

Interview with Taito Suzuki, President of Taica Corporation

# A Unique Company Developing Technologies Inspired by Daily Life

By Japan SPOTLIGHT

Small and medium-sized enterprises (SMEs) play a key role in the Japanese economy in terms of their percentage of the national GDP and total employment. However, their true significance lies not in these figures, but in their unique contributions to large corporations and consumers. Without SMEs' unique products and irreplaceable technologies, large corporations would not be able to do business, and consumers' standard of living could not be maintained. Taica Corporation is one such innovative Japanese SME. Based in Tokyo, Taica has contributed extensively to global industry and consumer welfare with its unique technologies. These technologies are used in a wide range of products, from sports shoes and stationery, to smartphone cameras, automobiles, and even caregiving products. Why are Taica's technologies so widely adopted? How were these unique technologies invented? We interviewed Taito Suzuki, president of Taica Corporation, to find out.

(Interviewed on Oct. 3, 2018)

## Introduction

**JS:** Could you please tell me about your company's history and products, as well as your personal background?

**Suzuki:** Taica was founded by my grandfather in 1948. The main product then was a machine that peeled mandarin oranges for canning. He was a military man, having graduated from a military academy, and I guess he wanted to help rebuild Japan after World War II. He may have thought that starting a manufacturing business was the best way to contribute to economic redevelopment. His initial goal when founding the company was to identify consumers' needs, create a product to meet those needs, and then put that product on the market. That machine was a good example of this process. This simple goal has been passed down in our company through the generations. Today we manufacture and sell mainly three products derived from our original technologies: Alpha GEL, an incredibly shock-absorbent material, which can catch an egg dropped from a height of six stories without breaking it (*Photo 1*); CUBIC PRINTING, a technology which uses water pressure to transfer colorful patterns onto substrates using special, water-soluble film; and finally Alpha PLA, a series of caregiving products.

We are a research and development company first and foremost, not a manufacturing company producing a single product. We aim at developing new products to make our lives more convenient. This is why our customers are so diverse.

I joined Mitsubishi Corporation after graduating from university.



Taito Suzuki

Mitsubishi is a large trading company which deals in a variety of goods, ranging from plant facilities and industrial products to consumer goods. This is similar to Taica Corporation. After working for Mitsubishi and then Rakuten Corporation, I joined Taica in 2006. As president of Taica, I would like to participate in a variety of projects — not just limiting myself to manufacturing — which contribute to the global economy, just like my grandfather.

**JS:** Taica licenses its technologies internationally as well. What motivated this choice?

**Suzuki:** CUBIC PRINTING is used extensively in automotive interior decoration. Back in the early days, one of our Japanese automotive customers was building a factory overseas. At the time, we considered building a factory of our own next to their facility, but considering the size of our company at the time, we decided to license our technology to local companies instead. Rather than going it alone, we chose licensing as a way to spread CUBIC PRINTING around the world. Recently, however, we are increasingly interested in international production. We are currently considering building up our overseas production bases and/or strengthening ties with our international licensing partners.

## Technologies Discovered by Accident

**JS:** Could you explain how your two core technologies were born at crucial moments in your company's history?



*A 2-cm-thick sheet of Alpha GEL can catch an egg dropped from a height of six stories (18 meters) without breaking it.*

*Note: The image of falling eggs is a trademark of Taica Corporation, registered in Japan and other countries.*

**Suzuki:** Our two core technologies, Alpha GEL and CUBIC PRINTING, were both developed by our chief engineer, Motoyasu Nakanishi, who unfortunately passed away four years ago. He always told us to examine everything in daily life as carefully as possible, stressing the importance of thinking about what inconveniences us and how to overcome it. These two technologies were born out of his careful observations of daily life.

In the early 1980s, Mr. Nakanishi was researching shock absorbent materials, including polyurethane, gases, and oils. One day he caught a cold and accidentally discovered that melted gel ice packs are extremely soft. After this, using trial and error, he eventually succeeded in developing a completely new gel material, which became Alpha GEL.

As Mr. Nakanishi told it, the idea for CUBIC PRINTING came to him when he mistakenly dropped an *oburāto* (a water soluble, starch-based film used to swallow powdered medicine) into a cup of water. When he tried to fish it out, the film stuck to his fingers, giving him the idea to use water pressure to transfer patterns onto objects. This idea led to the invention of CUBIC PRINTING.

**JS: I think you need a very inquisitive mind to find clues to innovation in everyday life.**

**Suzuki:** I imagine Mr. Nakanishi maintained his curiosity every day, constantly imagining situations where new technologies might be useful. When he encountered those situations in real life, he would work to make his imagined technologies a reality. He loved reading books and always told us to read as much as possible. He believed reading books improves the imagination.

**JS: When were these technologies invented?**

**Suzuki:** CUBIC PRINTING was developed in 1974, and Alpha GEL was invented in 1984. But since the invention of these technologies, we have not had great success developing the next big thing. While we believe that it is crucial to develop new technologies, we have also strengthened efforts to discover new applications for our original

lineup. We are now looking for new consumers as part of our business development strategy.

### Applications & Markets

**JS: I hear that Alpha GEL is used in sports shoes and stationery. Could you tell us what other consumer goods it is found in?**

**Suzuki:** Certainly. A good example is smartphone cameras. Alpha GEL is not only an excellent shock absorber, but it also has remarkable thermal conduction functionality, playing a key role in heat management in electronics. It is also effective in vibration damping, which prevents the camera from shaking. In this way, Alpha GEL is truly a multifunctional material, compared to most other materials, which only have a single function. Alpha GEL can be enabled with shock absorbing, thermal conduction, vibration damping, and electromagnetic radiation absorption functionalities, among others.

**JS: There are truly many uses for Taica products. Which countries are key markets for your company?**

**Suzuki:** The US semiconductor industry is a crucial market for us, as well as the US and Chinese automotive industries. As these two industries are the most important for us, we are currently placing the most effort in promoting our products in these US markets.

**JS: Considering how essential the US and Chinese markets are for Taica, would a trade war between these countries present problems for your company?**

**Suzuki:** Yes, certainly. Trade disputes always cost the parties involved. But the question now is: how can we survive this situation? All companies face the same reality. As is often pointed out, if protectionist trade policies become mainstream and the world economy is divided into economic blocks, the most critical strategy for a business's survival will be to produce and consume goods in each country. I believe that we should anticipate this possible future by planning local production bases for the domestic market in each country, rather than just assuming there will always be a global market. In any event, we must minimize the damage caused by the current trade dispute between these countries.

**JS: How are you pursuing this strategy of local production for local consumption? In which countries are you currently building production facilities?**

**Suzuki:** We have different strategies for Alpha GEL and CUBIC PRINTING. We have Alpha GEL production bases in Japan, China, and Cambodia, while we have CUBIC PRINTING facilities in Japan, the US, China, and Mexico, in addition to sales offices in Shanghai, Detroit, and California.

**JS: What is your company's ratio of domestic to international sales?**

**Suzuki:** I believe it is six to four. In our regional sales strategies, we do not promote production and sales in a country where we have no contacts. In countries where we have set up either production facilities or sales offices to support a customer's international operations, we are now planning to expand our business so that all of our products can be completely consumed in the host country. Previously, we only produced the amount of products demanded by specific customers in those countries.

**JS: What are the main applications for CUBIC PRINTING?**

**Suzuki:** CUBIC PRINTING is mostly used in the decoration of plastic interior parts in automobiles. Recorders with a wood grain finish, which you may have used in elementary school, are another example, but the overwhelming majority of our CUBIC products are used in automotive interiors. We do business with most Japanese automotive manufacturers as well as some major international original equipment manufacturers (OEMs). We have not had much success with European OEMs, as they prefer real materials. However, the main European auto manufacturers are beginning to realize that real materials can be bad for the environment, so we are finding more and more business opportunities with luxury OEMs there. We have received positive feedback that our CUBIC PRINTING products are now very similar in quality to real materials (*Photo 2*).

**JS: Could you speak about your Wellness Division?**

**Suzuki:** Yes. The Wellness Division began with our original anti-bedsore mattress featuring Alpha GEL and now produces and sells Alpha PLA, our line of original caregiving products. The Alpha PLA series is aimed at individual consumers who are introduced by healthcare workers such as care workers and nurses (*Photo 3*). This is similar to a B2C operation rather than B2B, which is our standard business model. Recently we have developed Wellness products which do not use Alpha GEL, and we have been successful in diversifying our lineup.

**JS: Do caregiving products have strong growth potential, especially considering the rapid aging of**

**Japanese society?**

**Suzuki:** Yes, they do. However, most of these products are paid for by long-term care insurance. Any institutional change in the long-term care insurance system could affect our sales. We expect that many customers will use and be satisfied with our products, but this is only possible with the help of insurance, as these carefully manufactured products can be expensive. In the future, if the scope of long-term care insurance is narrowed, the number of users could decline despite increasing demand. Would we be content with a situation where only the wealthy can benefit from our products? I think this is a difficult business in which to achieve long-term stability.

**JS: I think there must be demand for your products from other consumers, not just elderly people.**

**Suzuki:** Yes. We recently developed and began selling a mattress featuring Alpha GEL aimed at general consumers in China. It is more expensive than an ordinary mattress and thus is targeted at wealthy users. We thought it would be better to launch this product in China, as it has a much larger population and more wealthy people per capita than Japan.

Our company has the top share in the static anti-bedsore mattress market in Japan. We believe our achievements in Japanese medical facilities and high reputation will appeal to Chinese consumers. If this new mattress proves a success in China, we will sell it in Japan as well.

**Developing Innovative Human Resources**

**JS: Your company began as a startup company. I have the impression that startups have not developed very well in Japan. Why do you think this is the case?**

**Suzuki:** I think one of the reasons for this could be that everyone here seems to be reluctant to follow their dreams. They easily give up on their goals in the fear that working toward them might end in failure. I think this mentality may be influenced by the Japanese media, which tend to criticize everything people do. Young Japanese people may believe that doing something new will lead to being attacked by the

Photo 2: Taica Corporation



CUBIC PRINTING is used to decorate a variety of materials in many industries, from automotive and consumer electronics to home interior and beyond.

Photo 3: Taica Corporation



Taica's Wellness Division develops, manufactures, and sells total bedsore prevention solutions, including anti-bedsore mattresses, wheelchair cushions, and bed positioning aids.

critical masses. Trying something new, such as founding a startup company, could result in failure or business behavior considered inappropriate by society. In Japan today, we cannot expect large business opportunities, and we all feel frustrated by the stagnant economy and the bleak future of an aging society. Anyone who tries to earn more money than the average person gets bashed, especially by the media. I think this hampers young people's desire to pursue their dreams.

Another reason for this situation could be a disinterest in contributing to the common good. While working in developing countries during my time at Mitsubishi, I saw many impoverished children struggling for survival. This instilled in me a special gratitude for having been born in a wealthy nation like Japan. I am now convinced that the Japanese must maximize our efforts to contribute to the common good as a way of paying the world back for our good fortune. Unfortunately, most young people in Japan today tend to forget how lucky they are to live in such a developed country. They do not think it is necessary to repay society for their happiness by engaging in social entrepreneurship. This lack of altruism could be another reason for the low level of entrepreneurship in Japan.

**JS: I imagine that research and development must be very important to your company. What kind of talent do you think is needed to support your R&D activities?**

**Suzuki:** We need people who can think for themselves. It is hard to invent something by starting out with the goal of invention. You have to think by yourself every day about daily inconveniences and how to solve them. You cannot depend on other people's opinions. You need to observe what is happening and think about why it is so. Otherwise, even if you studied science at a top university, you will not be able to fully utilize your knowledge. You need to keep stock of your observations and discuss them with your team of colleagues. Good ideas for resolving daily inconveniences can be worked out in brainstorming discussions among team members. We cannot expect high-quality discussions unless each member is aware of the importance of observing and thinking about real life. In conclusion, you have to be observant, collect information in daily life, and voice your opinion after thinking about your observations.

**JS: I believe that the capacity for creative thinking varies from person to person, but have you tried to raise such awareness through employee education?**

**Suzuki:** My own process of educating our young researchers is to take them on a trip. We can go anywhere, even if it has little to do with their research topics. During international trips, we spend all of our time together, and I talk with them about many issues during meals and other occasions. We often go to developing countries, where we talk about the people and way of life there, how they feel about their economic and social situations, and what we could do to improve them.

Another approach is to send sales and R&D personnel to trade shows, organizing them in groups that combine people from both departments. Sales and R&D each have their own perspectives on the

show, so by walking around and talking together they can think through new business opportunities on their own. I think management must create an environment in which each employee can think through issues.

## Future Business Plans

**JS: Could you tell us about your future business plans?**

**Suzuki:** I think there are new applications for Alpha GEL which we have not thought of yet. Our plan is to devote half of our resources to developing new markets and the other half to expanding existing ones. We will find ourselves left behind unless we respond to new market needs as astutely as possible. We were not aware of esports or bouldering 10 years ago. However, now we are developing a smartphone case exclusively for esports and mats for bouldering gyms. We want to enhance our revenue by entering new markets as well as maintaining current ones.

Regarding CUBIC PRINTING, we are currently planning to increase the number of our non-Japanese employees. Their knowledge and views will be invaluable as we work to expand our business with international automotive manufacturers.

As for our Wellness Division, we are now working on developing products for natural disaster relief in addition to caregiving. Based on stories of elderly people who suffered from neck pain caused by heavy helmets after the Great East Japan Earthquake in 2011, we developed DERUCAP, a light cap made from PE foam, which has exceptional storability and is five times as strong as disaster prevention hoods (*Photo 4*). In the near future, we will propose placing DERUCAPs under the seats at the new Olympic Stadium as a disaster preparedness measure. We are also developing products to protect the elderly and children during natural disasters. This includes sets of life jackets and helmets to be attached to school chairs and a folding mattress that doubles as a stretcher. **JS**

Photo 4: Taica Corporation



*DERUCAP is a light hat made of PE foam, which is easy to put on and can protect people of all ages in the event of a natural disaster.*

Written with the cooperation of freelance writer Naoko Sakai.