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Elegant Solutions

BREAKTHROUGH THINKING THE TOYOTA WAY

by Matthew E. May

Behind each of the over one million ideas implemented at Toyota every year is a mindful approach to innovative work driven by a companywide war on imperfection coupled with a disciplined creative methodology.

One Million.

That's how many ideas Toyota implements each year. Do the math: 3000 ideas a day. That number, more than anything else, explains why Toyota appears to be in a league all their own, playing offense on a field of innovation, while their competitors remain caught in a crossfire of cost-cutting.

Here's the thing: it's not about the cars. It's about ideas. And the people with those ideas. But not just any ideas. Mostly tiny ones, but effective ones nonetheless—elegant solutions to real world problems. Not grand slam homeruns, but groundball singles implemented all across the company by associates that view their role not to be simply doing the work, but taking it to the next level...every day, in some little way. *Good enough never is*. When an entire organization thinks like that, it becomes unstoppable.

Like a number of other market leaders, Toyota recognizes that companywide innovation is a matter of assembling a group of talented people in an environment where innovation is required by everyone at every level. To create that environment, Toyota employs systems and structures that neutralize the typical barriers to ingenuity and release individuals to realize significance through their work.

The cumulative effect is astounding: Toyota has a market value worth nearly as much as all the other carmakers combined. What's difficult to understand, though, is what Toyota associates have known all along: their vaunted automobiles and assembly techniques are simply visible outcomes, the direct result of a hidden process much closer to the bedrock of human creativity and interaction.

It's *invisible*. Which explains why Toyota stands alone. You simply cannot get it by interviewing people and visiting facilities. You have to become part of the process and breathe the air inside the culture for a bit before you can begin to decode it all.

As someone fortunate enough to have worked with the U.S. arm of the company for nearly a decade, I can finally explain it in terms that are accessible and, most importantly, portable.

But I'm getting ahead of myself. Because I'm not a Toyota employee. Allow me to explain.

Backstory

It all began in 1998, when a happy accident brought me into contact with the newly-appointed dean of a just-formed entity called University of Toyota. As a solo practitioner, I was thrilled to facilitate the first strategic summit at which the new organization set the course for its future. Toyota had set ambitious goals in the U.S. market. The purpose of the University was clear: move the business forward by ensuring that as the company grew, its principles and practices remained robust, undiluted.

The problem was, they couldn't exactly articulate those things, because the knowledge was tacit, passed from individual to individual, master to student, in much the same way as it was in the days of the Renaissance, when artists and artisans moved along the path to mastery over time, beginning as a novice, progressing to apprentice, then journeyman, and finally master. It's not all that different from the path to partnership found today in law firms and consulting companies, and the roughly eight year duration remains largely unchanged.

The difficulty is that when you're expanding at the rate of a few thousand people each year, you don't have that kind of time. You need to compress the front end a bit to get people up to speed quicker. It may take you just as long to achieve mastery, but you're adding value pretty much from the start. To do that you have to make tacit knowledge explicit. Toyota needed widespread *learnership*.

Thus, my first assignment: "*We want to figure out how to bring the levels of employee engagement and constant creativity found in our Toyota factories and warehouses to the corporate environment.*"

I said, "Makes perfect sense." What I thought was: "You're kidding, right? Factory work isn't creative."

I couldn't have been more wrong. What I discovered blew apart my previous assumptions about business innovation, problem-solving, and creativity. It took me years to complete the assignment.

What I learned changed my perspective, and my life. I'd like to share those lessons with you. Because they're helping other organizations and individuals become more innovative.

An elegant *solution* is one in which the optimal outcome is achieved with the minimal expenditure of effort and expense.

LESSON NUMBER 1

It's Not About the Gizmo (*It's About Elegance*).

Mention innovation, and people immediately think, *technology*. The truth is that business innovation is about value, not gadgetry. But the pace of technological progress sweeps us off our feet and we get all caught up in the gizmo, losing sight of the *why* behind the *what*. People don't want products and services. They want solutions to problems. That's value. And when it come to solutions, simple is better. Elegant is better still.

Great innovation requires understanding and appreciating the concept of elegance as it relates to solving important problems. Oliver Wendell Holmes once said: "*I would not give a fig for the simplicity this side of complexity, but I would give my life for the simplicity on the other side of complexity.*"

Elegance is the simplicity found on the far side of complexity. An elegant *solution* is one in which the optimal outcome is achieved with the minimal expenditure of effort and expense.

Elegant solutions embrace an overarching philosophy of doing far more with much less, a notion that has become synonymous with Toyota and is present to this day in all of their operations, from design and engineering to manufacturing and distribution to sales and marketing.

An elegant solution is recognized by its juxtaposition of simplicity and power. The most challenging games have the fewest rules, as do the most dynamic organizations. The most memorable films have a simple message with complex meaning, touching a universal chord while allowing multiple interpretations.

An elegant solution is quite often a single tiny *aha!* idea that changes everything.

Finally, elegant solutions aren't obvious, except, of course, in retrospect.

Define Innovation for the Everyman.

A lot has been written about innovation. How it goes beyond improvement. How it entails seeking and taking big risks. How it's all about big ideas and radical departures from convention. How it means completely scrapping the old system. How it's limited to the right-brainers, and suits need not apply. How you need deep pockets just to play the game.

Those biases are limiting at best, and only serve to exclude the everyman from innovating. It never fails: in my talks and workshops I ask the true innovators to raise their hands. A few hands go up. Then I ask the problem-solvers to raise their hands. Nearly every hand is up.

I believe the best definition of innovation is the one given by David Neeleman, founder and CEO of JetBlue: *"Innovation is trying to figure out a way to do something better than it's ever been done before."* Thomas Edison would agree. Asked his philosophy, he said: *"There's a way to do it better—find it."*

The definition is an elegant solution in itself, because it wrestles to the ground a complex, hotly- contested concept and makes it accessible to everyone, at every level. It renders irrelevant all the silly distinctions between different theoretical classes of innovation.

So from here on, when I refer to innovation, I mean solving the problem of how to do something better than ever.

Avoid the Temptations (At All Costs).

Elegant solutions are all around us, waiting to be discovered. But they're no easy challenge. Elegant solutions require a working knowledge of the forces at play, and obstacles in the way. A few big traps can stop elegant innovation cold. They are three in number, easy to fall into, and most appropriately termed temptations:

1. *Swinging for fences.* This is the “homerun or bust” trap, which invariably destroys a strong batting average over time. It carries with it huge risk, usually accompanied by high cost.
2. *Getting too clever.* This is the “bells and whistles” trap, which can easily get out of control in an effort to outdo competitors. It carries with it the danger of complexity and customer alienation.
3. *Solving problems frivolously.* This is the “brainstorm” trap, which is misguided creativity far afield from company direction. It's a symptom of poorly defined work, and fraught with waste. There's a reason we call it an organization.

So how do you overcome the temptations? Where do you start? How do you know if you're heading in the right direction? *What guides the innovation effort?*

To answer the question, I need to relate the story of Sakichi Toyoda, a true innovator.

In those days, spinning and weaving was not a thriving business as it is today. The work was done by old women sitting at home and weaving the cloth by hand. Although everybody in my village was a farmer, every house also had its own handloom. I began thinking about ways to power the looms so that weaving could be done faster, and more cloth could be made more cheaply. People could then buy cotton goods for less, and that would benefit society substantially.

~Sakichi Toyoda

Beating Temptation

It's 1888. In rural Japan, a young man watches his mother slave all day in the rafters of their humble home to weave clothing on a manual spinning loom, a primitive tool unchanged for centuries. It pains him to see her scrap a hard day's work because of a single broken thread in the finished garment. Barely 20, inventive, energetic, and eager to change the world—carpentry is his trade, but not his calling. Ignoring elder disapproval, he challenges himself to build a better loom, sketching prototypes, building test models, and applying his woodworking skills in creative ways that others view as eccentric. He receives a patent for a handloom that improves quality and productivity dramatically. He's not satisfied. He turns his attention to developing a power loom.

By 1898, he perfects Japan's first steam-powered loom, which allows textile mills to quadruple productivity and halve costs. His looms are the highest quality, lowest cost, and easiest to use—putting the finest German and French looms to shame. Business booms, and his star rises quickly in Japan. His quest to perfect drives him ever forward, creating a string of tiny innovations in rapid succession.

Three decades into his search, he designs a mechanism to automatically halt the loom whenever a thread breaks. It changes the world. It takes five more years to perfect. And so from small but steady improvements with radical results and a strong desire to help people is born Toyoda Automatic Loom Works, the precursor to Toyota Motor Company.

Nearly a lifetime in the offing, Sakichi Toyoda finds the elegant solution.

Sakichi died at age 63 in 1930, never realizing another of his dreams—manufacturing automobiles.

The Principles of Innovation

The story of Sakichi Toyoda is not about invention, or about the technological development of the automatic loom in Japan. It's about one man's nearly spiritual quest to solve a very real problem facing the world around him.

Through his story, three underlying principles come into clear view:

- ⇒ Ingenuity in craft
- ⇒ Pursuit of perfection
- ⇒ Fit with society

These are the very principles that to this day fuel the engine of innovation at Toyota. More important, they are in fact the deeper principles behind nearly every great innovation the world has ever seen.

We face hundreds of problems and opportunities each day. We need some way to weed out the important ones, the right ones, the ones we should be working on—because those are the ones that demand elegant solutions.

The three principles of *ingenuity*, *perfection*, and *fit* light the path. Treated as policy, they lend the proper framework for the practice of innovation. They let us know if we're doing the right work. They inform our efforts by providing a solid focus, so actions and decisions become clearer. They put us in a better position to adapt to the rapidly changing landscape. They promote personal responsibility by requiring us to think through the immediate issues and summon our best judgment. Adhered to religiously, they prevent ideas for ideas' sake.

So it's worth a closer look at each.

Slaying dragons and storming castles isn't for the faint of heart. In a world run by powerful bosses and inflexible systems, rarely if ever is creative license granted freely. It's taken.

The Art of Ingenuity

The search for elegant solutions begins with the principle of *ingenuity in craft*, because the pressure to innovate in a fiercely competitive marketplace falls on the individual. Companies don't innovate, people do. The difficulty is that the ability to meet business objectives doesn't always square with the personal capabilities needed to innovate as required. Doing so requires that we work the way artists or scientists do: accept the limitations, use them to our advantage, and pursue the simple question that drives the thinking behind every breakthrough, big or small: *Is there a better way?*

You need a bit of storybook hero in you to tackle the obstacles to ingenuity. And there are plenty of them. You hear it in the whines of the seemingly put-upon: *Our culture is too bureaucratic. My ideas don't count. I don't get the resources I need. My boss won't let me.*

Slaying dragons and storming castles isn't for the faint of heart. The root meaning of ingenuity means *free thinker*. In a world run by powerful bosses and inflexible systems, rarely if ever is creative license granted freely. *It's taken*. And that takes basic courage. Or at least a soldier's bravado. It's the obstacles that make the achievement so impressive. If it was easy, we wouldn't be talking about it. No challenge, no creativity.

Artists and scientists own their work and sculpt their job. That's new school. It's a different mindset, and anything different is risky. And most certainly a form of leadership. So there's a penalty for it. New-schoolers know they'll get pushback, but they trust their abilities, and continue to employ their ingenuity to explore and experiment with new ways of doing things within the confines of the organization. They view defeat as the chance to begin again.

So expect it. And ignore it. Don't expect big rewards. Don't expect anyone to beat a path to your door to embrace your ideas. Don't expect anyone to help or support you. Do it so you can look at yourself in the mirror every day with pride. That's the biggest and best payoff.

Whatever your work, make it your art. All sorts of good things happen when you do.

How have you changed the way you perform your work in the last week?

The Pursuit of Perfection

If ingenuity is the starting point, perfection is the vector. Approached as a process, it can drive breakthroughs. Approached as a goal, it can actually block innovation.

The pursuit of perfection is not focused on achieving perfection, it's focused on chasing it. Perfection is unachievable...it'll never happen. Unless you're Buddha I guess. That's what throws people, at least in our Western culture. We've become impatient with mastery. If you can't achieve perfection, why bother? Because you have to. Otherwise you'll always be a follower.

At Toyota the mantra is: no best, only better. This gets to the heart of our redefinition of innovation.

The pursuit of perfection is a discipline of increments, and just plain hard work. It ignores the impractical theoretical distinction between incremental improvement and breakthrough innovation. Innovation isn't an either-or proposition forcing a choice between small steps and big leaps. It's how to achieve big leaps *through* small steps.

Your portfolio will remain secret sauce,
because routine ground singles don't catch the
eye of scholars, competitors, or the media like
homeruns do.

Chasing perfection through relentless improvement builds the capability needed to achieve cross-company innovation. There's no downside to growing a strong portfolio of small ideas. Dealing in smaller currency lets you experiment more, get results quicker, and learn faster. Without fretting over risk. The more ideas you have, the more patterns and possibilities emerge. Which gives you more opportunities to combine and multiply ideas into bigger ones. The multiplier effect of compounding ideas is enormous. And when the big idea hits, which it will when the time is right, it'll be the daily incremental innovation you get from chasing perfection that will sustain your competitive advantage. And protect you from imitators. Your portfolio will remain secret sauce, because routine ground singles don't catch the eye of scholars, competitors, or the media like homeruns do.

What distinguishes great innovation is its ability to serve the great needs of society.

Those who fail to constantly ideate and initiate are destined to be the eternal followers. That's okay for some, even many. But refuse to adapt, and the near future may include the auction block. Adaptation is all about evolution through incremental progress. And lest you think you'll run out of things to improve or an irrational fear of diminishing returns kicks in, rest easy. Because the world keeps changing.

There's no more logical way to consistently achieve breakthroughs than through a discipline of increments. And no better way to increase the odds of finding the elegant solution.

If you remember nothing else, remember this: *imperfection drives innovation*.

What role does pursuing perfection play in your work?

The Rhythm of Fit

What distinguishes great innovation is its ability to serve the great needs of society. Simply put, a successful mousetrap needs a serious rodent infestation, and a delivery system that places the mousetrap in the hands of those who can make the most use and best sense of it in today's terms.

And that requires a keen insight into the prevailing systems surrounding your business. You can fight for your marvelously bright idea, but chances are you'll lose in the long run to a competitor who figures out how to either leverage the current system to make the idea work with what's out there now, or offers a new system to deliver the idea. Either way, it takes *systems thinking*, defined as the ability to think well through cause and effect. And that entails understanding *context*.

Great innovation is great in large part because of context. Context separates invention from innovation. Context is like the frame in art. If the canvas doesn't fit the frame, the whole thing doesn't quite work.

We're constantly being told to think outside the box. It's become an impotent platitude. Which is okay, because it's well off the mark. Most people in big outfits probably don't even have a clue what the box is. So you can't think outside it even if you wanted to.

The box is context, the system. And you have two choices: make your idea fit inside the box, or build a brand new box to replace the old one. Some people call that disruptive, or destructive. Of course it is. So what? Creation is destruction. New replacing old is the way of the world. And if you don't deliver a new box for an idea that doesn't fit in the old box, you've got nothing to put your great idea in. So it'll float untethered in the ether as just another invention without application, until it gets anchored to context.

Great innovation seeks to find and fit the rhythm of change happening around us. It fits the innovator, fits the times, and fits within a larger system—like it's always been there.

What are the great and pressing needs your solution serves?

Getting Real: Principles Into Practice

Ingenuity in craft, pursuit of perfection, and fit with society. These three principles guide innovative energy toward elegant solutions. At Toyota, they're all that's worth fighting for. Without them...well, business then becomes all about the money. And that's a balloon that will eventually burst. Sneak a peak at Toyota's competition in Detroit for proof.

But now comes the hard part—making these three principles actionable—bringing them to life, applying them to your world, and building a capability around finding elegant solutions. And that requires more ground-level concepts.

Practices. The how.

But embedded and present in each of the ten key practices to be covered next are the three underlying principles of innovation.

I should tell you up front that none of the individual concepts are new, or even unique to Toyota. The non-Toyota cases included should bear that out. Rather, the magic is found in Toyota's remarkable ability to collectively and completely master all of them as a way of life, not a program centered on select teams led by specialists with artificial agendas. That's what makes Toyota unique, and worth studying.

Too, they are in fact universally applicable—be it in an individual, team or organizational level. That's hard to come by. And that's what makes this particular collection different, valuable.

Let Learning Lead

Learning and innovation go hand in hand, but learning comes first.

Real learning is a cycle of questioning, experimenting and reflecting. It's how we convert curiosity into an innovative solution, so learning must BE the work, not something separate from it. Learning triggers creativity down the line, and makes the other nine practices work.

Learning cycles come naturally. But they got replaced by institutional education as we grew up. So all we really have to do is get back in touch with them and practice. And learning cycles aren't complicated. They're all around us. So much so that we often discount them.

The next time you see an infant in a high chair throwing food on the floor, know that you're watching a learning cycle in action. She's wondering what will happen if she drops her strained carrots. The problem is how to get them on the ground. She could tip her dish over the tray, flick her spoon or grab a fistful and toss away. She tries the tip. It works. Great feedback from the dish as it crashes on the tile. She confirms her test by doing it again after mom picks it up. It works so well she adopts it as her current preferred method.

Lesson learned, though: Mom doesn't like it.

So she launches another experiment.

To what degree is experimentation built into your core work processes?

NUMBER 2

Learn to See

Elegant solutions often come from customers—get out more and live in their world.

Live the customer's life. Watch the problem in the context and environment within which it occurs. View it from every conceivable angle. If you don't, you'll fail to properly frame the problem. You'll fail to empathize with your customers. There goes deep understanding. There goes innovation with impact.

To make sure they understood their target market, product developers for Toyota's new youth-oriented brand Scion attended raves and hip-hop parties. They came to understand that personal expression is the most powerful purchase motivation among Generation Y. They came to understand the trend in customization. Designers then made sure to create a vehicle that enabled and encouraged buyers to add their signature and make it their own. Scion has now become a "raving" success.

The phrase in Japanese is *genchi genbutsu*: go look and see to fully grasp the situation; then, and only then, define the problem and design the appropriate solution.

And remember, everyone has a customer. Somewhere, someone is in direct receipt of that which you do on a daily basis.

How well do you understand the problem your customers face?

Design for Today

Focus on clear and present needs, or your great ideas remain just that.

Make sure you're concentrating on a real need. Don't confuse an unarticulated need with a non-existent one. Don't attempt to manufacture a need. And don't confuse long lead times with future needs. The incubation and design period of the hybrid automobile lasted many years, but Toyota would have never even begun product development for an innovation that did not, if successful, have immediate application as a solution to a transportation need already in existence.

Kevin Hunter heads CALTY, one of Toyota's major design centers, and has this to say: "People can't tell you what they want in the future. But they know what they want now. You have to balance creativity with market acceptability. You have to push the envelope and be progressive, but you can't get too far out there, because customers won't understand. Your design has to evoke something familiar or emotional while at the same time offering something new and unfamiliar. You have to avoid a strict design bias and remember who you're designing for. You can't be selfish, you must focus outward, and on the problem you're trying to solve for customers."

If your idea became a reality today, how well would it do?

NUMBER 4

Think in Pictures

Make your intentions visual—you'll surprise yourself with the image.

There's a reason everyone talks about "the big picture." Pictures and images connect people to thoughts and goals and help turn valuable ideas into action. So get graphic. Whenever you can, wherever you can, start building a visual element into your thinking. Storyboard it, diagram it, mindmap it, whiteboard it, butcher-paper the walls and go crazy. Show progress against your goals in an appealing, unborning way. Show people the gripping picture of the future by telling the story in a powerful way, using imagery to describe the goal.

Toyota Chief Engineer Tetsuya Tada used a high-energy, heart-pounding music video to propose the Scion concept to Toyota's senior executives.

At BMW-owned design studio Designworks USA in Southern California, all employees take art classes to improve and maintain their graphic ability, even if their main tool of choice is computer-aided design and modeling.

What opportunities exist to use images and visual references?

Capture the Intangible

The most compelling solutions are often perceptual and emotional.

It's the intangibles that differentiate and transform. They move well beyond the transaction, the product, the service, the process. Capture the intangibles that people truly prize, and you'll find the most compelling elements of value.

Cadillac hasn't sold transportation since the Great Depression. In the 1930s, Nicholas Dreystadt took over as the company was about to fail and announced that Cadillac did not compete with other automakers, but that "Cadillac competes with diamonds and mink coats. The Cadillac customer does not buy transportation, but status." That simple perceptual innovation translated to a price premium and saved the company. Within two years Cadillac had become a major growth business despite the dismal economy.

Lexus doesn't sell luxury transportation, it sells safe sanctuary and quiet escape. Disney doesn't operate theme parks, it sells magic and fantasy. Harley-Davidson sells the ability for a 43-year old accountant to dress in all black leather, ride through small towns and have people be afraid of him. And Starbucks doesn't sell coffee, it offers personal expression and daily ritual.

Here's the thought: it's not business, it's personal.

How do you connect emotionally with your customers?

Leverage the Limits

Restraining forces rule—resource constraints can spur ingenuity.

No one was shocked when Toyota president Katsuaki Watanabe announced to Wall Street and the world in the latter part of 2005 that he had ordered his research chief Masatami Takimoto to find a way to cut in half the \$5,000 price difference between Toyota's hybrid cars and similar gasoline models, without compromising any of the current quality standards, features and performance. Watanabe was quoted as saying: "I assume Mr. Takimoto must be racking his brains about how to do that."

That's the Toyota way. Since World War II, resource constraints have been a key driver of innovation at Toyota. Toyota treats resources constraints the same way artists do.

All artists work within the confines of their chosen media, and it's the limits that spur their creativity. The canvas edge, the marble block, the eight musical notes—the resources are finite. So it's how you view and manage them that makes all the difference.

And that's the big question: Are limits preventing innovation, or enabling it?

There's only one right answer. Innovation demands exploiting limits, not ignoring them.

Which of your goals will stimulate new thinking?

Master the Tension

Breakthrough thinking demands something to break through.

Great innovation is often born of an ability to harmonize opposing tensions. Unfortunately, we have a natural tendency to “satisfice”—give in too early and glom on to the solution that is inevitably less than elegant, less than optimal. To fight that, set goals to conflict with others to prevent compromise and dilution. Breakthrough thinking comes from breaking through the mental barrier erected by the obvious solutions.

A newly-appointed executive at Toyota’s Parts Operations division wished to transform the supply chain. She set goals of 50% reduction of inventory and 50% reduction in backorders. The targets were paired one against another to purposely create a dynamic tension in every part of the supply chain. Backorders and inventory are considered opposite sides of the same coin. Increase inventory, and backorders drop. Decrease it, and backorders generally rise. Calling for the simultaneous reduction in both provided the creative tension needed to power new thinking.

How do generate creative tension?

NUMBER 8

Run the Numbers

Think for yourself—temper instinct with insight, focus on facts, and do the math.

Innovation by definition disrupts the status quo. Digging into relevant data helps fight the dangers of bias, convention and instinct. There's nothing better to help make the break with comfortable patterns than solid evidence. Great innovations are based on much more than a feeling.

Following his bout with testicular cancer, Lance Armstrong found that his physiology had changed. He was lighter, with a diminished musculature. The way his body most efficiently produced power had changed. He needed a new way to ride the bike in order to compete at the elite level. He examined the power equation of $\text{Power} = \text{Force} \times \text{Velocity}$, where force was the force applied to his pedals and velocity was leg speed, or pedal cadence. He did the math, looking at the variables. *If it takes 200 watts to move a bike at 20 mph, what were the possibilities? What were the differences of pedaling 70 rpm, versus 100 rpm?* Lower cadence required higher force applied to each pedal stroke, which meant more work for his leg muscles, and quicker fatigue. Lower force to the pedals required higher cadence, which meant more work for his heart and aerobic system. Given his stronger aerobic engine, he switched to spinning lower gears at a much higher cadence. It ran counter to conventional wisdom of driving big gears. But it worked. No one could touch him in grueling mountain climbs of the Alps and Pyrenees.

By simply focusing on the facts, he rewrote the rules and forever changed the game. His record of seven straight Tour de France victories may never be matched.

What patterns might be investigated to challenge convention?

Make Kaizen Mandatory

Pursuing perfection requires great discipline—create a standard, follow it, and find a better way.

Combined research from the Employee Involvement Association and Japan Human Relations Association reveals that the average number of ideas submitted per employee annually is 100 times greater in Japanese companies than in U.S. companies. *Why?* For one thing, we reward the wrong thing in the wrong way. The average reward in Japanese companies is 100 times less than the average U.S. reward of nearly \$500. We have it backwards! The bottom line is that the Western business practice of rewarding only accepted ideas has all but killed the creative drive of corporate America.

We need a better way—kaizen. *Kaizen* (ky-zen), the Japanese word for the American-made concept of continuous improvement, is all about idea submission, not acceptance. The *de facto* incubator for consistent business innovation, it's the practice that fosters a strong ethos of lab-like curiosity in companies like Toyota. And it's a proven, grass roots way to harvest human creativity.

Kaizen has three steps: First, create a standard. Second, follow it. Third, find a better way. Repeat endlessly. Trying to improve and innovate without a standard as reference is like a journey with no starting point. It's like hitting golf balls in the fog.

How do you sustain a steady flow of ideas in your organization?

Keep it Lean

Complexity kills—scale it back, make it simple, and let it flow.

More is often just more. Unless it's more simple, accessible, timely and efficient, which really means it's less complicated and complex. When it comes to solutions, size and sprawl matter. Be-all, end-all, feature-rich solutions almost always miss the mark. Because they're over-scoped and too complex. They're usually proof that we lack real insight into our customer's desires. Complexity destroys value, which is what matters most to the customer. The most elegant solutions always seem blazingly simple.

Founders of MinuteClinic decided to solve the problem of waiting for medical attention in urgent care centers and emergency rooms. Waiting is pure waste, the antithesis of lean. MinuteClinic gets you in and out in 15 minutes. A nurse practitioner qualified to treat the most common illnesses runs the show. Those illnesses appear on a menu—if it's not on the menu, it doesn't get treated. No appointment is needed. No treatment takes more than 15 minutes. Overhead is low due to the small footprint and absence of medical equipment. Most MinuteClinics are located in a large retail store like Target, so time wasted waiting is minimized: patients just grab a pager and go shopping while they wait to get beeped when it's their turn. Customer satisfaction is near 100%. The value proposition is clear and compelling: quick, affordable treatment. Funny, that's exactly opposite of what most hospitals offer.

What elements of complexity would your customers love for you to eliminate?

An Encouraging Word (Because Elegance Ain't Easy)

Innovation is at or near the center of nearly everyone's radar screen. If you're not looking for it in your work, you're looking for it in your avocations. Because stirring in each of us is the desire to employ our creative spirit through what we do every day. At some level, we're all scientists and artists at heart.

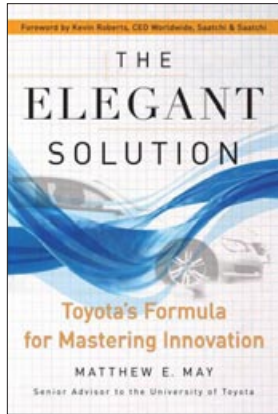
The evidence is all around us. It's there in the strategies we concoct, teams we supervise, projects we manage, deals we cut, reports we prepare, and software we program. From an Apple computer to a Starbucks coffee to a Ferrari automobile—if we can think it, build it or do it, the opportunity exists to find a way to do it better than it's ever been done before. The potential to innovate our way to an elegant solution is alive and well in everyone.

Actually *doing* it is another matter entirely. The journey to elegance along the pathway of innovation is one most don't commit to making. The reasons? It's not easy, it's not quick, and it doesn't guarantee wealth or success.

But do me a favor. Don't be a modern day Archimedes, waiting for a lightning bolt of Eureka! to hit you in the bathtub. I'm fairly certain the elegant solution won't magically come to you through the mythical happy accident.

Because there's nothing accidental about true innovation.

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For more details or to buy a copy of Matthew E. May's, *The Elegant Solution: Toyota's Formula for Mastering Innovation* [click here](#).

ABOUT THE AUTHOR

Matthew E. May is the author of *The Elegant Solution: Toyota's Formula for Mastering Innovation* (Free Press, October 2006) from which this manifesto is adapted. He is a longtime Toyota business partner, holding a key advisory role with the University of Toyota for over eight years. As a master Toyota instructor and founder of Los Angeles-based management education firm, Aevitas, he partners with management teams to achieve excellence in innovation, working with a number of well known organizations, including Wells Fargo, The Department of Defense, Quadrant Homes, and Los Angeles Police Department. A graduate of the Wharton School and Johns Hopkins University, he lives with his wife and daughters in southern California, where he is an avid cyclist.

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