R&D Intellectual Property Activities



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Forging the Future of Business from the Research and Development Laboratory

Up to now, the Research and Development Laboratory has supported TAIYO YUDEN's competitive capabilities through the development of high-performance materials and elemental technologies. We view FY2026 as the year in which we take this role a step further, evolving from research aimed at creating high-quality products to research that reliably leads to business opportunities. The Research and Development Laboratory's mission is to anticipate future market changes while supporting advances in existing business and the creation of new businesses. Specifically, in our core electronic components business, which includes capacitors and inductors, we will strengthen our ability to deliver value to growing markets by achieving stable performance even during mass production through the refinement of materials and process technology advances. For new businesses, we will clarify the process leading up to commercialization and strengthen collaborations with existing businesses.

Proactive Development That Anticipates Demand

The key to research and development is getting started before demand takes off rather than waiting until after. Market and technological changes are occurring faster than anticipated. For example, in the AI server and in-vehicle fields, high standards are required across the board, from performance to reliability and power efficiency. TAIYO YUDEN pursues development that goes beyond mere extensions of its existing products, advancing development from both the materials and process perspectives while anticipating changes in markets and technologies. The Research and Development Laboratory leads the way, with business divisions quickly commercializing our achievements. By strengthening this collaboration, we will build a competitive advantage unique to TAIYO YUDEN.

In line with FY2026 organizational restructuring, the Intellectual Property Department is now under the aegis of the Research and Development Laboratory. Relevant departments are now working together to promote intellectual property creation activities in closer collaboration with the development and engineering departments from the early stages of research and development. In submitting patent applications, we aim to increase the proportion of high-value patents and promote the creation of strong intellectual property that directly contributes to our business competitiveness. Although it is difficult to quantify research and developments contribution to business performance, we are committed to taking proactive measures that both protect research results and drive future business growth.

Cultivating the Next Areas of Growth Based on the Strengths of Existing Businesses

When approaching new business ventures, we prioritize areas that extend naturally from existing businesses rather than isolated, unrelated ventures. We will identify themes with potential for future growth, including all-solid-state batteries, healthcare-related technologies, and odor sensors, and first aim to develop several of these areas to the commercialization stage. To this end, we are working even more closely with the Sales Headquarters, Field Application Engineers (engineering sales), and business divisions to quickly identify changes in demand and have a system in place to reflect them in research themes. Rather than operating in isolation, it is important for the Research and Development Laboratory to bridge markets and research by connecting insights from within and outside the Company.

Toward Sustainable Value Creation

In research and development, not only quantity but also quality and efficiency are becoming increasingly important. To achieve greater results even with a small team, we will advance the automation of experiments, data collection, and the use of AI to enhance the reproducibility and speed of our research. We will also continue to validate new processes that go beyond simply extending existing processes.

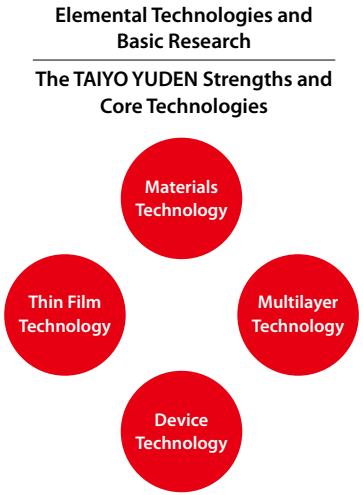
As we move forward with research and development, a key priority is to formalize knowledge accumulated through research activities and ensure it is steadily passed on to the next generation. While promoting the transfer of technologies from veteran staff to younger employees, we will also leverage data to build a development framework that is not overly reliant on experience, with the goal of establishing a sustainable and resilient organization. We will continue taking on the challenge of developments that shape the future of TAIYO YUDEN, while maintaining a strong awareness of business contributions through the ongoing proposal of forward-looking themes, the creation of roadmaps in collaboration with business divisions, and the allocation of resources to researchers.

R&D

Fundamental Stance

The Foundation of Our Research and Development Activities

Hikohachi Sato, the founder of TAIYO YUDEN, was a researcher in ceramic materials, and since its establishment, has believed that product commercialization should start from the development of materials. This has been one of the strengths of TAIYO YUDEN, and has resulted in us creating many products that have been "world firsts." TAIYO YUDEN's research and development activities are aimed at further honing the many elemental technologies it has so far developed to create products that contribute to the ongoing development of electronic devices.



Approach to Research and Development

Research and Development Supporting the Realization of Sustainable Well-Being

Rooted in the idea of "the wonders of science," our research and development is characterized by a vertically integrated approach combining core technologies including material, multilayer, and design technologies, and handles everything from materials development to mass production. By leveraging this strength and optimizing everything from materials to design and production processes, we are creating differentiated products that are both high performance and highly reliable. Furthermore, we are using AI and digital technologies to enhance the sophistication of development processes, while also promoting the creation of new value in growth fields such as energy, mobility, telecommunications, and healthcare. Through these initiatives, we will contribute to the resolution of social issues and advance research and development that supports the realization of Sustainable Well-being.

Research and Development Principles

We promote research and development based on the three pillars of support for existing businesses of the future, creation of new business pillars, and strengthening of shared foundations.



Driving research from a business perspective

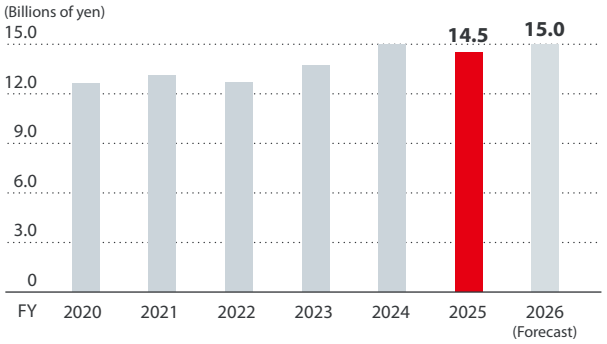
Supporting the future of existing businesses
Support the creation of high-value-added products with materials research

Creating new business pillars
Creating new solutions to social challenges through core technologies

Strengthening shared foundations
Maximizing functional value across organizational boundaries

R&D Expenses

We recognize that continuing innovations and advancement in our technologies through R&D is the foundation for TAIYO YUDEN to create the future. As such, in recent years we have continuously invested a fixed amount into R&D activities, rather than making major adjustments based on the financial results.



Developing Research Talent

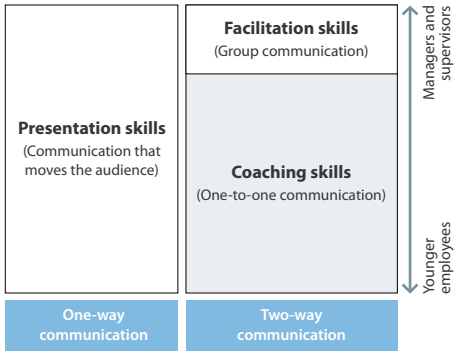
At the Research and Development Laboratory, we are strengthening our human capital in order to create an innovative organization and workforce.

Efforts to enhance communication skills promoted since FY2021 aim to realize the collective genius* essential for innovation. We began by strengthening presentation skills to improve individual communication skills, then worked to strengthen coaching and facilitation skills to further improve group output (Fig.1). Regarding presentation skills, we conduct an annual, objective quantitative assessment for members who regularly make presentations. In FY2025, the average score rose 20% compared to FY2021. In particular, the number of employees with high scores increased, leading to an overall improvement in skill levels (Fig. 2).

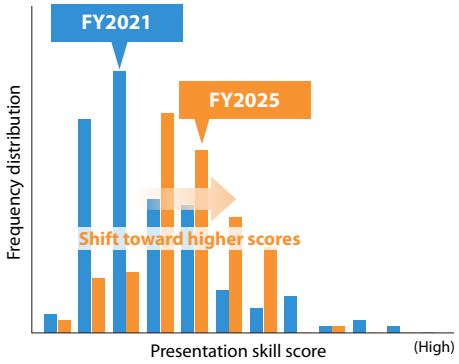
We also quantify progress on road-mapping skills, a program ongoing since FY2022. In FY2025, the average score by theme improved significantly from FY2022, achieving the target. We will continue to strategically develop mid- to long-term roadmaps through backcasting.

* The idea that combining individual talents enables genius-level outcomes as an organization.

(Fig. 1) Initiatives to strengthen communication skills



(Fig. 2) Changes in presentation skill scores



TAIYO YUDEN's Research Facility

We profess to be "the TAIYO YUDEN of technology and the TAIYO YUDEN of development," and aim to continuously create the world's best products. Based on this idea, in 1998 we opened the R&D Center (Takasaki City, Gunma Prefecture, Japan). Since then, research and development has accelerated, and the Center continues to serve as a source of technological and development capabilities, as well as a foundation for future creation.

In 2020, we opened the Shin-Kawasaki Center SOLairoLab as a hub for co-creation with external partners. Leveraging collaborations with research institutions and startups concentrated in the Shin-Kawasaki Sozo no Mori ("Forest of Creation") area, we are working to strengthen our marketing and solution development through external exchanges.

In FY2025, we engaged with more than 510 individuals and promoted initiatives with external partners aimed at creating new markets and resolving social issues. Additionally, lectures by experts are held eight times a year. As part of our student support initiatives, we also conducted the second year of our seminar program and provided a three-month program to the nine students selected to participate. We will continue striving to achieve both economic and social value through open innovation.



AIRBIC, the building in which the Shin-Kawasaki Center SOLairoLab is located



Lecture in progress

Activities on Intellectual Property Rights

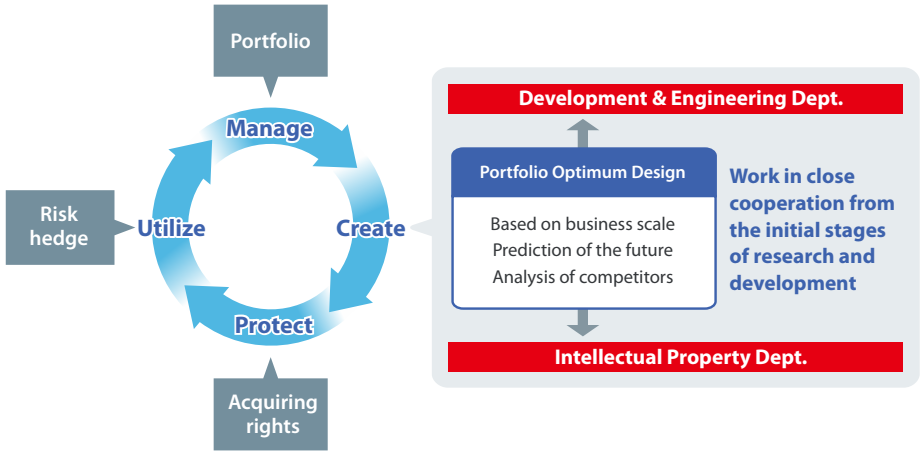
Basic Policy

We, TAIYO YUDEN, endeavor to obtain, maintain and protect intellectual property rights for proper use, and also to respect the intellectual property rights of third parties, in accordance with our CSR Code of Conduct.

Under the Medium-Term Management Plan 2030, we will strengthen collaborations with the Development and Engineering Department through integrated operations with our Research and Development Laboratory, thereby supporting TAIYO YUDEN's technological advancements and competitive advantages through influential intellectual property. We will evaluate these activities based on Intellectual Property Department KGIs and KPIs and strategically allocate IP resources to priority areas, thereby contributing to the enhancement of corporate value.

Protection of Intellectual Property Rights

To stay ahead in research and development and secure solid intellectual property rights from our results, the Intellectual Property Department works closely with the Development and Engineering Department from the earliest stages. We also leverage our intellectual properties through a unique management approach that is optimized for each business unit.



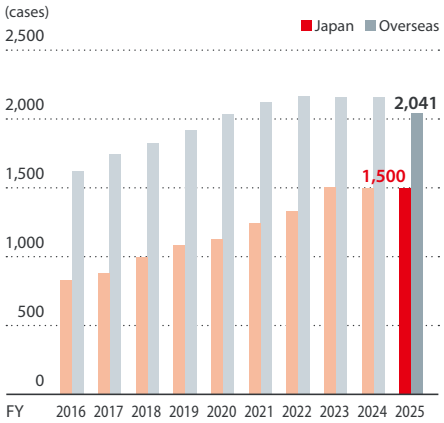
Number of Patents Held

TAIYO YUDEN acquires patents necessary for business activities in Japan and overseas. We file patent applications based on forecasting-driven thinking, starting from immediate issues, and backcasting-driven thinking, focused on future issues, with equal emphasis on both. (Fig. 1)

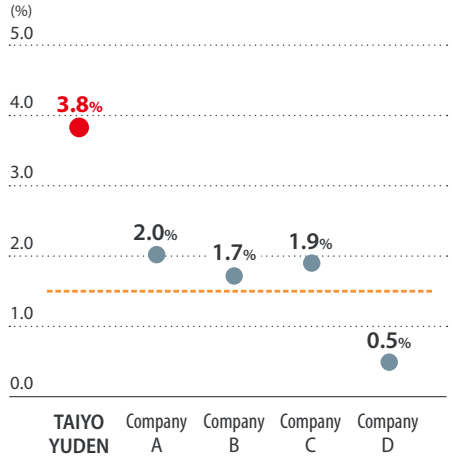
Competitor Patent Application Prevention Rate

TAIYO YUDEN goes beyond simply protecting intellectual property, and utilizes it to secure our competitive advantage. In addition to acquiring rights to technologies that are essential for our products, we focus on developing patents that impact other companies' products. With competitors here in Japan, as well as in South Korea and China, we promote the acquisition of intellectual property rights while maintaining an awareness of other companies' products. (Fig. 2)

(Fig. 1) Number of patents held



(Fig. 2) Competitor patent application prevention rate



Note: Calculated based on 20 years of patent application statistics (FY2006–FY2025)