

Dai Nippon Printing, Co., Ltd.  
Sustainability Briefing: Q&A Summary  
(October 25, 2022)

**[Questioner 1]**

**Q: Regarding the strengthening of intellectual capital, please explain how you plan to continue to generate products that are highly competitive and important profit drivers, like battery pouches for lithium-ion battery. Also, I would like to hear about the background behind the changes to the framework for technology and R&D that are explained on page 20 of the presentation materials, and about the purpose of those changes.**

A: We believe that in order to continuously develop new technologies and improve our R&D, we need to pursue the development of seeds and the discovery of needs in an integrated manner. In our battery pouch and metal mask for OLED display manufacturing businesses, our position as a leading manufacturer allowed us to grasp our customers' needs more quickly than competitors and to continually develop technologies based on a strategic outlook, and this resulted in significant growth.

In terms of technology and R&D systems, we used to develop seeds in a single location, whereas needs were somewhat dispersed. That's why, in the previous fiscal year, we set up Research and Business Development Center that combines these functions to create a framework that enables the efficient development of both technologies and businesses.

**Q: Regarding the strengthening of human capital, at last year's ESG briefing you talked about changing the employee evaluation system under the Value Creation Program, and shifting jobs toward ICT. Please share specifics about how the new evaluation system has helped boost ROE, and how the shift into ICT is progressing.**

A: The key to improving ROE is boosting returns by creating more value. Before we launched the Value Creation Program, the president granted awards based on results achieved, especially net sales and/or operating profits. Since then, we changed our system so that it also recognizes the processes that generate that kind of value. In addition, since value creation through team-based emergent activities has become DNP's basic mode of operating, we took a fresh look at our previous system of evaluating each

individual separately and introduced a new "DNP Value Target System" (← DNP Value Objectives System) that evaluates team-based activities.

Regarding the shift in job types, we have started offering retraining in ICT-related skills for younger employees who work in manufacturing and desire such training. Since we just started this program recently, so far, just under 10 people are currently receiving the training. In addition, as we have continued to transform our business portfolio, over the past year and a half, we have provided training in necessary new skills for employees who move from a manufacturing job in a business division whose growth is lagging to a manufacturing job in a business division that is performing well. About 150 production-line workers have already received this type of training and have been transferred to new positions.

We have also enhanced the training of our ICT and DX personnel in order to raise the skill level of DNP's ICT technicians. Through these various efforts, we plan to increase the total number of ICT and DX human resources, from about 5,000 as of FY 2021 to 7,500 by the end of March 2023.

**[Questioner 2]**

**Q: With regard to environmental initiatives in the Packaging business, in what direction do you expect customers' demand for eco-friendly products to head? Customers seem to have started buying eco-friendly products even when they cost a little more, but how much of a price gap do you think they will tolerate?**

A: In response to customer demand, mono-materials have become the mainstream. Outside Japan, especially in Europe, there is a clear trend toward mono-material packaging, and our factories have systems in place to support this trend. However, Japan has not established an infrastructure for collecting packaging materials as reusable resources, so demand for mono-materials has not increased so much. Moreover, shifting to paper packaging is attracting more attention since the advantages of paper are easier to understand. Switching to paper packaging material reduces the amount of plastic waste that is actually disposed of, while at the same time paper's excellent barrier properties, ease of design, and excellent suitability for heat sealing make it an increasingly popular choice, so DNP offers a variety of paper packaging products.

So far, the cost of eco-friendly packaging products has been higher than that of conventional products due to differences in the materials used, among

other factors. I would like to refrain from answering the question about customers' tolerance for higher prices of eco-friendly products, partly out of respect for our relationships with our customers, and partly because it is impossible to generalize.

**Q: You said you aim to increase the number of "digital" personnel from 5,000 to 7,500. What methods are you considering for recruiting these human resources?**

A: At DNP, when we talk about "digital human resources," we refer to both "ICT personnel" who use ICT and digital technologies to plan, design, develop, operate, and maintain services and systems, and "DX personnel" who use ICT and related technologies to bring about changes to actual businesses, products, services, and organizational development, etc.

As of 2021, DNP employed about 2,000 ICT personnel, and about 3,000 DX personnel including employees involved in AI and DX sales and planning personnel, for a total of 5,000 people. In order to increase the number of such personnel by another 2,500, we changed our hiring system to make it extremely flexible, including in terms of working conditions and pay scales. Through these means, in addition to actively recruiting specialists from outside the Company, we will also strive to develop fresh graduates and internal human resources through ICT and DX training programs.

Our targeted annual mid-career hiring ratio is about 40%, and our actual results exceeded 30%, including ICT and other specialized human resources.

**[Questioner 3]**

**Q: Page 19 of the presentation materials shows the number of patents held by DNP. Please explain relevant trends from the past as well as the outlook for the future.**

A: The number of patents held by DNP has been increasing year by year in the various areas in which we focus our businesses. In 2017, DNP held more than 1,600 patents related to IoT and next-generation communications. In 2019 the number grew to almost 1,900, and by the end of March 2022, it reached 2,355. The number of patents related to data distribution has remained largely unchanged, but it exceeds 2,000. Patents related to mobility numbered over 550 in 2017, over 600 in 2019, and 828 at the end of March 2022. DNP held 680 environment-related patents in 2017. That number grew to 910 in 2019, and 1,057 as of March 2022.

**Q: According to Page 27 of the presentation materials, it seems that most of the GHG emissions reductions achieved in 2021 were in the area of Scope 2. Was this due largely to the effects of transforming DNP's business portfolio, or more to the impact of introducing renewable energy? Also, is it correct to understand that efforts to realize the "DNP Group Environmental Vision 2050" are on track for success?**

A: Using 2015 as a benchmark, total CO2 emissions in 2021 decreased by 400,000 tons, from 1.2 million tons to 800,000. The biggest contributor to this reduction was the transformation of our business portfolio, especially the scaling back of businesses that consume large amounts of energy, such as book and magazine printing and commercial printing.

Of the approximately 400,000 tons of emissions reductions, about half, or roughly 200,000 tons, resulted from the transformation of our business portfolio, of which about 100,000 tons were due to energy conservation, and the other roughly 100,000 tons resulted from changes in emission factors. Especially in 2021, the number of facilities that were disposed of during the year as part of our business portfolio transformation was much higher than the previous year, which contributed significantly to reducing emissions.

As for other indicators, resource recycling improved by 4.6 points compared to the fiscal year through March 2016, meaning that we achieved our target for the fiscal year. We also achieved our target for water usage reduction, with a decrease of 32% compared to the fiscal year through March 2016. Furthermore, we achieved our goals for the year ended March 2022 for reductions in VOCs and transport-related environmental impact.