

## PROGRESS WITH MEDIUM-TERM MANAGEMENT PLAN

### Business Strategy

– Medium-term Management Plan –



### Taking the long-term perspective, building on the achievements of the Medium-term Management Plan and continuing to provide essential value to society and people

**Hirofumi Hashimoto**  
Managing Director

At DNP, we embrace our corporate philosophy of connecting individuals and society, and providing new value, and through our business activities are working to achieve a sustainable, better society and more well-being lives. These value creation efforts are long term in nature, and we believe it is important for we ourselves to steadily build upon accomplishments to create a better future.

Most recently, we are pursuing a three-year medium-term management plan from fiscal 2020 to fiscal 2022. We are implementing a wide range of measures in keeping with two basic strategies under the plan, to create value through P&I Innovations, and to strengthen the business infrastructure to support growth.

With respect to value creation, we are closely examining the value created by each business based on profitability and market growth potential, and allocating our management resources to concentrate on focused businesses related to IoT and next-generation communications, data distribution, mobility and the environment. We are also working on all available structural reforms to create greater value, including in existing businesses, to build a strong business portfolio for the entire Group.

As an example of management indicators, in terms of fiscal

2024 targets, we plan to achieve net sales of 1.44 trillion yen, operating income of 75 billion yen and an operating income margin of 5.2%, while maintaining an ROE of 5.0% or higher. To achieve these targets, we plan to gradually increase the percentage of sales from our focused businesses in order to expand earnings, so that compared to fiscal 2019, in fiscal 2024 net sales increases from 35% to 45%, and operating income increases from 61% to 72%.

To strengthen our management foundations, there will be a particular focus on investment in human resources as we utilize financial and non-financial capital in an integrated manner. DNP employees are all professionals, each with their own unique strengths, forming an irreplaceable asset. By pursuing more in-depth dialogue with external partners while proactively combining our strengths, in line with one of our guiding principles of dialogue and cooperation, we will continue to create entirely new and innovative products, services and business models. We will also continue strongly to promote ESG (Environmental, Social and Governance) initiatives and strive to strengthen and fully implement corporate governance for appropriate and prompt management decisions. (See Guiding Principles on page 2.)

### Basic strategies of the Medium-term Management Plan

1. Social issues and people's expectations
2. P&I Innovations



#### Basic Strategy 1

#### Create value through P&I Innovations

- 1 - ① **Create value primarily in growth areas**  
Re-evaluate the value created by businesses and establish focus businesses in terms of four growth areas using the two axes of profitability and market growth potential.
- 1 - ② **Provide value optimized to each country and region**  
Provide value that is optimized not only to Japan but also to individual countries and regions and that is fine-tuned to address public expectations and social issues.
- 1 - ③ **Increase value using all available restructuring approaches**  
Improve profitability by optimizing management resources through the selection and focus of businesses according to the value created by each business.

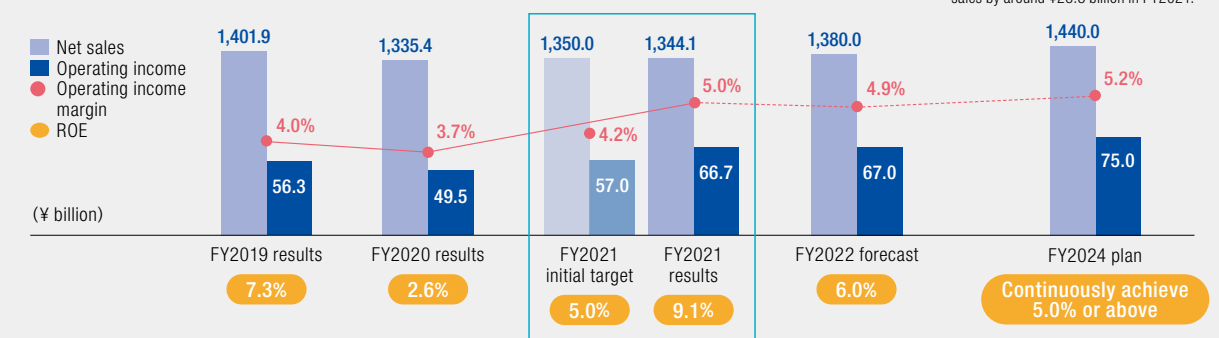
#### Basic Strategy 2

#### Strengthen business infrastructure to support growth

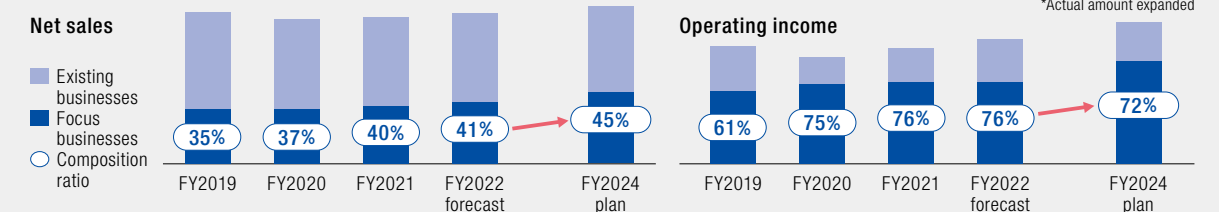
- 2 - ① **Strengthen financial and non-financial capital**  
Pursue capital strategy aimed at strengthening financial capital and combine financial capital/non-financial capital to promote integrated management.
- 2 - ② **Strengthen corporate governance**  
Build robust corporate governance system and structures to increase corporate value.

### Management targets for the year ending March 31, 2025

#### Management targets (Net sales / operating income / ROE)



#### Composition of focus businesses



#### Basic strategies for each segment of the printing business

<Segment>	<Basic Strategy>
Information Communication	<b>1 Growth strategy:</b> Pursue digital transformation (DX) aimed at adding value to customer experience <b>2 Restructuring:</b> Downsize paper media production bases
Lifestyle and Industrial Supplies	<b>1 Growth strategy:</b> Leverage converting technology to strengthen new product development and sales <b>2 Restructuring:</b> Push ahead with review of low value-added products
Electronics	<b>1 Growth strategy:</b> Develop and supply key components that contribute to sophisticated integration of real and digital <b>2 Restructuring:</b> Rebuild businesses where competitiveness has declined

PROGRESS WITH MEDIUM-TERM MANAGEMENT PLAN

Basic Strategy 1

Create value through P&I Innovations

1-① Create value primarily in growth areas

DNP established focused businesses that are promising in terms of high profitability and market growth, and is accelerating related business expansion through a focused and optimal allocation of management resources. The following were the main related initiatives in fiscal 2021.

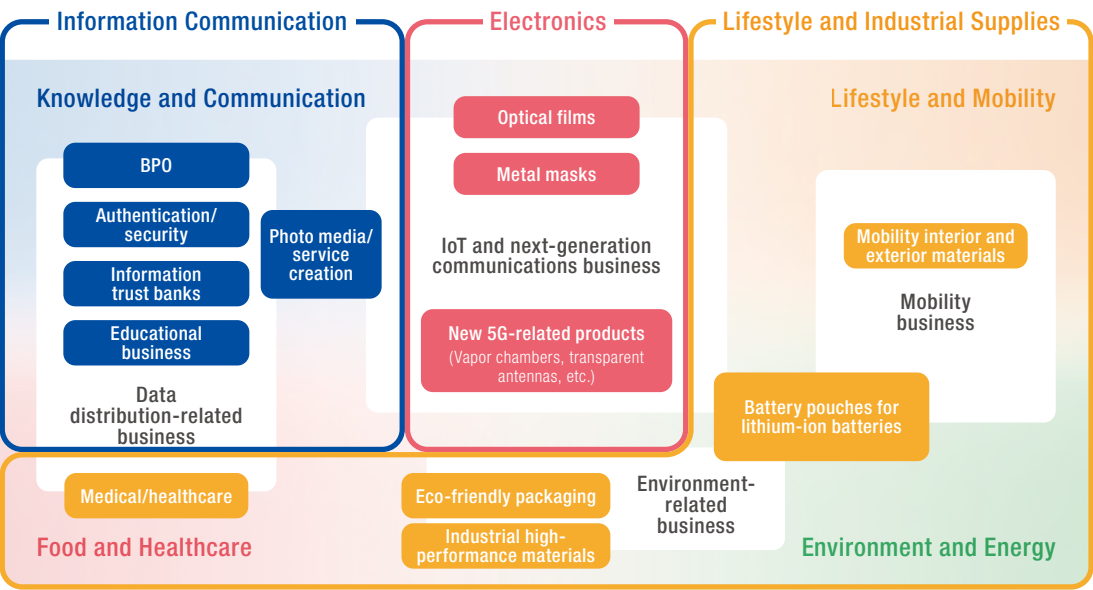
In the IoT and next-generation communications business, we advanced the development and supply of next-generation semiconductor products manufactured using nanoimprint lithography, for fifth-generation mobile communications system (5G) applications. Nanoimprint lithography cuts costs and the amount of energy consumed during semiconductor production using it is much less than that used by the conventional method, thereby contributing to the achievement of a decarbonized society.

In the data distribution-related business, we established NTT EDX Co., Ltd. in October 2021 as a joint investor with NTT West and NTT East with the aim of advancing higher education. With a focus on electronic textbooks and other teaching materials, we provide various services and support the digitization and streamlining of publisher and bookstore operations. We also use our “Ki-Rei-i” ID photo printing machine to provide an electronic application service for obtaining Japanese government “My Number” ID cards. In addition, we promote digital transformation (DX) governmental services.

In the mobility business, we developed products and services for the next-generation mobility society, which requires reduced environmental impact, improved energy efficiency, higher information security and comfort. In addition to battery pouches for lithium-ion batteries used in electric vehicles (EVs), we expanded our business in decorative films and panels for enhancing the design and function of interior and exterior materials.

In the environment-related business, DNP strengthened the development of mono-material packaging materials, which are made of a single material for enhanced recyclability, and developed polypropylene (PP) film packaging with improved oxygen and water vapor barrier properties and metallic designs using DNP's proprietary technology. The new product was adopted by a global consumer goods manufacturer in June 2021 and launched in the Southeast Asian market.

Focus businesses in four growth areas



1-② Provide value optimized to each country and region

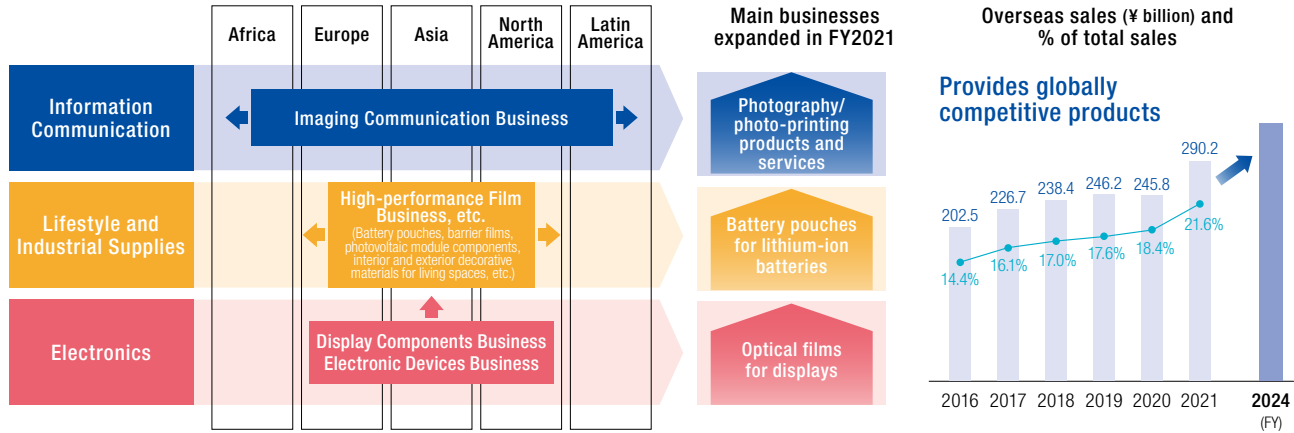
DNP is developing its business globally in a manner that accurately ascertains the characteristics of each country and region and the issues and needs of the people living there, and provides individually optimized products and services. Approximately one-eighth of the Group's employees are promoting diverse businesses at overseas locations, and the

ratio of overseas sales to total sales for the fiscal year ended March 31, 2022 was 21.6%, up 3.2% from the preceding year. As well as working to further expand businesses in which we hold the world's top market share, such as battery pouches for lithium-ion batteries, metal masks for manufacturing OLED displays, optical films for displays and

dye-sublimation thermal transfer printing media for photo prints, we will focus on creating new businesses to provide essential basic value to people the world over.

Our Sustainability Committee, which reports directly to the president, analyzes and manages the environmental, social and economic risks that have emerged in recent years around the world to ensure proper management. In addition to giving consideration to human rights and providing an appropriate labor environment, we will continue to fulfill our social responsibilities in Japan and overseas, which will lead to our long-term development. At the same time, taking change as an opportunity, we will make further efforts to strengthen our structure, such as by exploring overseas markets and acquiring cutting-edge technologies, and make every effort to provide further value by enhancing synergies.

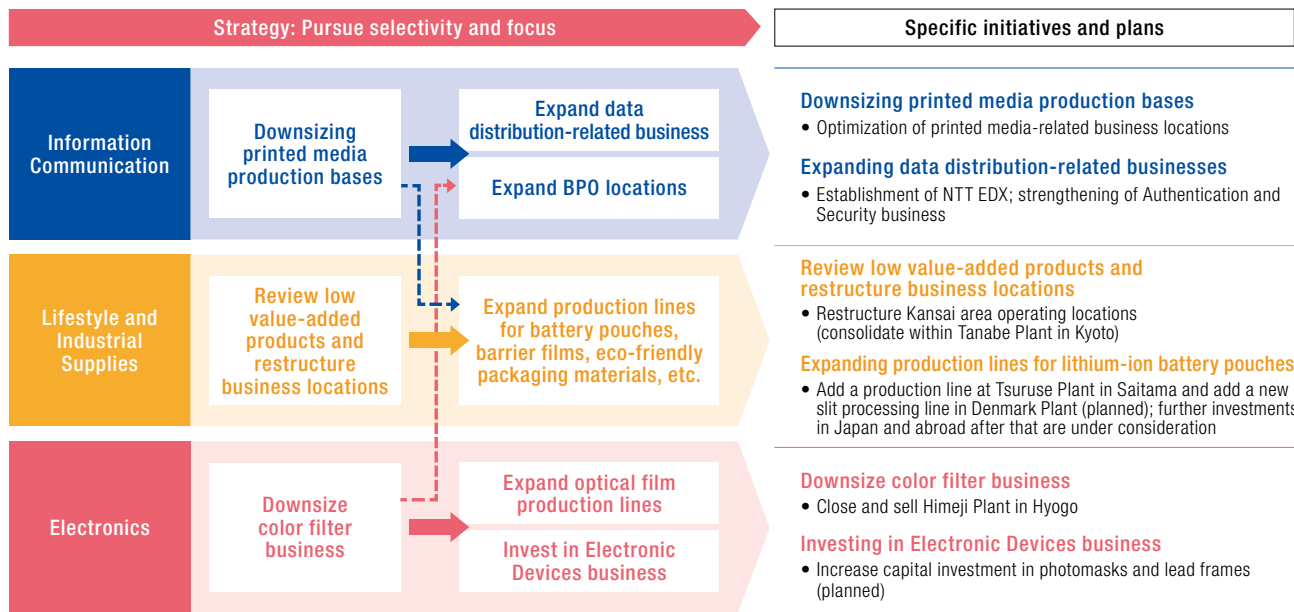
Main businesses undertaken in the global market



1-③ Increase value using all available restructuring approaches

A wide range of structural reforms will be promoted throughout the Group with the aim of building a strong business portfolio and improving profitability. For example, in the Information Communication segment, paper media production bases will be downsized, in the Lifestyle and Industrial Supplies segment, low value-added products will be reviewed and bases reorganized, and in the Electronics segment, productivity will be significantly improved through the use of data analysis, robots and AI. By allocating the human capital, R&D investment, land, equipment and other management resources generated through these efforts to focus businesses having high market growth potential and profitability, we will transform our business structure and further enhance our business competitiveness.

Examples of principal structural reforms in each business segment





## PROGRESS WITH MEDIUM-TERM MANAGEMENT PLAN

### Basic Strategy 2

### Strengthen business infrastructure to support growth

#### 2-① Strengthen financial and non-financial capital

DNP will strengthen its business infrastructure by comprehensively utilizing financial and non-financial capital for medium- and long-term growth. In addition to promoting capital policies that support business growth, we will focus on strengthening and expanding five types of non-financial capital, namely human capital, intellectual capital, manufactured capital, natural capital and social/relationship capital, and formulate and implement specific action plans.

In terms of capital policy, we will pursue investment in focused businesses in conjunction with Basic Policy 1. During our medium-term management plan for the three years up to fiscal 2022, we plan to make annual investments on the order of 100 billion yen. DNP will finance this by using both

its own funds and third-party capital, reducing idle assets and selling strategic shareholdings. We will also take a comprehensive approach to improving capital efficiency, stabilizing our financial base and returning profits to shareholders.

With regard to non-financial capital, we will strengthen our investment in our most important human resources. In addition, we will expand intellectual capital, including technology, R&D and patents, and strengthen environment-related initiatives aimed at further coexistence between business activities and the global environment. We will use these measures to foster an organizational culture that continues to take on the challenge of value creation.

#### 2-② Strengthen corporate governance

DNP works to strengthen corporate governance as one of its crucial management issues. We have built and are operating a robust system for prompt and accurate management decision-making and business execution, as well as for monitoring and auditing these functions. It is also important to increase the diversity of the management team. At the General Meeting of Shareholders in June 2022, as in the previous year, 12 directors, including one woman, were elected, of which four were outside directors who meet the criteria for independence. The effectiveness of the Board of Directors is also analyzed and evaluated once a year, and the results of the analysis are discussed by outside directors and shared with the Board of Directors.

To ensure that each and every employee fulfills his or her social responsibilities, we promote behavior based on the DNP Group Code of Conduct and foster compliance awareness through training and other means. In April 2022, in order to enhance environmental, social and economic sustainability and

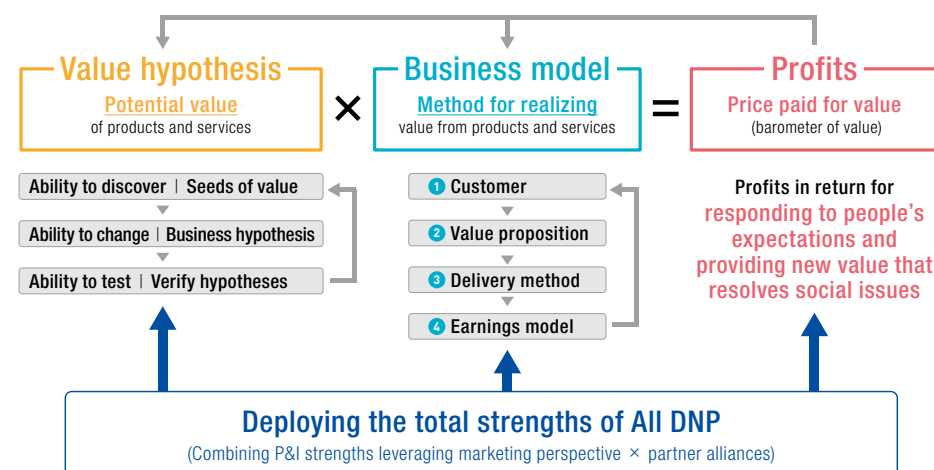
promote DNP's sustainable growth, we reorganized the structure of the Sustainability Committee, which is composed of the company president (chairman), the Senior Managing Director (vice-chairman) and directors and corporate officers with assigned duties at the Head Office. Based on the recognition that variable factors identified as risks are at the same time opportunities for business expansion, we will link them to the creation of new value that will also contribute to the achievement of the SDGs.

DNP's efforts in these areas of ESG (Environmental, Social and Governance) are highly regarded outside the company, as shown, for example, by DNP's selection for the FTSE4Good Global Index, a global socially responsible investment (SRI) index, for 22 consecutive years. In addition, DNP is the only company in the printing industry to be selected as a component of all five ESG indices managed by the General Pension Investment Fund (GPIF) (as of July 2022).

### TOPIC

#### Promote value creation programs that accelerate P&I Innovations

DNP will implement the Value Creation Program in which it promotes the All-DNP initiative that deploys our total strengths synergizing the strengths of the entire Group, discovers "seeds of value," repeats value hypothesis verifications and builds optimal business models. It is also important to expand profits, which is the price paid for value, and by promoting this program, we will increase corporate value over the medium to long term.



## Financial Strategy



**Through the optimal allocation of management capital, we will accelerate the expansion of business and enhance our cash generating capability and asset efficiency to maximize corporate value.**

**Masafumi Kuroyanagi**  
Managing Director

To continue to create value over the long term, the DNP Group needs to continuously strengthen its management foundations. We strive to practice integrated management that combines the strengths of financial and non-financial capital, and here I would like to explain in particular about our financial strategy focused on capital policy initiatives.

We are currently implementing a capital policy based on two pillars consisting of "improving ROE" and "shareholder returns." We will increase corporate value by undertaking business activities that take a long-term perspective while returning these results to all stakeholders, including our shareholders.

As part of efforts toward "improving ROE," we will invest in focus businesses with high profitability and market growth potential and work to create new value to expand operating cash flow. In fiscal 2021, due also to the recording of extraordinary gains that included gain on revision of retirement benefit plan and gain on sale of investment securities, net income attributable to parent company shareholders increased 287.4% from the previous year to 97.1 billion yen and ROE was 9.1%. We aim to consistently achieve ROE of at least 5.0% in the run-up to fiscal 2024.

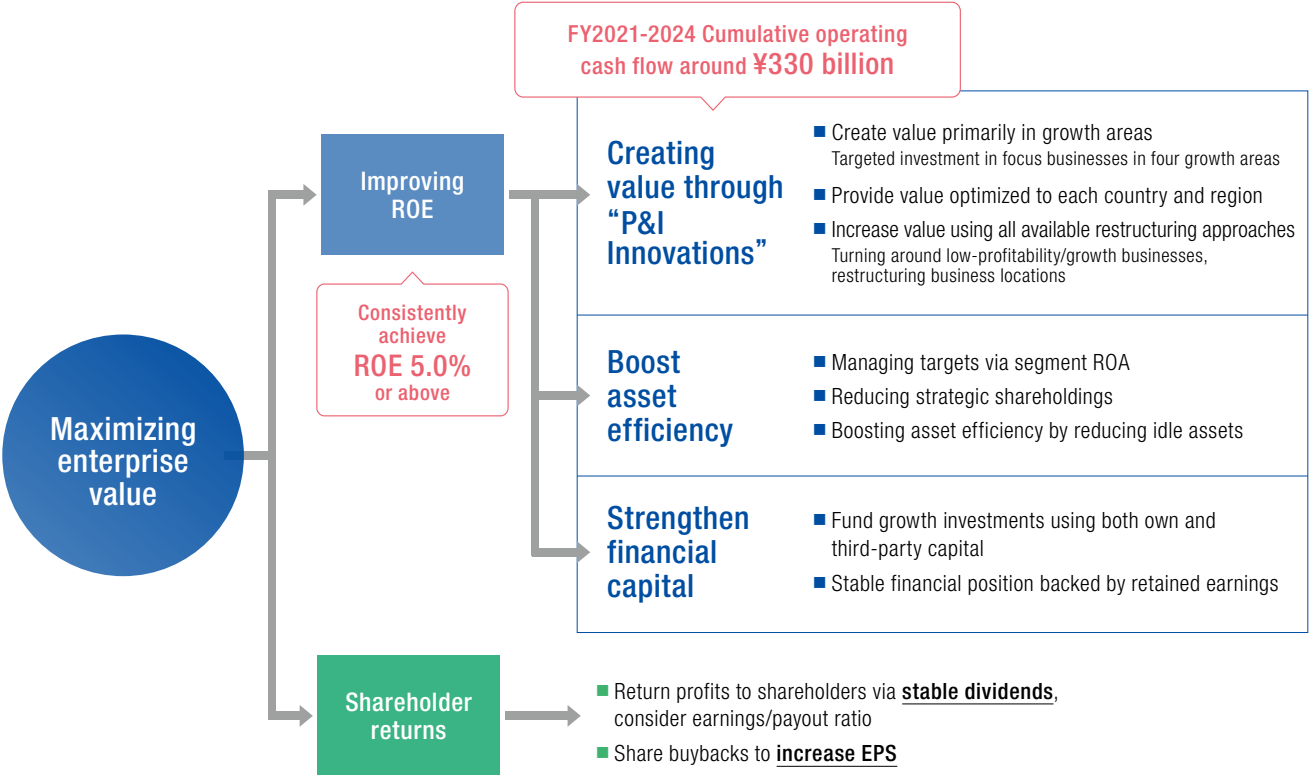
Furthermore, we will manage targets via segment ROA and undertake a broad review of the assets we hold domestically and overseas and reduce any idle assets. We will also continue efforts to decrease strategic shareholdings, for which we have achieved significant progress in recent years, as we further improve asset efficiency. Moreover, we will focus efforts on the strengthening of financial capital. In addition to making every effort to enhance a stable financial position backed by retained earnings, we will use both our own and low-interest third-party capital while working to reduce capital costs.

Regarding "shareholder returns," which is another important pillar, under our basic policy of stable dividends we will issue dividends that take into account factors such as earnings and dividend payout ratio. We will also consider share buybacks depending on the business environment and other factors.

Through these capital policy initiatives, DNP will strive to maximize corporate value in a way that contributes to the realization of a sustainable, better society and well-being lives for people.

Financial Strategy

Capital policy initiatives to maximize corporate value (~FY2024)



Strengthening initiatives for “improving ROE”

In promoting our medium-term management plan, DNP formulates and implements a capital policy based on “improving ROE” and “returning profits to shareholders.” In particular, for increasing the ROE numerator, we will promote Basic Strategy 1, Create value through “P&I Innovations.” Through targeted investment in focus businesses such as IoT and next-generation communications business, data distribution-related business, mobility business and

environment-related business, we plan for cumulative operating cash flow of around 330 billion yen from fiscal 2021 to fiscal 2024. With regard to “boost asset efficiency” and “strengthen financial capital,” DNP will minimize the negative impact of risks while turning these into business opportunities by anticipating rapidly changing domestic and international circumstances and flexibly combining various measures.

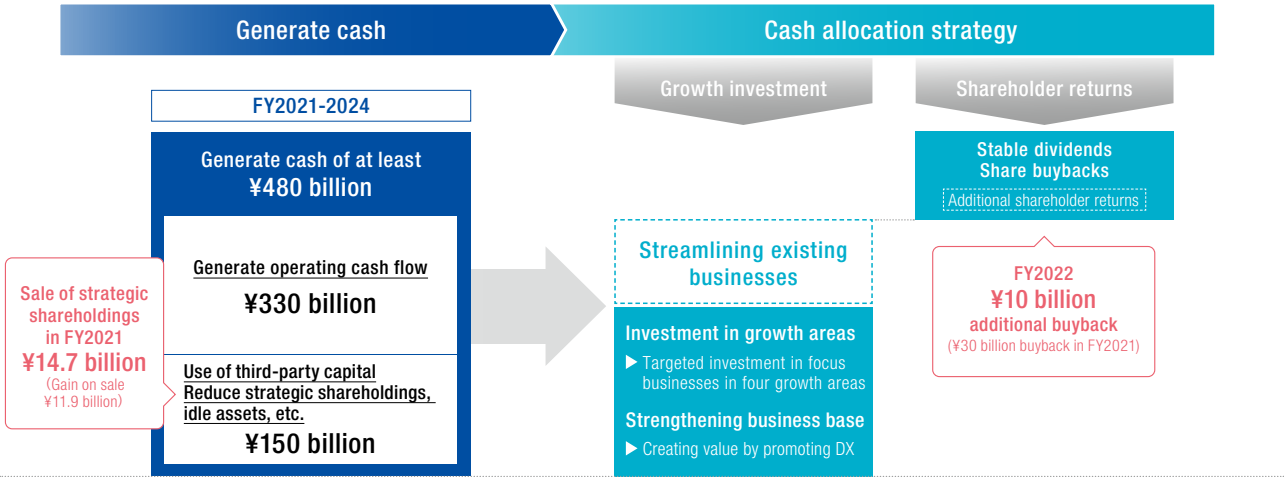
Generating cash and optimum allocation for growth investment and shareholder returns

DNP will work to generate cash by increasing operating cash flow through value creation and improving capital efficiency. By utilizing third-party capital in addition to our own equity capital, we will concretely progress with reducing capital costs and optimizing shareholders’ equity.

We have also established a cash allocation strategy which

promotes the optimum allocation toward growth investment and shareholder returns, and are pursuing a number of initiatives in this area. From fiscal 2021 to fiscal 2024, we aim to generate cash of at least 480 billion yen, and plan to allocate this for investment in focus businesses in four growth areas and efforts to strengthen our management foundations.

Executing optimal cash allocation

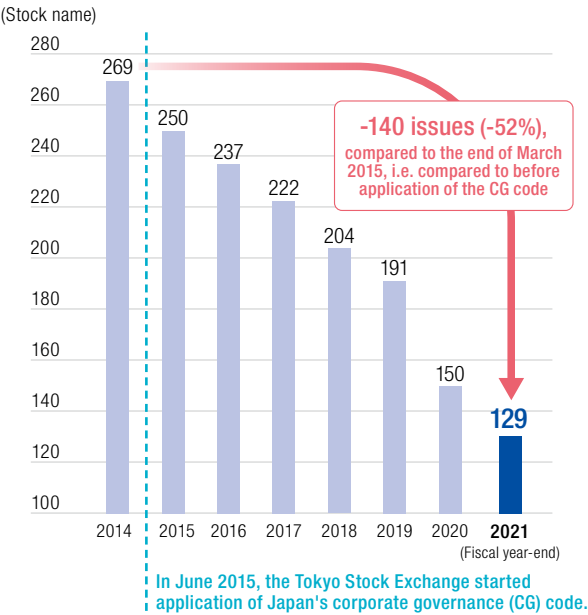


Returning value to all stakeholders

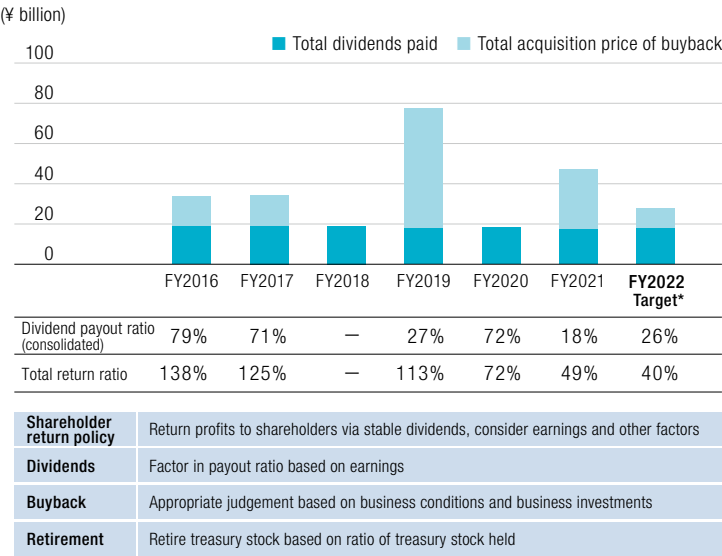
DNP constantly works to strengthen relationships with and return value to all stakeholders, including shareholders, employees and their families, client companies and consumers, business partners and local communities. In doing so, we especially regard the return of profits to shareholders as one of our key management policies and will return profits to shareholders based on our basic policy of stable dividends while considering earnings, dividend payout ratio and other factors. We will also look closely at the

management environment and business investment to make appropriate decisions regarding the buyback and retirement of treasury stock. For fiscal 2022, we have announced the buyback of treasury stock with an upper limit of 10 billion yen. In addition, we continuously undertake reviews to optimize our strategic shareholdings. The number of listed issues held by DNP has been reduced by 140 issues (-52%) to 129 issues from 269 issues held during the seven years from the end of fiscal 2014.

Trends in listed stockholdings



Shareholder return policy and trend in results



\* Details of buyback (FY2022 Target)

- Stock to be acquired: Common stock
- Number of shares: Up to 6 million shares, equivalent to 2.23% of shares outstanding excluding treasury stock
- Total acquisition price: Up to ¥10 billion
- Purchase period: May 16, 2022-December 20, 2022





## Human Capital Strategy

### Key issues 2

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

#### Promoting D&I as a driving force for growth

With DNP providing value to diverse people living in diverse societies in Japan and abroad, promoting DNP's own diversity and inclusion (D&I) initiatives is an essential management issue. Reflecting DNP's constant awareness of the importance of D&I in the conduct of its business, in 2020 it issued the DNP Group Diversity Declaration as a commitment from top management in order to strongly convey this stance both inside and outside the company. In addition, we are accelerating D&I initiatives throughout the Group, including by operating a D&I Promotion Committee consisting of top executives from each department and Group company.

Formerly we provided products and services to client companies by utilizing the individual strengths within each organization. Today, however, we are working to resolve social issues and create value that meets people's expectations by combining the diverse strengths that exist within the Group. The possibilities for such combinations are endless, and we will use the total strengths of All DNP as a driving force for growth.

For more on D&I, refer to the message on pages 66-67 by board director Minako Miyama.

#### Result

#### Employee D&I perception level

Improved from 56.3% in FY2019 to **78%** in FY2021

#### DNP Group Diversity Declaration

1. We will take the lead in working to promote diversity and inclusion.
2. We will transform the awareness of managers into a "Dialogue style" that utilizes the differences of each and every person as strengths.
3. We will make ourselves a company where each and every employee can actively take on challenges and create new value.

July 17, 2020  
Yoshinari Kitajima, President



#### Investing diverse capabilities in focus businesses

To create new value, it is becoming increasingly important to optimally allocate human capital mainly in focus businesses in four growth areas. We are also promoting the In-House Recruiting System that maximizes the strengths of diverse employees by aiming for optimal matching between human resources and work operations. Under this system, over 400 employees have been transferred in the past 10 years, and more than 150 in the past 3 years. The system provides an opportunity for employees to become aware of their own experience and capabilities, and to learn new things, leading to autonomous career development as the business expands.

We are also focusing on attracting outside human resources to increase the pace and effectiveness of value creation. At the same time, in fiscal 2021 we began

recruiting employees who wish to be transferred to companies outside the DNP Group, providing an opportunity for them to gain experience, skills and a broader perspective that cannot be obtained solely within the Group. For DNP, it also strengthens partnerships with the external companies concerned.

#### Result

#### Utilization of In-House Recruiting System

**152** employees transferred in the last 3 years, and **419** employees over the past 10 years

### Key issues 3

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

#### Increasing health management and health measures

In April 2021, we formulated and disseminated the DNP Group Declaration on Health as a top commitment. In accordance with this declaration, we will focus not only on physical and mental health, but also on efforts that include developing a positive mind and building psychological safety in employees. As one of our important management strategies, investing in the health of our employees will not only maintain and improve their health, but will also improve their vitality, creativity and productivity, thereby revitalizing the organization. By building a vibrant team, we will improve corporate value and link this to the happiness of each and every employee.

#### DNP Group Declaration on Health

The DNP Group aims to embody the DNP Group Safety and Health Charter by promoting the health management and health-driven measures that boost the happiness of our employees, based on the following three perspectives:

1. Maintaining and improving the physical and mental health of our employees and their families.
2. Developing the psychological capital, or positive mind of diverse individuals or human resources.
3. Building psychological safety, or trust-based relationships in our individual workplaces and teams.

With this declaration in mind we aim to achieve improved corporate value.

April 1, 2021  
Yoshinari Kitajima, President

#### TOPIC

DNP has been recognized as a Certified Health & Productivity Management Outstanding Organization (White 500) (sponsored by Nippon Kenko Kaigi\*), which certifies corporations that strategically address employee health from a managerial perspective. DNP has been highly evaluated for providing healthy menus in employee cafeterias nationwide and holding regular in-house sporting events and seminars on health measurements and food and health, and promoting a health education model that includes the use of sports facilities.

\* Nippon Kenko Kaigi: An association consisting of leaders in the business & medical sector and local municipalities



#### Increasing engagement

DNP has been promoting initiatives to increase employee engagement, which represents each employee's willingness to contribute to a company, organization or work. By doing so, we intend to improve labor productivity, create diverse value, cultivate employees' awareness that they help society and people through their work and encourage them to take action in this regard.

In fiscal 2021, in conjunction with the DNP Group

Declaration on Health, we launched an engagement survey to visualize the state of individual engagement and the state of teams. We will also utilize the survey to visualize issues and other factors in each organization, promote employees' self-understanding and mutual understanding through dialogue to increase their motivation and encourage teams to achieve their expected results.

#### TOPIC

DNP started using Atrac, Inc.'s survey tool, Wevox, in June 2021, and in November expanded the survey target to cover the entire Group. Each month all employees answer a survey (a simple questionnaire) on the Atrac website. Even in workplaces where survey responders don't use a computer as part of their jobs, responses can be made by BYOD (Bring Your Own Device), utilizing shared devices or personal terminals. This allows visualization and verification of team and workplace conditions, as well as relationships between companies, organizations and teams.





## Intellectual Capital Strategy



### Realizing a better future with many partners by leveraging our strengths in technology, R&D and intellectual property

**Masato Yamaguchi**  
Senior Managing Director

At DNP we have continually refined our unique P&I (printing and information) strengths and developed new technologies and know-how, while creating a wide variety of products and services together with many partners. By accumulating such value-creating efforts, we will create a better future in which diverse issues are resolved and people's expectations are fulfilled.

Currently, we are strengthening our technology, R&D and commercialization efforts in the four focus business areas of IoT and next-generation communications, data distribution, mobility and environment-related. We are enhancing our competitiveness by combining advanced technologies such as, for example, operational efficiency using AI (artificial intelligence) technology, innovative production systems that utilize manufacturing equipment we develop ourselves and material development using MI (Materials Informatics)\*.

We are promoting digital transformation (DX) by advancing development that combines the strengths of analog and digital, real and virtual and manufacturing and services. We are developing businesses in many fields which include our "honto" hybrid bookstore network that handles both paper and digital books and a payment platform that utilizes information security technology we have cultivated in our smart card business.

We believe that the potential arising from synergizing P&I strengths is unique to DNP and cannot be imitated by any other company and leads to endless possibilities. We are

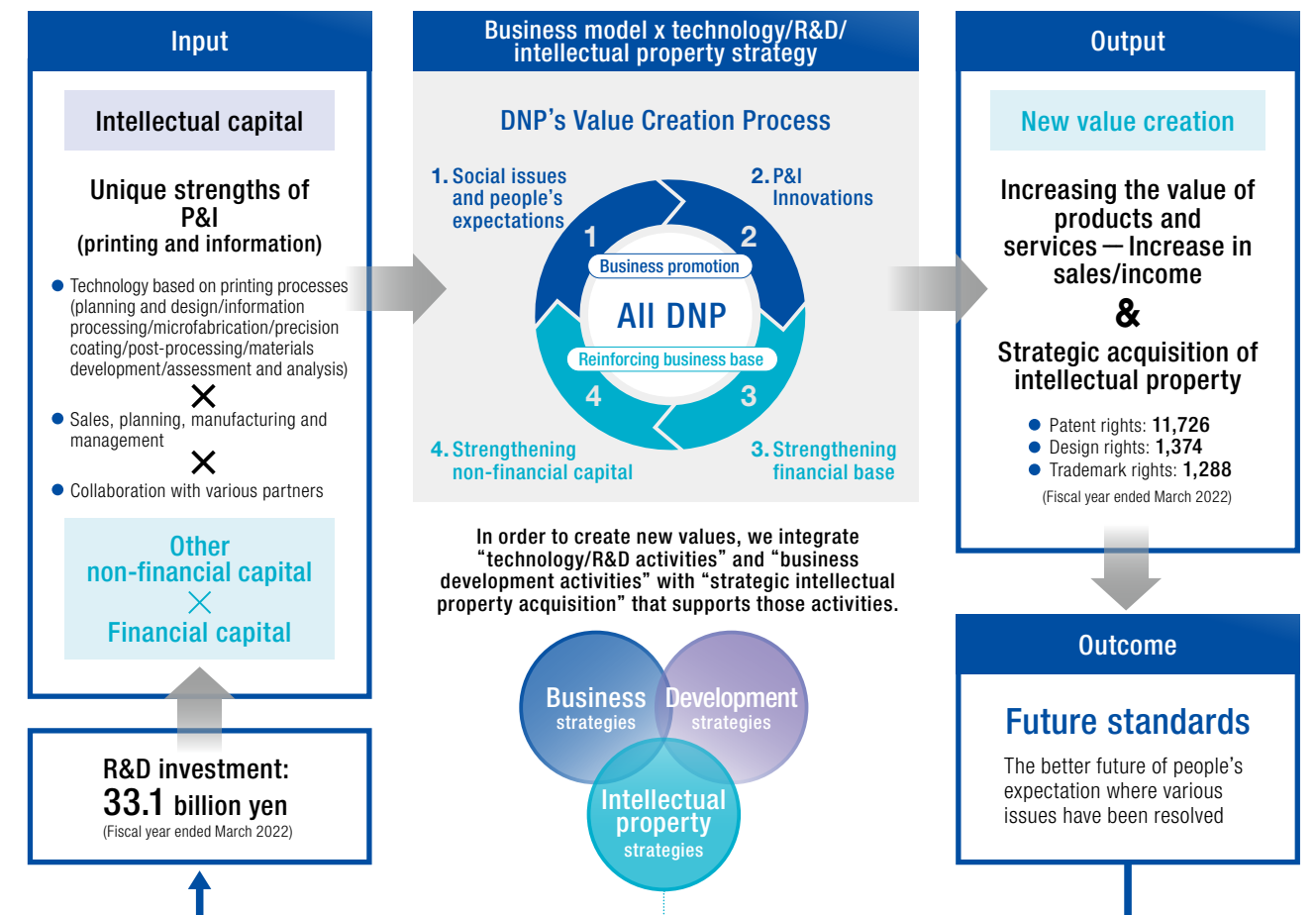
promoting open innovation with partners in Japan and abroad to further expand the variations in the combinations of our strengths.

It is an important management task to strategically acquire intellectual property for maximizing the value we create and for making our business competitive, sustainable and resilient. For example, we have acquired many patents for not only core technologies but also for peripheral technologies in businesses where we have acquired the world's top market share, such as battery pouches for lithium-ion batteries, metal masks for manufacturing OLED displays, optical films and dye-sublimation thermal transfer printing media for photo prints. DNP has been contributing to solving social issues, for example, by opening for license some of its patents relating to the Biomatech series of eco-friendly packaging materials which partially use plant-based raw materials instead of petroleum-derived materials.

DNP is continually taking on the challenge of innovation in order to create new value. We have a corporate culture that fully supports human resources who are willing to stand on the front lines and have the courage and determination to carve out the future themselves. Failure is the food of success, and by constantly taking on challenges in uncharted territory, we will provide essential value to people the world over and create future standards.

\*MI (Materials Informatics): A materials development method utilizing AI and other information sciences

### Long-term value creation by strengthening and expanding intellectual capital (technology, R&D/intellectual property-related)



### For strategic acquisition of intellectual property

- Understanding the intellectual property that underpins products and services that gain top market share**  
DNP views intellectual property as one of the essential assets for value creation. Especially for products and services that have gained top market share in Japan and internationally, our patent network of core and peripheral technologies has a significant effect on business development.
- Setting focus businesses and strategic acquisition of intellectual property**  
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.
- Integrating three strategies to create value**  
We will establish business models exploiting intellectual property for our focused businesses through the value creation process by integrating business strategy, development strategy and intellectual property strategy. We plan scenarios for creating value in the long term and strengthen internal and external collaboration.
- Concentrate resources and developing human resources**  
Our various resources, including intellectual property, will be concentrated on focus businesses. We will endeavor to develop human resources who are well versed in business, technologies, R&D and intellectual property, and we will encourage a culture of managing risk and respecting the rights of others.
- Strengthen governance and implement strategies**  
Intellectual property policies and the state of progress will be shared with management and other personnel having different responsibilities and utilized in management decision-making while ensuring effective governance. At the same time, there will be a further strengthening of cooperation between each business unit and the intellectual property department to accelerate the expansion of focus businesses.

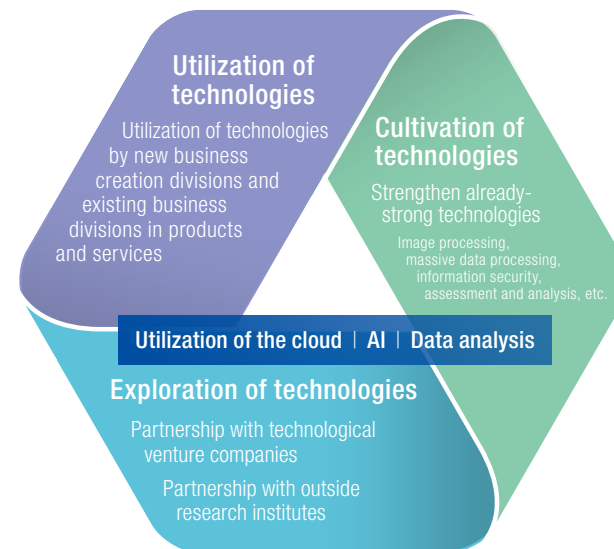
## Intellectual Capital Strategy

### Basic policies and structures for technologies and R&D

For DNP, which has expanded its business domains by applying and developing technologies cultivated in the printing process, strengthening technology and R&D is a crucial management issue. We will always take the consumer's point of view as we accurately understand environmental, social and economic issues, and create optimal solutions.

DNP will further strengthen and deepen the already-strong technologies that we have cultivated to handle, in a safe and secure manner, important information entrusted to us by companies, organizations and consumers, and will also accelerate development by promoting collaboration with various partners, including venture companies, start-ups, students and research institutions, and by exploring new technologies. Also, we will combine our internal and external technological strengths to solve various problems and create new value that excites people.

As a base for such cultivation, exploration and utilization of technologies, we will strengthen AI-based data analysis and the use of cloud environments, taking advantage of the major trends in DX.



### Technologies and R&D structures

DNP's technology and R&D divisions are developing proprietary technologies to solve diverse issues in a wide range of business fields, with the focus on the four growth areas of "Knowledge and Communication," "Food and Healthcare," "Lifestyle and Mobility" and "Environment and Energy." We are building and operating robust structures that create new value in existing and new businesses by promoting the combining of technologies and collaboration with external partners.

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

### Technology and R&D Expenditures

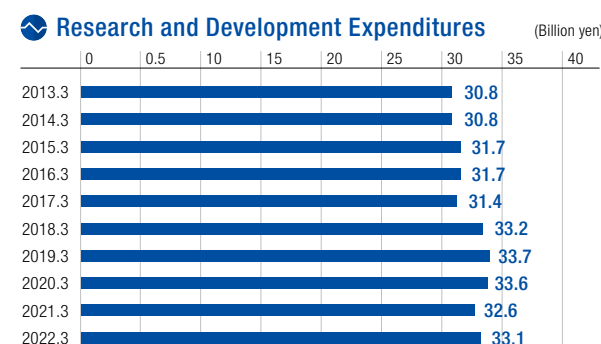
DNP continues to invest over 30 billion yen annually in technology and R&D, with the amount reaching 33.1 billion yen in the fiscal year ended March 31, 2022, and 33 billion yen planned for the current fiscal year ending March 31, 2023. In recent years, in order to solve increasingly diverse and complex problems and create a better future for ourselves, we have been increasing the expenditures of the R&D department at the headquarters based on the All DNP concept, which combines the strengths of the entire Group. The breakdown of each division is as follows.

Head office development department:  
**21,927 million yen**

Business segment total:  
**11,219 million yen**

Information Communication: **2,215 million yen**  
Lifestyle and Industrial Supplies: **1,842 million yen**  
Electronics: **7,162 million yen**

(As of March 2022)



### Expanding patent portfolio related to focus businesses

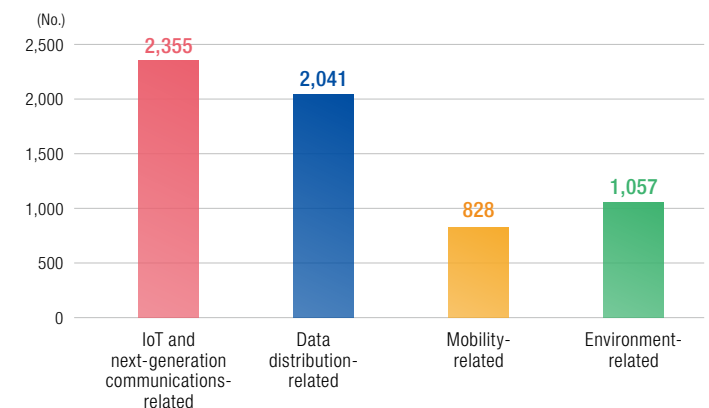
The DNP Group sets its focus businesses by carefully examining the environmental, social and economic value that each business generates based on the growth potential and profitability of domestic and overseas markets. In the current Mid-term Management Plan underway, we are concentrating

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.

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)



### COLUMN

### Potential of DNP functional films — Toward the realization of a sustainable society

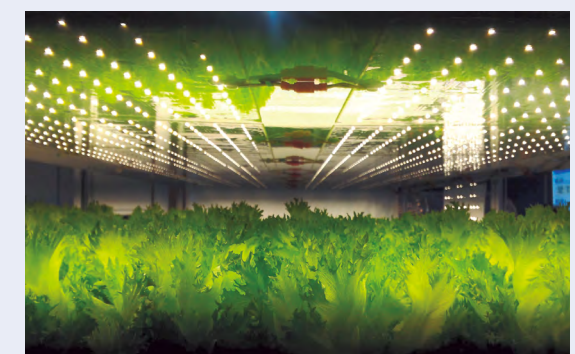
As business areas become borderless on a global scale, including the convergence of the automotive industry with the fields of IT and electronics, the potential of DNP's functional films is expanding. DNP has created products with a wide range of functions by combining thin-film formation, microfabrication, lamination and other technologies developed in the printing business. In addition, DNP will leverage its proprietary technologies for controlling light, heat, gases, liquids and other substances to create value by reducing environmental burdens and food loss and resolving labor shortages.

We have developed eco-friendly products using plant-derived materials and packaging with enhanced recyclability by using a single material (mono-material). In addition, by using film instead of conventional metal for packaging lithium-ion batteries, we have reduced the weight and improved fuel efficiency for automobiles. DNP has also made it possible to add designs such as wood grain patterns and geometric patterns to automobile interiors while taking advantage of their functionality.

At the same time as we are improving and strengthening existing technologies, we are contributing to the realization of a sustainable and better society and spiritually enriched lives by working on development that looks 10, 50, even 100 years down the road.



Next-generation decorative panels for advanced seamless designs of automobile interiors



DNP's Flexible LED Sheet is also expected to be used for growing plants.



## Intellectual Capital Strategy

### Creating new value by combining diverse strengths

We are constantly refining our most advanced technologies, such as microfabrication, precision coating and post-processing, based on printing processes, which is the basis of manufacturing, as well as planning and design, information processing, materials development and assessment and analysis. These in turn create synergies with our know-how in sales, planning, manufacturing and other practices, as well with our partners' strengths, to create new value.

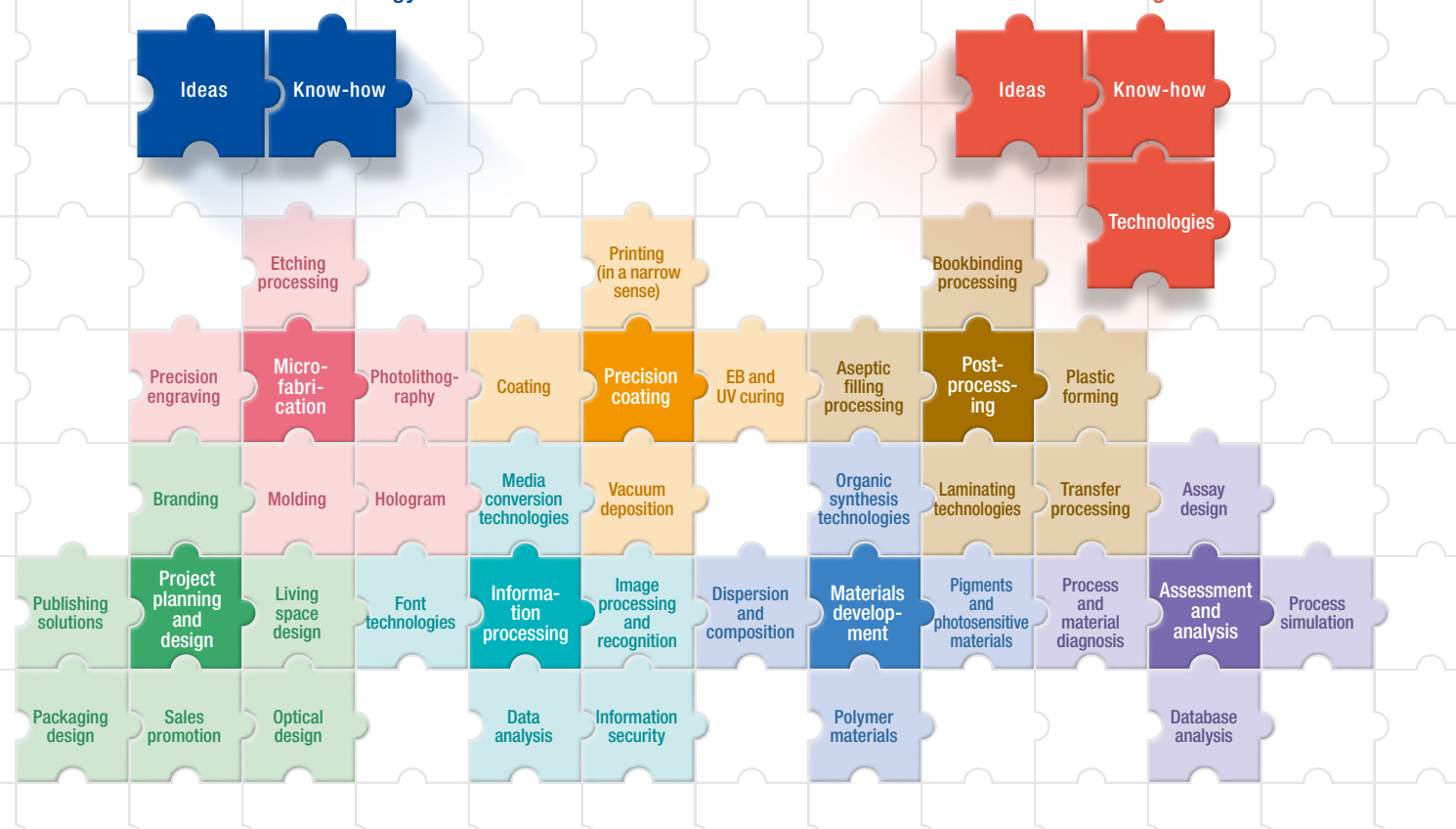
Especially for the promotion of DX, we will leverage DNP's hybrid strengths in both digital and analog technology, reality and virtual reality, manufacturing and services. (See pages 40 and 41.)

We are also strengthening collaboration with diverse external partners to speed up value creation. There are endless such ways in which our strengths can be combined, and we will continue to pursue the many possibilities to achieving a better future.



### DNP's P&I technologies

#### Combining DNP's diverse ideas and know-how with technology



#### Combining partners' strengths (technology & ideas & know-how) with DNP's strengths

### Technologies cultivated through printing processes



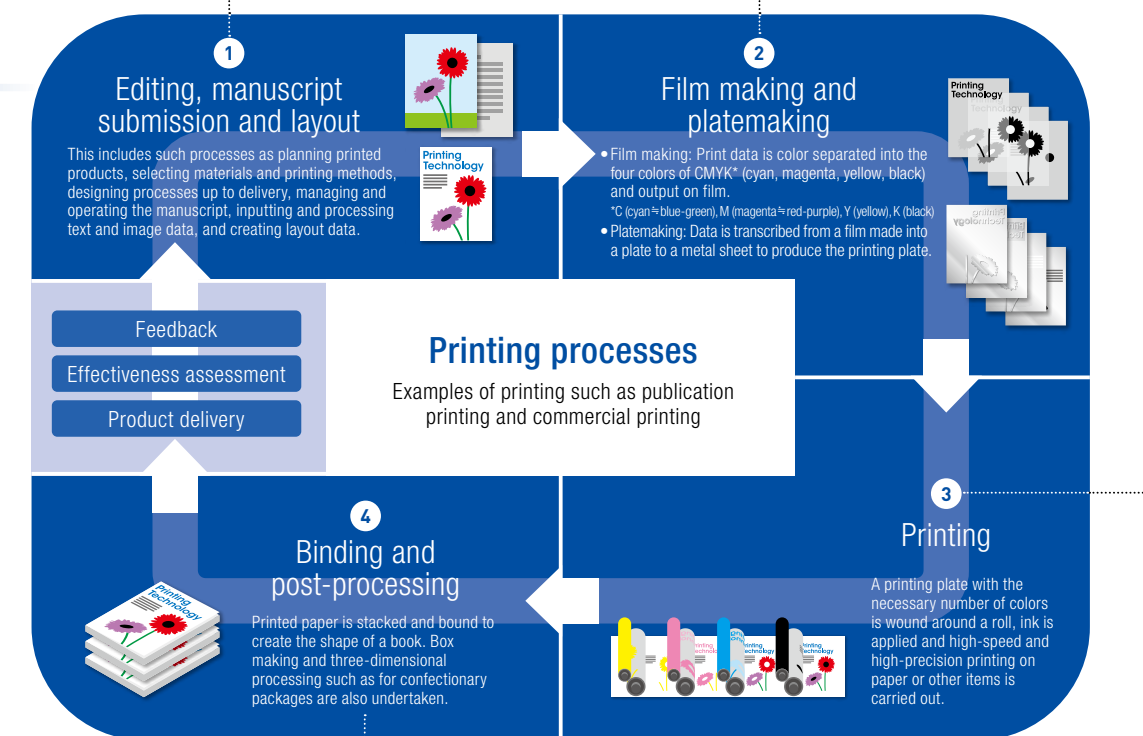
DNP plans and designs a process suited to the desired layout. DNP continuously handles large volumes of text, still images, videos, voice and other data and arranges data formats and color tones, and also undertakes processing and storage. DNP is raising its know-how for safely and properly handling large volumes of data as it expands into various types of important information processing and analysis and security technologies.



In the printing process, extremely minute processing is performed to ensure that halftone dots of printed ink are difficult to discern with the naked eye. We have further advanced this technology to enable microfabrication for such substrates as metals, glass and plastics. This technology is being applied in numerous leading-edge electronics products and in such fields as hologram anti-counterfeiting and security.



Precision coating is a technology that forms a coating film on materials with a variety of features, in either single or multilayers, in a homogenous and uniform manner on the surface of substrates such as paper as well as plastic film, metal and glass. A variety of functions that include optical and barrier properties and heat resistance can be added, giving this technology widespread applications in such areas as packaging and building materials, photographic print materials, battery materials and optical films.



Post-processing technologies are derived from various processes that follow printing, such as bookbinding. These technologies are applied to make printed products easy to use and suitable for the purpose of the finished product and are also outstanding for use in three-dimensional processing such as die cutting and assembly. These technologies have enabled the creation of packaging for such items as foods, beverages and daily necessities; the development of systems for the aseptic filling of contents; and the inspection, measurement and analysis of various products.



This technology, which works to synthesize, disperse and mix materials, is applied in the design and manufacture of materials such as ink, adhesives, photosensitive materials, coatings, etc. In order to maximize performance as the printing accuracy becomes sophisticated and products become highly functional and diversified, the development process begins with materials.



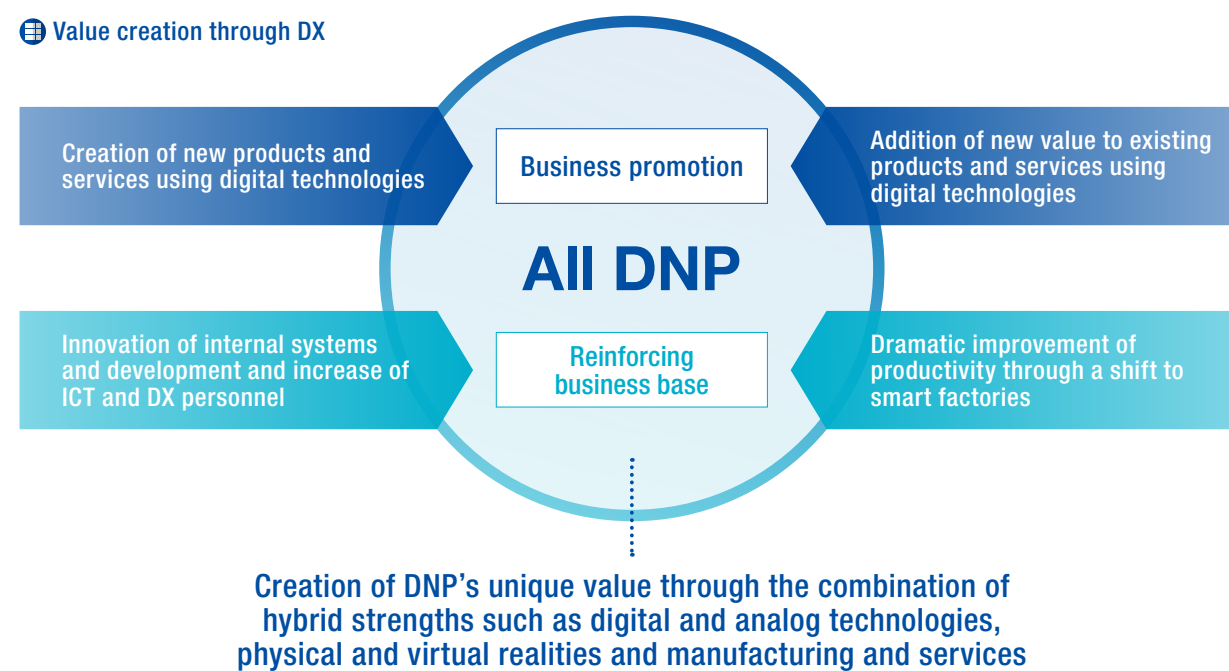
Through analysis of the manufacturing process, this technology boosts productivity, consistency of product quality, improvement of the work environment and more. Incorporating elements of theory in the latest sensing technology, we find mechanisms to identify the materials and processes impacting product quality, as well as to realize functionality and performance.

# Value Creation through Digital Transformation (DX)

DNP's DX is positioned as "value creation through P&I Innovations," which combines digital technologies and DNP's strengths. We will build our unique new business model in which people, goods and experiences are linked together by combining the hybrid strengths of complete opposites, such as digital and analog technologies, physical and virtual realities and manufacturing and services. Every single employee will take the initiative and contribute to the total strength of All DNP, promptly gather and analyze the needs of the diverse companies, other groups and consumers in Japan and abroad, and develop and provide new value beyond expectations.

## Basic policy for DX

### Value creation through DX



## Development of a range of businesses related to DX

We are developing a range of businesses in the four growth areas using core technologies such as media conversion, image processing and recognition, information security, data analysis and other information processing technologies developed in the printing process.

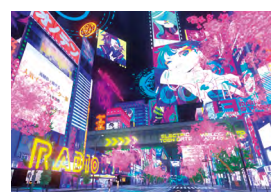
In addition to the data distribution-related business in the Knowledge and Communication area, we are promoting specific business themes in the Food and Healthcare, Lifestyle and Mobility and Environment and Energy areas.



Hybrid bookstore network "honto"



Authentication, security related solutions



PARALLEL CITY combines physical and virtual spaces



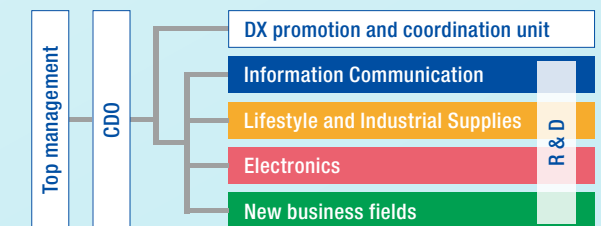
Regional creation and community development (smart city-related businesses, etc.)



Online healthcare (diagnostic imaging, etc.)

## DX promotion system

The Chief Digital Officer (CDO) appointed by the President supervises company-wide efforts relating to DX. We have established a full-time DX promotion and coordination unit at the head office and will strengthen each business unit and the alliances between the sections in charge of new businesses development, R&D, information systems and other relevant divisions within the business unit and implement a range of measures across the entire company leveraging the megatrend of digital transformation.



## Strengthening the base for the promotion of DX

### Internal system infrastructure innovation

We are reforming our internal ICT foundation to improve the processes for a range of business operations and working styles and accelerate value creation with All DNP. This base uses a highly flexible, agile cloud service with security levels that are capable of promptly and flexibly responding to changes in the business environment or individual operations. Further, we are improving our base as a foundation for data integration that management can use in decision-making.

Moreover, DNP is working to improve measures for telecommuting, which has become increasingly entrenched

as one of many diverse working styles, and its business continuity plans (BCP) assume the occurrence of wide-area disasters. To use a safe and secure cloud service at any time and from anywhere, we are also focusing on zero-trust networks which do not assume matters such as that access from inside the organization is safe. We will accelerate infrastructure development to strengthen ICT governance not only in Japan but at overseas bases, with an eye on the recent international situation, geopolitical risks and other factors.

### Improving human resources to support the promotion of DX

We will improve our ability to create DX-related value across the entire DNP Group by clearly defining ICT personnel and DX personnel, etc., and by supporting career development from the perspectives of both the individual and the

organization. We will improve investments in human resources and continuously develop and increase professional personnel to follow technological innovation, predict the future and constantly lead other companies.

### Understanding ICT personnel and DX personnel

### Improving ICT personnel and DX personnel

#### Definition of ICT personnel

##### ICT personnel

Human resources who plan, design, develop, operate and maintain service systems using ICT and digital technologies

##### DX personnel

Human resources who reform businesses, services, operations, organizations and corporate culture using ICT and digital technologies

#### Understanding of ICT personnel

- Use of IT skill standard and IT skill visualization service
- Centralized management of skills and operational experience using a talent management system that visualizes the strengths of each employee

#### Enhancement of human resource development

- Education of all employees to increase their computer literacy for DX
- Improvement of educational programs on subjects such as agile development, cloud-native development and AI, which will provide important skills for DX and encourage the acquisition of qualifications
- Education of all employees regarding security to increase their awareness of cyber attacks (development of Plus Security Personnel who use ICT while performing their primary duties)

#### Development of systems

- Introduction of an ICT professional system to secure and appropriately compensate ICT personnel
- Adoption of a fixed-term employment system to secure skilled human resources from outside the company who have exceptionally advanced knowledge and skills in a specific area of expertise

#### Indicators of human resources development

	End of FY2021	End of FY2022
ICT personnel/DX personnel	5,000	7,500
Of the above, individuals that are capable of autonomously performing duties	650	1,900