matter of the overall relationship between the company and its customers, rather than innovation isolated in this or that aspect. It's not a coincidence that the winners in business model warfare are usually those who manage their customer relationships in the most effective ways possible, by creating compelling experiences across many different dimensions.

Some examples:

Japanese auto manufacturers are the source of many business model innovations, and when they applied their increasing expertise in manufacturing quality to create new, affordable high-end product lines, and now Lexus, Acura, and Infiniti, they created products among the most admired cars worldwide, and enormously profitable segments of their businesses.

They continue to steadily increase their share of the American auto market. Further, Toyota's innovations in alternative fuels with the hybrid Prius line, far in advance of American manufacturers, won it added market share as buyers develop a preference for fuels other than oil. The Prius was the bestselling car in California in 2013, 2014, and 2015.

In Europe, retailing giants Auchan and Carrefour redefined the French grocery business in the 1960s by applying new cash register technology to create the hypermarket, and at about the same time Novotel introduced a new kind of hotel.

In the 1970s, Nike redefined the nature of competition in the sports shoe and sports apparel business by transforming star athletes into marketing icons, first with runner Steve Prefontaine and later with Michael Jordan. In so doing, Nike created new markets for its shoes and clothing, and surpassed Adidas to become the global leader in a ruptured market. Nike's core business model innovation was turning its own brand into a key element in the self-identity of its customers, which comes pretty close to the ideal when we're talking about the company-customer relationship. Nike, in fact, elevated brand management to unprecedented heights, and has demonstrated how central the concept of brand management is in today's market.[346]

American Express once dominated the credit card industry and carefully cultivated an image of prestige and exclusivity. Visa entered into competition by creating a global network that was far more fluid, flexible, and low cost, and has far surpassed American Express. Visa charges lower rates to merchants, making its services more attractive, and built its brand on ubiquity – Visa cards are available and accepted everywhere. Then along came PayPal and changed things again, and also made Elon Musk a multi-millionaire.

In Africa, meanwhile, MPesa has entirely disrupted money by creating a new form of digital currency that now carries a significant portion of all transactions in Kenya. In the next digital economy, it may be bitcoin that disrupts them all.

Dell created a commercial powerhouse by completely re-inventing the manufacturing and distribution process and building machines to order, rather than to inventory, thereby introducing an entirely new business model to the personal computer industry. Mass customization at a competitive price defined a new kind of customer relationship in the PC industry. But in an impressive display of changing market structures, the company's unique business model became entirely passé, and founder Michael Dell took the company private in 2013 in his attempt to rediscover the lost magic of its entrepreneurial past, when it could move nimbly. So far the innovations have arrived, but perhaps tomorrow …

Southwest Airlines developed an approach to the airline business unlike any of the airlines that were established when the company was founded, and sustained its unique business model to become the most financially successful company in a profoundly troubled industry for the decades. Since the terror attacks of September 11, 2001 Southwest has only been average, however, which suggests that when the innovation cycle has run its course then even a great company reverts to the mean. In some industries that cycle is thirty years, although in technology it takes only 5 – 10 years for many companies to peak and then falter as still more innovative ones emerge.

From Technology Innovation to Business Model Innovation

What we see consistently across all of these examples, and with widespread consistency across the entire history of business, is the following: It's rarely, if ever, that a single innovation that propels a business to success. It is, instead, a suite of innovations that complement one another and work together to provide a novel or distinctive value proposition that underlies success. The key is not necessarily the product or service itself – which could be highly innovative or even just acceptable – but something brought to market in an innovative way, supported in an innovative way, branded in an innovative way, and in the end always an approach that builds enduring relationships between the company and its customers. This is the essence of the business model.

Furthermore, the core of the innovation value proposition need not be built around a technology per se. In the examples cited above – Toyota, Honda, Nike, Visa, FedEx, Home Depot, Southwest Airlines, and Ford (in its early days, and then again…?) – proprietary technologies do play a part in the company's success, but later the key to success becomes a focus not only on technology itself, but technology applied in a business process to optimize the relationship between the company and its customers.

In today's environment nearly any technology can be, has been, and will be copied, so the critical competitive advantage is knowing how to use the technology in a way that adds the greatest value for customers. When enough people believe that a $45,000 Lexus performs as well as or better than a $65,000 Mercedes, it is then that the structure of the market undergoes a profound change. And then along comes Elon Musk in a Tesla and disrupts everything yet again.

With all of this in mind, we now have a better way to characterize marketplace competition, creative destruction, and innovation. We see that effective innovation is not a matter of exploiting individual technologies, nor of exceptional performance in any other individual element of a business, but rather a matter of harnessing the business model itself, which may but does not necessarily include technologies among its many possible dimensions.

To state it more simply, what's happening continuously in the marketplace is competition between business models themselves. The Lexus business model is different than Ford's business model, or that of Mercedes or a Tesla, etc. What this means is that the winners at business model warfare have generally applied speed and innovation to create competitive advantages, building stronger relationships with customers by developing business models that fit more closely with customer needs and preferences across multiple dimensions.

Winners who have figured out these principles then seek to sustain their advantages through further business model innovations that defend newly-won territory and extend into new domains. It is therefore the business model itself that must be the focus of innovation, and innovation must be undertaken in service to a larger framework that is defined by the business model itself.

Four key points summarize this discussion about business model warfare.

First, a "business model" defines a broad competitive approach to business, and articulates how a company applies processes and technologies to build and sustain effective relationships with customers. The experiences that customers have, and the relationships that companies build with customers, are the most critical factors. Creating them, understanding them, preserving them, enriching them, and extending them are the critical attributes of success. Everything that is done must be in service to these relationships; they are the point.

Second, every successful business model earns some sort of competitive advantage to the extent that it serves successful relationships. However, any advantage may disappear overnight should a competitor devise a superior model, thereby displacing the company in the relationship with the customer. Due to competitive forces, the life span of every business model is therefore limited, and due to the general unpredictability of change, its viable time frame is indeterminate. Leaders who have the good fortune to preside over a successful business model should never lose sight of the ephemeral nature of their advantages, and must focus not only on administering the (illusory) stability of today, but on preparing for or precipitating the inevitable change of tomorrow by understanding how costs can be lowered while customization is simultaneously increased.

Third, since business models themselves are a more comprehensive way of understanding the focus of competition, they must also become a focus of innovation itself. Relentlessly changing conditions means that business models evolve rapidly, and business model innovation is therefore not optional. While innovations in any area within an organization may be important, innovations that pertain broadly and directly to the business model will be life-sustaining.

Fourth, because the market is so transparent, and the performance of every public company is subject to detailed scrutiny by investors and analysts, subtle changes in an organization's performance can lead to broad swings in stock price.

Improving performance and increasing stock price are both self-feeding cycles that create more favorable conditions for companies to develop and implement future innovations, both by improving stock currency for making acquisitions and by lowering the overall cost of capital. Conversely, declining performance and a falling stock price can lead to a downward spiral that makes it progressively more difficult for companies to compete for attractive acquisition fodder, and which can also increase the cost of capital that could be invested in innovation-related activities such as R&D and product development. Get ahead and push farther ahead; get behind and fall farther behind.

The prevalence of this trap suggests that while leaders may be thinking and worrying about change and its impact on their companies, about competition and about competitive advantage, many have been doing so in a way that is simply not effective. Hence, we suggest that thinking about and enacting business model innovation may be a productive exercise for established businesses. And the need for good thinking about business models is as important for new businesses as it is for old ones.

For these reasons it will remains imperative to discuss managing for change as an absolute requirement, but many (most?) business leaders nevertheless still aren't very good at dealing with it. Recognizing the revolutions and their impact in the marketplace, anticipating, and adapting to its turbulent evolution, these are the challenges that confront all executives, for although we remember periods that seemed stable, they are in fact long gone and never to return.

As markets continue to evolve and competition becomes ever more demanding as we enter Phase 3 and get more deeply into the six revolutions, engaging in Business Model Warfare therefore becomes not just an interesting possibility, but perhaps a requirement. For their organizations to survive, leaders must develop comprehensive innovation frameworks, and perhaps the perspective offered by the Business Model Warfare framework can help leaders to be more effective. In the end, when we look at the business world it's clear that the story of change is still the important story to tell, and the process of leading an organization in the face of change remains the critical skill. Consequently, we'll take up the theme of leadership next.

Notes

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