

Special Feature

# “Today's Innovation is Tomorrow's Basic”

Toward medium- and long-term growth  
for DNP and society

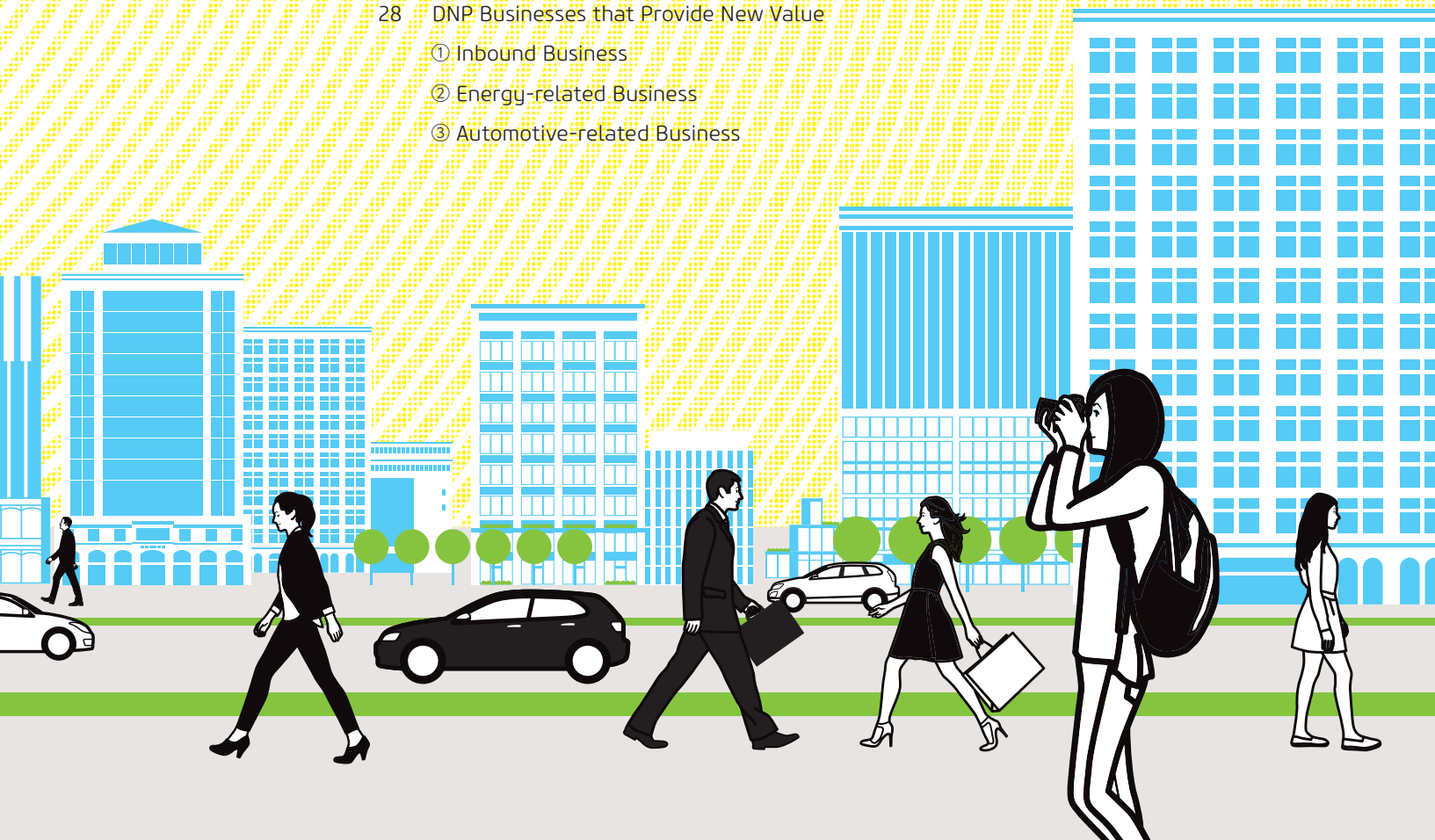




Our corporate philosophy is “the DNP Group connects individuals and society, and provides new value.” In other words, we at DNP aspire to provide value that never existed before, by more actively engaging with consumers and more proactively grappling with social issues. In order for the new value that DNP creates to become indispensable to companies’ business processes and to each consumer’s lifestyle, we must develop it in such a way that people come to think of it as a given—as something basic. “Today’s Innovation is Tomorrow’s Basic” represents DNP’s efforts to develop new value as universal value for society. In this special feature section, we will introduce medium- and long-term initiatives aimed at creating value for the future.

#### CONTENTS

- 24 Overview of Business Expansion Based on “DNP Group Vision 2015”
- 26 New Value to Be Generated in Four Growth Areas
- 28 DNP Businesses that Provide New Value
  - ① Inbound Business
  - ② Energy-related Business
  - ③ Automotive-related Business



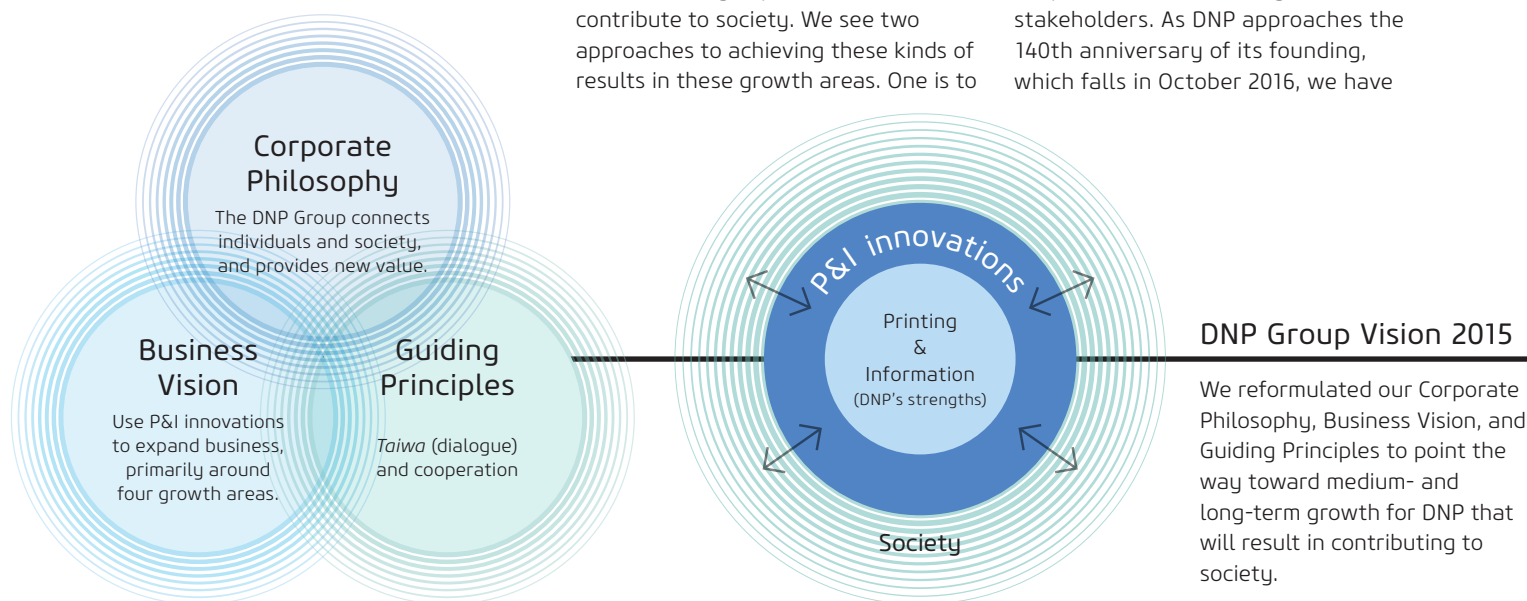
# Resolve social issues in four growth areas Expand business by providing new value

Our business vision is “Use P&I innovations to expand business, primarily around four growth areas.”

Among the various social problems in these four areas, both in Japan and overseas, we aim to address those which can be resolved through heavy involvement by DNP, allowing us to simultaneously expand our business and contribute to society. We see two approaches to achieving these kinds of results in these growth areas. One is to

develop new businesses. The other is to add new value within the many businesses we already pursue, with a view toward resolving social issues found in these growth areas.

In order to make both approaches succeed, DNP is working hard at engaging in *taiwa* (dialogue) and cooperation with its many stakeholders. As DNP approaches the 140th anniversary of its founding, which falls in October 2016, we have



## Main initiatives in the fiscal term ended March 2016

### Information Communication

**We expanded our business in Japan and overseas by leveraging DNP's strengths in areas like information security and business process outsourcing (BPO).**

December 2015 Strengthened BPO business by opening two new BPO centers, giving us a total of five operating locations in Japan  
February 2016 Expanded smart card business in Indonesia by establishing PT. Wahyu DNP Bureau

**We increased synergistic benefits by rethinking our business segments.**

April 2015 Transferred photo printing-related business to Information Communication segment

### Lifestyle and Industrial Supplies

**We pursued strategic M&As and other forms of collaboration aimed at generating new value.**

August 2015 Strengthened automotive business by adding TAMURA PLASTIC MFG. Co., Ltd. to the DNP Group  
February 2016 Strengthened medical image processing business by making PSP Corp. an affiliated company accounted for by the equity method

### Electronics

**We focused on products that use cutting-edge technologies and on developing new business models.**

April 2015 Started a new, market-creating ultrafine processing business utilizing nanoimprinting technology  
October 2015 Announced new film for in-vehicle displays that prevents glare on windshield

### P&I innovations

**We will use abilities and resources from within and outside DNP to continue creating new value.**

**We increased competitiveness by restructuring operations and implementing cost structure reforms.**

August 2015 Completion of DNP Ichigaya Kagacho Building, the centerpiece of DNP's Ichigaya district redevelopment project

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capital and a variety of tangible and intangible assets including the skills and expertise we have cultivated so far, strengths in sales, planning and manufacturing, and connections with society and communities. However, amid the large-scale changes that are rapidly occurring today, it is very important that we link our own strengths with those of the many stakeholders outside of DNP in ways that will lead to generating new value.

Any products or services that DNP creates as new value will be meaningless unless they are recognized as valuable by corporate clients and consumers. That's why

dialogue and cooperation are so important; they are the vehicles that will enable us to resolve issues in companies' business processes, make individuals' lives more rich and varied, and bequeath our planetary environment to the next generation without destroying it.

DNP intends to achieve sustainable growth for our company and for society by taking a broad view that encompasses past, present and future, formulating comprehensive strategies for the short, medium and long term, making decisions quickly, and actively developing business activities.

Increasing corporate value in the medium and long term  
Toward growth for DNP and society

October 2015

## Four growth areas

Areas in which DNP can solve social problems by making use of its strengths, enhance its corporate value, and contribute to society

Knowledge and Communication

Food and Healthcare

Lifestyle and Mobility

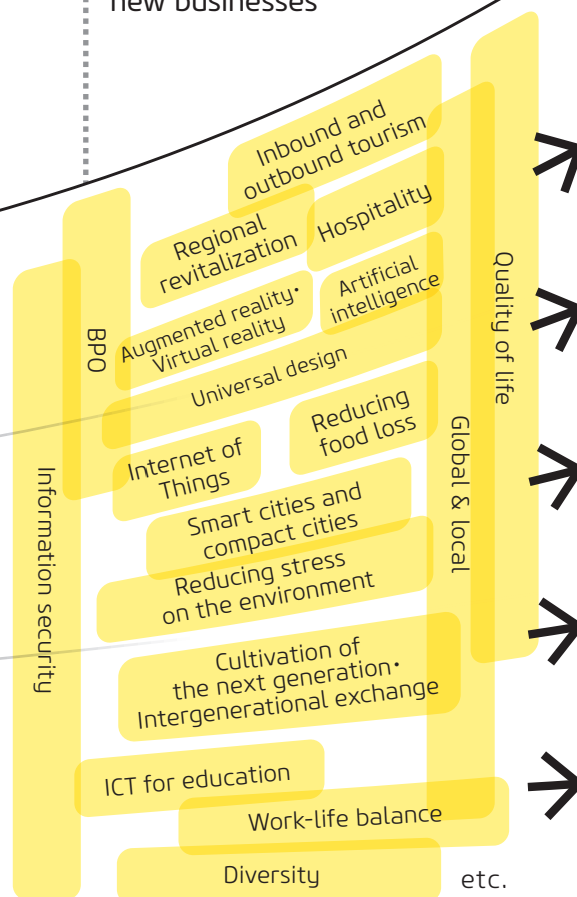
Environment and Energy

Areas where DNP's strengths can contribute

Various social problems

Some of the main areas where DNP can expect to create "new value"

Expanding existing businesses and creating new businesses



Solving society's problems

||

DNP's growth

||

Contributions to society





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

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## New Value Generated in Each Growth Area

DNP supports people's lifestyles through pleasant communication and provides products and services that foster culture. We provide information that consumers want, when they want it and in optimal formats, by producing information media and content and by enhancing services protected by information security measures, etc. For example, we will continue to promote initiatives like DNP's "honto" hybrid bookstore network which handles paper and electronic books, to develop educational information and communication technologies including digital textbooks, and to stimulate multilingual communication in response to the increasing number of people visiting Japan from overseas.

### Main businesses

- Safe and secure information platforms
- Reliable settlement solutions
- Stimulation of paper and electronic publications distribution markets
- Inbound and outbound tourism
- Multilingual communication, etc.

Amid changes in worldwide population dynamics, including a falling birthrate and increasing longevity in Japan, we will support safe, high-quality lifestyles and work to provide new value that supports lifelong health maintenance. For example, we support people's food supply and health by providing safe, hygienic packages for foods and beverages, household items and pharmaceutical products. In addition, we are actively developing advanced products and services using printing and information technologies in new fields like life sciences (including regenerative medicine and medical imaging control systems) and agricultural films that help boost farm productivity.

### Main businesses

- Development of products that can help increase agricultural productivity
- Reducing food loss with the help of high-performance packaging films
- "Universal design" that makes products and services easy for everyone to use
- Commercialization of regenerative medicine
- Advancement of medical imaging control systems, etc.

We will continue to provide new value that contributes to achieving a high degree of comfort, safety and security in a variety of living spaces including homes, commercial facilities, offices and medical facilities, automobiles and passenger trains. In our daily lives we pass through a number of living spaces and exchange various types of information. DNP will continue to develop products with outstanding functionality and aesthetic design in order to make these spaces more pleasant. We will keep our eye on developments in areas like mobile terminals, wearable devices, and the Internet of Things (IoT), and promote businesses aimed at realizing a smart society in which living space infrastructure is appropriately controlled.

### Main businesses

- Actualizing a smart society that comfortably connects various spaces
- "Internet of Things," connecting many things to the Internet
- Creation of information services that can be used safely
- Development of electric cars and other next-generation vehicles
- Making automated driving systems a reality, etc.

We will speed up development of a variety of products and services aimed at realizing a sustainable society that combines economic development and environmental preservation. One example is "DNP Lighting Film," which efficiently reflects light entering rooms from windows onto ceilings and other areas, and diffuses it to brighten up rooms. In the energy field, we intend to further increase our already large global share of the market for pouches for lithium-ion rechargeable batteries. In addition, we will focus on the development of eco-friendly products and services that will contribute to energy and resource conservation, and to preserving biological diversity.

### Main businesses

- Expanding eco-friendly products and services
- Generating, storing and conserving energy
- Reuse, reduction, recycling
- Advanced products that control light and heat
- Establishing traceability of materials, etc.

**Achieve medium- and long-term growth for both DNP and society by providing new value that makes possible richer and more varied lifestyles**

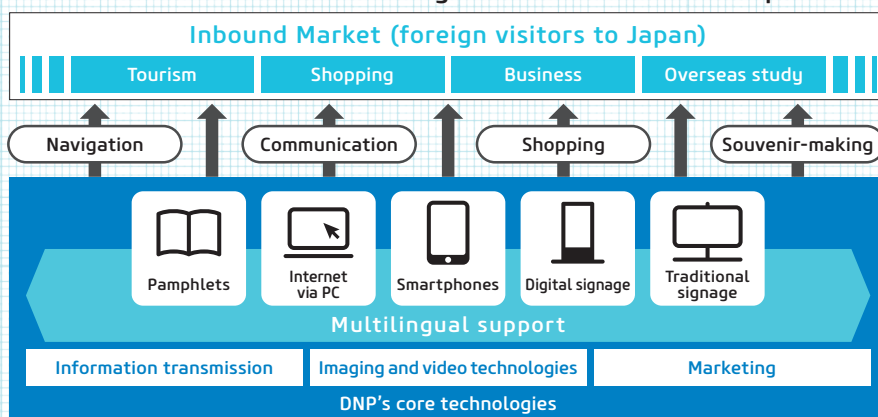


## Services for inbound travelers to Japan —Initiatives aimed at revitalizing every corner of Japan

The number of foreign travelers to Japan in 2015 reached about 19.74 million, and they spent 3.5 trillion yen, a sum on a par with total exports by Japan's automotive components industry. The government's new goal for 2020 is to double the number of foreign visitors to 40 million and increase their consumption to 8 trillion yen. The main reasons foreigners come to Japan are sightseeing and shopping. Related inbound business is seen as a significant potential booster for regional economies and is being hailed as a pillar of the government's growth strategy aimed at achieving GDP of 600 trillion yen.

Along with the advancement of digitization and networking, DNP has developed its own diverse information and communication technologies (ICT) such as optimal processing of image, voice and text data and stronger information security. Backed by our strengths in printing technologies and ICT, along with our experience in making safe, reliable and pleasant communication a reality for corporate clients and consumers, today DNP provides comprehensive services that meet the wide range of needs of foreign visitors to Japan. In addition to these services to foreign visitors, DNP also continues to work to increase the appeal of localities throughout Japan, prepare environments in which information is easy for everyone to access, and provide a variety of services.

### DNP's Initiatives for Serving Inbound Travelers to Japan



### Cross-media Communications Design that Makes Use of Printing Technologies

When we travel overseas, very often the first obstacle we encounter is the "language barrier," i.e. the difficulty of communicating smoothly. The same is true for the foreigners who visit Japan from a variety of countries and regions: when shopping or trying to find their way to an unfamiliar destination, it would be very reassuring to be able to navigate in one's own native language.

DNP's touchscreen multilingual digital signage based on universal design\* helps first-time visitors to a location or facility find their way easily.

In response to this problem, DNP has developed services that will help everyone who visits Japan to create the best possible memories. Examples include touchscreen digital signage that displays maps and tourist information in multiple languages and tablet PC apps that support smooth dialogue with customers in multiple languages by tapping the screen to change languages. We will focus on serving the growing number of foreign visitors to Japan by using the most appropriate expressions and designs based on gaining understanding of cultures around the world.

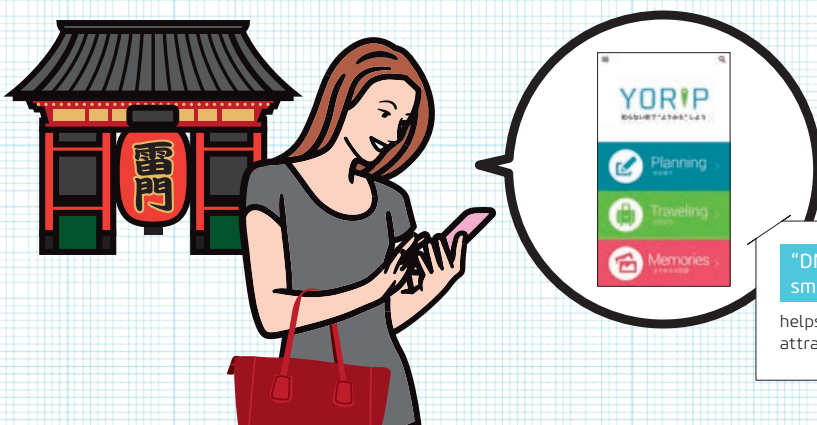
\* Universal design makes it easy for anyone to use a product or service.





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## "DNP YORIP" or "DNP Side Trip" smartphone application

helps popularize little-known attractions and establish local brands.

## Attractive Local Branding Connects Individuals and Society

### DNP content services

In our inbound business, at the same time that we bolster multilingual service and prepare environments that welcome foreign visitors, it is also important to take steps to increase the appeal of outlying regions. DNP is pursuing initiatives aimed at discovering each area's best features and publicizing them to a large number of people.

For example, DNP is promoting a digital archiving business that uses ultra high-definition technology to record 4K video content of the 17 shrines, temples and castles in Kyoto that are registered as World Heritage cultural sites. The content includes high-resolution images of treasures that tourists normally cannot see, such as ceiling paintings and paintings on interior sliding doors. In addition, DNP has entered into an industrial development cooperation agreement with the Higashimatsuura Genkai-cho district of Karatsu, Saga Prefecture, to promote the "Karatsu Cosmetic Concept," under which DNP will

help the district develop and market local health and beauty products, including support for overseas expansion.

Another service that DNP provides for travelers is its "DNP YORIP" or "DNP Side Trip" smartphone application, which sends information about the charms of various localities at different points along a journey. Before departure, the smartphone app helps travelers plan their trip and make various reservations. During the trip it suggests side trips, and afterward it helps the traveler record notes and memories. The first edition provides tourists with information about eight cities and towns in the broader Hachinohe area of Aomori Prefecture. DNP plans to actively promote new businesses related to regional revitalization. As an example of making souvenirs, DNP operates a nationwide network of "ShaGool!" automated photo booths at tourist attractions and event venues, where customers can take unique photos that commemorate their visit to the site or participation in an event.



## "ShaGool!" automated commemorative photo booths

help tourists share memories of their trip.

information is then provided to business operators within a secure information environment when the visitor orders goods or services.

### Barrier-free access

DNP is working on barrier-free urban development that will allow diverse people from all over the world to enjoy their time in Japan without worry. Looking ahead to the 2020 Tokyo Olympic and Paralympic Games, businesses and shopping malls throughout the city as well as train stations, airports and other transportation facilities have begun making many types of infrastructure barrier free. DNP is focusing especially on removing barriers from various types of information communication at shops and on city streets, for example by developing reading software and producing braille pamphlets that are easy for visually impaired people to use.

In ways like these, DNP takes a broad view of inbound business and uses its printing technologies and ICT to contribute to urban development, enabling all types of people to feel at ease in sightseeing and in daily life.

### Measures to ensure safety and security

From the autumn of 2016, a vendor relationship management (VRM) system developed by DNP will support the "Omotenashi (Hospitality) Platform" to be provided by Japan's Ministry of Economy, Trade and Industry for the convenience of foreign visitors. The VRM system will make it easy for foreign visitors to Japan to receive all types of services from the time they begin preparing for their trip until after they return home. By simply registering their personal information and credit card information with the system once, the



## Ryoanji, a World Heritage site from "Historic Monuments of Ancient Kyoto,"

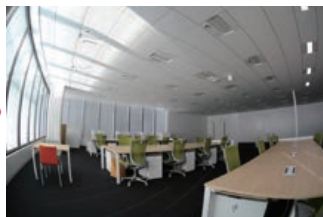
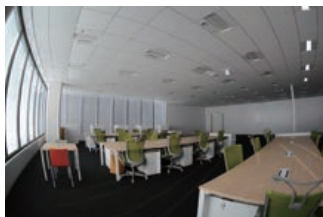
an example of the digital archiving business we are promoting



## Reducing stress on the environment in many areas —Initiatives that make effective use of energy

Due to rapid worldwide economic development and population growth, energy and resource use have increased sharply, and destruction of natural habitats and other negative effects on the global environment have become problematic. DNP positions Environment and Energy as one of its growth areas. We are promoting a variety of initiatives, including the development of eco-friendly products and services, in order to realize a sustainable society that can coexist with nature.

Through our business activities, DNP aims to simultaneously achieve economic growth and environmental preservation. Specific examples include helping to create smart cities that reduce resource and energy usage and supporting compact cities that concentrate the functions needed for domestic life; development of products and services that make effective use of natural energy; initiatives for generating and storing power; and development of products that are easy on the environment throughout their life cycle, i.e. from raw material procurement through manufacturing, usage, disposal and recycling.



Room brightness before applying lighting film (left) and after (right)

### DNP Lighting Film

improves room brightness by efficiently reflecting and dispersing sunlight.

### “DNP Lighting Film” applied to windows to brighten interior space

“DNP Lighting Film” is applied to windows at homes, offices, and commercial, medical or nursing care facilities, etc., in order to effectively bring sunlight inside so the interior is brightened during the daytime, thereby reducing electricity consumption. “DNP Lighting Film” (for laminated glass) was introduced for sale in October 2015. The film, which directs light coming into the room to jump upward, is sandwiched between two pieces of glass, thus also making the glass more difficult to break and preventing crime. In tests using the new film in laminated glass windows on the north side of buildings where there is not much sunlight, it was found that after installing the film, brightness in the rooms doubled<sup>\*1</sup>, and electricity required for lighting was reduced by 13%<sup>\*2</sup>. In previous attempts to make this type of product, its light-drawing function was hindered when the film was bonded to the glass. However, this problem was solved by tweaking the film’s structure and materials, for example by placing the light reflective and dispersal functions inside the film rather than on the surface. The product has been adopted by major housing manufacturers. DNP has also developed “DNP Lighting Film” (for on-site installation) which it provides for application to existing residential windows, for example during renovations.

<sup>\*1</sup> According to a DNP study; maximum values measured June 5, 2015, 9 a.m. to 6 p.m.

<sup>\*2</sup> According to a DNP study; measured July 2, 2015, 9 a.m. to 6 p.m.

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## Energy usage assessment system makes energy consumption visible

DNP actively develops solutions that manage overall energy usage. We began operating a monitoring system at our own facilities that displays at a glance, in addition to electric power and water usage, energy costs and CO<sub>2</sub> emissions equivalents. Building on that experience, we have answered the needs of companies and local governments that wanted to manage and reduce energy usage based on a smart house or smart cities model. We intend to continue helping them manage energy usage and operate energy management systems.

Citing DNP's contribution to gas-related technology and business development, the Japan Gas Association awarded its 2016 technology prize to DNP for our "e-gokochi" assessment system, which we developed in 2014 to help reduce household energy consumption. The system simulates water and power usage based on factors like the number of people in the household, the types of equipment being used, and the way equipment is used. It assesses equipment performance, proposes energy-saving and CO<sub>2</sub> reduction measures, and calculates the expected effectiveness of those measures. DNP will supply the system to a large number of gas dealers.

### "e-gokochi" energy conservation assessment system for household use

proposes household energy conservation measures.

## Disaster-resistant, crime-preventing digital signage uses natural energy

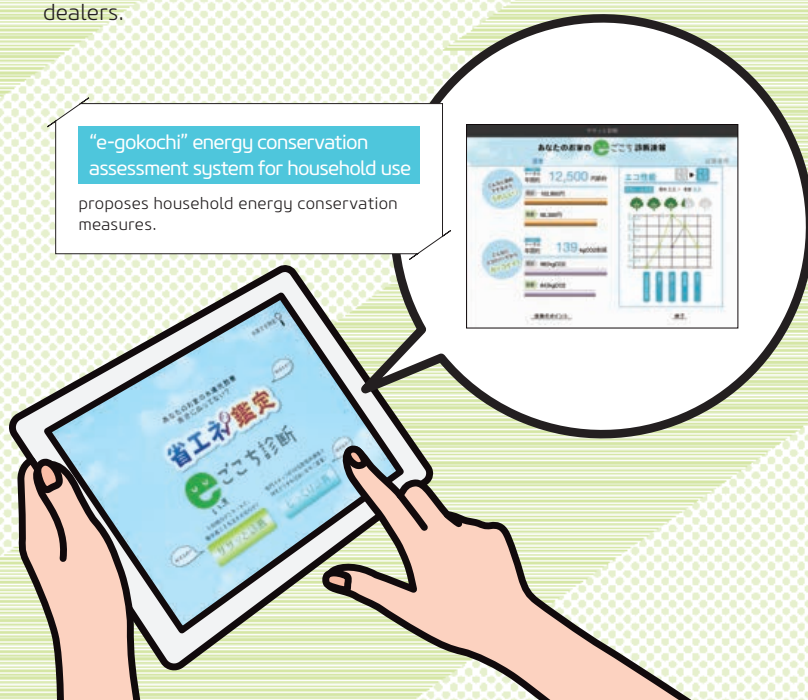
Many companies and local governments are working on making effective use of natural energy as a way to prevent global warming.

Since April 2016, DNP has been selling energy-efficient digital signage that contains a natural power generation system combining solar and wind power and storage batteries. In the event of a major earthquake, if power outages and/or disruptions in telecommunications infrastructure render smartphones and other information terminals unusable, it may become difficult to obtain emergency information promptly.

The energy-efficient digital signage developed by DNP can transmit emergency information and confirm individuals' safety should a disaster occur. In addition, it can be fitted with a security camera and serve as both a disaster prevention and crime prevention system. DNP will push to have the signs installed in public facilities and parks, schools and designated emergency shelters, commercial facilities where many people gather, high-traffic roads, apartment buildings, offices and factories, etc. in order to achieve safe, worry-free cities and towns.

### Energy-efficient digital signage with its own natural power generation system

transmits information in times of emergency as well as at normal times.





## Automotive-related initiatives that respond to changes in automobile functioning

In the automotive industry, a number of technologies are being developed in order to minimize stress on the environment and improve safety and comfort. Rather than simply meeting fuel efficiency standards, vehicle manufacturers are speeding up initiatives such as developing electric, fuel cell, and other next-generation vehicles and reducing the weight of auto body components in order to decrease the burden on the environment worldwide.

One of DNP's designated growth areas is "Lifestyle and Mobility," where our efforts involve securing people's comfort not only in homes, workplaces, schools and commercial facilities, but also in transit spaces such as automobiles and trains, as well as working to generate information services that are safe to use. Consumers often view automobiles in particular as their personal space where they seek special functions and new value.

Amid increasing adoption of advanced driving support systems that detect and preempt potential collisions, the automobile market is anticipating the realization of automated driving systems. The market is also focusing on products and services that increase comfort, for example by protecting privacy, improving design and texture of auto interiors and exteriors, or by adoption of head-up displays that project information onto a car's windshield. DNP is working to provide new value that will lead to resolving issues like these.

### ■ Toward realizing pleasant, safe and reliable transit spaces

#### More comfortable personal spaces

DNP began developing residential construction materials in the 1950s. In the 1980s, we developed methods of decorating products made of plastic formed into complex three-dimensional shapes, including "Thermoject" technology that enables the application of diverse designs simultaneous with injection molding, and our "Curlfit" technology for using water pressure to transfer design onto curved surfaces. Automobiles are considered part of personal space and there is strong demand for improving their design. DNP will continue to work toward advancing formed products through the use of these technologies, and to expand the range of possibilities for interior and exterior design. Meanwhile, TAMURA PLASTIC MFG. Co., Ltd., which joined the DNP Group in August 2015, holds a substantial share of the Japanese market for side visors that are attached above automobile side windows. We will focus on developing new products that combine Tamura's strengths with DNP's decorative technologies and strength in functional films.

#### Using nanoimprinting for self-driven cars

Nanoimprinting is a method that enables the transfer of concavo-convex micro-

patterns with line widths of 20nm\*<sup>1</sup> or less by pressing a template against a resin-coated substrate. DNP cultivated high-definition pattern-forming technologies by making semiconductor photomasks, and we believe we can apply those technologies to self-driven automobiles. Automatic controls used in automobiles require an enormous number of light sensors. By using nanoimprinting technology, it is possible to develop and mass produce optical elements that improve sensing accuracy and efficiency by controlling light within a nano-structure according to the light's wavelength. In 2015, DNP launched a one-stop service for companies that want to produce nano-processed goods, whereby we support every step from product planning and design to development, die production, transcription prototyping and mass production.

#### Increasing in-vehicle information security

People have started talking about "connected cars" that serve as information terminals since they are always connected to a network and have many sensors. Based on our strength in information security technologies, DNP offers services that boost the security of in-vehicle information systems, for example by

preventing the manipulation of applications loaded onto devices in the car. Our services use CrackProof, a program that prevents illicit access to information from in-vehicle systems, and DNP Multi-Peer VPN\*<sup>2</sup>, a system embedded in in-vehicle telecommunications devices that encodes transmitted data and uses dedicated servers to manage and authenticate access between devices. Going forward, we will continue to develop services that ensure the security of communication between automobiles and servers and between one automobile and another.

\*1 - A nanometer (nm) is one billionth of a meter.

\*2 - VPN stands for virtual private network.

#### DNP's ultra weather-resistant hard-coat transfer film

improves weather and wear resistance of resin glass.





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To Our Shareholders

DNP in Brief

Special Feature

Segment Information

How DNP Works to Achieve Sustainable Development

Finance Section

Appendix

## Initiatives aimed at linking sustainable society and automobiles

As people all over the world work to make sustainable societies, an important topic in the automotive industry is how to make lighter auto bodies that can directly improve fuel efficiency. As car bodies and many automotive components become lighter, DNP provides "pouches" as the outer covering of lithium-ion batteries. The pouches are made of multi-layer film that seals in electrolytes and other battery materials. Compared to conventional metal can-type containers, the pouches afford greater flexibility in battery dimensions and shape, and have won high praise as the best solution for reducing the weight and thickness of car batteries, which are key components in

electric and plug-in hybrid cars.

DNP has also developed a hard-coat transfer film for use on resin glass, which is seen as a promising substitute for conventional glass in automobiles. Simply by transferring DNP's new film to the surface of the resin glass, it increases wear resistance and prevents damage from ultraviolet rays.

Resin glass has already been adopted for use in some vehicles, including trains and construction equipment, because in addition to weighing only about half as much as regular glass, it is difficult to break and offers excellent thermal insulation and formability. DNP uses original technology for transferring the

hard-coat layers to the resin glass surface. Compared to previous technology that involved spraying hard-coat materials onto a surface, DNP's new method results in higher product yield. DNP began supplying resin glass with the new transfer film in the spring of 2016.

In addition, we will accelerate development of functional film products that can help realize reductions in auto body weight. For example, we are working on a film that can bond different materials together, such as carbon fiber-reinforced plastic and metal.

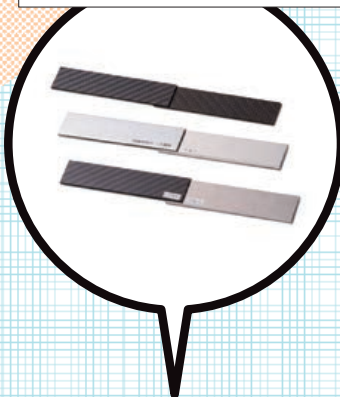


A rich variety of designs for automobile interior materials

thanks to DNP's technologies for decorating formed plastics

### DNP adhesive films

bond together different materials, such as aluminum and carbon fiber-reinforced plastic.



### Pouch for lithium-ion batteries

used in an increasing variety of applications including electric cars

