



## Section

## 1

## About DNP

We provide an overview of what drives DNP's sustainable growth, such as our value creation story, our materiality, and our management capital, which all begins with the fundamental nature of the strengths we have developed over the past 150 years and our competitive advantages.

## 2

## 3

## 4

## 5

## 6

**Corporate Philosophy**

- 14 DNP Group's Corporate Philosophy
- 15 Innovation Creation History

**Strengths and Business Model**

- 16 Strengths and Business Model
- 17 Advanced Printing Technology
- 18 Main Business Areas
- 19 Global Expansion
- 20 A Thoroughly Embedded Corporate Philosophy

**Materiality**

- 21 Overview of Sustainability Management
- 22 The Value Creation Story That Supports Our Sustainable Growth
- 23 Process of Identifying Materiality and Assessing Significance
- 24 Value Creation Structure Beginning with Materiality
- 25 Key Initiatives and KPIs for Achieving the Materiality
- 26 Assessment of the Significance of Risks and Opportunities
- 27 Response to Significant Risks:  
Advancing the Supply Chain and Developing Intelligence Capabilities

**Six Capitals**

- 28 Six Capitals
- 30 Combination of Management Capitals
- 31 Enhancement of Management Capitals Through Corporate Branding

# DNP Group's Corporate Philosophy

## An innovation mindset that has been a part of the Group since its founding

Our Group was founded a century and a half ago with the aspiration of contributing to the advancement of civilized society through what was then cutting-edge letterpress printing, guided by the principle of “running a civilized business.”

This spirit lives on unchanged today, even 150 years later.

Today, under its Brand Statement, Creating future standards, the DNP Group hones the technologies, processes, and skills it has cultivated through printing, and continually challenges itself to create new value as each of its diverse employees engages in *TAIWA* and cooperation. Going forward, we will continue to create value that is meaningful for both society and consumers, turning “future standards” into reality.

1876: Founding

## Running a civilized business

“We aspire to spread knowledge and culture through printing and contribute to the modernization of our nation”



1876

Founding of Shueisha in Ginza



1881

Start of in-house casting of printing type



1886

Opening of plant in Ichigaya

The innovation mindset of providing value to society lives on unchanged today, 150 years later

Brand Statement

## Creating future standards

DNP Group Vision



# Innovation Creation History

## The spirit of challenge that has always been essential to the creation of value

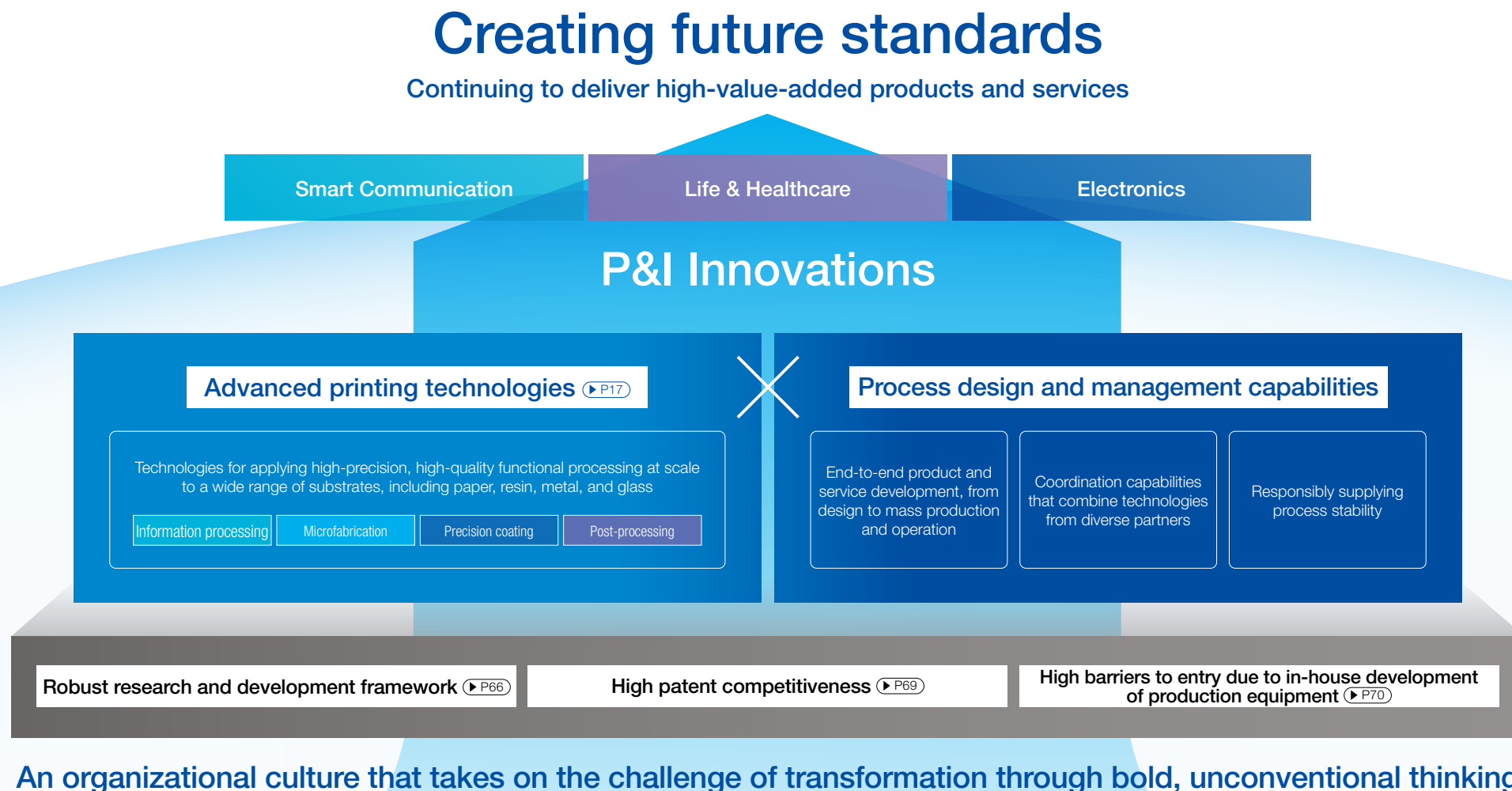
For 150 years, DNP has refined, applied, and developed its printing technologies, producing diverse innovations and expanding its business. At the root of these efforts is the spirit of challenge that has endured since our founding. We leverage the strengths we have refined over the past century and a half and use them to create new value and future growth.



# Strengths and Business Model

## Creating high barriers to entry through P&I Innovations

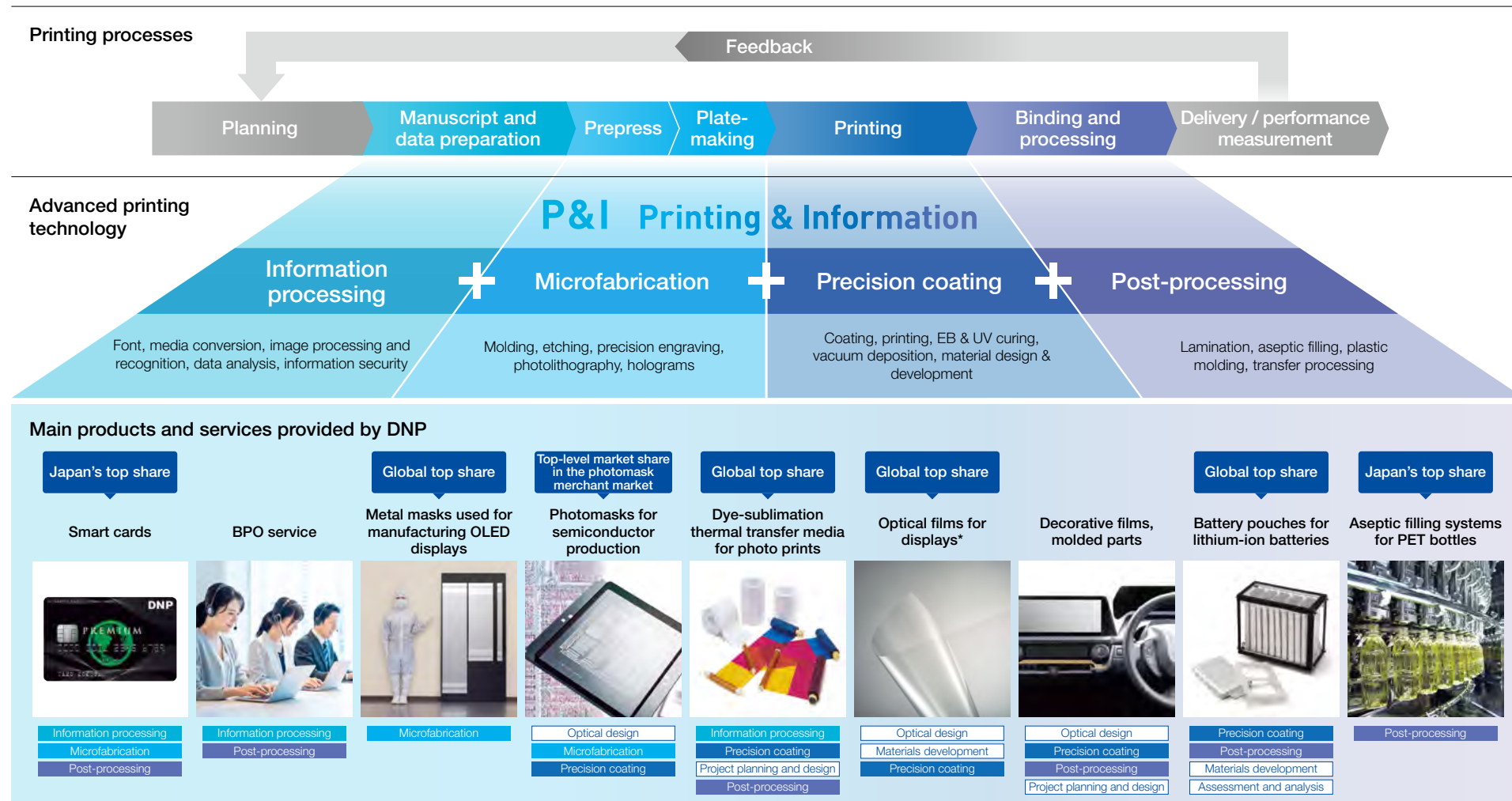
DNP's strength is rooted in the printing technologies it has refined since its founding and its innovative mindset of taking on transformation. It combines advanced printing technologies with the process design and management capabilities it has honed through its *TAIWA* with customers to continuously generate new unique strengths. By continually building on these strengths, DNP has created high barriers to entry and continues to deliver new value to society through its diverse businesses.



# Advanced Printing Technology

## Applying and developing printing technologies, producing products and services with the world's top market shares

Leveraging and advancing the strengths of our core printing technologies, we have expanded into diverse business areas. By combining the advanced technologies of information processing, microfabrication, precision coating, and post-processing, we generate products and services that achieve world-leading market shares. Through P&I Innovations, we are expanding business areas and continuously supplying value that is vital for society and industry.



\* In the case of anti-reflection film and anti-glare film used on the surface of displays



# Main Business Areas

## Driving diverse businesses through P&I Innovations

We do business in a wide range of business areas by refining our unique printing technologies and the process design and management capabilities that support them. We offer products and services across three business segments that continue to hold leading market shares in Japan and around the world. We continue to provide value that is essential to people's lives.

### P&I Innovations

Advanced printing technology

Process design and management capabilities

#### Smart Communication

##### Imaging Communication



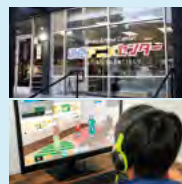
We provide dye-sublimation thermal transfer media, for which we hold the global top share, and photo printers in over 100 countries. We deliver smiles around the world through photo experiences and photos.

##### Information Security



By way of services utilizing sophisticated security infrastructure such as Digital Transformation (DX) for authentication purposes, payment, and BPO, etc., we work to achieve improvements to work styles, as well as do our part for better safety and security in our society in general.

##### Content & XR Communication



We create and deliver globally new experiential value that seamlessly connects the real and virtual worlds through IP, XR, and AI.

##### Marketing



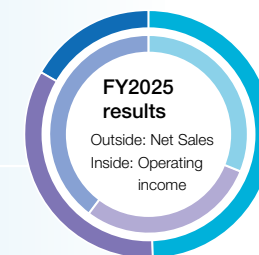
While promoting DX, we design and implement communication initiatives that connect companies and customers, creating and delivering exceptional customer experiences.

##### Publishing

We empower people through knowledge by producing and selling books, magazines, and e-books, expanding the global reach of publishing content, and contributing to the revitalization of local communities.

##### Education

We are offering educational platforms, such as Realtendant, through which we achieve education pertinent to each individual child or student, as well as reducing the load of individual teachers.



Sales  
**1,512.571 billion yen**  
Operating income  
**101.039 billion yen**

#### Life & Healthcare

##### Mobility Industrial High-Performance Materials



We are committed to advancing a next-generation mobility society by enhancing the value of mobility through innovative design and functionality. We are also driving the development of high-performance materials that anticipate future needs.

##### Medical & Healthcare



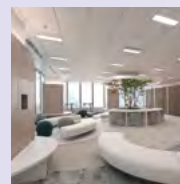
We provide pharmaceutical packaging and active ingredients for pharmaceutical companies, and are also entrusted with contract manufacturing of pharmaceutical formulations. We contribute to healthcare by providing value related to maintaining drug quality and improving convenience.

##### Packaging



We provide packaging globally for food, beverages, and home/personal care products. Through safe and reliable products and services with reduced environmental impact, we contribute to well-being lives.

##### Living Spaces



We provide new value for all manner of daily-life spaces, including homes, various kinds of architectural buildings, automobiles, train coaches, etc. By enhancing functionality and design, we create more cheerful and comfortable spaces.

##### Beverages



Hokkaido Coca-Cola Bottling has promoted its business drawing on the strength of the brand, and we provide value to people through the synergies of All DNP.

#### Smart Communication

■ Sales:  
**750.3 billion yen**  
(Ratio by segment 49.6%)  
■ Operating income:  
**40.0 billion yen**  
(Ratio by segment 31.3%)

#### Life & Healthcare

■ Sales:  
**512.3 billion yen**  
(Ratio by segment 33.8%)  
■ Operating income:  
**37.2 billion yen**  
(Ratio by segment 29.1%)

#### Electronics

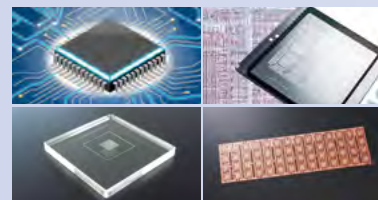
■ Sales:  
**251.8 billion yen**  
(Ratio by segment 16.6%)  
■ Operating income:  
**50.7 billion yen**  
(Ratio by segment 39.6%)

#### Electronics

##### Digital Interfaces



We develop metal masks to achieve thinner, lighter, and higher resolution OLED displays, as well as optical film with a variety of functions that leverage converting technology and our unique optical design technology. From R&D through to mass production, we consistently contribute to the advancement of display technology, helping to create more comfortable lifestyles.



##### Semiconductors

We develop photomasks, lead frames, and other key components in semiconductors. We offer high-quality, high-precision products to Japan and the world, while expanding our business into advanced fields expected to grow, including nano-imprint templates, EUV photomasks, glass cores for next-generation packaging, and photonics-electronics convergence.

# Global Expansion

## Accelerating the global expansion of businesses and capturing new growth opportunities

To accelerate its provision of products and services to global markets, DNP has sites in locations around the world. Furthermore, we use various approaches, such as M&As, joint research projects, and partnerships, to expand our business while moving into markets with high growth potential and pioneering technical areas. Through these initiatives, we will accelerate the global expansion of our Focus Businesses and take advantage of new growth opportunities.

### Global locations

# 36 cities

DNP has sites around the world to supply products and services to the global market.

(As of March 31, 2026)

#### Semiconductors

We have opened a research site in Eindhoven, the Netherlands, one of Europe's top innovation areas. We are working on cutting-edge optoelectronic fusion technologies and corporate networks, and will accelerate the strengthening of our competitiveness in the next-generation semiconductor field.



Europe  
9 cities

Asia  
18 cities

North America  
9 cities

#### Aseptic Filling System

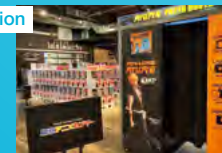
Our aseptic filling system for PET bottles, which offers a high level of sterility and high operating rates, supports a reliable supply of beverages. We will continue to expand its adoption, primarily in Asia, India, and Oceania.



#### Content & XR Communication

##### Photo Imaging

We have opened Tokyo Anime Centers in the US (in San Francisco, Boston, and Charlotte), and we are accelerating the global expansion of our content business, centered on Japanese anime and manga, while also creating new earnings opportunities.



#### Digital Interfaces

DNP's optical films are notable for their unique optical designs and converting technologies. They are continuously used in products from global brands, and we will continue to advance our production systems to meet market needs for larger displays with enhanced functionality.

#### Information Security

Through M&A with Rubicon, which offers ID authentication services for governments, primarily in Africa, we will fuse its technologies with the authentication and security technologies we have refined here in Japan. We will take on the growing markets of emerging countries while participating in the creation of their social infrastructure.



#### Mobility & Living

##### Medical & Healthcare

We are collaborating with the Indian Institute of Technology Hyderabad to promote research and development of wireless power supply technologies for EVs and active pharmaceutical ingredient synthesis technologies in India's rapidly growing market. We will create new value (business opportunities) in both the mobility and medical and healthcare fields.



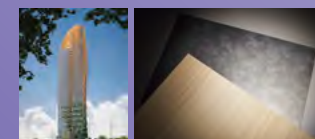
#### Mobility & Living

We have begun mass-production of automotive display films that have great aesthetic appeal and also clear image visibility. Starting with sales in China's automobile market, we are accelerating our business growth, focusing on providing greater experiential value in vehicle interiors.



#### Mobility & Living

DNP's Artellion aluminum panels are used as exterior materials with diverse, full-fledged design appeal in Taiwan's KUMA TOWER, which was designed by Kengo Kuma. In the future, we will expand the use of these panels internationally.



# A Thoroughly Embedded Corporate Philosophy

## Cultivating an organizational culture that boldly takes on transformation through unconventional thinking

When DNP was founded in 1876, its guiding principle was “running a civilized business.” Ever since, we have been creating value that is essential to creating a better society and well-being lives. Marking our 150th anniversary as a new milestone, we will leverage our organizational culture of boldly pursuing transformation to accelerate our efforts to create a better future.

### 150th Anniversary Project | Concept

## Powered by our legacy, we boldly challenge the future.

Over the past 150 years, we have developed and carried forward DNP's spirit, technology, knowledge, organizational strength, and the human connections that bring them to life. These “legacies” can be found in all of our business fields. These legacies are DNP's strengths that are essential for transformation. To make a better future, we must learn from these legacies, leverage them, and turn them into power. But, at the same time, we must be bold and unconventional in our thinking, not allowing ourselves to be trapped by our legacy. Such thinking gives rise to unprecedented dreams. The concept of this project represents how each and every employee will engage in deeper *TAIWA* and cooperation, taking that step into the future.

### Transforming employee behavior

#### Awareness and understanding

Learning about the importance of our 150th anniversary and about our corporate philosophy and aspirations

#### Connection and internalization

Feeling that one's own work is shaping the future

#### Motivation

Rising to action and taking on challenges, even if starting small

#### Unity and pride

Re-affirming the Company's DNA and culture of challenge, developing a greater sense of comradery



Key visual

### Motivation Increasing employee autonomy and engagement by deepening *TAIWA* and cooperation

DNP's organizational culture, built on its corporate philosophy, is behind its ability to keep creating value through transformation. In our 150th anniversary activities, as well, we place importance on each and every employee thinking and acting on their own, with employees and the company working together to create these initiatives.

The 150th anniversary project's logo was selected through voting from roughly 800 submissions from employees in Group companies around the world, with over 10,000 votes cast. Employees at each site, their families, and local partners are also collaborating in carrying out regional activities across Japan.

Through these activities, rooted in the initiative and *TAIWA* of employees, each employee is deepening their understanding of DNP's aspirations, heightening their sense of ownership in efforts to make a better future, and using what they learn to take on new challenges. This organizational culture is what supports DNP's ongoing creation of business value and corporate value.



### Unity and pride Key visuals that express the spirit of challenge and aspirations of employees

AI was used to create graphics representing the spirit of challenge in a group of 12 employees in different job types, work sites, and business fields. These resulting graphics were combined with photographs of the employees themselves. By using AI to draw out the intentions behind each employee's thoughts, we were able to visually represent a vision that even the employees did not anticipate, free from conventional assumptions. The visuals create an impression of our spirit of challenge, going down roads that none have gone down before.

We are also using “ShaGoo!” DNP commemorative photo booths in DNP locations nationwide, along with a smartphone app, so that all employees can have their photo taken against this key visual. This is fostering an even stronger sense of unity among employees.



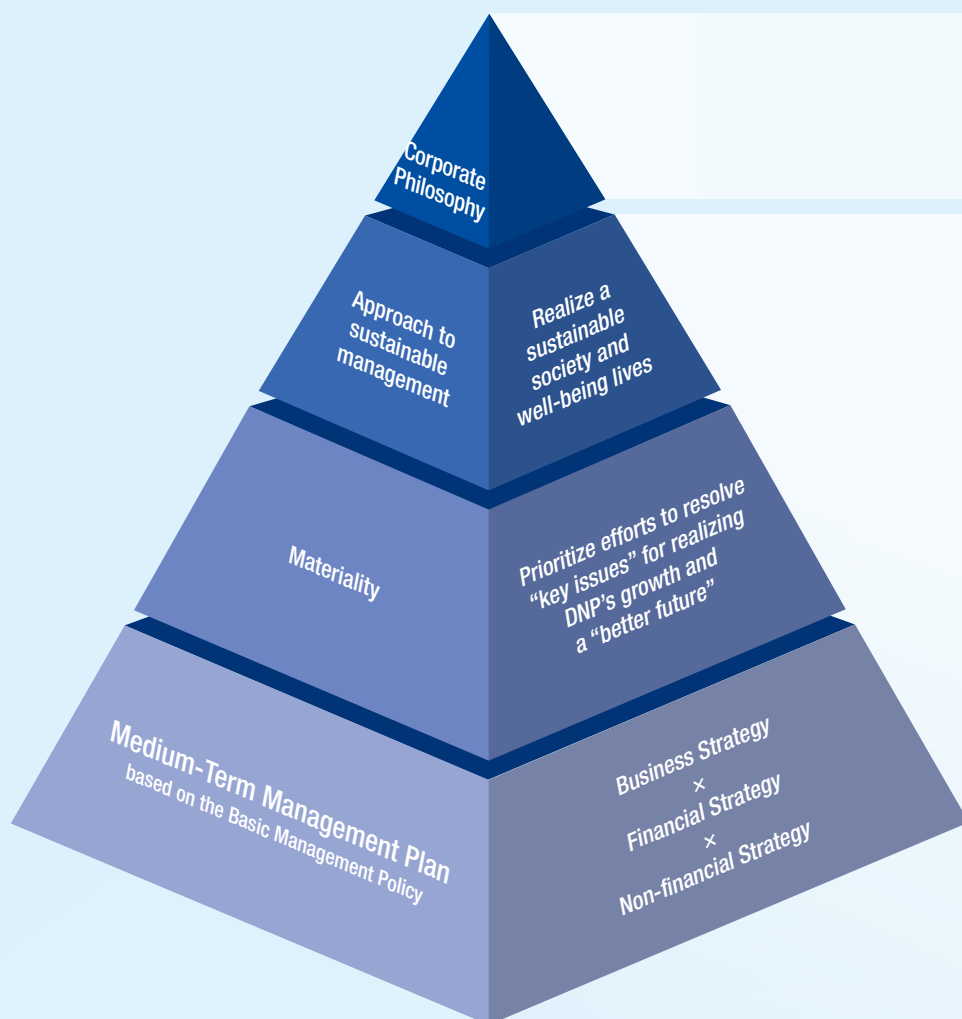
# Overview of Sustainability Management

DNP conducts business activities based on its corporate philosophy, taking a long-term perspective and creating a “better future” of its own initiative, with the aim of realizing a sustainable society and well-being lives. DNP has defined four visions of society for a “better future” and identified materiality issues for achieving them.

Brand Statement

## Creating future standards

The DNP Group connects individuals and society, and provides new value.



### A “better future” aimed for by DNP

A society where people can live safe, secure, healthy and well-being lives



The DNP Group boosts environmental, social, and economic sustainability by engendering change of our own volition, as well as accommodating change that comes our way with a flexible stance.

A society where people can communicate comfortably



The DNP Group improves the quality of experiential value and expands on opportunities for everyone by fusing the real and the digital.

A society where people mutually respect each other



The DNP Group strives to create a place where all the people can play an active role by deepening mutual understanding and mutual recognition.

A society that realizes a balance between economic growth and the global environment



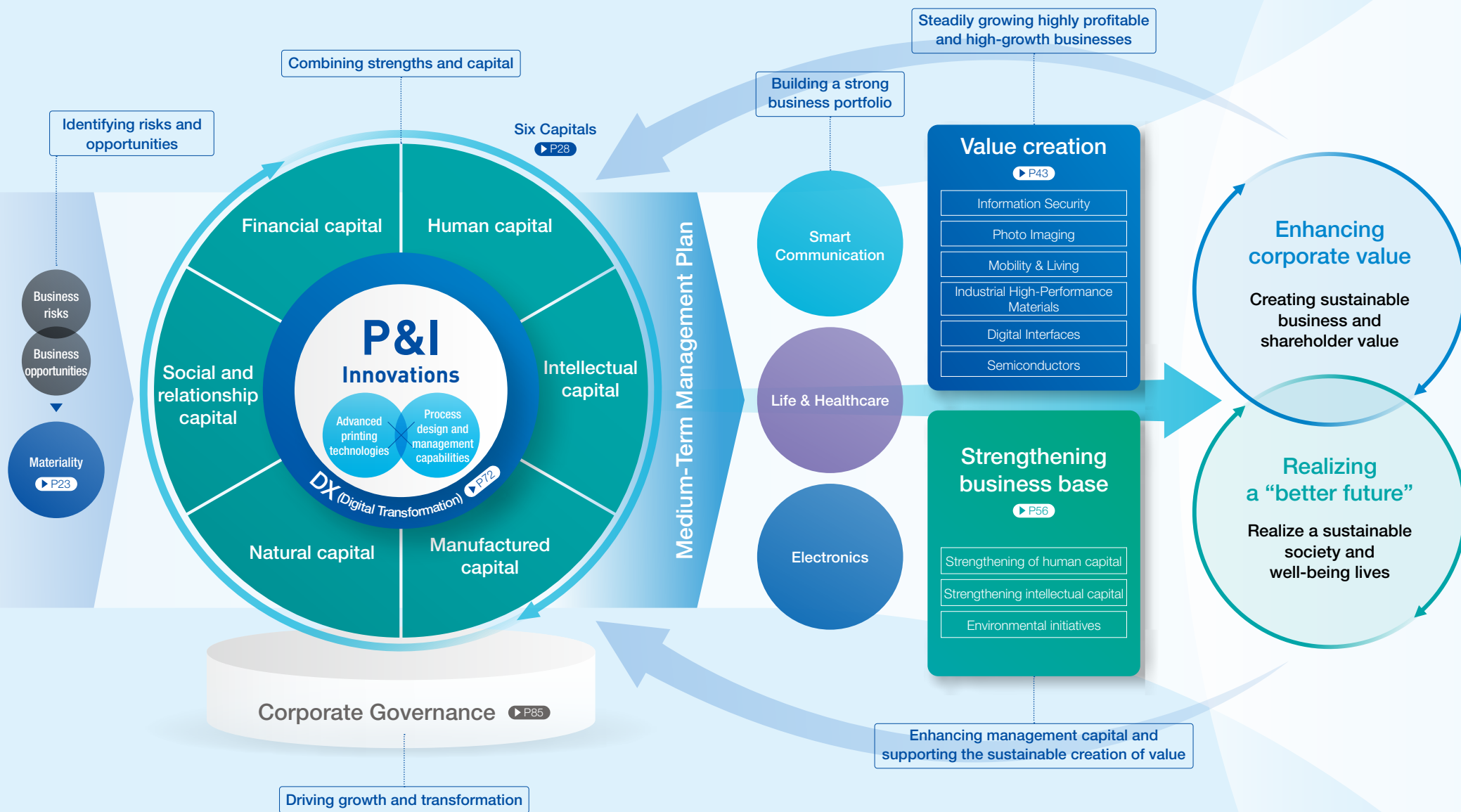
The DNP Group works to achieve nature-positive value chains by engaging in environmental conservation and reducing negative environmental impacts.

### Materiality



# The Value Creation Story That Supports Our Sustainable Growth

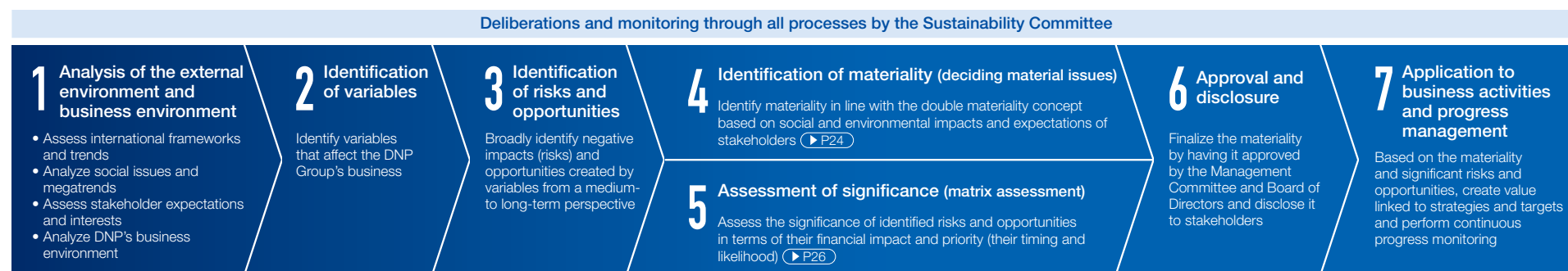
DNP accurately identifies the risks and opportunities created by changes in the external environment and combines six types of management capital to create new value through P&I Innovations. We invest in growth areas and transform our business portfolio to strengthen our business base, which supports profitability, growth potential, and resilience.



# Process of Identifying Materiality and Assessing Significance

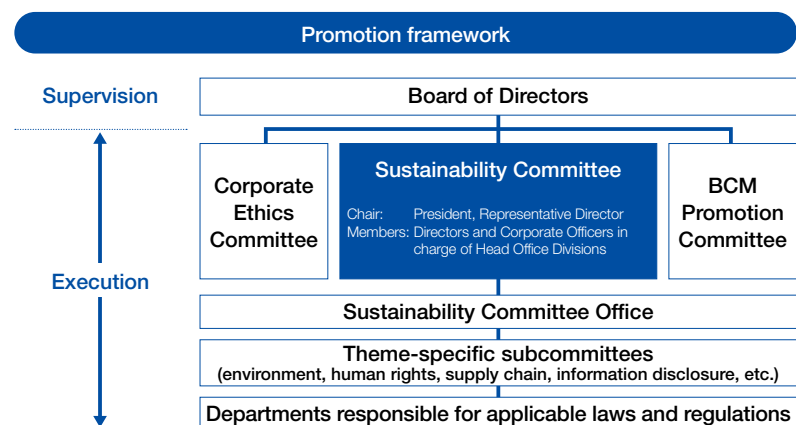
In its efforts to realize its four visions of society for a “better future,” DNP identifies its materiality from the perspective of “double materiality” (both impacts on society and the environment and impacts on corporate value). In doing so, it considers economic, social, and environmental changes and stakeholder expectations. It also continuously identifies, evaluates, and reviews risks and opportunities based on changes in the management environment, assesses their significance in terms of their financial impact and priority, and reflects them in medium- and long-term management strategies.

## Process of identifying materiality and assessing the significance of risks and opportunities



## Framework for promoting sustainability management

DNP has established a framework centered on the Sustainability Committee under the supervision of the Board of Directors. It continuously evaluates risks and opportunities, reviews materiality, and reflects the results in management strategies, thereby contributing to the sustainable enhancement of corporate value.



### Advancing Sustainability Management through Dialogue

The social and market environment is constantly changing, and business opportunities and risks are changing along with it. DNP continuously monitors these changes and reviews risks and opportunities each year from a medium- to long-term perspective.

Based on the results of these reviews, the Sustainability Committee reviews materiality as necessary and, through ongoing dialogue with each division, reflects material issues in management strategies and key initiatives, with an emphasis on sustainably enhancing corporate value. It has also established theme-specific subcommittees as needed in response to changes in the social environment and advanced cross-divisional efforts to address material issues, including human rights initiatives and more advanced information disclosure.

Rather than responding passively to change, we will proactively identify change and reflect it in management through *TAMA* and cooperation, thereby advancing sustainability management that contributes to realizing a “better future.”

**Yuka Suzuki**, General Manager of the Sustainability Committee Office



# Value Creation Structure Beginning with Materiality

Based on the risks and opportunities created by changes in the external environment, DNP has identified materiality (value to be provided and issues to be addressed) for realizing its four visions of society for a “better future.” DNP promotes business strategies, financial strategies, non-financial strategies, and risk management based on this materiality, monitors the results of these strategies through KPIs, and is aiming to achieve sustainable growth and improved corporate value.

|                                                        |  <b>DX, AI, and security</b><br><small>Technology trends</small>                                                                                                                                                                                   |  <b>Globalization, geopolitics, and regulations</b><br><small>Economic activity</small>                                                                                                                                                                                                               |  <b>Demographics, talent acquisition, and human rights awareness</b><br><small>Human capital</small>                                                                                                                                                                                                |  <b>Culture, systems, and ethics</b><br><small>Value chain-related</small>                                                                                                                                                                        |  <b>Nature and biodiversity degradation and transition</b><br><small>Environment-related</small>                                                                                                                                                                 |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Changes in the external environment (variables)</b> | <ul style="list-style-type: none"> <li>Advances in the utilization of DX, AI, and robotics within society, expansion of competitive use</li> <li>Increase in cyberattacks and growing threats to information security</li> <li>Expansion of the data and digital divide</li> </ul>                                                  | <ul style="list-style-type: none"> <li>Rise of geopolitical risks and market and supply instability</li> <li>Refinement and tightening of regulations and systems, expansion of their influence</li> <li>Changes in the global competitive environment, increasing complexity of business operations</li> </ul>                                                                        | <ul style="list-style-type: none"> <li>Growth of global population and shrinking of domestic working-age population</li> <li>Shift in focus from personnel numbers to quality and utilization</li> <li>Growth of human rights, D&amp;I, and well-being demands</li> </ul>                                                                                                              | <ul style="list-style-type: none"> <li>Diversification of systems and cultures in conjunction with global business growth</li> <li>Stricter compliance demands</li> <li>Greater reputational impact as a result of spreading of information</li> </ul>                                                                               | <ul style="list-style-type: none"> <li>Greater impact of climate change and degradation of the natural environment</li> <li>Acceleration of transition toward decarbonization and a circular economy</li> <li>Heightening of demands for environmental information disclosure</li> </ul>                                                            |
| <b>Risks</b>                                           | <ul style="list-style-type: none"> <li>Decline in competitiveness due to delayed response to AI and technological advances</li> <li>Business disruption caused by cyberattacks</li> <li>Spread of disinformation and human rights violations associated with the use of AI</li> </ul>                                               | <ul style="list-style-type: none"> <li>Supply chain disruptions caused by geopolitical risks</li> <li>Decline in profitability due to geoeconomic changes or financial volatility</li> <li>Decline in business efficiency due to regulatory diversification, increased risk of intellectual property disputes</li> </ul>                                                               | <ul style="list-style-type: none"> <li>Shortage or outflow of specialized personnel</li> <li>Decline in competitiveness due to difficulty in securing specialized talent</li> <li>Decline in engagement due to issues with organizational culture and lack of psychological safety</li> </ul>                                                                                          | <ul style="list-style-type: none"> <li>Increased burden of dealing with human rights and compliance issues</li> <li>Increasing complexity of global business</li> <li>Reputational damage from compliance infractions</li> </ul>                                                                                                     | <ul style="list-style-type: none"> <li>Lack of stability in operations, production, or procurement due to natural disasters or resource constraints</li> <li>Increase in costs due to stricter environmental compliance or information disclosure requirements</li> <li>Greater burden placed by tightening of environmental regulations</li> </ul> |
| <b>Opportunities</b>                                   | <ul style="list-style-type: none"> <li>Improved operational efficiency and productivity through use of AI and robots</li> <li>Increase in large-scale data distribution and cybersecurity demand in high-security environments</li> <li>New growth opportunities created by the expansion of the digital services market</li> </ul> | <ul style="list-style-type: none"> <li>Strengthening of business resilience and competitiveness through the rebuilding of supply chains</li> <li>Increase in demand in related business fields, such as semiconductors, and expansion of business in growth markets</li> <li>Strengthening of competitiveness through strategic IR and more advanced information disclosure</li> </ul> | <ul style="list-style-type: none"> <li>Optimal talent allocation and maximization of organizational strength through shifting and reskilling of human resources</li> <li>Improvement of organizational strength and creativity by promoting diversity and utilizing our alumni</li> <li>Increased operational efficiency and creation of new services through the use of AI</li> </ul> | <ul style="list-style-type: none"> <li>Enhancement of corporate value through the reinforcement of DNP's global governance and compliance system</li> <li>Improvement of trust and brand value through supply chain transparency</li> <li>New market and new business expansion by leveraging diverse cultures and values</li> </ul> | <ul style="list-style-type: none"> <li>Strengthening business resilience by making our supply chain more resilient</li> <li>Acquisition of markets and strengthening of competitiveness through eco-friendly products and services</li> <li>Differentiation and improved reliability through traceability</li> </ul>                                |

|                                             |                                                                                                                                                                                               |                                                                                                                                     |                                                                                                                                                |                                                                                                                                                        |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>The “better future” aimed for by DNP</b> | <b>A society where people can live safe, secure, healthy and well-being lives</b>                                                                                                             | <b>A society where people can communicate comfortably</b>                                                                           | <b>A society where people mutually respect each other</b>                                                                                      | <b>A society that realizes a balance between economic growth and the global environment</b>                                                            |
| <b>Materiality</b>                          | The DNP Group boosts environmental, social, and economic sustainability by engendering change of our own volition, as well as accommodating change that comes our way with a flexible stance. | The DNP Group improves the quality of experiential value and expands opportunities for everyone by fusing the real and the digital. | The DNP Group strives to create a place where all the people can play an active role by deepening mutual understanding and mutual recognition. | The DNP Group works to achieve nature-positive value chains by engaging in environmental conservation and reducing negative environmental impacts.     |
| <b>Value creation to be prioritized</b>     | Developing social environments that enable well-being lives<br>Building social and information infrastructure that supports safety and security                                               | Providing information tailored to each individual<br>Enhancing experiences through next-generation technologies                     | Creating opportunities for everyone to participate<br>Ensuring globally accessible information                                                 | Building systems that balance convenience and environmental consideration<br>Supporting sustainable economic growth through efficient use of resources |

## Rollout of strategies and policies

|                                     | <b>Business Strategies</b><br><small>(value creation)</small>                                | <b>Financial Strategies</b><br><small>(value creation)</small>     | <b>Non-Financial Strategies</b><br><small>(strengthening business base)</small> |                                                             |                                                    | <b>Risk management</b><br><small>(minimization of latent negative impacts)</small>                                                                                               |
|-------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Response policies Strategies</b> | Expansion of Focus Businesses and advancement of structural reforms<br><a href="#">▶ P33</a> | Reinforcement of cash allocation strategy<br><a href="#">▶ P40</a> | Strengthening of human capital<br><a href="#">▶ P58</a>                         | Strengthening intellectual capital<br><a href="#">▶ P65</a> | Environmental initiatives<br><a href="#">▶ P77</a> | Supply chain management <a href="#">▶ P27</a><br>Information security <a href="#">▶ P101</a><br>Respecting human rights <a href="#">▶ P100</a><br>Thoroughly ensuring compliance |

# Key Initiatives and KPIs for Achieving the Materiality

DNP translates strategies based on its materiality into specific key initiatives and promotes its focus business areas and measures to strengthen its business base in an integrated manner. By continuously monitoring progress on these key initiatives using KPIs, DNP seeks to create value for its four visions of society for a “better future,” thereby contributing to sustainable growth and increased corporate value.

## Main related materiality

-  A society where people can live safe, secure, healthy and well-being lives
-  A society where people can communicate comfortably
-  A society where people mutually respect each other
-  A society that realizes a balance between economic growth and the global environment

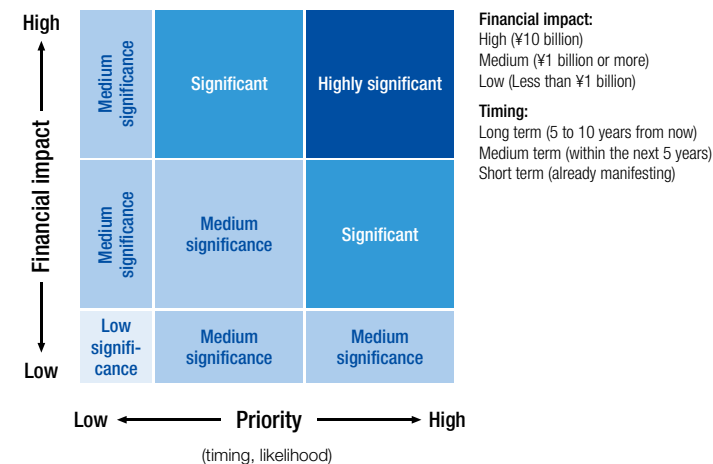
## Application to business activities and main KPIs

|                                                          | Initiatives          | Main activities                       | Materiality                                                                                                                                                                                                                                                                                                                                           | Main KPIs (FY2026–2028 Medium-Term Management Plan)                                                                                                                                |
|----------------------------------------------------------|----------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Value creation through business                          | Smart Communication  | Information Security                  |                                                                                                                                                                                 | Operating income: <b>+¥10.0 billion</b><br>Operating income CAGR: <b>8%</b>                                                                                                        |
|                                                          |                      | Photo Imaging                         |                                                                                                                                                                                 |                                                                                                                                                                                    |
|                                                          | Life & Healthcare    | Mobility & Living                     |                                                                                              | Operating income: <b>+¥8.8 billion</b><br>Operating income CAGR: <b>7%</b>                                                                                                         |
|                                                          |                      | Industrial High-Performance Materials |                                                                                                                                                                                 |                                                                                                                                                                                    |
|                                                          | Electronics          | Digital Interfaces                    |           | Operating income: <b>+¥14.3 billion</b><br>Operating income CAGR: <b>9%</b>                                                                                                        |
|                                                          |                      | Semiconductors                        |     |                                                                                                                                                                                    |
| Reinforcement of foundation that supports value creation | Human capital        |                                       |                                                                                        | Human capital investment: Approx. <b>¥35.0 billion</b><br>Employee engagement survey score (challenge score): <b>+10%</b> or more<br>Ratio of female managers: <b>15%</b> (FY2030) |
|                                                          | Intellectual capital |                                       |                                                                                        | R&D investment: Approx. <b>¥120.0 billion</b><br>Completion of standard deployment of generative AI<br>Retention rate among advanced users: <b>50%</b>                             |
|                                                          | Environment          |                                       |                                                                                                                                                                             | By FY2030 GHG emissions reductions compared to FY 2019: <b>46.2%</b><br>Resource recycling rate: <b>70%</b><br>Water intensity reductions compared to FY 2019: <b>30%</b>          |
|                                                          | Risk management      |                                       |                                                                                        | Number of major incidents: <b>Zero</b>                                                                                                                                             |

\* Eco-friendly products and services are products and services certified under DNP's Guidelines for the Development of Eco-Friendly Products and Services. Super Eco-Products are those among them that receive particularly high ratings.

# Assessment of the Significance of Risks and Opportunities

DNP assesses the significance of risks and opportunities with business impacts from perspectives including their financial impacts, timing, likelihood, societal and environmental impacts. The assessment results are deliberated by the Sustainability Committee, and issues with particularly large impacts on management are designated as significant risks or opportunities. For significant risks, key initiatives are formulated to reduce their business impacts and management of these risks is intensified, with a focus on supply chain management, information security, and respect for human rights. Significant opportunities are linked to focus business areas within the Medium-Term Management Plan and actively pursued as growth opportunities. These significant risks and opportunities are incorporated in the formulation of business strategies and in deliberations regarding resource allocation. Furthermore, they are handled on an ongoing basis through key initiatives.



## Significant risks

| Significant risk                                                                   | Detailed description                                                                                                                                                                                                                       | Main measures                      |        |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--------|
| Supply chain disruptions caused by geopolitical risks                              | • Business stagnation resulting from supply chain disruptions or fragmentation due to rising geopolitical risks, instability or rising costs of business activities due to rebuilding of supply chains, changing procurement sources, etc. | Supply chain management            | ▶ P27  |
| Business disruption caused by cyberattacks                                         | • Suspension of business or services, system destruction, data loss, and other impacts caused by the growing threat of cyberattacks.                                                                                                       | Strengthening information security | ▶ P101 |
| Spread of disinformation and human rights violations associated with the use of AI | • Risk of the growing use of AI resulting in the generation and spread of disinformation and the inappropriate use of AI, leading to a loss of trust among customers and society or to human rights violations or privacy violations       | Respect for human rights           | ▶ P100 |
| Stricter human rights due diligence, legal systems, and regulatory systems         | • Increased management and response burden resulting from higher standards of compliance and corporate ethics across the global supply chain                                                                                               |                                    |        |

## Significant opportunities

| Significant opportunity                                                                                                   | Detailed description                                                                                                                                                                                                                                              | Related Focus Businesses              |       |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------|
| High-volume data sharing and exchange in high-security environments                                                       | • Growing demand for secure data sharing and exchange<br>• Enhanced reliability and transparency for data and digital infrastructure                                                                                                                              | Information security                  | ▶ P47 |
| Expansion of the digital services market                                                                                  | • Enhanced customer experiences and satisfaction driven by digitalization, along with the provision of personalized information and more sophisticated services                                                                                                   | Photo Imaging                         | ▶ P48 |
| Acquisition of markets through expansion of demand Rapid development of eco-friendly products, services, and technologies | • Expansion of demand for low-carbon products and services, alternative material products, clean energy-related components, etc.<br>• Creation of growth opportunities through transition-related technologies                                                    | Mobility & Living                     | ▶ P49 |
| Improvement of supply chain competitiveness and business resilience                                                       | • Decentralization of procurement and production, supply chain competitiveness improvement and business resilience improvement through information visualization, and business continuity improvement                                                             | Industrial High-Performance Materials | ▶ P49 |
| Productivity reforms through the use of AI and robotics                                                                   | • Acceleration of decision-making through the use of AI<br>• Commercialization, operational efficiency improvement, and production process reforms through the use of AI and robotics<br>• Enhanced communications in the government, finance, and retail sectors | Digital Interfaces                    | ▶ P52 |
| Growing demand in related business areas driven by digital transformation (DX) and real-world deployment of AI            | • Expansion of demand in the semiconductor field                                                                                                                                                                                                                  | Semiconductors                        | ▶ P53 |

# Response to Significant Risks: Advancing the Supply Chain and Developing Intelligence Capabilities

In a highly uncertain external environment, the stable procurement of raw materials has evolved from being merely a cost to becoming a source of value. To ensure business continuity and maintain a competitive advantage, DNP regards enhancing transparency and improving resilience within its materials supply chain as material issues for management and is working to address them.

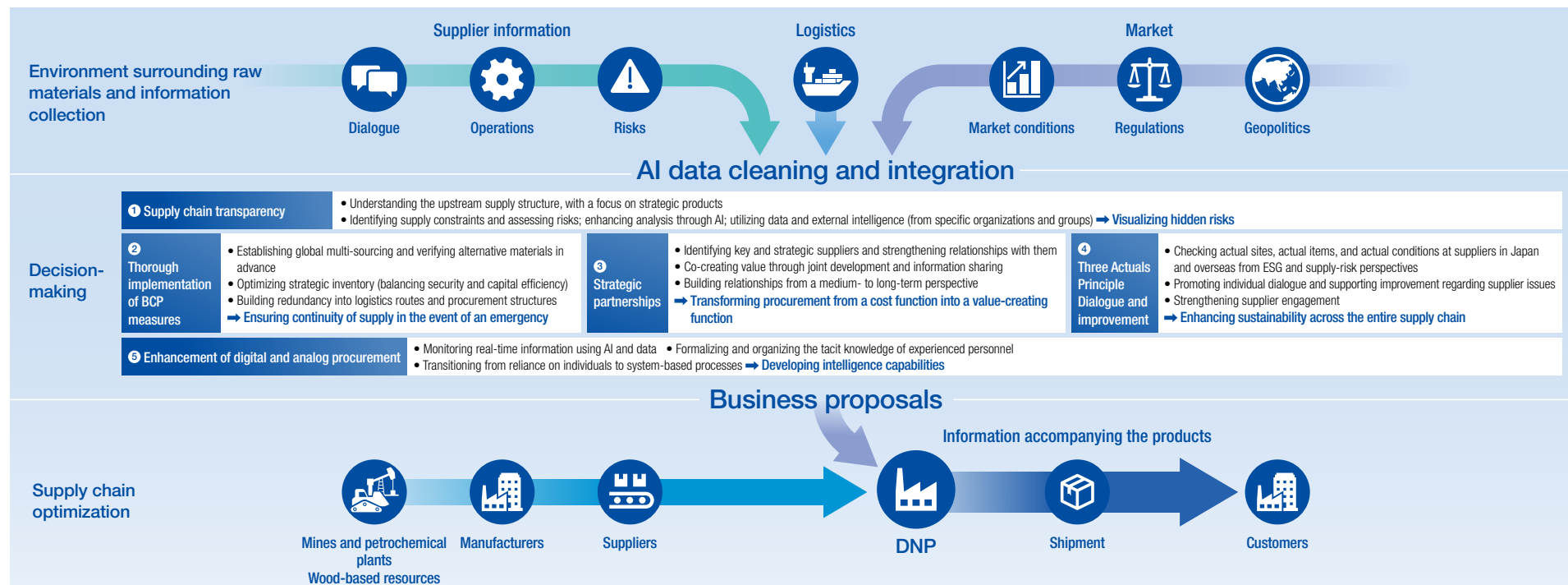
## Paradigm shift in procurement strategy from efficiency to resilience

Due to rising geopolitical risks, logistics disruptions, tighter regulations, and increasingly stringent environmental and human rights requirements, traditional efficiency-focused supply chains are reaching their limits, and the risks of supply disruptions and business stagnation are becoming apparent. In particular, supply networks at the upstream end (materials) have become increasingly multilayered and obscure, creating a structure of hidden uncertainty where companies themselves are unable to fully grasp the risks involved. Rather than viewing this rapidly changing environment as a risk of increased costs, DNP defines it as a prime opportunity to transform its business structure into a resilient one. Going beyond mere materials procurement, we are developing our intelligence capabilities by implementing five measures based on the collection and analysis of

information, fusing technology with organizational capabilities. By responding to uncertainty in unconventional ways with transformative approaches, we are practicing strategic procurement that creates new competitive advantages and proactive value creation, underpinned by the defensive strength of stable supply.

Through the development of intelligence capabilities, we are working toward realizing our vision for raw materials procurement. Starting with collecting information and then combining AI, data, and human expertise in an integrated manner, we aim to build an organizational structure capable of quick decision-making even in the event of an emergency, and to provide accurate and appropriate proposals for our business operations.

## Development of intelligence capabilities and control of the supply chain



# Six Capitals

## Sources of competitive advantage supporting value creation

DNP sees its six management capitals—human capital, intellectual capital, manufactured capital, natural capital, social and relationship capital, and financial capital—as the sources of its competitive advantage. By combining P&I (printing and information) grounded in printing processes with these management capitals, we generate synergy toward continuous value creation.

| Capitals                                                                                                                        | Strengths/vision                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Material issues                                                                                                                                                                                                                                                                                                                                                                                           | Input (FY2025 actual)                                                                                                                                                                                                                                        | Output (FY2025 actual)                                                                                                                                                                                                                                                                                                                           | Issues and future initiatives                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <b>Human capital</b><br>▶ P58                 | <b>A culture that embraces new challenges and people eager to take them on</b><br>By investing in people, we encourage their autonomous growth and willingness to take on challenges, strengthening human capital—a foundation of value creation and a source of strength—through <i>TAIWA</i> and cooperation based on trust. Furthermore, such investment enhances human creativity and achieves sustainable value creation.                                     | <ul style="list-style-type: none"> <li>Managing talent aligned with management strategy</li> <li>Strengthening Organizational Capabilities and Fostering a Culture of Taking on New Challenges</li> <li>Maximizing the employee experience</li> <li>Pursuing sustainable earnings power</li> <li>Achieving DNP well-being</li> </ul>                                                                      | <ul style="list-style-type: none"> <li>Number of employees: <b>36,360</b> (consolidated)<br/>Of which <b>3,707</b> are overseas</li> <li>Expenses per employee of education and training: <b>108,000 yen</b> (Dai Nippon Printing Co., Ltd. only)</li> </ul> | <ul style="list-style-type: none"> <li>Employee engagement survey scores: <b>+6.0%</b> compared with FY2022</li> <li>Completion of DX literacy standard basic education course: <b>29,259 people</b></li> <li>Percentage of female managers: <b>12.3%</b></li> <li>Percentage of male employees taking childcare leave: <b>106.8%</b></li> </ul> | Based on our Human Capital Policy, we foster each individual's career autonomy and willingness to take on new challenges to develop an organizational culture full of challenges and dialogue. Further promoting integration with our management strategy, we establish a virtuous cycle of value creation based on investing in people through optimization of personnel assignment and autonomous growth.                               |
|  <b>Intellectual capital</b><br>▶ P65<br>▶ P72 | <b>Technological innovation and R&amp;D across a wide range of fields</b><br>We continue to advance and deepen our strengths in P&I, while strengthening collaboration with external partners to enhance our intellectual capital. Our business, R&D, and intellectual property divisions work together to create new value.                                                                                                                                       | <ul style="list-style-type: none"> <li>Accelerating acquisition of technologies to create new businesses</li> <li>Advancing and globally deploying DNP's core technologies</li> <li>Shifting to AI-driven business and decision-making processes</li> </ul>                                                                                                                                               | <ul style="list-style-type: none"> <li>R&amp;D expenditures (annual): <b>¥42.2 billion</b></li> </ul>                                                                                                                                                        | <ul style="list-style-type: none"> <li>Number of Japanese patents held: <b>12,328</b><br/>Number of overseas patents held: <b>5,041</b></li> <li>Standardized implementation and advanced adoption of generative AI tailored to job functions<br/><b>50%</b> adoption rate among advanced users</li> </ul>                                       | To accelerate the acquisition of technologies for creating new businesses and to advance and globally deploy DNP's core technologies, we define focus areas, combine diverse technologies, build strategic partnerships, and expand open innovation. Through these initiatives, we enhance global innovation capabilities and strengthen our competitive advantage.                                                                       |
|  <b>Manufactured capital</b>                 | <b>Manufacturing sites with advanced printing technologies</b><br>Based on our business strategy, we actively and continuously invest in equipment—centered on Focus Businesses—and enhance profitability through the restructuring of existing printing-related manufacturing sites. These efforts strengthen our manufactured capital and serve as the foundation for producing and delivering products and services, enabling the creation of additional value. | <ul style="list-style-type: none"> <li>Optimizing investment allocation</li> <li>Increasing earnings through reorganization and effective use of manufacturing sites</li> <li>Ensuring rapid recovery and business continuity measures (BCM/BCP) considering various potential incidents</li> <li>Establishing a highly competitive, safe, reliable, and high-quality manufacturing foundation</li> </ul> | <ul style="list-style-type: none"> <li>Global manufacturing sites: <b>60</b> in Japan, <b>18</b> overseas</li> <li>Global sales offices: <b>33</b> in Japan, <b>25</b> overseas</li> <li>Annual capital expenditures: <b>¥87.7 billion</b></li> </ul>        | <ul style="list-style-type: none"> <li>Active investment in focus business areas through expansion of production facilities and M&amp;A</li> <li>Promotion of business structure reform through organizational restructuring and other initiatives</li> <li>Number of major quality incidents: <b>Zero</b></li> </ul>                            | In response to domestic and international market trends, we are developing manufacturing sites that create our unique strengths, centered on Focus Businesses such as Semiconductors, Digital Interfaces, Mobility & Living, Industrial High-Performance Materials, Information Security, and Photo Imaging. In addition, we are enhancing asset efficiency through the restructuring of manufacturing sites in Businesses for Reforming. |



## Six Capitals

| Capitals                                                                                                                                                                                                         | Strengths/vision                                                                                                                                                                                                                                                                                                                                                     | Material issues                                                                                                                                                                                                                                                                                                                                                                    | Input (FY2025 actual)                                                                                                                                                                                                                          | Output (FY2025 actual)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Issues and future initiatives                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>Natural capital</b><br>                 | <b>Environmentally friendly products and services</b><br><p>Through our unique environmental management system, we understand the relationship between our business activities and natural capital and implement effective initiatives based on the DNP Group Environmental Vision 2050 to achieve a balance between economic growth and the global environment.</p> | <ul style="list-style-type: none"> <li>Reduction of GHG emissions from DNP's own business activities</li> <li>Increasing the resource recycling rate</li> <li>Consideration for local ecosystems</li> <li>Design of eco-friendly products and services, and reduction of negative environmental impacts across the entire supply chain</li> </ul>                                  | <ul style="list-style-type: none"> <li>Total energy consumption: <b>14,120 TJ</b></li> <li>Water usage: <b>9,003,000 m³</b></li> <li>Paper input: <b>452,000 tons</b></li> <li>Plastic input: <b>284,000 tons</b></li> </ul>                   | <ul style="list-style-type: none"> <li>GHG emissions (Scope 1 and 2): <b>719,000 t-CO<sub>2</sub>e</b></li> <li>Water discharged: <b>7,013,000 m³</b></li> <li>Total unnecessary objects emission: <b>225,000 t</b></li> <li>Amount of landfill waste: <b>4,900 t</b></li> <li>Sales of eco-friendly products and services (Super Eco-Products): <b>276.1 billion yen</b> (18.3% of total sales)</li> </ul>                                                                                                     | <p>We implement strategies that consider the dependencies and impacts of our business activities on natural capital, and work to enhance our resilience to environmental risks over the medium to long term. We also view the transition to a nature-positive economy as an opportunity and will create new value through P&amp;I Innovations.</p> |
| <br><b>Social and relationship capital</b><br> | <b>Co-creation with diverse stakeholders</b><br><p>We strive to be a company that grows with society by remaining trusted by all stakeholders as well as by creating sustainable value through co-creation with diverse stakeholders.</p>                                                                                                                            | <ul style="list-style-type: none"> <li>Building and expanding diverse partnerships</li> <li>Promoting responsible procurement and conducting human rights due diligence across the supply chain</li> <li>Ensuring strict adherence to corporate ethics and compliance by employees</li> <li>Contributing to local communities and broader society through collaboration</li> </ul> | <ul style="list-style-type: none"> <li>Tens of thousands of business partners</li> <li>Suppliers cooperating in responsible procurement activities: <b>285</b></li> <li>Social contribution activity programs conducted: <b>170</b></li> </ul> | <ul style="list-style-type: none"> <li>Supplier survey based on DNP Group Sustainable Procurement Guidelines<br/>Average score: <b>85</b></li> <li>Procurement of papers conforming to DNP Group Guidelines for Procurement of Paper for Printing and Converting<br/>Ratio of key suppliers that have obtained the conformance certificate: <b>99.9%</b></li> <li>Donation menu at company cafeteria to support children<br/>Total of dishes: <b>44,433</b> / Annual donations: <b>2,220,000 JPY</b></li> </ul> | <p>We work to raise employee awareness of compliance and strengthen risk management throughout the supply chain, while collaborating with diverse stakeholders to respect human rights globally and reduce environmental impacts.</p>                                                                                                              |
| <br><b>Financial capital</b><br>           | <b>Cash allocation strategy responding to changes in the business environment</b><br><p>We balance growth investment for sustainable growth and shareholder return, and at the same time, increase capital efficiency. In this way, we strive to enhance corporate value over the long term.</p>                                                                     | <ul style="list-style-type: none"> <li>Reducing the cost of equity</li> <li>Increasing expected growth rate</li> <li>Raising ROA</li> <li>Utilizing leverage</li> </ul>                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>Stockholders' equity: <b>¥1,190.5 billion</b></li> <li>Interest-bearing debt: <b>¥263.5 billion</b></li> <li>Equity ratio: <b>58.5%</b></li> <li>Credit rating: <b>AA- (R&amp;I)</b></li> </ul>         | <ul style="list-style-type: none"> <li>Net sales: <b>¥1,512.5 billion</b></li> <li>Operating income: <b>¥101.0 billion</b></li> <li>Net income: <b>¥103.9 billion</b></li> <li>ROE: <b>8.9%</b></li> <li>Cash flows from operating activities: <b>¥68.5 billion</b> (excluding tax expenses related to the sales of strategic shareholdings)</li> </ul>                                                                                                                                                         | <p>We strive to sustainably generate capital returns exceeding the cost of capital by actively and dynamically undertaking investment and M&amp;A in areas where we have strengths and that offer expected profitability and growth, and at the same time, appropriately controlling equity.</p>                                                   |

# Combination of Management Capitals

## Generating capital synergy and accelerating growth

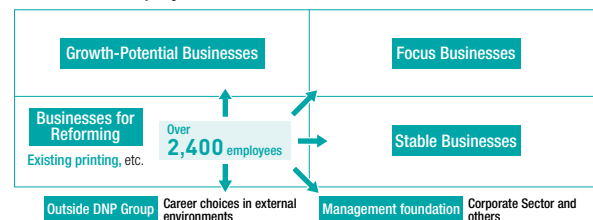
Instead of viewing the six management capitals separately, DNP combines them to increase synergy in value creation. Through *TAI/VA* and cooperation with internal and external stakeholders, we will connect human, intellectual, manufactured, and other management capitals to simultaneously solve social issues and achieve business growth.



### Configuring manufactured and human capitals according to our business portfolio

In response to the transformation of our business portfolio, we are advancing the optimal configuration of our manufactured and human capitals. We are enhancing our human resource portfolio based on each business strategy and are promoting the redeployment of personnel from Businesses for Reforming to Growth-Potential Businesses, Focus Businesses, and Stable Businesses. In addition, for those transitioning to significantly different roles, we carry out systematic reskilling to help them acquire the fundamental knowledge and skills needed in their new positions, as well as to foster the right mindset. Besides transitioning employees who had developed themselves in printing-related businesses to roles in areas related to high-performance materials and semiconductors, as well as BPO business areas, we are also deploying employees to areas in extended reality (XR) after 3D design training, and shifting employees to ICT and DX areas. Going forward, we will continue to implement optimal allocation linked to business strategies and driven by employees' autonomous willingness to take on new challenges to help improve our ability to create value.

Personnel redeployment overview (FY2020–FY2025)



**Achievement metrics** Over the six-year period from fiscal 2020 to fiscal 2025, we redeployed more than 2,400 employees, including those who chose careers outside the DNP Group, steadily shifting our human resources to strategic areas.



### Mirai-Zukuri Meetings that create P&I Innovations by combining internal resources

Mirai-Zukuri Meetings - Inspiring New Ideas for DNP's Next Vision are internal events of DNP, held annually since fiscal 2023 and for the fourth time in fiscal 2026. This event series provided a future-oriented setting, where Group employees deepen *TAI/VA* and cooperation, understand unique core technologies, production processes, patents, and other strengths, and combine these strengths to create concepts and technological seeds that lead to future business creation. The number of participants has also expanded to approximately one-third of all employees. Besides real-world venues, we also use cutting-edge technologies, such as holding meetings at virtual venues in the metaverse that can be accessed at all times from anywhere, leading to synergy between human, intellectual, manufactured, and other management capitals. Through these initiatives, we will continue working to create medium- to long-term growth opportunities and sustainably enhance corporate value, centered on our business vision of P&I Innovations.



**Achievement metrics** In 2026, there are 137 themes being exhibited from across the DNP Group, with events being held not just in Tokyo and Osaka but also at virtual venues in the metaverse, enabling participation regardless of location. Approximately 9,200 people participated in the event, taking on the challenge of creating future standards.



### P&I LAB. that creates new value through *TAI/VA* and cooperation with external partners

DNP combines its unique technologies and knowledge in printing and information (P&I) with the technologies and ideas of its partners to promote P&I Innovations that create value sought by society and people. As a part of this effort, DNP works to create new value through *TAI/VA* and cooperation with visitors at P&I LAB., its collaboration facility.

Here, we connect internal and external human resources, knowledge, and relationships through a process of (1) discovering issues, (2) generating ideas, and (3) materializing value. Together with our partners, we strive to grow human capital, deepen intellectual capital, and expand social and relationship capital, contributing to the sustainable creation of innovation.



**Achievement metrics** After opening in May 2023, we have been carrying out *TAI/VA* and cooperation for creating future standards with approximately 16,000 partner visitors in around 3,400 cases over a three-year period.

# Enhancement of Management Capitals Through Corporate Branding:

## Accelerating Understanding of and Affinity for DNP as an Innovation Company

By creating opportunities for dialogue, enhancing brand value, and other such efforts, DNP shares with society its attitude toward creating innovation and its approach to value creation. By deepening and expanding relationships with stakeholders, DNP enhances its management capitals, including intellectual capital and social and relationship capital, leading to sustainable growth.

### Basic approach to corporate branding

DNP positions branding as a key management strategy. “Creating future standards” is our brand statement. We will enhance the DNP brand by using our management capitals appropriately to continue providing value sought by people around the world. We will also contribute toward enhancement of corporate value by widely communicating DNP’s image as an “Innovation Company” that strives to create a better future and foster people’s recognition, affinity, and action. We will work with more partners to deepen *TAIWA* and cooperation and enhance intellectual capital, social and relationship capital, and other capitals to achieve medium- to long-term growth.

### About our corporate advertising

DNP was established in 1876. With the milestone of our 150th anniversary as a new start, more than before, we will spread the value of “standards” essential to people around the world. To widely communicate this corporate attitude, we launched a new corporate advertising series in April 2026 titled “Can we make the extraordinary ordinary?” This series depicts the power and potential of standards and the expectations for an unknown future. Acclaimed actor Satomi Ishihara, known for her expressive performances across a wide range of roles, speaks directly to audiences through humorous facial expressions and actions. Through this advertising effort, we strive to increase our employees’ momentum toward taking on challenges, and at the same time, foster *TAIWA* and cooperation with external partners.



### Branding research

Based on the DNP brand image research that we undertake annually, our image has improved\* across most metrics for fiscal 2025. In particular, scores in “Able to respond to changes in society,” “Is innovative,” and “Is passionate about entering new fields” have increased significantly from last year. We will continue to link the enhancement of DNP’s brand value to wider recognition of corporate activities.

\* December 2025, according to DNP’s in-house research  
Scope: Business professionals in Japan, primarily in the Kanto region, from companies or organizations with 301 or more employees  
Number of responses: 648

