

# **Biomass Resin by Kazuhito Kamiya**

## **Entrepreneur mindset for continuous startup**

This case is based on the interview with Mr. Kazuhito Kamiya, the CEO of Biomass Resin Holdings Co., Ltd. (Biomass Resin) and will describe how entrepreneurship should be for reference of future business people who intend to manage their own business.

Biomass Resin Minamiuonuma Co., Ltd., (Biomass Resin Minamiuonuma) the research and development company working on plastic material based on biomass, is a company located in Minamiuonuma City of Niigata Prefecture. Biomass is a word made of biological resources and mass and indicates "materials made from renewable organic resources derived from living organisms, excluding fossil resources such as petroleum".

It is a material that is in the limelight because it is carbon neutral and renewable. This type of material differ from material that rely on oil and other fossil resources and generate CO<sub>2</sub> when burned because they can offset the CO<sub>2</sub> in the process of growing (photosynthesis) and achieve carbon neutrality.

Material of biological origin are organic substances produced through photosynthesis from solar energy, water, and carbon dioxide. Therefore, as long as these organisms continue to live using the power of the sun, they are treated as renewable resources. The material is quite valuable to improve environment and secure sustainability.

### **Beginning of biomass business**

Biomass Resin Minamiuonuma is a company that Kazuhito Kamiya, current President and CEO of Biomass Resin, established in 2017. Biomass Resin Minamiuonuma is engaged in production, sales and research and development of plastic resin material that use rice and other biomass resources. Kazuhito Kamiya is leading this company since its establishment.

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Kamiya worked as a consultant of commercial facilities development and for trading company of food material and, also managed several businesses and established Biomass Technology Co., Ltd., the predecessor company of Biomass Resin in 2007.

Back in 2002, Kamiya was working for a seafood company exploring the sale of DHA and EPA from oil extracted from heads and tails of fishes that were discarded and use them for supplements. He visited Cargill, one of the U.S. grain majors and was surprised to learn that the company was producing plastics from corn, even though it is a grain. Cargill said that it is only natural to use corn (as material), the most popular agricultural products in the U.S. It made Kamiya think that maybe he can produce something from rice, the most abundant produce in Japan. He thought of using rice as material to produce plastic because he was starting to get interested in agriculture. He saw many abandoned farmlands and thought that there must be some ways to utilize the lands.

He visited Aichi Expo in 2005 and saw biodegradable plastic that returned to the soil. It reminded him of his visit in Cargill and then learned that technically, rice can also be the material for plastic, and decided to establish a company.

Kamiya initially thought that his product, the cutting-edge material, would sell well. It did not. He learned that the product did not sell because there was no market for such a new product. He was confident about the technology to produce plastic from rice and devoted his energy on technical side and did not think much about the market feature to sell the product. Kamiya recalled that this kind of great difficulty that had to be overcome to establish profitable cycle popped up every three years or so, based on his past experiences of setting up many new companies other than Biomass Resin.

When establishing a company, one may be able to refine certain technology and yet not able to succeed. In the case of Rice-Resin, rice based biomass plastic, the government gave it a recommendation but provided no specific help to succeed. Kamiya approached companies interested in new material such as Sony, but could not bring the technology to commercialization. This sort of situation right after company establishment was like starting a car with low gear or the first booster of a rocket. It required exceptional amount of energy and one had to be prepared for that challenge.

After the many conflicts that he encountered, Kamiya changed his approach and started to get advice from other people around him even when working on something technical

that he had enough knowledge about. He tried not to insist on his own technical approach but to be open to ideas from outside people to balance technical priorities and expectations of the society and general public. This change of his mind enabled him to overcome various difficulties and started to succeed as an entrepreneur. This experience made Kamiya think twice about how to take risk when you are an entrepreneur.

### **Starting a business in Japan**

Plastic material companies provide their products to industrial users and adding a new material was extremely difficult because they have to maintain established quality, cost, supply, etc.

Japanese manufacturing companies expect suppliers to provide material that exceed the designated standard and not material that just meet the standard. Non-Japanese manufacturers at least consider purchasing products that meet their standard 80% but Japanese manufacturers demand products that meet their standard 120%. This tendency to require something not designated or something above what is designated is observed not just in Japanese manufacturers but also in Japanese society in general. This tendency might exist so that the buyers can acquit themselves in case there is any problem with the products. In Europe and the U.S., contract is everything in business. In Japan, they implicitly seek something more. As Shichihei Yamamoto wrote in his book “Study of Air”, the buyers tend to expect sellers to agree with hidden messages and without deciding specifics in business in Japan.

When Kamiya started a business of rice based plastic material, he could commercialize it but could not sell it in large amount. He thought it was because the material could not fulfill above Japanese manufacturers’ expectation of 120% quality, price and supply. He thought that there are less new manufacturing companies in Japan because of this unique business customs.

Kamiya thought that to operate a business with core competency in research and development and survive in material industry, he needed both the capability to create innovation in the industry and cooperation with other companies’ research laboratories that support such innovation. In other words, he thought that he should not just compare his products with the same type of products. He thought he should take the approach to come up with products that have absolutely superior value and quality. Biomass material

was competing with petroleum-based material and had to secure the quality standard required as industrial product but the technical data to achieve this objective was insufficient.

### **Business Roadmap**

In managing business, Kamiya thought about not competing with other biomass material but to live together with them. He did not deny the value of other material and tried to coexist with them by adding new perspective to the concept of material. The market size of plastic material is a huge one and it was impossible for him to change the entire market. He realized the limit of what he could do by himself and the importance to direct different types of material to the most suitable markets. He tried to focus on the unique strength of certain material and further increase the superiority of the product by tailoring the product to a specific market even when the market is a small one. He did not focus on the existing demand of the market but wanted to create a new trend of material and had that trend spread across the industry.

Kamiya's company was not engaged in defining the roadmap of future direction in the industry but tried to create business around the direction that the government roadmap indicated because they were well aware of what they can do and what role they are expected to play.

In Japan, unwritten demand for excessive quality to free the buyers from potential liability is built in the product standard. This practice in the material industry of demanding something beyond what was defined in the standard was seen as a big obstacle to those who engage in manufacturing. Therefore, Kamiya thought that he should not start his business in the middle of a typical Japanese environment. He tried to see the situation in Japan from outside and saw how he can do best for business in Japan.

In 2015, Kamiya was interested in Asia and its market, but also wondering which area is the best place to start a business. He wondered where is the best place to appeal the goodness of Japanese industry for Asian point of view. One possibility was to set up an R&D center in Kyoto and manufacturing base in Minamiuonuma. This location did not mean total denial of Japanese situation but a place that can break down rigid old practices of Japanese business. Minamiuonuma, famous for the great rice, was the best place to

project the good image of Japan onto the product. He still considered Bangkok as the location for future office but chose Minamiuonuma as a place to remind everyone how good Japan looked from outside of the country.

Newest trends are recognized much faster abroad and Kamiya's current product that address sustainability will also be more visible abroad. However, by generating the news of such trends from Japan, Japan's strength such as installation and operation of incinerators and recycling of waste could be promoted to outside world. Kamiya also thought he might be able to suggest new possibilities in Japan where people were doing business based on its own rules that were so much different from global practices.

Around 2015, Asian companies were more aware of the demand and trend in the market of Europe and the U.S. Japanese companies were more concerned about their own value set and methodology when discussing environmental issues. They were so much out of touch with the rest of the world.

For example, the required specifications and quality of shopping bags in Asian countries will be decided by how the bags are used and requirements such as easiness to print letters on the bags are of secondary importance. In Japan, they tend to include ease of printing and other issues of lower priority that are less important than requirement as eco-friendliness. They waste time on discussions for the sake of discussions. Kamiya realized that decisions come fast in Asian countries unlike in Japan.

Kamiya thought such difference resulted in slower economic growth of Japan as compared to Asian countries. Another factor was that Japanese businesses were trying to avoid risk, so their manufacturing capability was respected but they were not perceived as promising business partners. Kamiya observed this kind of situation since 2005 and felt that Japanese companies lost confidence.

Kamiya wanted to break through this pessimistic business environment in Japan and started to feel like doing a business utilizing the excellence of Japan and so that more growing companies would emerge from Japanese business environment.

Kamiya aimed to realize manufacturing that utilize Japanese strength and is fast enough to fulfil foreign buyer's expectation, not manufacturing that try to fulfil 120% of the required quality. In 2020s, businesses in Japan started not to demand 120% of quality

standard but accept 100% of standard. The change was caused by the general understanding that purchasing process also has to consider both sustainability and the high level of required standard for material and products started to change in laws and industry.

Kamiya felt that people started to take sustainable development goals (SDG) more seriously. However, non-Japanese companies were still taking up new business challenges by first accepting 80% of necessary standard to speed things up and Japanese companies were changing but still slower than companies outside Japan.

Kamiya observed these latest trends and felt that his company's effort in manufacturing will improve the standard of quality while the buyers in Japan will also lower the standard of quality because they have to buy more material that are eco-friendly and that there will be more business opportunity. New material started to be used by companies, but the cost of other material for his companies' products such as food and oil was increasing sharply, too. There were many new materials with acceptable quality but now the cost was blocking the sales.

### **Direction of biomass business in Japan**

In Japan, only Hokkaido region has the agricultural production capability to achieve self-sufficiency of food. Kamiya thought that Japan should be prepared for a case in which import of food and oil into Japan stops. He felt that we should utilize local products more and protect the jobs of local regions and people to guarantee national security.

Kamiya started to feel that the structure of society may be changing in a long cycle of 30 years or 90 years. He felt he should not do business based on short-term experience to predict the future but had to look back the past on long-term or historical time-frame and grasp current situation in an objective way.

Kamiya thought that noticing a turning point based on such a historical perspective was critical when starting a new business. He thought biomass plastic could trigger such a change. The product was supposed to evolve over 5 to 10 years. Eventually, it would not be enough if the plastic is disassembled into particles. The goal is for microorganisms to decompose the material plastic down to the molecular level and finally turn them into carbon dioxide and water.

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Kamiya knew that polylactic acid he saw 30 years ago would make it possible. (<https://highchem.co.jp/biodegradable/pla/>) He saw that as the eventual goal of the new plastic.

At this time, biomass resin's product used oil and rice and needed further research and development to achieve biodegradation. In the fall of 2022, rice based biodegradable resin Neoryza was completed and Sanyo Chemical Industries, a user of Biomass Resin products, announced that it developed fertilizer cover that use Neoryza.

Kamiya wanted to engage in production of rice itself, which is the material of plastics. It meant entering the upstream segment of manufacturing, which is material. He was not pursuing better taste through such means as regenerative double cropping and direct seeding cultivation by drone but improve the production efficiency to increase the value of rice as biomass material.

To produce 100,000 tons of material in 2025, 50,000 tons of rice is necessary. When rice is produced, rice bran and rice husk are also generated, which can be used to regenerate energy. As the material business to use rice, he will focus on upstream activity of rice production but wants to use rice husk, etc. as a source of green energy in the future.

Kamiya thought that he could also engage in the education of people who use rice based material, which could lead to human resource development and regional cooperation. He could team up with companies such as Hakuhodo (one of big advertisement agency in Japan) or Ministry of Education, Culture, Sports, Science and Technology to teach them to try new ways of using material and why certain product can be accepted even if it can satisfy only 80% of the product standard.

Kamiya wanted product users and consumers to be able to make sound judgement and learn right criteria in buying goods. Not just the price, design, and application but to think why he/she chose a particular product.

He thought that changing the value set of people in the downstream of manufacturing is critical for the growth of Japan industries. Otherwise, buyer companies will keep on demanding product quality that is 120% of the standard and consumers will also demand more and more features. Kamiya felt that changing the value set of end users should lead

to the mind set change of industry.

Without change of buyers' value set, buyers will continue to demand all past standards, companies will not want to take any responsibility related to quality of new revolutionary product. People engaged in manufacturing will only spend energy on achieving 120% quality and the end result could be the demonization of plastics.

Kamiya felt that he should keep his desire to change people's mind set on consumption and the long-term perspective of being in a turning point in history. Otherwise, his point of view in business can easily lose his perspective of the business and he would be caught in just solving everyday problems. He felt that he should encourage himself to spend more time on long-term vision as the CEO.

Kamiya already experienced some failures by this time. He knew that having a long-term vision is not enough and he should use the experience of past failures to identify the problem he might have as a businessman. He thought that both chicken (the system to create new service or product) and egg (the new service or product to be created) are important in producing goods and doing business.

Current Biomass Resin is starting to have all aspects of business, human resources, goods and money, in a balanced way. Kamiya thought that now he must put the company on track to grow further and create new business and his role as a founder could be over in a few years. He felt that he had come to phase 1 as an entrepreneur.

It was not like passing what he achieved to another person but try not to take up more than what is expected in each stage of business.

Kamiya thought that his role was to create a new business or one from scratch. Next generation should make that 1 into 100 and to adjust the business to enable that growth and then pass the business to another successor.

To achieve this objective, Kamiya looked beyond his company, categorized the partner companies to optimize the allocation of tasks to each businesses and people. In implementing business, he visualized the entire picture as well as what each pieces should do. He mapped the roles and activities of all organizations and persons to define the partner relationship.

He first visualized the goal of business, then created the map of business units, thought when, where and which company to partner with, to visualize the entire business. This map was revised every three months to always look toward the future.

When he looked at the situation of businesses in Japan, Kamiya was worried about its future. He wondered whether he should continue business in Japan or move it to Bangkok to continue.

### **Maintaining entrepreneurship and future of business**

In the current business roadmap of Kamiya, the company's name was to be changed from Biomass Resin Holdings to new one in two years by 2024. He thought even if he show his business roadmap and detailed map of partner companies to stakeholders, they could not understand the whole picture nor what Kamiya wants to achieve and always used a company name that best represent the business at that time. Biomass Resin's name was used for current business related to plant-based plastics that use Japanese rice.

Kamiya was planning to handle multiple brands such as rice resin in the future and the name of the company that include them could not be Biomass Resin. Kamiya was wondering how to express the entire businesses that he would engage and what would be the best definition of the domain. While thinking about the future direction of the company, he was also thinking about businesses that contribute to the society outside of plastics. He created the roadmap to define what should be the future businesses and examined how to operate Biomass Resin's entire business in the next three years and how to communicate the vision.

The challenge of local economy was more than the issues in plastics. For example, a company that rely on green energy started to provide electricity locally in Namie City of Fukushima Prefecture. In Minamiuonuma, where snow and hot spring are abundant, power generation that use such sources could be explored. Those social issues all have their own meaning and they could be connected to make sense.

Rice resin was a material that could connect some of those issues to local communities. It was needed to structure one business around plastic as an alternative and show the entire picture in a comprehensive way.

Regarding the production of rice, smart agriculture (agriculture that employs robots, AI, etc. to transform individual based production into high-efficiency production) was ripe for introduction. He was examining which direction to go as a company of rice and technology. He was envisioning that 30% to 40% of the business could be related to rice but wanted to leave some parts ready to take up new growth business field.

## **Appendix**

### **Biomass Resin Holdings**

Mission (Mission to fulfil): To improve the agriculture of Asia and global environment

Vision (Future to realize to fulfil mission): To realize circular economy in agriculture with plastic and CO2 reduction through popularization of biomass resin.

Value (The company's strength and common value of employees): Inclusion (People with different experiences and abilities recognizing each other's individuality and working together.)

### **Businesses**

Biomass based production, sales and R&D of plastic raw material

Network support: Sales & marketing, marketing research, public relations and advertising, HRD

Production of biomass plastic raw material: Production of biomass plastic (biomass resin based on rice, wood, etc.) with latest technology

Sale of biomass plastic raw material: Supply and sale of biomass resin, low-cost biomass plastic

Sale of biomass plastic products: Sale of products utilizing biomass resin

Contract research of organic resource resin: R&D of biomass material, evaluation and analysis of chemical industrial products, development of composite material, management of intellectual property

## **History**

- May 2007 Establishment of Biomass Technology Co., Ltd.  
Development of applications in biomass plastic market
- July 2010 "Rice toy series" announced by People Co., Ltd.  
Based on recent increase of tourists from abroad and increased awareness against oil based plastic, demand for rice based plastic increased dramatically. Establishment of in-house R&D lab and production facility required.
- November 2017 Establishment of Biomass Resin Minamiounuma Co., Ltd.  
Received the production and technology information and marketing and brand rights from Biomass Technology. Headquarters in Minamiuonuma, the heartland of rice production, to produce biomass plastic based on 100% domestic rice.
- March 2018 Start of production
- September 2018 Acquired certification of Biomass Mark from Japan Organics Recycling Association  
  
Rice resin® (70% biomass)  
  
Wood resin® (50% biomass)
- July 2019 Acquired certification of Biomass Mark from Japan Organics Recycling Association  
  
Rice film 10 (10% biomass)  
  
Rice film 30 (30% biomass)
- October 2019 Establishment of Biomass Resin Engineering Co., Ltd.  
Joint venture between Biomass Resin Minamiounuma and NNC Holdings Inc. to perform designing, sales, set-up, maintenance of production facility of domestic biomass plastic resin.
- November 2019 Establishment of Biomass Resin Engineering Co., Ltd.  
Joint venture between Biomass Resin Minamiounuma and Sky Material Holdings Co., Ltd for inflation process of domestic biomass plastic resin.
- January 2020 Establishment of Biomass Resin Marketing Co., Ltd. to perform

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	marketing activities of all Biomass Resin group companies.
January 2020	Establishment of Biomass Resin Kumamoto Co., Ltd.
March 2020	Establishment of Biomass Resin Holdings Co., Ltd.
September 2020	Establishment of Smart Agri Relations Co., Ltd. Use abandoned farm lands to produce rice for rice resin to be use t develop new markets.
July 2021	Establishment of Biomass Resin Fukushima Co., Ltd.
July 2021	Establishment of Biomass Resin Kansai Co., Ltd.
March 2022	Production start of Biomass Resin Kumamoto Co., Ltd.

### **Message from the President**

Plastic innovation for tomorrow.

We started business before the establishment of Biomass Resin Holdings Co., Ltd. in 2005, when biomass related businesses were just starting in Japan.

Since then and until today, we went through many ups and downs, never quite giving things up, believing in the infinite possibilities of this business of business as well as responsibility to improve global environment and kept on delivering technology innovation.

Today, we are contributing to the solution of social issues as marine pollution, global warming and food loss through the production and sales of eco-friendly plastics such as biomass plastic Rice Resin, based on rice, the precious resources in Japan and Asia, and Neoryza, biodegradable plastic.

On domestic front, we are teaming up with group companies in various parts of Japan to apply our unique solutions to social issues as revitalization of local agriculture and economies.

Under the banner of “Plastic innovation for tomorrow,” we will develop an inclusive organization that is truly wanted by the society from Japan to Asia and the world.

Kazuhito Kamiya, President and CEO

### Sample of our products



Rice based shopping bag



Rice based trash bag



Children's toys that use rice



Rice based kitchen set

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