# Shaping the Future Step by Step Becoming a Truly Global Company

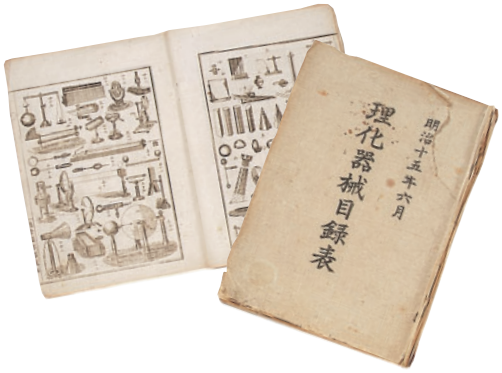
**Backed by inquisitive minds and a venture business spirit, Shimadzu is helping to shape important fields in the 21st century. Holding onto its proud traditions, the company continues to forge ahead in this era of transformation.**

For 130 years now, Shimadzu has created a steady stream of highly innovative products. Today, it is evolving into a truly global corporation as it implements sweeping management reforms to strengthen itself and its activities. What have these 130 years meant to Shimadzu? What course will it take in the future? These are some of the questions we put to Shimadzu President Shigehiko Hattori.

## Driving Industrial Progress

**Interviewer:** *Shimadzu Corporation reached its 130th anniversary this year, since its founding in the early years of Japan's Meiji Era (1868–1912). What kind of company was it back then?*

**Hattori:** Shimadzu started as a manufacturer of scientific instruments. We still have a product catalog from the middle of the Meiji Era, called the "Science Equipment Catalog List" that contains mainly scales, electric power




generators, and instruments for conducting physics and chemistry experiments in elementary and middle schools. Later, Shimadzu produced Japan's first X-ray machine.

**Interviewer:** *It's surprising that the company was able to recognize the importance of science in that day and age, and that it had the foresight to start a business based on technology. Do you still see this kind of pioneering spirit at Shimadzu?*

**Hattori:** Yes, our company has been blessed with a number of pioneers. Of course, Koichi Tanaka, who received the 2002 Nobel Prize in Chemistry, is one of them. Our history shows consistent contributions to science and technology. That's what led to our reputation for technical expertise.

Unfortunately, though, not many of our products are used directly by consumers, so we're not as well known by the general public as we might be. Many of our customers are researchers or doctors, and our role is to support their work. Our analytical instruments let them see material structures that can't be viewed with the naked eye, and our X-ray equipment lets them see inside the human body.

In the same way, we support industries like steel, which used to be a Japanese specialty and, of course, automobiles. Without measuring instruments to determine the quality and strength of their materials, these industries wouldn't be able to manufacture their components. We develop measuring instruments together with our customers to promote development in their industries. We take great pride in this.

## Nobel Prize, Japan's Confidence Builder

**Interviewer:** *Mr. Tanaka's Nobel Prize was the first to be received by a person involved in Japanese industry, and had a substantial impact. What was it like for the company?*

**Hattori:** Oh, it was huge. Just imagine having a colleague who works right next to you receive one of the world's highest honors. People were saying things like, "You mean *our* Tanaka received the Nobel Prize?" It gave an enormous amount of self-confidence to everyone.

**Interviewer:** *I'd say it boosted the confidence of Japanese industry too. After all, it came at a time when Japan, which had been a few steps ahead in the area of technology,*

*was suddenly being overtaken by the U.S. and Europe, and countries like China were rising quickly. It seemed like Japanese corporations were losing confidence.*

**Hattori:** That's one of the things I'm happiest about. Craftsmanship is a steadfast Japanese tradition, but the country's extended recession weakened our ability to support the drive for new technology. I think the Nobel Prize helped us to recognize its importance once again.

## Continuous Innovation

**Interviewer:** *Research & Development outlays are generally said to be about 5% of total sales for most companies. What is it at Shimadzu?*

**Hattori:** It's about 8% on a non-consolidated basis. I think this is higher than most companies. Of course, our basic stance is to produce a diverse range of products in small lots, so our R&D budget has to be about that level. If we simply did the same thing as everyone else, we'd never be a winner on a global scale. We have to keep innovating. For the same reason, we can't afford to reduce our investment in R&D. The breakdown, though, is gradually changing. In the past, about 70% of our researchers were engaged in what we call "seeds-oriented" basic research. This kind of research doesn't lead directly to new products, but may be beneficial some day in the future. Mr. Tanaka's research was also in this area, and it brought forth such wonderful results we'll naturally continue along that path. Still, faced with today's intense competition, we have to think about our ongoing sales as well. As a result, our "needs-oriented" research currently accounts for 60% of the total, and our seeds-oriented research stands at 40%. This balance is something we'll have to keep adjusting long into the future.

Shigehiko Hattori

## Development that Starts with a Catalog

**Interviewer:** *It sounds like it's vital that you combine your technological capabilities to generate sales and profit.*

**Hattori:** In the past, there was a strong tendency to make whatever our engineers wanted to make. The engineers thought they knew exactly what our customers wanted. I was an engineer, so I know how they feel, but that kind of thinking is incorrect. Customers want more than just better performance. They want things like, for example, larger switches that are easier to use and displays that are easier to see. These little enhancements are very important. And only the people who actually use the products know what's necessary.

For this reason, it's essential that we collaborate with our customers. To do this, our first job was to revamp our in-house systems. Now, when we start developing a new product, our salespeople join in right from the beginning because they know what the customer wants. Then we create a catalog that clearly identifies the selling points. This lets us develop products that truly make our customers happy, while requiring less time and money.

**Interviewer:** *That's an interesting approach. Does it work well?*

**Hattori:** It's been a year and a half since we revamped the system, and it's starting to work very well indeed. Eventually, I hope to reach an operating income of 10%. With this in mind, we're basing our next medium-term management plan, which began this in April, on the need to restructure both our production and our sales and service. On top of that, we'll be actively accelerating globalization, concentrating on growth businesses, and continuing to obtain advanced technologies.

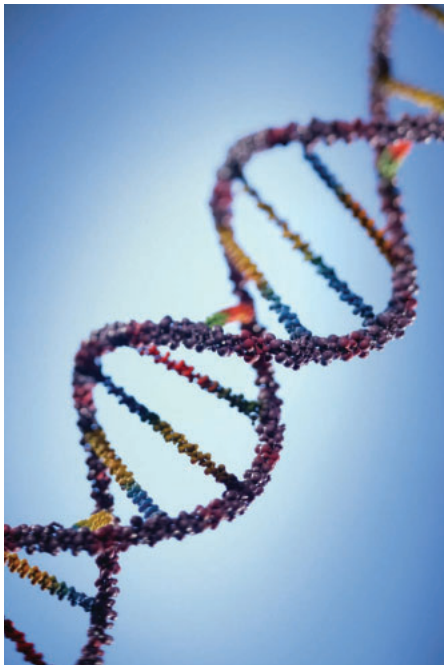
## Revolutionizing Preventive Medicine

**Interviewer:** *When you talk about concentrating on growth businesses, what kind of businesses do you mean?*

**Hattori:** Well, for example, life science. The life science market is undergoing

rapid growth right now, particularly in the area of protein analysis. In the near future, drug discovery, clinical diagnosis, and medical therapies based on protein analysis will all come to the fore. Our mass spectrometry technology is top-notch worldwide and we want to use this as a basis to supply systems that support researchers working on the cutting edge of life science. We may also enter the area of clinical laboratory testing.

Something of prime importance here is a technology called molecular imaging. As we enter the postgenomic era, we're seeing the clarification of numerous biological molecules and genomic sequences. To speed up the early detection of diseases, many people have high expectations for technologies that will allow us to directly monitor the proteins within tissues and cells. This calls for instruments that actually let us see the workings of the body on a molecular level. In other words, we need instruments that can show us which molecules interact, at what exact time and location, and in what way.



Fortunately, Shimadzu is in an excellent position to develop molecular imaging by combining our medical technologies, such as positron emission tomography (PET), our analytical and measuring technologies, such as microscopes and mass spectrometers, and our life science technologies.

**Interviewer:** *And you're also a pioneer in X-ray devices.*

**Hattori:** Yes, that's right. In the medical field, our fully digital X-ray diagnosis system, which uses a direct-conversion type flat panel detector (FPD), has been well received in Japan and is now being introduced to the global market. We're also the only PET manufacturer in Japan. The most important feature of this device is its preventive capability. It can reveal early-stage cancer, before it begins to grow. At that stage, it can often be treated with pharmaceuticals alone.

The importance of preventive medicine is widely recognized today. Our clinical analysis instruments cover a broad spectrum in this area, with genetic, protein, and PET instruments to monitor functional changes, and X-ray devices to monitor morphological changes. By combining these elements together in a system, we'll be able to make major contributions to preventive medicine.

## New Steps Toward a Healthier Planet

**Interviewer:** *I understand you're also active in the environmental field.*

**Hattori:** Yes, that's an area in which we're applying some newly obtained technologies. Our original approach in the environmental field was to market analytical instruments for measuring air and water pollution. Of course, these sales are important, but our current activities are aimed at taking us a step further into the field.

You could say that we were originally monitoring things considered harmful to people and to the planet and then sounding an alarm to halt the damage. Now, we're expanding our efforts to make things cleaner by restoring the environment. One example is soil remediation. Until now, soil that was contaminated with heavy metals could only be taken somewhere and disposed of. There was also machinery for cleansing it, but the process was extremely expensive. To solve this problem, Shimadzu has introduced a method of inserting electrodes into the soil and eliminating heavy metals by the action of ionization.

We're also developing technology that can lead directly to the prevention of global warming by capturing carbon dioxide from the air, separating the carbon from the oxygen, and then solidifying the carbon. The business scale is not very large in the environmental field, but these activities fulfill our management principle, "Realizing Our Wishes for the Well-being of Mankind and the

Earth." For this reason, we will continue to work aggressively in this area as we move forward.

## Globalization = Localization

**Interviewer:** *What would you say is your global strategy?*

**Hattori:** Right now we're putting our main efforts into the U.S. and the rest of North America, Europe, China, and Southeast Asia. The Chinese market, of course, is huge and continues to grow. We're aggressively expanding our business in analytical and measuring instruments, medical instruments, and semiconductor production instruments. The U.S. influence, however is also very large. Many companies around the world want to use the same measuring instruments that are being used in U.S. labs. This makes it very important for us to be successful in the U.S. market.

Our international and domestic sales ratio is currently 3:7, with 3 being international, however, we want to raise this to 5:5 within ten years. The Japanese market is a large one, representing 1/7 of the world market, but this also shows that we still have plenty of room to grow.

Of course, this won't be easy. We can't do it by simply carrying on with business as usual. That's why one of the main points in our next medium-term plan is to work toward becoming a top brand worldwide.

**Interviewer:** *What specific strategies do you have in mind?*

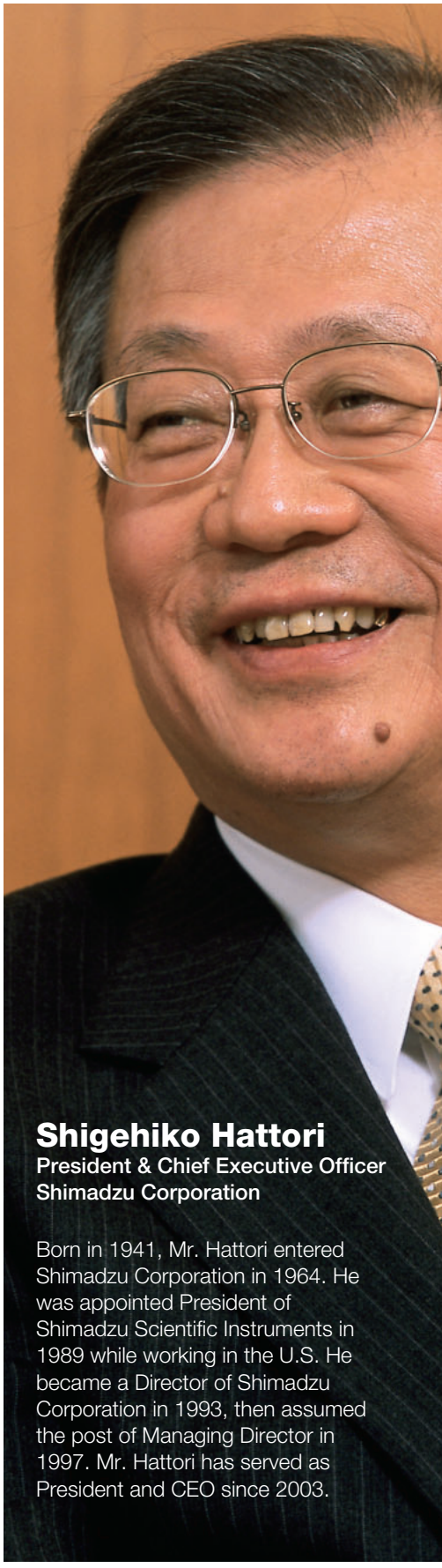
**Hattori:** I think globalization is largely localization. By that I mean, making things locally. Until now, the business model for most Japanese corporations has been to develop and manufacture products in Japan, and then export them to other countries. This might have been acceptable up to now, but things have changed. Today you have to closely match your development, production, sales promotion, and support systems to each country. This is the only way you can offer products that are well received all over the world.

Employee training is the most important point in this process. With this in mind, we're encouraging our young employees to gain experience by working overseas. Of course, we also can't depend on Japanese employees alone. It's vital that our future sales, planning, and eventually development be done by the people of each country.

So, at the same time, we're actively transplanting the Japanese tradition of craftsmanship to our overseas centers. The old idea that you can always profit by simply holding on to core technologies is unraveling. We need to move quickly to build systems that will lead us to coexistence and mutual prosperity.

## Shimadzu Corporation - Steeped in Tradition

**Hattori:** In our 130 year history, we have never once changed our company name. We might appear to be old-fashioned in some respects, but we have been blessed with a tradition of a venture business spirit. Our founder, Genzo Shimadzu, originally launched the business during the stormy period of Japan's Meiji Restoration. After that second-generation Genzo Shimadzu created a host of inventions and split the company into functional units during the 1910's. As you can see, our ancestors had a fierce enthusiasm for their work. Today, we're doing everything we can to reignite this tradition in our employees. My greatest hope is that we'll find a number of present-day Genzo Shimadzus among us.



**Shigehiko Hattori**
**President & Chief Executive Officer**
**Shimadzu Corporation**

Born in 1941, Mr. Hattori entered Shimadzu Corporation in 1964. He was appointed President of Shimadzu Scientific Instruments in 1989 while working in the U.S. He became a Director of Shimadzu Corporation in 1993, then assumed the post of Managing Director in 1997. Mr. Hattori has served as President and CEO since 2003.