

01 What's Resonac?

What is Resonac? We will introduce Resonac's past and now, including the path to Resonac's birth, how we create value, and what is the "Co-creative Chemical Company" we are trying to achieve.

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Former Showa Denko

Originating in the field of electrochemistry, Showa Denko has developed its technological capabilities over the course of years to expand into the fields of inorganic chemistry, organic chemistry, and metal materials. Many of its past technological achievements have been passed down to serve the development of a wide variety of products in use today, including materials and components used for IT equipment and mobility devices as well as essential daily items.

1908

Established Sobo Marine Products K.K. (later Nihon Iodine K.K.) to manufacture and sell iodine



Sobo Marine Products K.K.

1931

Started production of ammonium sulfate using domestic technology (Showa Fertilizers K.K.)

1939

Established Showa Denko K.K. through the merger of Showa Fertilizers and Nihon Electrical Industries

1934

Industrialized domestically produced aluminum (Nihon Electrical Industries K.K. (former Nihon Iodine K.K.))



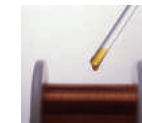
The first block of aluminum

Former Hitachi Chemical (Showa Denko Materials)

Showa Denko Materials continues to create new functions and value centered on semiconductor materials and other IT and mobility products. These efforts are driven by its proficiency in developing products using the material design technologies to capitalize on the material characteristics it has fostered since its founding.

1912

Started research into insulating varnish for electrical motors aiming at domestic production



Electrical insulating varnishes

1930

Started trial production of phenol resin laminates

1933

Started trial production of carbon brushes

1931

Started trial production of porcelain insulators

1930's

Society's needs

Stable food supply

Value we provide

Ammonia production using Japanese technology

Succeeded in synthesizing ammonia for the first time in Japan using Japanese technology and machinery, a feat considered impossible at the time. We then went on to produce the first synthetic ammonium sulfate (inorganic fertilizer) made using only Japanese technology, and started providing inexpensive fertilizer.



Society's needs and the value we provide to society

1950's

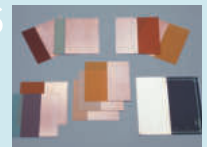
Society's needs

Innovation of technology

Value we provide

Copper clad laminates for multilayer PCBs

Developed technique to enable complicated wiring on a single copper clad laminate board, which enabled mass production of electronic circuits, a key contributor to the popularization of commercial television and radio systems.



1969
Oita Petrochemical Complex started commercial operation



Office of Oita Petrochemical Complex

1988
Entered the hard disk media business

2001
Merged with Showa Aluminum Corporation
Product lineup included aluminum cooling devices, cylinders, and packaging



Aluminum cylinders

2003
Started the plastic chemical recycling business



Kawasaki Plastic Chemical Recycling (KPR) plant

2006
Began contract manufacturing of SiC epitaxial wafer for power devices

2009
Started production of cooling devices for power semiconductors



Cooling devices for power semiconductors

2010
Merged with Showa Highpolymer Co., Ltd., the first company to achieve domestic production of synthetic resin emulsion, unsaturated polyester resin, etc.

2017
Acquired SGL GE, a German graphite electrode supplier



Graphite electrodes

2022
Substantive integration

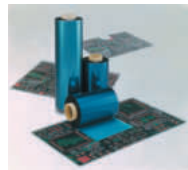
2023
Resonac established

RESONAC

Resonac experienced its second founding, as a company that operates the semiconductor and electronic materials, mobility, innovation enabling materials, chemicals, and other businesses, and possesses a broad lineup of material and technology offerings spanning midstream and downstream areas.

As a "Co-creative Chemical Company," Resonac aims to continuously grow and improve corporate value through co-creation.

1955
Started production of copper clad laminates for multilayer PCBs



Photoreactive film of alkali-based solvents

1978
Started sale of photosensitive film of alkali-based solvents

1984
Started production of circuit connecting film for displays



Circuit connecting film for displays

1992
Started sale of reflow-resistance epoxy molding compounds



Epoxy molding compounds

1998
Started mass production of carbon anode materials for lithium-ion batteries
Started production of CMP slurry for shallow trench isolation (STI)



CMP slurry

2001
Started production of molded plastic rear door modules

Society's needs
Waste problem
Recycling
Value we provide
Aluminum can recycling activities



Resonac, the first producer of aluminum cans in Japan, was the first to kick-start and spearhead recycling activities in Japan to create a recycling-oriented society. In 2021, the ratio of aluminum cans recycled across Japan rose to as high as 96.6%.

Society's needs
Innovation of technology (longevity)
Value we provide
Anode materials



Production of graphite material used to make anodes, which affect the performance of lithium-ion batteries. They enable electronic devices to be more energy efficient, more compact, and charge more efficiently.

2000's
Society's needs
Weight reduction
Value we provide
Plastic rear doors



Succeeded in manufacturing molded plastic rear door modules for the first time in Japan. Enabled more design freedom and lighter car bodies at a time when metal backdoor was the norm.

Society's needs
Innovation of technology
Value we provide
Hard disk (HD)



Successfully mass-produced the world's first large-storage hard disk media for perpendicular magnetic recording. Used to safely and securely store large amounts of data, such as at data centers.

Society's needs
Energy saving
Value we provide
SiC



A material used in next-generation power semiconductors, expected to save energy. Used in power supplies for data center servers, railcar devices, etc.

Overview of Resonac's Business

Operating Income

¥61.7 billion

Down 29.2% year on year

Consolidated Net Sales

¥1,392.6 billion

Down 1.9% year on year

Total Assets

¥2,093.7 billion

Down 2.3% year on year

Semiconductor and Electronic Materials

Net sales **¥427.2 billion** Operating income **¥45.5 billion**

The Semiconductor and Electronic Materials segment supplies materials used in front-end and back-end semiconductor production processes, SiC epitaxial wafers for next-generation power devices as well as hard disk media.

Major products

- Front-end semiconductor materials: Electronic chemicals, materials for chemical mechanical semiconductor planarization (CMP slurry)
- Back-end semiconductor materials: Epoxy molding compounds, die bonding materials, copper clad laminates, photosensitive dry film, photosensitive solder resist
- Device solutions: hard disk media, SiC epitaxial wafers, compound semiconductors (LEDs)

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Mobility

Net sales **¥180.6 billion** Operating loss **¥(0.7 billion)**

The Mobility segment contributes to the production of lighter-weight vehicles with molded plastic rear door modules and plastic gears, while supplying lithium-ion battery materials for use in the electrification of vehicles.

Major products

- Automotive products: Molded resins, friction materials, powdered metal products
- Lithium-ion battery materials: SPALF aluminum laminated film, carbon nanofiber additives, carbon anode materials

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Innovation Enabling Materials

Net sales **¥141.1 billion** Operating income **¥10.1 billion**

The Innovation Enabling Materials segment supplies a wide range of technologies and materials that support the innovation and competitiveness of the Resonac's businesses. Offerings include ceramics, functional chemicals, aluminum specialty components, and coating materials.

Major products

- Functional chemicals, functional resins, coating materials, ceramics, aluminum specialty components

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Chemicals

Net sales **¥527.8 billion** Operating income **¥24.9 billion**

The Chemicals segment boasts a lineup of competitive, high-share products including olefin, organic chemicals, basic chemicals, industrials gases, and graphite electrodes.

Major products

- Olefins and Derivatives: Olefins, organic chemicals
- Basic chemicals and Industrial gases
- Graphite electrodes

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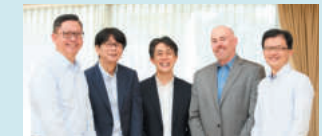
Others and Intersegment Transactions

Net sales **¥115.9 billion** Operating loss **¥(18.1 billion)**

Semiconductor Materials Global Top Management Roundtable

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The semiconductor materials business is positioned as a growth business in our long-term vision. We present the round table discussion on this business, which holds the key to Resonac's growth, held by Hiroyuki Yamashita, who oversees the Electronics Business Headquarters, the leaders of the U.S., Taiwan, and Singapore sales offices, and CSO Tomomitsu Maoka.



Overview of Resonac's Business

Consolidated Workforce Composition



Consolidated Number of Employees

25,803

Down 1.0% year on year

Net Sales Ratio

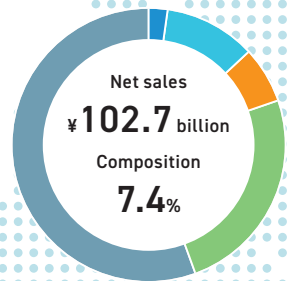


Global Business Composition

(As of December 31, 2022)

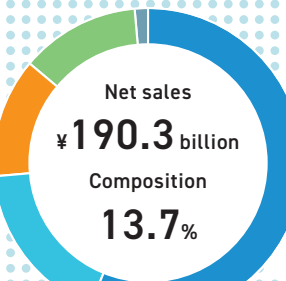
Europe

Number of employees 1,580
Number of companies 17



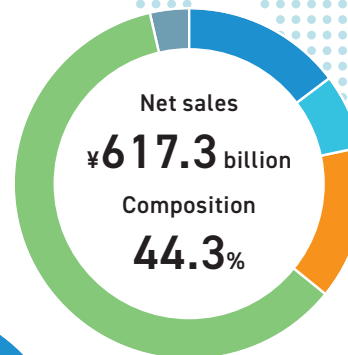
China

Number of employees 3,407
Number of companies 23



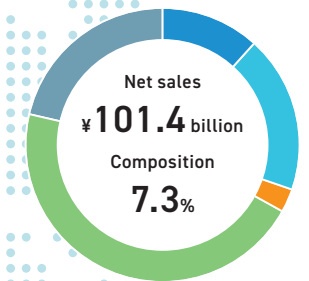
Japan

Number of employees 12,706
Number of companies 25



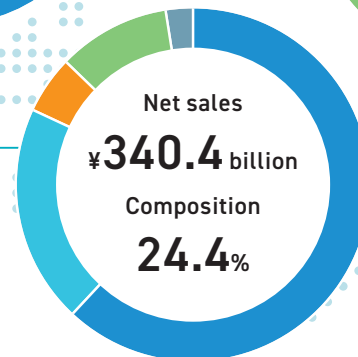
North America

Number of employees 989
Number of companies 10



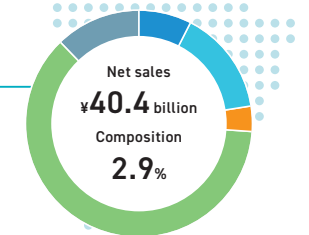
Asia

Number of employees 6,680
Number of companies 32



Other regions

Number of employees 441
Number of companies 1

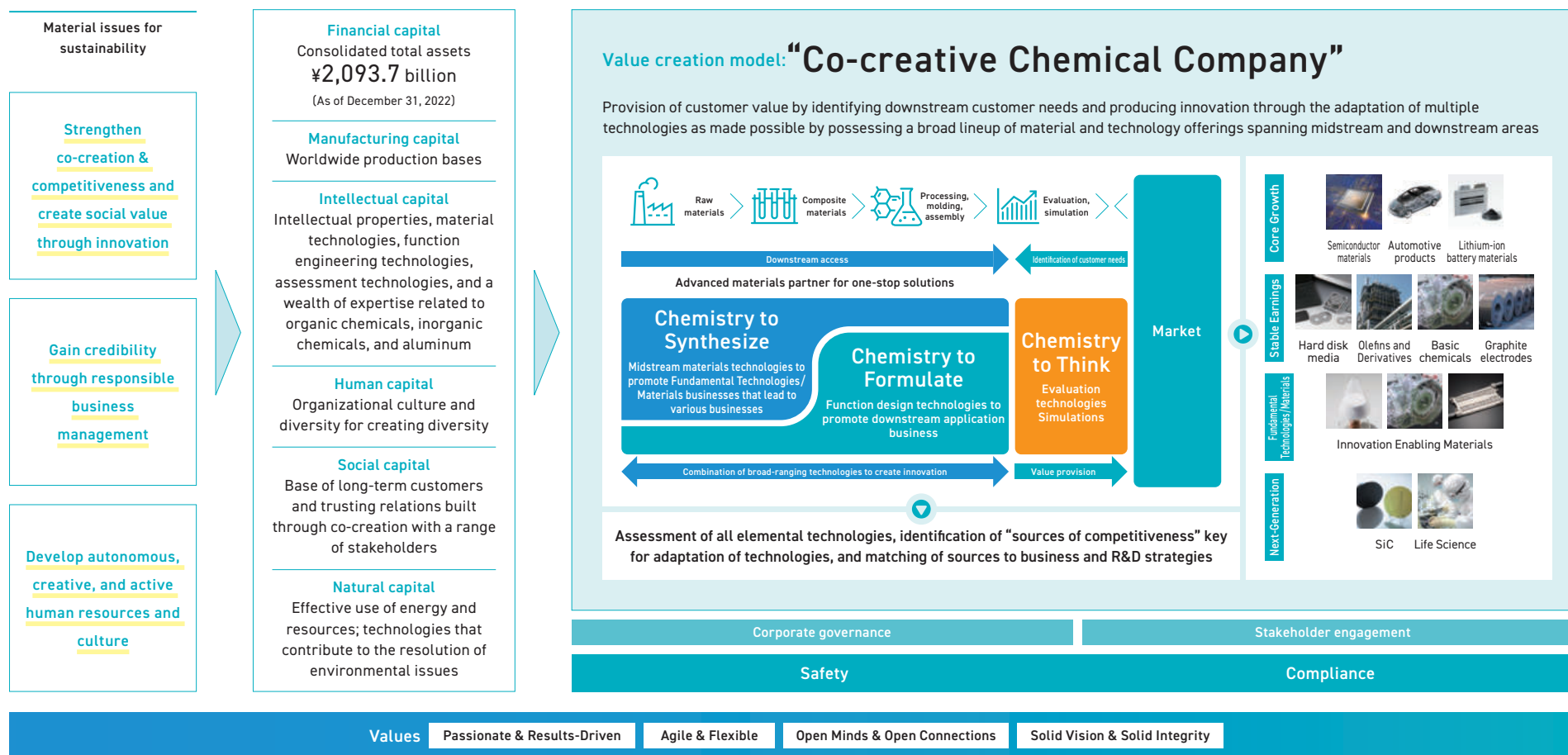


- Semiconductor and Electronic Materials
- Mobility
- Innovation Enabling Materials
- Chemicals
- Others

Value Creation Process

Change Society through the Power of Chemistry

Contribute to the sustainable development of global society by creating functions required of the times as an advanced material partner



Material Issues for Sustainability

Strengthen co-creation & competitiveness and create social value through innovation

We are creating social value through our business by taking the initiative in co-creation and enacting a process, spanning from the identification of social issues to the provision of solutions to these issues, by means of technology development and new business models.

2023, NOW

Development of advanced semiconductor packaging materials

With an eye to 3 to 5 years down the road, we collaborated with raw materials and assembly process development at the Stage for Co-creation, and started R&D of the materials (products) needed for the future generation of advanced semiconductor packages. Alongside tackling the long-term themes of plastic recycling and next-generation high-speed communications composite materials, we are also working to create value through co-creation with the aim of solving medium to long-term social issues.



Gain credibility through responsible business management

We must cultivate a culture of safety and work to eliminate accidents, while mitigating strategy, operational, hazard, and other risks. In addition, we should facilitate a flexible response to the changing environment in order to gain trust from stakeholders by continuously delivering distinctive value.

2023, NOW

Building a safety infrastructure, safety culture

In keeping with Article 1 of Resonac's Code of Conduct, which stipulates "Safety First," we are working to build a safety culture across our global operations under the leadership of the CEO. Based on our safety code of conduct and 10 safety principles, newly formulated in 2023, we carry out safety activities across workplaces in Japan and overseas, and also promote interactive safety patrols (SCP: Safety Communication Program).



[▶ Video](#)

Develop autonomous, creative, and active human resources and culture

We aim to become a human resource developing company, whose employees are the envy of other companies, by fostering creative and autonomous co-creative human resources and building the corresponding corporate culture.

2023, NOW

Co-creative leadership training and training sessions to bolster the co-creative collaboration capabilities

In the pursuit of solving social issues, we seek to foster co-creative talent that can take the lead in innovating and solving problems creatively through co-creation founded on autonomous bonds that go beyond companies and departments, shaped by mutual understanding and a resonance of values. We encourage and support the development of co-creative leader skills, the implementation of action based on our values, and autonomous career development.



Ideal State (long-term vision)

World-class Functional Chemical Manufacturer

Company that can compete on the world stage

World-class competitiveness and profitability

Company that contributes to a sustainable global society

Capability to create innovations and to develop new businesses

Company that develops co-creative talent that represents Japan's manufacturing industry

Ability to train competitive talent with co-creation values

2030 targets

TSR: Aim to rank among the chemicals industry's top **25%** over the medium to long term
Achieving Sustainability Vision

Future we seek to realize through the power of chemistry

Harmony with the global environment



Happiness and prosperity of people

[Special Feature] What is a Co-creative Chemical Company?

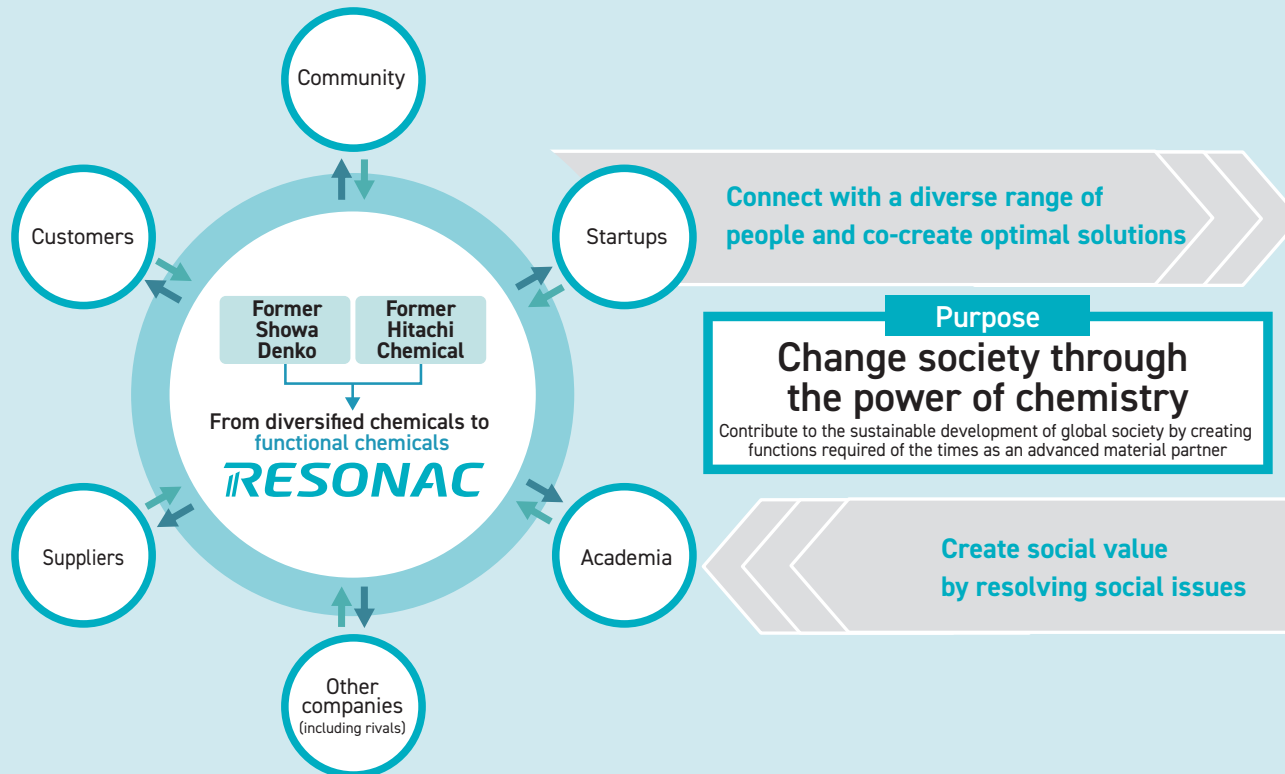
Resonac Aims to Become a “Co-creative Chemical Company”



Why? Chemistry is a building block of all industries, and the chemical industry should be able to help find solutions to society's issues through **co-creation with a range of stakeholders**

In today's global society, the industrial structure is changing at a dizzying pace, and this speed continues to accelerate. Not only that, the challenges faced by various industries are too complex and large to be solved by a single company alone. Since chemistry is a building block of all industries, the chemical industry should be able to solve society's issues through co-creation with a range of stakeholders. Our current strategy is to focus our investment on the Semiconductor and Electronic Materials segment as a core growth area. Not only is the pace of technological innovation for semiconductors extremely fast, the combination of various technologies is essential. Co-creation is thus indispensable both inside and outside the company in order to develop the required functions at a swift pace. As a “Co-creative Chemical Company,” we will quickly create new functions together with diverse talent and change society with the power of chemistry.

[P11 / Value Creation Process](#) > [P45 / Long-term Vision](#)



Future we seek to realize through the power of chemistry

Achieve carbon neutrality and create a recycling-based society

- Reduce environmental impact during manufacturing
- Vehicle electrification
- Use of renewable energy
- Resource recycling

Happiness and prosperity of people
Responding to a data-driven society

- Data centers
- Faster processing speeds
- Next-generation communications technologies
- AI



Who? In order to become a “Co-creative Chemical Company” that creates innovation, we need “co-creative talent” that embody our purpose and values

To become a “Co-creative Chemical Company” that creates innovation and changes society with the power of chemistry, we need human resources that embody our purpose and values. In other words, we need “human resources that can innovate and solve problems creatively through co-creation founded on autonomous bonds with people inside and outside the company as we work to resolve social issues.”

Based on the idea that employees have ownership of their own careers, we have prepared a variety of career paths and educational opportunities to fit each person’s individual aspirations, and have launched various systems to support connections both inside and outside the company.

One of these is AHA!, a global award that all Resonac Group employees can submit preliminary entries to. In addition to workplaces, cross-organizational teams establish declarations of action based on our purpose and values, set targets and concrete initiatives based on these declarations, and submit entries themselves. At the subsequent judging events, entrants will talk about their experiences putting our values into practice in carrying out our initiatives. This will result in feelings of mutual understanding (harmony) among employees, thus contributing to co-creation that transcends various boundaries.

We are working to nurture co-creative human resources by introducing unique training programs, such as co-creative leadership training and training sessions to bolster the co-creative collaboration capabilities, so that a wide range of Resonac employees around the world can further realize their purpose as a team.

[P19 / Letter from the CEO](#) > [P35 / Letter from the CHRO](#) > [P91 / Human Resource Strategies](#)

Source of value **Diverse range of technologies and customer base that has been cultivated over many years** held by Resonac

- 1 Problems are large, complex, and unknown
- Changes in the external environment
- 2 Changes in value

To create innovation and social value

“Co-creative talent” that embody our purpose and value is necessary

In the pursuit of resolving social issues, we will innovate and solve problems creatively through co-creation founded on autonomous bonds with people inside and outside the company

Passion
for solving social issues

Co-creation
across companies and departments

Leading change
with humility and persistence

Purpose: Change society through the power of chemistry

Values



Passionate & Results-Driven



Agile & Flexible

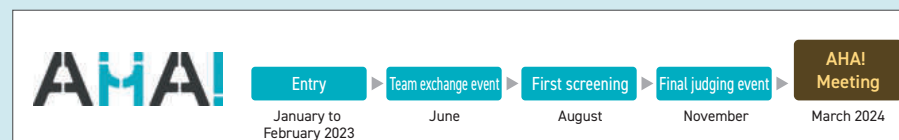


Open Minds & Open Connections



Solid Vision & Solid Integrity

A global award that leads to the development of co-creative talent



The name of the award comes from our wish to realize co-creation that transcends boundaries, through creating feelings of mutual understanding (harmony) from Aha moments, which is created by learning about the activities of a wide range of teams and becoming inspired to do things that employees could not do or understand before.

*AHA!: Awards of Harmony, successor to the global awards held by former Showa Denko and former Hitachi Chemical.

POINT
01

Opportunities for personal growth

- Autonomously carry out activities
- Collaboration with various people, cross-departmental activities
- Find new friends
- Engage in activities from a new perspective

POINT
02

A connection of equals

- Interaction between entry teams
- A place you can promote your activities (work) to the people around you

How and Where?

We will establish a “place that fosters co-creation” with various stakeholders, and co-create cutting-edge technologies to help create a better society with a diverse range of people

A platform for open innovation, key to Resonac's R&D efforts

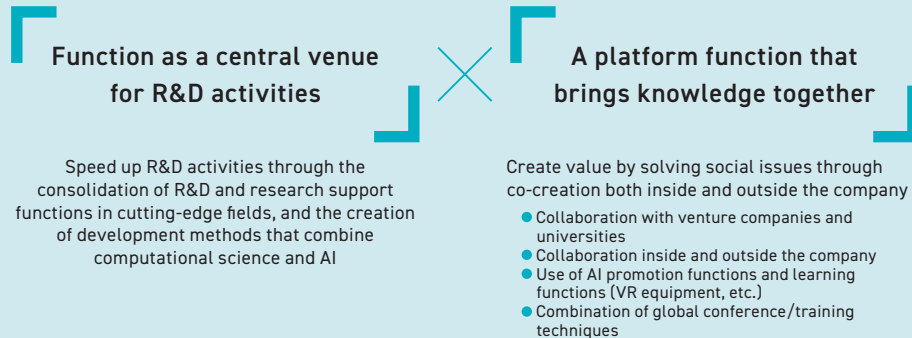
Stage for Co-creation



Web

With an eye to solving social issues by listening to the needs of the world and the views of society, we established the Stage for Co-Creation (in Yokohama City, Kanagawa Prefecture). This venue serves as a platform for open innovation, which stands at the core of Resonac's R&D activities. We are integrating the organizations that house functions related to computational science, material analysis, mass production technology & facility management, and chemical safety management & evaluation, Resonac's areas of strength. In doing so, we aim to develop advanced technologies that can help create a better society through collaboration and co-creation with local communities, as well as with venture companies and universities inside and outside Japan.

P65 / R&D and Intellectual Property Strategies



Launch of the Stage for Co-creation!

On April 4, 2023, Resonac held the Stage for Co-creation's opening ceremony. Executives, guests, and a number of employees involved in the Stage for Co-creation cut the ribbon and talked about their expectations for co-creation initiatives and their enthusiasm for working at the venue. Ahead of the full-scale opening in 2024, most of the development members will move in during 2023 and kick operations into gear.

P32 / Letter from the CTO

Taking on technological innovation for next-generation semiconductors together with other companies

Packaging Solution Center



Web

In 2019, we established the Packaging Solution Center (Kawasaki City, Kanagawa Prefecture) with the aim of creating cutting-edge technologies that can handle increasingly complex and constantly evolving semiconductor packages. The center's greatest strength is its state-of-the-art equipment, which can be said to be on par with the semiconductor package manufacturing equipment used by semiconductor manufacturers. It enables the mounting, evaluation, and simulation of semiconductors themselves using materials for a variety of semiconductors. The ability to verify the entire manufacturing process greatly contributes to the improvement of material functionality and development speed. The center is open not only for use by Resonac, but also to a wide range of industries. We are taking on the challenge of solving issues faced in next-generation semiconductor manufacturing while interacting with other companies and universities. In addition, JOINT2 was established as a consortium consisting of 12 companies* that manufacture semiconductor equipment, materials, and substrates. JOINT2 is a project subsidized by NEDO, and is working to develop technologies for high-density mounting of next-generation semiconductors, such as through the mutual use of technologies and information. The combination of member companies' materials and technologies allows for the proposal of optimal one-stop solutions for customers.

P77 / Semiconductor and Electronic Materials



*Members: Ajinomoto Fine-Techno Co., Inc., C. Uyemura & Co., Ltd., EBARA CORPORATION, SHINKO ELECTRIC INDUSTRIES CO., LTD., Dai Nippon Printing Co., Ltd., DISCO Corporation, TOKYO OHKA KOGYO CO., LTD., NAMICS Corporation, Panasonic Connect Co., Ltd., MEO COMPANY LTD., Yamaha Robotics Holdings Co., Ltd., ORC MANUFACTURING CO., LTD.



Message from Professor Tadahiro Kuroda of the University of Tokyo Graduate School

Web

Although Japan's share of the global semiconductor wafer manufacturing market has declined in recent years, we still have the ability to compete on the global stage in the fields of semiconductor materials and manufacturing equipment. I am impressed that Resonac, one of the first Japanese companies to focus on the back-end processes of semiconductor manufacturing that possesses the latest equipment and an expansive network, has carved out a very good position for itself.



Now What?

Co-creation to solve various issues has been “started” and steadily advanced to realize the vision we want to be

Case 1 A long-term R&D theme undertaken at the Stage for Co-creation that contributes to the next generation

Development of next-generation high-speed communications materials

In order to achieve next-generation high-speed communication (6G), a new semiconductor material that significantly reduces transmission loss is required to achieve a transmission speed 100 times that of 5G. With the aim of creating new materials for next-generation semiconductors used in 6G, Resonac is working with universities and venture companies to develop ceramics and interface control technologies for resins and fillers from scratch through material synthesis.

By utilizing the power of computational science from the molecular and material design stages, it is possible to verify as many as 90 types of combinations in the three months it previously required to verify a single combination.

Circular Economy; Plastic chemical recycling

In order to reduce the consumption of fossil resources, reduce CO₂ emissions, and eventually achieve carbon neutrality, we are taking on the challenge of establishing plastic chemical recycling, in which used plastics are decomposed, turned back into raw materials, and then used again to manufacture plastics.

Since 2022, we have been jointly developing technology with Microwave Chemical Co., Ltd., and in experiments using model samples of used plastics, we have succeeded in extracting raw material components such as ethylene and propylene with a yield of about 80%, reaching a certain point in establishing the basic technology. We are leveraging AI and computational science to elucidate the decomposition mechanism of plastics and investigate catalysts, which enables us to swiftly move forward with development.



Message from Microwave Chemical

When we were approached by Resonac, which was ahead of the times in launching a chemical recycling business, we were convinced that if we could combine our technology with Resonac's know-how, we would surely be able to create a new, one-of-a-kind chemical plastic recycling business in the world. We believe that the way both companies are always on equal terms and can exchange opinions freely has led to the acceleration of technology development.

Left: Mr. Kitani, Group Leader of Research and Development Department, Microwave Chemical Co., Ltd.
Right: Mr. Kameda, Manager of Business Development Dept. / Head of Chemical Recycling Business Div., Microwave Chemical Co., Ltd.

Case 2 Starting co-creation with customers in the evaluation of power module materials



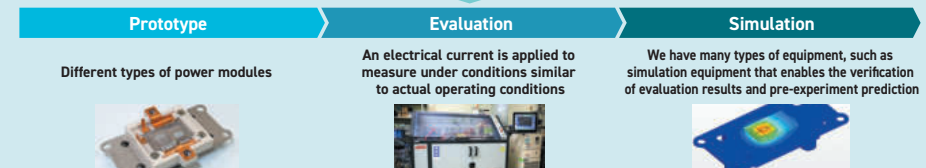
The Power Module Integration Center (located at the Oyama Plant in Tochigi Prefecture) has started full-scale operations to strengthen the development of materials for power semiconductors, which are essential for vehicle electrification, and the power modules packaged with these semiconductors. As an organization that modularizes and evaluates a wide range of Resonac's power module-related materials, the center has utilized this technology to develop materials and speed up this process. Since 2023, we have been evaluating materials under conditions similar to those set by our customers, and sharing the verification details. In doing so, we provide technological innovation support as far back as customers' material development phases and help shorten the development time for power modules. In fact, there have already been cases where customers have successfully reduced the number of prototype evaluations by half. By 2025, we aim to establish a system for joint evaluations with customers and help shorten development times further.

We have also started carrying out value proposition activities for power module-related materials in the marketing process.

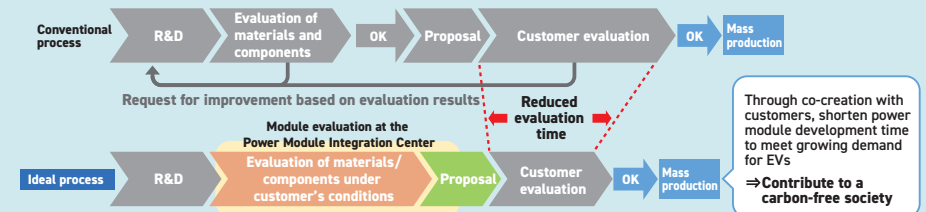
[P70 / Marketing Activities in the Automotive Market](#)



Utilizing our wide range of power module-related materials in verification



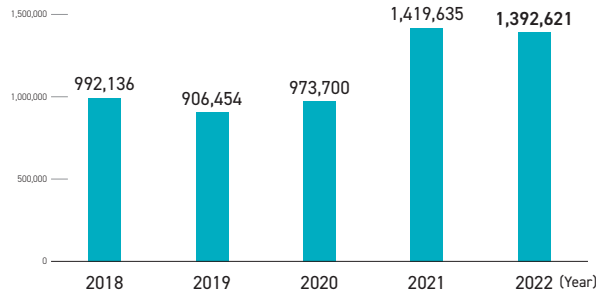
By 2025, we aim to shorten the time taken from power module material development to customer adoption



Financial and Nonfinancial Highlights

Figures include data for former Hitachi Chemicals after July 1, 2020.

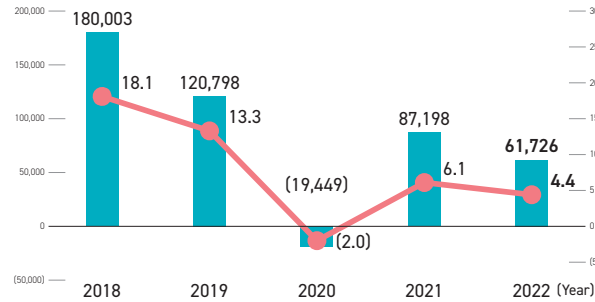
Net sales (Millions of yen)



Businesses that Resonac will continue to operate saw a growth in net sales thanks to robust semiconductor demand, a recovery in automobile production, and higher selling prices. However, net sales fell overall due to the impact from the sale of multiple businesses in the previous fiscal year.

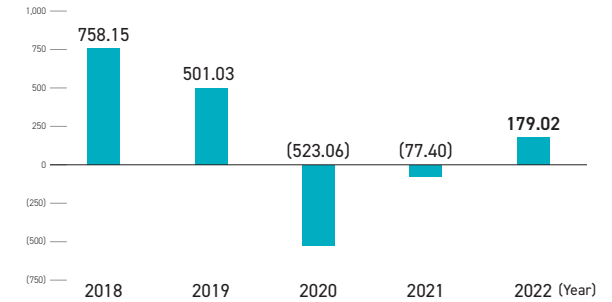
Operating income (Millions of yen)

Ratio of operating income (loss) to sales (%)



Operating income decreased, due partly to drags from the time lag at which soaring raw material costs were passed onto selling prices and from the sale of businesses. The above figures have been revised since the time of the earnings release due to changes in accounting policies.

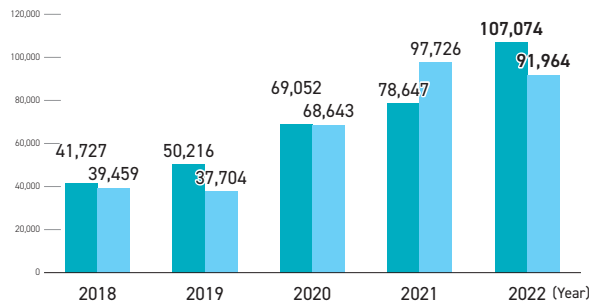
Net income (loss) per share^{*1} (Yen)



While hefty extraordinary losses were recorded in the previous fiscal year due to business restructuring, no such losses were booked in the current fiscal year, resulting in a move back into the black.

Capital expenditures (Millions of yen)

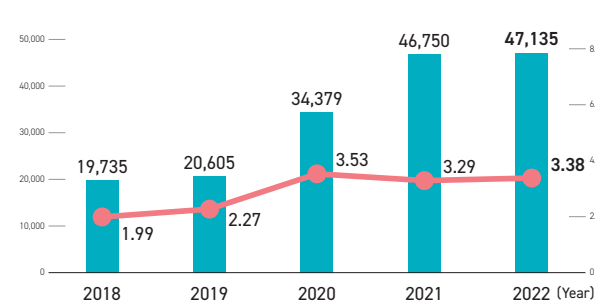
Depreciation and amortization (Millions of yen)



In line with the goals set in our long-term vision, we focused investments on boosting the production capacity of the Semiconductor and Electronic Materials segment, a Core Growth business.

R&D expenditures (Millions of yen)

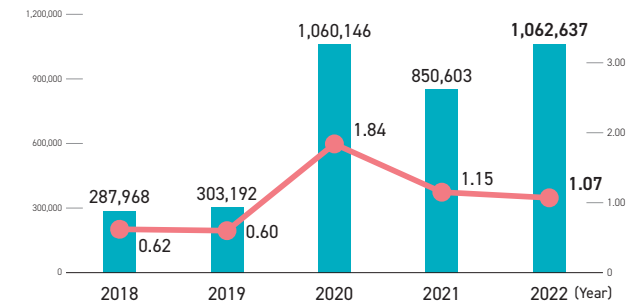
Ratio of R&D expenditures to sales (%)



We are focusing efforts on R&D in a bid to swiftly create synergies from the integration of two companies that have been integrated.

Interest-bearing debt (Millions of yen)^{*2}

Post-adjustment net debt/equity ratio (Times)^{*2}



We raised funds through subordinated loans for the acquisition of preferred stock, which resulted in an increase in interest-bearing debt. As a result, interest expense increased while preferred stock dividends decreased.

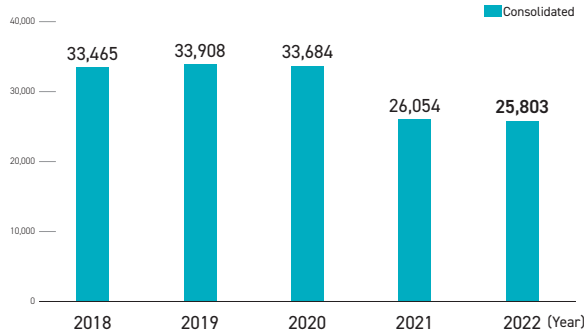
Our subsidiary former Hitachi Chemical (current Resonac Corporation) and its Japanese subsidiaries previously adopted the International Financial Reporting Standards (IFRS), but switched to Japanese Generally Accepted Accounting Principles (JGAAP) from fiscal 2023. This change has been applied retroactively and the figures for fiscal 2022 have been retroactively adjusted. Some of these retroactively adjusted figures include those that have not yet been audited.

*1 Net income (loss) per share has been computed based on the average number of shares of common stock outstanding during the respective fiscal year.

*2 From the third quarter of 2020, due to former Hitachi Chemical, becoming a consolidated subsidiary, the D/E ratio reflects the following situation: regarding preferred shares issued by HC Holdings K.K., a subsidiary, posted under non-controlling interests on the consolidated balance sheets, the value equivalent to 50% interest-bearing debt, net value is indicated after excluding cash and deposits and adding debt on lease. For determination of the 50/50 allocation for preferred shares in light of the characteristics of the capital structure is based on the rating of Japan Credit Rating Agency, dated April 21, 2020. This change in accounting standards for the D/E ratio from 2020 has been retroactively reflected in 2019 figures. Furthermore, in regards to the subordinated loans taken out in order to purchase preferred stock, 50% of this amount is deducted from interest-bearing debt and added to shareholders' equity. Determination of the 50/50 allocation for the subordinated loan in light of the characteristics of the capital structure is based on the rating of Japan Credit Rating Agency, dated October 4, 2022.

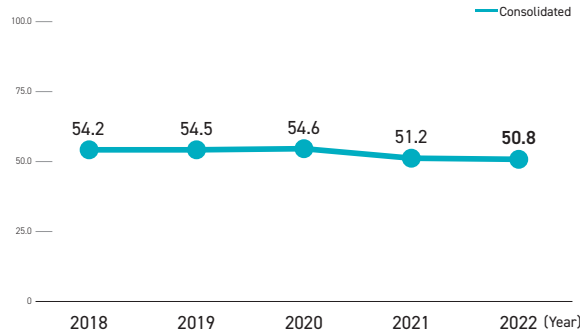
Financial and Nonfinancial Highlights

Number of employees (persons)



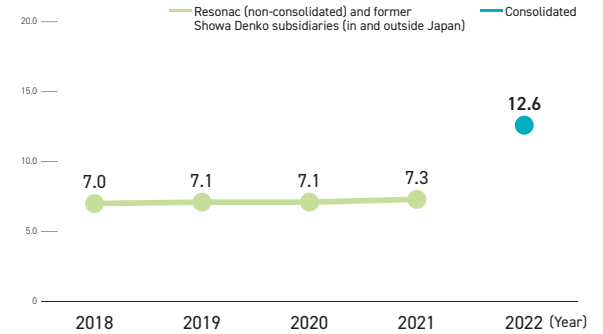
Former Hitachi Chemical joined the Showa Denko Group in 2020. We have been carrying out business portfolio restructuring, such as selling off the energy storage devices and systems business in 2021, and are working to optimize the allocation of employees.

Ratio of employees working outside Japan (%)



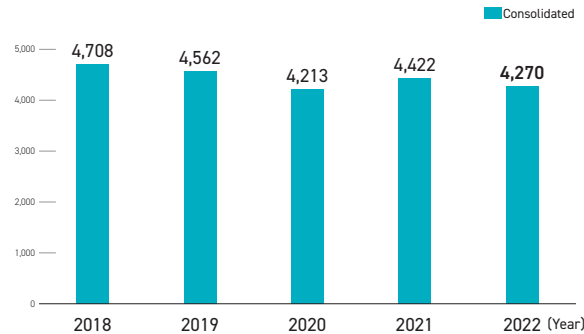
The sale of domestic and overseas plants and Group company businesses, carried out as part of business portfolio restructuring, has led to a change in the number of employees. See [P10](#) for the number of employees by region.

Ratio of female managers (%)



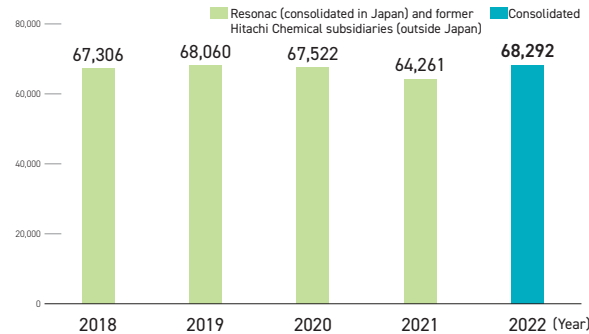
We aim to recruit and train employees without being influenced by nationality, gender, or other factors, and maximize the value of individuality within our organization by accepting the meaningful value brought by the unique and varying attributes of each person.

Greenhouse gas emissions (Scope1+Scope2; kt-CO₂)



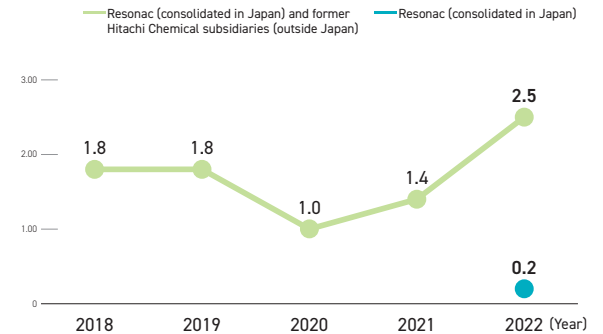
In a bid to reach our goal of becoming carbon neutral in 2050, we have set the target of a 30% reduction in greenhouse gas emissions in 2030 from the level of 2013. We are reviewing the medium- to long-term targets for each business, and are working to reduce our greenhouse gas emissions and promote energy saving.

Amount of water used (excluding seawater; thousand m³)



The Resonac Group regards a shortage of water as a global issue and is working to make effective use of water and reduce its consumption. We also treat the water used in our activities to reduce its environmental impact before releasing it back into the environment.

Ratio of industrial waste sent to landfills (%)



We have set the target of achieving a ratio of industrial waste sent to landfills of 0.5% or less in Japan, and are working to reduce the amount of waste we produce and recycle and use our resources more efficiently. We also inspect our sub-contractors for intermediate treatment and final disposal of waste to confirm that they appropriately treat and dispose of our waste.