Dexerials Corporation

ESG/Sustainability Briefing

January 17, 2022

Event Summary

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[Participants]	
[Number of Speakers]	3

Takashi Yoshida	Executive Officer
Koichi Akeyama	Executive Officer
Shinji Tomita	General Manager, IR Department

Presentation

Tomita: Thank you for waiting. Dexerials Corporation will now begin ESG/Sustainability Briefing.

I'm Tomita from the Investor Relations Department, and I will be your facilitator today.

This briefing will be held via webcast and teleconference. Please be aware that in addition to investors and analysts, there will also be members of the media in attendance today.

Now, I would like to introduce today's speakers from the Company.

Takashi Yoshida, Executive Officer and Corporate Planning & Control Division Head.

Yoshida: I'm Yoshida. Thank you.

Tomita: Koichi Akeyama, Executive Officer and Corporate Strategy Division Head.

Akeyama: I'm Akeyama. Thank you.

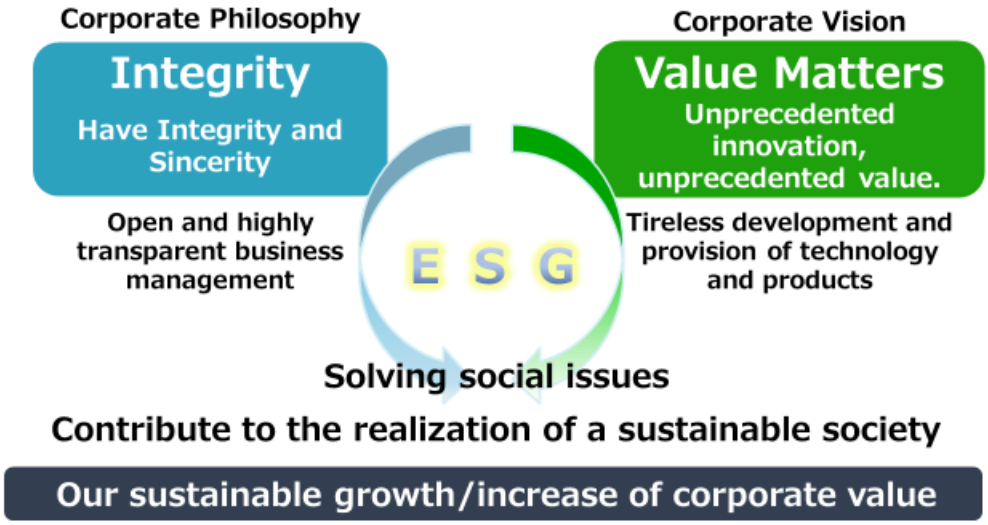
Agenda

1. Presentation
   - Corporate Philosophy, Corporate Vision, and our ESG/Sustainability
   - Initiatives to Strengthen the Management Base
     ① Improvement of Management Functionality
     ② Enhancement of Intellectual Property Position
     ③ Promotion of Digital Transformation (DX)
2. Q&A Session

Tomita: Today, Mr. Yoshida and Mr. Akeyama will give presentation based on the agenda as presented, and then we will take your questions.

Please note that today's video and transcript of the presentation through Q&A session will be posted on our website at a later date, including your name and company name.

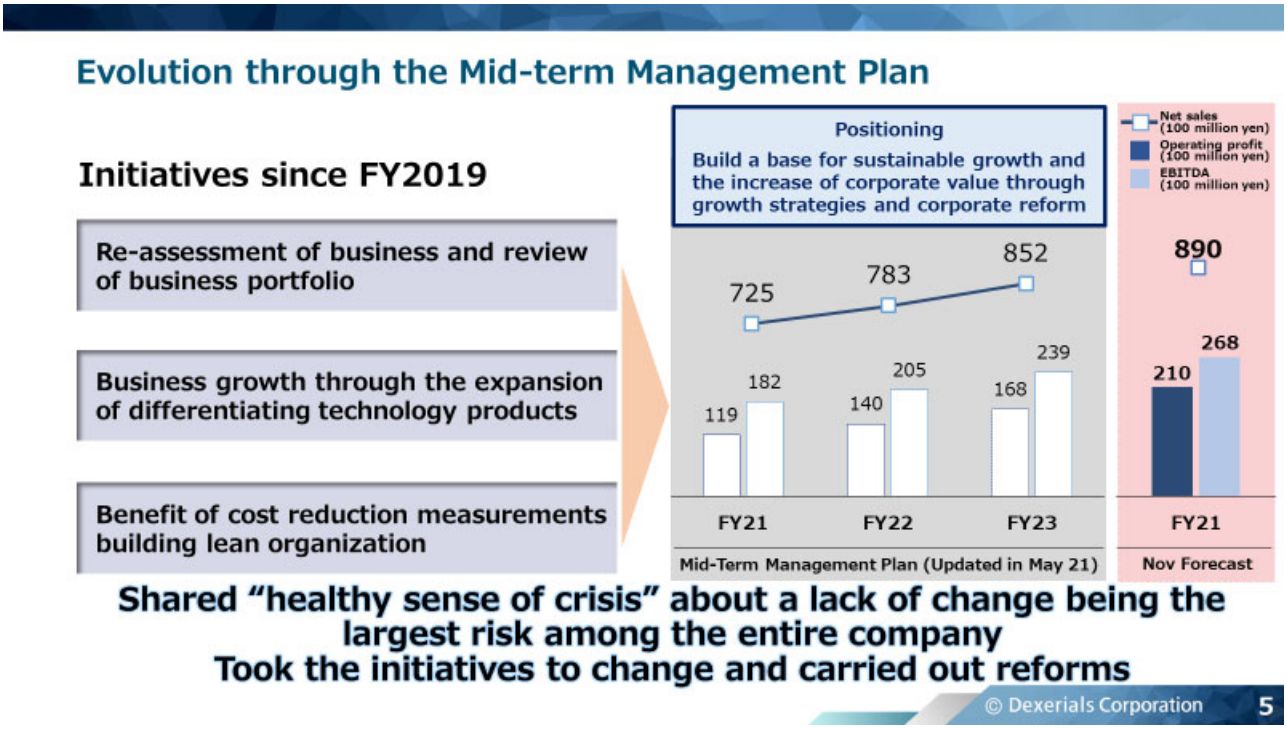
Corporate Philosophy, Corporate Vision, and Sustainable Growth through Solution of Social Issues



Yoshida: Good morning, everyone. I am Yoshida, the Executive Officer in charge of the Corporate Planning & Control Division. Now I will begin the presentation.

First, let me explain our management philosophy and corporate vision.

Our corporate philosophy is “Integrity, Have Integrity and Sincerity,” and our corporate vision is “Value Matters, Unprecedented innovation, unprecedented value.” We aim to achieve sustainable growth and increase our corporate value by contributing to the resolution of social issues and the realization of a sustainable society through open and highly transparent corporate management and the continuous development and supply of technologies and products.



Next, I will explain the evolution through the medium-term management plan. First, on the left side of the document, I will explain what we have tackled and achieved on from FY2019 to now.

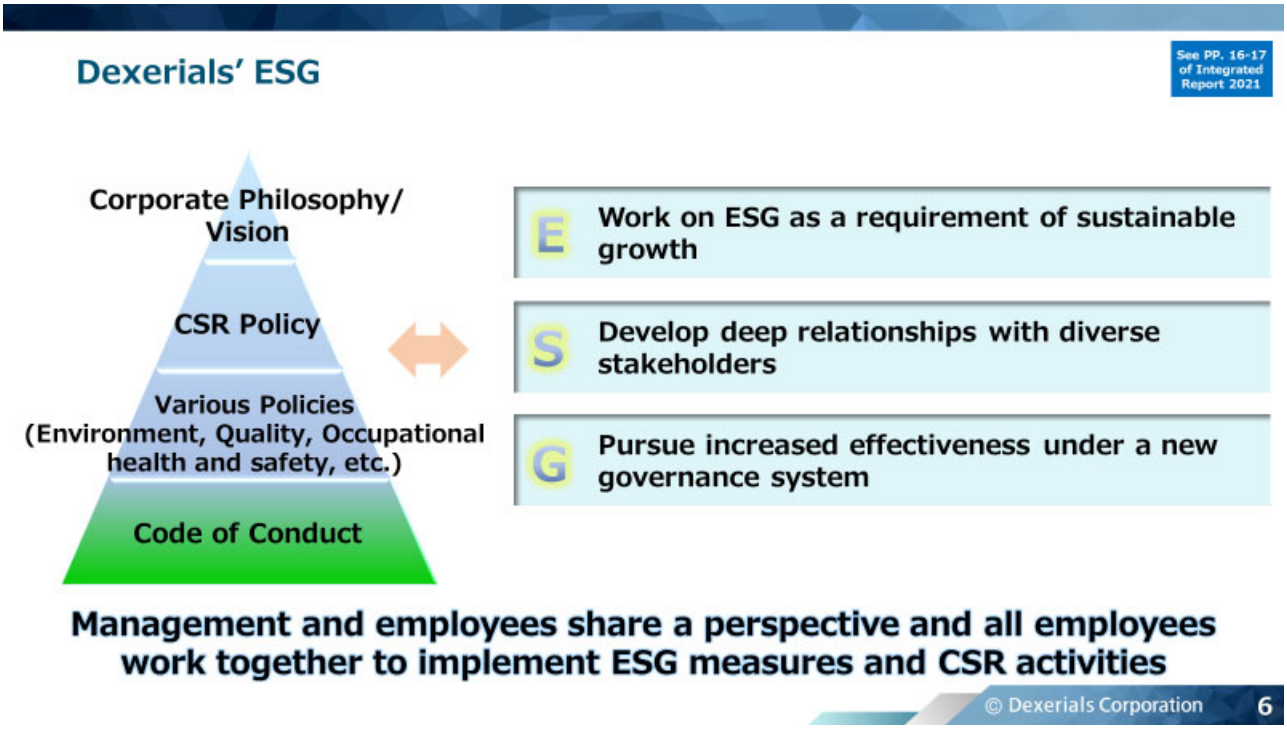
First, we have conducted business feasibility assessments for each product category and reviewed our portfolio based on the results of these assessments.

Second, we have been working to expand the sales of differentiated technology products that we have developed and launched in anticipation of technological trends.

Third, in order to strengthen our management base, we have reviewed costs throughout the Company and implemented personnel-related initiatives to build a lean structure.

In FY2020, we were able to achieve our FY2023 operating income target of the final year of our mid-term management plan, 3 years ahead of schedule as a result of these measurements. In FY2021, we announced the “Mid-term Management Plan Update” by further reviewing our targets.

In addition, as a result of the Company-wide shared sense of crisis that the biggest risk is to remain unchanged and for each and every employee’s self-initiated change, the profit structure has become less susceptible to the trend of the end product market, and we expect to achieve the refreshed FY2023 sales and profit targets again in the current fiscal year.



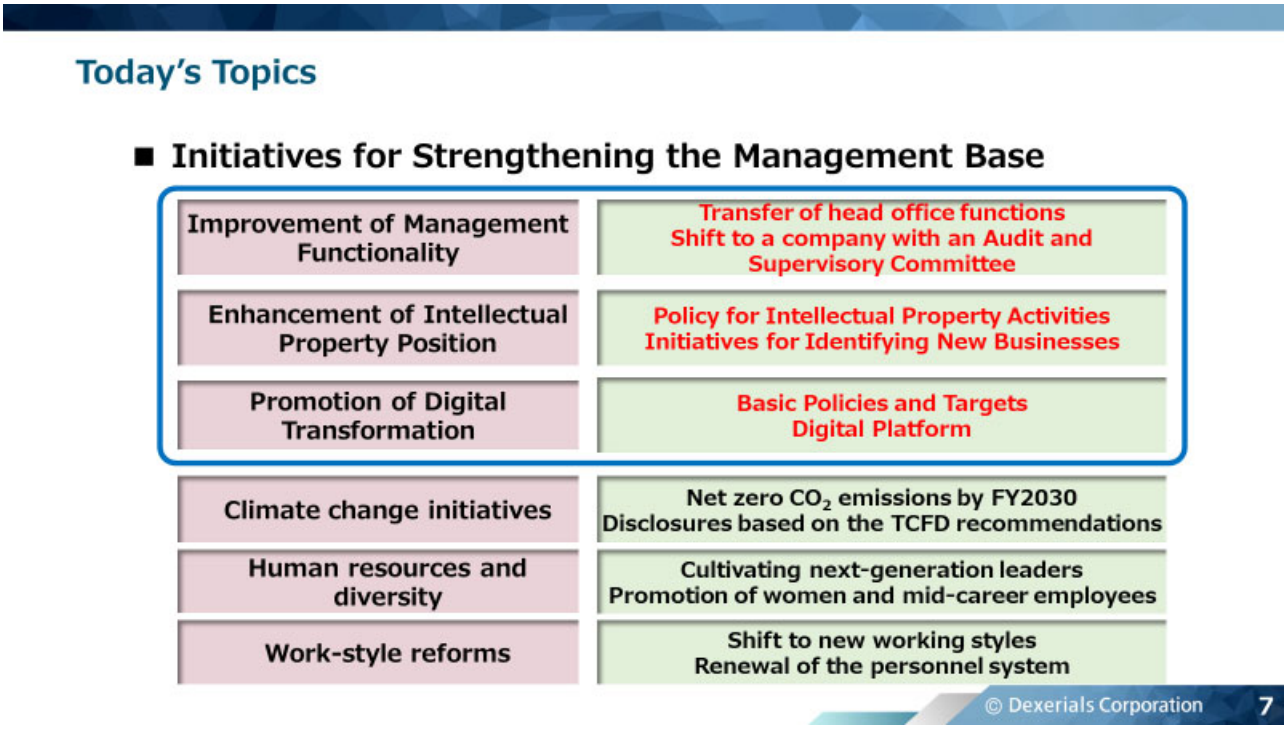
The following is an explanation of ESG for our company.

In order to ensure that each and every employee is aware of our management philosophy and corporate vision on a daily basis, we link them to our CSR policy, various policies, and code of conduct, and implement them consistently from management to the workplace. These are closely linked to our ESG management.

First of all, with regard to Environment of ESG, although our CO_2 emissions are very low for a company in the chemical sector, we believe it is important to be a pioneer in making firm efforts to decarbonize our business, as this is becoming one of the requirements for doing business.

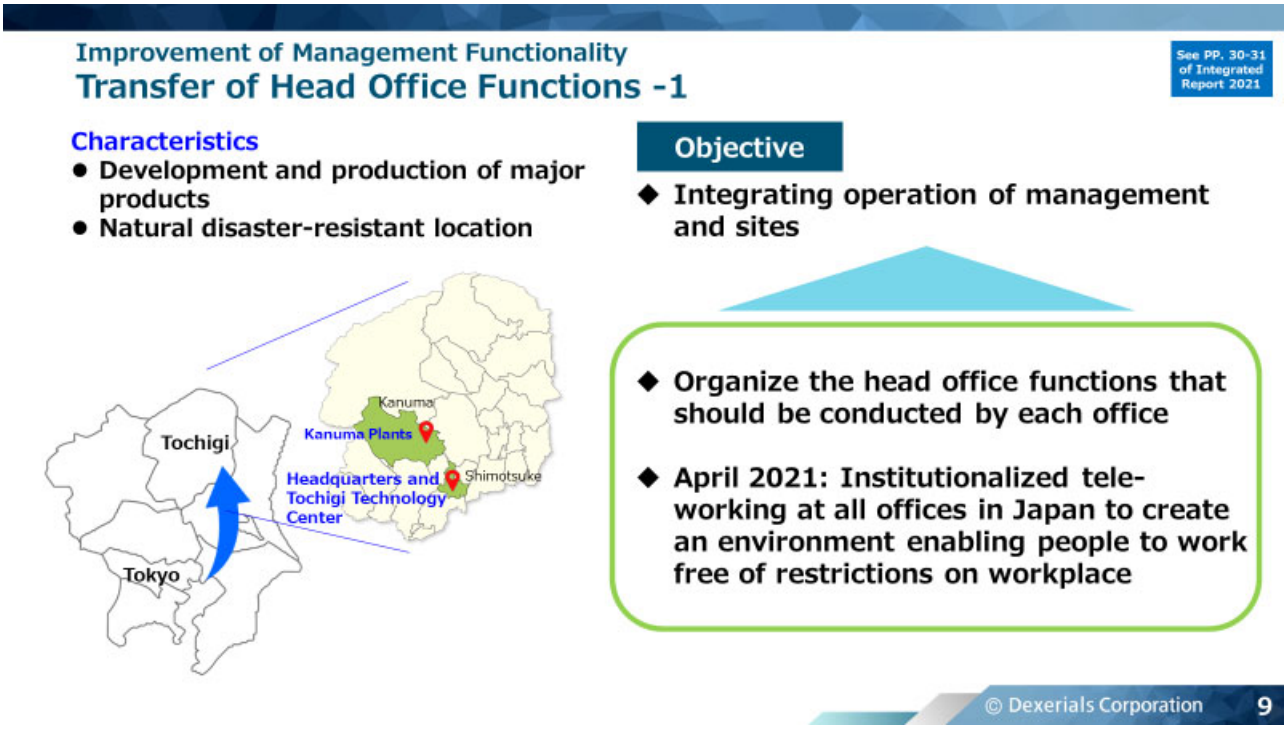
Next, I would like to talk about Social. As we work to deepen our relationships with our various stakeholders, we will create a system that will enable the Company to achieve sustainable growth by building a personnel system that responds to the diversification of work styles of our employees, and we will not only actively promote women and non-Japanese employees, but also expand overall diversity as one of our important management issues.

I will explain about Governance later, in which we have introduced a new governance system and will further promote ESG management under this system.



These are today's topics.

Today, since time is limited, we would like to explain the following 3 points in "strengthen the management base," one of the basic policies of our medium-term management plan: strengthening of management functions, enhancement of intellectual property, and promotion of DX. These topics are featured in the content of the Dexerials Integrated Report 2021, which was published in December.



Let me begin by explaining the background and objectives of the relocation of the HQ functions to strengthen management functions.

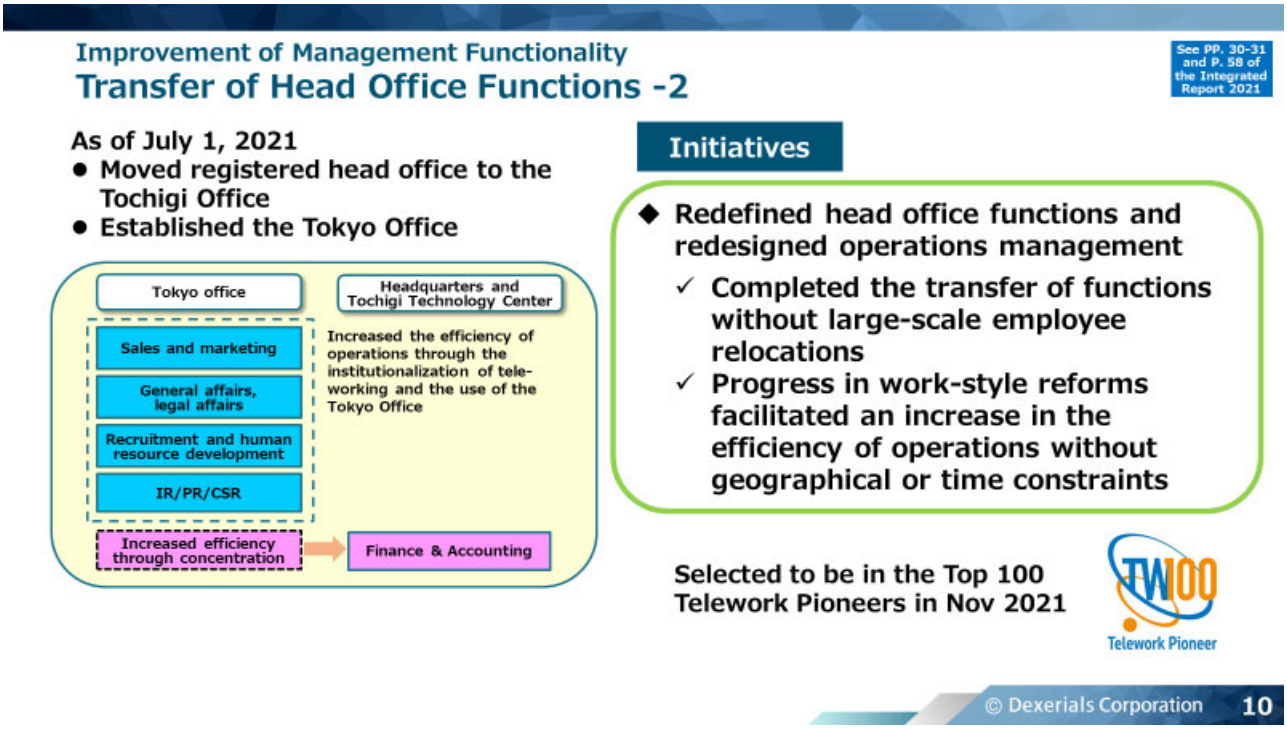
As shown in the figure on the left, we develop and produce our main products of anti-reflection films and surface mounted type fuses, at our Tochigi Technology Center in Shimotsuke, Tochigi prefecture, and anisotropic conductive films (ACF) and optical elastic resin (SVR) at our Kanuma Plants in Kanuma, Tochigi prefecture.

From the perspective of BCP, Tochigi prefecture is a good base for dealing with natural disasters such as earthquakes, so we have set up a development base at Tochigi Technology Center.

In the summer of 2020, when the Tokyo Olympics was supposed to be held, companies with offices in Tokyo were encouraged to stagger their commutes, and in January 2020, we introduced teleworking style for our Tokyo headquarters employees on a trial basis.

After that, COVID-19 infection spread mainly in the Tokyo metropolitan area, and with the aim of realizing more integrated management and field operations, including infection prevention, we organized what each base should have as head office functions, and started relocating head office functions sequentially 2 years ago.

In parallel, in order to promote the relocation of head office functions, we reformed our work style and environment, focusing on teleworking, and in April 2021, we institutionalized teleworking at all of our domestic offices. In addition, although there are differences depending on the laws and business practices of each country, we have been working to build an environment where people can work anywhere, including the establishment of teleworking systems not only in Japan but also at offices outside Japan.



In moving the HQ functions, we sorted out the functions that should remain in the Tokyo office and those that could be made more efficient by moving them to Tochigi prefecture. After thoroughly examining whether the employees in the departments that would be moved to the Tochigi Technology Center would need to be transferred, we aimed to complete the relocation of the HQ functions without a large-scale transfer.

In addition, with the approval at the annual general meeting of shareholders, the registered head office was moved to the Tochigi Technology Center on July 1 last year, and the Tokyo office was established at the same time. The Tokyo office in Kyobashi, which was relocated from Osaki, has been positioned as a place for communication among employees and with stakeholders as teleworking has become the norm, and as a place where members can gather to discuss with creative ideas when necessary. By reducing the floor space to an open space, we have been able to reduce costs, commuting expenses, improve work efficiency by shortening the commute time of employees, and conduct recruitment activities regardless of where they live.

In November last year, the Ministry of Internal Affairs and Communications (MIC) selected us as one of the 100 Telework Pioneers for FY2021, in recognition of our initiatives.

As teleworking has become the norm, we have been able to improve the work-life balance of our employees while shortening the physical distance between management and the field employees, which was our goal, and achieve efficient business operations. In the future, we will continue to promote reforms in the way we work and further enhance the integrated management and field operations that are unique to our company, without being bound by geographical or time constraints.

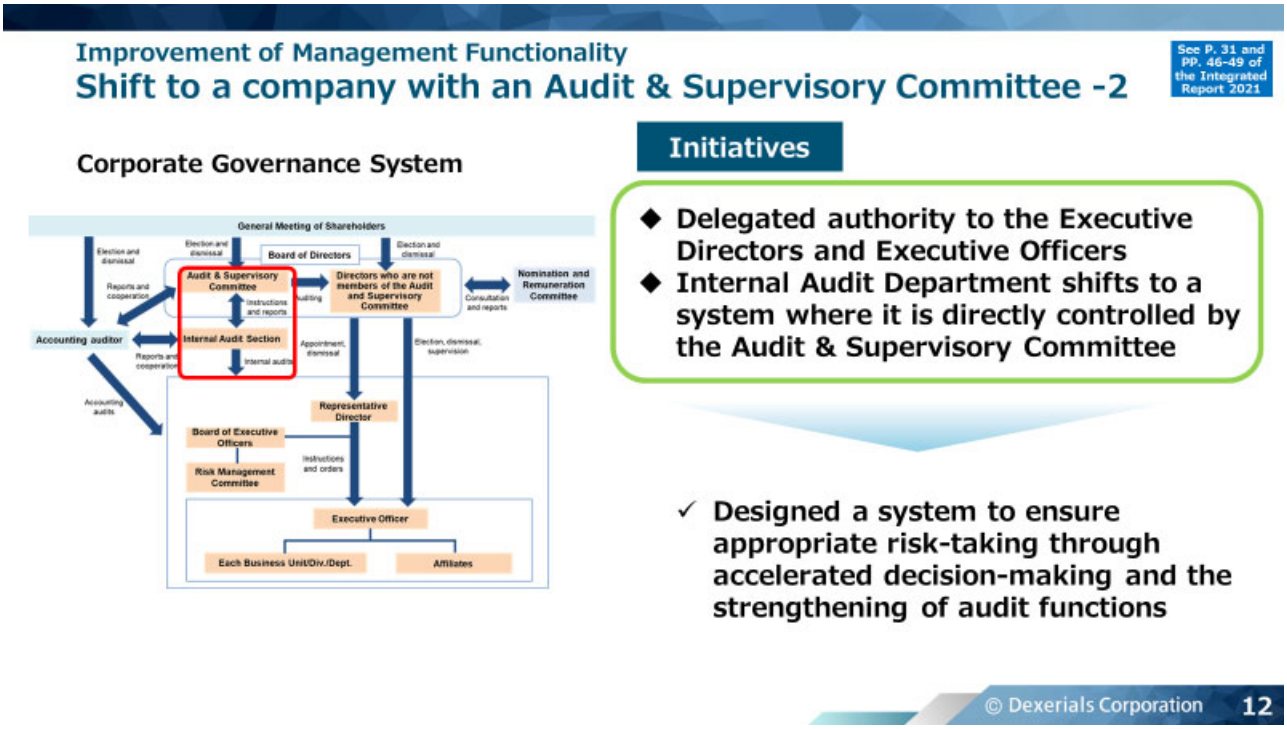
Next, I would like to explain the transition to a company with an Audit & Supervisory Committee.

As a second measure to strengthen management functions, we shifted from a company with an Audit and Supervisory Board to a company with an Audit & Supervisory committee in June last year.

Since listing on the stock exchange in July 2015, the Company has implemented various measures to strengthen governance, including the introduction of a performance-linked stock compensation system, the establishment of a nomination and compensation committee, and expansion the transfer of authority after the introduction of an Entrusted Executive Officer System.

However, the business environment surrounding our company continues to change at a dizzying pace, and in order to continue sustainable growth under such a business environment, we believed it was important to have a more robust corporate structure and to further speed up our decision-making.

Therefore, the shift to a company with an Audit & Supervisory Committee is aimed at accelerating management decision-making, strengthening the monitoring function, and making the board of directors a place for more strategic discussions.

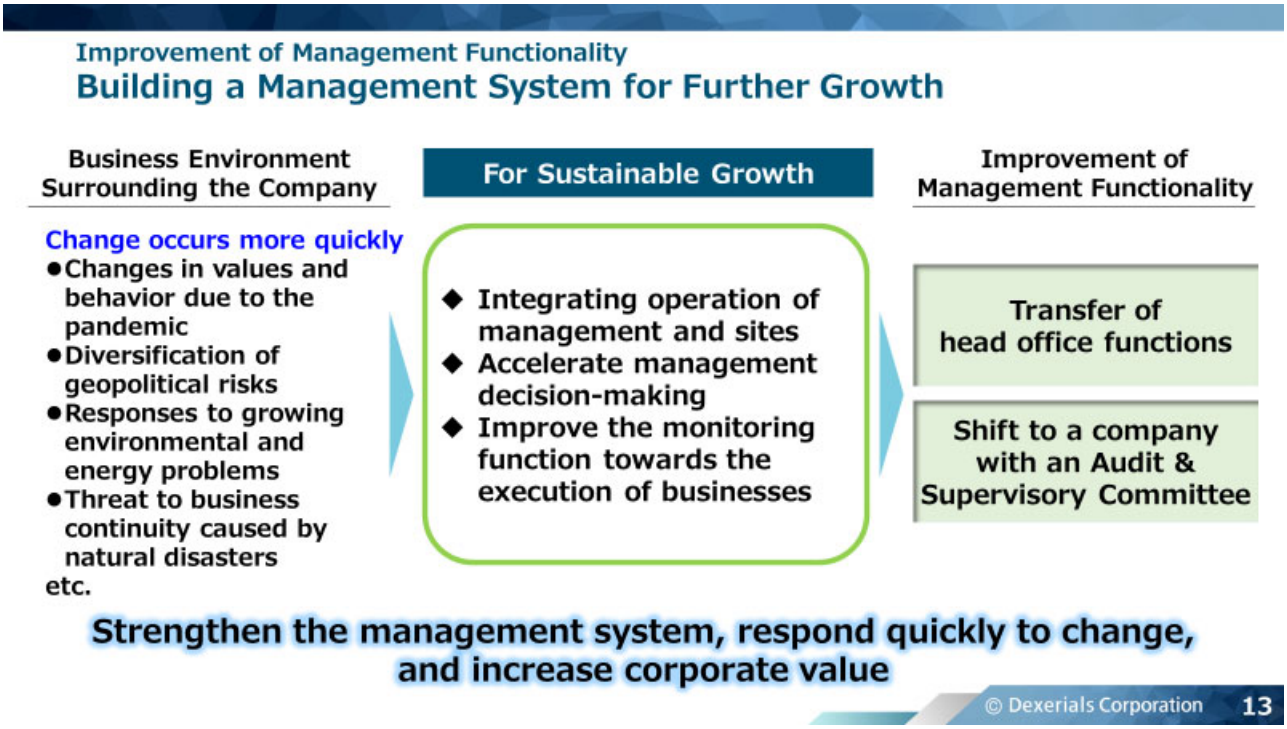


In making the transition to a company with an Audit & Supervisory Committee, we first actively delegated authority to the directors and executive officers in charge of business execution through a review of the decision-making authority regulations, etc., in order to promote more flexible decision-making, and to further accelerate decision-making by the executive officers.

In addition, as indicated by the red line in the corporate governance system diagram on the left of the slide, the Audit & Supervisory Committee members, who have voting rights at the Board of Directors, have strengthened the supervisory function by placing the audit department directly under the committee, so that the monitoring function regarding management can be more effectively exercised.

Through these efforts, we believe that we now have a governance system that allows for appropriate risk-taking in management, with the Board of Directors overseeing the speedy decision-making of the executive members.

In addition, the Board of Directors has more clearly separated the 2 functions of execution and supervision, which has led to a shift in emphasis from decision-making on business execution to management supervision, as well as increased opportunities to discuss medium- to long-term management strategies.



The following is a summary of the strengthening of management functions.

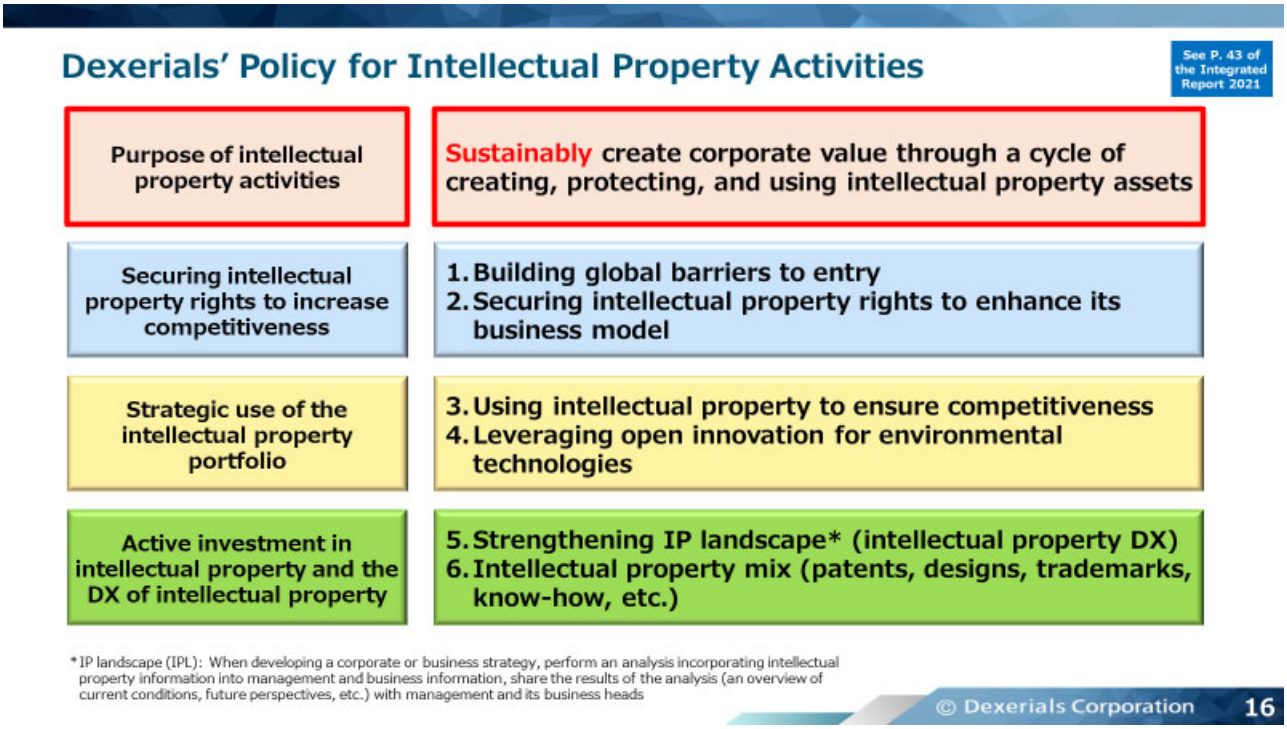
I have explained our efforts to strengthen management functions, but as I explained at the beginning of this presentation, the speed of change in the business environment surrounding our company will continue to increase. In order to achieve sustainable growth in such environment, it is important to have a gas pedal to increase the speed of management decision-making more than ever before, and at the same time, a system to strengthen monitoring and apply the brakes more than ever before.

The relocation of the HQ function and the transition to a company with an Audit & Supervisory Committee are not individual measures to strengthen the Company, but rather reforms that have been carried out in unison based on a common understanding of the issues, and I believe that they are reforms that are unique to our company. We will continue to strengthen our management system, so that we can respond quickly to changes and improve corporate value.

That is all for the explanation from me.

Tomita: Thank you very much, Mr. Yoshida.

Next, Mr. Akeyama, please go ahead.



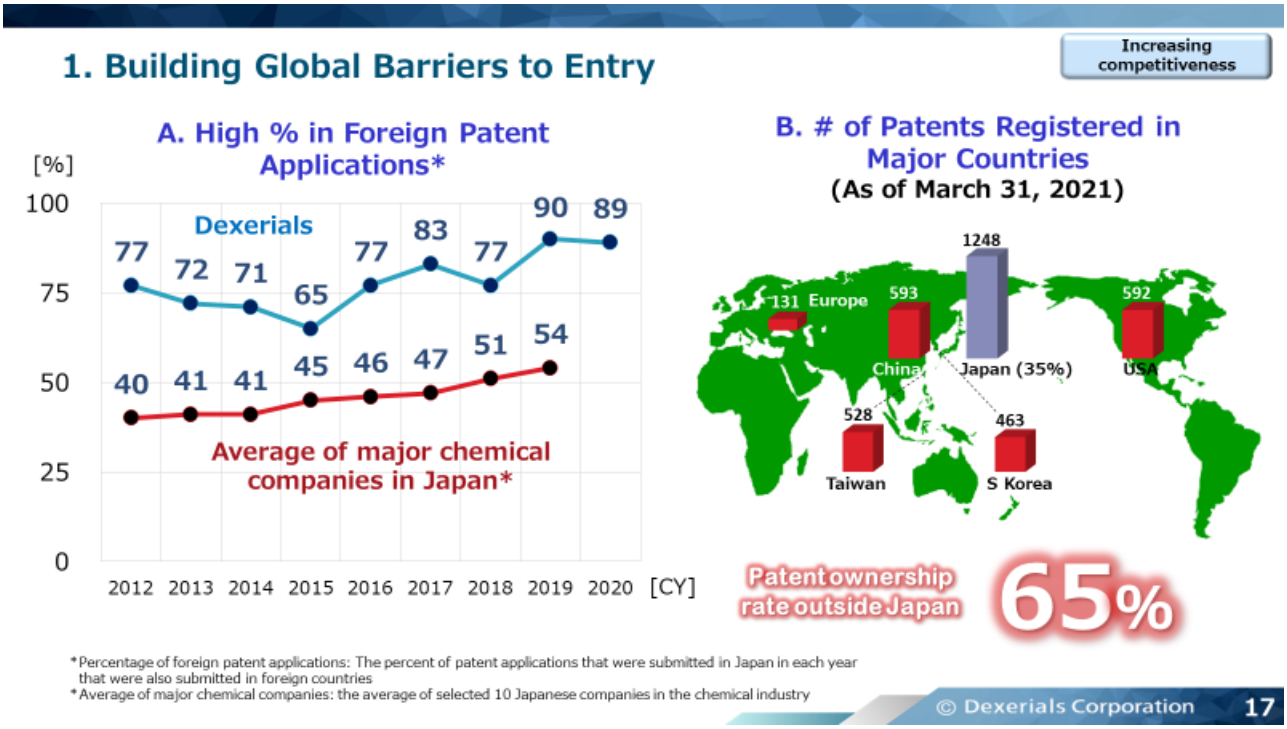
Akeyama: I'm Akeyama, Executive Officer and Corporate Strategy Division Head.

Today, I would like to explain the initiatives to strengthen intellectual property and promote DX as part of the initiatives to strengthen the business base. Thank you.

First, I would like to explain the initiatives to strengthen our intellectual property.

First of all, the purpose of our IP activities is to implement a cycle of creation, protection, and utilization of IP management assets to sustainably create corporate value for our company. In order to achieve this objective, we have established 6 policies for intellectual property activities.

Specifically, 1 & 2 are initiatives to strengthen business competitiveness, 3 & 4 are initiatives to build an IP portfolio and utilize IP, and 5 & 6 are initiatives to proactively invest in IP and introduce IP DX. The following is a detailed explanation of each policy.

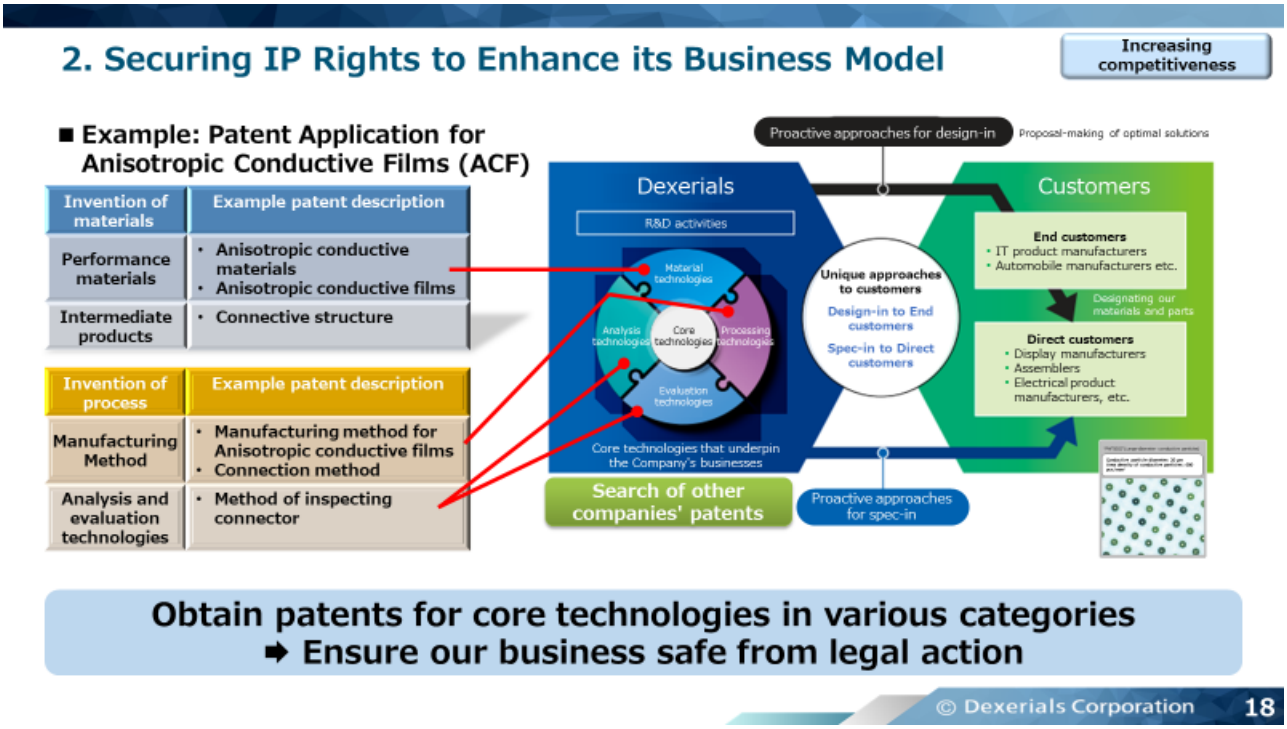


The first activity policy will be to build global entry barriers.

The left side shows the foreign patent application rate, which is an indicator of percentage of the annual number of Japanese patent applications are filed abroad.

Since our independence in 2012, we have filed more than 70% of our Japanese patent applications in foreign countries, and we continue to maintain a higher rate of foreign patent applications than the average of major chemical companies.

The right side shows the number of registered patents held by the Company in major countries, i.e., the number of patents that have actually been granted after application and examination by the patent office in each country.



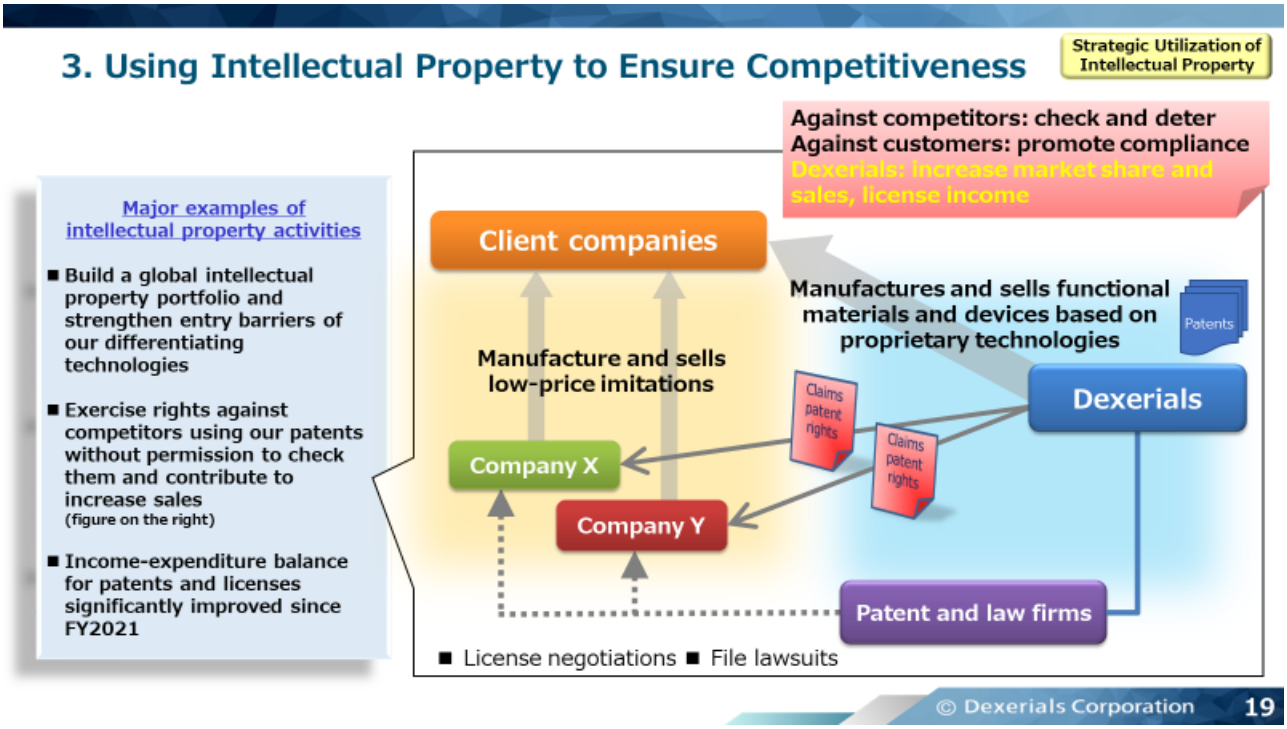
The second policy is to secure intellectual property rights for the enhancement of our business model.

We are a manufacturer of functional materials and devices, so we file patent applications and obtain rights for so-called product inventions. Furthermore, since our core technologies include the areas of process technology and analytical evaluation technology, we are working to obtain rights for these as well.

The table on the left shows an example of patenting of ACF, which is one of our main products, but we have also obtained patents for product inventions such as “anisotropic conductive materials” and “anisotropic conductive film”, as well as “connection structures” for circuit boards using these materials.

On the other hand, in terms of process inventions, we have also obtained patents for “manufacturing method of anisotropic conductive film”, “connection method”, and “inspection method of connected body”.

In this way, by properly obtaining rights to various categories of patents related to products and processes, we make it possible to provide a wide range of solutions from direct customers to end-product customers.

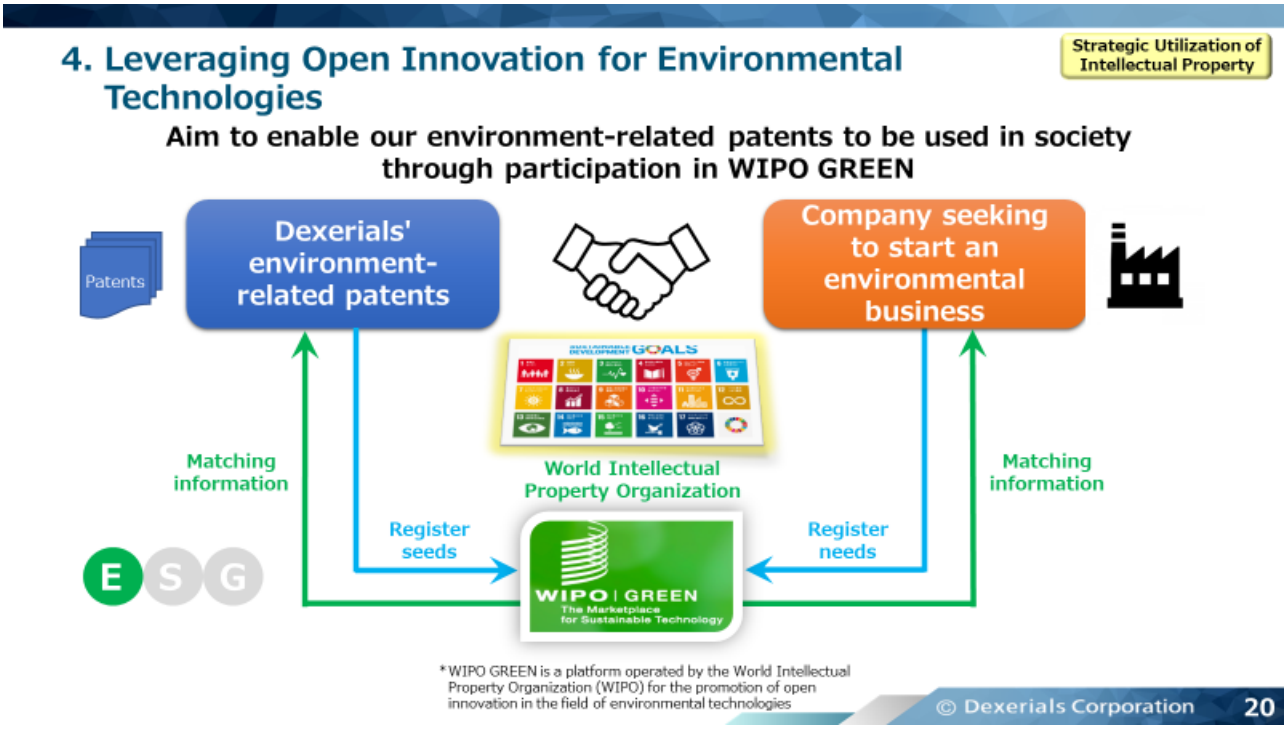


The third policy will be to utilize intellectual property to ensure business competitiveness.

As I mentioned earlier, on the left side we are strengthening barriers to entry for other companies by building a global IP portfolio for our differentiating technologies.

On the other hand, if a competitor appears who is using the Company's patent without permission, the Company warns the competitor and enforces its patent rights to restrain the competitor's business, as shown in the figure.

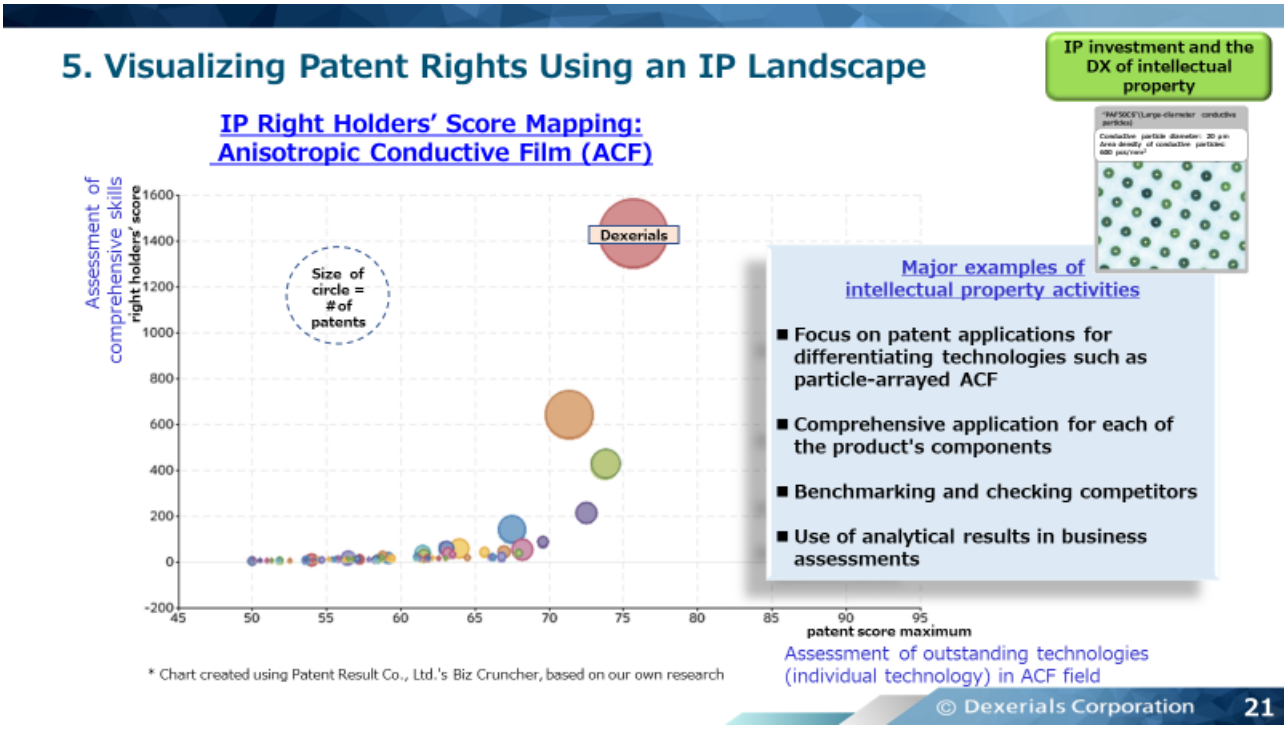
As a result, if our competitor stops doing business, we will be able to increase the market share and sales of our product, and even if our competitor continues to do business, we will be able to earn income from licensing our patents.



The fourth policy will be open innovation in environment-related technologies.

Last year, in September 2021, our company joined the so-called WIPO GREEN, a platform run by the World Intellectual Property Organization, WIPO, to promote open innovation in environmental technologies. The purpose of this platform is to allow companies that own environment-related patents and seeds to register them in the WIPO database, and to match them with companies that wish to commercialize the environment.

Through this initiative, we aim to contribute for the Company's environmental business and social contribution by licensing environment-related patents to those who wish to use our IPs.

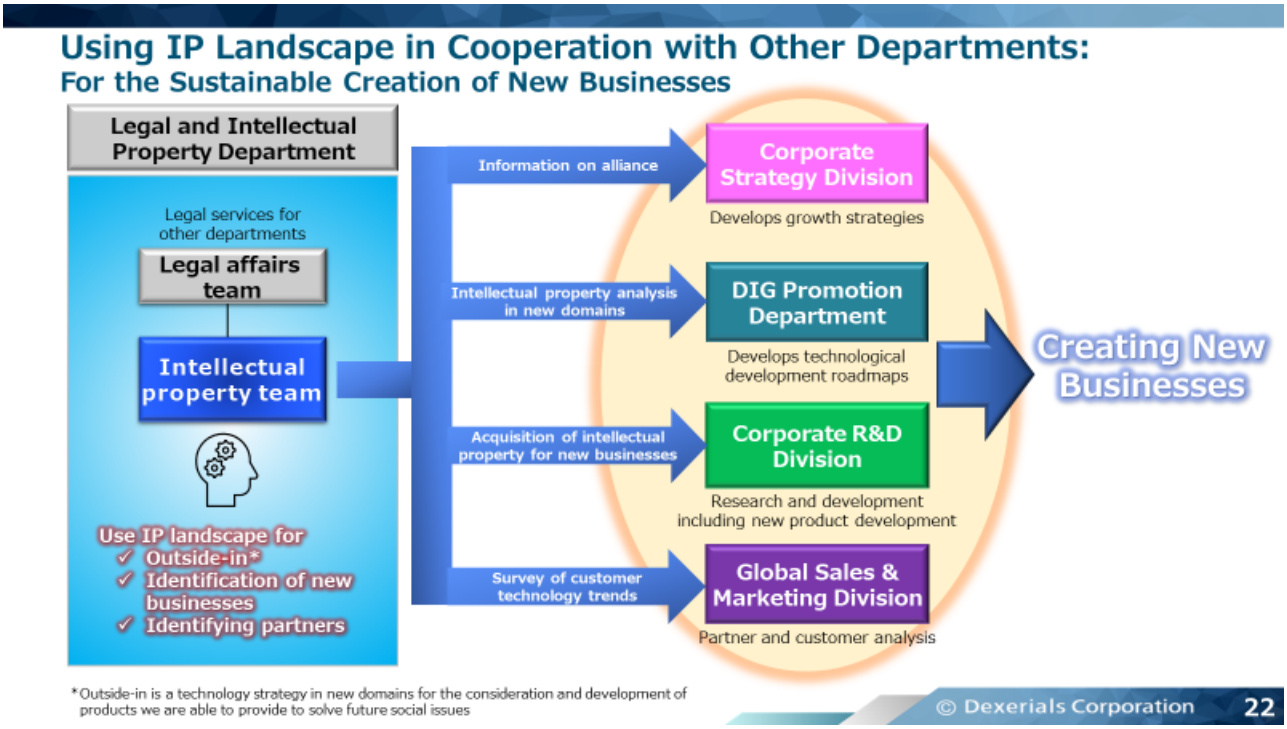


The fifth policy is to support management decisions, we using the IP landscape to visualize the patent strength of the Company and other companies .

Our IP department has already introduced the analysis software necessary for IP landscape, and as shown in the figure, we are visualizing our own and other companies' IP capabilities for each product, and using it to benchmark our competitors and evaluate our business.

As you can see in the figure, the highest patent score on the horizontal axis is the score that evaluates the shining technology, the individual patent power, in the relevant field. The rights holder score on the vertical axis shows the total score of the patents applied for by each company, indicating the overall strength. The size of the circle indicates the number of patent applications. For example, with regard to our main product, ACF, we have relatively higher scores than our competitors in strength of individual patents, overall strength of patents, and the number of patents.

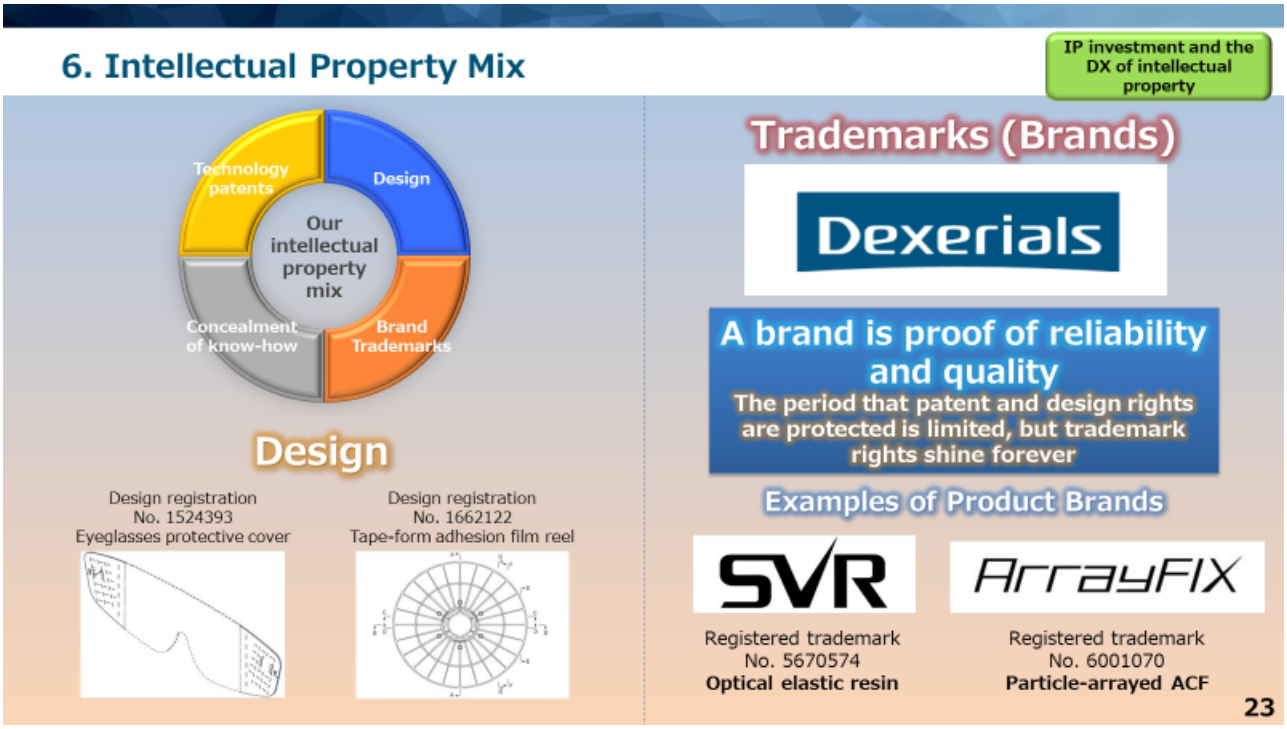
We believe that the reason for this high score is due to our efforts to file applications for differentiating technologies such as particle-arrayed ACFs in an exhaustive manner for each component, and to invalidate patents of other companies through opposition and other means that could hinder the business of other companies.



Let me explain in more detail the IP landscape we are working on.

The IP landscape is not an activity completed by the IP department, but is being introduced in cooperation with related divisions such as the corporate strategy division. For example, the added value that can be provided from IP to each department includes alliance information, IP analysis of new areas, IP acquisition for new businesses, and customer technology trend research.

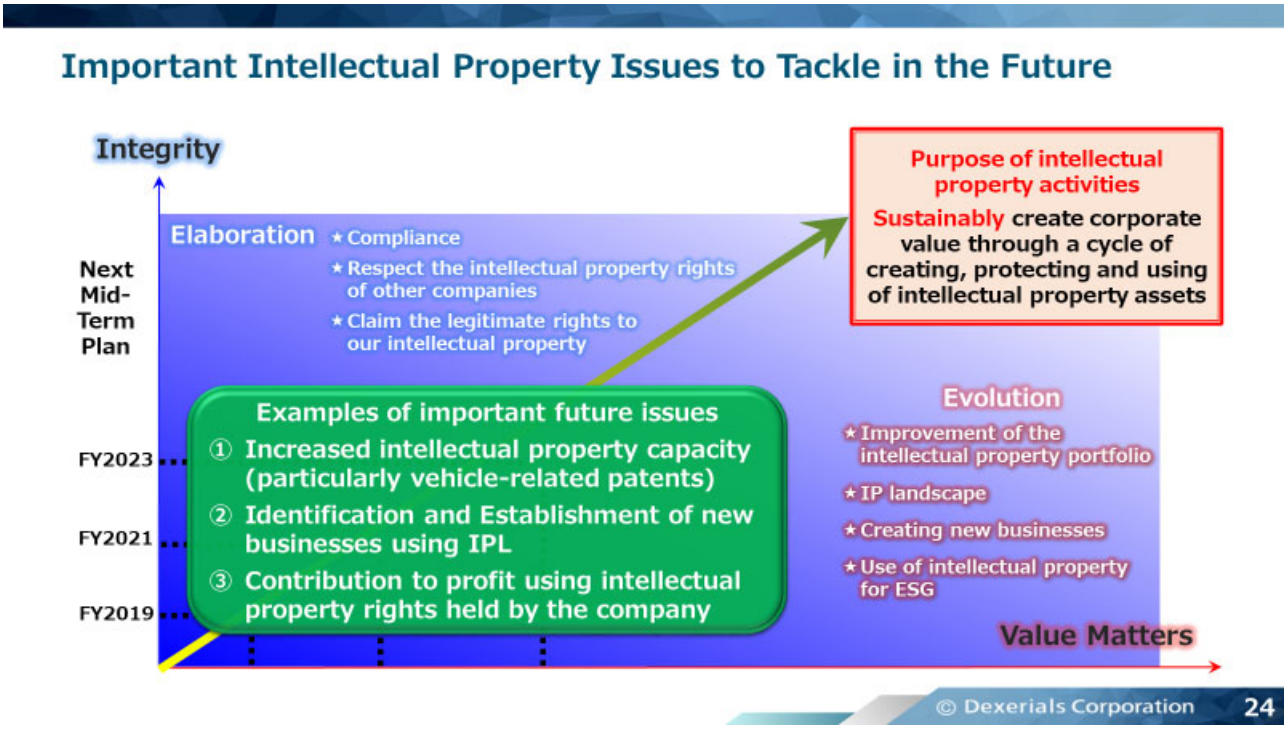
In particular, we use it as a tool to plan to new products that will contribute to solving future social issues in order to implement our outside-in technology strategy. We also use the IP landscape approach in terms of searching for new businesses as an extension of considering new products and searching for partners when necessary.



The sixth will be activities to acquire multifaceted intellectual property, called the IP mix. In addition to patents, we also protect designs, brands, and know-how for use in our business.

For example, designs have recently been used to protect protective covers for eyeglasses with anti-reflection films moth-eye type, and reels used to ship tape adhesive films such as ACF.

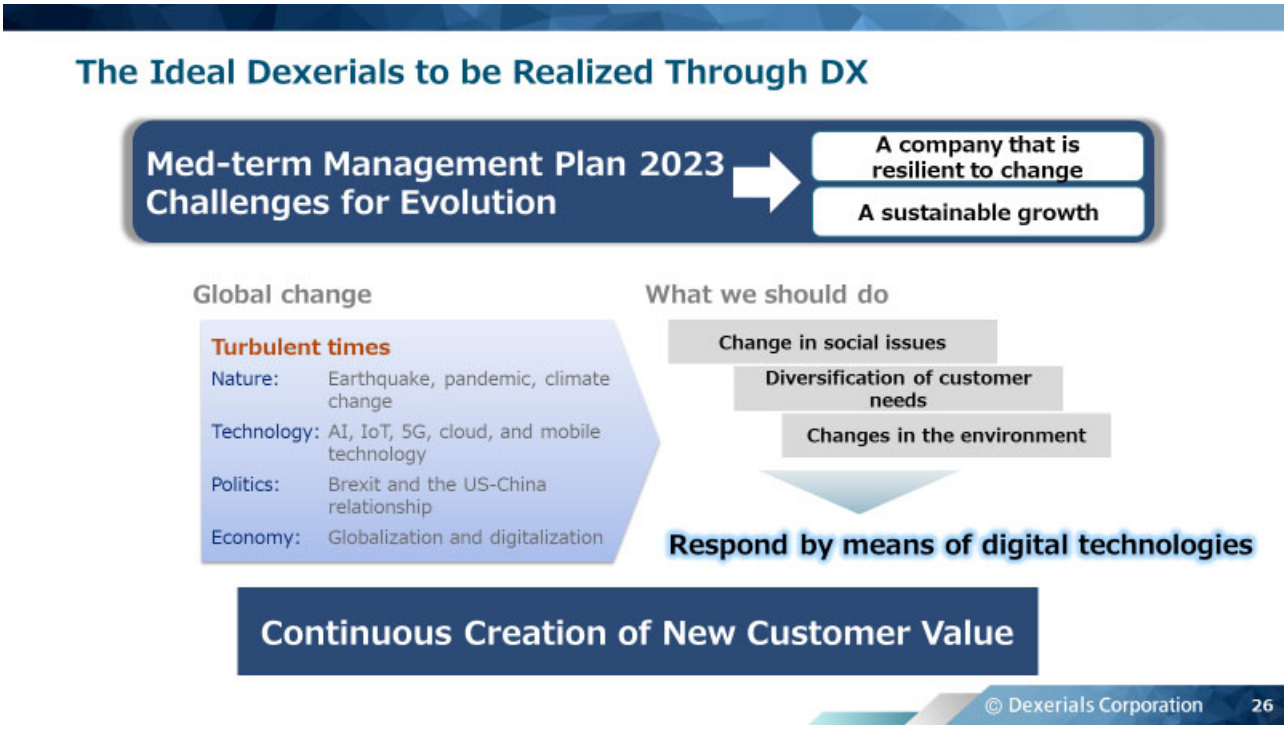
As for trademarks, we have registered the names of our main products as trademarks as much as possible to prevent our product names from being imitated and our brands from being diluted.



These activities are based on the principles of “Integrity,” our management philosophy, and “Value Matters,” our corporate vision.

On the other hand, from a medium-term perspective, there are some issues to be addressed. For example, in order to expand our automotive business, we will further strengthen our automotive related patents, promote the search for new businesses by utilizing our IP landscape, provide IP support to new businesses up to their launch, and contribute to profits by utilizing our IP rights.

The IP department hopes to contribute to the sustainable growth of the Company by resolving these issues in cooperation with the relevant departments.



Next, I would like to talk about our company's DX.

In our mid-term management plan "Challenge to Evolution", Dexerials is trying to realize to redesign our operations and business, and to change the mindset of our employees, in order to become a sustainable company that is resistant to change.

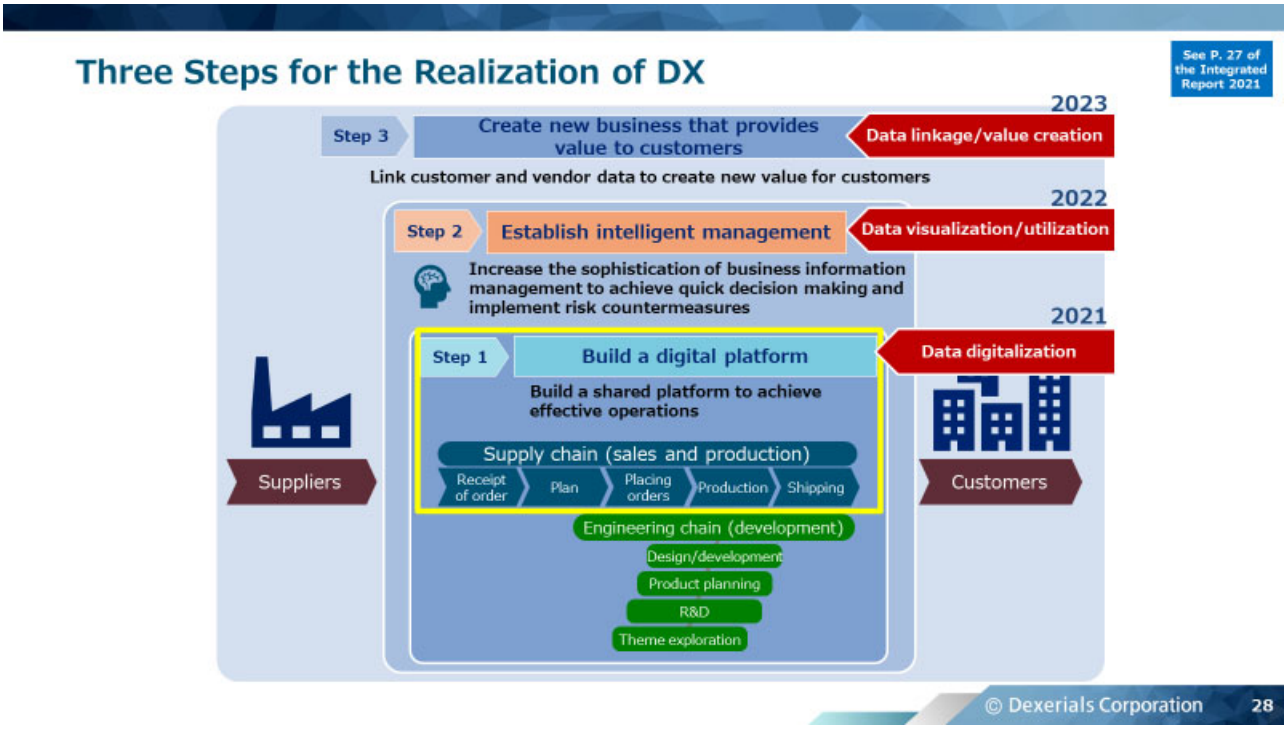
The environment around us is changing rapidly. This is an era in which conventional common sense is no longer applicable. In this environment, Dexerials aims not only to continuously support our customers in solving their problems together, but also to continue to create new customer value, while making good use of DX as a means of achieving this goal, in order to firmly respond to changes in society, customers' needs, and the environment.

We have established these 3 basic policies for the promotion of DX.

First, “Operational Reforms” is about using IT technology to streamline our operations and improve our own productivity.

Next, "Business Reforms" aims to expand our business by integrating business and IT systems to provide new values and experiences to our customers. We are currently engaged in active discussions within the Company through workshops, etc., and we have gathered many ideas on what we can do and how we can do it.

In addition, in order to "Improving Corporate Value", we will make sure that our efforts are well communicated to the outside world so that they can understand what we are doing in order to increase our recognition and corporate value.



There are 3 major steps to be taken in the realization of DX.

Step 1 is to prepare our operations to run on a shared platform. By creating a shared platform for the engineering chain, which develops products, and the supply chain, which connects orders to manufacturing and shipping, we aim to achieve efficient operations.

Step 2 is to make "Establish intelligent management". We will manage digitized data in a unified manner to increase the sophistication of management information. We will aim to achieve quick decision-making and risk response by building a system that can deliver data to the right people at the right time.

At step 3, we will work to create new businesses that provide customer value. We will create new value for our customers through the use of digital technology, which is the ultimate goal of DX. For example, by using data to connect suppliers who procure raw materials to customers who use our products, we can expect proactive production planning, reduced losses, and shorter lead times.

Today, I would like to explain our efforts in step 1 for "Build a digital platform".

First of all, I would like to explain the background that led us to create a digital platform for our supply chain.

In 2016, we acquired the Tochigi Plant in Shimotsuke City and built a new production line for anti-reflection films. If we are going to install a new line in a new factory, we should make it a smart factory that achieves thorough efficiency and high quality, and that is why we started to build a digital platform. Therefore, we aimed for a state in which everything about the factory, products, equipment, and quality could be visualized, that is, data was digitized and centrally managed.

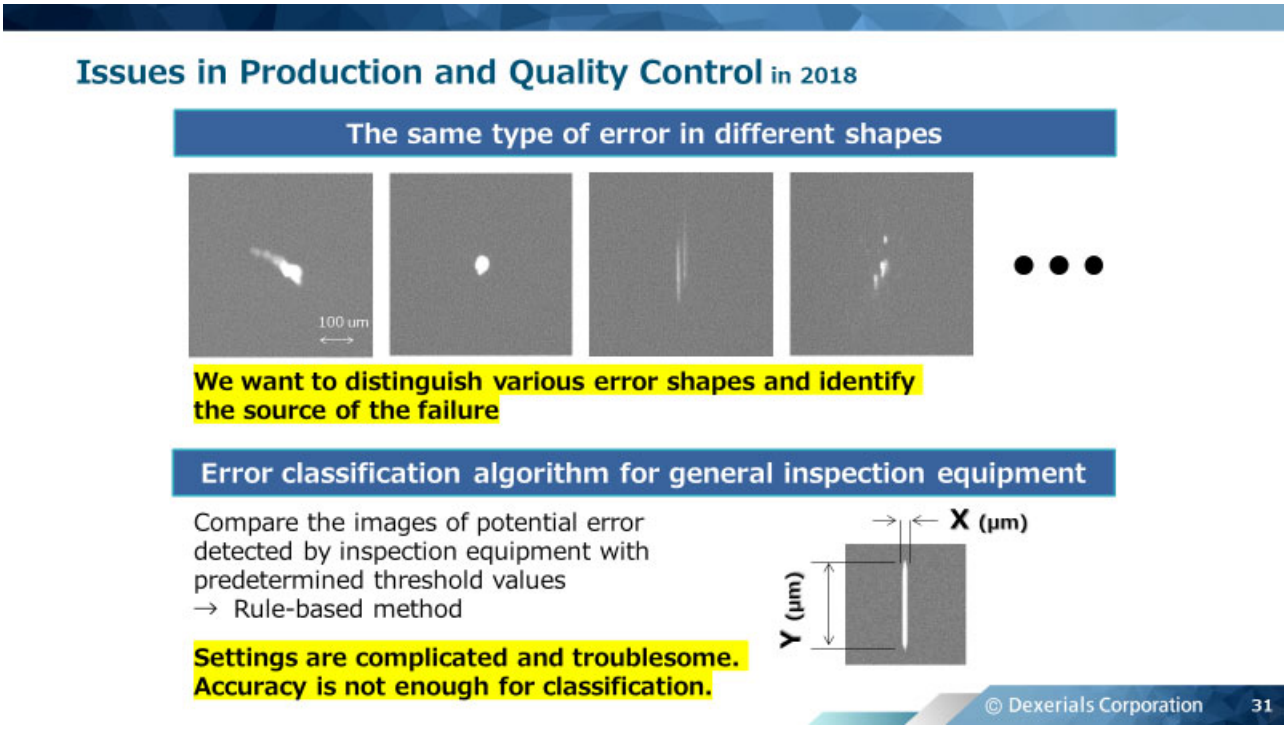
To achieve this goal, we undertook a number of projects, one of which was the introduction of AI into the inspection process of anti-reflection films production in 2018.

Many of you who are present today may already be familiar with this, but I would like to explain briefly about anti-reflection films again.

It is a highly functional anti-reflection films for use in notebook PCs and automotive displays, with excellent low reflection and scratch resistance, created through our original development and manufacturing technologies. The bottom left is a structural drawing. Anti-reflection and anti-fouling layers are added to a base material called base film. The photo shows the finished product. This method is suitable for long and continuous production, but it also has the risk of producing products with errors continuously when they occur.

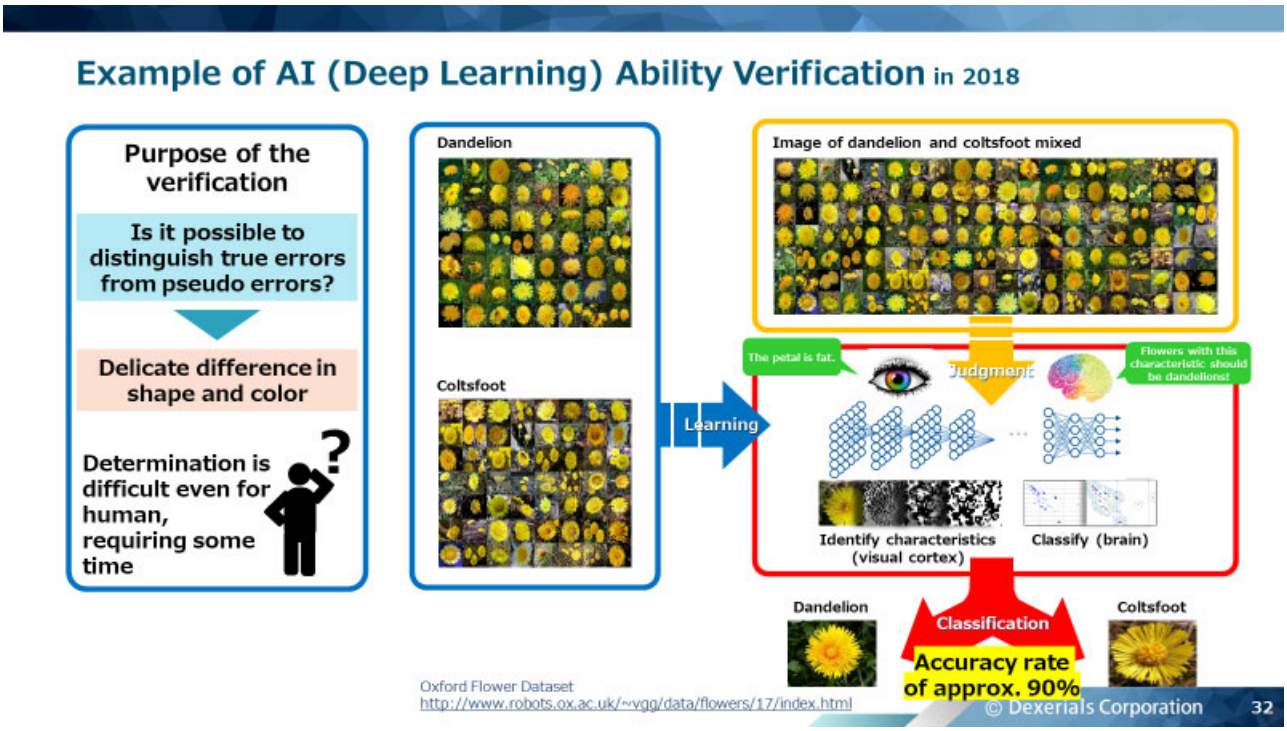
Therefore, we have installed optical inspection equipment to control and guarantee quality, and perform quality inspection in real time for the entire length and width to ensure quality and early detection of errors.

In order to deliver quality products to our customers, we put special emphasis on quality. Back in 2018, we struggled to ensure quality, so here's what we learned and how AI can help.



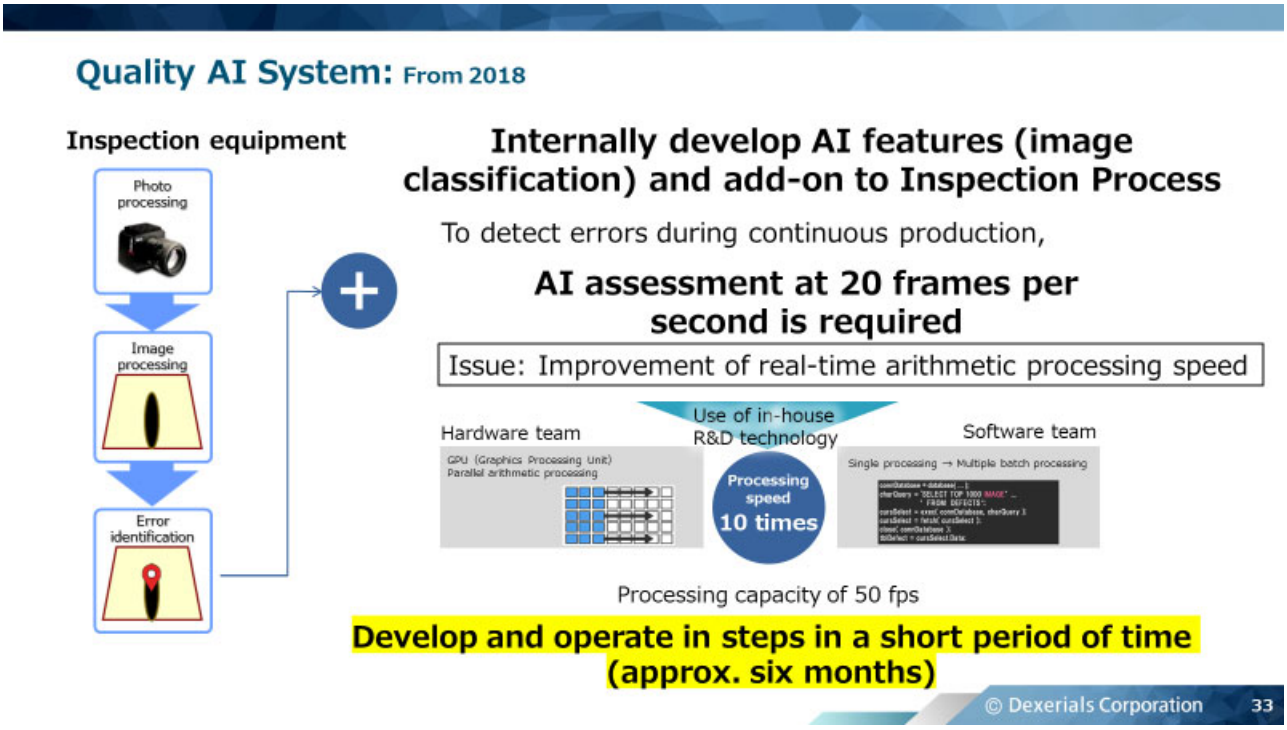
There are a wide variety of faulty modes in film, and it is necessary to determine the cause of the faulty from the mode and take countermeasures. Until now, general inspection systems have determined faulty classification based on rules, where the faulty image is measured in microns in length and in microns in width, and the faulty image is classified as a foreign object if the ratio of the 2 is greater than a certain number.

However, this method has the problem that the setting of the threshold value is complicated and time-consuming, and the accuracy of the classification becomes worse depending on the shape of the potential faulty. In addition, because of the reliance on human labor, we would essentially like to recognize faulty in real time during production, but this was not possible, and we often ended up with a large number of faulty.



As a means to solve this problem, a new AI called Deep Learning emerged at the time of 2018, and we were quick to verify its classification accuracy.

The first thing we examined was the classification of dandelion and coltsfoot, which can be found here. The aim was to have the AI learn and classify differences that are vaguely recognizable to the human eye, and we were able to extract and classify them with about 90% accuracy. This is equivalent to the accuracy of classification by the human eye. These results gave us confidence that we could use it well enough for our quality control.



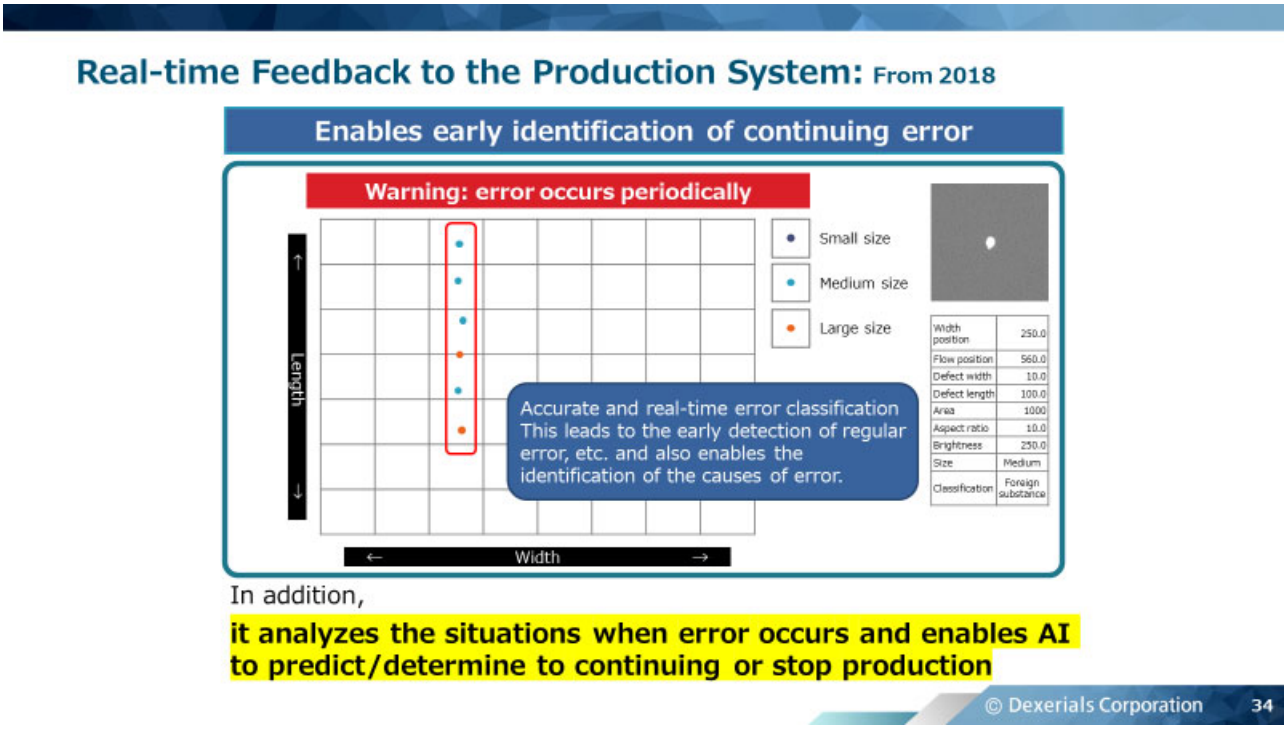
This is the configuration of a system that applies AI to inspections.

At the time of 2018, there was no commercially available AI suitable for the roll-to-roll manufacturing system we use to produce anti-reflection films, so we proceeded with internal development with external cooperation and put it to practical use in a short period of 6 months.

Even though it is simply called AI, the processing requires a huge amount of calculation, and in order to detect abnormalities during continuous production, a processing speed of 20 fps (frames per second) or higher was required, but initially the speed was only 5 fps.

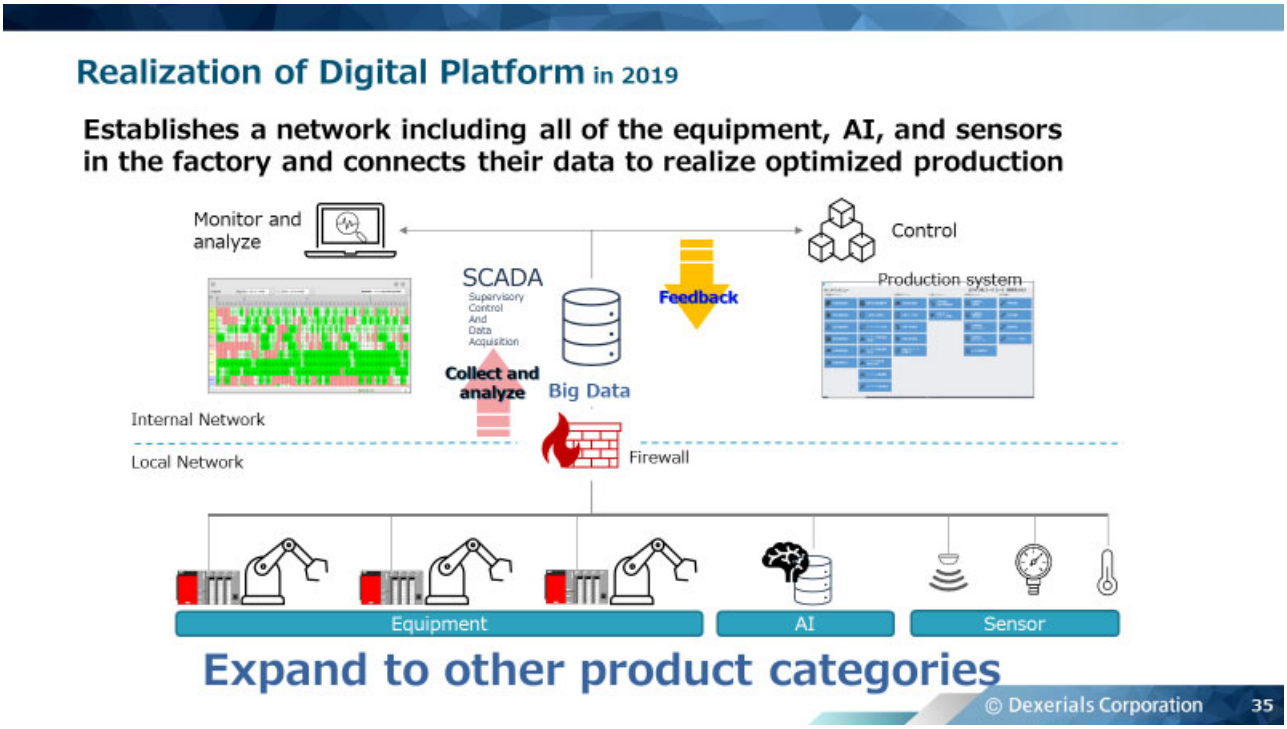
Therefore, we took measures from both hardware and software perspectives, utilizing our in-house technology, and achieved a 10-fold increase in processing speed from the beginning, thus introducing AI into the production line. While keeping the existing inspection system intact, the new system is an add-on with a function that allows AI to automatically classify and process the extracted images of faulty in real time.

In this way, while the inspection equipment itself has an independent configuration, the production and inspection processes are digitally linked in real time to enable higher value to be realized flexibly.



Information about possible error in a product that is in roll form is displayed in a map like this, where the vertical axis is length and the horizontal axis is width. By using AI to classify this mixed information of potential faulty in real time, it is now possible to identify the true faulty. As a result, we are able to prevent the production of continuing faulty products. This has greatly contributed to the reduction of the defective rate of the product, which in turn has contributed to a significant improvement in the profitability of this product.

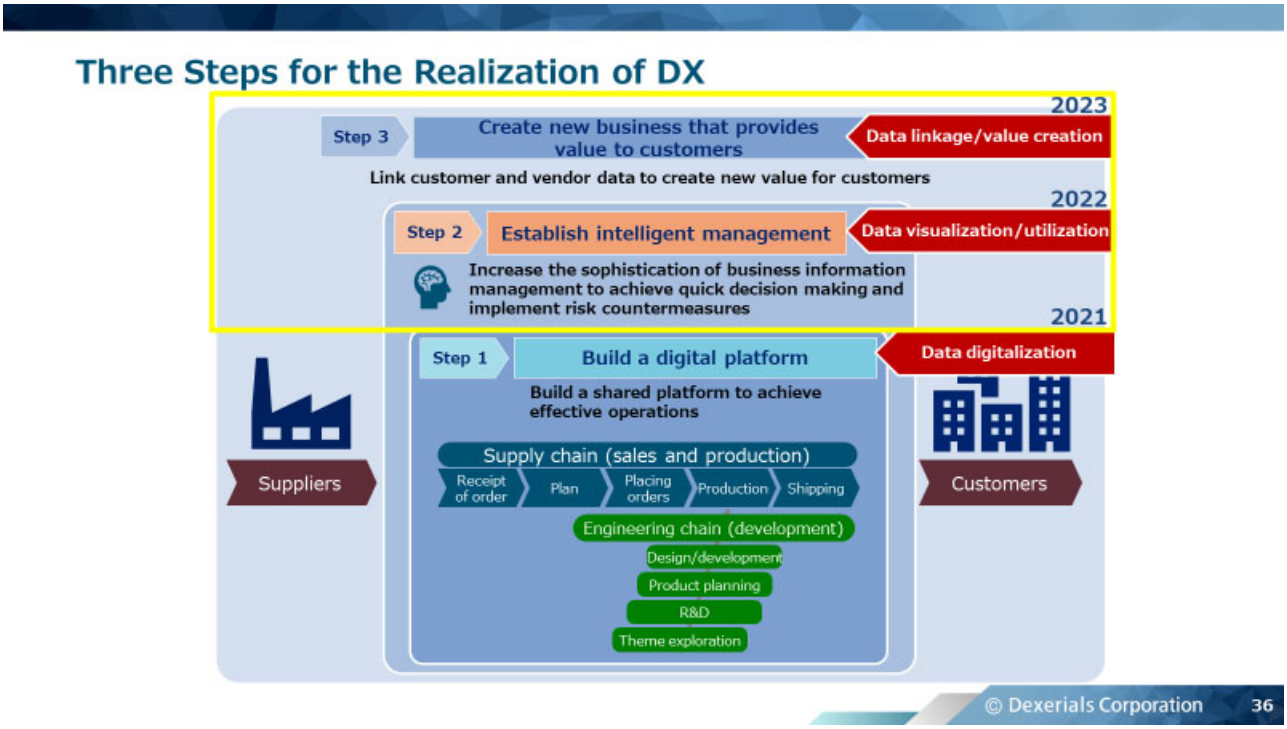
In addition, we are currently building a system in which AI can predict errors before they are created by analyzing the occurrence of errors in real time, and prevent them from occurring themselves.



A new anti-reflection films production line was built in 2016, and a quality AI system was introduced in 2018 to create a digital platform where all such equipment is networked. This has enabled us to optimize production and improve productivity, including yield, which has significantly increased our profitability.

When we introduced AI to the inspection process, I think there were rather more members in the Company who were skeptical. I believe that the reason we were able to draw out these success stories was because we took an agile approach to DX development, which is unique to DX development: Try without fear of failure up to Proof of Concept, and then decide whether to proceed further based on the results.

I've only talked about things that worked, but in reality, there are many cases where things didn't work. After reflecting on what worked and what didn't, we are now in the process of expanding DX as a powerful tool for sustainable growth, not only for anti-reflection films, but also for our other products, by applying the DX method of operational and business innovation across the board.



Once again, these are the 3 steps to realizing DX.

We have been talking about step 1 for a digital platform, and the data that is made into a platform and accumulated is expected to lead to step 2 for making management intelligent and contribute to faster management decisions.

Having completed step 1, which was to create a digital platform, we will now move on to step 2, which is to make management more intelligent. We will work to achieve the final step 3 while improving the DX literacy of the entire company.

In FY2021, we first conducted a DX training session for the management team, and then conducted a DX training session for more than 600 employees to lay the groundwork for gathering ideas on DX from various perspectives. In fact, the quality and quantity of postings to the “everyone’s DX consultation service,” which the DX promotion department has set up in our company intranet, has improved greatly from before the training.

While continuing to make the necessary investments in the human resources that will support this type of DX, I would like all employees to have a sense of ownership and commitment to DX as we move toward step 3.

Achieving Sustainable Growth through Strengthening the Management Base

*These are the four Materialities specified by Dexerials and its related SDGs

Today, I have explained about strengthening management functions, enhancing intellectual property, and promoting DX. While consistently practicing the management philosophy and corporate vision from management to the field, executives and employees are aware that they will make decisions and take actions based on ESG and sustainability concepts for sustainable growth. I feel that this awareness is spreading among them.

How to incorporate ESG into our business strategy will be an issue for the future, but we will continue to promote ESG management to achieve sustainable growth and increase corporate value.

That is all of the explanation from me.

Question & Answer

Tomita [M]: We will now move on to the question and answer session.

We have a request from Mr. Watabe of Morgan Stanley MUFG Securities Co., Ltd. Mr. Watabe, please go ahead with your question.

Watabe [Q]: First, what changes have actually taken place since the transition to a company with an Audit & Supervisory Committee? For example, is there any case that decisions of the executive officers have been rejected at the Board meeting? This is my first question.

Yoshida [A]: I would like to explain to answer your question about what exactly happened to manage our decision-making after the transition to a company with an Audit & Supervisory committee.

At the Board of Directors, we have a basic policy of holding open discussions, not only at the Board of Directors meetings, but also by having outside directors visit our Tochigi Technology Center to see various operations. We continue to have discussions until a conclusion is reached without ambiguity.

With regard to the anti-reflection films for which we invested in increased production this fiscal year, we received a variety of advice and opinions during the planning stage from outside directors when we had them actually visit and check our production sites.

I would like to refrain from explaining to specific cases, but I believe that the Board of Directors have been enhanced as a place where we can have truly open discussions.

Watabe [Q]: The second is about Digital Transformation("DX") and "AI". Earlier, you mentioned major improvements in anti-reflection films, but I think productivity improvements in Anisotropic conductive film (ACF) were also significant. Is this not so much about DX or AI, but rather your company's self-help efforts?

You mentioned lateral expansion, but if you have any quantitative figures on the effects of this "DX" promotion, etc., I would be interested to hear them, as overall business performance is expected to improve significantly in the future due to further improvements in ACF, etc. Can you please explain ACF and horizontal expansion in the future as well?

Akeyama [A]: First of all, with regard to ACF, etc., we are now in the stage of horizontal expansion of "DX" that has been achieved with anti-reflection films to other product categories, so we believe that we can expect even more benefits from "DX" going forward.

However, in recent years, the productivity or production yield of products other than anti-reflection films, such as ACF products, have improved significantly. For example, there are many areas that have been achieved through the development of elemental technologies in the manufacturing process, so I believe and expect that these areas of process development and the areas that will be further improved through "DX" will become apparent in the near future.

Regarding how effective "DX" was, in the case of anti-reflection films, I would like to refrain from giving specific numbers, but the effect has been very large. We actually started using "AI" in FY18, and we believe that the results were very effective in FY20.

Watabe [Q]: There is a chart that I would like to check, on page 21, the ACF score map, and I would like to know if there were so many competitors. Is this what you mean in your company, that the particle-arrayed

ACF is in the upper right corner here, and the existing one is a little bit lower, or something like this, or is this already the case with Dexerials, where the upper right corner here represents the whole thing, and is there this much competition in this area?

Akeyama [A]: This includes not only our competitors, but also patents held by display manufacturers who are in the next stage of the value chain. Therefore, the mapping of patents includes ACF patents that are subject to the Company's own competition, as well as those that are slightly upstream or downstream.

Therefore, I hope you can understand that this mapping includes patents from companies that are slightly different from our competitors in the ACF business.

Tomita [M]: Thank you very much for your question, Mr. Watabe. Next, Mr. Umebayashi from Daiwa Securities Co. Ltd.

Umebayashi [Q]: So, I would also like to ask about "DX" first. You said that the anti-reflection films was very successful this time, but you mentioned earlier that there were cases where it did not work. I would like to know what kind of pattern it was.

For example, as you mentioned earlier, using AI Deep Learning, the inspection went well, but the process did not go so well. In terms of products, for example, products such as inorganic polarizer are now outsourced, but I would like to know if there are any examples of how "DX" has tried to improve this area but failed to do so.

Akeyama [A]: The first step is to create a platform, and then to connect all of them, hopefully with real-time feedback, so that the productivity of anti-reflection films has been increased in such a connected way.

In such a situation, we come up with ideas on how we can use the information we get more rigorously and in real time to be more productive. When we come up with an idea, the most important way to approach "DX" is to try it first. When we decide to try something, we set a rather challenging goal, so there are quite a few cases in the manufacturing process where we thought it would work, but the results did not exceed our expectations.

Therefore, there are some that have shown great results and some that have been quite challenging but have not shown the same level of promise. This is my answer for the first question.

The second is inorganic-materials products, which are manufactured in a completely different way from anti-reflection films and ACF in terms of product category. For example, we will handle things like wafers, so the manufacturing process itself will change entirely, from tons or meters to units. Therefore, DX at anti-reflection films business is a little different from that of "DX" for such as the inorganic polarizer.

However, what they all have in common is the need to monitor the manufacturing process as much as possible, place a large number of sensors, connect them, find hints for detecting errors, or find the cause of errors, and then feedback the process to production as quickly as possible. Although there is difference between anti-reflection films and ACF, "DX" has been used for such purposes for the past 3 years.

For example, in terms of labor productivity, there are cases where processes that used to require about 12 people can now be done by about 4 people through the innovation of automation and connecting platforms.

Umebayashi [Q]: If that's the case, surface mounted type fuses are also rather managed by the number of pieces, but is it correct to say that "DX" is expected to improve productivity in these areas in the future?

Akeyama [A]: This is how I see it. Each product has its own unique characteristics, so the basic idea is to create a platform and connect inspection processes and sensors to determine causes and results, but each product is slightly optimized in terms of what it monitors and senses. The same concept is applied to surface mounted type fuses, and I believe that we are seeing results in terms of improved productivity and quicker communication of the results to the management team.

Tomita [M]: Actually, Mr. Yoshida, who is here today, used to be involved in the anti-reflection films business, so he would like to say a few words.

Yoshida [A]: As I was in charge of the implementation of the digital platform and smart factory in the area of anti-reflection films until March last year, I would like to talk about what we were able to do and what we were not able to do.

First of all, the implementation of the AI-based inspection method has been successful in conveying the information to the front-end process more quickly and preventing the creation of continuous errors. I will explain one thing that did not work and that we are still working on.

We are planning to build a real-time monitoring system that can collect big data on the condition of all the equipment in real time, including IoT, and connect the condition of the equipment with the finished product. We are planning to build a real-time monitoring system that can give us feedback on what process control we should have, to what kind of behavior the equipment is experiencing.

In the process control, we need to accumulate and collect more data before we can establish a system to make a decision to stop or go with the equipment while monitoring the condition of the equipment. So, there are some items that we are still working on.

Umebayashi [Q]: Secondly, I would like to ask about the relocation of your headquarters. You mentioned earlier that there were many advantages, but what were some of the disadvantages, such as the fact that some people quit due to the relocation of the head office, or if there are any issues that still remain as a result of this?

Yoshida [A]: First of all, as I explained in the main part of the presentation, we were aiming to relocate the head office functions this time without any major relocations including transfers. Of the 180 to 200 people working at the head office in Tokyo, less than 10 have been transferred to the new HQ/Tochigi Technology Center, so we have not had any issues with employees leaving.

We are continuing to work on the potential issue of whether the location of Tokyo and Tochigi will make it difficult to hire people.

In fact, we have made the teleworking system a regular feature of our company since April, which means that we will firmly establish a new way of working regardless of location. We are also working on the possibility of attracting excellent talents, including diversity, who could not be hired due to various restrictions, including geographical conditions.

Other than that, the cost of relocation has been very effective, so we will continue to work on the recruitment of human resources.

Tomita [M]: Next, we have a request from Mr. Yamada of Mizuho Securities Co., Ltd. Mr. Yamada, please ask your question.

Yamada [Q]: First, when you talked about “DX” earlier, you said that up to Proof of Concept, you would try various things without fear of failure, and that you would adopt the concept of agile development. In this

story, the definition of the requirement to eliminate errors is extremely clear, so this really doesn't need to be a waterfall development, and I think it's better to do it being agile development.

I don't think it's that difficult to be agile while creating a digital platform, but in order to implement the overall optimization that you mentioned earlier, and to implement intelligent management, the definition of requirements suddenly becomes more complex. Please tell us your thoughts on whether you have as many human resources as possible in the agile development method, whether you are hiring more externally, or whether you can do it in-house.

Also, is this an on-premise system?

Akeyama [A]: First of all, it is impossible for us to do everything with our own resources. Therefore, we work with our subcontractors and consultants in various ways to define the requirements and actually construct the system.

I think it is important for us, as a control tower, to know what we want to do, verify what we have accomplished, and make improvements. It is important for us to do the part of turning PDCA properly.

Therefore, even with agile development, depending on the scale of the project, we may need to be a little more careful, and if it is a small project, or if the theme is to improve productivity, we can just do it. So, we are doing it in an agile way and evaluating the results in the form of a PDCA cycle. We are doing this with the help of an outside party.

As for whether it is on-premise or not, it is on-premise.

Yamada [Q]: Just to confirm, even at the stage of taking management to the intelligent stage or another higher stage, your company has developed a large number of people who can define requirements and do the PDCA cycle, in other words, people with a digital mindset, so it won't be out of control. With agile, multiple people run the project at once, so I think it would be very troublesome if it became out-of-control, but that's not the case, is that correct?

Akeyama [A]: We have a dedicated department called the DX department, which reports directly to me. As the name of the department implies, the DX department does not necessarily handle all "DX" activities. I think that "DX" starts from the idea of how to solve each department's problems digitally.

Therefore, if each department wants to solve this kind of problem through digitalization, the DX department will first identify the problem and then lead the way to show them how to do it. However, if this is the only way, the system will be locally optimized, but the whole system will not be well connected, or the whole system will be uneven, and when we go to the second stage, when we connect it to intelligent management, there will be cases where it is difficult to connect.

Therefore, we have a system in which the DX department takes the lead on each theme from the perspective of company-wide optimization, so that the system can be built smoothly from step 1 to step 2.

Yamada [Q]: I would like to ask my second question. I have read in the Integrated Report 2021 that your company's CO_2 emissions are quite low, but I think that in the future, as your carbon neutral initiatives progress, there is a possibility that cost increases upstream will flow downstream, or that unexpected cost increases will occur in the procurement of raw materials.

Since your company manufactures a lot of products with high marginal profit margins, do you think this kind of upstream cost increase will have little impact on your business or do you consider it as a management risk?

What are your thoughts on the risk of raw material price increases associated with the promotion of carbon neutrality?

Yoshida [A]: To reduce emissions, it is necessary to reduce emissions throughout the value chain, which cannot be implemented by ourselves. Therefore, we are considering calculating our own emissions while preparing for discussions with our suppliers.

This is one of the scenarios under the TCFD, so we would like to proceed with the calculation of the carbon tax and the associated upstream and downstream costs.

Yamada [Q]: For example, the risk of a large increase in electricity rates due to the increased introduction of renewable energy to power companies, or the risk of a large increase in raw material prices due to higher costs in the refining process of organic chemicals are not very big management risks, or price risks.

Yoshida [A]: That's right. We are already working on the purchase of J-credits, including renewable energy, and we believe that the amount of electricity used in production related to the renewable energy portion will be about JPY100 million per year. In fact, if a carbon tax were to be introduced, the cost would be 3 to 4 times higher than this, but we do not think it would be a large cost.

Yamada [Q]: Lastly, in the S section, you mentioned the deepening of relationships with various stakeholders, and today you talked about the actual supply chain, so I think that is the main topic. In addition to that, you talked about the hiring of employees, so I think you are talking about the relationship between upstream and downstream.

You have been doing IR activities vigorously, but if there is anything else you are thinking about in terms of stakeholders, other than the investors, employees, and value chain that I just mentioned, please let us know.

Tomita [A]: As you pointed out, we want to be a company that is chosen by a wide range of stakeholders, not only in Japan but also around the world.

In order to achieve this, for example, we have moved our headquarters to Tochigi. Although this is a bit local, in order to maintain a stable business here in Tochigi for many years to come, we need to be recognized in the community. Furthermore, in order for us to grow in the world in the future, we will need to acquire excellent talents and promising technologies around the globe.

In this sense, we would like to present our management policies, ideas, and directions to our various stakeholders around the world, and show them how we can contribute to society by doing what we do. We hope that many stakeholders want to work with us, and that they want to live with us.

Yamada [M]: I look forward to various inclusions and developments.

Tomita [M]: Thank you for your questions. This is the end of the question and answer session as the time has just come. This will be the end of the briefing for today.

Thank you for joining us today despite your busy schedule. Thank you very much for your continued support for Dexerials. Have a very good day.

[END]

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