



ESG/Sustainability Briefing

January 17, 2022

Dexerials Corporation

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



Corporate Philosophy, Corporate Vision, and our ESG/Sustainability

**Executive Officer,
Corporate Planning & Control Division Head
Takashi Yoshida**

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

Corporate Philosophy

Integrity

Have Integrity and Sincerity

Open and highly transparent business management

Corporate Vision

Value Matters

Unprecedented innovation, unprecedented value.

Tireless development and provision of technology and products



Contribute to the realization of a sustainable society

Our sustainable growth/increase of corporate value

Evolution through the Mid-term Management Plan

Initiatives since FY2019

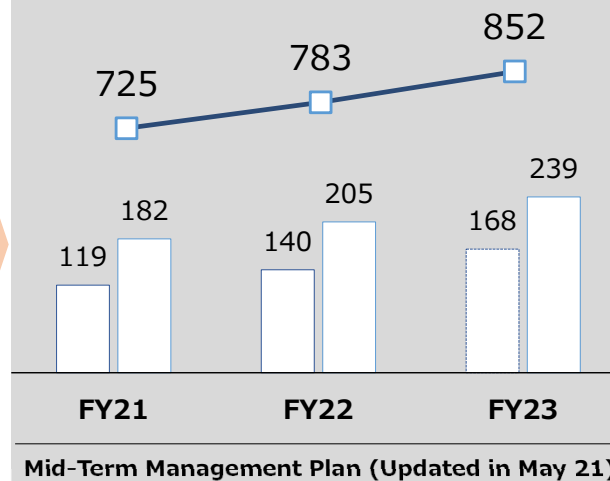
Re-assessment of business and review of business portfolio

Business growth through the expansion of differentiating technology products

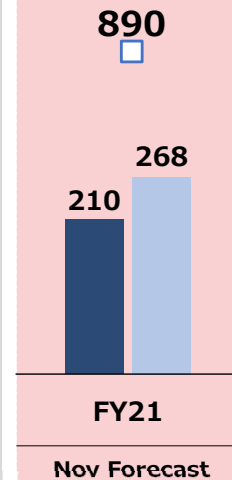
Benefit of cost reduction measurements building lean organization

Positioning

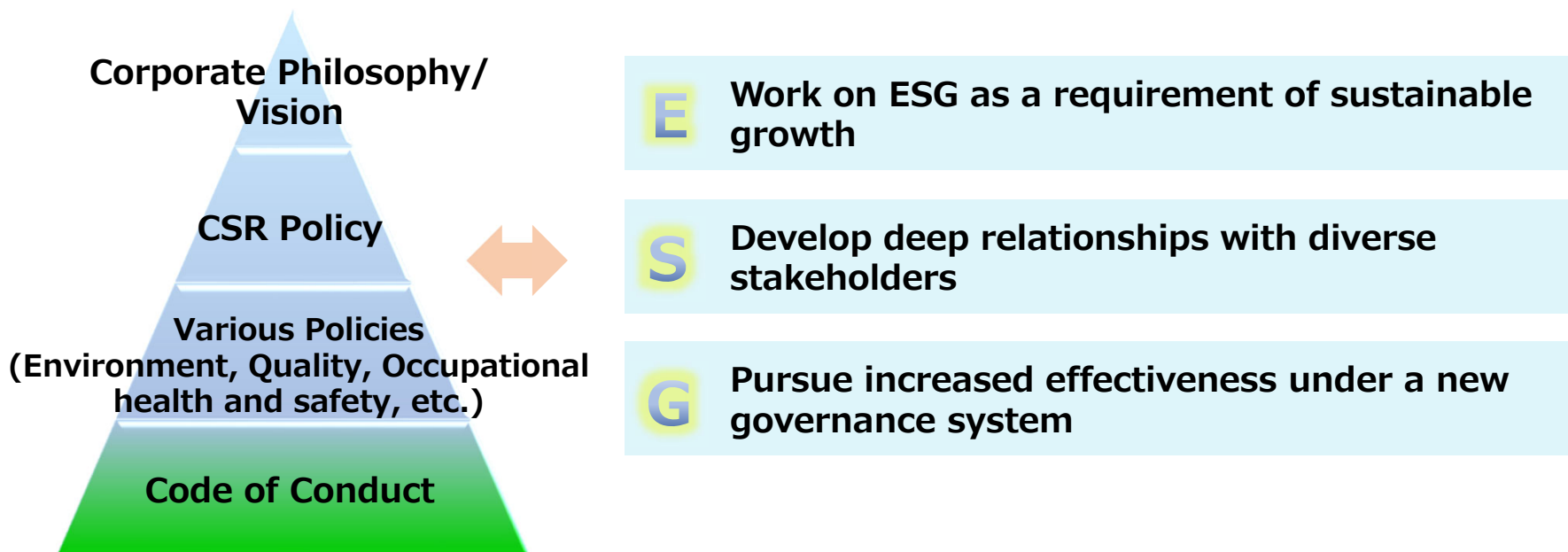
Build a base for sustainable growth and the increase of corporate value through growth strategies and corporate reform



Net sales (100 million yen)
Operating profit (100 million yen)
EBITDA (100 million yen)



Shared “healthy sense of crisis” about a lack of change being the largest risk among the entire company
Took the initiatives to change and carried out reforms



Management and employees share a perspective and all employees work together to implement ESG measures and CSR activities

Today's Topics

■ Initiatives for Strengthening the Management Base

Improvement of Management Functionality	Transfer of head office functions Shift to a company with an Audit and Supervisory Committee
Enhancement of Intellectual Property Position	Policy for Intellectual Property Activities Initiatives for Identifying New Businesses
Promotion of Digital Transformation	Basic Policies and Targets Digital Platform
Climate change initiatives	Net zero CO ₂ emissions by FY2030 Disclosures based on the TCFD recommendations
Human resources and diversity	Cultivating next-generation leaders Promotion of women and mid-career employees
Work-style reforms	Shift to new working styles Renewal of the personnel system

Initiatives for Strengthening the Management Base

Improvement of Management Functionality

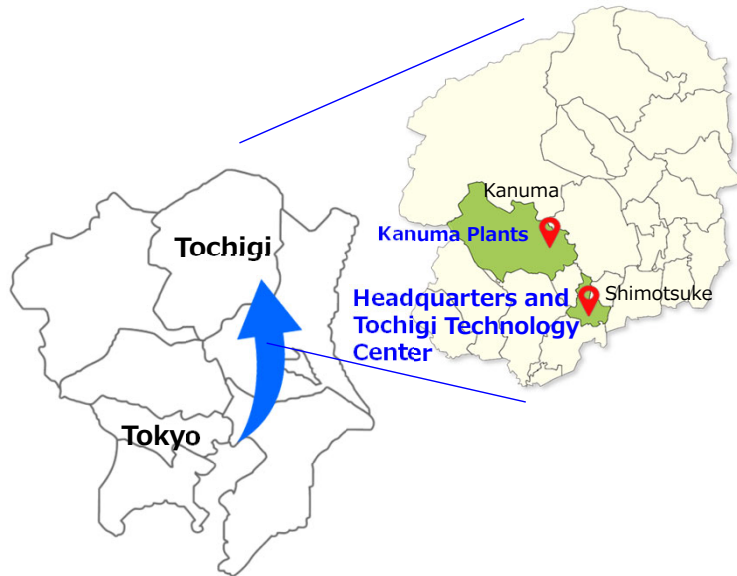
Improvement of Management Functionality

Transfer of Head Office Functions -1

See PP. 30-31
of Integrated
Report 2021

Characteristics

- Development and production of major products
- Natural disaster-resistant location



Objective

- ◆ Integrating operation of management and sites
- ◆ Organize the head office functions that should be conducted by each office
 - ◆ April 2021: Institutionalized tele-working at all offices in Japan to create an environment enabling people to work free of restrictions on workplace

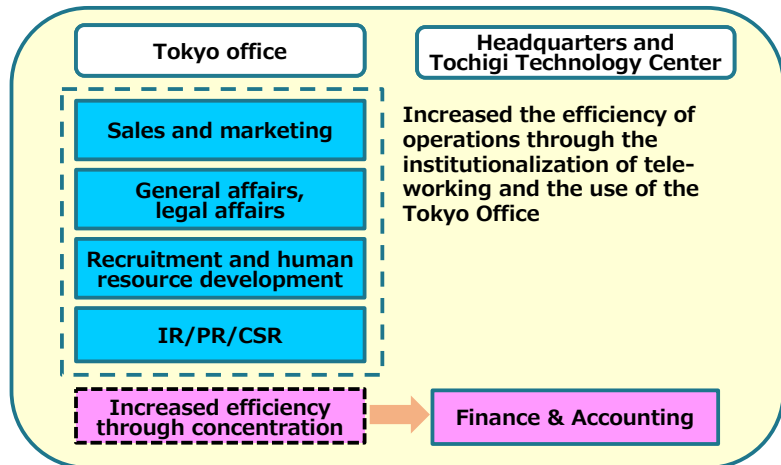
Improvement of Management Functionality

Transfer of Head Office Functions -2

See PP. 30-31
and P. 58 of
the Integrated
Report 2021

As of July 1, 2021

- Moved registered head office to the Tochigi Office
- Established the Tokyo Office



Initiatives

- ◆ Redefined head office functions and redesigned operations management
 - ✓ Completed the transfer of functions without large-scale employee relocations
 - ✓ Progress in work-style reforms facilitated an increase in the efficiency of operations without geographical or time constraints

Selected to be in the Top 100
Telework Pioneers in Nov 2021



Improvement of Management Functionality

Shift to a company with an Audit & Supervisory Committee -1

See P. 31 and
PP. 46-49 of
the Integrated
Report 2021

Improving corporate governance since its stock listing

July 2019

- Establishment of the Nomination and Remuneration Committee
- Introduced a delegation-type executive officer system
- Increased transfer of authority

June 2016

- Introduced a performance-linked stock remuneration system

June 2021

- Shift to a company with an Audit and Supervisory Committee
- Revised policy for determining officer remuneration
- Made all executive officers subject to delegation agreements
- Increased transfer of authority

July 2015

- Initial listing of shares in the TSE's 1st Section

Objective

- ◆ Increase the agility of management and accelerate operations
- ◆ Appropriately support management decisions and improve monitoring functions
- ◆ Make the Board of Directors a place for more strategic discussions by ensuring it is composed of diverse and highly specialized members

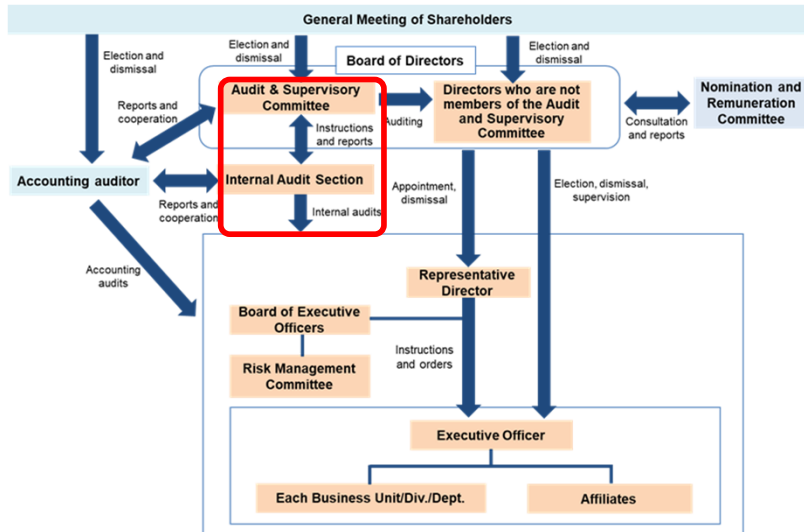
**Shift to a company with
an Audit & Supervisory
Committee in June 2021**

Improvement of Management Functionality

Shift to a company with an Audit & Supervisory Committee -2

See P. 31 and
PP. 46-49 of
the Integrated
Report 2021

Corporate Governance System



Initiatives

- ◆ Delegated authority to the Executive Directors and Executive Officers
- ◆ Internal Audit Department shifts to a system where it is directly controlled by the Audit & Supervisory Committee

- ✓ Designed a system to ensure appropriate risk-taking through accelerated decision-making and the strengthening of audit functions

Improvement of Management Functionality

Building a Management System for Further Growth

Business Environment Surrounding the Company

Change occurs more quickly

- Changes in values and behavior due to the pandemic
- Diversification of geopolitical risks
- Responses to growing environmental and energy problems
- Threat to business continuity caused by natural disasters etc.

For Sustainable Growth

- ◆ Integrating operation of management and sites
- ◆ Accelerate management decision-making
- ◆ Improve the monitoring function towards the execution of businesses

Improvement of Management Functionality

Transfer of head office functions

Shift to a company with an Audit & Supervisory Committee

Strengthen the management system, respond quickly to change, and increase corporate value

Initiatives for Strengthening the Management Base

Initiatives towards Enhancement of Intellectual Property Position and Promotion of Digital Transformation (DX)

**Executive Officer,
Corporate Strategy Division Head
Koichi Akeyama**

Initiatives for Strengthening the Management Base

Initiatives towards Enhancement of Intellectual Property Position

Dexerials' Policy for Intellectual Property Activities

See P. 43 of
the Integrated
Report 2021

**Purpose of intellectual
property activities**

Sustainably create corporate value through a cycle of
creating, protecting, and using intellectual property assets

**Securing intellectual
property rights to increase
competitiveness**

**1. Building global barriers to entry
2. Securing intellectual property rights to enhance its
business model**

**Strategic use of the
intellectual property
portfolio**

**3. Using intellectual property to ensure competitiveness
4. Leveraging open innovation for environmental
technologies**

**Active investment in
intellectual property and the
DX of intellectual property**

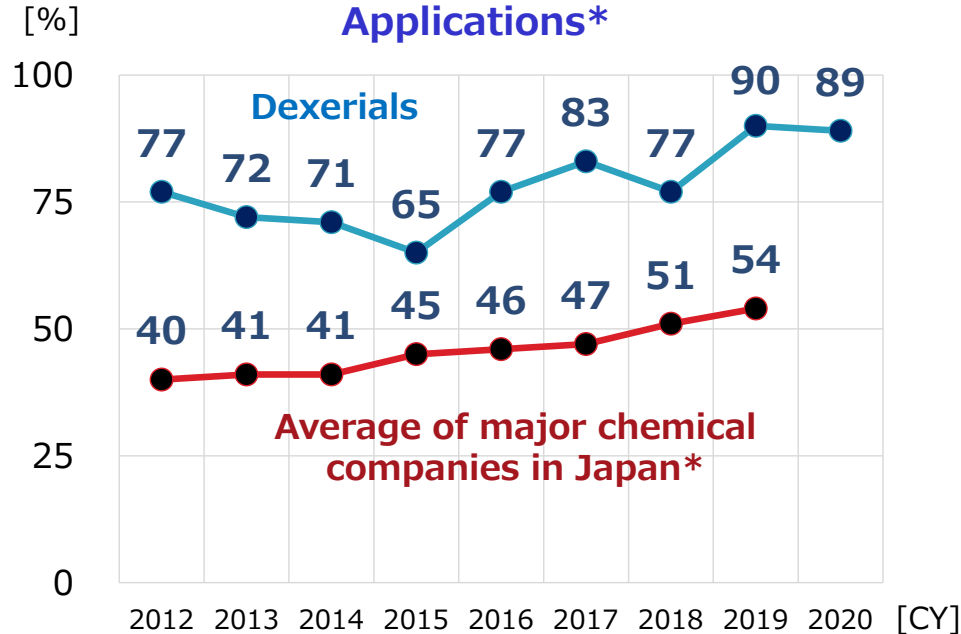
**5. Strengthening IP landscape* (intellectual property DX)
6. Intellectual property mix (patents, designs, trademarks,
know-how, etc.)**

*IP landscape (IPL): When developing a corporate or business strategy, perform an analysis incorporating intellectual property information into management and business information, share the results of the analysis (an overview of current conditions, future perspectives, etc.) with management and its business heads

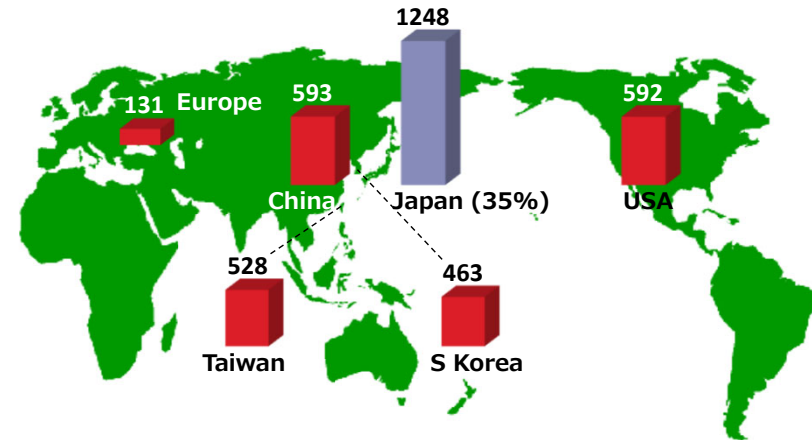
1. Building Global Barriers to Entry

Increasing competitiveness

A. High % in Foreign Patent Applications*



B. # of Patents Registered in Major Countries (As of March 31, 2021)



Patent ownership rate outside Japan

65%

*Percentage of foreign patent applications: The percent of patent applications that were submitted in Japan in each year that were also submitted in foreign countries

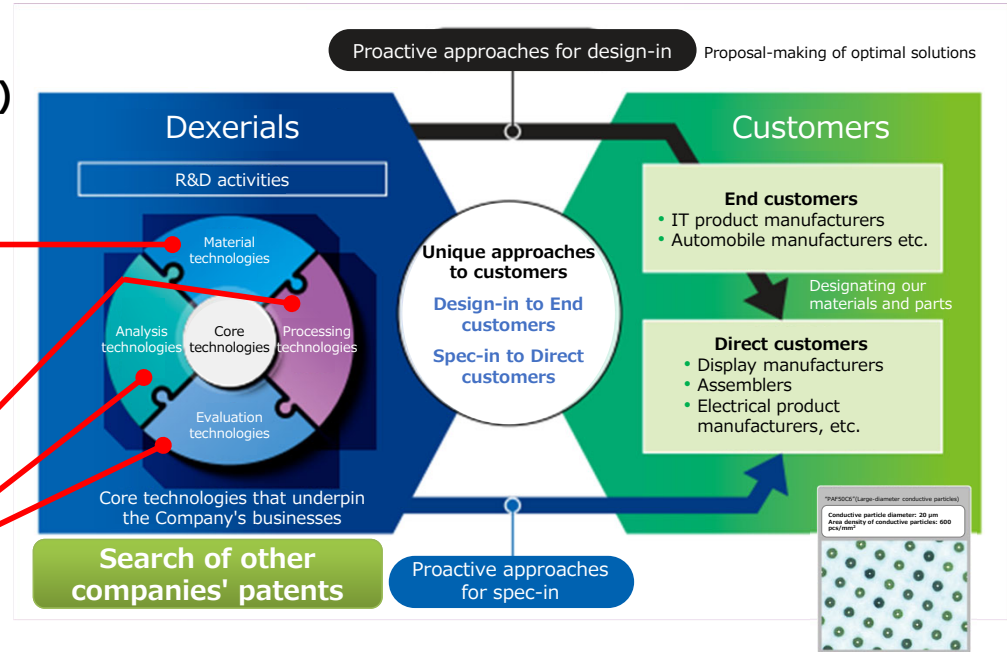
*Average of major chemical companies: the average of selected 10 Japanese companies in the chemical industry

2. Securing IP Rights to Enhance its Business Model

Increasing competitiveness

■ Example: Patent Application for Anisotropic Conductive Films (ACF)

Invention of materials	Example patent description
Performance materials	<ul style="list-style-type: none">• Anisotropic conductive materials• Anisotropic conductive films
Intermediate products	<ul style="list-style-type: none">• Connective structure
Invention of process	Example patent description
Manufacturing Method	<ul style="list-style-type: none">• Manufacturing method for Anisotropic conductive films• Connection method
Analysis and evaluation technologies	<ul style="list-style-type: none">• Method of inspecting connector

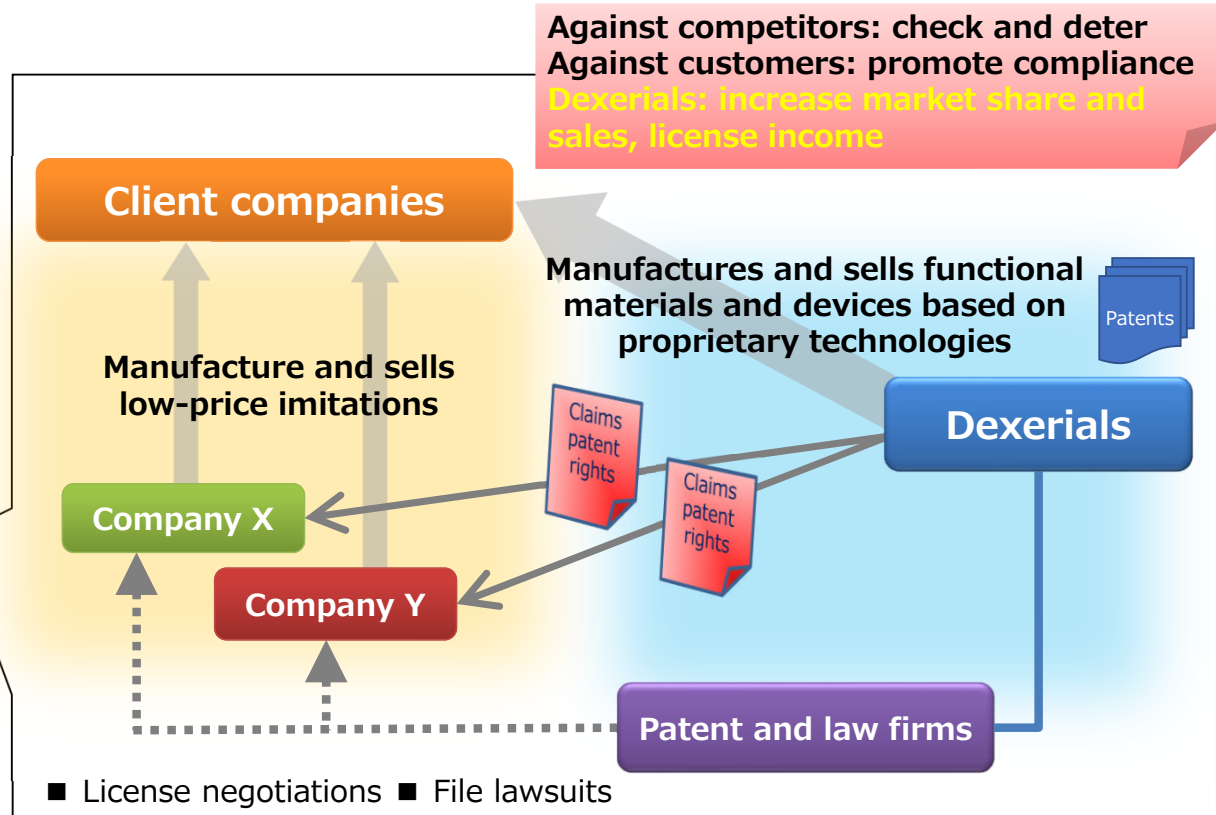


Obtain patents for core technologies in various categories
➡ Ensure our business safe from legal action

3. Using Intellectual Property to Ensure Competitiveness

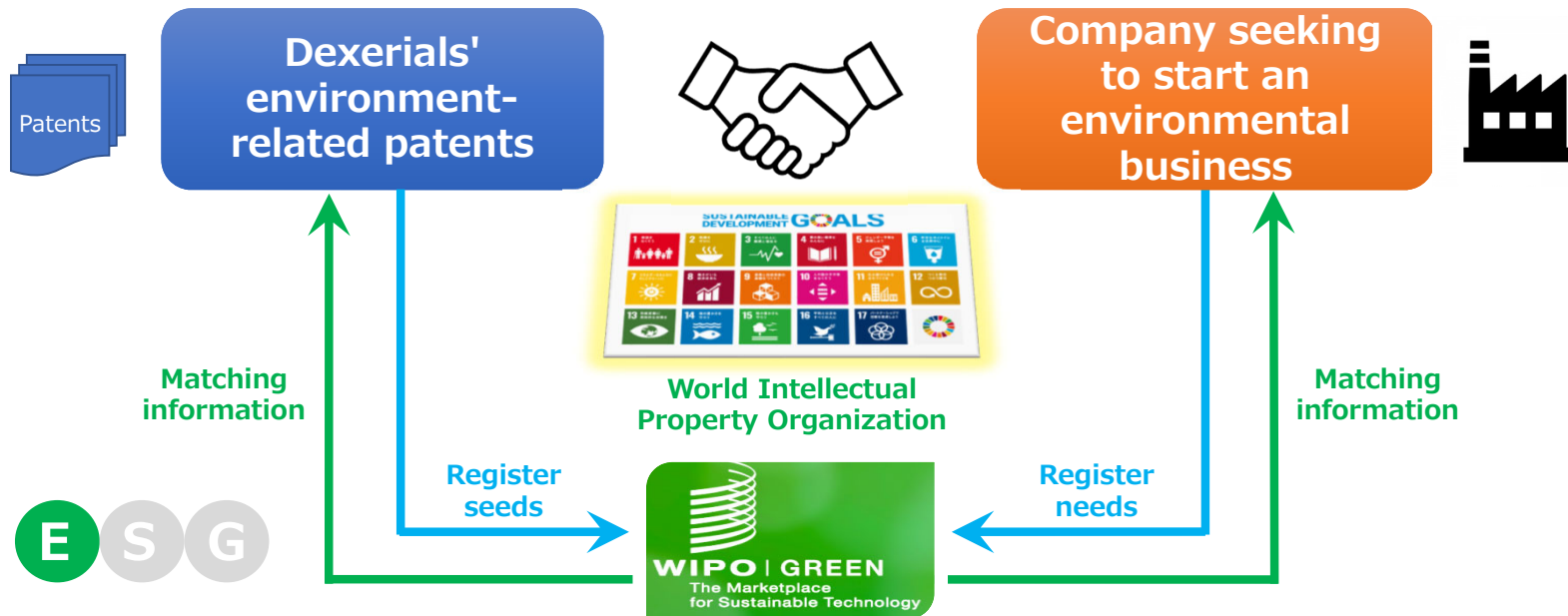
Major examples of intellectual property activities

- Build a global intellectual property portfolio and strengthen entry barriers of our differentiating technologies
- Exercise rights against competitors using our patents without permission to check them and contribute to increase sales (figure on the right)
- Income-expenditure balance for patents and licenses significantly improved since FY2021



4. Leveraging Open Innovation for Environmental Technologies

Aim to enable our environment-related patents to be used in society through participation in WIPO GREEN

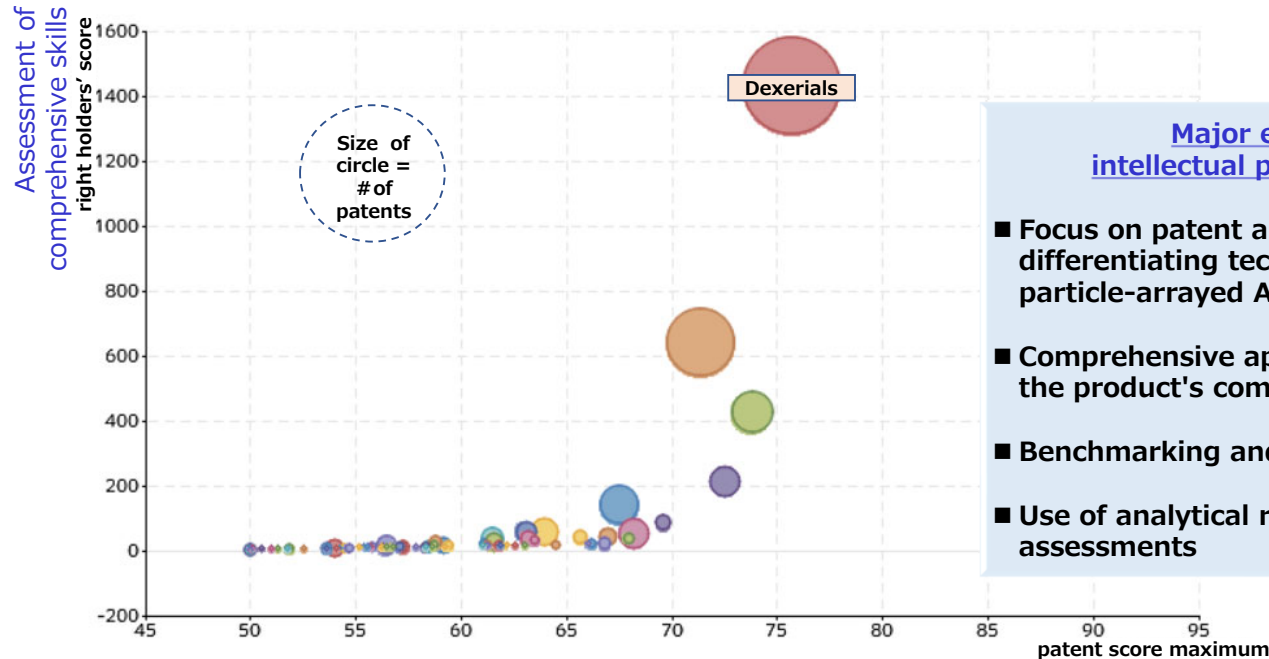


*WIPO GREEN is a platform operated by the World Intellectual Property Organization (WIPO) for the promotion of open innovation in the field of environmental technologies

5. Visualizing Patent Rights Using an IP Landscape

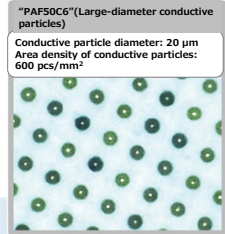
IP investment and the
DX of intellectual
property

IP Right Holders' Score Mapping: Anisotropic Conductive Film (ACF)



Major examples of intellectual property activities

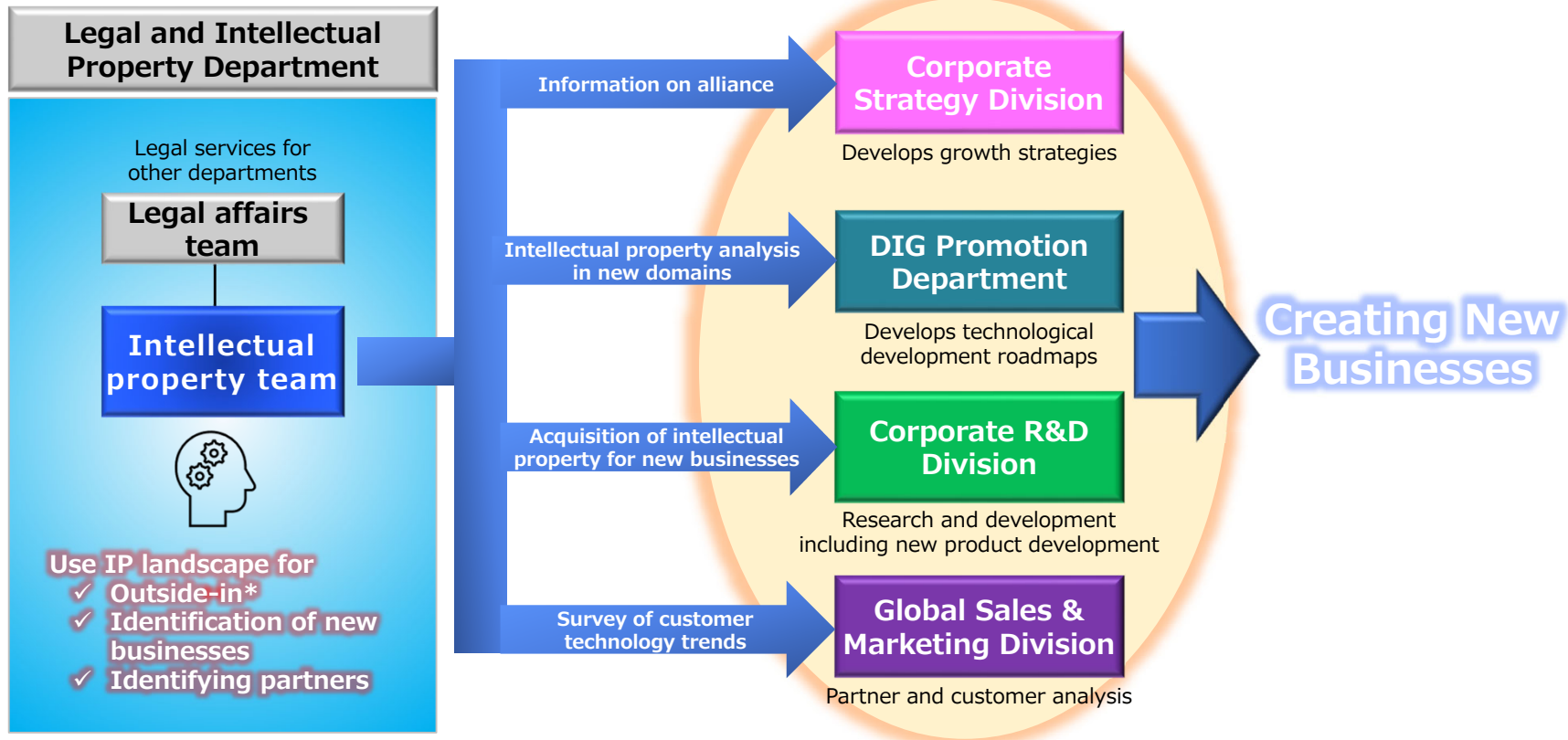
- Focus on patent applications for differentiating technologies such as particle-arrayed ACF
- Comprehensive application for each of the product's components
- Benchmarking and checking competitors
- Use of analytical results in business assessments



* Chart created using Patent Result Co., Ltd.'s Biz Cruncher, based on our own research

Assessment of outstanding technologies
(individual technology) in ACF field

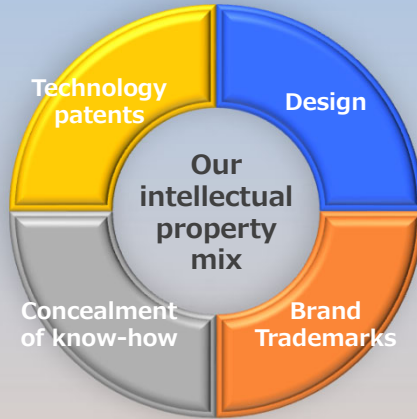
Using IP Landscape in Cooperation with Other Departments: For the Sustainable Creation of New Businesses



*Outside-in is a technology strategy in new domains for the consideration and development of products we are able to provide to solve future social issues

6. Intellectual Property Mix

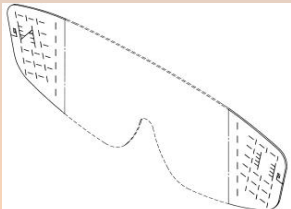
IP investment and the
DX of intellectual
property



Design

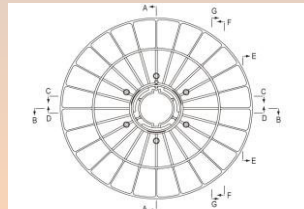
Design registration
No. 1524393

Eyeglasses protective cover



Design registration
No. 1662122

Tape-form adhesion film reel



Trademarks (Brands)

Dexerials

**A brand is proof of reliability
and quality**

The period that patent and design rights
are protected is limited, but trademark
rights shine forever

Examples of Product Brands

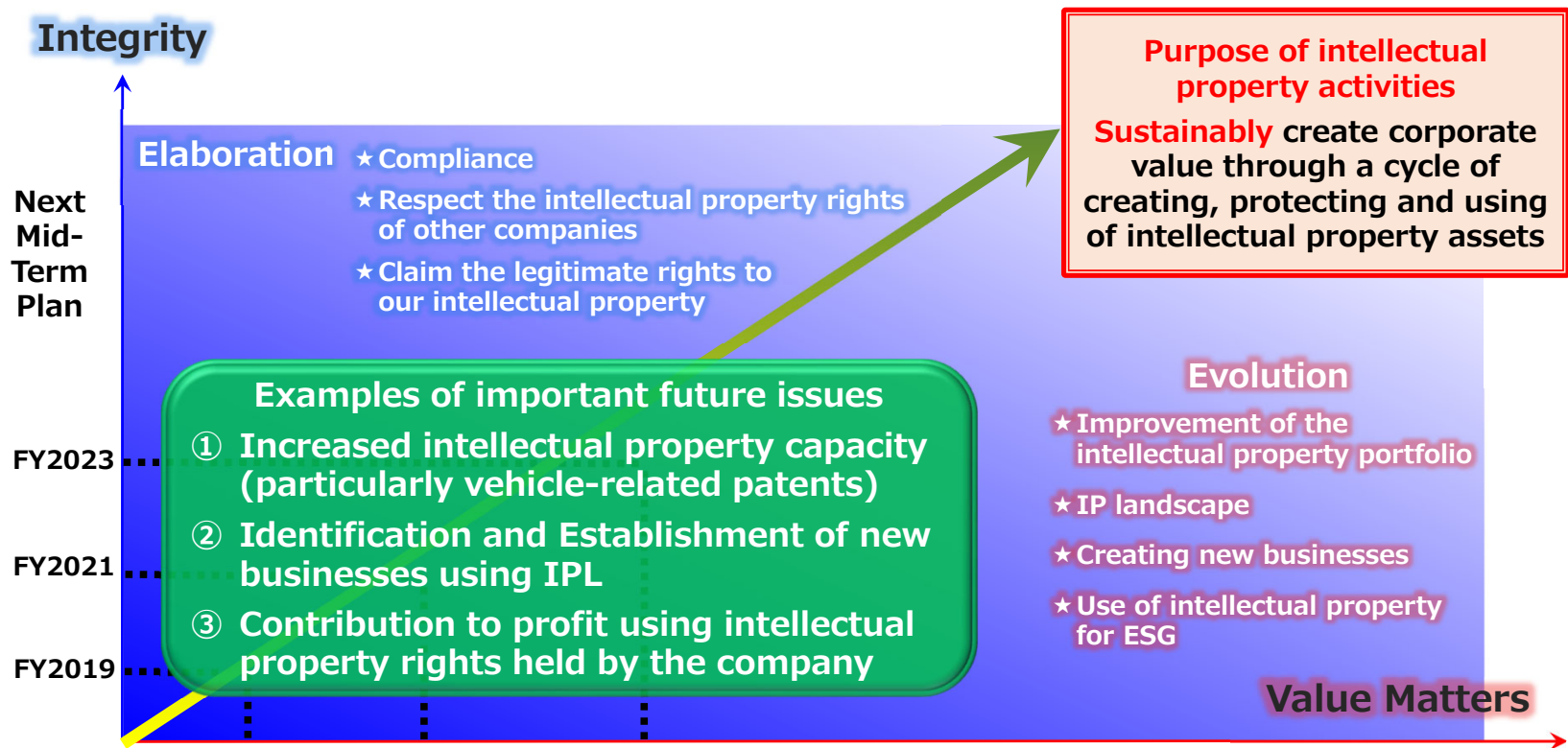
SVR

Registered trademark
No. 5670574
Optical elastic resin

ArrayFIX

Registered trademark
No. 6001070
Particle-arrayed ACF

Important Intellectual Property Issues to Tackle in the Future



Initiatives for Strengthening the Management Base

Initiatives towards Promotion of Digital Transformation (DX)

The Ideal Dexerials to be Realized Through DX

**Med-term Management Plan 2023
Challenges for Evolution**



**A company that is
resilient to change**

A sustainable growth

Global change

Turbulent times

Nature: Earthquake, pandemic, climate change

Technology: AI, IoT, 5G, cloud, and mobile technology

Politics: Brexit and the US-China relationship

Economy: Globalization and digitalization

What we should do

Change in social issues

**Diversification of customer
needs**

Changes in the environment



Respond by means of digital technologies

Continuous Creation of New Customer Value

Dexerials' Basic Policies on DX

See P. 27 of
the Integrated
Report 2021

Operational Reforms

Productivity/efficiency improvement

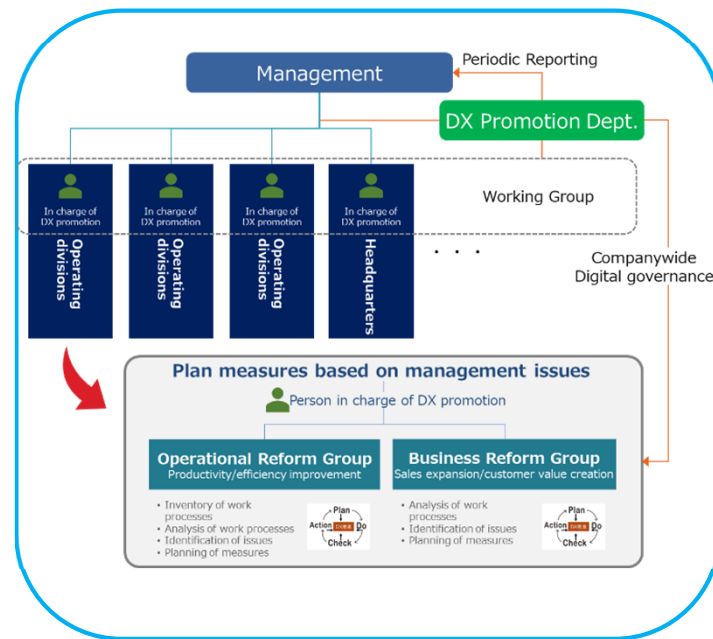
Business Reforms

Sales expansion/customer value creation

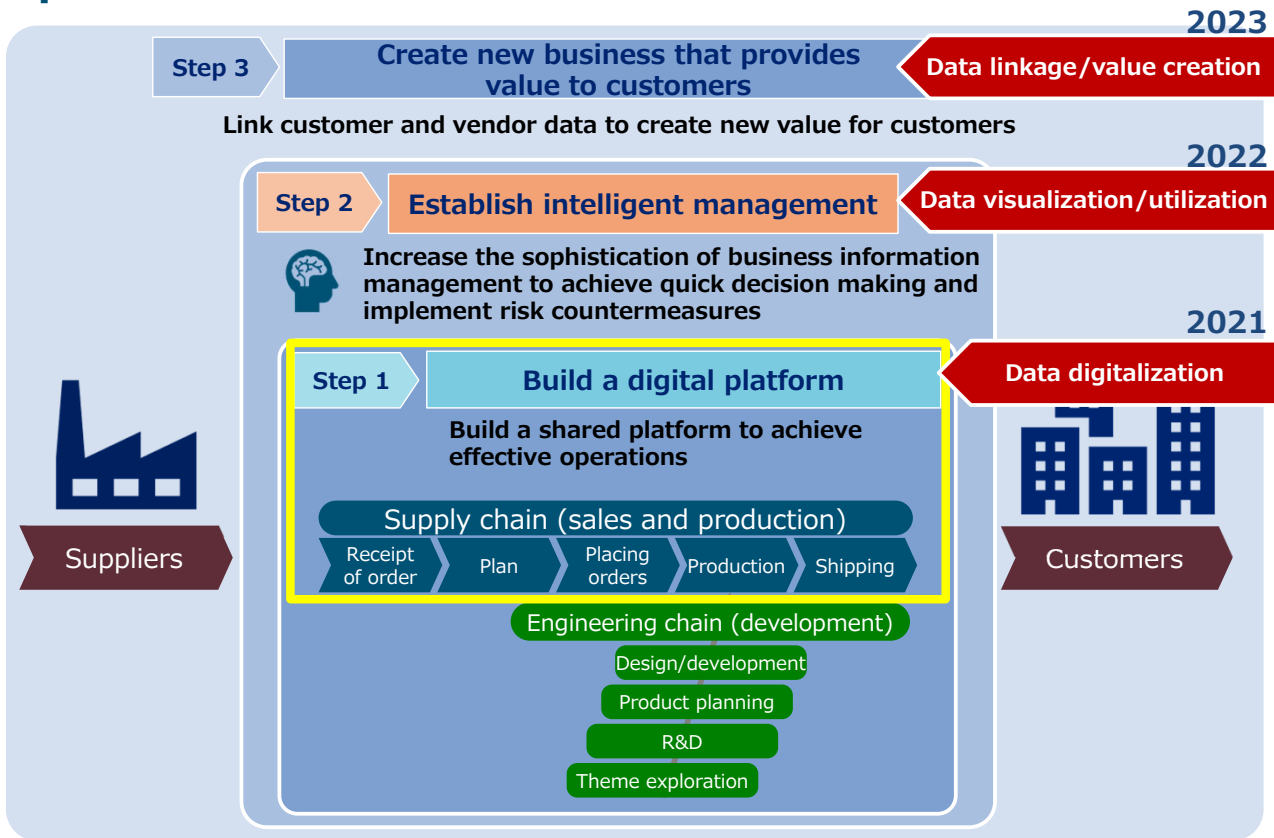
Improving Corporate Value

Disclose information to stakeholders

DX Promotion Framework



Three Steps for the Realization of DX



Towards Improvement in Productivity/Quality: Smart Factory Concept in 2016

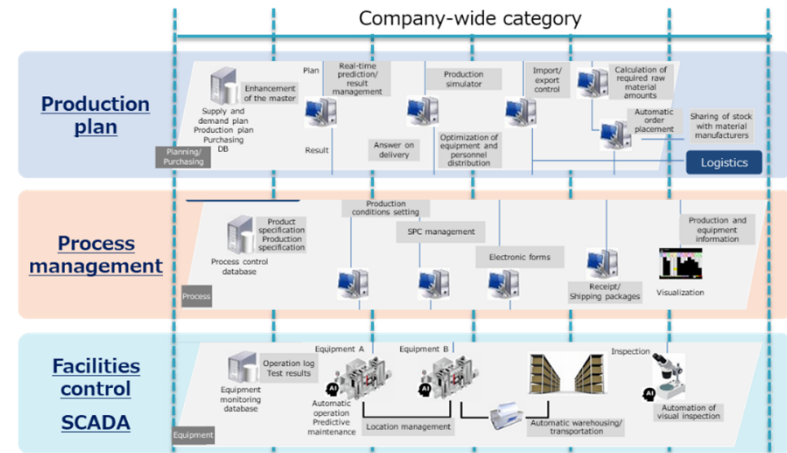
Introduction of new lines for
anti-reflection films



Reform to Build a Company-wide
Integrated Platform



Tochigi Office (mother factory)



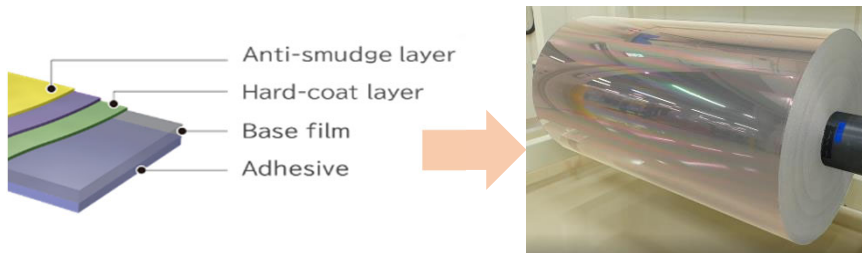
Introducing AI in
Inspection Processes in 2018

Anti-reflection Films

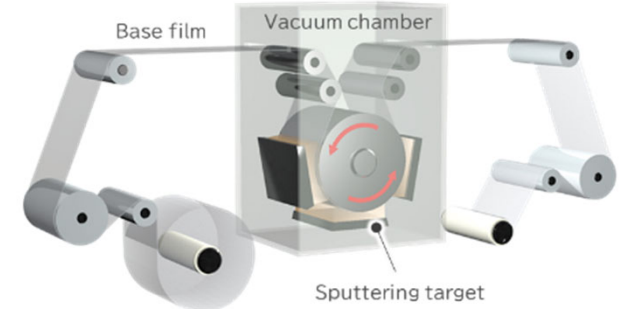
Optical films for displays, which have low reflectance and superior abrasion resistance, made with our original manufacturing and design technologies



Structure



Roll-to-roll production method:



Schematic diagram of an R-to-R sputtering machine

Photographs and images are for illustrative purposes only.

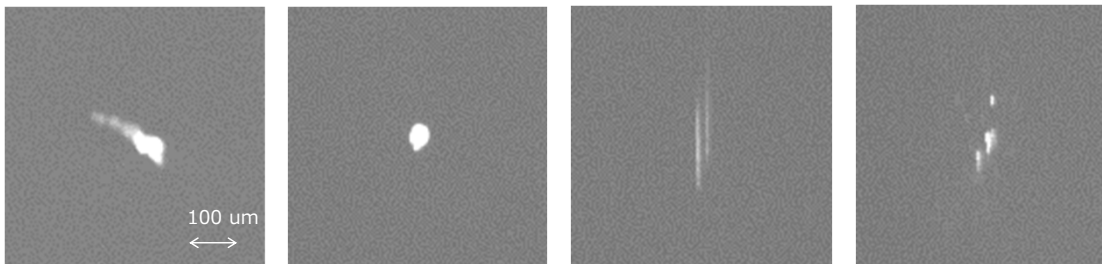
Produce film products efficiently and at high quality



Risks related to continuing occurrence of errors

Issues in Production and Quality Control in 2018

The same type of error in different shapes

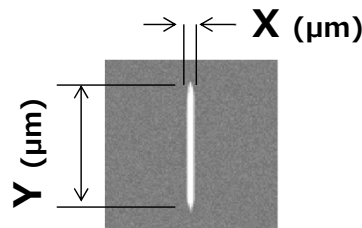


We want to distinguish various error shapes and identify the source of the failure

Error classification algorithm for general inspection equipment

Compare the images of potential error detected by inspection equipment with predetermined threshold values
→ Rule-based method

**Settings are complicated and troublesome.
Accuracy is not enough for classification.**



Example of AI (Deep Learning) Ability Verification in 2018

Purpose of the verification

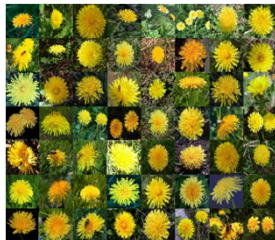
Is it possible to distinguish true errors from pseudo errors?

Delicate difference in shape and color

Determination is difficult even for human, requiring some time



Dandelion



Coltsfoot

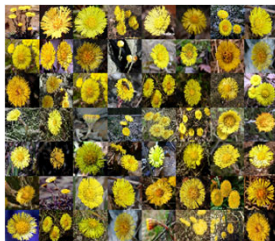
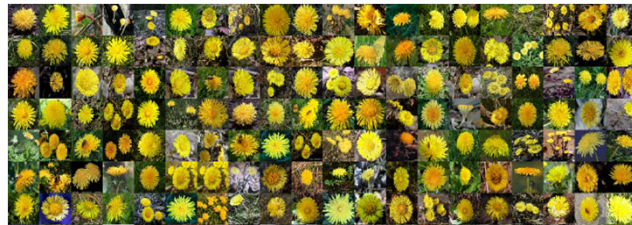


Image of dandelion and coltsfoot mixed



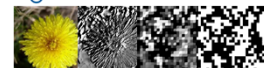
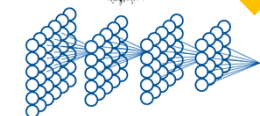
Learning

The petal is fat.

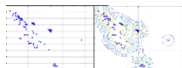


Judgment

Flowers with this characteristic should be dandelions!



Identify characteristics (visual cortex)



Classify (brain)

Dandelion



Coltsfoot

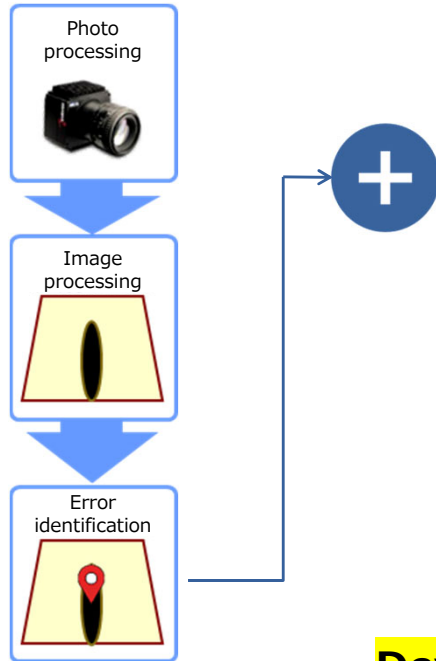


Classification

Accuracy rate of approx. 90%

Quality AI System: From 2018

Inspection equipment

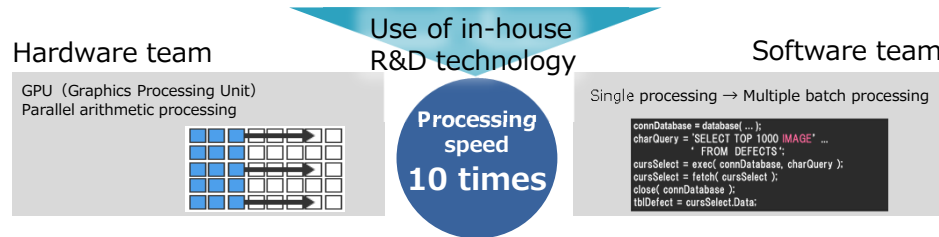


Internally develop AI features (image classification) and add-on to Inspection Process

To detect errors during continuous production,

AI assessment at 20 frames per second is required

Issue: Improvement of real-time arithmetic processing speed

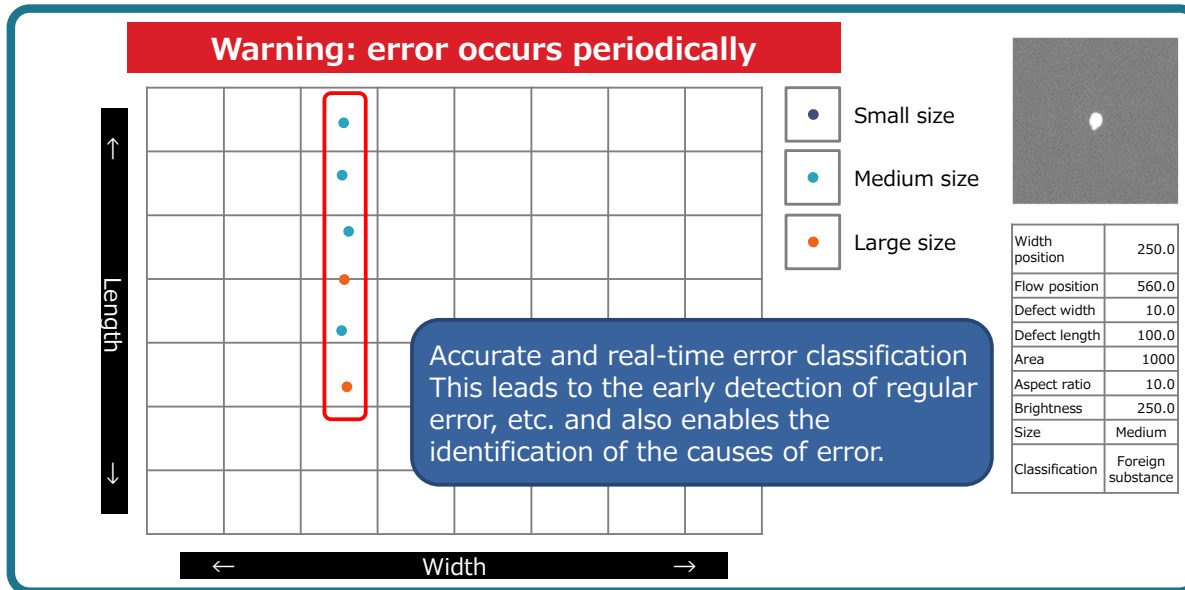


Processing capacity of 50 fps

Develop and operate in steps in a short period of time (approx. six months)

Real-time Feedback to the Production System: From 2018

Enables early identification of continuing error

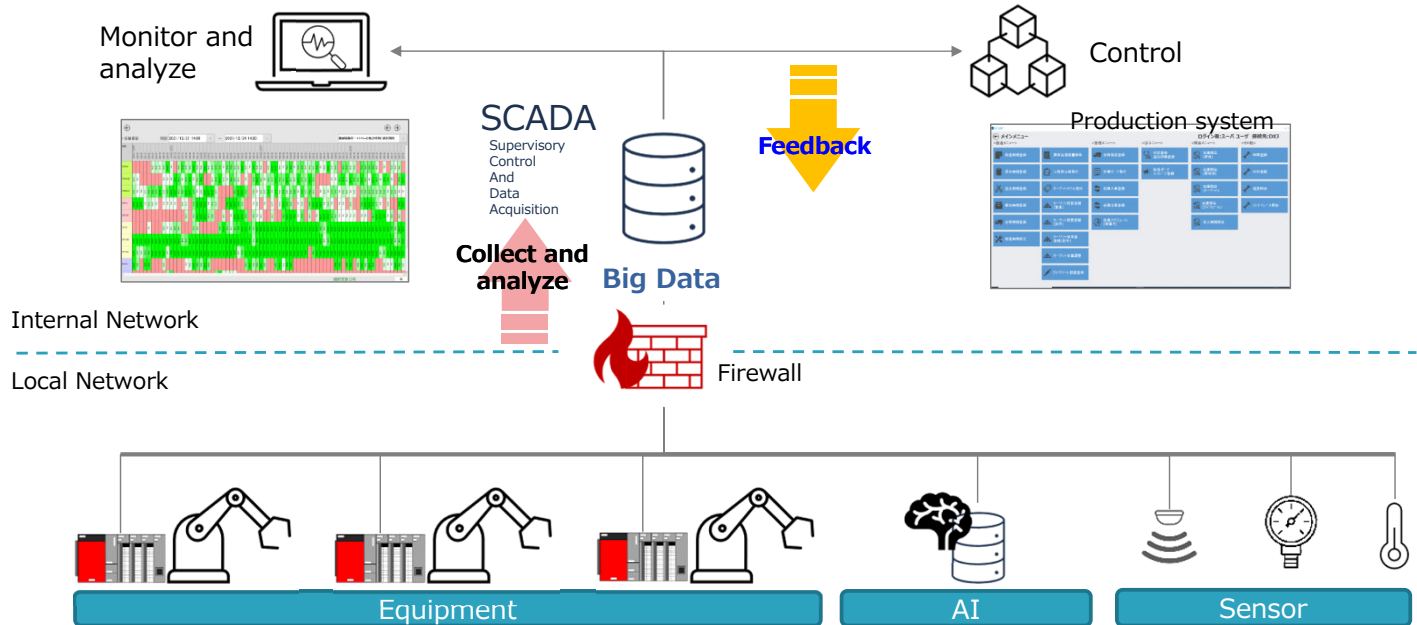


In addition,

it analyzes the situations when error occurs and enables AI to predict/determine to continuing or stop production

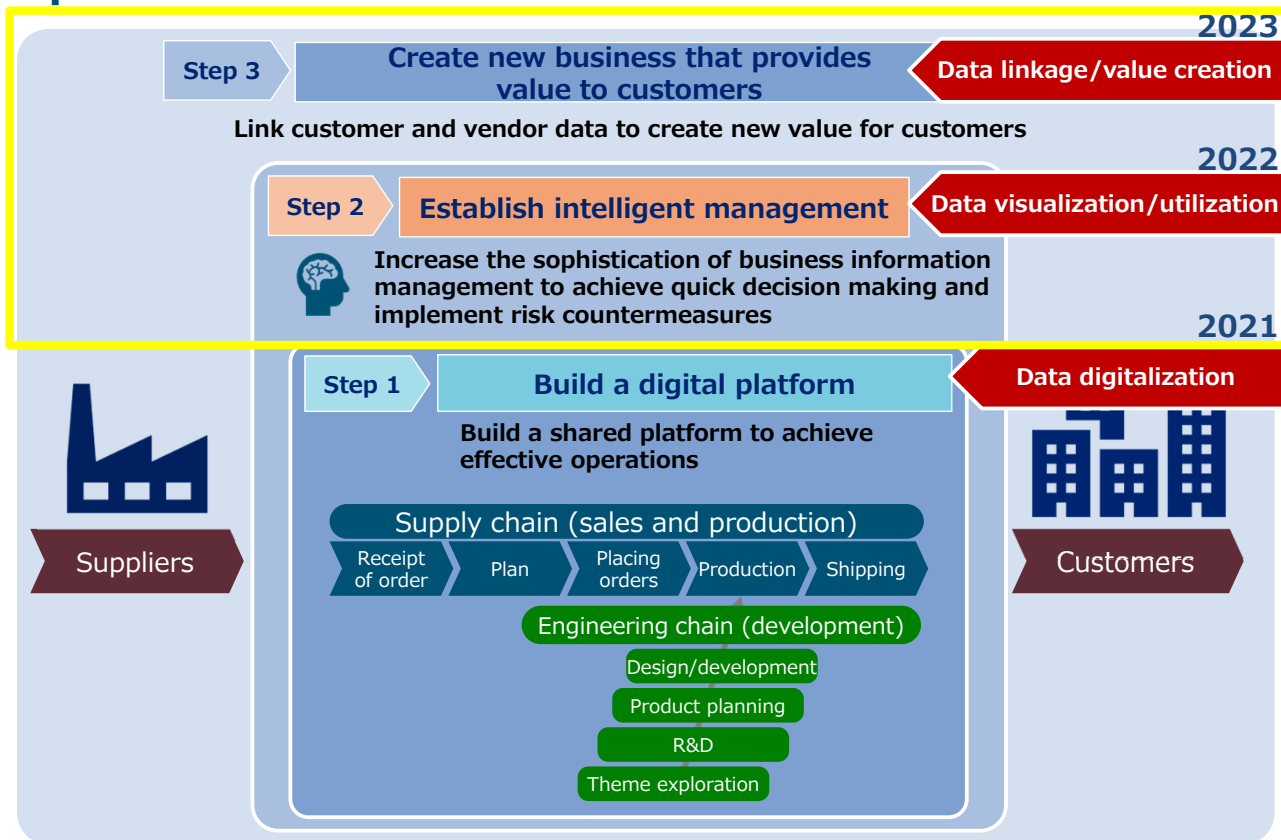
Realization of Digital Platform in 2019

Establishes a network including all of the equipment, AI, and sensors in the factory and connects their data to realize optimized production



Expand to other product categories

Three Steps for the Realization of DX



Achieving Sustainable Growth through Strengthening the Management Base

Creating New Value, Resolving Social Issues

Reinforcement of Corporate Governance and Compliance

Cultivation of Diverse Human Resources and Engagement

Ensuring Operational Safety and Business Continuity

SUSTAINABLE DEVELOPMENT GOALS



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