

Human Assets

Basic Approach

Approach

Mindful of how deeply we depend on our employees, we strive to foster employees who will one day go on to create new knowledge and skills. The TOPPAN Group has been nurturing working environments and a corporate culture ideal for the sustainable growth of individuals and TOPPAN as an organization that contributes to society.

We value our employees as human capital, that is, as precious “human assets.” We are convinced that maximizing the value of human assets will generate human-led innovation that drives our business growth.

The TOPPAN Group Human Rights Policy calls for appropriate personnel treatment based on individual work performance to motivate employees to perform to their full potential. We provide diverse personnel development programs as learning platforms where human assets can develop abilities suited to their individual jobs and careers.

Human Asset Development Programs

System

The Human Resource Development Center in the Personnel & Labor Relations Division coordinates with persons in charge of human asset development across departments throughout the Group to institute personnel training programs. These programs are organized systematically around TOPPAN UNIVERSITY, a platform that strives to foster leaders while supporting the skill and career enhancement of employees through basic and special programs, leader development programs, and personal empowerment programs. The center deploys the Human Resource Development Laboratory (HRDL) as an R&D base to study, research, and verify ideal programs for personnel innovation that inspire self-transformation and expand individual potential and abilities to create new value.

Annual employee questionnaires on personnel development measures have been organized at Toppan Inc. since fiscal 2012. Employees' appetite for learning, evaluations of the measures currently practiced, and opinions on workplace support for learning have been collected and shared with all of the officers as important data to be used in the design of new development programs. Of 9,500 respondents in fiscal 2022 (RR 90.5%), 7,912 (83.3%) employees evaluated personnel measures as favorable.

Fostering Managerial Talent

Training, education

We are systematically nurturing human assets with the experience and competence necessary to occupy managerial positions with a view to sustaining and enhancing our organizational competitiveness.

A wide variety of programs have been arranged to foster and pool talent that will drive our business portfolio transformation. Seamless rank-based training programs are organized to nurture personnel with the qualities of future leaders, both male and female, across all age groups.

Through these systematic programs, we continue to develop human assets who are ready to succeed senior management. The fostered managerial talent will spearhead the reinforcement of a management structure that addresses business shifts and secures the sustainable development and management stability of the Group.

Systematic Human Asset Development Programs

Respect for human beings A core management principle since our foundation in 1900

Human asset development policy Mindful of how deeply we depend on our employees, we will foster human assets who will one day go on to create new knowledge and skills. We will nurture working environments and a corporate culture ideal for the sustainable growth of individuals and TOPPAN as an organization that contributes to society.

Approach to human asset development

- 1) Individual growth engenders our growth and individual competitiveness engenders our competitiveness.
- 2) Fostering self-directed individuals: We will foster self-directed human assets who take the initiative in value creation.
- 3) Creating excellent collective knowledge: We will nurture distinguished personnel who generate excellent collective knowledge that enhances decision-making and actions across the Group.

Ideal human assets and organization (Human assets to be fostered within the Group) A human asset who accurately understands and proactively practices the principles of our Purpose & Values and an organization that makes decisions and acts based on excellent collective knowledge.

Three key competencies **1** Communication skills **2** Enhanced sensitivity **3** High aspirations



Purpose, Structure & Training Policy

Purpose of establishment

Mindful of how deeply we depend on our employees, we will foster human assets who will one day go on to create new knowledge and skills. We will nurture working environments and a corporate culture ideal for the sustainable growth of individuals hand in hand with our growth as an organization that contributes to society.

Note: A virtual platform for engaging in personnel development and training programs fashioned in an accessible, university-style. Not a formal university within the Group.

Overall structure

Composition of Groupwide basic education, rank- & job-based training courses, selective leader development programs, and a personal empowerment platform supported by the infrastructure of the Kawaguchi and Yugawara Training Centers, TOPPAN VR Online Training Center, and Career Navigator (online portal providing comprehensive information on personnel development)

Training policy

- We will
- offer education to develop individuals who can contribute to corporate growth and the development of society at large;
 - provide quality training programs for motivated individuals;
 - arrange practical programs in alignment with actual job duties; and
 - respect and support the independence and personal empowerment of our human assets.

R&D at HRDL
Self-transformation & new-value creation

Neuroscience Research Group	Art Innovation Research Group	Sensitivity Research Group
Physiological Condition Research Group	SDGs Research Group (through Buddhist teachings)	Kanosei Art Project
Technology Research Group	Universe and Astronomy Research Group	Airin Blue Project
	Philosophy Research Group	



	Early career planning	OJT
	Trainer training system	Rotation system Challenging Job System
Basic courses	Groupwide compulsory training (e-learning programs)	Training on effective data utilization
	Career Navigator Internal webpages on human asset development	Executive business school
	Human Resource Development Laboratory (HRDL) TOPPAN VR Online Training Center	

Personal empowerment

TOPPAN UNIVERSITY BUSINESS SCHOOL

Subscription-based training courses
(Manabi-hodai "all-you-can-learn buffet" library)

Group training / E-learning programs / Assessment / External training program / Open seminars / Digital technology training

TOPPAN UNIVERSITY CHALLENGE SCHOOL

Correspondence-learning courses / E-learning programs

Liberal arts (general knowledge, sensitivity); Diversity; Skills for global businesses; various other subjects

Key themes

D&I programs	MOT & DX programs		
Career-development & job-transfer programs	Programs to enhance technological capabilities	Groupwide programs to strengthen digital knowledge foundations	Programs for encouraging employees to acquire digital technology certifications
ESG programs	Digital technology e-learning platform	Basic training on digital marketing	

(as of September 2023)

Fostering Human Assets Active in the DX Arena

System Training, education Activity results, performance data

We are enriching training platforms for digital knowledge and skills to expand the DX skills of human assets across positions and departments throughout the Group. We nurture an organizational culture that emphasizes continuous learning, in the recognition that constant self-improvement and deeper knowledge beyond the expectations of customers will be key in the digital era.

A learning platform for subscription-based training on digital technology has been developed to keep human assets constantly up to date on the latest digital knowledge necessary

for their individual jobs and career plans. We also provide employees with the opportunity to train for Microsoft Azure certifications, as well as a cloud-service training program to equip employees with the skills required for Amazon Web Services (AWS) certifications (run jointly with Amazon Web Services Inc., the world's most broadly adopted cloud platform provider). New courses to acquire data science certifications and learning programs on AI and deep learning were introduced in fiscal 2022 to further upgrade our digital education curriculum with a view to fostering personnel who will advance the digital transformation.

 More details on the Data on DX Human Asset Development Programs (See page 40) >

DX Training Based on Digital Literacy

Literacy Level	Training System			
	An assortment of programs for acquiring the knowledge and skills needed to perform the assigned jobs, empowerment programs for career development, and various other programs suited to individuals at different digital-literacy levels			
<ul style="list-style-type: none"> ● Supervisory A leader guiding other human assets ● Fluent A human asset with practical knowledge or experience ● General A human asset with basic general knowledge needed to develop the required skills ● Inexperienced Digitally challenged 	Groupwide compulsory courses	<p style="text-align: center;">Digital learning platform</p> <p>Acquire the latest high-quality digital knowledge and skills in a timely and necessary manner through department-based training and personal empowerment programs</p> <p><small>*Selectable from 7,300 courses on Udemy and 140 courses on Aidemy</small></p>	<p style="text-align: center;">Cloud course</p> <p>Microsoft Azure training programs and original TOPPAN training programs designed jointly with Amazon Web Services Inc. (AWS, the world's No.1 cloud platform provider) to convey essential knowledge for digital business and prepare employees to acquire AWS and Azure certifications</p> <ul style="list-style-type: none"> • AWS certification (introductory) • AWS certification (intermediate) • Microsoft Azure certifications 	<p style="text-align: center;">Licensing exams & specialist courses</p> <ul style="list-style-type: none"> • Digital marketing training • Data scientist certifications • Generalist certifications • DX business certifications

Fostering Human Assets Active in the SX Arena

System Training, education Activity results, performance data

Since 2013 we have been organizing training programs to foster human assets adept in sustainable transformation (SX) as members of a group of corporations that creates social value and contributes to a sustainable society through environmental, social, and governance (ESG) initiatives.

We continue to dispatch employees on fieldwork programs

in Fukushima Prefecture, an area affected by the Great East Japan (Tohoku) Earthquake. In total, 1,748 employees have visited Fukushima in nine separate years. We also run an ongoing Social Innovation Program and Kanosei Art Project (*kanosei* means “potential” in Japanese) to develop innovative businesses with a balanced approach to solving social issues and creating economic value. Our goal is for the human assets fostered in these initiatives to contribute to our social innovation businesses.

DX Human Asset Fostering Programs

Program	Launched in	Concept & Outline	Cumulative No. of Participants
Personnel dispatches to JICA-JOCV	2013	To foster human assets who will be able to lead Japanese society and the Japanese economy based on the objective viewpoints they have gained by comparing Japan's industrial, legal, and other systems with those in overseas countries where they have worked	17
A program for developing innovative businesses that take a balanced approach to solving social issues and creating economic value		<div style="background-color: #f4a460; padding: 5px; text-align: center;"> A total of 1,748 employees (incl. 434 online participants) who have visited Fukushima since 2013 </div>	
<div style="background-color: #f4a460; padding: 5px; text-align: center;"> A total of 1,748 employees (incl. 434 online participants) who have visited Fukushima since 2013 </div>			
Social Innovation Program	2013	To equip employees with creative thinking abilities they can apply to the development of innovative next-generation businesses that balance solutions to social issues with economic value creation	430
“Advance—Shaping the Future”	2014	To create networks and drive the integrated strengths of the Group by encouraging employees to think and act independently and explore “what TOPPAN can do to solve social challenges”	867
Fieldwork program for managers in Fukushima	2015		481

Expanded Organizations and Work

We have established organizations that drive social innovation programs. The human assets fostered by those organizations contribute to the programs.



- Apr 2016 Social Business Center
- Jan 2018 Social Innovation Center
- Apr 2020 Social Innovation Subdivision
- Apr 2023 Social Innovation Center*
*Organizational change

Fostering Human Assets Active in the Global Arena

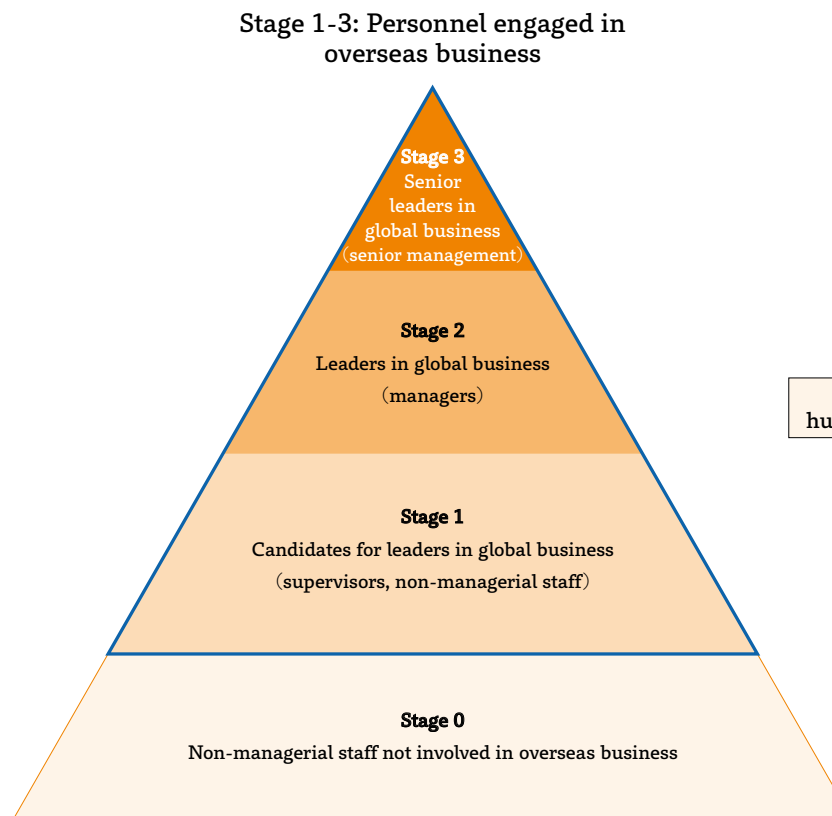
System Training, education

We have been hiring non-Japanese individuals and arranging frequent personnel exchanges between overseas Group companies as part of an overall effort to adapt to our more globalized business operations.

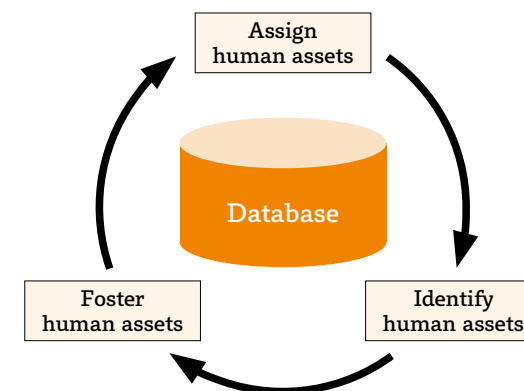
We believe that human assets can thrive in global business arenas when they are business literate and have the requisite business communication skills and overseas experience, along with advanced language skills and cross-cultural competencies. We work to visualize qualified personnel and formulate training plans to nurture them.

The annual language-proficiency assessment identifies the global business potential of the TOPPAN workforce and estimates how many personnel should be assigned to the international operations of the Group. Based on the assessment results, we are fostering global personnel through a human resource (HR) system that encourages employees to participate in various global business programs, acquire basic literacy and knowledge required for overseas business in fields such as accounting and finance, and gain experience outside of Japan via dispatch beyond borders.

Structure for Fostering Global Human Assets



Developing global human assets within the HR system



Research and Development at HRDL

Activity results, performance data

In April 2017 we launched the Human Resource Development Laboratory (HRDL), an R&D base to study, research, and verify ideal programs for personnel innovation. The fields of interest range from neuroscience and brain research to physiological condition analyses and business support technologies.

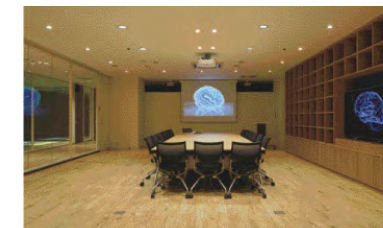
The HRDL applies interdisciplinary expert knowledge from outside of the Group to design original personnel development models that promote self-transformation and inspire individuals to fulfill and expand their potential and abilities. The research outputs are expected to spur TOPPAN's brand new value creation.

Our three-level approach to personnel development is shown in Figure 1. At the first level, we seek continuous improvement in training programs through a PDCA cycle. At the second, the training effectiveness and efficiency gained at the first level are maximized with human resource (HR) technology and various other technologies. At the third, we study, research, and verify ideal methods to stimulate human asset innovation.

In its work at the third level, the HRDL aims to produce an original personnel development model by applying the lab's advanced approaches to the existing training system at the first level.

The HRDL embraces sensibility and non-verbal dimensions by transcending the verbalized dimensions in which conventional training programs are organized (see Figure 2). We

believe that human assets can innovate and create new value when they are better able to recognize non-quantifiable cognitive attributes such as sensitivity and non-verbal understanding. We are forging ahead with medium- and long-term research and development projects in cooperation with outside experts.



Human Resource Development Laboratory

Systematic R&D at HRDL in 2023 (for innovative human asset development)

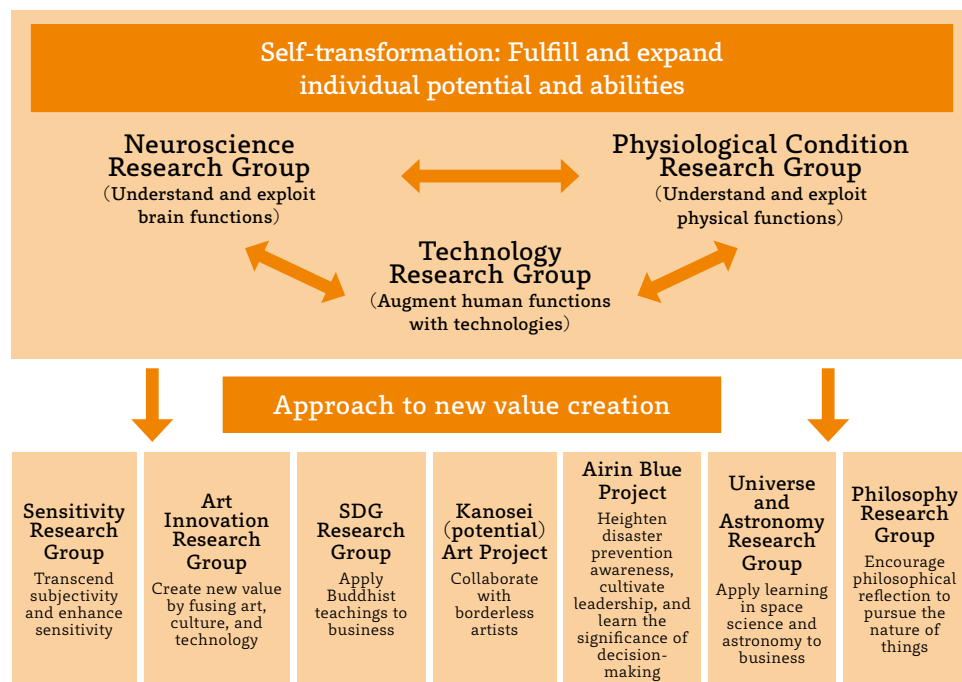


Figure 1: Three-level Approach to Human Asset Development

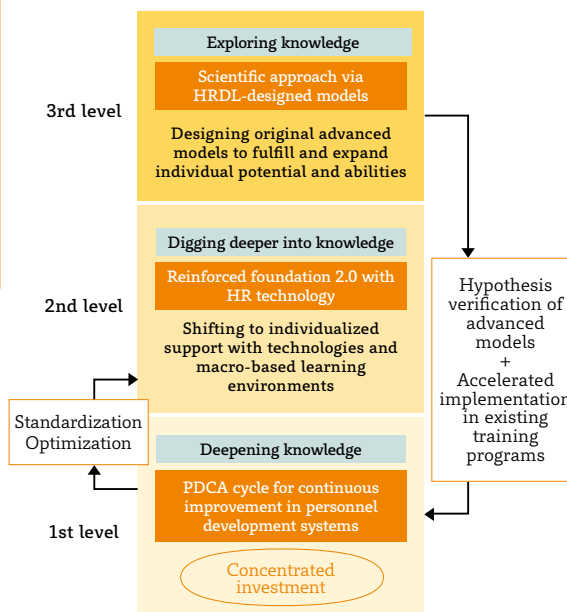
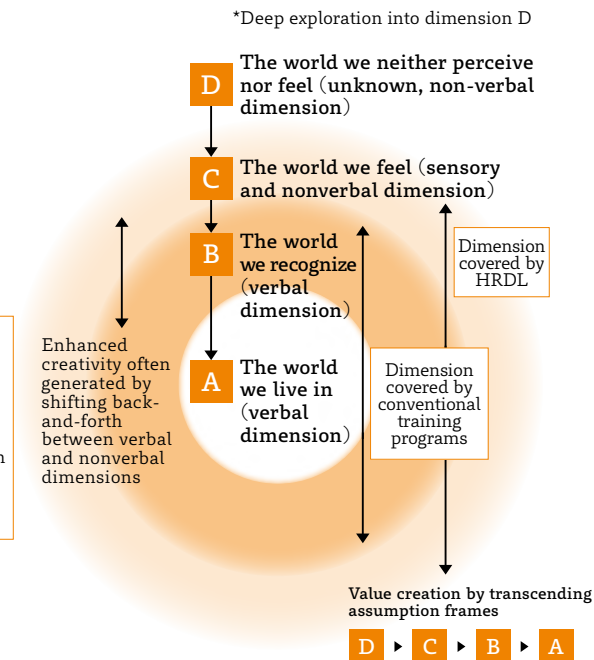


Figure 2: Dimensions Covered by HRDL



R&D Efforts at HRDL (1)

Neuroscience Research Group

We are collaborating with DANCing Einstein, Co., Ltd. to form a Neuroscience Research Group that studies ways to apply neuroscience knowledge to human asset development. The research group aims to develop the individual talents needed for accelerated corporate growth and the creation of a better society. Its forefront brain science programs seek to improve the performance and communication skills of human assets by shedding new light on the mechanisms of human learning, behavior, emotions, and thinking.

Some of the training sessions for new employees encompass specialized knowledge in the form of assessments based on neuroscience. When preparing to lecture new recruits, internal instructors learn how to model their lectures and lecture materials around the cognitive processes of the learners. This approach seeks to improve the recruits' understanding of the content they are learning in the training sessions.

The research group also uses neuroscience knowledge to unravel human emotions and memory systems and explore ways to encourage employees to meet the needs of their workplaces by taking on new challenges as action-ready personnel.



From the forefront brain science programs (upper right and bottom; in Japanese)

R&D Efforts at HRDL (2)

Physiological Condition Research Group

We are advancing health management as a means of maintaining and enhancing the health of human assets and enabling higher performance and work efficiency. We have adopted an innovative approach to personnel development by entering an advisory contract with Dr. Hideyuki Negoro, a lecturer of medicine at the Harvard Medical School and a visiting professor at the Sorbonne University School of Medicine. The Physiological Condition Research Group set up with Dr. Negoro has produced *Around-the-clock Tips for Better Performance*, a self-care video to help employees look after their own mental and physical health. Drawing from Dr. Negoro's expertise in healthcare, this easy-to-understand, animated video explains certain things that a businessperson can do in the course of a day to stay in better shape. The video demonstrates good living routines to follow in the morning, afternoon, and evening by describing basic mechanisms of the body, such as the clock genes and body clock.

We have also sought guidance from Dr. Negoro in the development of a smartphone app that monitors user wellness around-the-clock. Employees in many positions, from new hires to managers, use the app in rank-based training to keep track of daily behaviors such as sleep quality, steps taken, and meals eaten. The app is also social, with gamified features that get trainees to enhance their performance by competing to learn good habits.



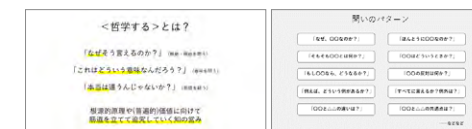
R&D Efforts at HRDL (3)

Philosophy Research Group

We launched a Philosophy Research Group in 2022 to accomplish three things: to explore ways to leverage philosophical viewpoints to devise personnel training programs; to encourage human assets to leverage philosophical knowledge and knowhow to contemplate the nature of things and to apply the wisdom gained to business scenarios; and to seek ways TOPPAN personnel can apply philosophical principles towards the creation of new services, solutions, and businesses. The knowledge and knowhow attained from philosophy have many implications for the business of the day. Human assets will become more adept in pursuing the nature of things by approaching challenges in business, in society, and in their own lives with insights learned from the latest philosophical principles.

The Philosophy Research Group has joined the Universe and Astronomy Research Group in a series of training sessions to help managers think from macrocosmic perspectives. The trainee managers learned how to question the world more deeply and capture the essence of things based on philosophical knowledge. The sessions sought to promote the acquisition of thinking skills needed for the attainment of balanced perspectives and a clear view of the actions expected of future CEO candidates.

Looking forward, the research group will be exploring the styles of personnel development TOPPAN envisions for the future from philosophical perspectives. Wide-ranging findings from other HRDL research groups will be integrated to create new value and further innovate the activities at the laboratory.



From a training session to learn philosophical views (in Japanese)

R&D Activities at HRDL

Program	Launched in	Concept & Outline	Results
Neuroscience Research Group	2017	<ul style="list-style-type: none"> A program to apply neuroscience knowledge to human asset development, established with DAnCing Einstein, Co., Ltd. Aims to develop individual talent necessary for corporate growth and the creation of a better society. 	<ul style="list-style-type: none"> Designed a forefront brain science program that seeks to improve employee performance and communication skills by shedding new light on the mechanisms of human learning, behavior, emotions, and thinking; opened the program to client companies for a fee to share the expertise with wider society. *Forefront brain science program: 388 participants (total for 16 terms), Forefront brain science program—advanced: 122 participants (total for 5 terms), Mindfulness & stress management program: 286 participants (total for 12 terms) Incorporated neuroscience knowledge into training sessions for new hires and personnel during their first three years of employment (attended by a total of 7,971 participants, as of July 2023). Studied clues on the actions to take in response to new challenges; summarized the findings in a video and art installation for employees.
Physiological Condition Research Group	2017	<ul style="list-style-type: none"> A program to provide human assets with accurate knowledge and skills for maintaining sound mental and physical health, designed with contracted advisor Dr. Hideyuki Negoro, a lecturer of medicine at the Harvard Medical School and a visiting professor at the Sorbonne University School of Medicine. The gains in mental and physical health achieved through the program will promote the health management of the Group by improving individual performance and enhancing work efficiency. 	<ul style="list-style-type: none"> Produced <i>Around-the-clock Tips for Better Performance</i> and <i>Breath Control & Tips for Optimal Sleep, Exercise, and Diet</i>, self-care videos designed to help all Toppan Inc. employees look after their own mental and physical health; a total of 17,503 views (as of July 2023). Teamed up with Dr. Negoro to develop a smartphone app that helps employees manage their own mental and physical health; used the app in rank-based training sessions for a total of 6,159 participants, from new hires to managers (as of July 2023). Developed the 3D Stress Check & Support, a comprehensive system for businesses that automatically prescribes tailored support for individuals based on the results of mental-health risk screenings.
Technology Research Group	2020	<ul style="list-style-type: none"> A program to nurture human assets who create new value by broadening their human functions through technology and expanding their individual potential and abilities. 	<ul style="list-style-type: none"> Developed a business-plan creation support system that compares and proposes business models using a combination of AI and financial expertise in 2021; incorporated the system into TOPPAN's in-house personnel training on frontier business creation in the same year.
Sensitivity Research Group	2018	<ul style="list-style-type: none"> A program that seeks to unleash creativity and link it with innovation by enhancing sensitivity, designed with external research institutions specialized in the human senses, primarily sound and scent. Researches spatial designs and develops sensitivity-enhancing programs to allow human assets to merge their human sensitivity into business. 	<ul style="list-style-type: none"> Held interactive employee workshops in which participants worked with non-verbal dimensions such as smell, color, physical expression, sensitivity engineering, perception, and hearing.
Art Innovation Research Group	2018	<ul style="list-style-type: none"> A program to create new value by fusing art, culture, and technology through an industry-university collaborative course established with Kyoto University. Seeks to formulate an innovative value-creation scheme that enhances the creativity of human assets by transcending their subjectivity through the logic of artists. 	<ul style="list-style-type: none"> Developed the Art Innovation Framework™, a thinking method that systematizes the logic of artists to spur the generation of new ideas in business; made an animated video on this framework. Arranged an Art Innovation Framework program for managers to transcend subjectivity and create new value; encouraged supervisors to leverage the framework to plan ideas at selective training programs for creating new businesses. Implemented business ideas born from Art Innovation Framework programs as prototypes to be verified on a small scale. Held internal seminars focused on the fusion of art, culture, and technology to create new value.
SDG Research Group	2019	<ul style="list-style-type: none"> A program designed with the Yoi-Otera Research Institute (<i>yoi otera</i> means “good temples” in Japanese) to develop an approach to human asset development that applies Buddhist principles to business scenarios. Incorporates Buddhist teachings into employee training to engender innovative ways of thinking about work in modern society, the value of a corporation, the concept of being oneself, etc. 	<ul style="list-style-type: none"> Produced <i>Buddhist Teachings in Business</i>, an animated video to be viewed across the Group. Organized online fieldwork programs to guide senior managers on virtual visits through the Zenko-ji temple in Nagano and Koyasan sacred mountain in Wakayama, Japan. The participants learned about the meaning and significance of work and the roles required of senior management with a thematic focus on the moral values of a corporation. Held internal seminars hosted by monks to present Buddhist principles applicable to business scenarios.
Kanosei Art Project	2018	<ul style="list-style-type: none"> A project to develop a business model that links a social benefit (the greater independence of persons with disabilities) with an economic benefit (earnings for the Group) using TOPPAN technologies that add value to the works of borderless artists, and to foster the next generation of leaders in the process. 	<ul style="list-style-type: none"> Continued to arrange training programs in which new and experienced employees explored ways to add value to the works of borderless artists (attended by more than 2,700 participants since 2018). Held offline and online exhibitions in temples in Kyoto from 2018 to 2021, attracting many visitors from around the world and increasing temple visits overall (e.g., by 1.4 times from fiscal 2017 to fiscal 2018). Selected 50 artworks to be shown at the 2023 exhibition based on in-house votes cast by 4,248 employees and officers in 2021. Won the Grand Mécénat Award for the project at the Japan Mécénat Awards 2022 organized by the Association for Corporate Support of the Arts of Japan.
Airin Blue Project	2019	<ul style="list-style-type: none"> A project to remind people of the value of life through the daily replenishment of flowers in bloom at the final resting place of Airi Sato, a child who perished in Ishinomaki, Miyagi Prefecture in the tsunami caused by the Tohoku Earthquake. The flowers signify the need for disaster preparedness and effective action when a disaster strikes, in honor of Airi's memory. 	<ul style="list-style-type: none"> Held an internal seminar on individual preparations to save lives; presented a lecture on the leadership required during disasters and disaster prevention activities.
Universe and Astronomy Research Group	2021	<ul style="list-style-type: none"> A program to encourage human assets to apply learning and findings from space science and astronomy to business scenarios for new value creation. Encourages employees to think on a macrocosmic scale: thinking broadly, taking in the big picture, and gaining deeper insights into the futures to which they aspire. 	<ul style="list-style-type: none"> Developed the Space Innovation Framework, a thinking method for new value creation. Worked with the Philosophy Research Group on the utilization of the Space Innovation Framework for manager training with a view to fostering thinking skills that generate balanced perspectives and actions; organized training for new division managers to reaffirm two qualities required in a leadership candidate: a broad, long-term viewpoint and the personal principles of a frontrunner. Held employee seminars on space science and culture.
Philosophy Research Group	2022	<ul style="list-style-type: none"> A program with three objectives: to explore ways to leverage philosophical viewpoints in the design of training programs for human asset development; to encourage human assets to apply the knowledge, knowhow, and inner wisdom (the ability to contemplate essences) learned from philosophy to business scenarios; and to seek ways TOPPAN personnel can apply philosophical principles towards the creation of new services, solutions, and businesses. 	<ul style="list-style-type: none"> Held training sessions for supervisors to foster inner wisdom (the ability to see the nature of things) and a clear understanding of a supervisor's roles as a member of the Group that creates social value. Held internal seminars on philosophical thinking for a deeper questioning of the world in the pursuit of the essence of things.

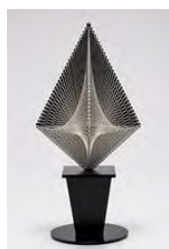
R&D Results at HRDL in 2022 (1)

Grand Mécénat Award 2022 for Kanosei Art Project

The Kanosei Art Project (*kanosei* means “possibility” in Japanese) was organized in fiscal 2018 as an activity that uses TOPPAN technologies to add value to the works of borderless artists. The project seeks to develop a business model that links solutions to social issues (the greater independence of persons with disabilities) with an economic benefit (earnings for the Group). The next generation of leaders at TOPPAN is expected to emerge in the process.

The project received the Grand Mécénat Award at the Japan Mécénat Awards 2022, an event sponsored by the Association for Corporate Support of the Arts of Japan. The association commended the Kanosei Art Project for developing a sustainable scheme that combines economic activities with solutions to social issues and innovating a personnel development function through employee participation in a pioneering business model.

We will work with various allies to sustain this project and stay on track as a social value creator.



R&D Results at HRDL in 2022 (2)

Innovation Frameworks with Art, Buddhism, and Space

The Human Resource Development Laboratory (HRDL) was established in 2017 as an R&D base committed to the study, research, and verification of ideal programs for personnel innovation. In 2020 the laboratory developed the Art Innovation Framework™, a thinking method that systematizes the logic of artists to spur the generation of new ideas in business. The research fields at HRDL are comprehensive, encompassing neuroscience, brain research, physiological condition analyses, space science, astronomy, and the teachings of Buddhism. Human assets experienced with self-transformation and expanded abilities through HRDL programs have already created various forms of new value.

The laboratory has recently developed two innovative frameworks with Buddhist principles and space science—a Buddhism Innovation Framework that seeks to achieve self-transformation with Buddhist insights and a Space Innovation Framework that pursues ways of thinking that encourage human assets to create new value by seeing things from a long-term,

universal perspective acquired from the findings of space science and astronomy. By combining these with its existing Art Innovation Framework, the laboratory has established a series of systematized thinking methods that drive personnel innovation through perceptive thinking in the realms of art, Buddhism, and space science/astronomy.

Advantages of the Buddhism Innovation Framework

- Recognize egoism and altruism
- Realize the meaning and significance of work
- Redefine ways of living

Advantages of the Space Innovation Framework

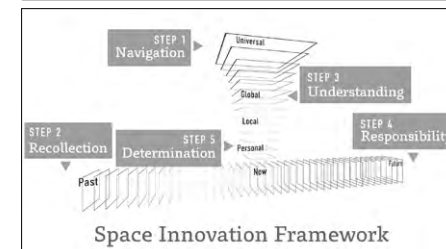
- Expanded thought
- Long-term thinking
- Firm determination

The trio of innovative frameworks will be applied to personnel training programs to enhance individual capabilities in creating new value and to develop prolific value creators within the Group. Now that personnel development programs encompass the new Buddhism and Space Innovation Frameworks, we are considering models to sell them commercially to external parties.

Modeling the logic of artists to apply the creative process to business



Art Innovation Framework™



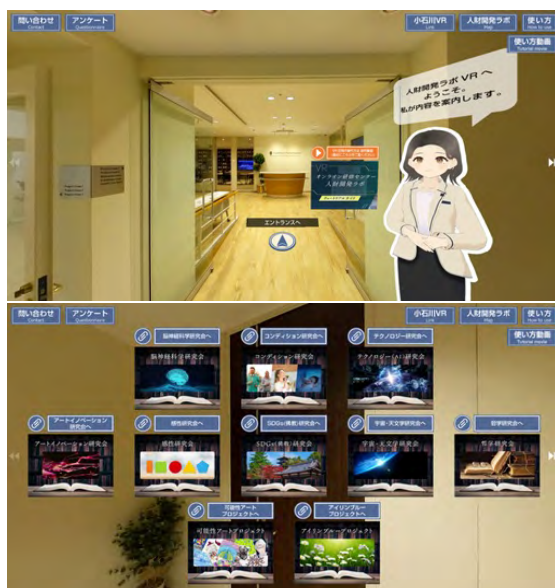
TOPPAN VR Online Training Center

Activity results, performance data

We leverage VR and other forefront technologies for human asset development.

In 2021 we launched the TOPPAN VR Online Training Center as a global education platform that seamlessly connects digital and real spaces for coming generations. Employees from across the world think of it as an online station where they can gather and meet with a wide diversity of people from within and outside of the Group. We seek to integrate knowledge and produce innovations through this optimized VR training environment.

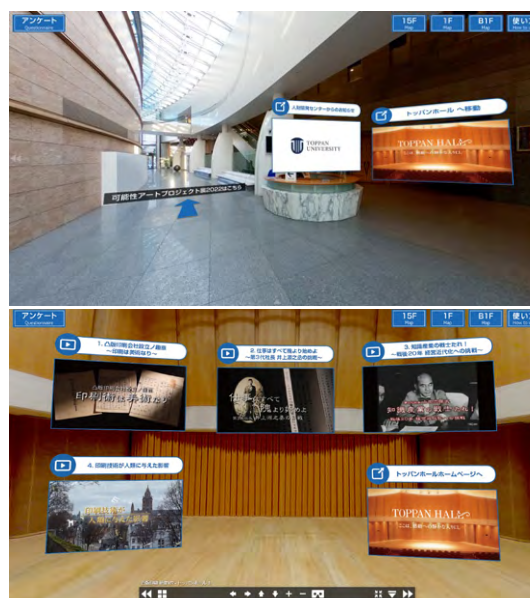
The training center operates two virtual venues. One is the VR Koishikawa Head Office Building, an online facility where visitors can experience virtual tours of Toppan Hall and the Printing Museum, Tokyo. The other is the VR Human Resource



Development Laboratory (HRDL), an online facsimile of the physical-world laboratory.

Employees can visit the virtual HRDL to check the research results from the lab's two projects and eight research groups and to learn the specialist knowledge of the HRDL researchers by viewing in-house seminar videos. One series of videos describes the art, Buddhism, and space frameworks adopted for personnel development based on research findings under the three innovation frameworks. Another prominent title is *Around-the-clock Tips for Better Performance*, an animated video to help human assets look after their own mental and physical health. The virtual laboratory also presents artworks from the Kanosei Art Project and outputs from training session participants produced by harnessing research group findings.

Real and VR learning infrastructures are now available at TOPPAN. Employees can tour our facilities remotely and catch up on the latest knowledge at any time and from any distance.



Training Programs with Digital Technology

Activity results, performance data

We have upgraded our online training programs by leveraging digital technology in ways that transcend the mere substitution of face-to-face training. In fiscal 2021 we launched the TOPPAN VR Online Training Center to provide new hires with virtual work experiences at web-based training sessions. A year later the center introduced training activities in the metaverse to facilitate virtual communication that feels more tangibly real. All new employees were invited to a Kawaguchi Plant VR Tour in the metaverse at the beginning of fiscal 2023. Participants experienced workplace hazards from an operator's point of view, as transmitted through standalone VR goggles. Embodied within realistic avatars of themselves, new hires shook hands with their virtual peers and gave high-fives in an experientially expanded communication space. The outcomes of the training have guided us towards more sophisticated uses of digital technology in other rank-based training programs.



Human Asset Development Initiatives

Activity results, performance data

Fiscal 2022 Data on Human Asset Development Programs (TOPPAN Group)

Program	Outline	No. of Participants (cumulative)
Rank-based programs	A set of programs for acquiring the knowledge, skills, and mindsets employees will need in their careers, mainly for new postings.	4,412
Leader development programs	A series of selective training programs to foster leaders of tomorrow, including a program for creating frontier businesses and a program for developing human assets active in global business arenas.	592
Personal empowerment programs	A series of self-initiated programs that give Groupwide employees the choice of what they learn. Three learning styles are available.	13,509
TOPPAN Business School	Diverse courses that cover wide-ranging subjects from basic knowledge and skills in business to advanced specialist skills. Offered in online-group and e-learning settings and in a course that dispatches trainees to business schools outside of the Group.	1,726
Manabi-hodai (all-you-can-learn buffet) e-learning library	A subscription-based program with 187 courses and no limits placed on the time or place of learning or how often the courses can be repeated.	8,773
Challenge School	Correspondence-learning courses for acquiring business knowledge and skills.	3,010
Groupwide basic education	E-learning programs to give every Group employee the opportunity to learn requisite business knowledge.	143,046
Human asset map for global business	An annual language-proficiency assessment to gauge foreign language competency at the Groupwide level and to count and rank the human assets with high aptitude for global business. The top-scorers will be fostered under an upcoming mid-to-long-term development plan as personnel expected to be indispensable for the global growth of the Group.	3,052
Selective training on global business	A program to equip employees with fundamental skills for global business such as linguistic aptitude, cross-cultural competency, and consensus building.	45
Trainee system	A system to deploy young employees to overseas affiliates for one year of language immersion and practical training in day-to-day business activities, primarily to enhance their linguistic aptitude and cross-cultural competency.	90 ¹
JICA Japan Overseas Cooperation Volunteers	A trainee system to dispatch Group employees to emerging and developing countries.	17 ¹
Short-term open programs at IMD	A program to send employees involved in international business to short-term open courses at the International Institute for Management Development (IMD; one of the world's top-ranked business schools) in Lausanne, Switzerland to acquire practical training in leadership, the tenacity required to follow through on projects to completion, and other capabilities required in global business.	19 ¹

¹Cumulative total since fiscal 2013

Data on DX Human Asset Development Programs (TOPPAN Group)

Program	Outline	No. of Participants in Fiscal 2022
DX basic training	An e-learning program for acquiring basic knowledge and essential skills for DX business.	8,889 ²
Training for acquiring AWS-certifications	A program focused on basic-level training for employees seeking to become AWS-certified cloud practitioners. Trainees come not only from the digital departments, but also the sales, planning, and technology departments, to acquire cloud knowledge and skills.	2,441 (total for fiscal 2021-2022) *AWS-certified employees: 1,527 (as of March 2023)
Udemy / AIdemy	A set of MOOCs with the latest digital training content for department-based training and personal empowerment training through online digital learning platforms.	1,531
Co-learning	A one-year, cross-departmental program to convey the latest knowledge and practical skills across the entire digital marketing field.	200

²DX basic training was launched in fiscal 2021.

Human Asset Development Expenditure (Toppan Inc.)

	Expenditure on Training, etc. per Employee
Fiscal 2018	67,383 yen
Fiscal 2019	64,654 yen
Fiscal 2020	53,637 yen
Fiscal 2021	56,070 yen
Fiscal 2022	64,937 yen

*Average training hours per employee taking part in human asset development programs in fiscal 2022 (incl. individual training held at the business divisions and divisions): 81.7 hours

Participants in Leader Development Programs

(Cumulative total for fiscal 2021-2022, TOPPAN Group)

Level	Program	Total (cumulative)
Management Class	Business innovation (intermediate/advanced)	320
	Management literacy (advanced)	403
	Management literacy (intermediate)	1,320
	Total	2,043
Supervisors	Business innovation (elementary)	894
	Management literacy (elementary)	699
	Total	1,593
General employees	Business innovation (basic)	2,507
	Total	2,507
Employees at all levels	Global leader development	230
	Total	230
Sum total		6,373

Information on Employees at Toppan Inc.

Activity results, performance data

No. of Employees (as of March 31) (Toppan Inc.)

		Directors	Total Employees	Management Class	Supervisors	Average Tenure	Average Age	Sum Total Employees	Part-time Workers	Dispatched Staff
Fiscal 2018	Male	18	7,974	2,282	1,891	15.4	44.0	9,993	233	249
	Female	1	2,019	89	319	9.0	35.5			
Fiscal 2019	Male	15	8,123	2,366	1,908	15.1	44.5	10,330	183	375
	Female	1	2,207	101	378	8.9	35.8			
Fiscal 2020	Male	14	8,294	2,449	1,879	14.9	44.8	10,730	133	436
	Female	2	2,436	109	419	8.7	35.9			
Fiscal 2021	Male	7	8,347	2,485	1,865	14.7	45.0	10,951	153	584
	Female	2	2,604	120	455	8.7	35.9			
Fiscal 2022	Male	7	8,190	2,511	1,793	15.3	45.3	10,899	113	639
	Female	2	2,709	149	522	8.9	36.1			

*The total number of employees includes the number of part-time workers who have shifted to indefinite-term employment.

*The average tenure: 20.8 years for male employees and 10.9 years for female employees, based on tallying periods of less than one year in month units, with the pre-retirement tenures of re-employed employees added.

Employees by Age-group (as of March 31) (Toppan Inc.)

	Sex	Age-group	Total Em- ployees	Manage- ment Class	Super- visors
Fiscal 2018	Male	1. Below 30 years old	971	0	0
		2. 30-50 years old	4,394	1,170	1,706
		3. Over 50 years old	2,609	1,112	185
	Female	1. Below 30 years old	687	0	0
		2. 30-50 years old	1,149	57	297
		3. Over 50 years old	183	32	22
Fiscal 2019	Male	1. Below 30 years old	987	0	0
		2. 30-50 years old	4,209	1,158	1,686
		3. Over 50 years old	2,927	1,208	222
	Female	1. Below 30 years old	770	0	0
		2. 30-50 years old	1,224	66	350
		3. Over 50 years old	213	35	28

	Sex	Age-group	Total Em- ployees	Manage- ment Class	Super- visors
Fiscal 2020	Male	1. Below 30 years old	1,051	0	0
		2. 30-50 years old	4,111	1,178	1,656
		3. Over 50 years old	3,132	1,271	223
	Female	1. Below 30 years old	873	0	0
		2. 30-50 years old	1,302	66	390
		3. Over 50 years old	261	43	29
Fiscal 2021	Male	1. Below 30 years old	1,105	0	0
		2. 30-50 years old	4,024	1,230	1,642
		3. Over 50 years old	3,218	1,255	223
	Female	1. Below 30 years old	966	0	0
		2. 30-50 years old	1,347	77	427
		3. Over 50 years old	291	43	28

	Sex	Age-group	Total Em- ployees	Manage- ment Class	Super- visors
Fiscal 2022	Male	1. Below 30 years old	1,080	0	0
		2. 30-50 years old	3,843	1,249	1,574
		3. Over 50 years old	3,267	1,262	219
	Female	1. Below 30 years old	1,007	0	0
		2. 30-50 years old	1,368	96	486
		3. Over 50 years old	334	53	36

No. of Recruits (Toppan Inc.)

		Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023	
Regular recruitment of new graduates from universities and graduate schools	Sales, administration, etc.	Male	102	115	109	105	90	103
		Female	86	100	98	123	105	123
	Technical	Male	86	108	109	128	138	139
		Female	45	55	54	53	63	75
Regular recruitment of new graduates from high schools and colleges of technology	Male	6	4	5	3	6	10	
	Female	30	29	29	26	29	24	
Total no. of regular recruits (percentage of women) <input checked="" type="checkbox"/>		355 (45.4%)	411 (44.8%)	404 (44.8%)	438 (46.1%)	431 (45.7%)	474 (46.8%)	
Mid-career recruitment of experienced personnel (outside recruitment) <input checked="" type="checkbox"/>	Male	46	51	61	100	110	–	
	Female	13	17	36	42	46	–	

Reasons for Leaving (Toppan Inc.)

		Sex	Age-group	Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022
Personal reasons*1	Male	1. Below 30 years old		70	94	44	89	104
		2. 30-50 years old		104	105	49	71	111
		3. Over 50 years old		39	57	42	57	63
	Female	1. Below 30 years old		50	50	25	58	90
		2. 30-50 years old		40	37	25	32	38
		3. Over 50 years old		2	4	4	9	10
Retirement*2	Male		124	180	174	247	1	
	Female		8	5	0	17	4	
Other	Male		90	90	92	92	107	
	Female		3	6	6	10	12	
Total	Male		427	526	401	556	386	
	Female		103	102	60	126	154	
Annual turnover rate				5.2%	5.9%	4.3%	6.1%	4.8%

*1 Eight female and 43 male employees who departed for personal reasons in fiscal 2022 took advantage of the Company's support system for employees who leave the Company to pursue new careers.

*2 The retirement age has been extended to 65 in some employment categories since fiscal 2022.

Three-year Retention Rates for Recruits (Toppan Inc.)

	Male	Female
Hired on April 1, 2020	223	181
Still with the Company as of April 1, 2023	187	164
Retention rates	83.9%	90.6%
Average for male and female employees	86.9%	
Percentage who leave the Company within three years	13.1%	

Announcing the Mid-career Hiring Rate

Toppan Inc. discloses the ratio of mid-career hires (both outside recruitment and indefinite-term employment of persons previously on fixed-term contracts) to the total number of regular employees in accordance with the Japanese Act on Comprehensive Promotion of Labor Measures, and of Employees, and Enrichment of Their Working Lives.

Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022
22%	24%	29%	29%

Publication date: October 1, 2023

Information on Employees at the TOPPAN Group

No. of Employees (Japan Consolidated)

Sex	Directors	Total Employees	Management Class	Supervisors	Sum Total Employees
Male	371	27,769	5,318	5,442	35,049
Female	17	7,280	345	993	✓
Percentage of women	4.4%	20.8%	6.1%	15.4%	

No. of Employees (Overseas Consolidated)

Region	Sex	Directors	Total Employees	Management Class	Sum Total Employees
Asia (excluding Japan)	Male	146	8,845	972	14,548
	Female	11	5,703	409	
Europe	Male	46	1,414	176	1,944
	Female	9	530	72	
North America	Male	27	1,312	229	2,043
	Female	5	731	95	
Latin America	Male	0	88	8	104
	Female	0	16	5	
Middle East	Male	0	3	1	6
	Female	0	3	2	
Africa	Male	0	10	0	28
	Female	6	18	1	
Overseas consolidated	Male	219	11,672	1,386	18,673
	Female	31	7,001	584	

No. of Employees (Consolidated)

Sex	Directors	Total Employees	Management Class	Supervisors	Sum Total Employees
Male	590	39,441	6,704	5,442	53,722
Female	48	14,281	929	993	
Percentage of women	7.5%	26.6%	12.2%	15.4%	

Employees by Age-group (Japan Consolidated)

Sex	Age-group	Total Employees	Management Class	Supervisors
Male	1. Below 30 years old	3,829	1	5
	2. 30-50 years old	13,565	2,498	4,226
	3. Over 50 years old	10,373	2,819	1,211
Female	1. Below 30 years old	2,075	0	6
	2. 30-50 years old	3,540	207	834
	3. Over 50 years old	1,667	138	153

Employees by Age-group (Overseas Consolidated)

Region	Sex	Age-group	Total Employees	Management Class
Asia (excluding Japan)	Male	1. Below 30 years old	2,111	15
		2. 30-50 years old	5,177	702
		3. Over 50 years old	1,156	256
	Female	1. Below 30 years old	1,334	11
		2. 30-50 years old	2,909	310
		3. Over 50 years old	513	87
Europe	Male	1. Below 30 years old	185	2
		2. 30-50 years old	862	111
		3. Over 50 years old	367	63
	Female	1. Below 30 years old	122	7
		2. 30-50 years old	306	53
		3. Over 50 years old	102	12
North America	Male	1. Below 30 years old	181	6
		2. 30-50 years old	544	75
		3. Over 50 years old	587	148
	Female	1. Below 30 years old	85	1
		2. 30-50 years old	282	37
		3. Over 50 years old	364	57

Region	Sex	Age-group	Total Employees	Management Class
Latin America	Male	1. Below 30 years old	28	0
		2. 30-50 years old	54	8
		3. Over 50 years old	6	0
	Female	1. Below 30 years old	5	0
		2. 30-50 years old	10	4
		3. Over 50 years old	1	1
Middle East	Male	1. Below 30 years old	0	0
		2. 30-50 years old	2	0
		3. Over 50 years old	1	1
	Female	1. Below 30 years old	1	0
		2. 30-50 years old	1	1
		3. Over 50 years old	1	1
Africa	Male	1. Below 30 years old	2	0
		2. 30-50 years old	5	0
		3. Over 50 years old	3	0
	Female	1. Below 30 years old	1	0
		2. 30-50 years old	13	0
		3. Over 50 years old	4	1
Overseas consolidated	Male	1. Below 30 years old	2,507	23
		2. 30-50 years old	6,644	896
		3. Over 50 years old	2,120	468
	Female	1. Below 30 years old	1,548	19
		2. 30-50 years old	3,521	405
		3. Over 50 years old	985	159

Employees by Age-group (Consolidated Total)

Sex	Age-group	Total Employees	Management Class	Supervisors
Male	1. Below 30 years old	6,336	24	5
	2. 30-50 years old	20,209	3,394	4,226
	3. Over 50 years old	12,493	3,287	1,211
Female	1. Below 30 years old	3,623	19	6
	2. 30-50 years old	7,061	612	834
	3. Over 50 years old	2,652	297	153

No. of Recruits (Japan Consolidated)

Sex	New Graduates and Mid-career Recruitment
Male	1,044
Female	646

No. of Turnover (Japan Consolidated)

Sex	Total Resignations	Resignations for Personal Reasons
Male	1,378	864
Female	467	367

No. of Recruits (Overseas Consolidated)

Region	Sex	New Graduates and Mid-career Recruitment
Asia (excluding Japan)	Male	2,488
	Female	1,386
Europe	Male	167
	Female	85
North America	Male	335
	Female	159
Latin America	Male	17
	Female	1
Middle East	Male	1
	Female	2
Africa	Male	2
	Female	5
Overseas consolidated	Male	3,010
	Female	1,638

No. of Turnover (Overseas Consolidated)

Region	Sex	Total Resignations	Resignations for Personal Reasons
Asia (excluding Japan)	Male	1,774	1,216
	Female	1,222	825
Europe	Male	161	115
	Female	64	56
North America	Male	306	212
	Female	132	98
Latin America	Male	3	2
	Female	3	1
Middle East	Male	0	0
	Female	0	0
Africa	Male	2	1
	Female	0	0
Overseas consolidated	Male	2,246	1,546
	Female	1,421	980

No. of Recruits (Consolidated Total)

Sex	New Graduates and Mid-career Recruitment
Male	4,054
Female	2,284

No. of Turnover (Consolidated Total)

Sex	Total Resignations	Resignations for Personal Reasons
Male	3,624	2,410
Female	1,888	1,347