

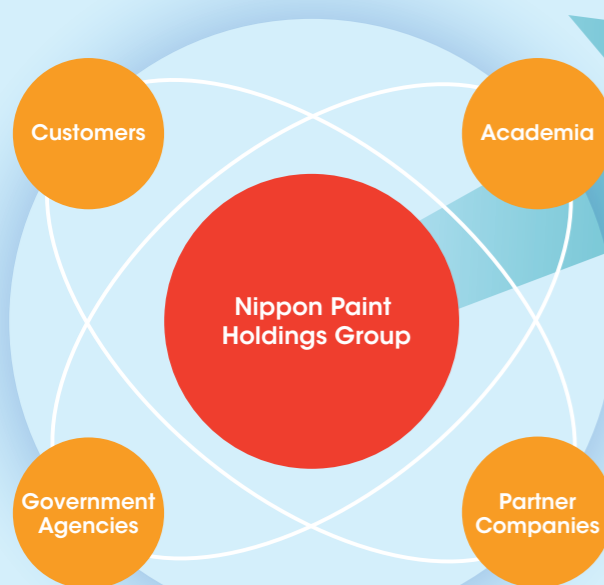
Research and Development

The Group's activities in creating innovations through the power of paint toward delivering innovation in future

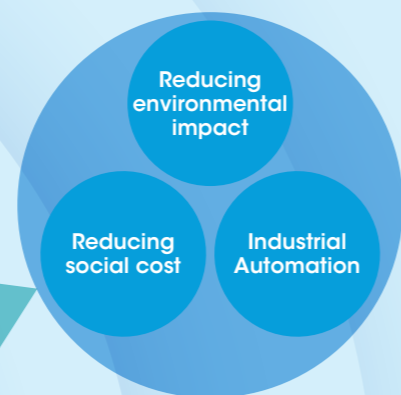
R&D policy

Investing in R&D to Address Social Issues

Maximizing the allure of the paint through collaboration of collective capabilities of global technologists and external networks



SUSTAINABLE DEVELOPMENT GOALS



Address social issues through the capabilities of paint to preserve mother nature for the next generation

Polymer Synthesis	Color Science
Corrosion	Formulation
Process Technology	Measurement Science
Dispersion Technology	Application Technology
Rheology	Curing Chemistry

In our R&D, we are working to strengthen the collaboration between the comprehensive strengths of the Group's engineers in Japan and overseas and our external networks to maximize the appeal of paint through our technological capabilities for providing solutions to various social challenges. Examples of this include close collaboration in information exchange and joint research programs with the engineering departments and research departments of our partner companies around the world, proactive open innovation activities with suppliers, customers, and academic institutions such as universities and research institutions,

and strategic technology development projects involving government agencies. Our aim is to deliver unprecedented and innovative solutions to society through such initiatives. We believe one of our major management themes is to provide places where our 1,000 engineers in Japan and the engineers of our global partner companies can demonstrate their full potential, and we will continue to explore various opportunities for our engineers. Furthermore, we will proactively share and disseminate the attractive features of the paints developed by our engineering teams.

TOPICS

Set up "Advanced Product Development" by calling in R&D engineers from the Group's partner companies

In May 2020, NPHD set up Advanced Product Development, where excellent R&D engineers from the Group's partner companies were assigned with a mission of "exploiting all the Group's technologies in areas including paints, coatings, and surface treatments and forming collaborative relationships with universities, research institutions, and other companies as necessary in order to develop products that contribute to solving social challenges."

In response to the social anxieties caused by the spread of the COVID-19 pandemic, Advanced Product Development was launched with the highest priority placed on the development of anti-viral products by identifying situations in everyday lives where the risk of infection is high. Led by this specialized team, we are accelerating research and development activities aimed at providing safety and security for people's lives and for maintaining social functions in the "new normal" lifestyles. Meanwhile, we need to promptly deliver new products thus developed to end users through the processes of production, distribution, and sales, which requires collaboration with each partner company. By monitoring such activities through the Anti-viral Product Development Technology Meeting, which was established as a company-wide organization, we are working on providing solutions to social challenges as a company-wide project.

We plan to introduce various innovative anti-viral products to society, following on from "Perfect Interior Air Clean," an innovative anti-viral and anti-bacterial interior paint, by leveraging our industry-academia collaboration activities with the University of Tokyo. We will tackle social challenges, including the containment of the COVID-19 pandemic, to make a contribution to society, while at the same time will contribute to sustainable business expansion and growth of the Group by capturing business opportunities by anticipating customer needs.



Conclusion of industry-academia collaboration agreement with the University of Tokyo

On May 18, 2020, the University of Tokyo and NPHD concluded an industry-academia co-creation agreement aimed at high-level comprehensive joint research and the exchange of human resources. We decided to establish a social cooperation course titled "Construction of Innovation Coating Technologies" in the Graduate School of Engineering of the University of Tokyo. The period of the agreement will be five years from October 1, 2020, to September 30, 2025, with a total of 1 billion yen offered as research funds. Through this agreement, NPHD and the University of Tokyo will focus on achieving the development of technology that will help prevent the spread of the COVID-19 pandemic, including anti-viral technologies, and technology to solve new social problems that will emerge after the end of the spread of infections shaped around the concept of "paints and coatings." This agreement will also bring new technologies to the table to both build a foundation for a smart/remote society and weave together the threads to create a beautiful, attractive, and sustainable society.



Right) Masaaki Tanaka, Chairman, President & CEO, Nippon Paint Holdings Co., Ltd.
Left) Makoto Gonokami, President, The University of Tokyo