

Intellectual Property

Basic Approach

Approach

Mindful of the importance of intellectual property (IP) as a core source of competitiveness, TOPPAN implements IP initiatives to secure market advantages. We believe that every IP activity should be aligned with business plans and R&D activities. We will acquire IP rights for products and services generated from the linkage between an IP strategy derived from our IP portfolio and a technology strategy focusing on market needs and the competitive landscape. Intensified IP initiatives will enable us to acquire IP capabilities that support our portfolio transformation and reinforce our management.

TOPPAN Group Basic Policy on Intellectual Property

1. We develop proactive intellectual property initiatives from a global perspective based on an intellectual property strategy that further aligns our market-oriented stance and R&D activities by positioning intellectual property and intangible assets as important management resources to generate competitiveness in business.
2. We strategically use the intellectual property we have created to enhance corporate value and attain sustainable growth through the execution of Group management, higher business profits, and effective solutions for social issues.
3. We respect the intellectual property rights of others and take appropriate proactive/preemptive measures to avoid rights infringements when operating our businesses.
4. We comply with the laws and regulations pertinent to intellectual property rights across the world and exercise our legitimate rights appropriately when any of our intellectual property rights is infringed by a third party.
5. We appropriately and accurately use the trademarks we hold to enhance our brand value.

Maximizing Corporate Value

IP initiatives support our business portfolio transformation to achieve the Medium Term Plan. Effective intellectual assets secure our competitiveness in business to maximize the corporate value of TOPPAN.



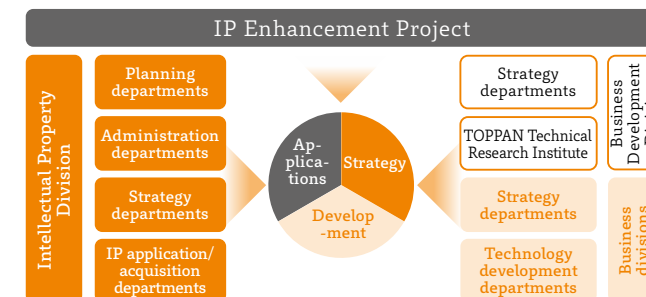
Reinforcing the IP Infrastructure

Framework

IP Management Framework

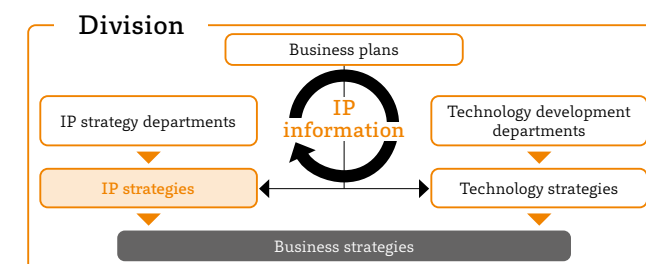
With the transition to a holding company structure in October 2023, we have built a framework where TOPPAN Holdings Inc. centrally manages the intellectual property rights owned by the main operating companies. Group synergies will be maximized through Groupwide IP utilization under the holding company structure.

Under this framework, the business divisions, R&D departments, and IP departments collaborate to implement IP activities across the Group. IP managers and personnel from the business divisions are jointly operating an IP Enhancement Project that addresses cross-divisional IP issues for the consolidated control of IP activities throughout the Group.



Promoting IP Strategy

TOPPAN is establishing a framework to enable business divisions to implement their own IP strategies in line with business plans. The measures required consist of the following: IP analysis to determine the direction of technology development, beginning from business planning (e.g., a clear understanding of positioning); construction of an IP portfolio linked to technology development aimed at business advantage; planning and execution of IP strategies to counter competitor intellectual properties of interest. Strategy, technology development, and IP departments develop IP strategy by preparing a joint IP strategy sheet. Business divisions use this sheet to identify TOPPAN's business strengths by reviewing market environments, technological trends, and the IP rights held by the Group and competitors. Once our strengths are confirmed, we search for the optimal approaches to applying for and acquiring intellectual properties.



Developing IP Talent

An IP training system has been built for all of the technical personnel employed by TOPPAN Holdings Inc. and its main operating companies. Job-based IP training, for example, enhances an IP-focused mindset in every TOPPAN employee. Human assets chosen from business divisions across the Group take part in training on IP strategy as future specialists in the field.

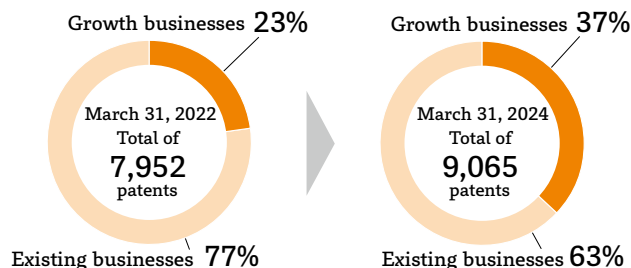
IP Initiatives to Secure the Portfolio Transformation

Activity results, performance data

A Patent Portfolio Consistent with the Business Transformation

We review our patent portfolio whenever necessary to ensure that the intellectual property rights we hold are aligned with our management policy under the Medium Term Plan. The establishment of the Intellectual Property Division in April 2022 has accelerated our patent portfolio transformation. The ratio of patents TOPPAN holds in the growth businesses of “DX (Erhoht-X™),” “SX,” and “new businesses” has been steadily increasing.

Patent Portfolio in Japan (incl. unprotected) *Published only



Gaining Competitive Edge in New Businesses

The IP departments work with the development departments and business strategy departments in the TOPPAN Group to build a strategic patent network that secures competitive advantages in prominent businesses we are developing on a priority basis.

Metaverse Platform

TOPPAN is constructing a unique metaverse platform that satisfies diverse consumer needs by leveraging the communication and security technologies we have refined in our Information & Communication businesses.

“Metapa™” is a metaverse shopping mall combining the real and virtual worlds. Several of the original functions developed for communication between users and service staff have been patented: private talk, tour mode, screen sharing, and more. These functions differentiate Metapa from similar services



Private talk function

Protects confidentiality by preventing other users from overhearing conversations



Tour mode function

Allows users to follow behind staff guides automatically



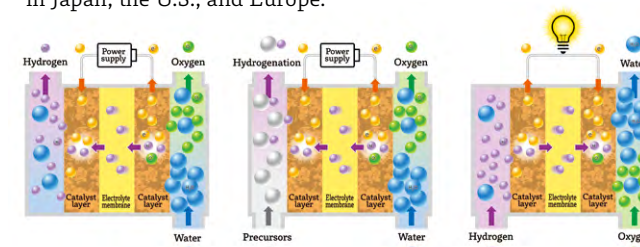
Screen sharing function

Synchronizes and shares screen operations between users and staff

from competitors, securing us a competitive edge in the metaverse.

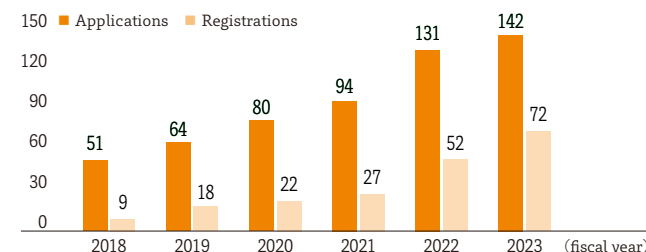
Electrodes for Hydrogen Energy

TOPPAN is developing electrode components, catalyst-coated membranes (CCMs) and membrane electrode assemblies (MEAs). CCMs and MEAs are core devices integrated in forefront hydrogen energy equipment that can be applied in hydrogen production, storage, transport, and use. Our original direct-coating manufacturing method has improved adhesion between the electrolyte membrane and catalyst layers to achieve high energy-conversion efficiency. Our unique additives have also enhanced the drainage and conductivity of the catalyst layers. Outstanding TOPPAN technologies bring high functionality to CCMs and MEAs. We are strategically developing a patent network for these technologies with a view to securing competitive superiority on a global basis, especially in Japan, the U.S., and Europe.



Producing hydrogen Storing/transporting hydrogen Using hydrogen

Cumulative Total of CCM/MEA-related Patent Applications/Registrations (Japan)

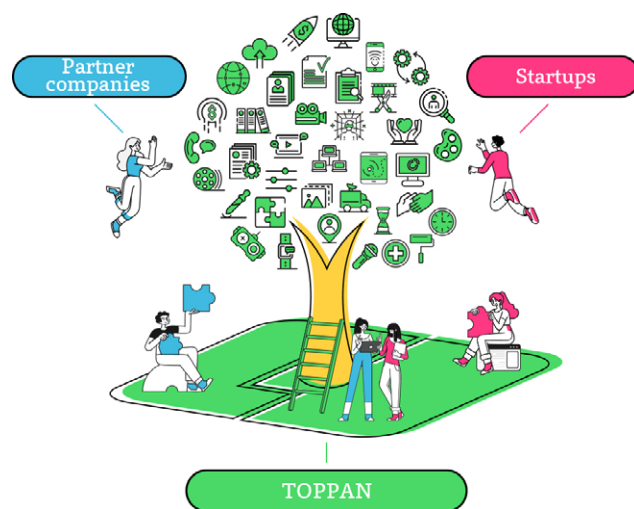


Driving Open Innovation

The TOPPAN Group has been implementing an open innovation program called “co-necto™” since 2017. The program solicits outstanding business ideas mainly from startups and advances those ideas with our management resources to co-create new businesses.

A co-necto venture starts with field trials aiming at co-creation by three parties: TOPPAN, a startup, and a local partner company. The field trials explore the best market to fit a new service, product, or solution emerging from the collaboration of the three parties. One hundred and thirty-five startups entered this program and three field trials were performed in fiscal 2023.

We support the ventures from an IP perspective by conducting IP due diligence before the field trial implementation.

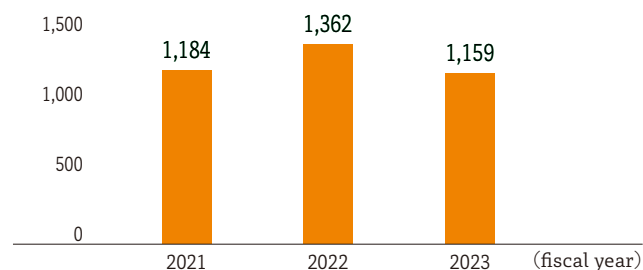


Acquisition of Intellectual Property Rights (TOPPAN Holdings Inc.)

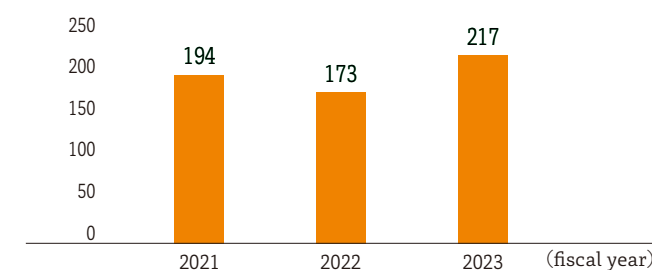
Activity results, performance data

*The number of applications, etc. may increase or decrease when we change our in-house aggregation methods.

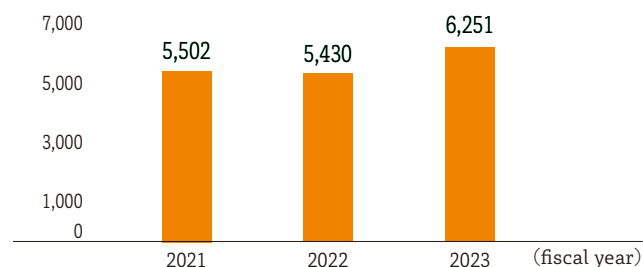
No. of Patent Applications (Japan)



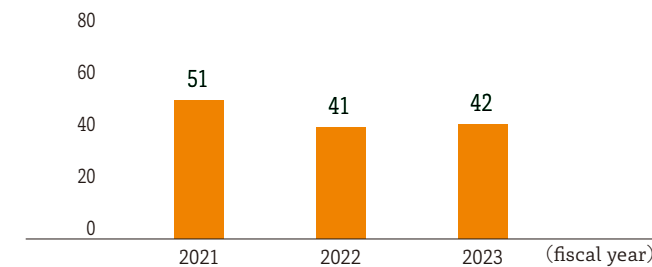
No. of Overseas IP Applications (PCT)



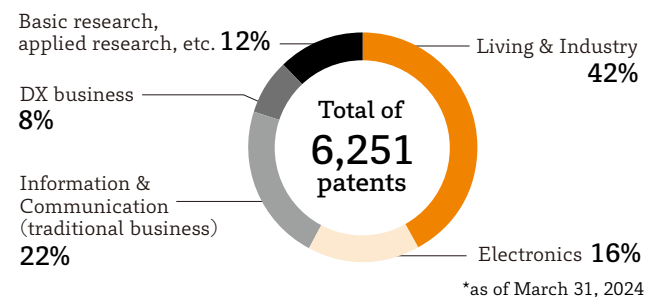
No. of Patents Held (Japan)



No. of Design Applications (Japan)



Patents Held by Business Field (Japan)



No. of Trademark Applications (Japan)

