

THE HBR INTERVIEW

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An Interview with Katsuaki Watanabe

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Toyota's way is to measure everything—even the noise that car doors make when they open and close as workers perform their final inspections on newly manufactured automobiles. By any measure, whether esoteric or mundane, Toyota Motor Corporation has become one of the most successful companies in the world today. This year marks the 70th anniversary of Toyota's founding, 50 years since the Japanese company started exporting cars to the United States, and a decade since it launched the world's first commercial hybrid, the Prius. If, as Toyota officially forecast last December, it sells 9.34 million vehicles in 2007, it will overtake America's General Motors to become the world's biggest automobile manufacturer.

Toyota is, arguably, already the best carmaker on the planet. For almost 15 years J.D. Power and other research firms have consistently rated Toyota and its luxury line, Lexus, among the top automotive brands in terms of reliability, initial quality, and long-term durability. Toyota is also the most profitable car manufacturer: In the financial year that ended in March 2007, it made

a profit of \$13.7 billion, whereas GM and Ford reported losses of \$1.97 billion and \$12.61 billion, respectively, in 2006. In fact, Toyota's market capitalization on May 10, 2007—of \$186.71 billion—was more than one and a half times GM's (\$16.60 billion), Ford's (\$15.70 billion), and DaimlerChrysler's (\$81.77 billion) combined.

In the history of the modern corporation, Toyota's march to the top from its humble beginnings as a textile machinery manufacturer in the mill town of Koromo—now Toyota City—is one of the most remarkable examples ever of managing for the long term. Toyota's rise wasn't quick or inevitable. Even in the early 1980s Ford and GM marketed bigger, better-looking, and plusher cars than Toyota did—although its soulless creations were more reliable and fuel efficient. The Japanese manufacturer closed the gap little by little, improvement by improvement. In 1970 GM had a 40% chunk of the U.S. car and light-trucks market, whereas Toyota had only a 2% sliver. Toyota's market share inched up to 3% in 1980, to 8% in 1990, and to 9% in 2000, entering double digits for the first

time only in 2006, when it rose to 13% and GM's fell to 26%. Toyota's ascension is best captured by the Japanese word *jojo*: "slowly, gradually, and steadily."

Every executive has two questions about Toyota today: What can my company learn from the world's greatest manufacturer? and (sotto voce) How is Toyota handling success? The answer to the former is obvious (plenty), but the jury is still out on the latter. Toyota is more confident than ever in some ways. The company is proud of the fact that its management principles are different from those taught in B-schools. Senior executives take great pleasure in explaining that other companies find it difficult to emulate Toyota because its management tools matter less than its mind-set. To some observers, the company has become insufferable. For instance, after it unveiled the Lexus LS600h L at the New York Auto Show in April 2006, the influential blogger Peter DeLorenzo complained, "The tone, the language, and everything about the presentation confirmed to me that the 'creeping' arrogance that has been brewing at Toyota for years has finally blossomed into full bloom for everyone to see."

A long and deep look at Toyota, especially in Japan, reveals a different picture. The company appears to be running scared. Toyota's executives were blindsided last year by a series of problems with its automobiles that blemished the company's reputation for manufacturing quality products. They are worried about always being the second (or the sixth, according to the 2006 Formula One standings) to enter new markets and to incorporate new technologies in vehicles. They are also gravely concerned about not having enough people to sustain their global growth. In fact, almost every aspect of Toyota is straining to keep pace with the company's rapid expansion and with technological change.

These pressures are compounded by three factors. First, in order to meet demand, Toyota has added the capacity to produce 3 million automobiles over the past six years. Perhaps the only other automaker to boost production that fast, according to industry experts, was the Ford Motor Company, under Henry Ford in the early 1900s. Second, Toyota's ambitions have dramatically expanded. The company wants to develop Lexus into a big luxury brand in Europe, attacking European carmakers' biggest source of profits; to grow sales of its full-size pickup truck, the Tundra, in the United States, thereby assaulting Ameri-

can automakers' last redoubt; and to develop a new breed of vehicles for emerging markets such as China and India. Third, the rate of technological change both in manufacturing processes and in products is unprecedented. For instance, Toyota's vision is to develop "dream cars" that are revolutionary in safety and environmental benignity.

A series of interviews with Katsuaki Watanabe, Toyota's 65-year-old president, and several executive vice presidents revealed that Toyota's future will depend on its ability to strike the right balance—between the short term and the long term; between being a Japanese company and being a global company; between the manufacturing culture of Toyota City and the design culture of Los Angeles, where some of Toyota's cars take shape; between the cautiousness of Toyota's veterans, who are worried about growing too fast, and the confidence of its youngsters, who have seen only success. And Watanabe, who is using the Toyota Way to remake the company, told HBR's editor, Thomas A. Stewart, and senior editor Anand P. Raman that Toyota must also balance incremental improvements with radical reform. What follows is an edited version of our interview with the company's president that incorporates (and identifies) some comments by Toyota executive vice presidents.

Mr. Watanabe, you have spoken recently about how the early part of the twenty-first century is Toyota's "second founding period," when the company will set a course that will create a more prosperous society in the future. Almost in the same breath, you spoke about "fixing the foundations" of the company. Is Toyota poised for long-term growth, or does the company face a crisis?

Toyota must keep growing even as it builds a stronger foundation for the future; it has to do both for the company's long-term health. There are three keys to building a stronger foundation: We must improve product quality, keep reducing costs, and, in order to attain those two objectives, develop human resources. We have to create a stronger foundation at every stage of the supply chain, from product development to after-sales service. Our products must be the best in the world; we must be the first to offer them to customers; we must manufacture them at the lowest cost; and we must sell them through the best service networks. My focus is on how Toyota can achieve all those things at the same time.

What does becoming number one in the global automobile industry mean to you?

To me, becoming number one isn't about being the world leader in terms of how many automobiles we manufacture or sell in a year, or about generating the most sales revenues or profits. Being number one is about being the best in the world in terms of quality on a sustained basis. I attach the greatest value and importance to quality; that lies at the root of my management style. It's critical for Toyota to keep making the highest-quality vehicles in the world—the best products in every way, manufactured without any defects. Unless we enhance quality today, we can't hope for growth in the future. That's why we are investing in the development of new technologies, new processes, and human resources. My top priority is to ensure that we do that resolutely, sure-footedly, and in a thorough fashion. We've never tried to become number one in terms of volumes or revenues; as long as we keep improving our quality, size will automatically follow.

That's an ambitious agenda. But there are several pressures operating on Toyota right now. For instance, between 2004 and 2006 the company recalled more vehicles than ever before. When you took over as CEO in June 2005, you talked openly about "big-company disease" and the risks of complacency. How do you manage the tensions that growth and globalization have created?

Since I became CEO, Toyota has continued to grow very rapidly. We produced around 3 million more cars in 2006 than we did in 2000. We opened about a dozen new facilities during that period, and we are building five more plants. In 1995 there were 26 Toyota factories; in 2007 there will be 63. I've personally visited our new manufacturing facilities in China and the United States and seen the new plants we're building in Thailand, Canada, China, and Russia. Sure, every Toyota plant faces distinct challenges and difficulties, but I realize that our system may be overstretched.

We must make that issue visible. Hidden problems are the ones that become serious threats eventually. If problems are revealed for everybody to see, I will feel reassured. Because once problems have been visualized, even if our people didn't notice them earlier, they will rack their brains to find solutions to them.

That's the DNA we've all inherited through the Toyota Production System. What are the problems with the new models we have launched? Have we trained our new workers well enough to produce quality? Are our new facilities operating all right? What would be the most appropriate way of marketing and selling the Tundra, given market conditions in the United States? As long as we know what needs and challenges we face, we can come up with countermeasures.

If there are problems that go beyond our immediate capability to deal with them, we must stop if necessary, postponing projects and growth. When I drive, I have my hands on the steering wheel but I also constantly think about when I should apply the accelerator and when I should brake. I may not need to brake right now, but if a time comes at Toyota when I need to put my foot on the brake pedal rather than on the accelerator, I won't hesitate to do so.

When a Toyota worker on the shop floor notices a problem, he or she has the freedom to pull the *andon* cord immediately, stop the line, and ensure that the problem is fixed before restarting production. But is it really possible to do that with the entire company? Don't you have to fix things as you go along?

The same principle applies to management, too, and it's my job to pull the *andon* cord. Soon after I became president, as you know, we confronted several quality-related problems. We created teams specializing in different areas and instructed them to analyze the root causes of problems in each area. We found that in several cases the problems had occurred because of design flaws or because of short lead times that didn't allow our engineers to build a sufficient number of physical prototypes. If we had thought about product designs more clearly or had the time to conduct more experiments, we could have avoided those problems.

To prevent more problems, I suggested that we extend the deadlines for several projects by six months, even if that meant delays in new launches, and that we postpone or eliminate other projects. Of course, we couldn't delay some critical projects; we kept our eyes on market conditions and technology trends and invested additional resources to tackle problems related to those projects first. But I will not allow the same problems to recur; we won't use

half-baked ideas to tackle half-cooked problems. We have to improve quality even if I have to slow our pace of growth. After examining every project in our pipeline, product by product, market by market, we have created a new product-development plan. Some projects have taken a different direction, and I have halted others—just as workers stop the line.

As Toyota's president, you have a responsibility to the capital markets. As you expand faster around the globe, will the variability of its share price—the company's beta—increase? How does Toyota address that risk in strategic terms?

The priority of Toyota's top management team is to increase shareholder value steadily over the long term. As the company continues to expand outside Japan, we will increasingly face market risk, which will vary from country to country. To create a company that can resist fluctuations all over the world all the time is

difficult. However, we use the concept of leveling fluctuations (*heijunka*), which is part of the Toyota Production System, to reduce risk. For example, the conditions in some Asian markets, such as Taiwan and Indonesia, are still tough. Japan's economy is doing better, but the automobile market is stagnant except for the minivehicles [whose engines have less than 660 cc capacity] segment. There will always be such vicissitudes in different markets, so leveling out those peaks and troughs is important. Our basic philosophy is to produce vehicles where customers are. When there are short-term demand fluctuations in one market, we use our operations in Japan to support them.

The more plants Toyota builds in different countries, the stabler its finances will become, because the company will be able to hedge against fluctuations in the yen vis-à-vis euros, dollars, and other currencies. But will your long-term strategy, which

The Long-Term Growth Strategy

In 2006 Toyota President Katsuaki Watanabe unveiled the full extent of Toyota's ambitions. The company strategy puts equal emphasis on taking in opportunities and avoiding or absorbing risks; it utilizes global car models and also regional models. With global models such as the Lexus, the Camry, and the Corolla, and regional models such as the Crown (Asia) and the Tundra (North America), Toyota will offer a full line of appropriate vehicles in all the world's markets.

	JAPAN	NORTH AMERICA	EUROPE	ASIA	OTHERS
PREMIUM	Lexus				
LARGE	Crown	Avalon		Crown	
MEDIUM	Prius				
	Mark X		Avensis	Reiz	
	Camry				
COMPACT		Scion			
		Matrix			
	Corolla				
	Vitz/Yaris				Vios
	Model for Emerging Markets				
TRUCK SUV MINIVAN	Alphard	Sienna	Hilux, Innova, Fortuner		
	Estima	Tundra			
	RAV4				

you have described as having a full line of products and competing in all regions, maintain stability? GM competes with a full line in all markets, but the strategy has proved to be more of a liability than an opportunity.

We will create a full line of appropriate products for every region in the world by offering global models and also developing regional models. In Japan we must continue to maintain our market share by launching new products that create new market segments and by re-vamping our sales channels. In North America we recently entered the full-size pickup truck segment with the redesigned Tundra, and we must engage more closely with Generation Y customers through brands such as the Scion. In Europe we will expand and strengthen the lineup by marketing diesel engine and hybrid vehicles. As I said earlier, we believe in building vehicles where we sell them, so we will increase our production capacity overseas.

However, that can sometimes create inflexibility in terms of capacity utilization, because local demand will fluctuate. To increase efficiency, we have developed a global link production system. Owing to the innovative technologies in our plants in Japan, we are able to transfer the production of different models between them quickly. So we have linked some plants in Japan to our overseas plants. When there is a spike in demand in, say, Europe, our plant in England will maintain stable production while the link plant in Japan manufactures the extra units needed. This system helps us in several ways: It enables us to respond swiftly to changes in demand; it enables high capacity utilization at all plants; and it saves capital expenditure, because we use existing resources in Japan to balance demand in other markets. Our plants in Japan serve as buffers, which is why our “full line, all regions” strategy works efficiently.

Japan, where you have 40% of the automobile market, is your arena for experiments with new products and production processes, and in North America and Europe, where you have 12% and 6% market shares, you plan to deepen penetration to achieve scale and profitability. But what is Toyota's vision for BRIC—Brazil, Russia, India, and China? Are they merely sources of raw materials, or are

they also markets? Haven't you entered them very late?

Brazil, Russia, India, and China are entirely new markets for us. They are going to be important markets for Toyota eventually. As those economies grow, we need to figure out what kinds of manufacturing facilities we should set up and what sorts of products we need to sell. We will introduce global and regional models and augment our production bases in those countries. I don't think we are too late. Those countries are growth markets, and they will continue to grow. We don't want to be too aggressive in them despite their potential. As our former executive vice president Mr. Yoshimi Inaba said, we would not like to create large capacities and slash the price of products—as some of our rivals do—when demand doesn't pick up as anticipated. As people in BRIC look for better cars, as roads are built, and as energy efficiency becomes more important, the demand for Toyota's cars will go up. We would do better to wait than to jump into the market; we should let the market come to us. Toyota can never be a cheap brand; it's a quality product with a fair price, which in emerging markets may be a premium price. But people will see the value of our products and think, “The next time, I must buy something better—like a Toyota.” We may not necessarily be somebody's first car; we definitely want to be the second car that the family buys. We should go slowly and steadily into those markets, ensuring that we stay abreast of their growth but don't go faster than is warranted.

Does the fear that Toyota may have to compromise on quality prevent you from entering the emerging markets more aggressively? Those markets demand low-priced vehicles, which embody cost-quality trade-offs that Toyota may not want to make. Is quality proving to be the enemy of growth?

It's wrong to think of the emerging markets as a single entity. Brazil is different from China, which is different from India, and so on. In Brazil the Corolla sells well; in Russia the Lexus sells extremely well. Sometimes I wonder if it's right for such an expensive car to be selling so well in Russia. Anyway, it would be wrong to say that these markets want lower-quality products. But yes, one factor they have in common is that many of their consumers want low-

cost automobiles. The moment I became president, I created a team to work on a project related to that. But I told our engineers, let us not focus on developing low-cost automobiles; let us develop technologies and processes that will allow Toyota to manufacture all our vehicles at lower costs. If we do that, we can produce cars for BRIC and we can use the same processes to reduce the cost of automobiles for other countries, too. By conceptualizing the problem in that fashion, we will also meet our quality standards rather than worrying about whether we have to compromise on them in emerging markets. We have started developing those technologies already. Our rivals may be trying to create low-cost vehicles for emerging markets, but Toyota will go beyond that and develop the optimal vehicles for all worlds.

Toyota is clearly trying to grow as it has always grown, at a steady pace. But the forces of the global market are pulling you, and you are being pushed to move faster and faster to keep up. Are those forces so strong that they might pull Toyota apart? How are they changing the company's fundamental operating principles?

The Toyota Way has been and will continue to be the standard for everyone who works for Toyota all over the world. Our guiding principles define Toyota's mission and values, but the Toyota Way defines how we work. To me, it's

like the air we breathe. The Toyota Way has two main pillars: continuous improvement and respect for people. Respect is necessary to work with people. By "people" we mean employees, supply partners, and customers. "Customer first" is one of the company's core tenets. We don't mean just the end customer; on the assembly line the person at the next workstation is also your customer. That leads to teamwork. If you adopt that principle, you'll also keep analyzing what you do in order to see if you're doing things perfectly, so you're not troubling your customer. That nurtures your ability to identify problems, and if you closely observe things, it will lead to *kaizen*: continuous improvement. The root of the Toyota Way is to be dissatisfied with the status quo; you have to ask constantly, "Why are we doing this?" People can apply these concepts throughout the world, not just in Japan. The question is how long it takes to train people to develop the Toyota mind-set.

How long does it take, especially if someone isn't Japanese, to learn the Toyota Way?

Just yesterday I spent a whole day with 30 of our young executives. At least 50% of them were from outside Japan. They had been broken up into teams to tackle different problems, and they made presentations based on what they had learned about using the Toyota Way to tackle them. I listened and commented. The managers felt happy and said that they had learned a lot. When I asked, many of them said they were now able to understand the Toyota Way fully. That's totally wrong. Two or three months isn't a long enough period for anyone to understand the Toyota Way. The managers may have understood what's on the surface, but what lies beneath is far greater. I asked them to explore that. There's no end to the process of learning about the Toyota Way. I don't think I have a complete understanding even today, and I have worked for the company for 43 years.

How will Toyota balance demand for its products with the longer-term need for human resources? Making cars is a capital-intensive business, but manufacturing at Toyota is a human capital-intensive business. Your executive vice presidents all say that Toyota is facing a serious shortage of trained people. Will you be able to catch up and keep up with the demand for people?

The Toyota Way

Toyota has developed distinct business beliefs and methods whose origins lie in five principles laid down in 1935 by the original company's founder, Sakichi Toyoda. However, the Toyota Way wasn't formally documented until 2001, when the company recognized that the growing number of Toyota employees outside Japan needed to be rigorously trained in its use.

In the company's own words, here are the two pillars of the Toyota Way.

I. Continuous Improvement

Challenge We form a long-term vision, meeting challenges with courage and creativity to realize our dreams.

Kaizen "Continuous improvement"

We improve our business operations continuously, always driving for innovation and evolution.

Genchi genbutsu "Go and see for yourself" We go to the source to find the facts to make correct decisions, build consensus, and achieve our goals.

II. Respect for People

Respect We respect others, make every effort to understand each other, take responsibility, and do our best to build mutual trust.

Teamwork We stimulate personal and professional growth, share the opportunities of development, and maximize individual and team performance.

Our demand for people is complicated by many factors that are peculiar to the automobile industry: long product life cycles; large and complex supplier networks; and, increasingly, state-of-the-art technologies vis-à-vis safety, the environment, and traveling comfort. As our executive vice president Mr. Mitsuo Kinoshita said, we need a workforce that is both specialized in new technologies and global because of Toyota's expansion. It takes time to develop Toyota people, who are trained on the job rather than in a classroom. Only when employees start working at Toyota do they learn from their superiors what values and skills they need in order to do their jobs. Most of our plants outside Japan were set up in the past ten years, so even senior employees overseas have relatively little experience with the Toyota Way.

Toyota develops T-type people. [See "Introducing T-Shaped Managers," by Morten T. Hansen and Bolko von Oetinger, HBR, March 2001.] As you may know, the vertical stroke of the T stands for the fact that employees must intensify or deepen what they do, and the horizontal stroke indicates that they must learn other jobs. Creating T-type personnel is a time-consuming process. However, in many countries outside Japan it's tough to employ people for the long term. The moment we start operations, employee turnover begins. So we are learning how to retain people.

We used to transmit the Toyota Way through the mother plant system, whereby a Japanese plant served as the parent of each new overseas plant we set up. That Japanese plant was responsible for training people in the overseas plant and instilling the Toyota Way in them. Because of the rate at which we are growing overseas, we have done away with that system. We now send people from Japan, coordinators, to instill our philosophy and concepts in our overseas companies. When a new company is established, the coordinator will serve as a teacher, or *sensei*, for its employees. After some years a second-generation coordinator will serve as a coach rather than a mentor. After several more years a third-generation coordinator will act as an adviser rather than a coach. The coordinators are critical to training people in the Toyota Way, but we have only about 2,000 coordinators. Our people in Japan take turns serving as coordinators every three to five years. Given the size of our business, we need three times as many coordinators as we have at present.

As you try to keep the learning curve rising as fast as the demand curve for people, how long will it take you to triple the number of coordinators?

It's difficult to say. We spent many years developing our human resources to be able to create 2,000 coordinators. Training a T-type manager takes 20 years or so, as Toyota's executive vice president Mr. Tokuichi Uranishi told you. In addition to knowing the Toyota Production System and the Toyota Way, a coordinator needs communication skills, the ability to sense other people's feelings, and a willingness to work across cultures.

We have taken several steps to cope with the situation. First, we formally documented the Toyota Way. We had communicated its principles orally for decades, but six years ago we decided to write it down so that it could serve as a bible for overseas executives. They also use it as a measurement tool to see where they stand and how they can improve. If we hadn't planned to expand outside Japan so aggressively, we might never have written down the Toyota Way. Second, Toyota retains Japanese employees who are over 60 years old if they wish to continue to work. If they don't want to work overseas, we use them locally, and that frees younger people to serve abroad. Third, we created several new training facilities. In 2002 we set up the Toyota Institute to train executives in the Toyota Way. The institute runs a global leadership school, which develops executives from all over the world for our businesses, and a management development school, which trains our people in the application of the Toyota Way. We also set up a global production center in Japan in 2003, which you visited, and regional centers in Thailand, the United States, and the UK. These centers "train the trainers" in plant management techniques, management roles, and shop-floor skills.

Finally, some of our overseas affiliates, such as Toyota Canada and Toyota Kentucky, have close to 20 years' experience with the Toyota Way. The time has come to send employees from those companies to serve as coordinators, especially to other English-speaking markets. This will be the first time we will be using non-Japanese employees to train other non-Japanese employees. There is a sense of urgency in the company, and we should be able to develop enough people to sustain the pace of our global expansion.

We have been humble; that has been the traditional Toyota character. Now, of course, we constantly remind ourselves, Don't be arrogant.

You described the importance of kaizen, continuous improvement, in speaking about the Toyota Way. But we heard on this visit, for the first time, that you have recently started talking about kakushin—revolutionary change or radical innovation—as well. Is incremental improvement no longer enough in these revolutionary times?

Fifteen years ago I would have said that as long as we had enough people, Toyota could achieve its goals through kaizen. In today's world, however, change can be produced by kaizen, but it may also need to be brought about by kakushin. When the rate of change is too slow, we have no choice but to resort to drastic changes or reform: *kaikaku*. Take the movement of parts in a factory, for example. Moving components doesn't add to their value; on the contrary, it destroys value, because parts may be dropped or scratched. So the movement of components should be limited as much as possible. I want our production engineers to take on the challenge of ensuring that things move as little as possible—close to the theoretical limit of zero—on shop floors. Doing that requires courage—and radical thinking.

Does the new manufacturing facility that Toyota is building at Takaoka incorporate the kind of radical change you think is needed?

The new manufacturing processes at Takaoka will completely change the way Toyota makes cars. We call them the “simple, slim, and speedy” production system. Right now our processes are complicated, so when a problem occurs, it is difficult to identify the cause. We've tried to make the processes at Takaoka simple, keep the facility slim, and have people close by observe the process. Simple and slim systems make it easier for people to notice abnormalities immediately.

When the first line at Takaoka opens, this summer, it will be Toyota's fastest production line, and it will cut lead times, logistics, and assembly time in half. We also hope to reduce the number of problems at each workstation by 50%. We have installed innovations in the stamping shop, the plastic molding shop, and the paint shop. For instance, instead of a transfer bar, we will use robots. That will allow the line to move 1.7 times faster than it used to. We have cut the length of the line by half. A new

painting process allows us to apply three coats at the same time, without having to wait for each coat to dry. This will shorten painting times by 40%. To build in quality, we will go beyond visual inspections and use high-precision instruments to measure several parameters. The testing devices will be located at various stages of the assembly process and will provide data in real time to factory managers and suppliers.

We will have more flexibility than ever before: Each line at Takaoka will be able to produce eight different models, so the plant will produce 16 models on two lines compared with the four or five it used to produce on three lines. In the old plant we used to make 222,000 vehicles a year on each line; now we will be able to make 250,000 units on each line. Toyota needs such radical changes today.

But Toyota is struggling to maintain the basic quality of its products. Is this the right time for you to talk about radical improvements?

It is. People can use revolutionary approaches while making incremental improvements. You can do that. In fact, while trying to come up with incremental improvements, many people come up with revolutionary ideas. The two have different focuses; there's continuous change in kaizen and there's discontinuity in kakushin. I am only trying to get people to make the leap from incremental improvement to radical improvement wherever possible.

In addition to speeding up manufacturing lines, Toyota has launched a cost reduction program called Value Innovation. What is the difference between the program called Construction of Cost Competitiveness for the 21st Century, which you headed before you took over as CEO, and Value Innovation? By how much do you hope to shave costs through VI?

We started the Value Innovation program in April 2005. It goes beyond the item-based approach we used in CCC21. It tries to reduce the cost of the components we use by incorporating several parts into one integrated system and doing away with unnecessary components. Our goal is to shrink the number of components we use by half. When we try to reduce the cost of components, we start with their design and development; we don't focus on price reductions. The process requires collaboration among our supply partners and several Toyota

divisions, such as design, production engineering, and purchasing. We pursue cost reduction efforts based on relationships of trust. The improvements that result from VI will strengthen the competitiveness of both Toyota and its suppliers.

Mr. Watanabe, you have said that your job is to “surface problems” and to “surface a vision of the future.” How do you and Toyota plan to invent your vision of the future, the dream car?

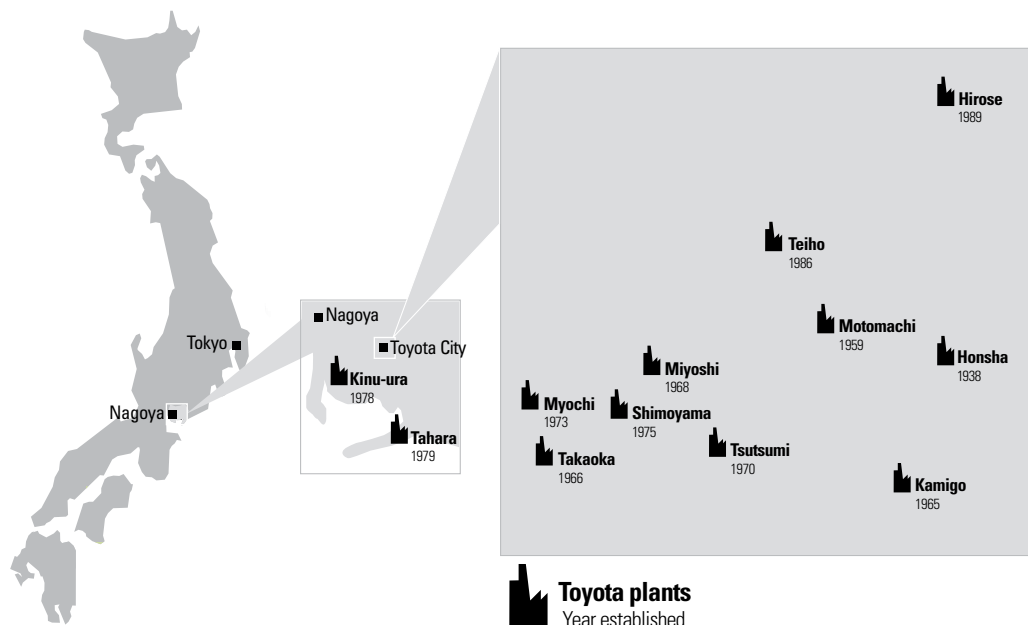
I don't know how many years it's going to take us, but I want Toyota to come up with the dream car—a vehicle that can make the air cleaner than it is, a vehicle that cannot injure people, a vehicle that prevents accidents from happening, a vehicle that can make people healthier the longer they drive it, a vehicle that can excite, entertain, and evoke the emotions of its occupants, a vehicle that can drive around the world on just one tank of gas. That's what I dream about. We would like to develop such vehicles as quickly as possible. In my vision for the future, the most important themes are the

environment, energy, safety, and evoking emotion or comfort. These are four key roads for the company's future, and we must develop technologies for each of them. Our engineers are working right now to develop the technologies we need and to incorporate them into vehicles. If we accelerate our technology development, we can realize the dream car.

As we incorporate the technologies into our vehicles, we need to study each region and match product development with the trends in each market. In Brazil, consumers can use ethanol as fuel because the country produces sugarcane. The United States is most worried about the environment and safety. We need to come up with vehicles there that use intelligent transport system technologies to satisfy consumers' requirements. In China car ownership could reach 380 million units by 2030. What will happen to petroleum prices there? What will the environmental impact be? How do we keep travelers and pedestrians safe? Energy, environment, and safety must be factored in to all the vehicles that Toyota launches in China. We refer to that as developing the

The Advantages of Clustering

Of Toyota's 15 plants in Japan, 12—along with the manufacturing facilities of most of the company's suppliers—are located in and around sleepy Toyota City, in Aichi Prefecture, a 45-minute drive from Nagoya. Senior executives believe that the cluster not only has allowed the company to use its “just-in-time” manufacturing system but also has shaped Toyota's culture. They plan to create similar clusters overseas.



right car at the right time for the right location. We need to select the appropriate fuel, technology, and supply and production system. When we combine those three elements, we will have a three-dimensional matrix. We want to produce the best cars the world has ever seen, and that, I believe, is critically important for Toyota's future.

In your two years as Toyota's president, what have you learned about being a leader?

I don't look at myself as a leader in the sense that you mean it. I have just been telling everyone in the company that we should do properly what we are trained to do. I can check how well people understand the Toyota Way in day-to-day management in any function. I visit different places to find out myself. However, my own capability and availability are limited. We have a large team of managers at Toyota, including the eight executive vice presidents, who enjoy the freedom to practice the Toyota Way in their areas of responsibility. I trust our managers to do that, but whenever there are problems, I want them to come to me with the bad news first. Other than that, my colleagues call on me to talk, to sound me out. We have hours of debate and discussion, and just as my colleagues air their opinions, I make my own views known. That's my management style. That kind of leadership is important today. Of course, we have to make decisions quickly, but we should do so steadily, thoroughly, and with an open mind. As you may have noticed, I am not afraid to do that.

Many Toyota executives talk about the importance of Toyota City in shaping the company and the values of working in a small town. Do you agree? After all, it could be argued that Detroit's provincialism is also a cause of its problems. In the Toyota of tomorrow—a company that operates out of Shanghai, Los Angeles, São Paulo, and Tokyo—how will you manage the values of Toyota's leaders and employees?

I, too, believe that the driving force behind Toyota's growth is that we are headquartered in Toyota City. We concentrate on work here and all of us tend to hold the same values. It's an excellent environment for nurturing people. Our philosophy of making things of the best possible quality has been fermented in Toyota

City, which is somewhat isolated from the rest of the world. We are in the middle of nowhere; there is nothing to do but work! Toyota is the way it is because it has been nurtured in that environment. As long as we can keep that spirit—the almost crazy pursuit of quality—alive, Toyota will remain true to its values. We have been humble; that has been the traditional Toyota character. Now, of course, we constantly remind ourselves, Don't be arrogant. That's why we must train our people all over the world to understand the Toyota Way truly. We also need to gather local employees in each country in locations like Toyota City. That will allow them to soak up our concepts and mindset. That's another priority for me: to localize our operations and to cluster them together. Thankfully, Toyota people are already transplanting these ideas throughout the world. Without those missionaries, global expansion places Toyota at a huge risk.

On the one hand, many people at Toyota make hundreds of little decisions every day to improve things. On the other hand, the company grows steadily and patiently. How do you manage these two time horizons—the quick rhythms of constant improvement and the steady rhythm of stable growth?

I don't believe the two rhythms are different. Once you indicate the direction in which the company should move, and as long as you have that direction right, you can leave other people to do the things that are necessary to get there. When people are heading in the right direction, the small movements and the major ones will stay aligned. In fact, the small changes are linked to the big changes; the people making all those small decisions together make the major movements possible. Why do you think Toyota has been successful so far? We're doing the same thing we always did; we're consistent. There's no genius in our company. We just do whatever we believe is right, trying every day to improve every little bit and piece. But when 70 years of very small improvements accumulate, they become a revolution.

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