

Strength of artience Group

STRENGTHS 1

Personnel strategy that draws on the individuals, a source of value creation



Junji Sekino
Operating Officer in charge of Human Resources, General Manager of Human Resources Department

Personnel are at the heart of all of artience's activities. Based on the notion that individual employees are essential to the company as a whole, we will support a *People-oriented Management* through personnel management to encourage employees to take on challenges.

Valuing the senses of individuals and supporting their taking on challenges through personnel management

We introduced a fresh philosophy system when we changed the name of the company, but we maintained our *People-oriented Management* Corporate Philosophy as a unique unalterable principle. From the standpoint of human resources management, we see this Corporate Philosophy as bringing out the maximum potential of the individual employees. The artience is the company that places its staff at the center of all of its corporate activities and that achieves the growth of its business based on *People-oriented Management*.

Today, I believe that, from the aspect of human resources, we should seek to implement personnel development that will fulfill the Brand Promise, "Creating value that resonates with the senses and building a future where all people can live enriched lives." In a situation where non-quantitative value that is not reflected in performance or prices is valued and where needs are diverse, we need to detect the latent needs of customers and markets and incorporate them into manufacturing. To do this, individual staff members need to stretch out their antennae. This is why we emphasize the senses of individuals in the new philosophy system.

In the past, many times our staff were reactive when meeting customers' needs. To encourage them to proactively discover problems and propose solutions, we are developing a system that evaluates people who take on challenges highly. In the system, they are encouraged to plan to take on challenges unique to each employee, implement the plans and achieve results when doing their day-to-day duties. We will incorporate the evaluation of their actions at separate

stages into their overall evaluation in order to reward their efforts and results. We are endeavoring to introduce this new evaluation scheme in FY2025.

Before that, we already revised the personnel management system for manager-class employees in January 2024 to introduce job-based treatment and performance-linked evaluation. We also reviewed the functions of operating officers and corporate advisors. We will massively decrease the number of officers and corporate advisors and pass the management of the company down to the next generation.

Increasing investments in human capital to develop and retain human resources

Our basic stance on personnel management in the artience 2027 medium-term management plan is to change the definition of personnel from a resource to capital and to invest more in developing and retaining personnel while maintaining the three pillars of our human resources management established in 2015.

Regarding personnel development, we have traditionally emphasized rank-specific training. In the future, we will develop a comprehensive education system including the development of future management executives, the development of IT, DX and other expert skills and new business creation. When we changed the name of the company, we renamed our *Toyo Ink Academy* groupwide training and education system to the "artience growth field." This new name embodies a vast field where employees act freely to achieve their own growth. Beyond conventional training programs teaching skills which employees use internally, we will support employees' development into professionals

Three Pillars of Human Resources Management (Established in 2015, revised in January 2024)

Fostering a Culture that Empowers Diverse Human Resources

We will create a corporate culture in which diverse personnel can play an active role in the company based on the belief that we will be able to provide the world with new value by respecting the human rights of our employees who come from different backgrounds as well as their diverse values, views and ideas and by helping them fulfill their duties.

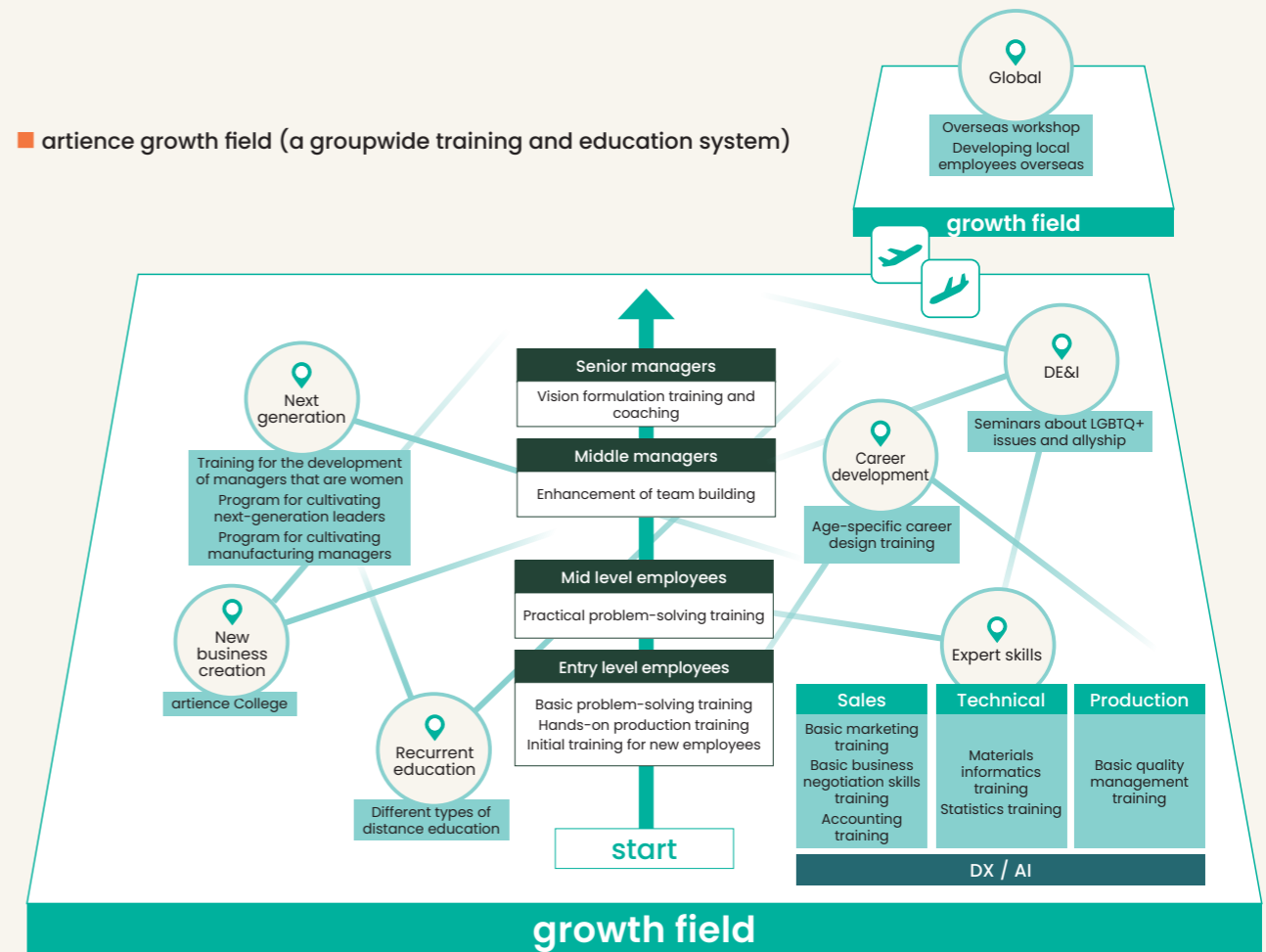
Building a System that Allows Independent Career Choices

We will build and implement a personnel development system based on the belief that as a corporation we bear a responsibility to hire personnel that are capable of designing their own careers and that are orientated toward growth and to continually provide them with opportunities to train and grow with a view toward the development of their careers.

Creating a Work Environment Where Employees Can Work with Peace of Mind

We believe that workplace safety and health, labor management and evaluation and employee health and welfare are essential for employees to work with peace of mind and maximize their capabilities. Based on this, we will develop and continuously improve our workplace environment.

artience growth field (a groupwide training and education system)



who can play active roles anywhere. We do this because we are convinced that these professionals will be new sources of value creation and that the company will have win-win relationships with its employees.

Traditionally, Japanese companies had a tendency to see male employees who joined them just after graduation as their core personnel. However, we must increase diversity as we aim to create value that resonates with the senses. We will recruit more experienced workers and actively hire personnel who have cultivated knowledge outside the Group. The male to female ratio in our workforce has long been an issue for us. Women are 41.5% of the employees we recruited in FY2024. We are building a foundation for promoting the active participation and advancement of women. We are increasing our efforts towards meeting the target of 10% of our managers being women by FY2030.

The improvement of employee engagement is at the heart of personnel strategy

A perspective that includes communicating information to people inside the company is also important. We are proud that our staff retention rate is high and that many employees have worked for us for a long time. As a result, an addiction to tacit understandings that only worked within the company has become the culture of the Company. For example, we tend to think that other staff members should understand a thing even if we have not said it to them. Amid the increase in the number of people recruited mid-career and the percentage

of overseas employees, we cannot leave this situation as it is. We are currently planning to hold workshops to share information about our new philosophy system known so that the whole Group understands it.

In addition, the improvement of employee engagement is always at the heart of our personnel strategy. We will address a wide variety of issues including employee treatment, the workplace environment, job satisfaction and the sharing of the corporate philosophy. In parallel with these efforts, we will consider conducting groupwide engagement surveys. Proper pay increases are necessary since they are directly associated with engagement. We will also need to review staff assignments and personnel transfers to enable employees to more independently choose their career paths. It is also vital that we collaborate with group companies and establish a structure for cooperating with them.

The management and employees share the same aspirations regarding corporate development and their own personal development. The role of the Human Resources Department is to link the two sides and build and coordinate the relationship of mutual trust between them. Their goals are identical in some ways but they have different needs at times. To pursue people-oriented management, we will steady carry out personnel management or human capital management in our ideal form with a view toward creating an organization and a culture with that has an attractive vitality and discipline as well as the serious and persistent pursuit of positive results.

STRENGTHS 2

Technology and Intellectual Property Strategy for Creating New Value through a Combination of Internal and External Sources



Toshinori Machida

Executive Operating Officer in charge of Technical, R&D, Intellectual Properties (CTO)

The artience Group possesses a wide range of technologies, including colorant, polymer, dispersion and coating technologies. Based on these technologies that we have cultivated, we will create new technologies and provide value that will exceed customers' expectations. In addition, we will more actively exchange of information and personnel and work more actively on our intellectual property strategy.

■ Diverting technologies for maximizing value

An advantage that we have is that we possess numerous businesses and a wide variety of technologies that support them. For example, there are many different products in the adhesives category, including pressure sensitive adhesives, laminating adhesives and hot-melt adhesives. Customers do not want pressure sensitive adhesives per se. They want to bond something. I believe it is a big advantage to possess many methods to do that.

Our leading products include the polymers used in labels, packaging materials and other products. Products based on this same technology can be applied in semiconductor sealing and adhesion by also using additional technologies. By applying technologies used to manufacture low-priced multipurpose items in other areas, it is possible to increase added value ten fold or, in some cases, 100 fold.

■ Focusing on semiconductors as the next technology

We are putting our development efforts into the semiconductor field. We see it as the technology following the CNT dispersions for LIBs technology, which we are currently working hard on. Semiconductors are now at a major turning point. The industry is shifting to three-dimensional (3D) packaging arising from the need for higher-capacity and higher-speed semiconductors. Since its beginning, manufacturers with a proven track record have had an overwhelming

advantage in the semiconductor market. However, during a structural change, there are opportunities for new players to enter the market. Specifically, the 3D packaging of semiconductors is connected to a heat problem. And it raises some unprecedented questions regarding how this heat should be dissipated and how the stress arising from the heat should be mitigated. They create big opportunities for new competitors to enter the market.

My understanding is that value that resonates with the senses means that we should offer value that exceeds customers' expectations. We wish to turn elaborate proposals into reality using science. I believe that this will lead to future development and the creation of new businesses.

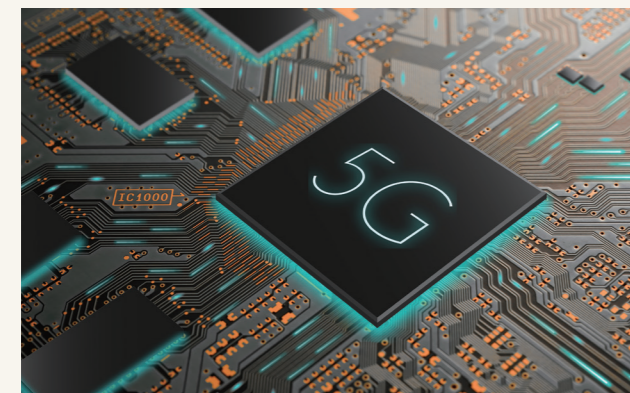
■ Introducing AI to stimulate the exchange of information and people

We have created a database of technologies that we developed in past that we use as a technology platform. I would like to develop it into a more advanced exclusively internal artificial intelligence (AI).

The artience Group has a large number of business divisions. Inevitably, walls emerge between divisions. The walls between organizations tend to block the exchange of information and engineers.

The years of experience accumulated by the company is meaningless if it cannot be fully utilized. We should keep sound records about the objectives of experiments, discussions and what the engineers thought about them in addition to the results and make sure that the data can be easily retrieved. That may sound easy but is in fact more difficult than expected. We will use the AI as a means of solving questions, hoping that the data will be easier to search and that the information that we desire will be easily obtained.

If our technologies alone are insufficient to bring a new idea into reality, we want to be able to search for and immediately contact the personnel in the Group who are capable of making it possible or who are familiar with the related domains beyond the organizational boundaries. We would like to develop a system that will allow us to do this. Connections between people will make it easier to create new things.



We will not just implement this initiative in Japan. We will develop a system that includes overseas bases as well. The system will allow us to ask questions without hesitating, and someone familiar with the field will respond. In some cases, dispatching personnel may help speedily resolve global issues to open the way toward sales and differentiation. We will establish a mechanism like that.

■ To create new technologies, we must have a corporate culture that does not fear failure

I was president of Toyochem Co., Ltd. until December 2023. In an initiative unique to the company, we called on all of its employees to take on the smallest challenges and launched an award program to honor outstanding people who took on challenges. Take on challenges without fearing failure. Small challenges will lead to bigger ones, generating new technologies and profits. I suppose that this initiative, in addition to the exchange of technologies and personnel, has helped created a good corporate culture.

We hope to spread the culture of taking on challenges without fear of failure to the entire Group. I think this is a part of my duties.

■ Actively acquiring outside technologies to thrive in ten years

We will of course work to steadily achieve results as mentioned in the medium-term management plan. The technology departments of the operating companies conduct short- and long-term development projects while the R&D Department of artience Co., Ltd. is engaged in long-term projects. They each work with an eye toward what will be future core businesses.

To thrive in ten years, we will leveraging backcasting to develop a scenario for corporate growth. Valuing uniqueness of artience, we will establish technologies to win out over our competitors. In this process, if we cannot develop technologies using our own resources alone, we will in the future need to conduct activities to gaining new technologies from outside the Group, such as technologies from start-ups and universities overseas and in Japan.

The integration of our technologies and these outside technologies may open the way toward a new combination of art and science and toward serendipitous development. One good example is the inner coating of the *Nama Jokki Can* (Draft mug can) created through the open innovation with Asahi Breweries.

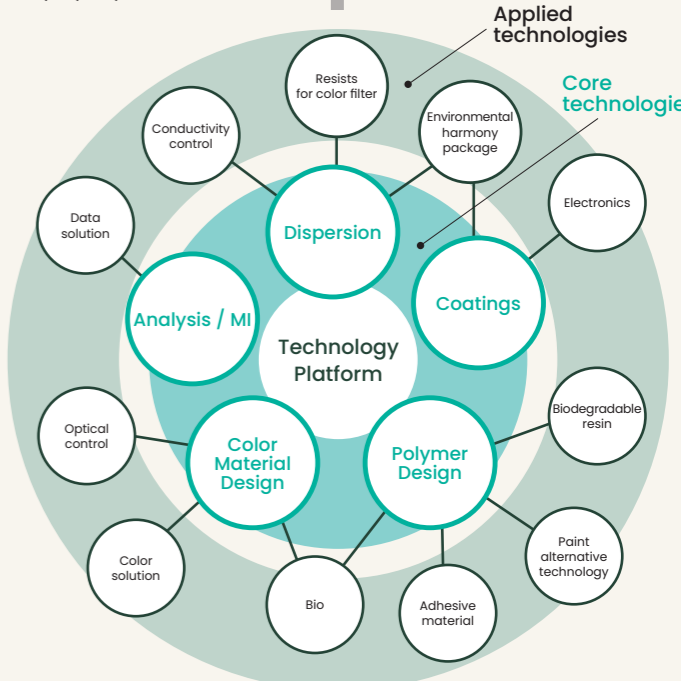
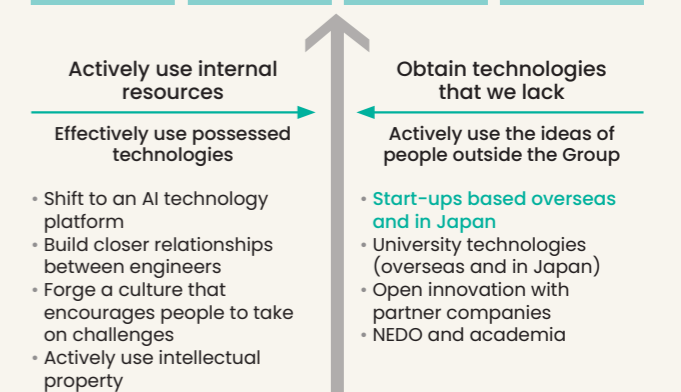
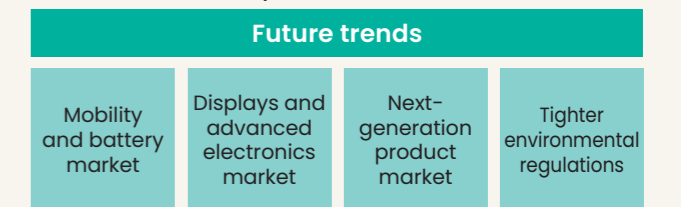
■ Strengthening powerful intellectual property and engineering personnel

Another thing that I wish to focus on is using intellectual property well. We are working to turn newly developed technologies into patents, and we will also turn the technologies that we take for granted and already use into patents. In addition, the speed with which we apply for a patent is vital when it comes to

intellectual property. We embarked on activities for to realize AI-assisted intellectual property management with the goal of quickly securing intellectual property rights for inventions and creations using artificial intelligence. We will strategically utilize intellectual property to strongly aid sales activities.

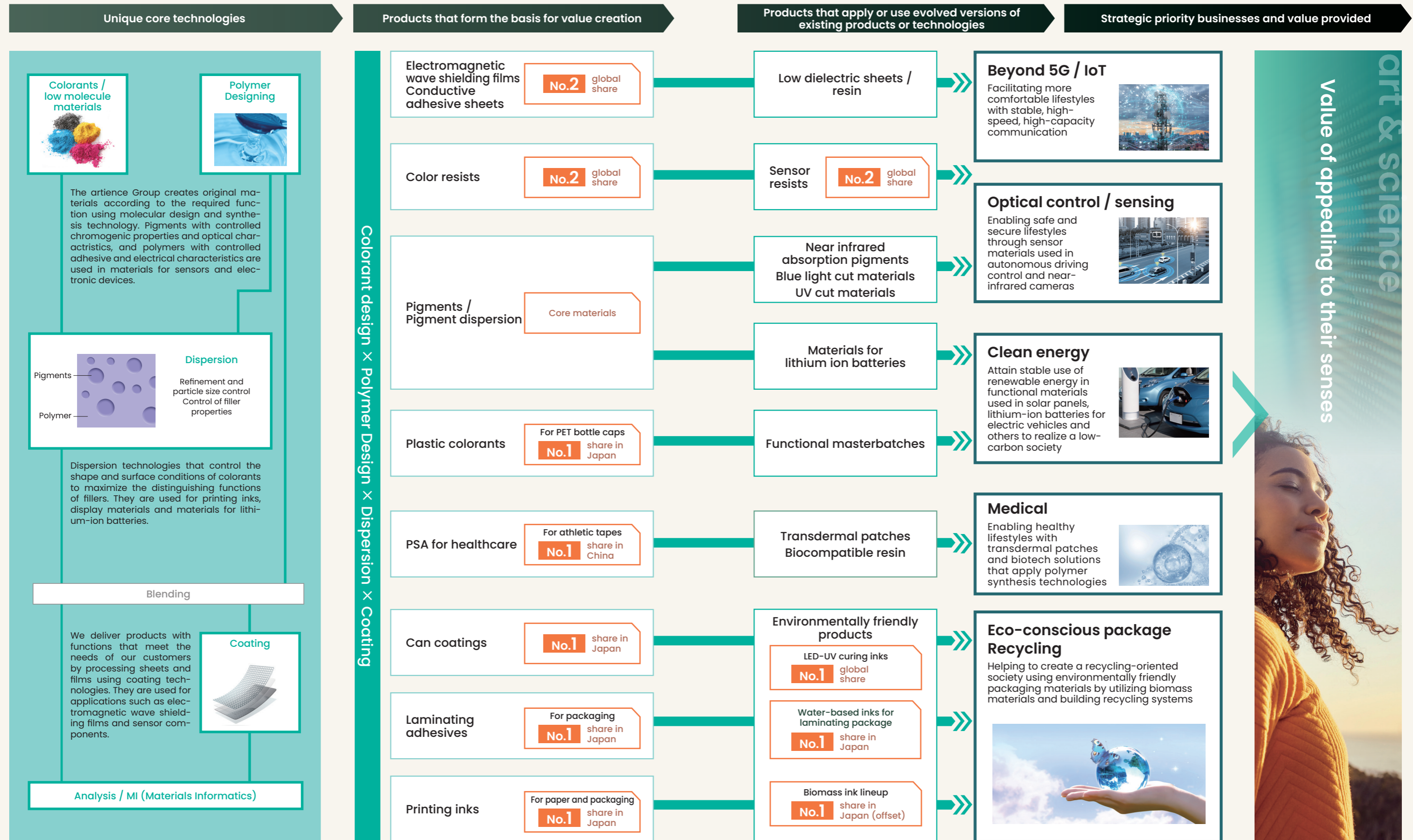
To accelerate development, we will set up an overseas R&D organization to improve our overseas engineering teams. We hope to develop more specialists and more distinctive personnel in Japan and overseas. We will review our personnel treatment to encourage them to take on new challenges that they find rewarding. We will develop this kind of corporate culture in the whole Group.

■ Structure for the development of technologies that lead to the development of future businesses



Strength of artience Group

■ Applying and advancing core technologies to create value



* Shares according to our research

STRENGTHS 3

Proactive Investing to Open the Way toward Market Strategies for New Businesses

The Business of Making CNT Dispersions Used as Materials for Lithium-Ion Battery Cathodes



Koji Obata

General Manager of Functional Materials Sales Department, Toyocolor Co., Ltd.

The artience Group's conductive carbon nanotube (CNT) dispersions are used as the materials for lithium-ion battery (LiB) cathodes. They are a key material that paves the way toward the increase of the capacity and output of LiBs. They are significant products that help ubiquitize electric vehicles (EVs), which is a growing market. We see CNT dispersions as a strategic priority business that will drive the Group's growth, and we are increasing our efforts in this area.

Evolving from printing ink pigments to CNT dispersions

The technologies supporting the manufacturing of the CNT dispersions that are applied in automotive LiBs are originally based on pigment dispersion technologies for printing inks.

A black pigment called carbon black is used to print newspapers. Its conductivity is so high that it has also been used in antistatic coatings for audio cassette tapes, VHS video tapes and other recording materials. Developed from these technologies, carbon black dispersions were used as conductivity agents in LiBs for hybrid vehicles for the first time in 2015.

However, it is difficult to disperse carbon black, so this made it difficult to advertise our uniqueness. At that time, I learned through marketing activities that in China, people had begun using CNT as an conductivity agent in LiBs. We thus started working to develop CNT dispersions. CNT is a material that helps improve LiB performance since a smaller amount of CNT will fulfill the role of a larger amount of carbon black. However, its dispersion was very difficult and there were big hurdles to clear before it could be commercialized. The advanced dispersion technologies that we had cultivated since our foundation greatly aided our commercialization of CNT.

After they were first used in 2019, our conductive CNT dispersions for LiB cathode materials have been

used by a series of large LiB manufacturers. In February 2024, Primeearth EV Energy Co., Ltd. began using our CNT dispersions for Toyota's hybrid vehicles. It is the first time that CNT dispersions are being used as conductivity agents in the materials used to make LiB cathodes for a mass-produced vehicle made in Japan.

Our strengths are technologies, dispersants, and optimization of production processes

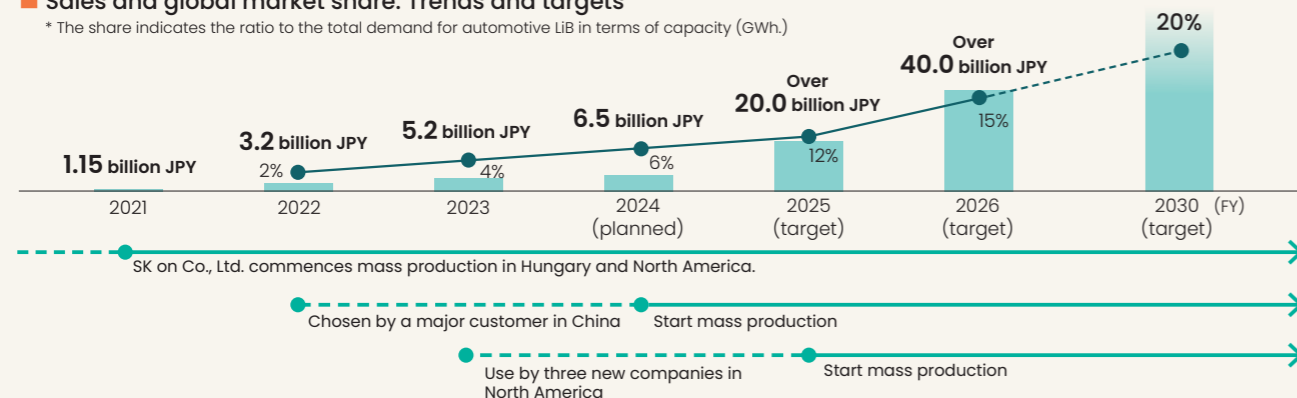
We not only have CNT dispersion technologies, but also develop dispersants independently, and establish a high-level of production process. We have strengths in three areas; the dispersion technologies, the development and improvement of dispersants, and the optimization of production processes.

The most important thin in LiB safety is the prevention of contamination with any metallic foreign matter. The contamination of CNT dispersions with metallic foreign matter would cause a short circuit between the cathode and the anode of the battery, increasing the risk of ignition and heat generation. The level of contamination prevention requested varies from customer to customer. We closely discuss the issues and coordinate with customers to develop a system for meeting their quality requirements.

We are convinced that the trust customers have in us and the expansion of sales that we are achieving today are a result of our customization of products

Sales and global market share: Trends and targets

* The share indicates the ratio to the total demand for automotive LiB in terms of capacity (GWh.)



to meet their needs and the establishment of robust quality management and assurance systems in addition to the CNT dispersion technologies.

The trend towards EVs will not change, even through there are political risks

Currently, we produce CNT dispersions for LiBs in the United States, Hungary, China and Japan. In FY2023, we established a second production base in the United States. LioChem is a subsidiary based in the US state of Georgia and our first LiB production base in the United States. It has been mainly producing colorants for plastics and gravure inks since the 1980s. Today, John Easley is the President of the company. In the process of establishing the new base, he secured a workforce, negotiated local subsidies and took other steps to support our business independently.

In some countries, there may be some political risks, such as the drastic changes in attitudes towards the reduction of CO₂ emissions due to government policies and other factors. But on a global scale, CO₂ emissions reduction policies are common, and the trend towards EVs will not change. It may possibly stagnate temporarily, but I assume that the upward trend will continue.

Increasing investments aiming to have a 20% share of the global market in FY2030

We have set the target of having a 20% share of the global market for CNT dispersions for LiBs (to total demand for automotive LiBs capacity) in FY2030. Given that the time it takes to develop a vehicle in the automobile industry, we are currently working on the business with an eye towards the future beyond the artience 2027 medium-term management plan.

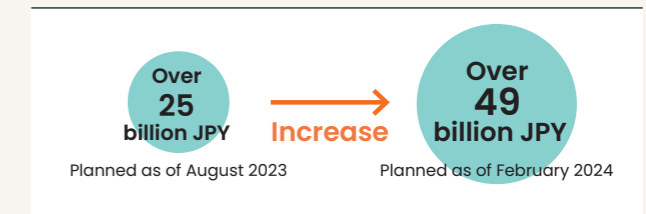
With the global trend toward decarbonization, the shift to EVs is progressing rapidly. It is forecast that by 2030 the global LiB market will grow to five to ten times its size in 2020 and it will continue to expand. The pace of the growth of the EV market decreased in the second half of 2023, but we are certain that it is temporary and that the upward trend will continue in the future. I believe that the goal of having a 20% share of the global market in FY2030 is reasonably achievable.

Five production bases in four regions



To support the achievement of this goal, we have increased the cumulative total investment planned from over 25 billion yen to over 49 billion yen. The Group has never invested this much in a single project before. In this process, we procured 15 billion yen from the Development Bank of Japan (DBJ) to be used in capital investments. We assume that the DBJ closely examined our strategy and made the decision to give us the loan.

Total investment planned in this project (from FY2019 onwards)



* Including 15 billion yen that has already been invested

Creating value that resonates with the senses through CNT dispersions

We are engaged in B2B businesses and general consumers never pick up our products directly from the shelves. However, we will collaborate closely with our direct customers such as battery manufacturers and carmakers to surprise and excite general consumers by increasing EVs' driving range and by improving their quick charging capabilities leveraging the CNT dispersions that we supply.

We will propose many different types of value to markets in collaboration with our direct customers. We expect that this will increase our market value. In our business activities, we will pay attention to providing value that appeals to the senses of the consumers who use the final products.

Direction of the Company's technology development

Short term	Long term
<ul style="list-style-type: none"> Swiftly introduce products for lithium manganese iron phosphate (LMFP) batteries and other medium-capacity batteries 	<ul style="list-style-type: none"> Developing related materials, including those for anode materials, and taking steps to have them evaluated by customers Products for all-solid-state batteries: Joint development with a customer under way Strengthening cooperation with Tokyo Institute of Technology, too