

DNP Group Sustainability Briefing FY2022

DNP

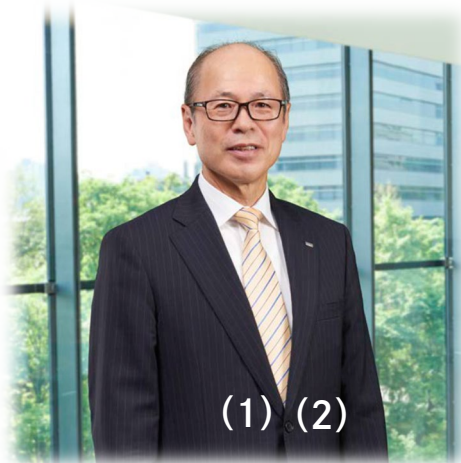
Creating future standards

October 25, 2022

Dai Nippon Printing, Co., Ltd.

Sustainability Briefing: Main Content

- (1) Concepts and Policies behind DNP's Sustainable Management
Senior Managing Director Kenji Miya
- (2) Reinforcing Human Capital
Senior Managing Director Kenji Miya
- (3) Reinforcing Intellectual Capital
Senior Managing Director Masato Yamaguchi
- (4) Environmental Initiatives
Managing Director Satoru Inoue



(1) Concepts and Policies behind DNP's Sustainable Management **DNP**

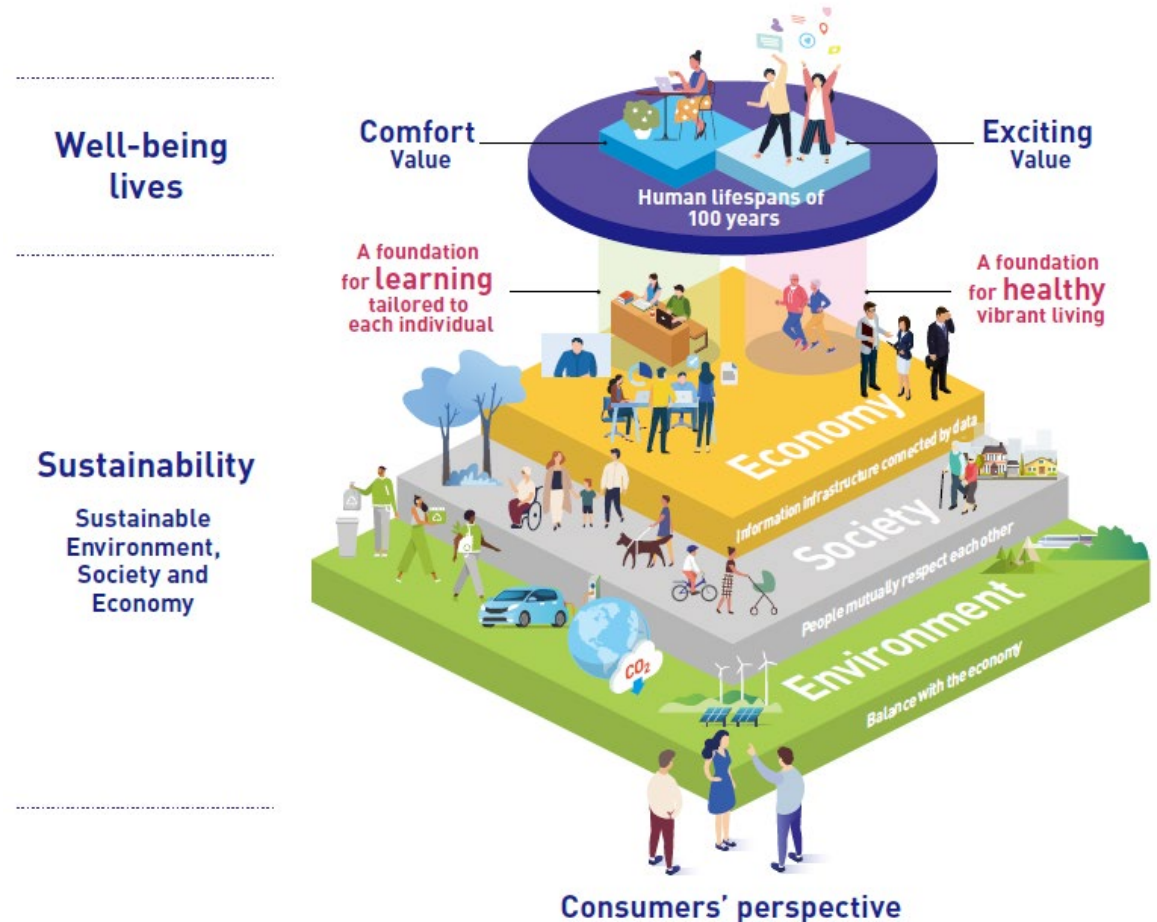
Corporate Statement

Creating future standards

The DNP Group will strive to realize a sustainable, better society and well-being lives by connecting individuals and society and creating new value.

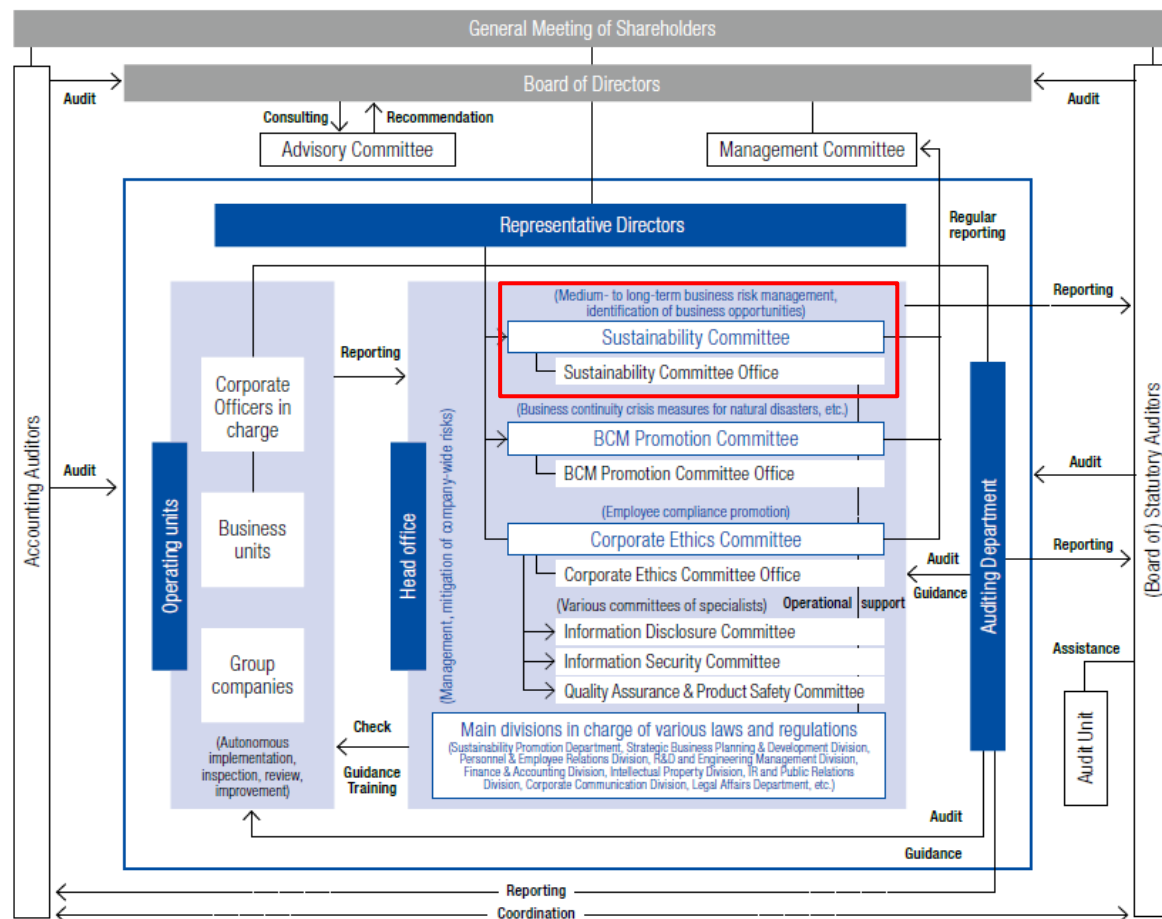
(1) Concepts and Policies behind DNP's Sustainable Management **DNP**

- DNP believes that healthy societies and economies, and comfortable, prosperous lives can only be achieved when our planet is sustainable.
- Our environment, society, and economy are changing more rapidly than ever, particularly in recent years. It is important for each of us to take the initiative to transform our environment, society, and economy in a positive direction.



(1) Concepts and Policies behind DNP's Sustainable Management **DNP**

Strengthening governance



From DNP Group Integrated Report 2022 p. 74

* Promote comprehensive risk management in order to reduce the negative impact of variable factors (risks).

* Diverse variables can also present opportunities for business expansion, and we aim to strengthen measures that turn risks into opportunities.

【Economic risks】

- Short-term and medium- to long-term variables in economic activity occurring in each country/region and in the global market
- Changes in the systems and rules that form the basis of economic activities

【Social risks】

- Variables related to the rights and dignity for diverse people living in society
- Changes in systems and rules for building a healthy society

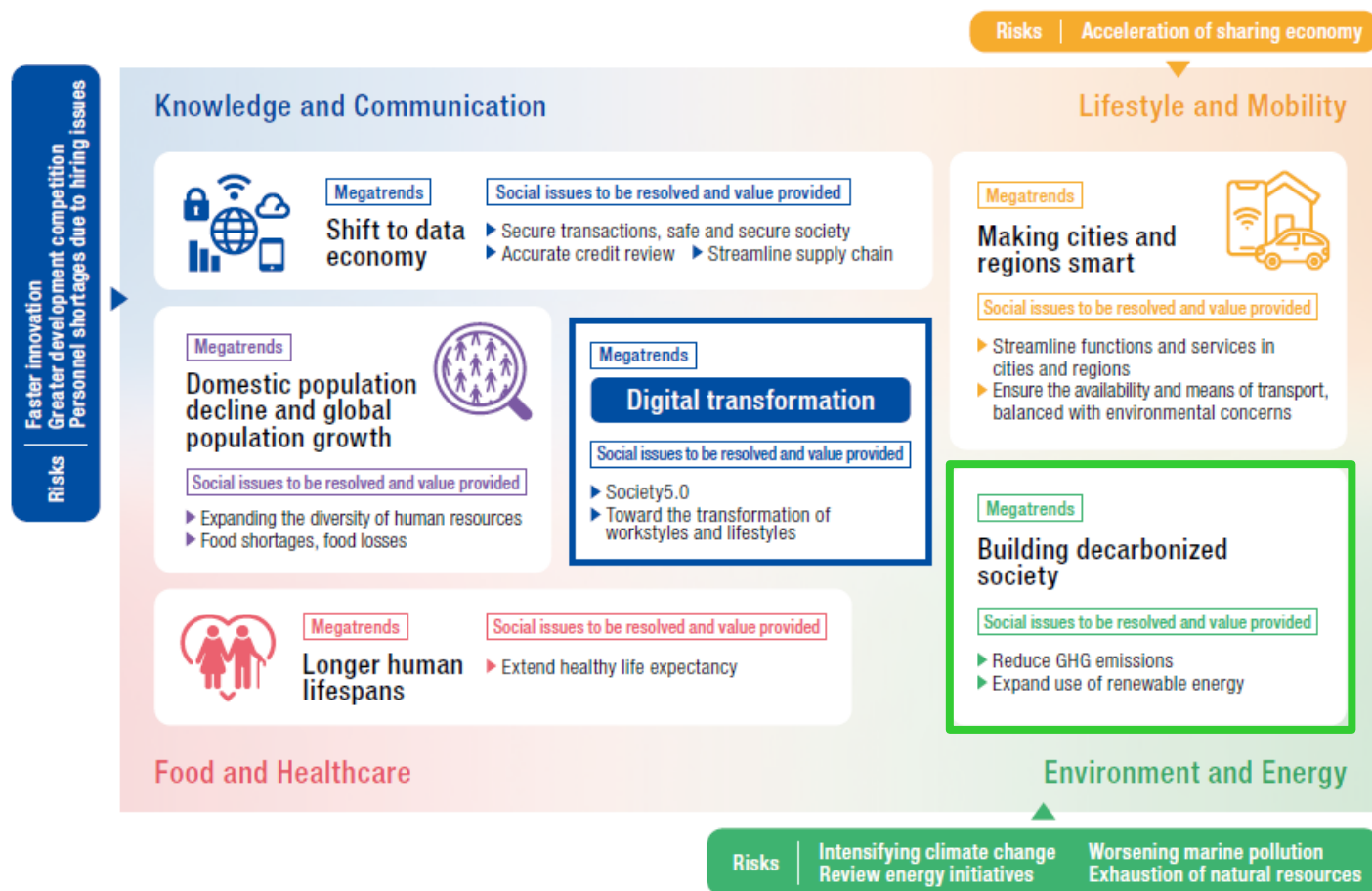
【Environmental risks】

- Variables related to the sustainability of the global environment that forms the foundation of all corporate activities
- Changes in systems and rules related to the global environment

Business risks and priority issues

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Identify risks inherent in business environment changes, and convert them into opportunities to create new business.

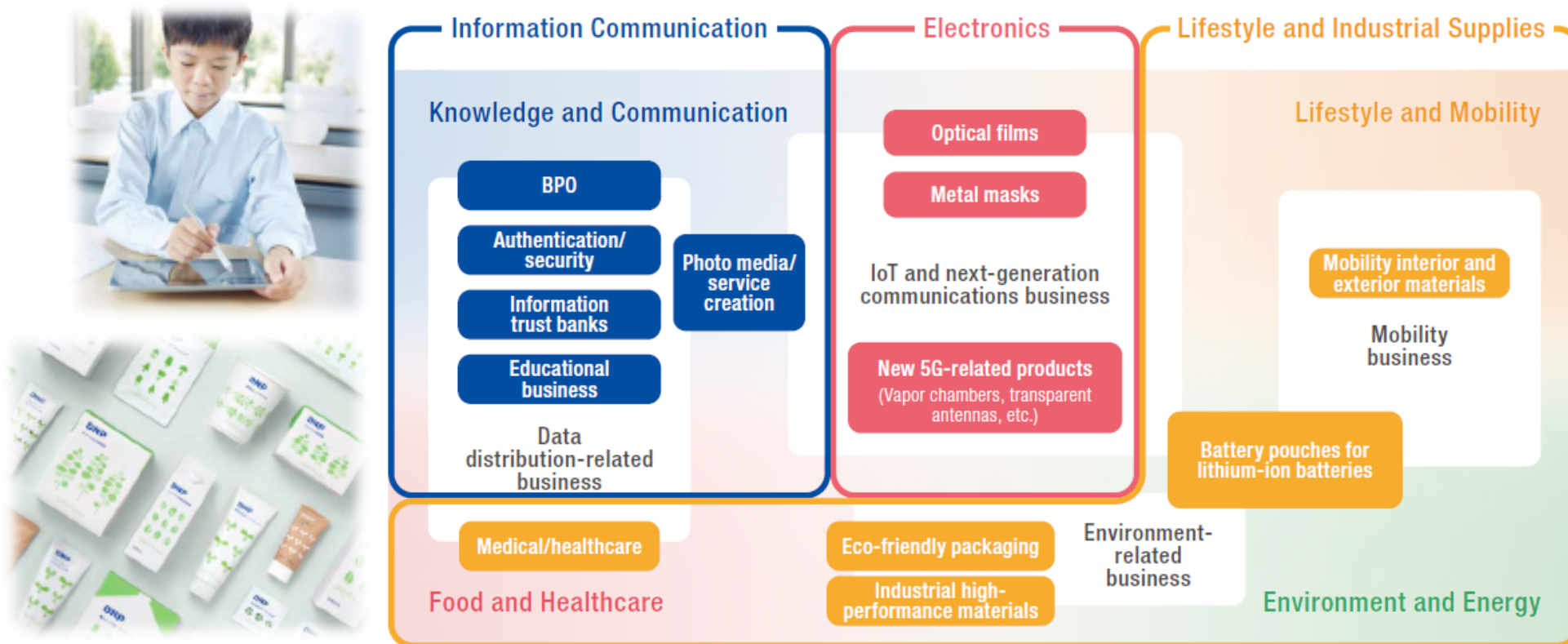


“Business promotion” in focus business areas

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Focus businesses that solve important issues related to megatrends

Focus businesses in four growth areas



Value Creation and the “business base reinforcement” that supports it

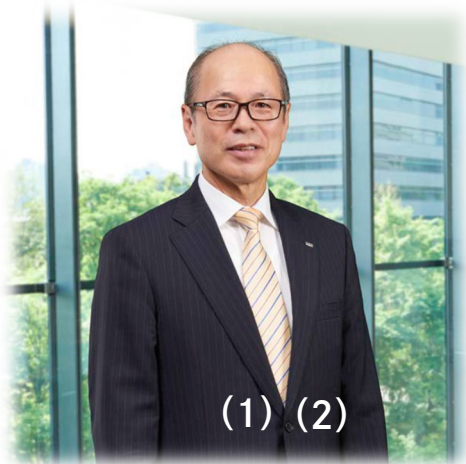


Major risk management issues that affect DNP's Value Creation

<div>Value creation</div> <div>オール DNP</div> <div>Foundation to support value creation</div>	Business to Contribute to SDGs Achievement	<p>We create new value through products and services, which will contribute to the achievement of the SDGs, and help society grow in a sustainable manner.</p>	
	Fair Operating Practices	<p>We help to maintain and develop orderly, free and competitive markets based on laws and social ethics and by always remaining fair and equitable.</p>	
	Human Rights and Labor	<p>We place human dignity first and foremost and respect diversity unique to all persons that includes their culture, nationality, race, ethnicity, language, religion, values, gender, age, gender identity, sexual orientation and whether they have disabilities. We accordingly respect working styles suited to the diversity of our employees and make efforts to create a safe, healthy and vibrant working environment based on the assumption of acting with discipline.</p>	
	Environment	<p>DNP targets the realization of a decarbonized society, a recycling-oriented society and a society in harmony with nature by creating new value through Printing and Information (P&I) innovation designed to achieve the emergence of a sustainable society.</p>	
	Responsible Procurement	<p>For creating excellent value and cultivating strong compliance awareness at the same time, we work jointly with our supply chain stakeholders and conduct procurement that gives due consideration to human rights, the environment and more.</p>	
	Product Safety and Quality	<p>We seek to gain the trust of society by prioritizing the safety and quality of our products and services as part of our responsibility as a company that supplies these to society.</p>	
	Information Security	<p>We ensure the exceptional security of personal information and all other information assets through management and protection as part of the social responsibility of a company handling such information assets.</p>	
	Corporate Citizenship	<p>We contribute to society by resolving social issues, conducting volunteer activities and through cultural activities as we look to deepen our relationship with society as a good corporate citizen that coexists with society.</p>	

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(2) Reinforcing Human Capital

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【Realization of diverse personnel systems that accelerate the creation of new value】

Restructuring of Personnel Systems (2019-2021)

＜Policies＞

- ① In order to bring to bear "All DNP" (the DNP Group's comprehensive strength), we will favor mechanisms and systems that are broadly conscious of society as a whole.
- ② The company respects its employees; respected employees drive the growth of the company; such employees also enrich society.
- ③ Development with a view toward new working styles, new types of management, and compensation in the "new normal" era

Phase 1 (2019)

＜Major system revisions＞

- Employment-related systems designed to actively incorporate external perspectives
- Employee compensation systems aimed at generating new value
- Systems that promote flexible working styles that enable the effective use of time and space

Phase 2 (2020)

＜ Major system revisions ＞

- Restructuring of systems related to retirement age and retirement benefits
- Revision of awards systems, in order to reform the organizational culture
- Equal pay for equal work
- Career development support

Phase 3 (2021)

＜ Major system revisions ＞

- Working and management styles in the New Normal era
- Introduction of multi-track careers and job grade systems, and expansion of related professional track systems
- Review of working conditions for employees stationed overseas
- Expansion of diversity-related systems

Establishment of our Human Capital Policy

Positioning our Human Capital Policy as our top-priority concept, we will integrate people-related policies, visions, and declarations, etc. and work to strengthen and maximize human capital in an integrated and strategic manner, with the aim of improving corporate value.

Human Capital Policy

**Respecting employees leads to the respected employees
driving corporate growth and enhancing society**

Nurturing human capitals who can be active in society (both within and outside DNP)

Labor and
Management
Joint
Declaration

Human Capital Departments (People-Related Departments) Policy	DNP Group Safety and Health Charter
DNP Group Diversity Declaration	DNP Group Declaration on Health
Human Resources Development Vision	DNP Group Welfare Vision

DNP Group
Human Rights
Policy
*Including stakeholders
other than employees

Human Capital Policy

**Respecting employees leads to the respected employees
driving corporate growth and enhancing society**

Nurturing human capitals who can be active in society
(both within and outside DNP)



Key issues 1

**Strengthen human resources and organizations to
promote value creation through P&I innovations**

Key issues 2

**Promoting diversity and inclusion essential for
creating value diversity**

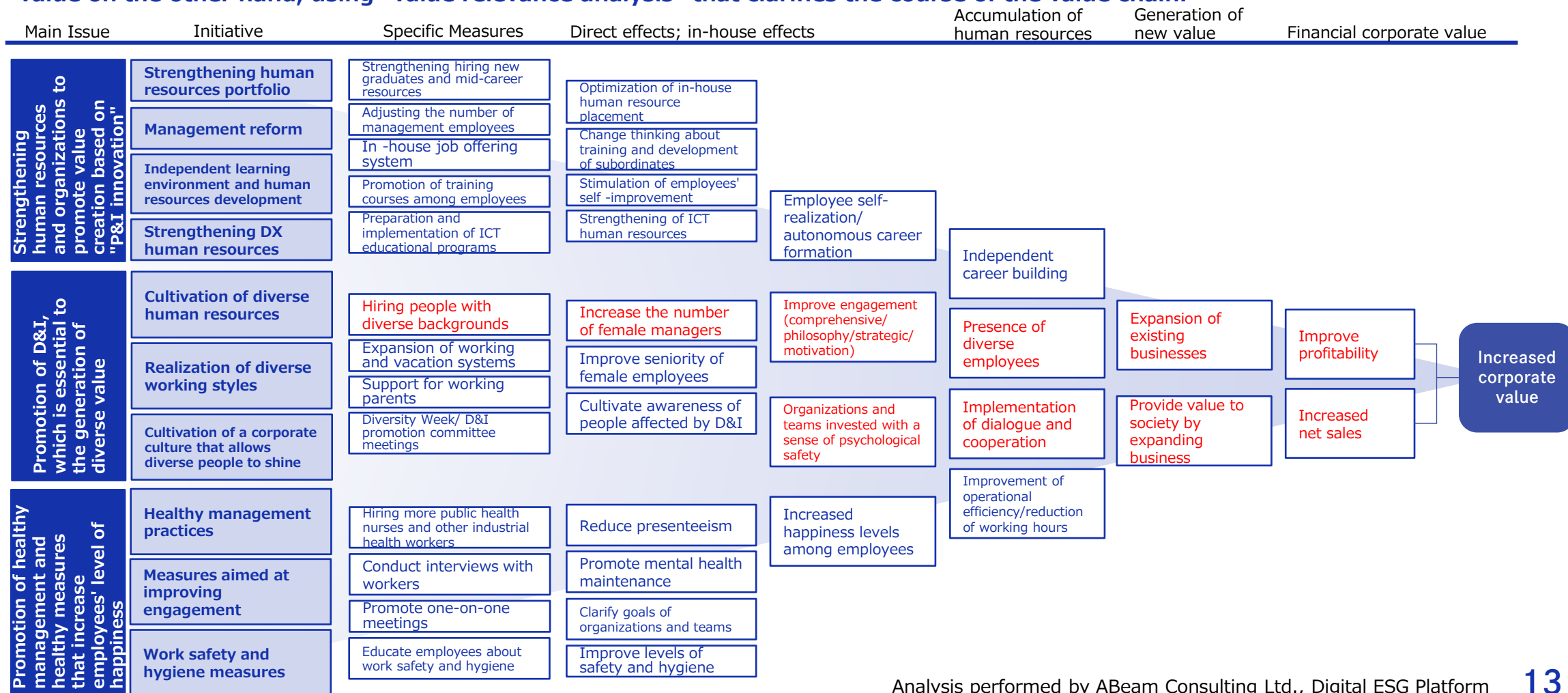
Key issues 3

**Promotion of health management and health
measures to increase employee happiness**

Analysis of value relevance in terms of human capital-related initiatives (partial excerpt)

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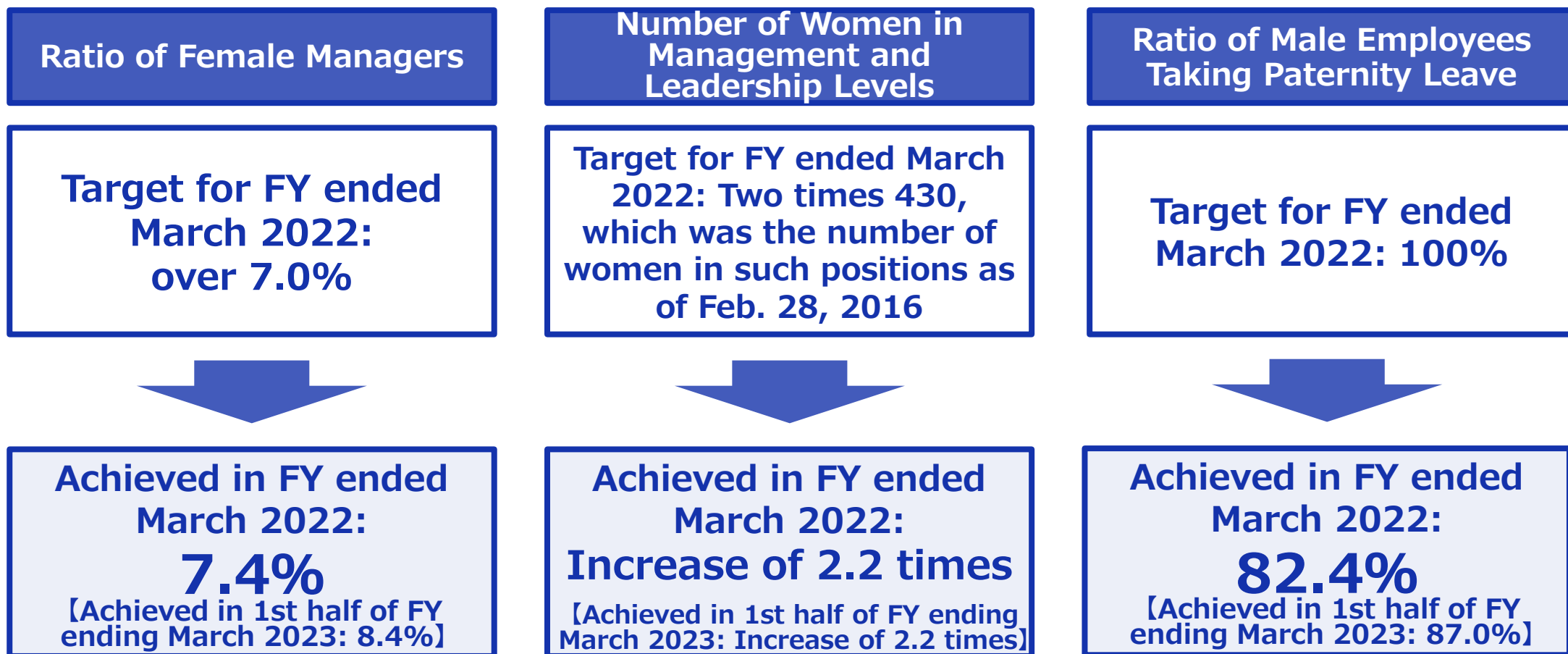
We show correlations between the results of investments and various measures on one hand and improvements in corporate value on the other hand, using "value relevance analysis" that clarifies the course of the value chain.



Example: Promotion of diversity and inclusion: KPI achievement status **DNP**

We achieved key performance indicators (KPIs) in terms of the ratio of female managers and the number of women included in management and leadership levels.

Our aims are to diversify our decision-making strata and to change employees' awareness and behavior.

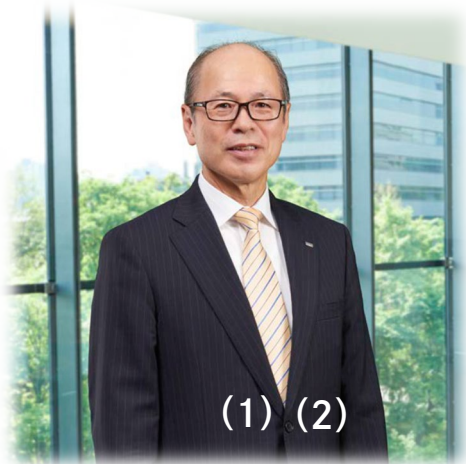


Issues for the Future

- 1. Link the human resources categories in our HR portfolio to employee data, and further refine recruitment and human resource development plans accordingly.**
 - Incorporate data from our human resources portfolio into a talent management system, and further tailor plans for hiring and developing human resources based on the portfolio. By doing so, we can succeed in placing the right people in the right positions in accordance with our business strategies.
- 2. Confirm outcomes of various measures that we started taking in recent years (for which there is currently insufficient data)**
 - Reform management through broad and deep introduction of the DVO (DNP Value Objectives) system
 - Make visible the skill levels of ICT and DX human resources
 - Let each and every employee experience diversity and inclusion as a reality
 - Employee data related to health measures for each and every employee
- 3. Understand and activate employee engagement in order to increase corporate value**
 - Compiling and analyzing data related to employee engagement can lead to improvements in overall engagement, can also help us grasp indicators that correlate with the improvement of corporate value, and can be useful when formulating human capital strategies, including the review of measures and systems.
- 4. Evaluating the effectiveness of human capital strategies by constructing systems for ongoing analysis and application of related data**

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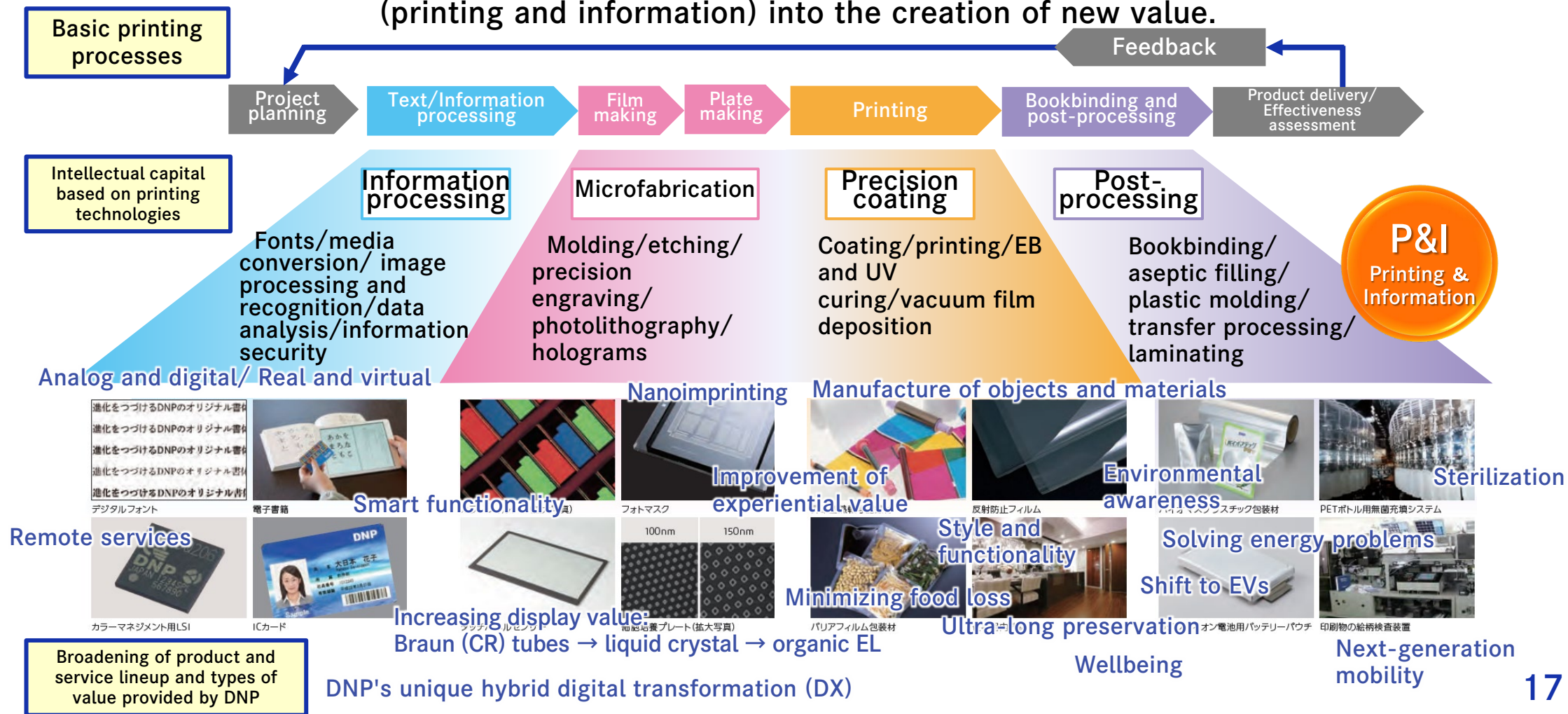
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(3) Reinforcing Intellectual Capital

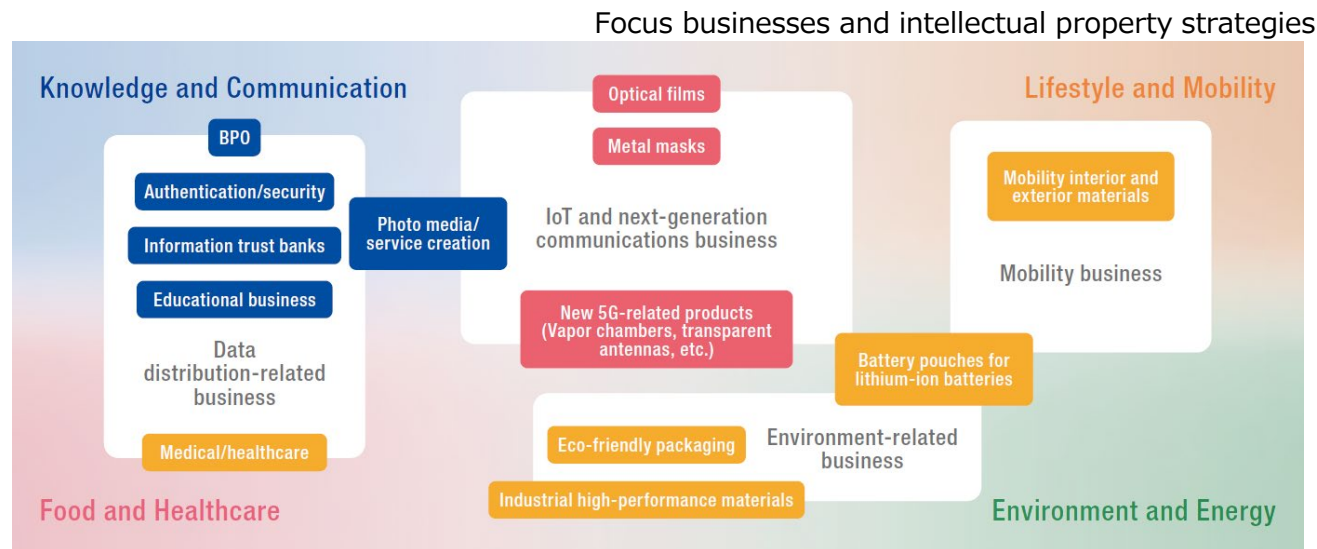
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【Basic Thinking】 Printing is the source of DNP's intellectual capital. By being quick to seize on changes in markets and society, we developed our strengths in P&I (printing and information) into the creation of new value.



(3) Reinforcing Intellectual Capital

【Focused Businesses and Intellectual Strategy】



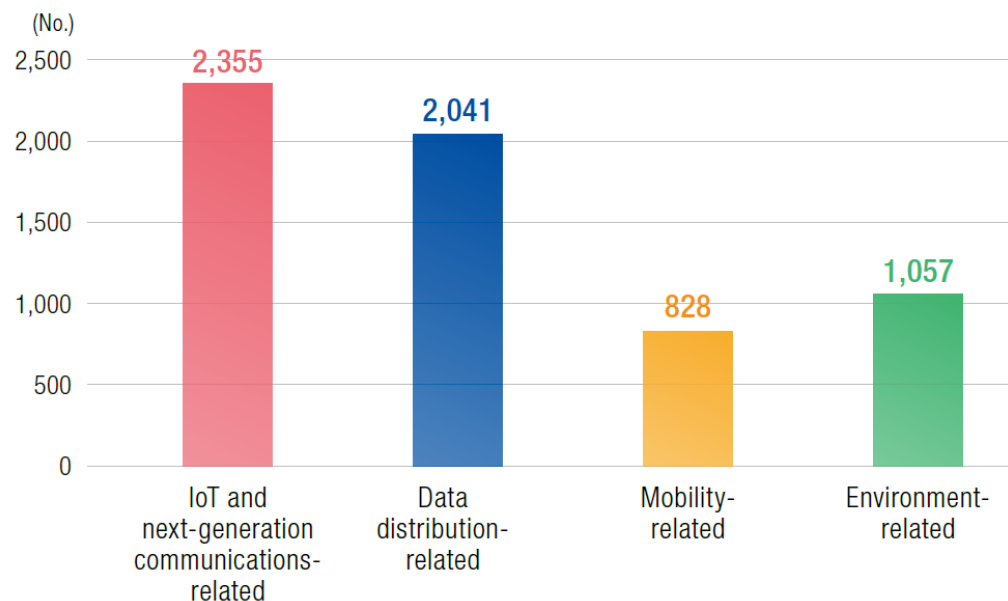
● We will strategically build a stronger business portfolio by setting focused businesses with high profitability and market growth potential. To this end, we are promoting open innovation and focusing on the strategic acquisition of intellectual property to ensure the superiority of our position.

● We will establish business models exploiting intellectual property for our focused businesses through value creation process by integrating business strategy, development strategy and intellectual property strategy. We plan scenario for creating value in long term and strengthen internal and external collaboration.

(3) Reinforcing Intellectual Capital

【Focused Businesses and Intellectual Strategy】

Number of patents related to focus businesses



Patents held: **11,726**

Patents related to focus businesses:
6,281

■ IoT and next-generation communications-related: **2,355**
■ Data distribution-related: **2,041**
■ Mobility-related: **828**
■ Environment-related: **1,057**
(As of March 2022)

- We are concentrating management resources on businesses related to IoT and next-generation communications, data distribution, mobility and environment. With regard to the acquisition and expansion of intellectual property, we will further strengthen our patent portfolio in these four focus businesses.

(3) Reinforcing Intellectual Capital

Technologies and R&D structures		Controlled by Head Office	
Sales division/ field	Business unit (Development headquarters)	Head office research and development framework	Super vision
Information Communication	<div>Publishing and Media Services</div> <div>Information Innovation</div> <div>Imaging Communication</div>	<div>Technology Development Center</div> <div>Research and Business Development Center</div> <div>Advanced Business Center</div>	R&D and Engineering Management Division
Lifestyle and Industrial Supplies	<div>Life Design (Packaging)</div> <div>Living Spaces</div> <div>Mobility</div> <div>High-performance Materials</div>		
Electronics	<div>Fine Optonics</div>		
New businesses field			
	Short-term development		
	Medium and long-term development		

- **October 2021: established R&D and new business promotion center.**
We integrated “seeds development” and “business development” functions.
- **By combining our “P&I” strengths, we aim for intensive promotion of new business themes that realize a better future by envisioning what’s “next after the next thing.”**
- **[Research and Development Expenditures]**
 - **Fiscal year ending March 2022 : 33.1 billion yen**
 - * Almost 10% increase over 10 years from FY ended March 2013 (30.8 billion yen)
 - * Head office development department : About 21.9 billion yen
 - * Business segment total : About 11.2 billion yen

(3) Reinforcing Intellectual Capital

DNP

<Case Study> Battery pouch business:

History, technological development and business development

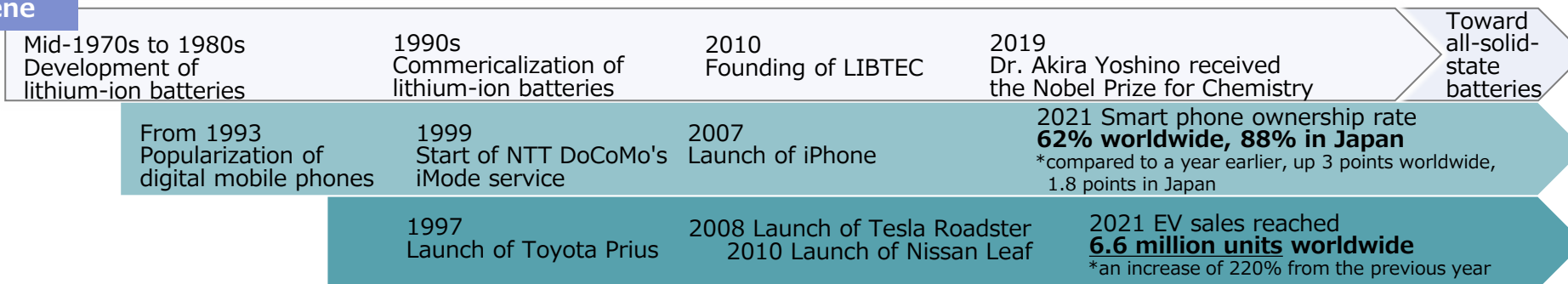


Based on food packaging technology, we used All DNP's converting technologies. We anticipated related market changes (the shift to Electric Vehicles).

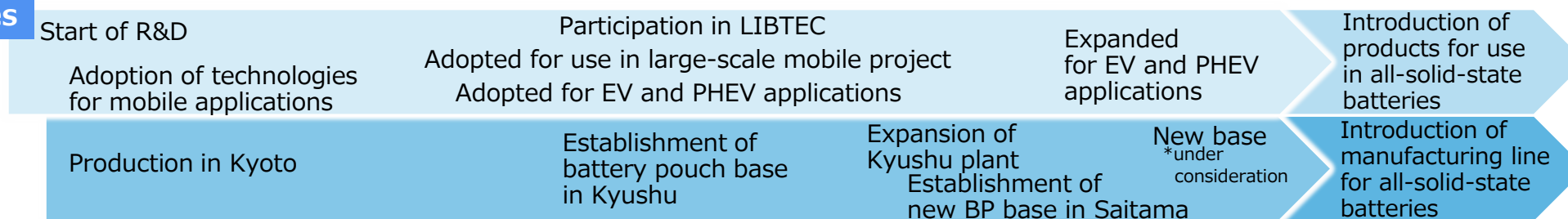


Lighter-weight,
more durable, safer battery casings

Changes on the Global Scene



DNP's Initiatives



(3) Reinforcing Intellectual Capital

DNP

<Case Study> Battery pouch business:
Intellectual capital and competitive edge

Establishment of Rights

Comprehensive
patent applications

We hold
more than 200
relevant patent rights

Black Box-ification

Materials designed
by DNP
Proprietary processes
(Research and Business
Development Center)

Production facilities
developed by DNP
(Technology
Development Center)

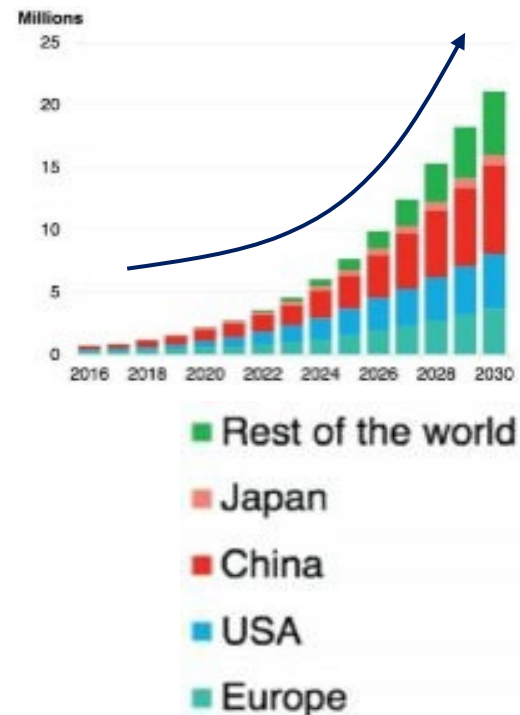
Collaboration with the Outside

Strategic alliances
with materials
manufacturers

Next-generation
batteries
developed as car
manufacturers'
OEM or jointly with
battery makers

Growth of EVs on the World Market

No. of vehicles

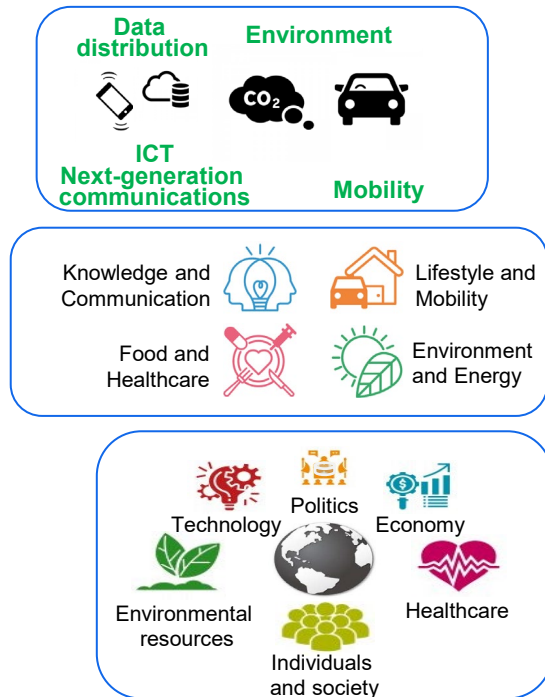
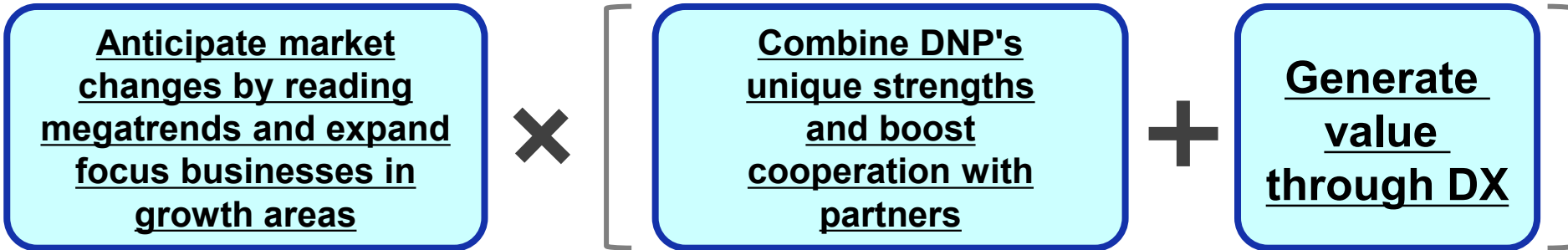


Source: Bloomberg.com

(3) Reinforcing Intellectual Capital

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[Policies for the Future]



Anticipation of market changes

Four growth areas

Megatrends

DNP's proprietary P&I technologies

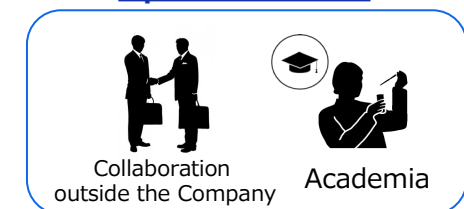


Value creation through DX



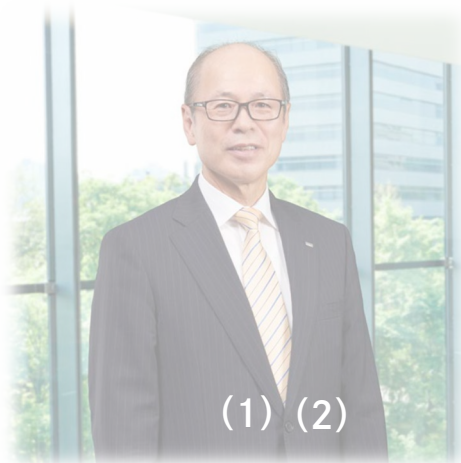
Value creation through DNP's unique DX, which fuses hybrid strengths such as digital and analog technologies, physical and virtual realities, and manufacturing and services

Open innovation



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(4) Environmental Initiatives

- Amid worsening trends including climate change, marine pollution, and declining biodiversity, the sustainability of the earth is endangered.
- DNP formulated The DNP Group Environmental Vision 2050 in order to help realize a sustainable society.
- DNP itself is accelerating value creation in order to create a better future.

DNP Group Environmental Vision 2050

A Decarbonized Society through Climate Change Mitigation and Adaptation

- We aim to achieve effective net-zero greenhouse gas (GHG) emissions from business activities at our sites.
- We will contribute to creating a decarbonized society through our products and services.

A Recycling-Oriented Society through the Efficient use of Resources

- We will provide maximum value through the efficient use and recycling of resources throughout the value chain.

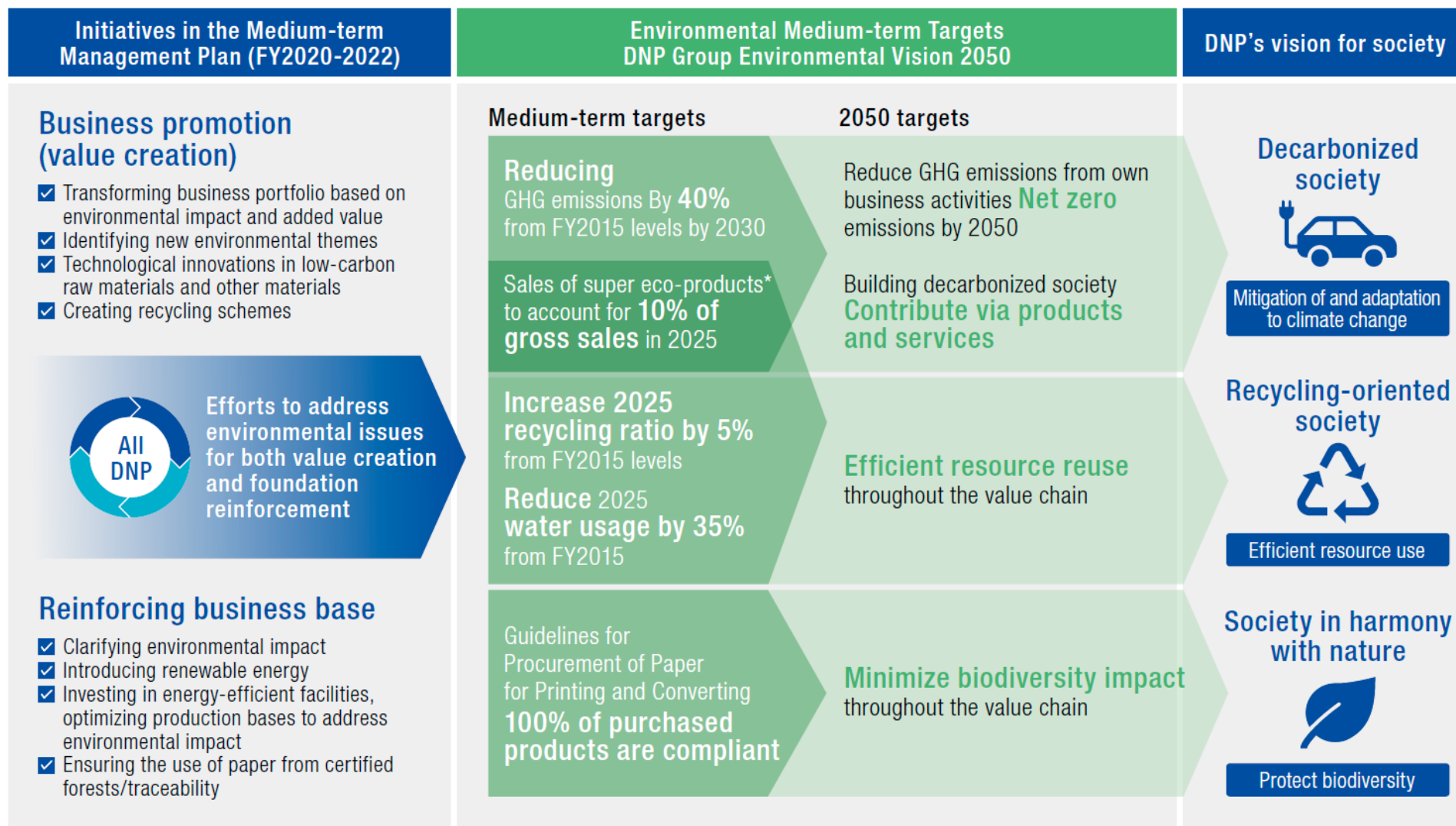
A Society in Harmony with Nature via the Conservation of Biodiversity

- We aim to minimize the impact on biodiversity throughout the entire value chain and achieve harmony with regional ecosystems.

► SDGs to which our initiatives correspond



(4) Environmental Initiatives

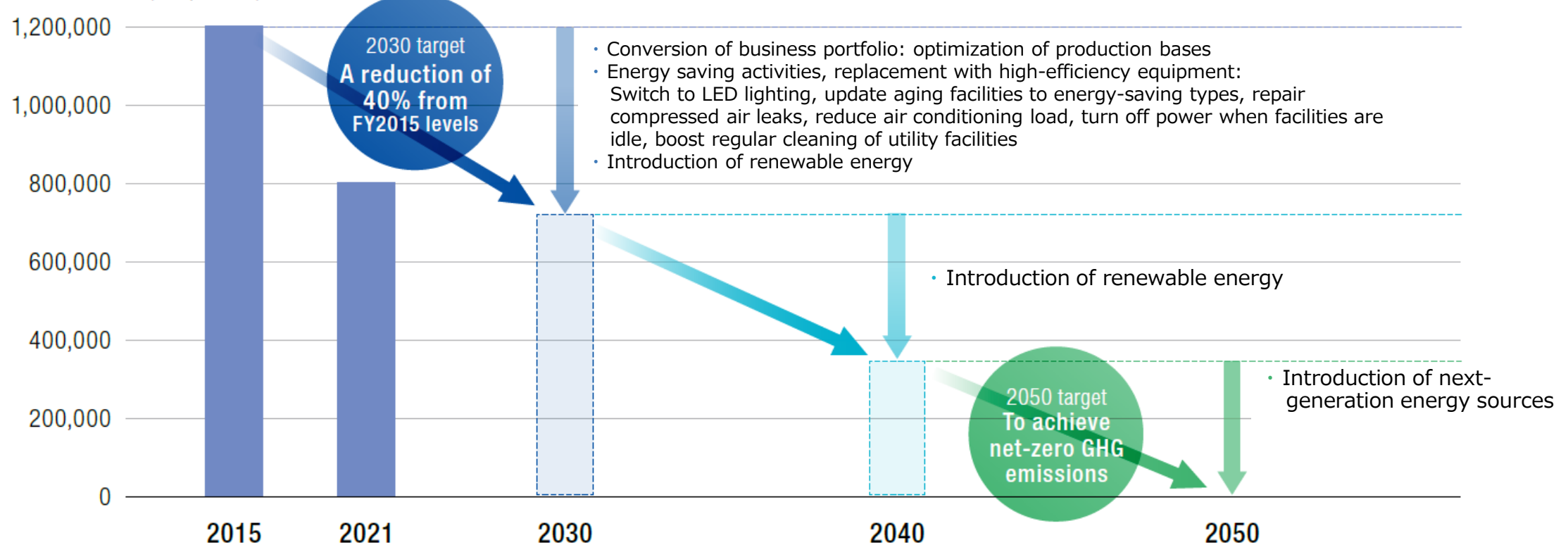


* Super eco-products are products and services that DNP deems to be exceptionally environmentally conscious based on its proprietary criteria.

(4) Environmental Initiatives

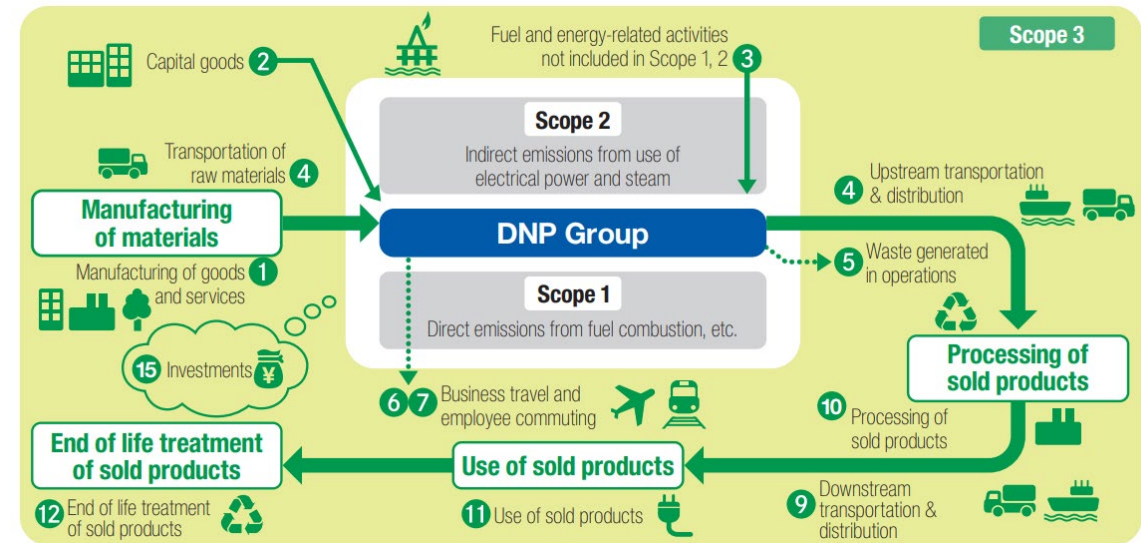
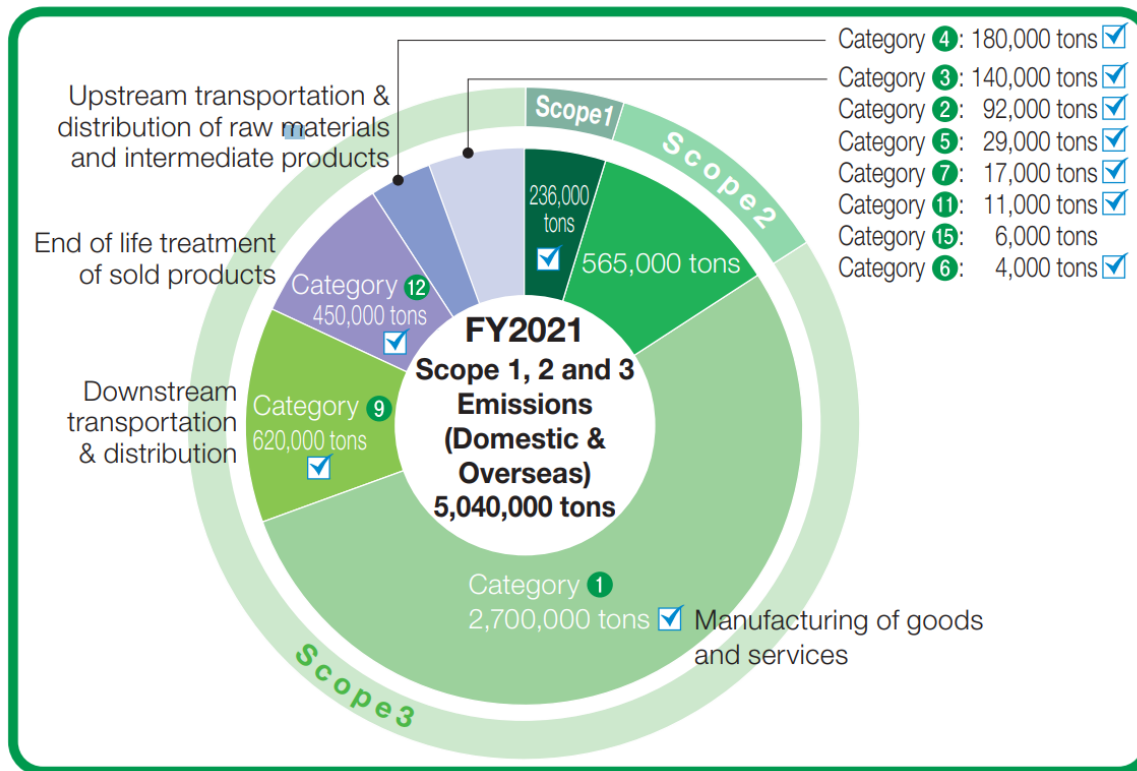
Roadmap for achieving carbon neutrality by 2050

GHG emissions (Scope 1+2) / t-CO₂



(4) Environmental Initiatives

Amount of Scope 3 emissions



Calculated in accordance with the Basic Guidelines on Accounting for Greenhouse Gas Emissions throughout the Supply Chain Ver. 3.2 established by the Ministry of the Environment and the Ministry of Economy, Trade and Industry.

Scope 1 emissions associated with transportation by Group companies are included in Category 4. Category 8 is included in Scope 1 and 2. Category 10 is excluded from the calculation because the percentage contained in final products is very small. Category 11 consists only of emissions from domestic PET plastic beverage bottles. Categories 13 and 14 are not applicable.

From the fiscal year through March 2022, we based the emissions per unit on "IDEA Ver.3.2" and for some portions we used the "Embodied Energy and Emission Intensity Data for Japan Using Input-Output Tables" (3EID).

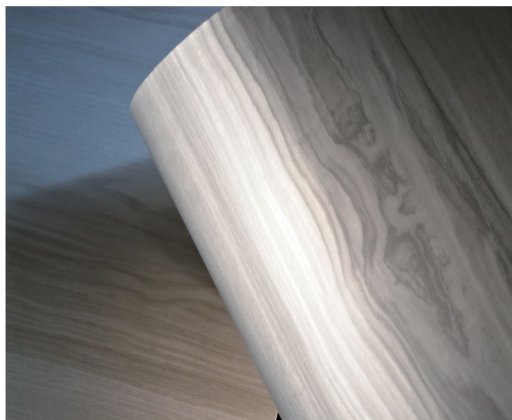
(4) Environmental Initiatives

[Indicators and Targets] for environmental initiatives

Value creation Under the Medium-term Management Plan, we will work to expand our focus businesses and contribute to creating a decarbonized society through our products and services.	Environment-related businesses	114.5 billion yen (FY2020) ▶ 175.0 billion yen (FY2024)
	Mobility businesses	39.5 billion yen (FY2020) ▶ 100.0 billion yen (FY2024)
	Percentage of gross sales from sales of super eco-products	10% (2025)
Foundation of business activities We will reduce GHG emissions from business activities at our sites.	Medium-term targets	40% Reduction of emissions from the FY2015 level (2030)
	Long-term Environmental Vision	Achievement of carbon neutrality by 2050

■ Examples of Super Eco-Products

「Arttec」 printed aluminum panels for interior and exterior use



Battery pouches for lithium-ion batteries

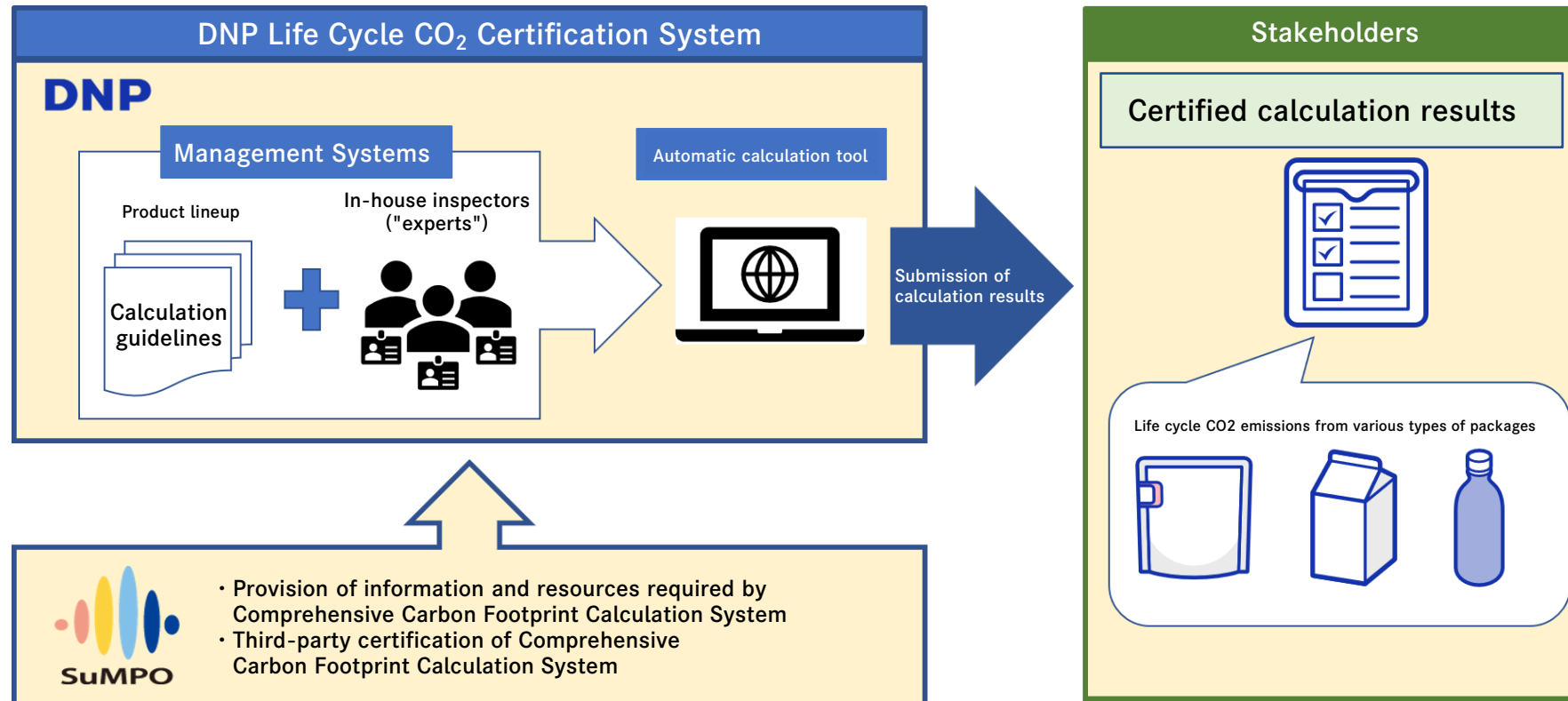


「GREEN PACKAGING」 eco-friendly packaging



(4) Environmental Initiatives

The DNP Life Cycle CO₂ Certification System



(4) Environmental Initiatives

We will respond flexibly and strategically to anticipated climate risks, and make our business activities more resilient over the medium to long term.

① Risks connected with manifestations of physical effects associated with climate change (Risks in a scenario where the average temperature has risen by 4°C)

Climate Risks		Financial and other effects on DNP		Level of impact	Likelihood
Increased damage from wind and rain due to events like torrential rain or floods	Suspension of operations during event	Negatives	<ul style="list-style-type: none">•Decreased earnings due to production delays•Increased cost of disaster countermeasures: disaster prevention measures for production facilities and bases, construction of production systems at multiple bases, etc.	Med.	High
	Disruption of supply chains		<ul style="list-style-type: none">•Decreased earnings due to manufacturing and shipping delays•Increases in raw material procurement costs and suspensions of supply	Med.	High
Rising temperatures; prolonged heat waves	Operations hindered by increased incidences of heatstroke, etc.		<ul style="list-style-type: none">•Decreased earnings due to production delays	Med.	High
	Increased costs due to greater demand for cooling		<ul style="list-style-type: none">•Increased energy costs•Increased capital expenditures	Med.	High
Risk of water damage in river basins and other areas vulnerable to flooding	Disruption of operations in river basins or other areas vulnerable to flooding		<ul style="list-style-type: none">•Decreased earnings due to production delays•Increased cost of disaster countermeasures: disaster prevention measures for production facilities and bases, construction of production systems at multiple bases, etc.	Med.	High

Confidential

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② Risks connected with transitioning to a decarbonized society (Risks in a scenario where the average temperature rise is limited to 1.5-2°C)

Climate Risks		Financial and other effects on DNP		Level of impact	Likelihood
Increased regulation of GHG emissions	Mandatory adoption of renewable energy	Negatives	Purchase cost of non-fossil certification As of 2030: roughly 600 million yen per year	Low	High
	Introduction of emission rights trading system		Purchase cost of emission rights As of 2030: roughly 400-800 million yen per year	Low	Med.
	Introduction of carbon tax		Cost effect of carbon tax As of 2030: roughly 880-1,050 million yen per year	High	Low
	Acceleration of carbon neutrality in supply chain		•Increasing requests from customers for carbon reductions •Impact on business contracts •Pass-through of raw material prices	Med.-High	High
Shift to low-carbon technologies	Acceleration of technological innovations aimed at carbon neutrality	Positives	•Market share gains due to early product development •Development aimed at next-generation energy → Increased sales from mobility-related businesses: Target for FY through March 2025: 100 billion yen	High	High
Changes in clients' behavior	Weeding out of products and services that are not low-carbon/eco-friendly		•Promotion of development of low-carbon products and services, and expansion of markets and expansion of market for them •Greater use of recycled and biomass materials, paper, and other alternative materials •Calculation of product life cycle CO2 → Increased sales from eco-friendly businesses: Target for FY through March 2025: 175 billion yen	High	High
Increased concern among stake-holders	Decline in corporate image; lower share prices; dismissal as investment target		•Increased information disclosure, stronger engagement • Competitive edge as a leading sustainability company; ability to attract talent	Med.	Med.

Recognition from Society

● DNP's sustainability activities have also received high marks from observers outside the company.

- In February 2022, DNP was selected for the third consecutive year to be on the Leader Board of the international non-profit organization CDP, meaning that DNP received CDP's highest Supplier Engagement Evaluation.



- DNP is the only printing company among the five constituent shares selected by GPIF for "ESG investment."



FTSE Blossom
Japan



FTSE Blossom
Japan Sector
Relative Index



2022 CONSTITUENT MSCI JAPAN
ESG SELECT LEADERS INDEX

2022 CONSTITUENT MSCI JAPAN
EMPOWERING WOMEN INDEX (WIN)

- For the 22nd consecutive year, DNP was included in the FTSE4Good Global Index, a globally recognized socially responsible investment index.



FTSE4Good

Today's Innovation is "Tomorrow's Basic."

DNP

Disclaimer

The earnings forecasts, medium-term management targets, and other forward-looking statements contained in these materials represent DNP's judgement of the current outlook based on information available at the time of preparation, and involve potential risks and uncertainties. Actual performance may therefore differ materially from these forward-looking statements due to changes in the various assumptions on which they are based.